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Situation analysis, curriculum mapping, needs assessment, case studies and best practices

Content

SITUATION ANALYSIS
IN REGARD TO EU SECURITY, RESILIENCE
AND SUSTAINABILITY

Edited by

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1) EU POWER (STRATEGIC AUTONOMY) IN A MULTIPOLAR WORLD

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ABSTRACT:

The aim of this module is provide an overview on the international role of the EU and on the debate referring to the concept of strategic autonomy. The discussion on creating / strengthening / restoring European strategic autonomy has gained visibility and significance after the European Union (EU) issued its first Global Strategy in 2016, calling for 'an appropriate level of ambition and strategic autonomy' to strengthen 'Europe's ability to promote peace and security within and beyond its borders'. This has been triggered by external pressures, namely the deterioration of the EU's security environment and the fragmentation of the international order against which the EU should have more action potential for promoting its own and hedging others' interests. External pressures included subsequent crises since 2008, the UK leaving the Union (Brexit) and the transformation of Transatlantic relations. This concept paper highlights the conceptual elements and key practical aspects of European strategic autonomy not only in the traditional defence-oriented sense but in the wider, global perspective, which we need to study to gain a thorough understanding of the ways and means of creating / strengthening / restoring European strategic autonomy in these fields.

KEYWORDS:

European Union; Strategy; Autonomy; Multipolarity; Foreign, security and defence policy

Introduction

The international role of the EU has been analysed through a number of different realist or liberal-normative lenses. The criticisms worded by the realist approach have clearly called attention to the lack of hard power tools (i.e. a European army). Since its creation, the European Union has been described as a sui generis international actor. According to this concept, the European Union is neither a federation nor a confederation, or not even a mere intergovernmental organization, but a separate, sui generis form of integration, which cannot even be considered as a State (Bogdandy 2012). To some extent, the EU can be described as a hybrid, state-like, sui generis international actor. The EU has its own legal system which is an integral part of the legal systems of the member states, and in this legal hierarchy the EU law has primacy over national law (EUR-Lex n.d.).

The European Union has been defined as a 'civilian' (Dûchene 1973; Stavridis 2001), or a 'soft' power (Hill 1990). Later, Manners described it as a 'normative' power (Manners, 2002, 2006). During the last decades, it has been conceptualized as an ethical (Aggestam 2008) or liberal power (Wagner 2017) in international affairs. However, sometimes the hybrid power character of this foreign policy actor still provokes a dispute (Tocci 2008). In many cases, concepts relating to the EU cannot be separated sharply, but often these are overlapping. In the literature, it is not uncommon that the normative, civilian or even soft adjectives are used as synonyms with each other.

The dynamics of the European integration process have been defined by the duality of inter-governmentalism and supranationalism. In some areas of external actions, e.g. in the case of common commercial policy, the EU decision-making processes are based on the community (or union) method which is not applied for the Common Foreign and Security Policy. In this latter field, which was created by the pillar system of the Maastricht Treaty, the intergovernmental cooperation remains the decisive form of decision-making processes. The contradiction in this duality encouraged the development of the European Union as a new hybrid political organisation which has the characteristics of a supranational entity. The Common Foreign and Security Policy, which is integral part of the external actions of the Union, remained a very sensitive area for Member States.

Why does the European Union need (more) strategic autonomy?

The discussion on creating / strengthening / restoring European strategic autonomy has gained visibility and significance after the European Union (EU) issued its first Global Strategy in 2016, calling for 'an appropriate level of ambition and strategic autonomy' to strengthen 'Europe's ability to promote peace and security within and beyond its borders'. (EEAS 2016, 9.) This has been triggered not primarily by the organic internal institutional development of the union (further deepening of the integration), but by external pressures, namely the deterioration of the EU's security environment and the fragmentation of the international order against which the union should have more action potential for promoting its own and hedging others' interests. However, as a consequence of adopting such an ambitious agenda that characterizes a capable great power, we could see important steps towards both streamlining and deepening cooperation in policy fields that should underpin European strategic autonomy,

such as economic policy, technology and innovation, civilian crisis management, defence capability development, sanctions policy, etc.

External pressures have unfolded during the past decade with growing impetus. On the one hand, the global shift in power brought about the relative weakening of the West, including both European countries and the United States versus returning (Russia) and emerging great powers (China, India) and regional powers (Iran). This does not mean the inferiority of Western countries to emerging powers, but a new rivalry across the power spectrum and all policy fields. However, it is important to properly evaluate the effects of this change as the weakening hegemonic role of the United States and the formation of a new multipolar world order (Murray and Brown 2013), which not only create strains but also offer opportunities. For Europe, this shift causes the transformation of bilateral relations across the Atlantic, as well as more room for manoeuver within multilateral relations to other great powers. In other words, the widening of the international arena takes place where the EU should be a capable actor (Dee 2015). On the other hand, the fragmentation of the international order brings about the demise of the liberal world order set up after World War II, the emptying of norms, legal frameworks and those international institutions that were devised to prevent and moderate international conflicts. Great powers challenging Western (U.S.) hegemony not only criticize the rules, structures and institutions of the liberal world order but effectively undermine it through their actions, sometimes also offering alternative conduct and formats. Therefore, it is imperative that the European Union be ready and capable of influencing international relations along European interest through developing its own capabilities of strategic autonomy and counterbalance such challenges.

During the last decades, significant changes have taken place in the international system: great power competitions and politics, characteristics of the former bipolar international system, have intensified again. The nearly two decades of US hegemony began to be eroded by an economically and militarily growing China and a much more ambitious Russia than before. The weakening of the liberal international world order has brought about the upset of the hitherto established but already fragile balance. As a result, the liberal international system based on cooperation and interdependence in the Western-inspired multilateral framework seems to be tearing apart (Haass 2017; Ikenberry 2018; Kundnani 2017; Fukuyama 2020, Helwig and Siddi 2020).

Further incentives were added to the debate on European strategic autonomy by the series of crises European countries have witnessed since 2008 on the continent and in its immediate

neighborhood: the Russo–Georgian War (2008), the financial and economic crisis (2008/2009) and its consequences, the Arab Spring (2010) and its aftermath, such as the Libya (2011–) and Syrian (2011–) civil wars, the emergence of Daesh / 'Islamic State' (2014) and a subsequent wave of terrorism (2015), the illegal annexation of Crimea (2014) and Russian-induced armed conflict in Eastern Ukraine (2014–), the migration and refugee crisis (2015), the outbreak of the coronavirus (COVID-19) pandemic (2019 –), and the 2nd Nagorno-Karabah war (2020). A common element of most external crises was that the European Union had only limited or no role in managing these – for various reasons, but mostly due to the lack of political consensus of the member states upon what action should be taken. In these cases, either the EU stood by, vulnerable to their effects, or European member states managed to influence events by participating in ad hoc formats, such as the Global Coalition to Counter ISIS or the 'Normandy Format' (Germany, France, Russia and Ukraine to resolve the war in Donbass). Reaching the necessary consensus was not easy in case of internal crises either, but in this regard the union proved to be a somewhat more capable actor.

The relation of the EU towards two key allies has also altered since the Global Strategy had been adopted, strengthening the calls for stronger EU strategic autonomy. After the election of Donald Trump as U.S. president in 2017 an unprecedented transformation of Transatlantic relations took place, questioning the security guarantees Washington had been providing for Europe for decades. Even though some realignment in style is expected to take place under the Biden administration, the strategic processes of U.S. pivot towards the Indo-Pacific and the resulting shift of forces and commitment away from Europe and the European neighbourhood will not change for the better. By 2021, the Brexit process that started in 2016 had also been concluded, depriving the EU from one of its most capable member states in terms of political, diplomatic, economic and military power, as well as in the field of technology and innovation.

Among these circumstances and upon adopting ambitious strategic goals the 2020s will set the stage for the EU to create the indispensable political, institutional and material pillars of its autonomous ability to act in its own way, as termed by High Representative Josep Borrell: to realize Europe's *Sinatra Doctrine* (Borrell 2020).

Defining and conceptualizing European strategic autonomy

The concept of 'strategic autonomy' in the European context has evolved throughout the past five years, revealing a complex nature upon identifying its various aspects under several names,

such as 'strategic responsibility' (Brattberg and Valásek 2019), 'strategic sovereignty' (Leonard – Shapiro 2019) and 'open strategic autonomy' (Hogan 2020). While there is no generally agreed common definition, shared elements can be identified in the relevant literature, moving from a narrow defence-oriented conception (Fiott 2018) towards global understanding both in terms of meaning and geographical focus (Lippert, von Ondarza and Perthes 2019).

For a suitable working definition, strategic autonomy in a general approach means the ability of an actor to independently determine its goals and priorities of international action, undertake decisions and realize them, including all their institutional, political, and material aspects. In the broadest sense strategic autonomy entails the capability to (trans)form, change and enforce the rules of the international order – as opposed to an obligatory (forced) consent to following the rules determined by other actors. As such, the opposite of strategic autonomy in the current international order would be the adoption of the rules defined by the United States, Russia and China or others.

In one of the most recent analyses, Niklas Helwig offered a conceptual overview, summarizing the broad understanding of strategic autonomy as the following (Helwig 2020, 6):

	Conventional perspective	Global perspective
Strategic autonomy for…	Security & defence	Security & defence, trade & industry, digitalization, climate, health
Strategic autonomy from…	United States	United States, China, other emerging powers and economies
Strategic autonomy to…	Act militarily in Europe's neighbourhood, protect Europe	Promote European interests and values
Drivers	US structural pivot, transatlantic uncertainties	Rise of China and rivalry with U.S., technological change
Inter-organizational relations	NATO	NATO, UN, WTO
Alternative concepts	Strategic responsibility, ability to act	Open strategic autonomy (trade), European sovereignty (tech, industry)
Principal dividing lines	Differing threat perceptions among EU member states & ties to the U.S.	Political economy / Free market vs. state intervention

We can clearly see that the global understanding of strategic autonomy goes beyond security and defence issues, primary ties to the U.S. and NATO, and encompasses those means of power in which the EU can indeed play a global role: economy and trade (the common market), technology, as well as multilateralism in global institutions. In the practical sense, other policy areas in which member states and EU institutions should join their efforts to act strategically include energy policy, intelligence, development and aid, civilian and military crisis management, sanctions policy, arms control, immigration and refugee policy, grey-zone conflicts, and defence. This approach refers to strategic autonomy as 'an essential enabler of Europe's shaping power' (Grevi 2019).

Helwig also suggests three dimensions within which the capacity of the EU regarding its strategic autonomy should be evaluated: institutional, material, and political aspects (Helwig 2020, 8):

Institutional autonomy – Distinct structures and instruments for the planning and implementation of policies

Elements:

- Decision-making structures: The EU and its member states have structures in place that facilitate the shaping and taking of joint decisions.
- Planning capacities: The EU has capacities to facilitate the preparation of joint decisions and support member states in their implementation.
- Power transfer: The EU can enforce the implementation of decisions, for example through a transfer of competences or a sanctioning mechanism in the case of member states' non-compliance.

Material autonomy – The technological, industrial and military capacity to independently implement decisions

Elements:

- Pooling and sharing: Member states share or jointly use critical goods and capabilities (e. g. military) in the implementation of policies.
- Capabilities and supply security: The EU and member states ensure the availability of capabilities (e. g. military) and critical supplies needed to implement policies through joint procurement, diversification, or stockpiling.
- Domestic industries: The EU and member states develop industries in strategic sectors through R&D efforts, financial incentives, or regulatory measures.

Political autonomy – The ability to independently define common priorities and take decisions

Elements:

- Joint assessment: Member states seek a common understanding of the challenges and options regarding a threat or international development.

- Policy convergence: Member states actively engage in a process of formulating a joint response (consultations, bargaining, leadership).
- Strategic culture: Member states can base their response on a common set of norms, strategic evaluations and behavioural patterns that facilitate joint action.

These three dimensions constitute the building blocks of EU institutions' and member states' ability to act, around which political and expert debates also revolve. In the institutional dimension one must understand to what extent are the EU's structures and processes, including their general and joint authorities fit for supporting collective action based on sovereignty sharing and sui generis EU competences. In the material domain the question is to what extent do member states provide the necessary resources, goods and capabilities for the EU to execute the jointly agreed decisions and realize their shared goals. While in the political domain the key question is to what extent can member states form consensual decisions to enable the EU to take action at all, what has very often been the most fundamental obstacle to take any action on behalf of the EU throughout the external crises of the past decade.

We can summarize very briefly that the European Union can reach more robust strategic autonomy in the next decade on a global scale only if its member states increase their efforts to cooperate, consent to effective sovereignty sharing, and underpin their joint endeavour with resources. Apart from some key EU institutions, such as the Commission that is to function with a 'geopolitical' mindset, or the External Action Service which is, by definition, the driver behind many foreign policy initiatives, the EU apparatus itself and member state representatives as well as national governments and strategic communities should also adopt such a strategic culture that drives common thinking and action towards the above-mentioned directions. The elaboration of the Strategic Compass kick-started by the German Presidency in 2020 and to be concluded during the French Presidency in 2022, might serve as a key tool in this process.

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2) MEGATRENDS

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ABSRACT:

The proposed modul introduces some of the underlying and long-term developments - megatrends - (societal, economic, geopolitical, technological) that are key to the thorough understanding of the world we live in. Appreciating the importance of megatrends is also necessary for making predictions regarding the future. Analysing issues regarding security − understood in the broadest possible sense, in line with the approach chosen by EUSecure – should also be embedded in the general framework of megatrends studies. Therefore, this introductory module will guide learners through several topical issues in megatrend analysis, such as the ongoing geopolitical shift, demography and ageing, migratory pressures and their potential long-term consequences. Environmental sustainability, water security and climate change, coupled with overpopulation and overconsumption in the post-industrial world are already a long-term worry for scientists, policy-makers and the population alike. Artificial intelligence is on the other hand an emerging issue that (with mass robotization) will have major security related consequences.

KEYWORDS:

Megatrends; Geopolitical shift; Sustainability; Demography; Ecological transition

Introducing the conceptual framework and its historical development

The term 'megatrends' was coined by John Naisbitt in the early 1980s in his most referenced book (Naisbitt 1982). Since then, the term has been used by several authors and its scope has also broadened. There is no uniform and globally accepted definition, but simply put megatrends are those, often long-term, developments that shape the world and have major impact on the future. Social scientists, economists, futurologists have dissected this term and mostly focussed on a selected area (demography, technology (See Prakash), ecological changes, etc.). Some put this concept to the test and analyse the robustness of this term regarding its capacity to describe or foretell global developments. Slaughter (1993), for instance, pondered the value and usefulness of the concept and its reliability in deriving global changes from. Allahar (2014) studies the practical aspects of megatrend analysis, namely how could or should decision-makers use it for policy purposes.

Key factors

The ongoing academic discourse on the concept itself is in any case not the main concern of the proposed module. Rather, its intention is to provide a general overview of the most important megatrends and support learners to develop and apply an approach to studying global security affairs seeking to also understand the underlying major developments as root causes.

The international system is undergoing a rapid and historic transformation, key actors are reconsidering their role, their geostrategic possibilities and also the toolsets to achieve their geopolitical interests. New geopolitical realities are emerging, the actors and the international system are being reorganized around new nodes that are connected at various levels of their existence. Khanna in his 'Connectography - Mapping of the Future Civilizaton' argues that, since the new Millenium, geo-economic systems have been organized into new types of geographic networks, and these operate on the basis of new kinds of methodological principles. According to Khanna (2016), in this new formation, the direct and indirect interconnection of various infrastructures, even at great distances from each other, arise. As a result, new political realities emerge including major shifts in the political systems and the list of key global actors, including regional and non-governmental actors as well as the state. The role of macro-regions and interregional ties are being redefined (Voskressenki-Koller 2019). The focus of the global political agenda is also changing rapidly. Issues such as technology (AI) and its societal consequences, or sustainability in a broad sense (encompassing environmental, climatic but also fiscal and demographic aspects), the disruptive societal role of giant technological companies, the general societal frustration with democracy in the West, etc. have come to the forefront. A new generation of Westerners has appeared: the crisis generation, including the political elite that must navigate from one crisis to another with contestable rate of success. New and important players have appeared and some of the traditional forces face rapid decline. These disruptive changes are often instigated by underlying changes in the global context whose span is way longer than the Western political (democratic) cycles, therefore decision-makers would need to apply much longer-term political agendas that are most of the time challenging or impossible. Therefore, the gap between "should" and "done" is widening.

Global trends (especially the so-called megatrends, whose transformative power has started to be felt recently by both political forces and societies through the stubborn emergence of different types of crises) by definition defy political reactions, political agendas of short and

medium term, therefore, are very difficult to manage by will. As a consequence, understanding them and their game-changing impact on geopolitics, economy and societal developments is the key to pondering the different possible paths international politics and the global order may follow.

The European Union, and Europe more generally is particularly exposed to the potential adverse effects of unfolding megatrends, which has stark security consequences for European states and also for the integration itself. The EU, as a unique, sui generis form of regional integration, is becoming a differentiated political system (Koller 2012). The unsustainability of several aspects of the economic, political and social constructs on the continent is ever more visible. This intertwined and complex phenomenon of unsustainability as presented by Marján (2010) serves as the starting point of the analysis that has to consider ecological, demographic, budgetary aspects and also politico-institutional considerations that all have considerable security repercussions.

The radically speedy increase (doubling in hardly more than a generation) of the dependency ratio (ratio of retirees over the active population) in each EU member state is one of the most powerful and highly underrated trend that impacts not only the labour market, but the general budgetary stability and, in the medium-term, the sustainability of the European social model itself, has already started to kick in.

The inherent instability of the European demographic situation (persistently low fertility rate – way under the minimal 2.1), the unprecedented demographic ageing of the society, coupled with ever more evident policy failures related to labour force import by immigration is also a game changing phenomenon in the long run. Unless tackled efficiently, it may prove a recipe for further erosion of societal peace and security (Marján 2010).

Looming ecological and climatic trends (including their repercussions such as the increase of the migratory pressure from Africa) is another historical challenge that will have to be tackled against the backdrop of shrinking European budgetary and geopolitical clout.

Migration from insecure and poor regions of the neighbourhood is a long-term reality for Europe. The stark difference of the population pyramid and the level of security and wealth between Europe and most of its immediate neighbouring areas will guarantee that the migratory pressure on Europe will be sustained for several generations. Migration and its potential mismanagement remain a direct and indirect security challenge for the EU and most of its member states.

In the course, our aim is to approach megatrends also from the perspective of the 'self', the individual in the complex, multi-layered international system. Basing our argument on Fukuyama's thesis, the need for recognition of the individual's identity is the key to understanding the political, economic and social processes in the world (Fukuyama 2018).

Conclusions

Megatrends are shaping the international systems in various aspects. Our aim is to show the vectors of these tectonic developments and their future prospects. The course's theme is a very dynamic one which will be mirrored in the educational approach as well by involving learners in an interactive way in making inferences and gauging different possible scenarios. Therefore, besides analysing the major sources of theoretical literature and some of the critically important case studies as well, small-scale simulation games with active student participation are also envisaged. After conceptualisation, our aim is to examine the major trends in the contemporary international system such as global and regional demographic trends, ageing, migration, environmental sustainability, climate change, political polarisation, digitalisation, AI challenges and robotization, as well as the pandemics. By analysing the results of Megatrend indexes, we aim to map the future scenarios in selected regions. The European Union and its role in the reshaped international system will be analysed in detail.

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3) INTERNATIONAL GOVERNANCE: MULTILATERAL INSTITUTIONS, NORMS, REGIMES

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ABSTRACT:

With reference to the 'Situation Analysis in regard to EU security', in the framework of the EUSecure project, this paper establishes a brief state of the art on international governance and multilateral institutions. The structuring topics and main themes of debate are briefly sketched, with a view to the following steps, which will imply a careful selection of items for building the curriculum. The text unfolds under three sequential issues: global governance and world security; international governmental organisations and 'regimes'; and the European Union as a regional governance structure.

1. Global governance and World security

The structure of international politics has substantially changed ever since WWII, which marked also a major change in geopolitics. Simply put, the world moved from state-centrism and fierce political-military competition into a progressive opening to multilateralism and international cooperation. This did not mean, of course, the immediate end of competition or war, but paved the way towards the acceptance of multilateralism as the way out of the many conundrums the world had fallen into in the wars and inter-wars period of the first half of the twentieth century (Baylis et al. 2020).

The creation of the United Nations Organisation (UN), back in 1945, was the institutional landmark of this process. The fact that it carried two major goals in its mission – peace and development – also inaugurated a worldwide political agenda, in spite of all its fragility and the shortcomings that can be identified in its history. The gradual development of the United Nations system with its constellation of agencies, programmes and funds created a global institutional setting never seen before. This is complemented by organisations of regional dimension and different scopes of action (Karns et al. 2015; Weiss and Daws 2018).

The whole structure, however, does not build into absolute coherence and integration, in its overall functioning, nor does the entire world share the same values, nor did the states become 'equal' entities in balance of power terms. Right after the war, the new world order emerged with a major bipolar divide, which was both an ideological and power politics structure. At the time, international security had to be balanced within that framework. Regional organisations for military cooperation were created – the North Atlantic Treaty Organisation (NATO) and the Warsaw Pact – conceived as 'defence alliances' and not as 'collective security structures' as the United Nations. Eventually, the divide spilled over to the UN, thus creating several stalemate situations, particularly at the level of the Security Council. After 1989, with the fall of the Berlin Wall, unipolarism first, and then potential multipolarism emerged, along with a new typology of threats to security, from terrorism to environmental hazards, which remain without full solution, so far, in the framework of 'global governance'. NATO survived through this process and remains a landmark in international security, but the Warsaw Pact collapsed with the end of the empire that had created it (Baylis et al. 2020; Buzan and Hansen 2009).

What is then 'global governance'? It is a concept coined by International Relations theorists to explain a post-state-centric world order, overcoming the classical but now anachronic idea of the 'anarchical international system'. It is, in Rosenau's words, "governance without government" (Rosenau 2008), i.e., a multiple institutional structure relying on several different types of actors (both governmental and non-governmental), some shared values and some joint capacity for normative action; but not a constitutionalised, hierarchical, all-encompassing polity. International organisations (IO) are one of the more formally established agents, but informal networks, ad-hoc arrangements, global conferences and the transnational civil society are also considered part of the setting. International law is quite obviously one of the fundamental pillars. In certain policy areas, 'international regimes' have emerged, which allow for some policy convergence across the world (Karns et al. 2015; Levi-Faur 2012; Zürn 2018). However, global governance also lacks some of the tools of conventional political power, namely a 'hard power' capacity. It often resorts to 'soft power', a pervasive tool in the action of many IO. In many cases, hard power largely remains with the states, while the IO need to adopt means other than binding rules and constraining power, and thus often relies on persuasion, socialisation, peer reviewing and horizontal cooperation (Nye 2005).

The model of multilevel governance was coined to describe the extant nested levels of governance in the world, from the subnational to the national, to the regional supranational, and to the global level. The model must however be adopted with caution, because a layout of

concentric circles may actually not portray the non-strictly-hierarchical nature of the model and will ignore the void areas. Furthermore, a cut-across section must be considered, for encompassing the role of an increasingly transnational civil society (Hooghe and Marks 2016; Piattoni 2010). Nevertheless, the model describes reasonably well the framework in which multilateralism unfolded, a way of conceiving international relations that largely relies on peace and mediation, trade and cooperation among sovereign states.

2. International governmental organisations and 'regimes'

International governmental organisations are therefore a major pillar of global governance. Studies on international governance and multilateralism thus require gaining knowledge on the more outstanding, namely the United Nations and the United Nations system (Hurd 2013; Weiss and Daws 2018). The UN is singular for its unique role and its all-encompassing mission and therefore deserves to be a special focus of attention. Then, the major IO and UN agencies that back the structure of the international system today are also to be studied, notably: the World Trade Organisation (WTO), the International Monetary Fund (IMF), the World Bank (WB), the International Criminal Court (ICC), the World Labour Organisation (ILO), the World Health Organisation (WHO), the International Organisation for Migration (IOM), the Food and Agriculture Organisation of the UN (FAO), and the United Nations Educational, Scientific and Cultural Organisation (UNESCO). Depending on the issue area, some of the functional divisions of the UN will also be fundamental for understanding governance, as for instance the United Nations Development Programme (UNDP), or the United Nations Conference on Trade and Development (UNCTAD) for development and sustainability issues (UN 2019).

As general guidelines, organisations can be studied along the following topics: membership, mission, organisational structure, decision-making procedures, funding, key policy areas, outcomes, challenges and enforcement capacity vis-à-vis the states. On the latter, Hurd (2013) summarises the role of IO in a threefold way that goes from more autonomy to strict dependency: IO as autonomous actors; IO as fora for debate; IO as instruments of the national interests of the member states.

Initially defined as: "a set of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations" (by Krasner 1983, 2), the concept of 'international regime' has been the subject of much academic debate and some controversy (Hasenclever et al. 2008). Regimes are therefore

the consequence of regular cooperation among states, they are issue-specific, and may evolve into the formation of new IO. There is reasonable consensus on the adoption of the term for instance for 'human rights', 'free trade' and, increasingly, for 'environment'. The human rights regime largely draws on international law instruments adopted in the framework of the UN and creates a universal normative framework on the rights of the individual. Problems emerge not so much from the definition of rights as from their implementation by the states. The trade liberalisation regime stemmed from the market-oriented perspective underlying the GATT agreements, first, and then the role of WTO in world trade regulation. Furthermore, its grounding principles extend into political options on cooperation, visible notably in the action of IMF and the World Bank. Reaching consensus on environment has been a longer and tougher process than for the abovementioned regimes, and very much remains to be regulated. In this case, international networking largely draws on global conferences and, for the time being, less on formal organisations – with the exception of the UN Environment Programme (O'Brien and Williams 2016; Stone and Moloney 2019).

Last but not least, the normative framework under which both IO and international regimes operate is often subject to criticism, based on the bias towards 'western' liberal values. This is also a major question of debate: from the political point of view, because it reintroduces the topic of hegemony; and from the cultural and philosophical point of view, because it reposits debates on universalism and cultural relativism (Zürn 2018). However, recent political changes have proven that the 'West' is not a static category either, and have brought about mounting criticism to and even opting-outs from multilateralism, in some 'western' countries.

3. The European Union as regional governance

This module elects as a special focus the case of European regional integration as portrayed in the European Union (EU). Beyond conventional sovereignty, this is the realm of regional supranational integration in which the barriers to break are stronger, the process requiring a qualitative leap into deep political innovation. It is therefore a singular case, because it goes well beyond intergovernmental cooperation in many policy issue areas. The debate on the nature of the EU has led many theorists to assert that we are no longer talking about an IO, but rather about a new polity in the making, a supranational entity that has managed to overcome the conventional attachment of the governments and eventually of the peoples to the national level of sovereignty. The debate on theories of European integration is therefore interesting,

complex and extensive, thus not easily manageable in a short course on the EU. It is nevertheless fundamental for understanding the process (Wiener et al. 2019).

An initial curriculum on the EU will therefore require some basic knowledge, namely: on the origins and aims of the project and the way it unfolded throughout its seventy years; the study of the institutional system and decision-making procedures; and an outlook of policy areas and the amount of integration reached there (Cardoso et al. 2017). The initial idea of functional integration dominated the pathway of European integration, always closely attached to the path-breaking steps of economic integration. The qualitative leaps (and also the shortcomings) introduced by treaty amendments bring to the fore the legal but also the political dimension of the project. Enlargements, in turn, make a clear connection with EU's geopolitical options, grounded on market economy and the rule of law and democracy. The institutional setting of the EU is a major laboratory to understanding international governance, with its twofold type of institutions – those of a remaining intergovernmental inspiration (the Council and the European Council) and those of a clearly supranational imprint (the European Parliament, the European Commission, the European Central Bank, and the Courts). The creative tension thus established (between the national and the supranational) is indeed what sets in motion the political construction. Decision-making procedures are testimony to this (Jones et al. 2012; Jorgensen et al. 2007). Furthermore, EU achievements cannot be assessed without examining policy outcomes. From long-established policies – such as transports, trade, agriculture and fisheries – to the ever enlarging set of policies – environment, consumers, regional and cohesion policies, economic and monetary policies, some areas of social and health policies, internal and external security, etcetera – the Union's scope broadened at a steady pace that gives arguments to those who consider it a new polity, rather than a sophisticated IO (Wallace et al. 2020).

Debating the relevant topics of the present, in the EU agenda, is also a relevant approach and one that has a major potential for bridging the gap between the citizens and the EU. The 'democratic deficit' has fuelled a long debate on EU legitimacy (Kohler-Koch and Rittberger 2007). Without a proper background of basic knowledge on the EU, exposed to media and party politics agendas, citizens may be good targets for demagogic approaches to integration. Throughout the previous decade the financial, economic and then the refugee crises fuelled strong anti-system reactions that led to the endorsement of neonationalism, protectionism and xenophobia, none of which meets the founding values of the European Union (Eatwell and Goodwin 2018; Norris and Inglehart 2019). Disintegration – in the form of the loss of one member-state, the United Kingdom – also emerged, backed by a popular referendum. Now, the

Union faces the challenges of the pandemic crisis and of the recovery to come, while some members test basic tenets of the rule of law and of liberal democracy, both pillars of the EU (Vollard 2018; Webber 2019).

Conclusion

Is the international order relevant for security? Do regional and global arrangements – from regimes to IO – amount to that security? How does the EU fit into this?

The international order no longer relies on bilateral state to state relations. It is a complex network of relations that multilateralism explains well, together with theories on governance. International security has to be put into context within this frame of analysis. That requires specific knowledge on IO and on international regimes. The specific case of the European Union deserves closer observation, not only for its exceptional imprint, but also because a clear understanding of EU security implies reasonable knowledge on the Union as a whole.

Therefore, and with reference to these guidelines, foci will be sought for structuring the curriculum design for the module, so that it contributes to a comprehensive overview of EU security, by placing it in its institutional context.

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4) MARITIME SECURITY AND THE EU

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ABSTRACT:

Piracy, terrorism, illegal trafficking, state disputes and climate change constitute significant threats to international maritime security. The EU has participated in missions in Bosnia, Northern Macedonia, Kosovo, the Democratic Republic of Congo and elsewhere. Nevertheless, it was not involved in maritime operations, although the 2003 European Security Strategy clearly states the likelihood that Member States' warships could be involved in areas such as the Mediterranean or the Black Sea. This situation was reversed in November 2008 when, with Operation Atalanta (EU NAVFOR), the EU provided distinct signs of presence and action against piracy and sea terrorism. It could be said that this initiative in naval operations, including the safe delivery of humanitarian aid to the Horn of Africa, has added another dimension to the EU's role in international military missions. Until recently, the EU stood behind NATO's institutional role in relation to security operations in the region. Despite this, it seems that today the European Union, as regards the protection of sea routes, is gaining confidence and its own independent role and military activity in the international security issues of Europe, Africa and Asia.

"A Sea State is a Great State"
Thucydides

Introduction

There is no commonly accepted interpretation of what "security" means in international relations (Boldwin 1997, 5-6). However, most studies focus on the political priorities of states in their attempt to define this concept, where in these cases the threat that each state, or alliance of states, rushes to face is considered as a matter of security (Brown 1977; Matthews 1989, 162-177; Ullman 1983, 129-153; Romm 1983; Tickner 1995, 175-197; Booth 1991, 313-326).

With the end of the Cold War, this assessment seems to have been treated with skepticism by some scholars and redefined, especially by those who considered that the safety of the individuals themselves should be given priority. Rothschild, for example, believes that throughout human history security has had to do primarily with the safety of the individuals (Rotschild 1995, 53-98).

Another view focuses on the security of human societies (Shaw 1994, 159-176), while according to a different opinion the issue is approached from the security of the individual himself first, then proceeding to human communities, societies, organizations, states and ending with the International system (Buzan 1991). Another point that appears recently prioritises the protection of the planet Earth, rather than the people who live on it, giving priority to ecology and the position that humans are part of nature which they must protect for their safety (Homer-Dixon 1999).

When the discussion comes specifically to Maritime Security, as a part of International Security, the fact is interesting that it considers all the dimensions presented earlier; meaning state, individuals, societies and ecology. Moreover, taking into consideration the fact that almost 80% of the world's trade is transported by sea and the percentage of industries that rely on safe and clean waters, it is obvious that an international actor which wishes to play a central role in international developments should focus on the safety and protection of the sea routes and securitise every aspect arising from Maritime Security.

The strategic position of Europe, surrounded by the Black Sea, the Mediterranean, the Atlantic Ocean and the Arctic Circle, in accordance with the changes that the 9/11 attack brought to the perspectives of international security, as well as the financial competition between the big economies of the Northern Hemisphere (the USA, Russia and China) are signals for the necessity of the EU to act more independently in order to protect the wellbeing of its citizens and of its member states.

Piracy, Armed Robbery and the Potential for Terrorism

The necessity for the EU's presence in security operations could be seen as part of a broader framework of changes in security issues created at the end of the Cold War. The pressure of other international actors, like the U.S.A, for example, for a stronger European presence is explained as imperative or necessary to protect Western interests and to change the views that the EU will remain under the auspices of NATO not being able to develop an independent defense and security policy.

Possible problems with shipping, especially oil tankers, could pose significant problems for Western economies and could prove a potential parameter of extremist movements. During the last decade the activities of piracy have increased the likelihood of terrorists being involved in such operations. The possibility of a terrorist attack at sea, as it is an area without clear

boundaries and rules, has preoccupied researchers of violence (Murphy 2010, 388). Some scholars identify pirates with terrorists as "enemies of humanity", as they operate outside the bounds of legal behavior (Thorup 2009, 401-411). However, in the conclusion of their research, they do not suggest an absolute identification of the pirate with the terrorist, as the two acts - piracy and terrorism - are not identified mainly due to the intentions of the perpetrators behind each act. That is, while piracy was originally a form of private use of force, it could be part of general terrorism as a means for financing activities. Moreover, the sea has not historically been a main area of terrorist activities (Wilkinson 1989; Jenkins et al. 1989).

However, Abu Musab al-Suri, one of Al-Qaeda's leading ideologues, in his book *"Global Islamic Resistance Call"* speaks about the need to hit ships in the Mediterranean mainly because of the strategic and economic importance of the region but also because of the importance of the following seas to the West (Strait of Hormuz, Suez Canal, Bam al-Madeb between Yemen and the Horn of Africa, Jabi Tariq Strait in Morocco) (Al-Suri 2007). There were also reports of suicide attacks on Western-interest shipping in the Mediterranean using small supertanker boats in the Strait of Gibraltar and yachts carrying tourists from Israel to Turkey (Persival 2005, 9; Sezer 2005; The New York Times 2005).

Further, the kidnappings of EU citizens and the deaths of some of them have identified piracy with terrorism, leading to the British government's view that "ransom is not paid to terrorists" (BBC News 2008). Sharing the same view, the French President Nikolas Sarkozy authorized the French Special Forces to attack pirates inside Somali territory after the abduction of the ship *"Le Ponant"* in April 2008.

Moreover, on 6 October 2002, the suicide bombers' attack against the French oil tanker *"M/V Limburg"* in the Gulf of Aden caused a short term collapse of navigation in the Gulf, an oil price rise of 40 cents per barrel and a cost of 3.8 million to the economy of Yemen (Sheppard 2003, 55). This is an example that causes worries as for the capabilities of extremist groups to cause extensive damage to specific countries' economies. Also on 12th October 2002 an Al-Qaeda attack against the USS Cole in the port of Aden killed 17 US Marines. Finally, the sea attacks coming from Tamil Tigers against the authorities in Sri Lanka, as well as the sea attacks of the Free Aceh Movement in Indonesia contribute, in some cases, to the further identification of piracy with terrorism.

At the height of the Piracy crisis in 2011 some 736 seamen were held hostage at one time and 32 ships remained seized off the coast of Somalia (EEAS 2020a). These developments

constituted great challenges to the EU's role on issues of international security. A significant development for the EU was the implementation of Operation Atalanta in 2008. It was the first Maritime operation of the EU in which individual Member States united under the EU flag. In the context of the operation violence can be used, within an institutional framework, at sea on the national waters of other countries in order to protect the interests of the European Member States but also to protect the local population in order to secure humanitarian aid.

Other Issues

States' disputes

The confidence that the EU builds, through operations at the high seas, seems to be expanded also in operations that have to do with state's disputes in order to protect vital interests of member states.

More specifically, since the uprising of 2011 Libya faces an ongoing conflict and instability posing a threat to the security of the region. On the 17th of February 2020 the EU's Foreign Affairs Council decided to launch a new operation in the Mediterranean focused on the implementation of the UN Security Council Resolution on the arms embargo on Libya. The operation named IRINI (Greek for peace) was launched in March 2020 and is mandated to carry out inspections of vessels on the high seas off the coast of Libya implementing the UN arms embargo on the country (EEAS 2020b).

High Seas Crime

According to the Executive Director of the UN Office on Drugs and Crime *"maritime crime involved vessels, cargoes, crews and illicit money flow from many regions. With its reach […] the Office works to curb cocaine trafficking in the Atlantic, heroin trafficking in the Indian Ocean, migrant smuggling in the Mediterranean, and piracy and armed robbery at sea in the Gulf of Guinea"* (UN 2019). Following the UN's efforts, the EU supports maritime security programs in the Gulf of Guinea and security efforts at the Horn of Africa.

Oil Spill in Mauritius. An Environmental Tragedy.

The devastating oil spill in August 2020, which ran aground on a coral reef near Mauritius, caused irreversible damage to the country's natural environment and put at risk the island's economy, food and security. This unfortunate and dramatic example points out clearly the huge damage, a similar accident could cause in the closed sea of the Mediterranean and the possible

consequences in every aspect of the states' functions. For this reason, all the necessary measures should be taken in order to ensure the cargo's safety.

Ice Melting and Security dilemmas in the Arctic

In August 2007, a submarine sank at the North Pole and hoisted the Russian flag on the seabed. The activity upset the surrounding states and other international players.

Rising temperatures have affected the ecologically sensitive area and are expected to have adverse effects if glaciers continue to melt at the same rate. On the other hand, companies and industries involved in mining, shipping, oil and gas, fisheries and tourism are positive about the effects of climate change in the Arctic in order to expand their business there, as the melting ice allows them to exploit natural resources in an area to which they did not have access earlier.

Three of the eight members of the Arctic Council are members of the EU. European countries pay considerable attention to the prospect of finding and exploiting Arctic resources. The European Security Strategy recognizes the need to find more natural resources to meet needs (European Council 2009, 14).

Conclusion

The new international security challenges oblige international actors to play a more central and independent role in global developments. Despite the fact that until recently the EU stood behind NATO's institutional role in relation to security operations, it seems that on the occasion of the protection of the sea routes it is constructing a more independent and confident role. Besides the difficulties, the European Union is constituted by Member States and civilizations which, taking advantage of the open sea and the strategic position of Europe, wrote some of the most important chapters in the history of mankind. Maybe it is now time for the European States to act together and find, once more, the sea current which will lead them to new glorious chapters of history.

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5) MIGRATION

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ABSTRACT:

This module will analyze the securitization of migration, especially irregular, by the EU. Whereas relevant literature has specified that the securitization of the issue of migration in the EU has begun since the establishment of the Schengen Area, this class focuses on the policy actions developed during and after the outburst of the recent refugee crisis in 2015. The analysis is based on the securitization theory, elaborated by the Copenhagen and the Paris Schools of security studies, and the principle that an issue is defined as a security threat either by speech or by practices. It, then, examines the policy choices made by the EU institutions for the control of migration flows. Specifically, it assesses EU policy initiatives on external border controls such as the reinforcement of the Frontex Agency, the initiation of the EU naval mission Operation Sophia and the cooperation of the EU with NATO.

1. The securitization of migration[1]

During the recent refugee crisis, the Syrian conflict, the Libyan civil war, the elusive situation in the Middle East and Afghanistan generated an unprecedented influx of irregular immigrants. In 2015, the EU registered 1.35 million asylum applications, a momentous double increase compared with 627 thousand in 2014, while most of the immigrants were originated from Syria, Afghanistan and Iraq where war and conflicts have outburst (Frontex 2016). The increased numbers of irregular migrants and, at the same time, the terrorist attacks in France, Belgium, Germany and the UK in 2015-2017, intensified the interrelation of terrorism and security threats with irregular migration (Schmid 2016). The security-migration nexus and the consideration of migration as a security issue has been widely studied in relative literature (Huysmans 2000; Geddes 2003; Leonard 2010; Estevens 2018).

The securitization of migration began during the establishment of the Schengen Agreement (1985) for the abolition of internal border controls which included irregular migration in cross border crimes and security issues (Brochmann 1999). Since the establishment of the Schengen

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[1] This work is based on the chapter Asderaki F. and Markozani E. (n. d.).

Area in the 1990s, migration has been correlated with security threats in the EU. Thus, the Agreement was supplemented by the Dublin Convention (1990) and additional measures aiming at creating a "fence" against irregular flows. The preventive policies against irregular migration have been based on three interrelated policy areas: the Common European Asylum System (CEAS), the external agreements on readmission of refugees and the management of migration flows and, finally, the external border controls (Asderaki and Markozani 2016). The process of securitization has been accentuated since the terrorist attacks of 9/11 in the USA and the terrorist bombings in Madrid (2004) and in London (2005). These together with the threats of the "Islamic State" (ISIS) augmented the feelings of insecurity in Europe but also pointed up the concomitance of the growing threat of terrorism with irregular migrants. European policy makers accentuated the link between migration and internal security (Boswell 2007; Moreno-Lax 2018). European decision-makers had long ago attempted the securitization of irregular migration, producing a preventive and multi-dimensional policy which included a rather complex and strict asylum system, close cooperation with third countries on the management of migration flows and control of irregular cross-border crossings (Huysmans 2000). Nevertheless, after the outbreak of the 2015 refugee crisis, the EU intensified the securitization, implementing aggressive means to fight the problem of irregular migration (Ceccorulli 2019). Therefore, the EU has been transforming its migration policy to a security strategy, passing a part of the migration agenda from the policy Area of Freedom, Security and Justice (AFSJ) to the Common Security and Defense Policy (CSDP).

On the theoretical level, the concept of the securitization of migration was developed by the Copenhagen School of security studies and Barry Buzan and Ole Wæver. They explained that a security threat is defined as such through speech and discourse: "Security is the speech act where a securitizing actor designates a threat to a specified referent object and declares an existential threat implying a right to use extraordinary means to fence it off" (Wæver 2000, 251). In this context, an issue is politically delineated as a security threat by the use of respective language publicly which legitimates extraordinary measures (Wæver 2000). The use of phrases in public speech such as that "Managing immigration effectively means addressing also different issues linked to the security of our societies...This requires fighting illegal immigration and criminal activities related to it…" (European Commission 2008, 3), correlate migration with cross-border crimes and other security threats and, therefore, securitize EU policy activities (Sperling and Webber 2019). This has been apparent in the EU policy making after the establishment of the Schengen Area which marked that "the abolition of internal border

controls cannot come at the expense of security" (European Commission 2018). The promotion of security in relation with migration by the relative actors can justify the formation of a policy based on security means. EU institutions, European leaders and policy makers are identified as the ones who perform "the securitizing act attempts to convince" (Wæver 2000; Buzan et al. 1998, 41) take the initiative on securitizing policy acts. As Neal suggested the concept of securitization helps us ". . .a commonly used way to understand how 'security' is invoked to legitimize contentious legislation, policies or practices that would otherwise not have been deemed legitimate" (Neal 2009, 335).

In addition to the securitization through speech, the correlation of migration with security issues can be attained through practices of routines, as the Paris School and Bigo elaborated. Relative administrative and bureaucratic routines and connections through institutional networks of agents can contribute to the securitization of a policy. In case of the establishment of a relation, during the implementation of professional tasks and routines, between agents of a security field with professionals of another field, such as migration, can result in the securitization of practices of the non-security field (Balzacq 2011). As a result, securitization can be the outcome of efficiency of policy practices, mimesis or cloning (Sperling and Webber 2019). These practices include "... population profiling, risk assessment, statistical calculation, category creation, proactive preparation, and what may be termed a specific habitus of the 'security professional' with its ethos of secrecy and concern for the management of fear or unease" (Bigo 2002, 65-66). In the context of migration policy, examples of such practices include the use of the relevant technology and databases for profiling and screening migrants such as the European Border Surveillance System (EUROSUR) (Lavenex 2001; Bigo 2002; Huysmans 2000; Boswell 2007; Ceccorulli 2019).

On the policy level, to deal with the new extensive challenges of the refugee crisis, the EU militarized its policy by reinforcing Frontex and transformed it to the official European Border and Guard Agency of Europe, while European decision makers established specialised military naval missions for the protection of external borders in the Mediterranean. Until 2016, the role of Frontex was supportive and auxiliary, and intended to increase the efficiency of coordinated border controls, aiming at administrative and operational cooperation between Member States in order to implement an Integrated Management System of proper supervision, and the development of the specialized joint sea operations for the control and protection of the EU's external borders (Council Regulation (EC) No 2007/2004). Nonetheless, in 2016 and after the outburst of the crisis on the EU's external borders in the Mediterranean, the EU reinforced

Frontex with the right to intervene in emergency circumstances which jeopardize the integrity and security of the Schengen Area, aggrandizing the Agency's autonomy (Regulation (EU) 2016/1624). Moreover, the new Regulation doubled the number of Frontex's guards (European Commission 2016). On the operational level, Frontex has coordinated the joint sea operations 'Triton' in the Central Mediterranean, 'Poseidon' in the Eastern Mediterranean, 'Minerva' and 'Indalo' in the Western Mediterranean for the control of maritime borders and the rescue of migrants in the sea (European Commission 2015b). The joint operation Triton was expanded and a number of additional experts, vessels and aircraft were brought in while in 2018 it was re-launched under the new name Operation Themis (Frontex 2020). Besides, Frontex has normalised the use of firearms as a means of self-defence of Frontex guards (Leggeri 2016). Frontex was further strengthened in 2019 through an amendment to its regulation which granted the agency even more autonomy on acquiring its own permanent personnel and, as a result, stop depending on the member states' human resources (Regulation (EU) 2019/1896). The continuous development of Frontex's power and the militarization of external border controls reveal the turn of the EU towards the deployment of a more offensive strategy against irregular migration (Moreno-Lax 2018).

The consolidation and empowerment of Frontex has not been the sole indication of the militarization of migration policy. The Action Plan of 10 points, launched by the Commission in 2015 and, particularly, the proposal for the unfolding of the military operation in the Mediterranean for the demolition of smugglers' activity, demonstrated that the actions of the Task Force could be evaluated as the transfer of the means for controlling irregular migration from the institutional framework of Home Affairs to the CSDP and the binding of the European Agenda of Migration with the European Agenda on Security (European Commission 2015a). The most significant aspect of the 10-point proposal of the Commission has been the establishment of the operation of the European marine body EUNAVFOR, similar to the Operation Atalanta for locating and destroying the boats used by smugglers. The Council of April 2015 adopted all of the Commission's proposals and, in May 2015, the Decision of the Council launched the military initiative of the EU Naval Force body, EUNAVFOR Mediterranean 'Operation Sophia' (Council Decision (CFSP) 2015/778). The objective of the operation has been the interruption of the ongoing tragedies in the Central Mediterranean, and the disruption of smugglers' operation model through the strengthening of EU maritime presence. The CSDP mission and operations in the Mediterranean were renewed in the Malta Declaration of 3 February 2017 (European Council 2017a).

Whereas Operation Sophia has been placed in the Central Mediterranean, in the Eastern Mediterranean and along the Greek-Turkish borders, the EU has cooperated with NATO. Since February 2015, NATO maritime force has contributed to the control of irregular migration flows from the Turkish coasts to the Greek islands. NATO fleets agreed to support the Greek and Turkish authorities and Frontex on the surveillance of migrant crossings.[2] Once more, the endorsement or NATO's support and its military fleet underscore the established conception of irregular migration as security threat. Besides, the fight against irregular migration was also incorporated in the announcement for the activation and formation of the Permanent Structured Cooperation (PESCO), (an institutional instrument introduced by the Treaty of Lisbon [Article 42(6) TEU and 46 TEU and Protocol 10]) and the deployment of joined security operations among the participating member states. As the Conclusions of the European Council stated, PESCO has included the creation of *"...a European Defence Fund, composed of a research window and a capability window, and is looking forward to its swift operationalisation.…including by cross border cooperation and participation of SMEs"* (European Council 2017b). The goal has been to tackle migration and to protect external EU borders.

Considering all, the EU policy on irregular migration has been based on the perception of migration as a security menace. This perception has led the EU to normalise the use of offensive and military means to tackle migration flows. Besides, the European Council included in its "New strategic agenda for the EU" as a priority to "defend the fundamental rights and freedoms of its citizens and protect them against existing and emerging threats" which include "effective control of the external borders, fighting illegal migration and human trafficking through better cooperation with countries of origin and transit, agreeing an effective asylum policy" (European Council 2019).

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6) CYBER SECURITY AND THE RISKS OF AI

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ABSTRACT:

Nowadays, growing digitalisation of the European Union (EU) Society poses new relevant challenges. In this background, Artificial Intelligence (AI) plays a significant role, therefore the EU is striving towards becoming the world-leading region for developing and deploying ethical and secure AI. The current level of **interdependence** of **physical and digital systems and infrastructures** steadily increases, it implies a strong and direct **correlation** between **physical events** and **damage to digital systems and networks**, as well as between **cyber-attacks** and the **continuity of supply of a certain service**, due to the related physical malfunctions. Thus, the EU has adopted a risk-based approach, aimed at ensuring resilience and reliability of infrastructures and services. The EU's citizens should be able to trust digital technologies, among others, one of the most disruptive: AI. To this end, the EU is striving to achieve an **AI ecosystem of excellence and trust**. In this paper we present the current and most significant challenges associated with cybersecurity and AI.

Acronyms— Artificial Intelligence (AI), Directive (EU) 2016/1148 (NIS Dir.), European Union (EU), European Union Agency for Network and Information Security (ENISA), Information and Communication Technologies (ICT)

Introduction

Nowadays, the growing digitalisation of the European Union (EU) Society Industry and Economy, strengthened by the boost to the large-scale adoption of technology, fostered by the COVID-19 pandemic, raises many important questions and poses new relevant challenges, both technical and ethical.

Thus, nevertheless European citizens daily take advantages of a wide variety of services, all reliant on both physical and digital infrastructure as deeply interwoven, e.g. energy, transports and finance, with a list of virtually endless benefits, the change towards a massive societal

digitalisation undeniably represents one of the most important challenges in the ongoing debate, even because of its effects on the full enjoyment of human rights and fundamental freedoms.

That said, it is unanimously acknowledged that technological advancements are paving the way for a new season of economic and productivity growth and a sustainable future development, but a batch of numerous threats and risks is likewise recognised associated with the society's digitalisation, as well as the cross-border impact on Member States of any successfully exploited threats.

Against this background, Artificial Intelligence (AI) plays a significant role in improving people's quality of lifestyle. Given this premise, it is not a coincidence that the EU is striving towards becoming the world-leading region for developing and deploying ethical and secure AI (European Commission 2018).

State of the Art Assessment

Today, Information and Communication Technologies (ICT) pervade most parts of the bulk of relevant activities daily carried out in the European single market: health, safety, security, economic or social well-being of people and vital societal functions all rely on a wide variety of services provided by both **physical and digital infrastructures**, essential for the maintenance of the daily needs of modern society.

Furthermore, the current level of **interdependence** of **physical and digital systems and infrastructures** is steadily increasing, and there is no reason to suggest that this trend will stop.

It implies a strong and direct **correlation** between **physical events** and **damage to digital systems and networks** in terms of significant impact on information systems and digital infrastructures it may have, as well as between **cyber-attacks** and the **continuity of supply of a certain service**, due to the physical malfunctions related3.

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3 The Stuxnet case is one of the most famous cyberattacks provoked relevant physical damages. Besides, the number of cyber-attacks steadily increases, as with the impact of successful security incidents - a single incident may have **cross-border effects** if two or more Member Sates rely on the same digital service or infrastructure. According to ENISA, among the most exploited attacks there are malware, web-based attacks, and phishing, whereas the number of denials of service and cyberespionage attacks is declining (ENISA 2020b).

On such grounds, **cybersecurity** has emerged over the last years as a key political priority of **strategic importance**, closely related to the EU's capacity to protect individuals (European Commission 2020a). According to the definition provided by the EU Agency for Network and Information Security (ENISA), cybersecurity "comprises all activities necessary to protect cyberspace, its users and impacted persons from cyber threats" (ENISA 2017).

In this regard, it should be stressed **the concept of security** has evolved from the former **all-hazards approach** focused on terrorism, to the more **"mature" risk-based approach** adopted by the European legislators within the NIS Dir, focused on cyberthreats.
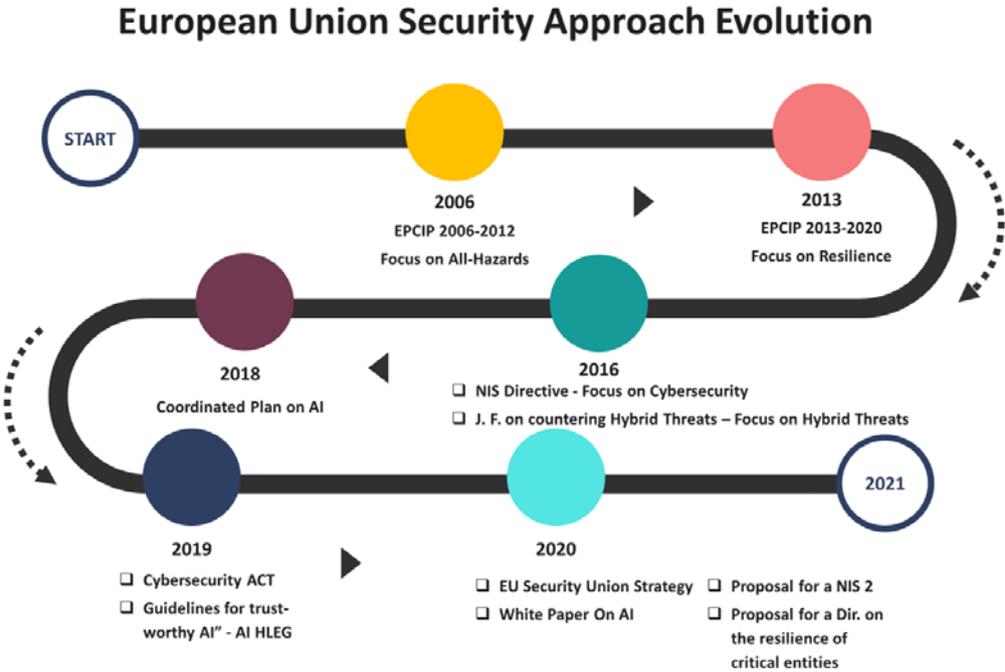
Figure 1. European Union Cybersecurity and AI Approach

In accordance with the provisions of art. 4, par. 1, n. 2), of Directive (EU) 2016/1148 (NIS Dir.), today, **security** represents "…*the ability of network and information systems to resist, at a given level of confidence, any action that compromises the **availability**, **authenticity**, **integrity** or **confidentiality** of stored or transmitted or processed data or the related services offered…*", and it requires **appropriate** and **specific countermeasures** to be implemented to mitigate and thwart the risk.

Such protection activities aim at implementing the **CIA Triad**, an acronym for Confidentiality, Integrity, Availability, the **traditional security properties**.
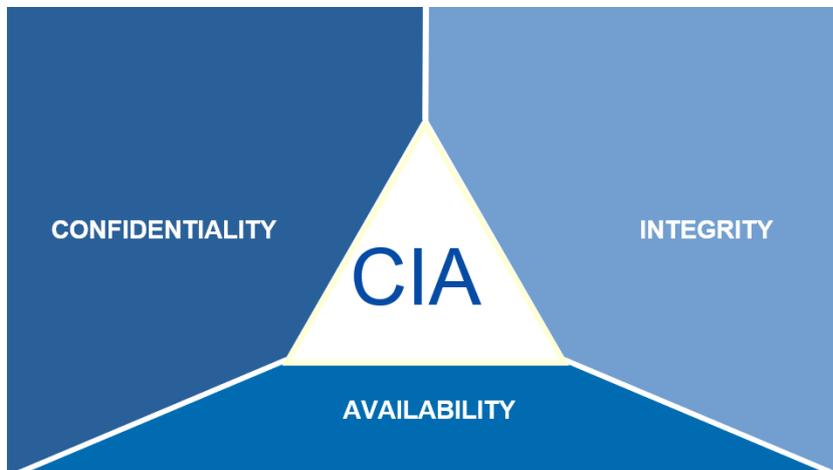
Figure 2. CIA Triad

Firstly, confidentiality preserves the data from unauthorised disclosure or access. It is hardly relevant, for instance, whenever personal data are processed. In this regard, authentication is the procedure carried out to verify the identity of any user who wants to access the collection of data4.

The same, the integrity of such data should be ensured, e.g. by thwarting the tampering of the data, namely, the alteration of something that is expected to be uncorrupted. It refers, among others, to the data in transit in the network, otherwise the data stored in a portable device.

Finally, the last element of the CIA Triad is availability: it ensures that the data collected are always available and fully accessible when needed.

Against this background, over the last years the emergence of a new disruptive technology should be noted which promises to transform citizens' life: the AI, "…*systems that display intelligent behaviour by analysing their environment and taking action — with some degree of autonomy — to achieve specific goals…*", as defined by the European Commission Coordinated Plan on AI (European Commission 2018).

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4 Authentication procedure may rely either on one or multiple factors. The latter, called strong authentication, rely on something only the user knows, something only the user possesses, something the user is.

Its advancements would not have been possible without the availability of large data sets, namely the Big Data, together with the significant increase of the computational power needed.

Given these premises, and emphasising the application of the above-mentioned CIA Triad principles to AI too, we can list some of the most significant current challenges cybersecurity experts and EU policy makers must face together:

Resilience and reliability of infrastructures and services

All the efforts should aim at increasing the **resilience** of infrastructures and services, working on prevention, preparedness and response, against threats of different nature, both **cyber-attacks**, either already acknowledged or zero-day attacks, and against **physical** and **hybrid threats** (European Commission 2013).

Adequate protection against **cyber-threats** requires the protection of "*information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide confidentiality, integrity, and availability*", that is, what the National Institute of Standards and Technology intends for "**Information Security**" (Glossary | NIST).

Consequently, to prevent accidental or unlawful incidents a **risk assessment** is required, a sub-process comprised within and being an integral part of the Information security risk management process5. However, risk assessment cannot commence without the preliminary **identification of critical assets**, distinguished on the basis of some criteria, among others, the level of exposure and the need of protection.

As regards AI, according to the AI asset taxonomy carried out by the ENISA (ENISA, 2020a), the key assets are the data and the processes, namely the set of operations performed on the data, the models which the AI resorts to, the actors involved, the Environment/Tools, that include the Machine learning platform and the monitoring tools, and, finally, the artefacts, such as the data and metadata schemata (ENISA, 2020a).

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5 We consider the Information security risk management process described by ENISA in the "Guidelines on assessing DSP and OES compliance to the NISD security", November 2018.

Once the intervention boundary is defined, it is possible to straight proceed into the activity of **threats** and **vulnerability mapping**: bearing in mind the assets identified, the **threat modelling activity** aims at identifying threats and prioritizing them.

Only after those activities will it be possible to choose and implement the appropriate countermeasures.

But cyber-threats do not exhaust the set of threats to which we should be prepared for.

After terrorist attacks launched in the early 2000, **physical protection** strongly emerged as an urgency: **cybersecurity** and **physical security** clearly **overlap**: either a successful physical attack or an adverse natural event is able to compromise the continuity of a service and requires the capacity of **prevention**, **preparedness** and **response** (European Commission 2013).

Finally, the third class of threats concerns **hybrid threats**. This term refers to the mixture of coercive and subversive activity, conventional and unconventional methods, all aimed at generating ambiguity and launching sophisticated disinformation campaigns (European Commission 2016).

Flexibility

Cyber-threats quickly evolve, therefore approaches and organisations should be flexible, avoiding sets of measures *ex ante* identified, in order to deal with new challenges as they arise (ENISA 2020b).

Educational challenge

Cybersecurity capacity building is still not enough, therefore a new urgency emerges: a **culture of cybersecurity by design**, as an opportunity to further enhance the link between the enjoyment of human rights and fundamental freedoms and the exploitation of the power of new technologies.

Therefore, joint degrees and the development of multi-disciplinary curricula are supported, for example in law or psychology and AI, in order to prepare the new workforce with an adequate level of awareness and safe behaviour.

Furthermore, **AI** should gain the appropriate momentum by investments in **research**, **training programs** and **awareness campaigns**, to exploit its power in the management of crisis

scenarios, and to facilitate the compliance with regulatory requirements provided for by, among others, Reg. (EU) 2016/679 and the NIS Dir.

AI ecosystem of excellence and trust, according to the principle of *"ethics and security by design"6*

EU is striving to achieve an **ecosystem of excellence and trust**: a coordinated European approach is adopted to avoid fragmentation and to pursue the same objectives, by means of a common set of actions comprised in the **Coordinated Plan on Artificial Intelligence** (European Commission 2018).

The **lack of trust** is the major risk to face, due, for instance, to the current uncertainty as regards:

- the **allocation of responsibilities** in case of incidents and material or non-material damages **provoked by the AI**
- the opaqueness of AI decision-making processes.

A "**trustworthy AI**" firstly should comply with the law, secondly, should fulfill ethical principles, thirdly, should be robust against cyber and hybrid threats (European Commission 2019). These are the three "**Guidelines for trustworthy AI**" drafted by the **AI high-level expert group**, set up by the EU Commission and in charge of drafting AI ethics guidelines as well as preparing the basis for **a human-centric AI**.

Current research aims at consolidating an **AI decision-making process no longer**:

- opaque

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6 "For AI made in Europe one key principle will be "**ethics by design**" whereby ethical and legal principles, on the basis of the General Data Protection Regulation, competition law compliance, absence of data bias are implemented since the beginning of the design process. […]. Another key principle will be "**security by design**", whereby cybersecurity, the protection of victims and the facilitation of law enforcement activities should be taken into account from the beginning of the design process" (European Commission 2018). AI has not reached its full potential yet, but numerous applications have been discovered in finance, in manufacturing, in the healthcare sector, in cybersecurity itself – contributing to the development of mature Cyber Threats Intelligence tools – improving the quality and efficiency of services.

- bias-based
- non-compliant with the privacy principles
- vulnerable to cybercriminal attacks.

Thus, besides the CIA Triad, some additional **security properties** are required:

- **Human agency and oversight**, implementing a human governance mechanism intervention
- **Technical robustness and safety**
- **Diversity, non-discrimination and fairness**, avoiding affection of data sets' historic bias
- **Transparency**, facing the matter of the explicability of the algorithmic decision-making Process
- **Privacy and Data Governance**
- **Societal and environmental well-being** and **Accountability** (European Commission 2019).

Therefore, current research efforts aim at avoiding that training schemes for AI inherit biases from their programmer and improving a fully compliant AI.

Common AI Legal Framework

AI requires a common legal framework to resort to, as already done both with data protection regulation and with cybersecurity regulation.

A few years after the adoption of the NIS Dir., the **Cybersecurity Act,** namely Reg. (EU) 2019/88, firstly, strengthens the ENISA's role, conferring to the latter a permanent mandate, and, at the same time, secondly, promotes the establishment and maintenance of a **cybersecurity certification framework at Union level** for digital products, services and processes.

Certifications and standards will be the springboard for a compliant AI, too. A set of Training data sufficiently representative, in order to avoid bias, as well as information provisions and, finally, available and accurate records regarding both the data set used and the documentation on the programming and training methodologies will implement a real trustworthy AI (European Commission 2020b).

Conclusion

Nowadays, cybersecurity is no longer a technologist's concern: **policymakers and cybersecurity experts** should **work together** to tackle those challenges described, involving

stakeholders for identifying and defining innovation strategies and promoting **public-private partnerships**.

Fragmented efforts across multiple and different solutions may be the major hindrance: cooperation and coordination of EU activities and information sharing among Member States are the priorities.

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7) WATER SECURITY AND WATER GEOPOLITICS

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ABSTRACT:

Water challenges can no longer be connected to arid regions of the world exclusively. Europe needs to take action, as increasing floods, droughts and water scarcity, all linked in a way or another to climate change, are just some of the threats that affect Europe as well. To confront these threats, Europe needs a perceptive and progressive water strategy. It also needs to set an example to the rest of the world, that expects Europe to proceed constructively and collectively to the most pressing natural resource matters facing the world. These highlight the fact that water crises should be approached not only in isolation through policy reforms, technological innovation or investment, which will require increased co-operation among all stakeholders. Experience shows that unless the parties are able to come up with a shared vision of the transboundary issues at hand, the finding of a workable solution is needed. Negotiation support systems, ranging from the hydrology of the basin, up to finding multi-criteria feasible solutions, or Pareto optima for that matter, is key to the effective solution(s). Europe might as yet not have an entirely developed water security strategy, but it has a strong commitment to evolve one. This basis is contained in the comprehensive water legislation of the European Union and this is extremely important as the problems related to water, especially water security are soon becoming one of the most important issues on Europe's environmental agenda.

Introduction

Water is a fundamental natural resource, moreover, the most essential necessity for life. As Scocca (2019) writes, water involves all biotic and anthropic activity which is a strong socio-economic determinant for the well-being of human communities, also affecting ecosystems and the environment. Water-related issues encouraged the movement of the human right to water, and actions for safe and clean water.

As a result of the population explosion of the twentieth century, when, in a single century, the Earth's population tripled from 2 billion to 6 billion, water abstraction has increased sixfold worldwide. As a result, a growing gap has opened up that is impeding the sustainability of our human and environmental systems (UNESCO 2018). The impact of climate change and the increasing frequency of water-related natural disasters like floods and desertification are

detected as new emergencies and aggravated by population growth. These factors induced the formulation of the notion of water security.

Water Security is defined as "the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability" (UN-Water 2013). Water Security is based on 4 main pillars. Firstly, on good governance, which means adequate legal regimes, institutions, infrastructure and capacity are in place. Secondly transboundary co-operation, that is to say, sovereign states discuss and coordinate their actions to meet the varied and sometimes competing interests for mutual benefit. Thirdly, peace and political stability, where the negative effects of conflicts could be mitigated and/or avoided, including reduced water quality and/or quantity, compromised water infrastructure, deteriorating human resources, related governance, and social or political systems. And fourthly, financing, including innovative sources of financing complement funding by the public sector, including investments from the private sector and micro-financing schemes. Achieving water security requires collaboration across sectors, communities, disciplines and political borders, to reduce the risk of potential conflicts over water resources (UN-Water 2013).

Water Security on the global scale

On the global scale the average annual water supply per capita has decreased dramatically since 1975: from a global average of approximately 15,500 m^3/person/year to an average of 5,000 m^3/person/year. This number is a global average for the current population of 7.7 billion, with a very wide range from 120,000 m^3/person/year in Canada to 11,700 m^3/person/year in water to 120 m^3/person/ year in Jordan.

Today, the Earth's freshwater supply is as much as it was in the period between 5000 and 9000 years ago. 97.5% of all water is contained in the seas and oceans, while the remaining 2.5% is humankind's freshwater supply. About 60% of this is solid water, i.e. ice and snow found in the Arctic, Antarctica, glaciers, alpine snow cover and permafrost. 90% of the remaining freshwater is non-frozen groundwater. What is left is a total of 42,000 km^3 of easily accessible surface water (Shiklomanov and Rodda 2003), 90% in lakes and reservoirs, and the remaining 10% in watercourses.

Over the last century, the number of consumers has increased in an exponential manner. This is the primary reason for the drastic decline in water resources per capita. The global water crisis does not mean that the water "is running out" for us, since the hydrological cycle is a continuous cycle. The crisis stems from the way we have our institutions manage our water: legal framework and its effectiveness, the operation of the hydro-meteorological detection systems; making the data about water publicly available. Lastly, how, if at all, does scientific research support government decisions (Szöllősi-Nagy 2020).

The acceleration of the hydrological cycle

The acceleration of the hydrological cycle can have many serious consequences, namely that more extreme hydrological events will occur per unit time. The degree and frequency of droughts and floods will increase. In the 20th century and nearly 80% of all natural disasters were water-related (Szöllősi-Nagy 2018). Drought refers to a temporary decline in water availability, for instance, when the precipitation level expected to diminish over a long period of time. Water scarcity arises when the available sustainable water resources fail to meet the water demands. We must develop strategies to prevent water scarcity. An adequate supply of good-quality water is a pre-requisite for economic and social progress, we must prepare for saving water, and managing our resources more efficiently (EU 2010).

With the temporal and spatial variations in rainfall patterns, groundwater reserves can also change significantly, so climatic changes and fluctuations affect the entire hydrological cycle. Climate change is thus superposed on anthropogenic effects - granted it is partly anthropological in nature as well - that is, it is expected to further exacerbate the uncertainty of hydrological events and thus the risk factors related to water management.

One needs to note that nearly 30 percent increase in the global population will take place over the next 35 years. The resulting population of more than 9 billion, is expected to cause security changes by orders of magnitude greater than those expected from climate change during the same period in the hydrological cycle and water management. Unfortunately, however, it is precisely the hydrological cycle that receives the least attention in debates and research on climate change. The importance of solving this is a vital question central to humanity's survival, and the importance of adaptation via water management cannot be emphasized enough. The reasons for the change are global changes that define the boundary conditions of our potential

local actions. In addition, our existing water resources are under pressure from global demographic trends including migration and radical urbanization.

Water pollution

At least a similar magnitude problem arises from the issue of water quality. According to recent data 2 million tons of waste and sewage are discharged into the world's waters yearly (Corcoran et al. 2010) where 80% of the pollution is released untreated into the recipients. In severe cases of water pollution contaminants interfering with the environment and affecting human health transitionally (Haseena et al. 2017). The risks of contamination are aggravated because water is a universal solvent in which any kinds of pollutants might occur. The WHO reports that 80% of diseases are spread through polluted water as they are waterborne (Scocca 2019).

The situation in the European Union

The vast majority of people in Europe enjoy access to safe drinking water. This is also due to over 30 years of EU legislation for ensuring water quality. The European Commission proposed in February 2018 to revise the EU legislation for improving access to higher quality of drinking water and provide widely available information to citizens (Scocca 2019). According to the EC the new measures are capable of reducing potential risks associated with drinking water from *4%* to below 1%.

Despite the fact that The Charter of Fundamental Rights of the EU does not contain a specific provision, certain principles set out in the text can be interpreted as also being of relevance for access to safe drinking water and sanitation, such as the right to dignity (Article 1) or the right to life (Article 2). A significant chapter relies on the protection of the quality of Europe's water resources. In the region, about 50% of drinking water is taken from groundwater and 40% from surface water while 10% is from other sources, such as artificial groundwater recharge or bank filtration.

The matter of environmental preservation has been a high priority since the mid 1970s, when the EU started adopting the first directives in this subject. The EU adopted a directive that set standards for the discharge of dangerous substances into natural water bodies (EEC 1976).

In 2000, the EU adopted a unified approach to water legislation, the ***Water Framework Directive (WFD)*** (EU 2000). This legislative measure aims at a legal framework to ensure the protection and restoration of water quality, improving the ecological and chemical quality of water as well as the sustainable use of water resources. This is in conjunction with the ***Drinking Water Directive (DWD)*** (EU 1998), concerning the quality of water for human consumption. (Scocca 2019).

Harmonizing the essential quality standards in the EU, the objective is to protect human health from adverse effects of any contamination of water. Water security is also covered at Member State level in terms of regulation. These legislative initiatives illustrate water quality priorities (Scocca 2019).

Physical security of water in the EU mostly relies on the ***Floods Directive*** (EU 2007), providing regulation for inland and coastal waters. This has been the catalyst for introducing a risk management approach in the Member States prone to floods (Scocca 2019). The two other Directives on ***Groundwater*** (2006/118/EC) and ***Quality Standards*** (2008/105/EC) as well have been the catalyst for introducing a risk management approach in the EU.

The Sustainable Development Goals (SDGs) were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. There are 17 goals among which SDG 6 is specifically related to water security. The new approach of the EU is in line with the SDG 6 to "achieve universal and equitable access to safe and affordable drinking water for all".

Water scarcity and drought in the EU

On the average, Europe is not an arid continent, but decreasing suitable water resources for nearly half of the EU population are alarming. The water exploitation index (WEI) indicates the amount of water abstracted each year as a proportion of total long-term freshwater resources. It is an indicator of the pressure on freshwater resources. A WEI above 20% implies that a water resource is under stress, and values above 40% indicate severe water stress and unsustainable use. There are several countries e.g. Bulgaria or Spain which recently use up at least 20% annually of the long-term supplies available. During the recent disastrous drought in Cyprus more than 40% of the countries renewable supplies were used up (EU 2010).

"Europe's geography and climate mean that water distribution is uneven in the EU, a situation made worse by human activity. In southern Europe, for instance, tourist development has increased demand for water, resulting in desertification and salt-water intrusion to aquifers located in coastal freshwater zones. Water scarcity is most acute in the south, but by no means limited to these areas: most Member States have suffered episodes of drought since 1976, and many now report frequent water scarcity problems and over-exploited aquifers" (EU 2010).

Summary

While climate change is a slow process, the direct impact of human activity has been measurable for decades. The primary cause of the impact is demographic change. With the demographic dynamics of the 9.6 billion population projected for 2050 (growth, mobility, migration) and the consequent changes in secondary land and water use the functioning of the hydrological cycle will fundamentally change. About 80% of the consequences of climate change, which is caused by human activity, are water-related. Sustainable water management is therefore a key issue for humanity's sustainability. As a result of the expected acceleration of the hydrological cycle, the likelihood of extremes will increase, meanwhile the Earth's water supply will not change. As a result of population growth, water resources per capita will be drastically reduced by the middle of the century, which could obviously be an unsustainable and serious source of conflict, both internationally and domestically (Wolf 2007).

Obviously, more water storage is needed to achieve water, food and energy security. Rational and sustainable management of highly sensitive and highly vulnerable groundwater is extremely important. If we connect the various aquifers to 80-meter wells without any consideration, hydrogeological expertise, measurement, or monitoring, then we are transferring the first aquifer completely polluted with non-point contaminants into the downstream aquifers, depriving future generations of clean water (Szöllősi-Nagy 2020).

The current water legislation of the EU ensures a strong basis for public health and environmental protection in the whole Union. The EU WFD states that "water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such" (EU 2000). It is a very important and forward-looking feature of EU water policy to ensure the good quality of waterbodies while implementing public participation and improving transparency.

True that the introduction of water security approach happened relatively early in the EU, but more efforts are needed in order to further improve the role of water in environmental

legislation, for example the encouragement of public–private partnerships or a better coordination across sectors would be highly desirable. These directions could also be advised universally in order to make the concept a coherent and functional principle for a conscious integrated water management (Scocca 2019).

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8) Social Media Issues and Fake News

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ABSTRACT:

In recent decades, the internet and social media have impacted all fields of life globally. Social media platforms have become a major channel for interpersonal as well as institutional communication and may even influence international relations. On one hand, widespread use of the social media and provision of content by citizens may lead to more participatory democracy, but, on the other hand, it provides opportunity for new ways of deception by overtly modifying various factors of the communicative situation. The new forms of deception have been termed "fake news", however, the phrase refers to a diverse class of phenomena. Its complexity requires multidisciplinary approaches, which results in a lack of standardised and universally accepted definition and classification. The difficulty of the legal regulation of information disseminated on social media is highlighted by current debates on media law. The study attempts at mapping the areas of social communication which may be targeted by fake news and offers an overview of the factors (technological advancements, the transformation of news production, individuals' need for structuring society and exchanging and organising information, slow legislation) which may prompt the spread of fake news. NATO and EU policy on building resilience against fake news is summarized.

KEYWORDS:

Fake news; Social media; Deception; Resilience; Legal regulation

1. The effect of the digital age on social communication

The technological advancements of the digital age have impacted communication in all domains of society. The internet has evolved as a channel for (and, actually, a component of) operating economy, public administration, healthcare, public utilities and education. In addition, it is a major provider of entertainment. By 2019, the share of households with internet access reached 90% in the European Union (Statista 2021). In parallel, active social media penetration in EU member countries ranges between 91% (Malta) and 45% (Germany) (Statista 2020).

Globally, Facebook ranks first among the most widely used social network platforms with 1,904.1 million users, followed by Instagram (1,000.8 million), Snapchat (347.3 million) and Twitter (317.3 million) (Enberg 2020). A novelty of our era is the increased use of technological

channels of communication and devices resulting in a symbolic representation of an individual's self (online identity), and of interpersonal relationships (online communities). This mediatisation of all types of relationships has led to changes in the flow of information and in the perception of factors of communication: the models of communication used for the description of the traditional media (print media, radio and television) were founded on models of interpersonal communication inherited from ancient rhetoric and focused on the questions who, what, when, where, how, to whom, and why. In other words, the major clues for creating and sending, as well as receiving a message were the following factors: source, topic, time, place, style, audience, reason/purpose. The art of persuasion, which developed from ancient rhetoric to 20th century propaganda, exploited psychological opportunities lying in these factors, for instance, concealment of the source, choice of rational arguments or emotional language, or hiding the ultimate purpose. One problem with online content is that more than one factors may become variable, confusing or concealed, for example, the extra-textual (pragmatic) references (time and place of an event) may get modified meaning due to constant updating of a news text; the source may be covert due to multiple sharing in the social media, or it may be deceptive, looking similar to a legal news- or business portal.

It appears that social communication has transformed from vertical into horizontal, since the appearance of user generated content gives the impression that citizens are communicating directly with one another, rather than expecting inspiration and instructions from the elites. As a result, the digital age may ideally lead to more democratic participation, a total freedom of speech and assertion of human rights. However, there are signs that suggest danger lurks in the rapid technological improvement surpassing social adaptation and transgressing legal regulation. Besides, owing to the technological and linguistic convergence of content manufactured and processed privately or socially, e.g. that of citizen produced content and news industry produced items, the boundaries between earlier distinguishable genres of social communication have become vague. In addition to the enormous amount of online information constantly bombarding citizens, it allows a disguise of messages and a confusion and manipulation of citizens that may endanger both an individual and a community. A collective term "fake news" is used for various types of deception and persuasion.

2. The emergence and definition of fake news

A recent study has published statistics on the sudden increase of mentions of fake news and related terms in academic literature in the past twenty years (Wang 2020, 160-161). Despite the frequent reference to fake news, no standard, universally accepted definition is available. One

reason may be the complexity of the phenomenon requiring interdisciplinary approach. Thus, among other academic branches, linguistics, psychology, social psychology and social science, information technology, political science, military science, media research and media law are all involved in research. Attempts at offering a definition and typology of fake news and related terms may only be centred on one or a few of these perspectives (e.g. Ahmed et al. 2018; Edson et al. 2018; Botha and Pieterse 2020). In the literature referenced in this study *misinformation, disinformation, fake news, false news, junk news, yellow journalism, hoaxes, factoids, propaganda news, news satire/parody, advertorial* (a combination of editorial and advertisement) and when it comes to false videos, *deepfakes* are terms that are used for describing deceptive communication which aims at misleading the target audience.

Apart from asymmetry in the communicative situation, the common feature of all types of deceptive communication is causing harm to the target audience. Consequently, a possible typology may involve the areas of reality in which damage is intended: fake news affects ethics of journalism and news consumption; combined with junk news, factoids and propaganda news and deepfakes it impacts politics and international relations and may become tools of hybrid warfare; fake news may be harmful for economy and business; and, finally, pseudo-scientific news may do damage to healthcare. On the whole, fake news destroys social cohesion by weakening trust in democratic institutions and collaboration among groups of society (intra-state impact) and international cooperation by targeting prestigious organizations, foreign states, or even directly the population of foreign states (inter-state impact). The definitions of fake news developed so far often include the element of "intentionality", e.g., intention to do harm. For instance, Tandoc et al. (2020, 383) write: "However, recent studies use the term to refer to a specific phenomenon – false information packaged to look like news to deliberately mislead." Intention is difficult to prove in the case of linguistic forms, so, this definition offers evidence for the interdisciplinarity of the issue: deliberate damage can be proved when a message is contrasted with reality. Nevertheless, often there is no evidence for physical damage because it is of psychological, political or other nature.

3. Areas affected by fake news

The most interesting area of current research is probably why fake news spreads via the social media and why individuals or groups respond in certain ways. Cognitive bias, self-persuasion, the bandwagon effect, Media Equation Theory may all contribute to our understanding how individuals behave online. An individual grows up by accepting certain values which they use later in practical reasoning; they try to preserve their face in society as acceptable and

respectable; they have a strong desire to belong to a large and powerful community, so they join the majority, and they do not have the neurological capability to clearly distinguish between physical experience and perceived virtual images. These aspects are exploited when deception takes place, consequently, the factors in communication such as sender, message, channel or receiver may each be analysed from the point of view which one is abused or distorted (Jayakumar et al. 2021). For example, majority opinion may be pretended with the help of online bots or botnets and an individual may be locked up in an opinion bubble.

For society, fake news poses a threat to social order by allowing the interference of foreign powers and NGOs or even criminal groups in election campaigns, shaping public opinion about home political or foreign political issues and even promoting subversion. From the point of view of society, "fake news" conveys the idea that news industry has transformed, ethical and professional standards have declined, partly due to the time pressure, and partly due to the competition for the attention of news consumers. Because of the convergence of standards of institutionalized journalism and citizen-provided content, as well as the appearance of troll armies and robots and botnets, the interference of outsiders is difficult to reveal (Agarwal and Alseedi 2020).

4. Fake news as a security risk

The "fake news" phenomenon has been identified as a security risk by NATO as a component of hybrid warfare, against which it has launched joint combat with the European Union (Hagelstam 2018). A prominent source of information on fake news and persuasion is the online journal Defence Strategic Communications issued by the NATO Strategic Communications Centre of Excellence (n.d.) based in Riga. The NATO Cooperative Cyber Defence Centre of Excellence in Tallinn focuses on technological features of cyber threats and cyber defence (CCDCOE n.d.). Apart from these, a freestanding legal entity was opened in Helsinki in 2017 under the name European Centre of Excellence for Countering Hybrid Threats (n.d.), which cooperates with the European Defence Agency as well as NATO.

The EU has also developed a strategy for informing the public about potential threats. For instance, in 2018 the European Strategy and Policy Analysis System (ESPAS) published an assessment of the impact of digital technology entitled *Global Trends to 2030: Identities and Biases in the Digital Age* as a part of a series. Additionally, the complexity of the legal background of regulating social media platforms and rooting out fake news is subject to public controversy in the EU (Niklewicz 2017) and other analyses are displayed on the home page of

ESPAS, for instance, *Who said what? The security challenges of modern disinformation,* an academic analysis by the Canadian Security Intelligence Service (2018). Since 2018, the European Commission has organized a series of *European Media Literacy Events* in the form of a road show in order to enlighten citizens about fake news and assist in protection against malicious influence.

In an effort to raise awareness and build resilience, researchers have published books for students in higher education (Peters et al., 2018), along with other volumes explaining the psychology of the social media and the dissemination of fake news (Greifeneder et al. 2020) and summarizing the transformation of journalism in the digital age (Winston and Winston 2020). Elías (2019) analyses the effect of the digital age on the decline of the prestige of science and on people's minds.

On the whole, the phenomenon of fake news can be examined from the following angles: I. the asymmetry in the communicative situation (distortions in factors caused by new technology); II. the detectability of deception by identifying textual features and other characteristics of communicative content; III. the detectability of trolls and bots or botnets in communication patterns; IV. the intention to mislead, if evidence from reality is available. Areas where the impact of deception is possible to demonstrate are as follows: 1. political news; 2. economic news; 3. clickbait content (related to business and advertising); 4. science and health related issues; 5. yellow journalism (sensationalism); 6. violating privacy (data collection and profiling) and bullying.

5. Fake news and law

Fake news is not a legally exact concept. It is necessary to clarify the question of how the law views falsified or fake news, which is so dangerous to individual or collective values that it is ordered by the state to prohibit it.

Within the framework of the protection of freedom of expression, according to the currently applied doctrine, lying cannot be prohibited in a general sense. At the same time, many provisions of the legal system prohibit the publication of false claims in certain situations, under certain circumstances or with certain content.

One of the most important areas of the protection of the right of the human personality is the protection of reputation and honor, or the right to slander, in order to prevent unfavorable and illegal changes in the external and social perception of the individual. These rules are intended to ensure that public opinion does not unduly destroy the image of the individual, in particular

by making untrue and offensive statements of fact. The approach of each state differs significantly on this issue, but the common starting point of Western legal systems is the strong protection of the debate in public affairs, so that the protection of the privacy rights of public actors takes precedence over freedom of expression.

There are a number of specific rules that apply to statements made during election campaigns. On the one hand, they aim to provide strong protection for communication in the campaign: the most strictly protected inner core of freedom of expression is political speech, and what is said in a campaign is as closely linked to the functioning of democracy as to democratic procedures. On the other hand, these procedures must be protected so that a candidate or a community or party does not distort the process of democratic decision-making and does not ultimately cause harm to the democratic order itself. It is no coincidence that the fake news problem became most acute during election campaigns (e.g., the 2016 U.S. presidential election, the 2019 European Parliament election).

The legal systems of many European countries regulate the publication of political advertisements, given their volume, the equal distribution of media space, the subscribers of advertisements or the limitation of the amount of money that can be spent on them. The main purpose of this is to ensure a level playing field to the detriment of parties and candidates with greater financial resources, for the benefit of others. The speeches of politicians running the campaign may also be restricted. The exercise of good faith during the campaign, including the prohibition of intentional lies, is required by European doctrine of freedom of expression, but untrue, misleading claims published for commercial purposes cannot be given constitutional protection, which also follows from European consumer protection rules (Koltay 2021).

In addition, it is worth looking at the initiatives of the European Union to regulate or to initiate the self- or co-regulation of the phenomena of fake news, with special emphasis on the proposed EU regulation of digital platforms.

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9) SUSTAINABILITY AND DEVELOPMENT, ENVIRONMENTAL PROTECTION AND CLIMATE CHANGE

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ABSTRACT:

Climate change, greenhouse gas emissions have negative impact through different economic, political and social factors. Climate security principles cover different aspects that could prepare governments for climate induced geopolitical instability. The EU is the world leader in climate change mitigations and still has to account with unmet challenges. Different legislative acts and amendments supporting the European Green Deal key targets will secure EU's position in leading climate security. EU's climate security principles through hard and soft governance, eventually will have positive impact ensuring durable jobs, energy security, resilience and prospering economy for regional and local authorities through technological innovations.

Situation analysis of climate security from EU perspective

Climate Security

Climate change trough social, political and economic factors have multidimensional negative impact on national and international levels. McDonald (2018) has taught that climate change is increasingly thought of as a security issue, "there is nothing inevitable about approaching climate change, or contestation over approaches to climate change, through the lens of security".

Environmental Security discussions due to its multidimensional factors affecting climate change, transpose to climate security discussions as the focus is shifted to global aspects which directly can be related to local ones. According to Dalby (2013) the new form of life on the planet, called "'industrial humanity' has taken the future of the planet into its hands, even if it is only now beginning to realize that this is what is happening". Ecological security is a fundamental multidimensional biosphere security perspective. Xiao and Chen (2002) defined ecological security as mankind's effort to diminish and minimize ecological instability, environmental pollution in yield, improving living and health, including basic element of water

and food security, air quality and green environment (Xiao and Chen 2002). A key to ecological security is obviously the main objective to keep the planet's temperature close to that/which civilization has so far known by means of climate security (Dalby 2003) i.e. climate security is the prerequisite of ecological security.

The United Nation Development Program proposes a multi-dimensional approach for climate security which includes the following factors that have to be taken into account by countries (UNDP 2030 Agenda):

- Recognition of importance of effective, accountable central and local governance
- Equitable management of natural resources
- Importance of ecosystem services
- Climate resilient alternative livelihoods
- Resilience-building of individuals
- Efficient cooperation between communities and institutions
- Peaceful and safe management of migration and displacement.

Climate security due to climate change has evolved to a global issue and is related to energy, economic, environment and technology. Globally all countries have to take short term measures based on their GHG contribution (weighted measures) but universal policies, legislative acts have to be implemented to provide transparency and to control efficiently global greenhouse gas emissions, to avoid 2oC increase of global temperature compared to pre-industrial values. According to Zehng et al. (2019) in a short run "it is necessary to identify the paths for GHG emission management in the major emitting countries, which are subjected to the international commitments and national policies. The Group 7 (G7) and BRICS countries account for more than 60% of the world GHG emissions excluding Land Use".
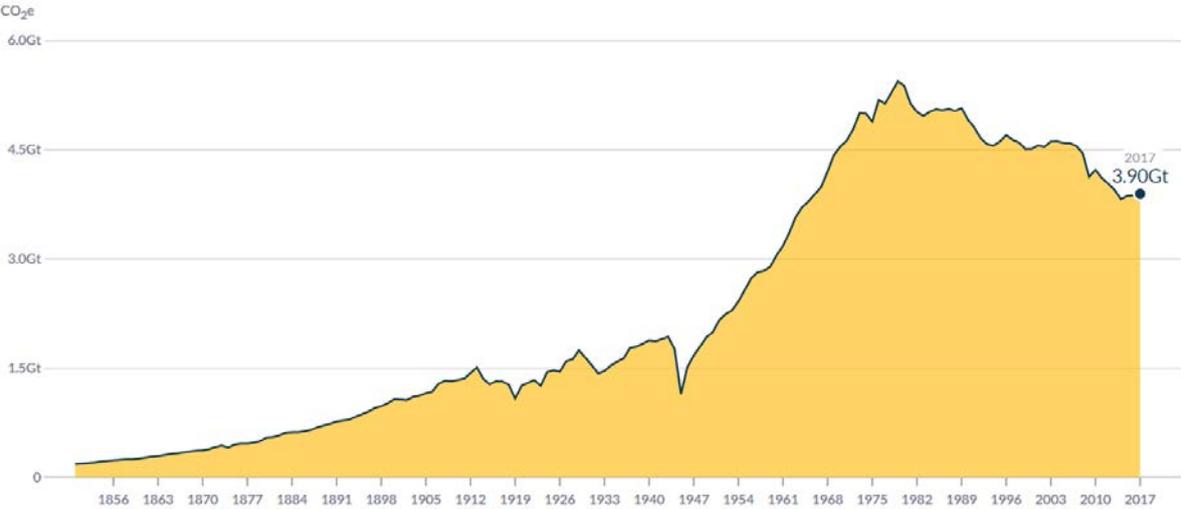
Figure 1. European Union, GHG CO2e emission values from pre-industrial time till 2017

The EU, as others, has to be prepared for climate-induced geopolitical instability by creating different strategies supporting climate security on energy, environment and geopolitical levels. Youngs (2014) highlighted that the EU should implement clear and systematic approach to the geoeconomics of climate change.

In order to achieve this, the EU should elaborate a strategy that can respond to new challenges and form the basis of efficient climate security measures. The EU "has to ensure that its internal energy policies are consistent with its external geostrategic aims". More climate specificity should be involved in its conflict-prevention initiatives and, in addition, "European militaries must become more involved in the climate security agenda to prepare for its broader geopolitical consequences, although the securitization of climate change should not entail a narrow militarization" (Young 2014).
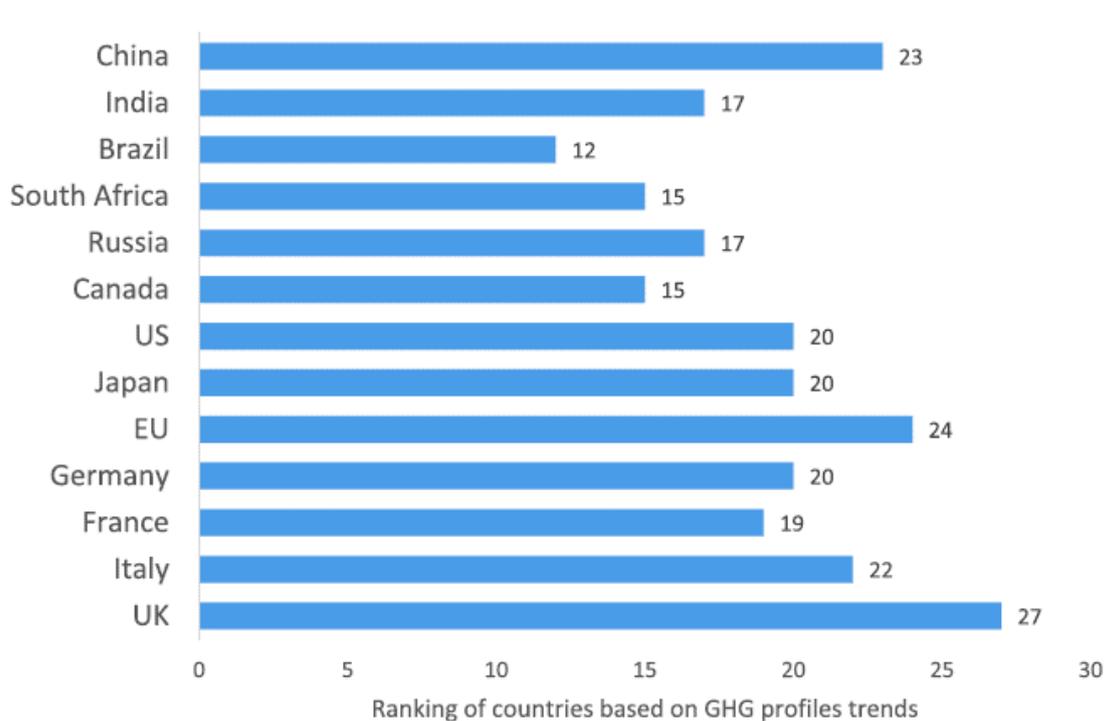
Figure 2. Ranking of countries based on GHG profiles trends
(Source: Climate Transparency 2018; World Resource Institute n.d.)

The unmet challenges of climate security policies in the European Union (Youngs 2014):

- "Address climate challenges through cooperation:
  - European states should avoid the temptation to prioritize self-preservation in the face of scarce resources and instead strengthen their commitment to cooperation-based, collective security.

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- Integrate climate concerns into conflict prevention:
  - The EU should incorporate climate-related factors into initiatives designed to predict and prevent conflicts, including by improving governance in resource-stressed states.
- Adopt a forward-looking response to climate migration:
  - Europe needs a strategy to address climate-induced migration that anticipates migratory flows and potential security risks.
- Broaden militaries' engagement with climate security:
  - European militaries must better understand how defense requirements are connected to the effects of climate change and engage with a broader range of climate-related challenges.
- Develop a systematic approach to the geoeconomics of climate change:
  - The EU must balance its commitment to free trade and its desire to access resources and renewables while avoiding mercantilist policies.
- Incorporate climate concerns into foreign policy:
  - The EU should integrate climate security considerations into all aspects of its foreign policies to move beyond the current focus on short-term climate crisis management."

The EU "is a world leader in climate change mitigation efforts" and has already drafted and introduced various GHG emission reduction policies, Yet, additional steps are needed to be able to meet the EU targets for 2030 and 2050 (Zheng et al. 2019).

Table 1. GHG emission and other climate change related indicators for EU and different important countries which have significant contribution (Climate Data Explorer database and Zheng et al. 2019)

Indicators	Units	EU	US	BRA	CHN	RUS
				1990		
GHG emissions	Mt CO_2 eq.	4453	4803,40	184,90	2077,40	2163,50
Carbon intensity of TPES	Kg CO_2 eq./toe	2.66	1,31	2,38	1,74	2,68
Carbon intensity of GDP	Ton CO_2 eq./USD 2010	0,50	0,53	0,12	1,24	0,80
GHG per capita	CO_2 eq./cap	9,53	19,20	1,23	1,83	14,59
				2014		
GHG emissions	Mt CO_2 eq.	3606,30 (-19% decrease)	5168,30 (+7,5% increase)	473,90 (+156% increase)	9031,50 (+334,7% increase)	1487,10 (-31,3 decrease)

Carbon intensity of TPES	Kg CO$_2$ eq./toe	2,19 (-17,7% decrease)	2,30 (+75,5% increase)	1,57 (-33% decrease)	3,06 (+75,8% increase)	2,05 (-23,5 decrease)
Carbon intensity of GDP	Ton CO$_2$ eq./USD 2010	0,27 (-46% decrease)	0,32 (-40% decrease)	0,15 (+25% increase)	0,54 (-56,46 decrease)	0,46 (-42,5 decrease)
GHG emission per capita	CO$_2$ eq./cap	7,11(-25,4% decrease)	16,19 (-15,7% decrease)	2,30 (+87% decrease)	6,62 (+261,7 increase)	10,34 (-29,2 decrease)

Abbreviations: GHG- greenhouse emissions, CO2eq- carbon dioxide equivalent, GDP – gross domestic products, TPES – total primary energy supply,

Table 1 shows different environmental indicator values for the years 1990 and 2014. It is worth drawing attention to the fact, that there are several positive changes between the values especially in the case of EU's indicators. Some of the values indicate decreasing tendency, reflecting efficient climate change policy implementation; some of them show increasing tendency implying indifferences of countries regarding climate change mitigation policy implementation.

EUs indicators have lower values related to the initial ones, GHG emission dropped by 19% as other factors decreased too. Other major players indicate increase, minor one in the case of US (7.5%) and significant ones in case of Brazil (156%) and China (334%).

As part of the European Green Deal, in September 2020, the Commission proposed to "raise the 2030 greenhouse gas emission reduction target, including emissions and removals, to at least 55% compared to 1990.

Key targets for 2030:

- At least 40% cuts in greenhouse gas emissions (from 1990 levels)
- At least 32% share for renewable energy
- At least 32.5% improvement in energy efficiency" (COM 2020, 562).

To meet the challenges listed by Youngs (2014) and to meet the Green Deal targets the European Parliament has already adopted different legislative acts and amendments. The following legal acts support the 2030 Framework, which were adopted in 2017/2018 (Oberthür 2019). The European Parliament and the Council of Ministers then amended and adopted these in 2017/2018.

The following six legal acts form the core of the 2030 Framework:

- Directive (EU) 2018/410 amending Directive 2003/87/EC on the EU emissions trading system (the ETS Directive);

- Regulation (EU) 2018/842 on binding annual GHG emission reductions by member states from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement (the Effort-Sharing Regulation);

- Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources (the RE Directive);

- Directive (EU) 2018/2002 amending Directive 2012/27/EU on energy efficiency (the EE Directive);

- Regulation (EU) 2018/841 on the inclusion of GHG emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework (the LULUCF Regulation);

- Regulation (EU) 2018/1999 on the governance of the Energy Union and climate action (the Governance Regulation).

> The European Commission "Clean Planet for All" communication sets up a long-term strategic vision for a modern, competitive and climate neutral economy (COM/2018/773). A 40% of reduction in GHG emission together with 32% share renewable energy (RE) was already stated in 2008/2001 EU directive (Directive EU 2018/2001). The new Green Deal (COM/2019/640) was declared by the new European Commission (2019-2024) to increase the already stated 40% for 2030 to at least 50% and towards 55% compared with the GHG emissions in 1990, and to achieve climate neutrality by 2050 (COM/2020/80). To achieve the 2030 Framework targets requires accelerated energy efficiency measures, smart grids, electrification of fossil fuel use sectors and implementation of more renewable energy technologies. Plans for future GHG emission cuts align with the vision set out in 2018 in an EC Communication (COM/2018/773 2018, 114.)

Oberthür (2019) in his detailed study about EU's climate and energy policy framework for 2030 summarized in a very comprehensive and clear way the stringency of Green Deal of governance frameworks, which are listed in table 1.

Table 2. Comparative study of EU's different climate security based legislative frameworks

Dimension	EU 2030	EU 2020	Paris Agreement
Formal status	high (binding EU legal acts)	high (binding EU legal acts)	high (international treaty)
Nature of obligation	medium-high (substantive & enhanced procedural requirement, incl. binding emission targets)	medium-high (substantive & enhanced procedural requirement, incl. binding targets for emissions and RE)	low (procedural requirements)
Perceptiveness and precision	medium-high (precise obligations with limited ambiguities/flexibilities)	medium-high (precise obligations with limited ambiguities/flexibilities)	low-medium (high degree of discretion)
Accountability and implementation	high (reporting, enhanced follow-up by COM, infringements)	High (reporting, enhanced follow-up by COM, infringements)	medium (reporting, expert review, facilitative response measures)

Source: (Oberthür 2019)
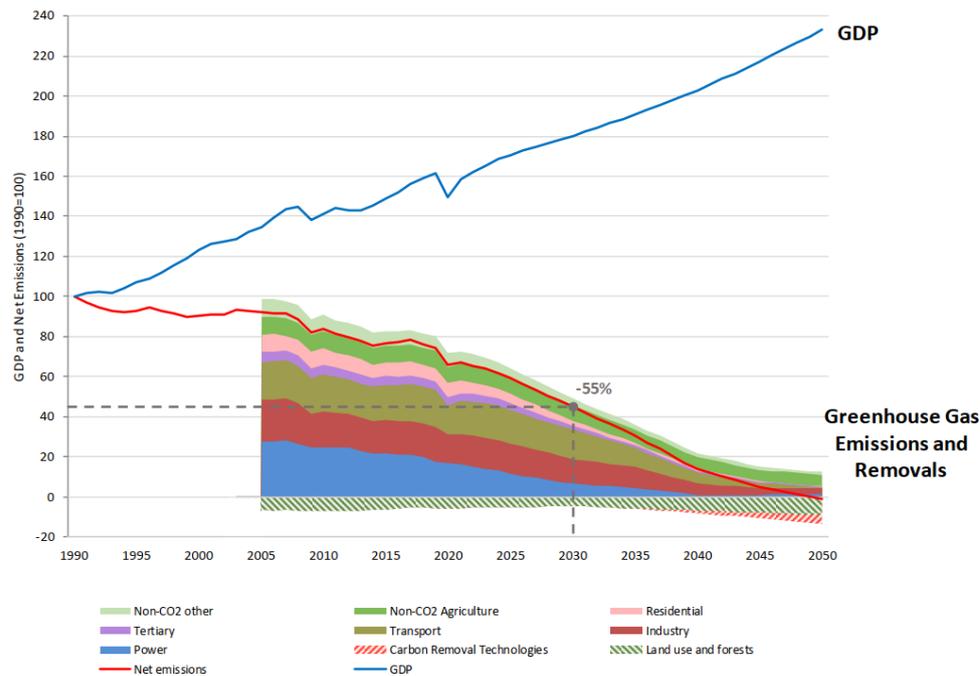
Figure 3. The EU's pathway to sustained economic prosperity and climate neutrality, 1990-2050 (European Commission 2020b)

To implement efficiently different legislative acts, any structural changes will pose challenges but according to the analysis results presented in Figure 3 the overall economy and EU citizens will benefit from the investment tools used to implement the EU Green Deal. Regional and local authorities can have multiple advantages and benefits, it ensures durable jobs, improves EU energy security, resilience and independence, and lays down a solid foundation for prospering economy by stimulating technological innovation (European Commission 2020b, 562).

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Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU.

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10) Public Health

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ABSTRACT:

There is a substantial social gradient in the state of health. Gender inequalities are reflected in the lower life expectancy of men throughout the continent. Ethnic minorities, immigrants and marginalized social groups are at risk of low life expectancy and bad health behaviour which are associated with their insufficient health literacy. The major causes of death are circulatory diseases and cancer, and mental health also has a considerable share in the years of life lost. The burden of disease could be diminished and healthy life years increased if population's health literacy and its participation in screening programs were improved, and vaccine compliance of parents on behalf of their children further encouraged. Community resilience is increasingly being acknowledged as a protective factor against hazards, its assessment with scientific methods and community interventions for its improvement is being encouraged. Immigration brings about further threats for public health for the indigenous populations. The EU faces a severe shortfall in healthcare professionals.

KEYWORDS:

Healthy life expectancy; Health behaviour; Health literacy; Community resilience; Vaccine compliance

1. Life expectancy and healthy life expectancy

Europe is an ageing continent with demographic and health features typical for this age structure, and in spite of the high rates of immigration, the ageing will continue in the next decades. The population pyramid below visualizes the rate of 5-year age groups in the total population by sexes.

Figure 1. Population pyramid, EU-28, 2019

% of the total population
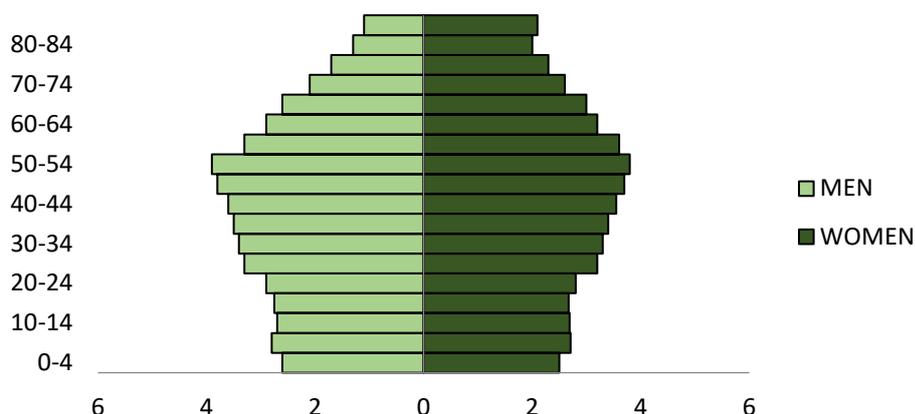
Source: Eurostat 2019

With regard to the high rate of elderly people on the continent, some of the most relevant public health issues are related to their state of health.

As the population pyramid suggests (figure above), in the European Union the rate of women in the elderly population is much higher than the rate of men, and the biggest differences are striking above the age of 80. Men continue to live less than women. Even in the countries with highest gross domestic product and living standards, men continue to live less than women, with a life expectancy at birth varying between 70.1 in Latvia and 81.9 in Switzerland. For women, the two extremes are 78.6 in Bulgaria and 86.3 years in Spain. Health inequalities across European countries are thus higher in men than in women. Marginalized social groups are at risk of bad health and low life expectancy.

In relation to the increasing life expectancy at birth, healthy life expectancy is also increasing. The number of healthy life years at birth was estimated at 64.2 years for women and 63.7 years for men in the EU, with considerable deviations from the average (Eurostat 2020). A prominent public health goal is the further increase in the healthy life expectancy (WHO/Europe 2013).

The gender gap observed in the case of life expectancy at birth almost disappears when it comes to years lived in good health, which suggests that it is first and foremost elderly women who experience many years of their old age in bad health.

2. Health literacy: the key to improve public health

Almost half of the adult population in Europe display limited health literacy, with substantial differences between member states in favour of Western and Northern European societies. There is a substantial social gradient in the health literacy of Europeans in the sense that low status groups and older people are overrepresented in the category of limited health literacy (Sørensen et al. 2012). Further international research results also revealed a negative correlation between health literacy and age (Jordan and Hoebel 2015, Garcia-Codina et al. 2019). This calls for the necessity to improve the health literacy of elderly people throughout Europe.

In many cases, the issue of national, ethnic and linguistic minorities and migrants raises a further concern. Namely, these minorities are not always competent in the official state languages, which may lead to detrimental effects upon health. Health messages, promotion materials, screening invitations, medical forms and hospital materials are in many cases transmitted in the official language of each state, which implies linguistic competences of patients. However, minorities and migrants often lack such competences, so that they are at-risk groups for insufficient health literacy. Health policy decisions should consider the disadvantages of such groups and address this issue more efficiently.

3. Health behaviour

Most chronic diseases originate in lifestyle. As such, the most frequent causes of death with the largest burden of disease are cardio-vascular diseases, the risk of which increases with unhealthy lifestyle and inadequate health behaviour. The HBSC studies, a WHO collaborative cross-national survey with longitudinal design results yield evidence for the unhealthy practices starting already at young ages (Inchley et al. 2020). A range of international research reveal unhealthy habits in the adult population. First and foremost, these are alcohol consumption (Kovács and Bálint 2015), bad nutrition habits (FAO et al. 2020) and lack of physical activity associated with being overweight (WHO/Europe 2018). In some European societies, the alcohol-related morbidity and mortality are particularly high. Bad nutrition and sedentarism were brought about by the modernisation of societies and the changing character of work. Risky sexual behaviour also has detrimental effects (Mirzaei et al. 2016). In particular, in the case of women, one of its consequences is cervical cancer as a leading cause of female mortality. HIV infections also spread particularly with the transmission of prostitution. The topic of health behaviour as a determinant of chronic diseases is a priority of health policy, and is addressed in the form of clearly formulated goals of population intervention programs.

The increased rate of cancer cases, the second biggest cause of death, is partly due to the ageing of the population. In the EU, **population-based screening programs** are recommended for cervical, breast and colorectal cancers. In those states where large population screenings were implemented, a significant reduction in cancer cases was accomplished, which led to a decrease in the burden of disease associated with that illness. In those EU-countries with no mass screening programs, health policy decisions should be met in favor of such programs, in order for funds to be allocated for these.

From the population side, participation in organized screening programs varies across and within countries. However, there are some effective interventions to increase participation: postal and telephone reminders, general practitioners' signature on the invitation letter, scheduled appointment instead of open appointments (Camilloni et al. 2013).

4. Vaccine incompliance

The literature is inconclusive with respect to the effect of the social gradient in vaccination, more specifically, in vaccine compliance. Although the relationship between health literacy and vaccination is not always clear (Lorini et al. 2018), most data yield evidence for the fact that social status is a predictor for vaccine hesitancy and incompliance (MacDonald et al. 2015).

Health literacy of mothers is decisive in this respect. In Eastern Europe, for instance, the limited knowledge of vaccination and the vaccination noncompliance of low status groups led to decreasing vaccination rates of babies and children. As a result, previously overcome communicable childhood diseases emerged newly, as was the case with measles in Romania recently (INSP 2019). Some Eastern European countries are about 10% below the optimal vaccination rate.

5. Mental health

The end of traditional communities and the lack of integration into the urbanized societies, as well as the constant and rapid changes brought about by modernization resulted in an increase of mental disorders in the European Union. These are the leading cause of disability and the third leading cause of overall disease burden, following cardiovascular diseases and cancer. The prevalence of mental disorders is 12%. Addressing comorbidity is a key issue, as mental disorders are associated with other non-communicable diseases like cardiovascular disease,

diabetes and cancers. People with mental disorders live, on the average, 20 years less (WHO 2019).

6. Community resilience

Resilience is the "dynamic process of adapting well and responding individually or collectively in the face of challenging circumstances, economic crisis, psychological stress, trauma, tragedy, threats and other significant sources of stress" (WHO/Europe 2013).

Recent studies suggest some options for measuring community resilience. From the social domain, the following measures are recommended: access to social networks, family support and civic participation. In the economic domain, indices of unemployment and poverty/financial insecurity should be used. Further indicators for computing the community resilience measures are "crime and safety, education and skills, and quality of the built environment". However, beside these indicators, there is a strong need for qualitative participatory case studies to support the engagement of communities facing marginalization or high levels of adversity (Jacob et al. 2019).

7. Migration and public health issues

Although most migrants and asylum seekers arriving in the EU are healthy upon arrival, there are some public health threats that concern the indigenous population of the EU through migration from other continents. Most prominently, the spread of communicable diseases (tropical diseases, HIV) needs to be kept under control by rigorous monitoring of immigrants. The Health Security Committee of the EU coordinates the monitoring of communicable diseases via the Early Warning and Response System.

8. Healthcare professionals' situation

There is a substantial workforce shortage healthcare across EU countries. The increasing number of old patients with chronic conditions and/or disability projects an increasing shortfall in health professionals. The reasons are "the ageing of the workforce, difficult working conditions, poor lifelong learning, skill mismatches, weak career development and insufficient social recognition" (Michel and Ecarnot 2020, 345). The high rates of burnout are mostly due to organizational and infrastructural reasons in the health care system.

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11) PANDEMIC MANAGEMENT

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ABSTRACT:

The European Union does not regulate national health policies, but issues recommendations and guidelines to be implemented by national governments. The EU institution European Centre for Disease Control has pandemic preparedness as its main target. In the context of the COVID-19 pandemic, unique in the history of modern societies, the EU recommends the emergence of the Biomedical Advanced Research and Development Authority to coordinate pandemic preparedness and management. Until the present, EU member states have applied similar risk mitigation measures in pandemic management: mobility restrictions, socio-economic restrictions, physical distancing, hygiene measures, communication, international support measures, and most recently, population immunization through vaccination. Through its recovery fund called the Recovery and Resilience Facility, loans and funds are offered to member states to rebuild economies and implement reforms and investments. With the Emergency Support Instrument, the EU coordinates an unprecedented action to accelerate the production, testing and introduction of EU-fabricated vaccines in the member states. Vaccination in the EU started at the very end of 2020. The success of immunization now mostly depends on the vaccine compliance of European populations.

KEYWORDS:

Influenza pandemic; COVID-19; EU-recommendations; Risk mitigation; Vaccine hesitancy

Introduction

The epidemiological transition of the 20th century brought about the victory of medicine over infectious diseases in the most developed countries. However, already in these first two decades of the 21st century, infectious diseases emerged time after time, and some of them turned into pandemic, i.e. spread across multiple continents.

The European Union as an entity has a relatively lose structure of pandemic control. Health is a national responsibility in the EU and is not regulated by the European Union. The EU institutions formulate guidelines and recommendations, and leave it to the member states to act in pandemic management and risk mitigation on national and regional levels.

In 1998, the EU set up the Early Warning and Response System, a network for the epidemiological surveillance and control of communicable diseases. In 2004, the EU Health Security Committee was given the responsibility for pandemic preparedness. The main EU structure dealing with pandemic preparedness is the European Centre for Disease Control

(ECDC) established in 2005, with its mission of data collection and evaluation, scientific monitoring, information exchange, and the coordination of European institutions' collaborative efforts in epidemiological surveillance. The ECDC supports the development of national "Pandemic Preparedness Plans" by providing guidance.

Guidelines and recommendations: lessons learned from the 2009 Influenza Pandemic

During the 2009 Influenza A (H1N1) outbreak, the ECDC and the WHO (Europe regional office) both operated next to each other. As learnings from that pandemic, The WHO Regional Office for Europe formulated the following priority issues and recommendations for good practice for states for good pandemic preparedness and response:

1. strong leadership and government engagement in conducting pandemic preparedness activities (PPA)

2. appropriate government funding of PPA

3. effectiveness of the planning process and development of the pandemic plan

4. effective communication among health care professionals, the public and other stakeholders

5. effective strategies for implementing pandemic interventions

6. development of professional capacity for successful implementation of PPA (WHO/University of Nottingham 2010).

EU recommendations for preparedness and management during the COVID-19 pandemic

Following the outbreak of the COVID-19 pandemic, on the EU level, a collaboration of the following entities started as a response to the pandemic: the European Commission's Group of Chief Scientific Advisors, the European Group on Ethics in Science and New Technologies and the Special Advisor to the President of the European Commission. The collaboration which was launched as late as November 2020 brings together different disciplines and perspectives, and formulated the following recommendations: prevent and pre-empt; enhance coordination across member states and at international level; strengthen systems for preparedness and management; uphold fundamental rights and strengthen social justice; find solidarity-based and sustainable ways of living (European Union 2020).

The above recommendations require EU-level collaboration with coordinated management. The proposed agency to carry out these activities at EU level is the Biomedical Advanced Research and Development Authority (BARDA), building on existing elements, such as the European Centre for Disease Prevention and Control (ECDC) and the European Medicines Agency (EMA) (European Union 2020).

Risk mitigation measures of EU member states during the COVID-19 pandemic

During the COVID-19 pandemic, EU member states have applied similar risk mitigation measures. However, the process of risk perception and taking measures against it took some time in all the countries. The measures implemented by European countries were as follows (De Bruin et al. 2020):

1. Mobility restrictions

Partial or total quarantine was introduced during the year 2020, and only access to alimentation and medication was allowed to the general population. Mobility restrictions were applied in order to prevent or at least lessen the spread of the virus. Public transportation was limited and air traffic temporarily closed. Outdoor activities in groups were also restricted.

2. Socio-economic restrictions

Educational and work-related gathering of people were restricted, recreational and sport activities only were allowed to be done alone in the neighbourhood. In most countries, schools and childcare institutions were temporarily closed and online teaching was introduced, with the states providing support for digital equipment. Visits were prohibited into the homes for the elderly, one of the most at-risk population groups. Services, hotels and leisure facilities were closed. Only banks, financial and insurance services were allowed to operate. These restrictions went along with the promotion/obligation of teleworking in several domains, and the limiting/cancellation of production in factories.

3. Physical distancing

These measures entailed keeping a distance of 1.5 to 2 m from one another, the prohibition of groups larger than 2-3 persons, the closure of public places and the regulation of the number of people admitted to indoor and outdoor public places. Churches were temporarily closed and even outdoor religious activities suspended.

4. Hygiene measures

These measures aim to limit the risk of spreading the virus by minimizing contamination risk. Recommendations comprise proper hand sanitizing, contactless payments, wearing protective equipment like masks, eye and hand protections. Institutions were imposed to regulate sanitization for members and visitors upon arrival. The measures entail preventive or imposed quarantine of people at risk, temperature screening upon arrival or entrance in institutions and laboratory testing.

5. Communication

This powerful tool contributes to the acceptance of the risk mitigation measures. Countries launched national communication measures. Mass media news platforms displayed the actual number of infected people, of those in quarantine and hospitalized. National police made efforts to combat fake news by severely sanctioning platforms and people who instigated against the pandemic or questioned the need for compliance with the restrictions.

6. International support mechanisms

Countries were interested in acquiring supply and exchanging protective equipment, medicine and infection treatment medical equipment (De Bruin et al. 2020). In particular, an unprecedented cooperation within the EU, the recovery fund Recovery and Resilience Facility provides financial support to rebuild national economies, and the Emergency Support Instrument ensures the acceleration of the mass vaccination process to overcome it.

7. Population immunization

The newly emerging risk mitigation measure is the vast and free vaccination program made available stepwise to at-risk groups and then to the general population. The program started at the end of December 2020 with the substantial support of the EU that enabled the acceleration of testing, authorizing and applying EU-produced vaccines in the member states (European Commission 2020).

The graph below (Graph 1) visualizes the main risk mitigation measures implemented by EU member states to fight the pandemic until December 2020.

Figure 1. Risk mitigation measures during the COVID-19 pandemic
Source: De Bruin et al. 2020

Rebuilding national economies: the EU Recovery and Resilience Facility

Following the proposal of the European Parliament and the Council for a Recovery and Resilience Facility (RRF), on 28 May 2020 the European Commission proposed the regulation for the Facility. Recently (21 December 2020), the Parliament and the Council reached a provisional agreement on the implementation in the very near future. As part of the vast recovery package of the EU, the Facility aims at supporting investments in the member states in order to recover from the economic and social damages caused by the pandemic. Further, the Facility contains supportive measures for green and digital transitions. Support will be offered in the form of loans and grants (a total of 672.5 billion euros) for those states who set out National Recovery and Resilience Plans and, within those, implement reforms and investments until 2026 (European Commission 2020a).

Overcoming the pandemic: the EU Emergency Support Instrument

The Emergency Support Instrument is the financing arm for a joint EU-level COVID-19 management. It finances the following activities:

As a massive part of the European level pandemic management, in order to protect EU citizens, the European Commission issued its Vaccination strategy for COVID-19 vaccines in June 2020. Through the Emergency Support Instrument, the European Union made considerable efforts to agree with producers and obtain the right for primacy in buying sufficient supplies of EU-fabricated vaccines fabricated at fixed prices. The ESI supports vaccine production in the EU by partial coverage of the vaccine producers' costs. Advance Purchase Agreements (APA) are being signed by the European Commission and the vaccine producers. Besides this instrument, as a joint effort to produce efficient vaccines of more types, the European Investment Bank is offering loans to manufacturers. The Horizon 2020 InnovFin Infectious Disease Finance Facility (H2020 InnovFin IDFF) has as its exclusive task the support of vaccine development in order accelerate the mass production. This measure facilitates a comprehensive, quick and cost efficient procedure of vaccine acquisition for EU citizens' needs (European Commission 2020b).

The second pillar is the centralization of vaccine authorization and procurement. The Member States are provided by support and unnecessary competition eliminated by the flexible regulations of the EU which has a conditional authorisation system. Own risk assessment of the member states can lead to an earlier access to vaccines than the usual authorization process would require. Legal derogations with regard to labelling, packaging and to the introduction of GMO-using vaccines are implemented in order to facilitate and accelerate mass vaccination.

The EU considers it a priority to ensure equity and affordability of the access to vaccination (European Commission 2020b).

Risks for a successful pandemic management: vaccine hesitancy

Vaccine hesitancy is a worldwide growing concern and gains particular significance for the management of COVID-19 pandemic. It is associated with several social, demographic and economic factors. According to a recent study on the vaccination willingness, there are significant variations across countries, Eastern Europeans displaying more vaccine hesitancy

than other countries. Women are more likely to comply with vaccination recommendations. Usually, people with higher education and better income are more likely to accept vaccination recommendations (Lazarus et al. 2020). However, some qualitative research results suggest that highly educated people also tend to disseminate countering views to the benefits of vaccination (Attwell et al. 2018).

Own and family members' experience with the illness does not increase vaccination willingness, but the mortality rate in a population does. It is remarkable and highly relevant for the EU pandemic policy that trust towards national government is associated with higher vaccine acceptancy (Lazarus et al. 2020). Eventual side effects of vaccines to be revealed in the near future might also reduce trust and further willingness to participate in the immunization program to overcome the COVID-19 pandemic.

Abbreviations
APA – Advance Purchase Agreement
ESI – Emergency Support Instrument
PPA – pandemic preparedness activities
RRF – Recovery and Resilience Facility

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12) INTERNATIONAL DEVELOPMENT COOPERATION

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ABSTRACT:

The outbreak of the COVID-19 pandemic has impacted the prospects of the European as well as the world economy. Almost 14 months after the manifestation of the pandemic, the European economy and the world economy are facing a more severe economic crisis in comparison with the financial crisis of 2007-2009. The aim of this article is to analyse the political economy of international development cooperation under the prism of COVID-19 pandemic. The negative economic growth rates that the developed countries are facing have negative effects on international development cooperation. At the same time, the negative economic growth rates of developing economies are creating urgent challenges for certain developing countries. The analysis focuses on the tools that are available to both developed and developing countries in order to face the main challenges of international development cooperation under the prism of the COVID-19 pandemic, with a special focus on European Union security related issues.

1. Introduction

The aim of this article is to analyse the political economy of the international development cooperation under the prism of pandemic COVID-19. Firstly, we analyse the concepts of international development cooperation, development cooperation and official development assistance (ODA). The study of these concepts reveals the importance of international development cooperation for the prospects of developing countries but at the same time the role of developed countries in order to reduce the social and economic challenges of developing countries. Then, we analyse the concept of international development cooperation historically in comparison with other types of resource flows. The role of official development assistance seems a fixed cash flow in order to confront the fluctuations in the

world economic environment in comparison with other types of flows. Moreover, we study the implications of pandemic COVID-19 for official development assistance and the main challenges for the developed and developing countries in the near future. Finally, we analyse the conclusions of the study.

2.   International Development Cooperation under the prism of pandemic COVID-19

Development cooperation is the cooperation among developed and developing countries in order to focus on the urgent needs of developing countries. The actions of developed counties should be under internationally agreed concepts and this enhances the definition of the term international development cooperation. According to Jose Antonio Alonso and Jonathan Glennie (2015, 1-2), development cooperation should meet the criteria below:

1) "Aims explicitly to support national or international development priorities

2) Is not driven by profit

3) Discriminates in favour of developing countries

4) Is based on cooperative relationships that seek to enhance developing country ownership".

As it can be observed from Table 1, development cooperation has certain purposes, characteristics and types. The purposes of development cooperation focus on the improvement of social protection and standards of living at a global level and more specifically on the active participation of the developing countries for access to public goods. It is evident that the purposes of development cooperation at an international level are socio-economic and are trying to reduce social and economic inequalities. The analysis of the characteristics of development cooperation underlines the nonprofit actions and the importance of developing countries for the design and the expected results of development cooperation. Moreover, the study of types of development cooperation highlights three different types with qualitative and quantitative goals.

Table 1. What is development cooperation?

Purposes	Characteristics	Types

Guaranteeing universal basic standards of social protection	Explicitly intended to support national or international development priorities	Financial (and in-kind) transfer
Promoting convergence among countries' standards of living	Not driven by profit	Capacity support
Supporting efforts of developing countries to actively participate in the provision of international public goods	Discriminates in favour of developing counties	Policy change
	Based on cooperative relationships that seek to enhance developing country ownership	

Source: Alonso and Glennie 2015, 3.

Under the prism of the above theoretical analysis concerning international development cooperation, we can now focus on the financial aspect of above-mentioned term. Official development assistance is the term that has been adopted from Development Assistance Committee (DAC) since 1961 (OECD 2021a). More specifically, the definition of official development assistance is the following:

> "Special attention has been given to the official and concessional part of this flow, defined as 'official development assistance' (ODA). The DAC first defined ODA in 1969, and tightened the definition in 1972. ODA is the key measure used in practically all aid targets and assessments of aid performance." (OECD 2021a).

Moreover, the Organization for Economic Cooperation and Development analyses ODA as follows:

> "Official development assistance (ODA) is flows to countries and territories on the DAC List of ODA Recipients and to multilateral development institutions that are:
> i. Provided by official agencies, including state and local governments, or by their executive agencies; and
> ii. Concessional (i.e. grants and soft loans) and administered with the promotion of the economic development and welfare of developing countries as the main objective.
> The DAC list of countries eligible to receive ODA is updated every three years and is based on per capita income. ODA data is collected, verified and made publicly available by the OECD. OECD statistics are the only source of official, verified and comparable data on aid reported by 30 members of the OECD Development Assistance Committee (DAC) and about 80 other providers of development cooperation, including other countries, multilateral organisations and private foundations." (OECD 2021b)

As we can understand form the above analysis, ODA is the most official and inclusive tool to measure the impact of development cooperation to developing economies. The Development

Assistance Committee is a committee of the OECD which has 30 members and deals with issues related to development cooperation (OECD 2021c). In order to understand the impact of official development assistance on the objectives of the developed economies and the results to the developing economies, we should analyse the structure of the official development assistance. Figure 1 analyses the total net resource flows from DAC countries to developing countries. We can understand that official development assistance has a steady augmenting path in comparison to other resource flows that have interdependence with the world economic prospects. The second category of flows with great impact is the private flows at market terms. The analysis shows that the economy and market conditions each time affect the prospects of these investments. Official development assistance is trying to confront the urgent challenges of developing countries with a lower level of impact in relation to economic fluctuations.

Figure 1. Total net resource flows from DAC countries to developing countries
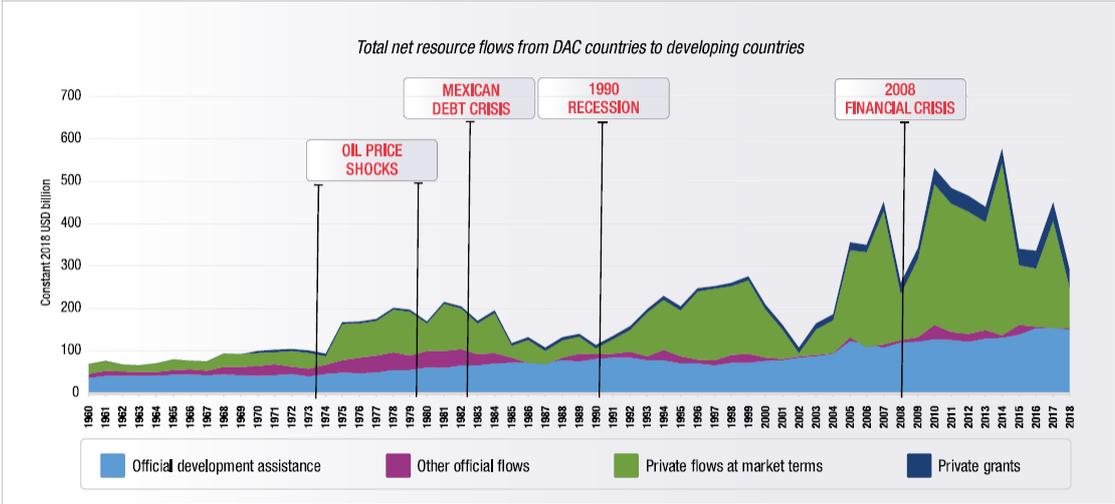
Source: OECD 2020a, 6.

In order to understand the current situation in the sector of international development assistance, we may analyse the greater world economic environment and the implication of pandemic COVID-19. According to Spyros Roukanas and Angelos Kotios (2021), pandemic COVID-19 has much more severe negative impacts in comparison with the world economic crisis of 2007-2009.

"The COVID-19 pandemic[7] affected the global economy more severely than the global economic crisis of 2007-2009. According to the International Monetary Fund, in 2009, the year with the most negative consequences as a result of the global economic crisis that first manifested itself in August 2007, real GDP growth stood at -0.1% for the world, -3.3% for the advanced economies, and 2.8% for the emerging markets and developing economies. In comparison, the corresponding percentages for the same group of countries in 2020 are estimated at -4.4%, -5.8% and -3.3% respectively. These are the most negative real GDP growth rates of the last 40 years, according to the IMF (IMF 2020a). It is obvious from the above data that the world economy is facing a completely unique economic phenomenon that has to do with the depth of the crisis but also with its initial cause. During the economic crisis of 2007-2009, the initial cause was related with the US subprime mortgage lending market and the securitisation of subprime mortgages (Roukanas 2016b), an economic phenomenon that occurred within the functioning of the international economic system. This time, though, we had the manifestation of the COVID-19 pandemic as a public health issue with global repercussions. In 1918 the outbreak of the great flu also had economic impacts (Vinet 2020). At that time, the global economy was at the end of World War I and the extent of economic globalization was much lower. As a result, we cannot compare the economic implications of the two pandemics."

The above analysis explains clearly the negative impacts of pandemic COVID-19 in developing economies in terms of external private finance as we can see at Figure 2. The global economic turmoil affects negatively the main categories of private finance and the impact is higher in comparison with the financial crisis of 2007-2009 in three out of four categories with the exception of portfolio investment. As we can observe, there are higher negative effects in comparison with the financial crisis of 2007-2009 in remittances, foreign direct investments and other investment. According to estimates, the total loss is around USD 700 billion and could be higher in comparison with the financial crisis of 2007-2009.

Figure 2. The overall COVID-19 impact on external private finance in developing economies is estimated to be USD 700 billion and could exceed the impact of the 2008 financial crisis by 60%

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7 "COVID-19 is the infectious disease caused by the coronavirus, SARS-CoV-2, which is a respiratory pathogen. WHO first learned of this new virus from cases in Wuhan, People's Republic of China on 31 December 2019" (World Health Organization 2020).

Change in net inflows relative to pre-crisis year
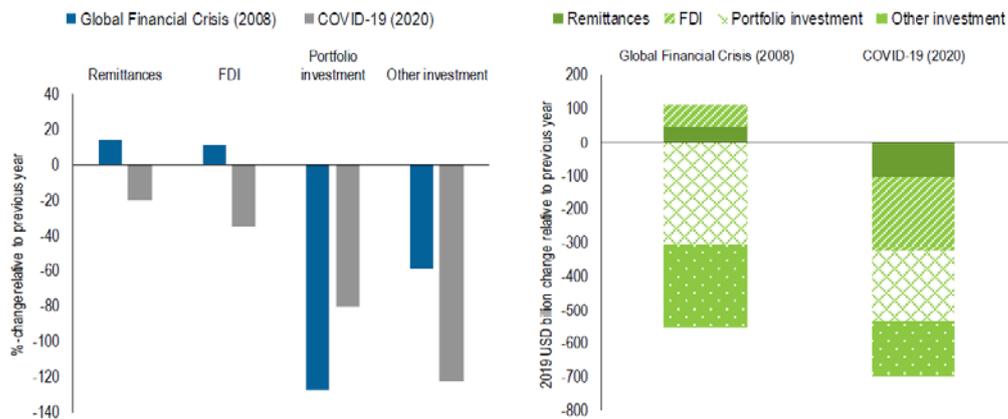
Note: All data refer to ODA-eligible countries as of April 2020. The sudden stop of capital flows in 2015 is not shown here, as it would have included a USD 556 billion drop relating only to the People's Republic of China. For details on the estimated COVID-19 impact on external private finance, the interested reader is referred to the Methodology.
Source: Historical remittance data based on KNOMAD Remittances Inflows (2020[13]). Historical foreign direct investment, portfolio investment and other investment are from IMF Balance of Payments (IMF, 2020[14]) and national central bank data, and refer to net incurrence of liabilities. World Bank World Development Indicators (2020[15]) are used to impute missing data on foreign direct investment. COVID-19 projections are based on combining historical data with projections from World Bank (2020[38]) (remittances and FDI) and IIF (2020[36]) (portfolio and other investment).

Source: OECD 2020b, 9.

Based on the above-mentioned analysis, we should examine the role of international development cooperation and official development assistance to confront the urgent challenges that certain developing countries are facing as a consequence of pandemic COVID-19. According to the last available data, the European Union remains the leading donor at world level. The total amount of ODA for 2019 was 55.2% out of total ODA and the total amount was €75.2 billion (European Commission 2020). The commitment of the European Union to development cooperation reveals the importance that the EU gives to the achievement of Sustainable Development Goals and in a broader view this commitment enhances European Union Security. Closing our analysis, the OECD had developed certain scenarios concerning the path of ODA for 2020 in relation to the impact of pandemic COVID-19. More specifically, the OECD analyses the prospects of ODA for 2020 as follows:

1) "Many countries have signalled political commitment in support of a global sustainable recovery. The COVID-19 crisis has exposed the interdependence of countries and the importance of global public goods. Increased solidarity could lead to increases in total ODA levels and would, in turn, increase ODA as a share of gross national income (GNI).

2) As highlighted in its statement, DAC members have expressed their will to protect ODA levels. In fact, OECD DAC Peer Reviews have previously found that protecting aid budgets against short-term shocks to public finance is an established practice. If

ODA levels were to be maintained at 2019 levels, the ratio of DAC members' ODA over GNI would increase from 0.29% in 2019 to about 0.32% in 2020.

3) Given DAC members' own budget pressure in 2020, the overall level of ODA could decline in 2020. The OECD calculates that if DAC members were to keep the same ODA to GNI ratios as in 2019, total ODA could decline by USD 11 billion to USD 14 billion, depending on a single- or double-hit recession scenario on member countries' GDP" (OECD 2020b, 9-10).

3.   Conclusions

This short study tried to highlight the impact of pandemic COVID-19 on international development cooperation. Firstly, we studied the basic concepts of international development cooperation, development cooperation and official development assistance in order to understand the theoretical background of our analysis. Then, we studied development cooperation under the prism of pandemic COVID-19. The conclusions of the study are the following:

a) The unexpected manifestation of pandemic COVID-19 had much more severe negative economic impact in comparison with the financial crisis of 2007-2009. These negative implications are coming after a tough decade of slow economic recovery, and states, international economic organizations and monetary authorities have fewer available tools to confront the economic consequences.

b) Development cooperation is a steady financial flow for developing countries independently of the world economic fluctuations in comparison with other types of flows. COVID-19 affects both the prospects of developed and developing economies with uncertain implications and at the same time with uncertain economic policies concerning the ODA of developing economies. The maintenance of ODA for 2020 is going to configure the main challenges for the developing economies for 2021. Finally, the continuation of ODA in 2020 will also set the direction of ODA for the upcoming years.

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13) Humanitarian Aid, Food Security

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ABSTRACT:

Humanitarian Aid (HA) is currently evolving, as a result of the challenges of globalisation and of the growingly intricate nature of humanitarian crisis. As a result, multiple new actors are now involved in HA, including State agencies, humanitarian NGOs, and other private organisations. This change of paradigm is visible even at the heart of the humanitarian organisations, within the International Committee of the Red Cross and also within the international organisations specialised in HA in the United Nations system. In particular, old and new principles applied in HA are being reassessed in the light of the security problems faced by populations and humanitarian workers in the various fields of intervention. Among them, food security is one of the most complex problems. This is due to the several possible causes of food insecurity. The food dimension of security also involves a great number of agencies, with a complex management. Last but not least food security is strategic, being not only an essential element for the survival of populations, but also a geopolitical factor for governments. The questions asked shall look at i) the conceptual framework in HA and security; ii) the key issues of food security within this challenging context.

1. Humanitarian Aid and Security

What is the connection between Humanitarian aid (HA) and security?

The simple answer is one that states that the many circumstances under which humanitarian aid is necessary are also situations under which security has been put in jeopardy. This is true both for conventional threats to security – as under wars or other types of conflict – and for a broader range of threats – such as those to be considered under the human security concept (Hough et al. 2020).

Conventional approaches frequently make a distinction between natural and manmade causes of the disasters and crises with which humanitarian aid deals. However, in the recent decades

both approaches to security/international security and to humanitarian action have evolved into a deeper consideration of the structural causes of threats to human life and, in that context, of the often intermingled character of natural and manmade disasters, as for instance in resource scarcity wars, or with 'environmental refugees' (Mac Ginty and Peterson 2019).

What is then 'humanitarian aid'? The concept is normally defined with reference to the criteria accepted by the UN, a set of four principles derived from the longstanding principles of the International Committee of the Red Cross (ICRC) and of the national Red Cross/Red Crescent societies (UN GA 2016). Humanitarian aid is therefore a series of actions intended to save human lives and to alleviate suffering, while protecting human dignity – a first principle known as *Humanity*. *Neutrality*, a second principle, means that the agents of humanitarian aid do not take sides in a conflict or controversy. *Impartiality*, that is, the delivery of aid according to needs and not to the situation (e.g. race, gender, religion or other identitarian tokens) of those in need is the third principle, while *Independence*, the fourth, implies that aid is kept separate from geopolitical (military, economic) power considerations. Although the formula is apparently straightforward, its ethical and practical implications are paramount (Mac Ginty and Peterson 2019).

The international legal order and the extant structure of global governance have defined patterns within which that action shall be carried out, notably international humanitarian law, but also refugee law and the human rights regime. The question thus arises as to *neutrality*, if not on *independence*, since those patterns do not exist in a geopolitical void. At the same time, new principles are emerging, as the principle of accountability, implying a new form of governance, also within HA (Tan and von Schreeb 2015).

The next question is then about who delivers HA.

There is a vast array of actors involved in the process. Originally, it was very much the task of ICRC then enlarging to a vast and rather diverse set of non-governmental actors (NGO), often associated with it, and theoretically well placed for delivering in accordance with the abovementioned four principles. However, HA is also a task of governmental entities: the states, who retain the first level of the 'responsibility to protect' (Australian Red Cross 2011); then international governmental organisations (IO) many of which were created for surmounting the shortcomings of a traditional state-centric world order. In field terms, this often means that a multiplicity of actors will be present, from the tiniest local non-governmental association, to military forces involved in peace and stabilisation missions (which partially share the objectives

of the humanitarians), to private security forces organised by the for-profit sector, to the media. No doubt that this scenario has led to the urgency of 'Delivering as one' (UN GA 2006), in practical terms a strong concern with coordination, organisation, logistical planning and needs assessment. Increasingly also, professionalization has entered the field, side by side with the many volunteers also involved.

Another question is on what is to be delivered: in a nutshell, immediate crisis' assistance – protection, food assistance, shelter, health, sanitation and hygiene. However, crises may last longer than expected, which leads to a necessity for longer term or structural answers for providing food, accommodation, health and education services (as is often the case for refugees and IDPs). Furthermore, the focus has shifted from the immediate problem to reconstruction, and to crisis prevention, which means disaster preparedness and capacity building, often with a view to local empowerment (OCHA 2020).

Funding remains a core issue for making HA viable. The role of IO and of international governmental and non-governmental donors is fundamental, but resources are always scarce, which further reinforces the necessity for their rational use (IASC 2020; OECD 2012; OCHA 2021).

Some problems recurrently emerge from the practice of HA, among them the security of the missions and of the humanitarian workers; the involvement of private armed groups in the process; the many difficulties stemming from having to deal with authoritarian regimes; or the ethical dilemmas of bridging principles with practice, to name but a few (Mac Ginty and Peterson 2019).

In the European Union (EU), humanitarian aid is also present, as a set of principles, policy area, and institutional structure (See: Article 21 of the Treaty on European Union; and Article 214 of the Treaty on the Functioning of the European Union). Within the European Commission the European Civil Protection and Humanitarian Aid Operations (ECHO) is the structure that directly deals with it, along with its civil protection agenda (ECHO 2020a). The structure is pliable to attending both to internal crises management (e.g. migration and refugees) and to delivering in the international context, and thus establishes a bridge with the EU's external action, notably in the promotion of human rights, stabilisation and rule of law action, and more broadly with cooperation for development.

2. Humanitarian Aid and Food Security

For the purposes of the present module we chose food security as focal point and as a topic for case studies. Food security is a relevant focus because it is both a short-term problem, in the context of most crises, but also a structural problem, often connected with poverty (Cosgrove and Curtis 2018), lack of resources, environmental imbalance, and therefore a potential trigger for conflicts and social unrest (WFP, 2019a, 2020).

The UN asserts that "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (World Food Summit 1996, cit. in FAO 2006, 1). Gibson (2012) indicates that when looking at food security, one should simultaneously look at food insecurity, namely the many factors that can challenge food availability, food access, as well as the stability of supplies and the biological utilisation. Food insecurity, as redefined by FAO in 2001, is "a situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life" (FAO 2002). Food insecurity can result in an inadequate dietary intake that may lead to different forms of malnutrition, i.e., situations of undernutrition as well as overweight and obesity, and to the development of chronic diseases (FAO 2020). Achieving food and nutrition security (and reducing food insecurity) depends on four dimensions: food availability, food access (economic and physical), food utilisation and the stability of these conditions over time (FAO 2006). Food security may be threatened by several factors such as insufficient purchasing power, unavailability of foods, inappropriate distribution, or inadequate use of food at the household level (FAO 2002). In addition, food safety plays a critical role across the dimensions of food security. "Food safety refers to the conditions and practices that preserve the quality of food to prevent contamination and food-borne illnesses" (WHO 2020). Therefore, there is no food security without food safety (FAO 2019). Food safety and food security are interrelated and complementary concepts, essential to reduce malnutrition and achieve Zero Hunger. Unsafe food does not solve food security problems, whereas measures to ensure safety and quality of food can sometimes reduce the amount of food available, and thereby amplify food scarcities (Vågsholm et al. 2020). Food banks have the potential to improve food security, playing a major role in the food aid sector by distributing donated and purchased groceries directly to food insecure populations. The challenge includes adequate operational resources, available

provisions of perishable food groups, and the identification of people's needs (Bazerghi et al. 2006).

Ensuring access to a safe, healthy and good quality diet is essential for achieving the SDG targets of eradicating all forms of malnutrition, "ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture" (FAO 2019, 2020). While it rightfully seats as the 2nd sustainable development goal ('zero hunger'), food security has clear connections with many other of the sustainable development goals (WFP 2019b). Importantly, at the heart of sustainable development, the complexity of dealing with food security issues is linked to the mal-functioning of the food systems thus requiring more systemic approaches, in order to understand the interconnectivity of relevant aspects related to food production, distribution and consumption but also social, economic and environmental trends that may affect uprising issues (Caron et al. 2018).

As we stand on the UN Decade of Action on Nutrition, much still needs to be done to eradicate hunger and malnutrition in all its forms globally. Actually, data show that since 2014 the world has been failing to progress towards SDG target 2 with conflict, weather extremes and economic shocks being the main drivers of food crises that affect an increasing number of people (FAO, IFAD, UNICEF, WFP, WHO 2020). In addition, the COVID-19 pandemic can further exacerbate current challenges to achieve global food security while natural disasters related to climate change will continuously put at risk more vulnerable regions. Thus, addressing food security is a complex issue which relies on innovative transformative approaches: the implementation of context specific actions that effectively promote more resilient and sustainable local food systems preparing and protecting livelihoods from crisis but also appropriately articulate food assistance programs to alleviate hunger and suffering in most acute and vulnerable contexts (FAO, 2020).

This perspective brings to the fore two bodies of the UN system: the World Food Programme (WFP) and the Food and Agriculture Organization (FAO). This also entails a twofold perspective: emergency relief but also resilience building, which in turn connects with sustainable agriculture and environmental protection (ECHO 2020b; FAO et al. 2020). As the world's largest development donor, the EU has a long cooperative role with FAO on the implementation of humanitarian aid, food security and food assistance actions at global scale.

Food Security and interlinkages with other policy areas on EUSECURE: Addressing food security as a challenging structural issue requires innovative forms of understanding its

complexity. In the next decades, climate change and environmental degradation (policy area 9) including soil degradation and water availability and water quality (policy area 7) can put at risk more vulnerable regions. In the EU, the Mediterranean region will be particularly affected by such a trend. The recently launched Farm to Fork Strategy under the EU Green Deal clearly indicates the importance of developing strategies to reduce the environmental impact from dietary choices to reduce GHG emissions but also to develop more resilient local food systems (European Commission 2020). In addition, poor dietary choices in the EU region is a major determinant for chronic diseases including obesity, cardiovascular disease and type 2 diabetes which impair the good health and well-being of many EU citizens (policy area 10) but also deteriorate the economic sustainability and resilience of national health systems as observed during the COVID-19 pandemic. Implementing transformative good governance that integrates more reflective, adaptive and flexible approaches to deal with social, economic and environmental trade-offs effectively will be required for smarter decision making (policy area 3) (Galli et al. 2020; Sol et al. 2018; Weber and Rohracher 2012). Importantly, new ways of governance that integrate system approaches to identify powerful leverage action for effective change towards more secure communities are urgently needed.

We would thus consider that the more relevant topics to be debated on food security and humanitarian aid are:

- Food security principles and its links with HA principles;

- HA effectiveness and the agencies architecture; resources and funding management (following the Grand Bargain);

- The causes of food security crises and specifically the prevention of vulnerability and risks;

- Food security decisions and interventions;

- Food safety;

- Conflict, migration, and food security8.

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8 Conflicts have led to the displacement of millions of people, causing and prolonging food insecurity among refugee population (FAO et al. 2017). Refugees have been identified as a vulnerable group. When on the move, they are more likely to experience disrupted or uncertain supplies of safe and nutritious food and water, especially under difficult circumstances (IOM 2013). When arriving in a new country, refugees face many challenges that increase the risk of food insecurity, including poverty and unemployment, compromised mental and physical health, language and cultural barriers, and high household expenses related to relocation (Southcombe 2013). Refugees may find it challenging to maintain a nutritious and safe diet as they must adjust to life in a new community, with new markets and foods. Therefore, during their resettlement process refugees can be highly vulnerable to food insecurity. Persistent food insecurity can result in malnutrition, inadequate dietary intake and nutrient deficiencies contributing to the development of chronic diseases (FAO 2020). Thus, ensuring that refugees

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have access to adequate, safe, and nutritious food and water is essential for protecting the safety, health and well-being of this population. In addition, food security is important for refugee integration, minimising health inequality and a sense of belonging to a new country (Lawlis et al. 2017).

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14) CRITICAL INFRASTRUCTURE PROTECTION

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ABSTRACT:

Infrastructures are sets of fundamental facilities and systems that support the functionality of modern society. This group of essential entities is called critical infrastructures, which should be duly protected by government and operators to ensure the continuity and availability of vital societal functions. Accordingly, the European Commission has launched a new program in 2006 in order to elevate the critical infrastructure protection in the member states. This paper aims to study EU-related critical infrastructure protection body of knowledge. In order to build a common understanding, the key terms will be defined in the context of European directives.

Acronyms — critical infrastructure (CI), Communication Technology (ICT), Critical infrastructure protection (CIP), Joint Research Centre (JRC), European Critical Infrastructures (ECI), *Warning Information Network (CIWIN), National Critical Infrastructures (NCI),European Programme for Critical Infrastructure Protection (EPCIP), European Reference Network for Critical Infrastructure Protection (ERNCIP), Industrial Automation & Control Systems (IACS), Geospatial Risk and Resilience Assessment Platform (GRRASP), Global Positioning System (GPS), Global Navigation Satellite System (GNSS), Safety Recommendation Information System (SRIS), European Anti-fraud Office (OLAF),* Critical Infrastructure *Preparedness and Resilience Research Network (CIPRNet), National Information Systems (NIS), Operators of Essential Services (OES), Digital Service Providers (DSP)*

Key Definitions

Critical Infrastructure

"The power grid, the transport network and information and communication systems are among the so called 'critical infrastructures', which are essential to maintain vital societal functions."

European Critical Infrastructure

"'European Critical Infrastructure' or 'ECI' means a critical infrastructure located in EU States, the disruption or destruction of which would have a significant impact on at least two EU States" (Council Directive 2008/114/EC).

European Programme for Critical Infrastructure Protection (EPCIP).

"This is a package of measures aimed at improving the protection of critical infrastructure in Europe, across all member States and in all relevant sectors of economic activity" (European Commission, 2006).

Critical Information Infrastructure Protection (CIIP)

This initiative aims to strengthen the security and resilience of vital ICT infrastructures (European Commission, 2013).

The Joint Research Centre (JRC)

The European Commission's science and knowledge service which employs scientists to carry out research in order to provide independent scientific advice and support to EU policy.

European Reference Network for Critical Infrastructure Protection (ERNCIP)

A network of experts, which provides technical support for the implementation of the Directive 114/08/EC, including the development of best practices and pre-normative technical standards associated with critical infrastructures protection and resilience. JRC coordinates this network.

Operators of Essential Services (OES)

A private or public entity that provides a vital service based on information systems and networks, in which in case of suffering from a disruptive security issue, vital economic and societal functions will be influenced by service deficiency.

Digital Service Providers (DSP)

DSPs are composed of three kinds of services: cloud, online marketplaces and search engines.

Introduction

A system is called Critical Infrastructure (CI) provided that its breakdown results in fatalities, immense economic damage, or general dissatisfaction in society (CIPRNet n. d.). CIs are the backbone of a society composed of complex systems such as energy, transportation, health care system etc. so that the functioning of modern societies is laid on their continuity of service. They are composed of sub-systems and components that must be reliable and protected (Faramondi et al. 2018). The protection measures must take into account both emerging threats, along with traditional risks associated with the lifecycle of critical infrastructures; for instance, terrorism, cyber attacks and natural disaster risk respectively. However, mitigating all kinds of risks is not always feasible; therefore, authorities around the globe have set priorities in order to consolidate the continuity of CI functioning.

With this aim, the eu commission tries to provide the requisites of ci resilience for member states. The inclination of the eu commission towards leading the union as a whole, and the members individually to enhance the protection of cis is dated back to 2004 with the focus on threats posed by terrorism. Fight against terrorism started by exchanging information, transparency and traceability of financial transactions. Nevertheless, soon the emerging issues associated with cip made europe start focusing on the protection of europe in different sectors. The terrorist attacks in france (7-9 january, 21 august 2015) convinced the eu commission to establish new action plans, but these experiences unveiled that cip associated with complex uncertainty and various unknown risks was not properly addressed yet. It was a significant reason to move forward resilience instead of traditional risk response plans. The last proposals for directives associated with "security of network and information systems" as well as "resilience of critical entities" were published in december 2020. Fig.1 illustrates the european journey on cipr and cybersecurity which will be analyzed in the following section.
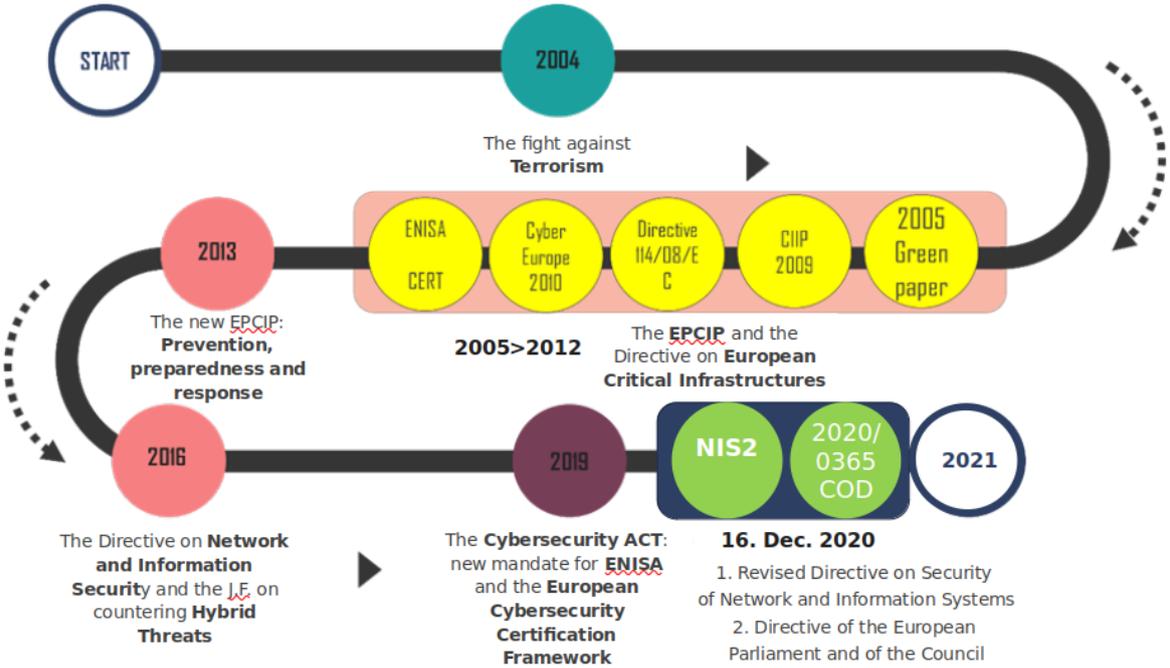
figure 1. The european journey on cipr and cybersecurity

State of the art assessment

Critical infrastructures are composed of physical and/or virtual assets that are the backbone of a society and economy. Every government in every nation has a responsibility to protect these systems against incapacity or destruction. Accordingly, in june 2004 the european council called for the definition of an overall strategy aiming at promoting ci protection. Before long, in november 2005, the commission legally accepted a green paper in the direction of epcip. Thereupon, in december, justice and home affairs put a set of proposals on practical principles, procedure, and instruments across. European critical infrastructures (eci) (european commission 2006) were defined in 2006 and finally in april 2007 the council legally accepted the acts and processes on the epci.

The main goal of epcip is to remedy the cip across the eu. In this case, the foundations of setting out the principles and instructions to enhance cip are inter-dependency studies and vulnerability, threat and risk evaluation associated with ci. The risk assessment is based on all-hazards approach; however, a priority was given to the terrorism risk. Six principles and a framework are defined to effective epcip implementation. The principle set comprises subsidiarity, complementarity, confidentiality, stakeholder cooperation, proportionality, sector-by-sector approach. On the other hand, the framework is composed of six measures. First, a procedure is incorporated in the framework to identify the eci, design eci in a secure status, and consider a common approach to evaluate the protection enhancement requirements. Second, warning information network (ciwin) and epcip action plan are designed. This measure considers interdependency analysis and identification, while developing cip information sharing processes. The third measure concerns national critical infrastructures (nci) to support some particular member states that may protect nci. The fourth framework measure takes financial measures into account. The last two measures are contingency planning and an external dimension.

After adopting epcip, in october 2008 another proposal was published, particularly devoted to ciwin. Information exchanging equipped by alert system is crucial to cip promotion in a union; therefore, a secure information source and communication channel were provided for member states. Nevertheless, to fill the gap of harmonizing test protocols throughout europe was a necessity. For this reason, erncip was proposed through the eu's executive body to empower

enhancing cip. Sponsored by dg home b4, dg home d2, dg cnect, the erncip roadmap was accepted in 2010 containing eleven main objectives built on existing facilities and capabilities (lewis et al. 2013).

In this context, a free-to-use search tool is provided as an erncip inventory. This tool is designed to provide open-source information on european security activities. All cip stakeholders cooperated to make this inventory available. Technical security solutions by technical nature are the main central interest of the system. It contains detailed information on laboratories that are involved in cip.

The roadmap is enacted by thematic groups, made up of volunteer members, which define and prioritize products/solutions corresponding security issues. Each group engages a particular scope, which is called thematic area. Currently 5 groups have ended their work programme and 7 groups are active (erncip project). The operating groups are working on an early warning zone for ci and related issues, drinking water risks, structural resistance of ci, issues related to weapons and explosives in non-aviation fields, chemical/biological substances in air particularly focused on indoor area, cyber-security issues associated with industrial components such as plcs and control systems, nuclear and radiation risks.

Granted that the known classic risks (a terroristic attack, natural disaster et*c.) Are imminent, future security challenges are fast evolving, more complex, interdisciplinary and even cross-border; therefore, critical infrastructures should be effectively resilient to the all likely risks and ci elements' resilience is crucial in a modern society. Correspondingly, in the eu, dg home* (innovation and industry for security) is seeking for an effectively secured union. To this end, the security research projects which are conducted in the eu aim to develop a capacity to be on alert for tackling emerging security threats along with an ability to tackle today's challenges. Dg home provided guidance, reports and studies9 to enhance the efficiency of the eu security

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9   Performance assessment of security related activities- Horizon 2020 and secure society challenges - FP7 research-Practitioners' Guidance Document in risk management scope – PASAG - Study on the development of statistical data on the European security database- Important third countries study

mechanism in line with eu security policy. Other actors and research networks have been created to support the development of the protection of ei critical infrastructure topics.

figure 2. Trans-border critical infrastructures and threats

Among other, eu policy makers benefit from the joint research center (jrc) advice on safety, security and stability. The jrc collects information in a database, looking through scientific lens on eco-friendly energy and transport systems. In addition, the jrc is *involved* in studying specific phenomena, like, for instance, geospatial issues, radio frequency effects on gps and galileo along with exploring gnss and its possible disruptions, ci cyber-physical protection, safety recommendations repository in sris, risk assessment and decision making support tools, the provision of anti-fraud methods for olaf. The work related to ci resilience is not limited to the jrc initiative; the critical infrastructure preparedness and resilience research network (ciprnet) was published in 2014 aimed at cip scenarios. It involves a number of eu universities and research centers. *Both the erncip project and* ciprnet experience in eu unveiled the importance of co-working and networks. On the other hand, cis are complex systems with cross-disciplinary

and dependent risks, which should be all considered to reach resilient ci. Fig2 shows trans-border critical infrastructures and threats.

The evolutionary process of cip in the eu is a continuous process. The crisis/risk management approach was transformed to resilience enhancement, the trans-border risks are disclosed but yet the progression is ongoing and new directives are being proposed recently. The most recent directives of the eu council have been proposed on 16 december 2020: 1.) The revised directive on the security of network and information systems (nis2) and 2.) The directive of the european parliament and of the council on the resilience of critical entities com(2020) 829.

A.   Nis2

Cybersecurity argument is inseparable from ci protection. The national information systems directive (nis) had been proposed by the eu council in 2016 aiming to improve member states' cybersecurity capabilities and to increase eu-level cooperation. Nis covers the following sectors: energy, healthcare, water supply, transport, digital service providers, digital infrastructure, banking and financial market infrastructure. Subsequently, the two eminent role-players of services - which are characterized in 2015 within directive (eu) 2015/1535-, operators of essential services (oes) and digital service providers (dsp), have adopted risk management practices and notify significant incidents to their national authorities.

In december 2020, nis2 was proposed, to provide greater capabilities, cooperation, and cybersecurity risk management. The scope extends nis by considering the following entities: providers of public electronic communications networks or services, digital services such as social networking services platforms and data center services, waste water and waste management, space, manufacturing of certain critical products (such as pharmaceuticals, medical devices, chemicals), postal and courier services, food, public administration.

B. *Directive com(2020) 829*

The main reason for the new proposal is to reduce vulnerabilities in the eu, including the critical infrastructures. Unlike the previous directives that use the term "critical infrastructure", com(2020) 829 follows that all entities providing essential services must be resilient; therefore critical infrastructure is changed in "critical entities". This directive concerns boosting the provision of resilience in the critical services market. In this regard, the main objective is increasing the resilience of critical entities which are providing such services.

Conclusion

National approach is not efficient anymore to address cip emerging interdependent and cross-disciplinary challenges; consequently, europe continues efforts to build a coherent and cooperative approach across the state members. Europe needs to tackle security and resilience challenges; therefore, to face the risks, it is heading to develop a high level of preparedness, security and resilience capabilities across the union and to upgrade technical competences. In view of the unprecedented digitalization, the last directives com(2020) 829 and nis2, published in december 2020, promote the "infrastructure" substituted by "entities" to enlarge the perspective and actions in order to enhance the resilience of the vital entities of society in the eu.

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15) QUALITATIVE RESEARCH METHODOLOGIES

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ABSTRACT:

This working paper is twofold: in the first part the relevance of qualitative research for security studies is addressed. In the second part, research paradigms, methodologies, research designs, and methods of data collection and data treatment are briefly summarised. Therefore, the text provides an initial outline of possible contents for a course on qualitative methodology and grounds choices for options to be made with reference to the module and MOOC design, in the framework of the EUSecure project.

1. Qualitative Research Methodologies and Security Studies

There is a long-established tradition of using quantitative methods for research in political science/international relations, ergo for international security studies as a sub-field. The explanatory potential of statistics, the role of quantification for economic or demographic indicators, the use of quantification coupled with the favourite 'comparative' method in political science are well-established methodologies (Halperin 2017; Lowndes et al. 2010). In security studies, for instance, large data bases on conflicts (e.g. Uppsala Conflict Data Program 2020) became a tool of information and research. This is not to say that qualitative methodologies do not have a long-standing role in political science, too. Studies on the role of elites, for instance, often rely on surveys and interviewing expertise (Halperin 2017; Lowndes et al. 2010).

However, the shift in paradigm that has led security studies from rationalist approaches into constructivism, post-structuralism and critical studies paved the way for methodological renovation too, not leaving behind the conventional methodologies but adding to them new epistemological approaches which require new or renovated tools (Hough et al. 2015; Lowndes et al. 2010; Salter and Mutlu 2012; Williams and McDonald 2018).

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If "Security, in any objective sense, measures the absence of threats to acquired values and in a subjective sense, the absence of fear that such values will be attacked" (Wolfers cit. in Buzan and Hansen 2009, 32), then research has to depart from the conceptualisation of threats (from hard military threats, to famine, disease, authoritarian drifts, etcetera), to delve into the concept of fear, and to operationalise new layouts of investigation for both. The Copenhagen School further reinforced this pathway in conceptualising 'securitisation/de-securitisation' and in highlighting the inherent 'social construction' of the process and discourse theory-based analyses (Buzan and Hansen 2009; Hough et al. 2015; Williams and McDonald 2018).

Even more, if we shift the focus from security to peace, and in Galtung's view to 'peacebuilding', then the concept of peace itself has to be re-worked. Galtung introduced the twofold definition of negative vs. positive peace. While the first can be identified by the compliance with the terms of the truce agreement, positive peace is about a structural underlying condition of human societies, one where violence retracts in favour of deeply engrained peace, and thus the construction of peace entails an entire change in the *zeitgeist* of a given human community (Webel and Galtung 2007).

Galtung's peace theory also makes a good connection with practice. Security approaches are not just an intellectual research area but also a field where action and research, or applied research, can be coupled in many positive ways. Several examples can be addressed. Security and peace studies are also about mediation and diplomacy. However, peace brokers can only achieve good agreements if they have an 'in-depth' understanding of the communities they are dealing with and the intellectual tools for 'culturally sensitive approaches'. The same applies to the success or otherwise the lack of it of the many 'peace missions' deployed to conflict and crises areas. Migrants, refugees and IDP carry cultural specificities in their own right, which have to be understood and considered in any efforts for intercultural dialogue and integration. Gendered views of the world need to be given careful consideration, whenever human rights are promoted, development fostered, or a boost to political participation attempted. Furthermore, traumatised people from war and conflict scenarios require mental health and psychological support as much as food and the healing of physical injuries. Many of these approaches require sound qualitative research underpinnings.

2. Qualitative Research

Research Paradigms

With regard to Research Paradigms there can be identified two main visions of the world: Objectivism/positivism (in which reality is perceived as unique and tangible, existing

independently of consciousness) and Constructivism/interpretivism (which understands knowledge as resulting from construction of the interaction between individuals and their social world) (Bryman 2016; Lowndes, Marsh and Stoker 2010).

These two paradigms differentiate themselves in relation to three dimensions: *Ontological* (on the perceived nature of reality); *Epistemological* (relation between researcher and researched); *Axiological* differences (the role of values in research).

Regarding the *Ontological* dimension, the Positivist paradigm believes in a unique reality that can be measured reliably and validly using scientific principles, while the Interpretative paradigm believes in multiple realities, socially constructed, that generate different meanings for different individuals, and whose interpretation depends on the researcher's gaze.

Regarding the *Epistemological* dimension, the Positivist paradigm defends the separation between researcher and object of study, while for the Interpretative paradigm these two entities are dependent on each other, and the privileged relationship of the researcher with the researched benefits the research.

Regarding the *Axiological* dimension, Positivist paradigm advocates that research should be free of values, while the Interpretative paradigm considers that research is largely influenced by the values of the researcher.

Although not coterminous, there is a broad identification of the *Quantitative* methodological approaches to the *Positivist* paradigm, while the *Qualitative* methodologies align themselves more with the *Interpretative* paradigm. This broad pairing of Quantitative/Positivist and Qualitative/Interpretivist, can find sustenance in the different ways Quantitative and Qualitative approaches objectify specific research dimensions. As such, and regarding **Research Questions**, the Positivist paradigm will mostly be asking *How many? And what is the strength of association?* While the Interpretivist paradigm will be more concerned with matters related to the *what? And why?* Regarding **Focus**, Quantitative approaches tend to have a *succinct and concise* focus while the Qualitative display *wider and more complex* foci. While Quantitative approaches **carry out** *control, reduction and singularization* of the reality under study, the Qualitative approaches will approach the reality under study so as to carry out its *description, and elicit its understanding and sharing of meanings*. As such, Quantitative approaches will be centered on **measurement and interpretation** while Qualitative approaches will aim at **description and interpretation**. For the Quantitative orientated research, **the basis of the**

explanation is the number and the statistics report while the **narrative and the written text** are the core production of the Qualitative approach.

What needs to be kept at the forefront of methodological choices, even at this broader and first stage, i.e., at the stage of deciding for a quantitative or qualitative approach is that such choice must be in agreement with both the **research objectives** and **the attributes of the objects under study**.

Research Design and Methods

In qualitative research, the numbers and types of approaches have become more clearly visible during the 1990s and into the 21st century (Cresswell 2014). In qualitative research the delineation of the sequence of stages is more controversial than in quantitative research because it exhibits somewhat less codification of the research process (Bryman 2016). Also, questions arise as to how far *reliability* and *validity* (two core concepts in Quantitative methodologies) are appropriate criteria for qualitative researchers, and if alternative criteria more tailored to the research strategy should be used (Tisdell and Merrian 2016). An outline of qualitative research steps could be as follows:

Table 1. An outline of the main steps of qualitative research

General research questions → **Selection of relevant site(s) and subjects** → **Collection of relevant data** → **Interpretation of data** ⇄ **Conceptual and theoretical** → **Writing up findings/conclusions**

Tighter specification of the research question(s)

Source: Bryman 2016.

Collection of further

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Different types of qualitative research can be chosen:

- Narrative Research (Esin, Fathi and Squire 2014);

- Phenomenological Research (Eberle 2014);

- Grounded Theory (Charmaz 2006; Thornberg and Charmaz 2014);

- Critical Ethnography (Angrosino 2005; Foley and Valenzuela 2005);

- Case Studies (Stake, 2005);

- Feminist Qualitative Research (Olesem 2005).

Different methods of data collection often used in qualitative research are:

- Participant observation (Tisdell and Merrian 2016);

- Different types of interviews (structured vs. unstructured; face-to-face/online; focus groups) (Bryman 2016; Tisdell and Merrian 2016);

- Questionnaires (Dillman, Smyth and Christian 2014);

- Visual based methods (Pink 2021);

- Biographical objects (Hoskins 2013; Tisdell and Merrian 2016);

- Documents and archival data (Tisdell and Merrian 2016).

Data treatment will often resort to:

- Content analysis (Schreier 2012, 2014);

- Discourses and Discourse Analysis (Willig, 2014);

- Thematic Analysis (Braun and Clarke, 2006);

- Thick description (Geertz and Darton 2000).

Conclusion

Applied Social science researchers are generally interested in speaking to an audience different from basic and peer researchers. The goal is that the work will be used by policymakers and administrators to improve the ways things are being done. The collection and treatment of data by researchers in evaluation/action research aims at establishing the basis for decision making and the possibility of establishing change. The topics (methodologies and tools) listed above are illustrating how rich qualitative research can be. For the goals at hand in this project, the next step would be to tailor-costume these topics to the specific context and goals of the project.

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PARTNERS' CURRICULUM MAPPING IN REGARD TO EU SECURITY, RESILIENCE AND SUSTAINABILITY TOPIC

Edited by Antonella Longo, Teresa Castiglione

OBJECTIVES

The curriculum mapping has the aim to map departments and faculties, expertise of all teaching staff and capabilities, innovative teaching methodologies applied in our institutions with the respect to the topic treated in EuSecure.

The goal of this exercise is to take on board of the project those experts and identify those teaching areas that our universities can provide state-of-the-art education.

To this aim the present document reports the results of the curriculum mapping. It is organized as follows: section II is related to the work method, section 3 describes results about the program and the course mapping. The last section is about conclusions.

WORK METHOD

The curriculum mapping aims to single out the departments, course programs and related experts which can be involved in EuSecure Project in each partner university.

The EuSecure topics looked up in the universities are the following:

1) Megatrends

2) EU power (strategic autonomy) in a multipolar world

3) International governance: multilateral institutions, norms, regimes

4) Maritime security

5) Migration

6) Cyber security and the risks of AI

7) Water security and water geopolitics

8) Social media issues and fake news

9) Sustainable development, environmental protection and climate change

10) Pandemic management

11) International development cooperation

12) Humanitarian Aid, Food security

13) Critical infrastructure protection (CIP, CIIP)

14) Qualitative Research Methodologies

15) Public Health

To this aim a template for mapping the consortium universities' programs and a form for the semester course mapping have been designed and shared.

The survey has been conducted using the official universities programs published at the institutional web portal, specific interviews with the academic delegates, plus the knowledge of researchers participating the project activities. In the following the two templates are reported with the rules for their filling.

PROGRAM TEMPLATE

In Table 1 the template designed for the program mapping is reported. In red there are the rules for filling it in.

Table 1: program courses template and rules for filling in

PROGRAM (BACHELOR / MASTER) COURSE MAPPING	
Program Name	[Name of the program in the native language and eventually in English]
Program Awarded	[Bachelor / Master]
Corresponding EuSecure Topic	[Choose one or more than one among the 15 EuSecure topics]
Duration	[years]
ECTS	[num.]
Program Language	[Language]
Department/ Faculty	[Department Name/Faculty]
Program Objectives	
Program Description	[max 500 words]
Postgraduate Opportunities	
Initial Required Skills	
EuSecure Coverage Level	[Partial/ Total]
Link	[Link to

SEMESTER COURSE MAPPING

After the program course mapping the survey inside Universities' consortium has drilled down in the single semester course which would fit with EuSecure topic. It has required info related to the courses structure and content.

For the structure, the consortium has analyzed the kind of program belonging to, the official taught language, the teaching methodology, the type of final evaluation, whether the course is mandatory or elective.

The contents aspects have been related to the topics treated and the references suggested to students for studying and preparing the final exam.

The consortium has agreed to choose 5 course at maximum for each EuSecure topic, which means appropriate 75 courses for each University at maximum.

In the Annexes the Google Module used for the course mapping survey is reported.

DISCUSSION AND EVALUATION

Program Mapping Results

An overview on the Degree Course Mapping is presented in the current chapter. Each University presented its own mapping, which includes, for each topic covered in the EUSecure project, the available courses. In particular, for each program course, type (in Bachelor or Master), duration, ECTs, language, objectives, contents and other information of interest were collected. Data were, therefore, analyzed according to the following criteria:

- For each EUSecure topic, the number of available courses are given;
- Statistics on provided courses concern: type (Bachelor/Master), course language (Native Language/English), course duration (years), Coverage Level (Partial/Total); ECTS.

A total number of 64 courses are proposed. Figure 1shows the number of courses for each EU topic. In this Figure, it is worth to point out that in many cases a single course is counted more than one time, as it is shared among different EUSecure topics.
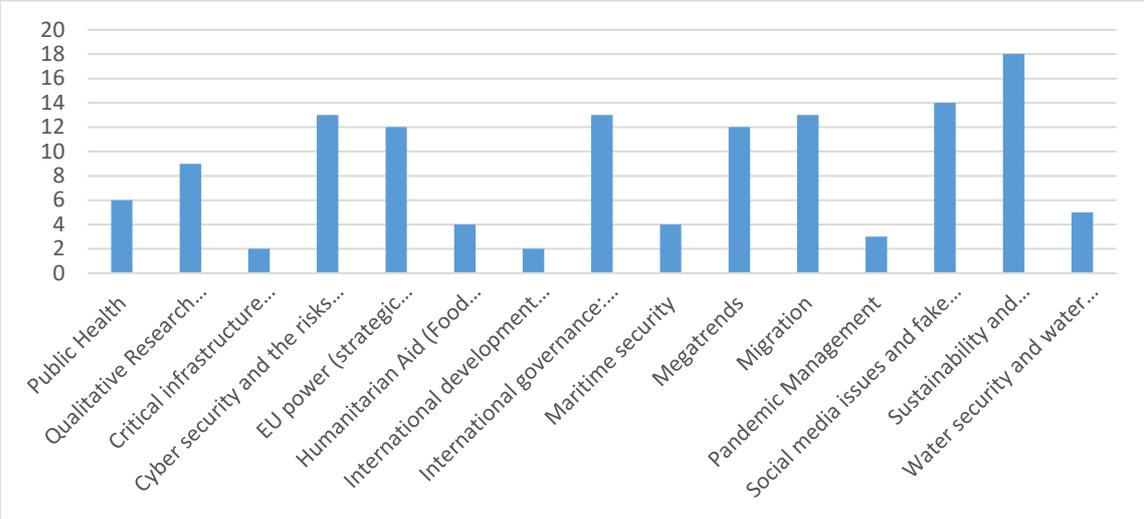
Figure 3: Number of programs for EUSecure topic

Data are more explicitly included in Table 2, where it can be observed that all topics are widely covered, with exception of "International Development Cooperation" and "Critical Infrastructure Protection", which are covered in 2 courses and "Pandemic Management", which is found in 3 courses.

EUSecure topic	N. of Course programs
Public Health	6
Qualitative Research Methodologies	9
Critical infrastructure protection	2
Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects)	13
EU power (strategic autonomy) in a multipolar world	12
Humanitarian Aid (Food security)	4
International development cooperation	2
International governance: multilateral institutions, norms, regimes	13
Maritime security	4
Megatrends	12
Migration	13
Pandemic Management	3
Social media issues and fake news	14
Sustainability and Development, Environmental protection and climate change	18
Water security and water geopolitics	5

Courses are almost equally shared between Bachelor and Master type (33 B and 31 M), as shown in Figure 2.
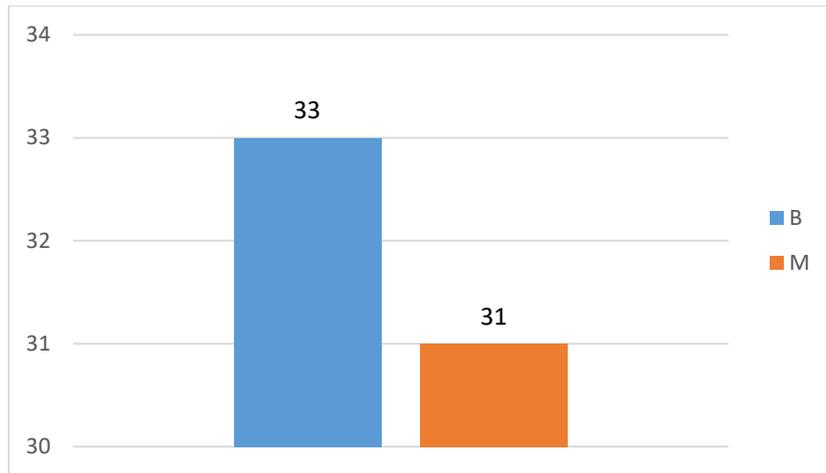
Most of the Bachelor degree courses have a duration of 3 years and correspond to 180 ECTS, while Master Degree programs have a duration of 2 years and correspond to 120 ECTS (Figure 3)
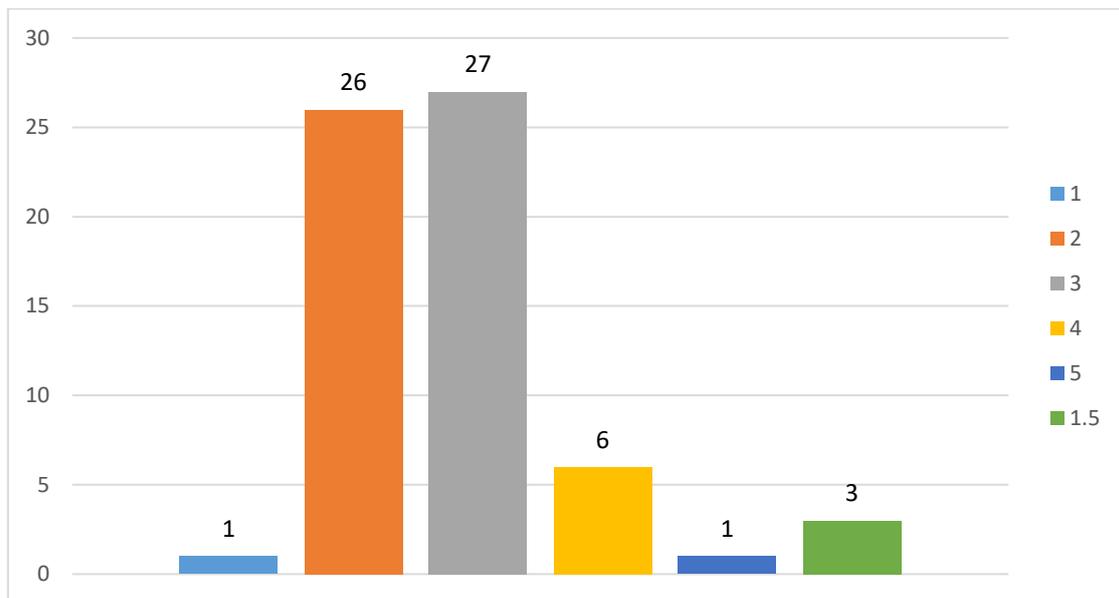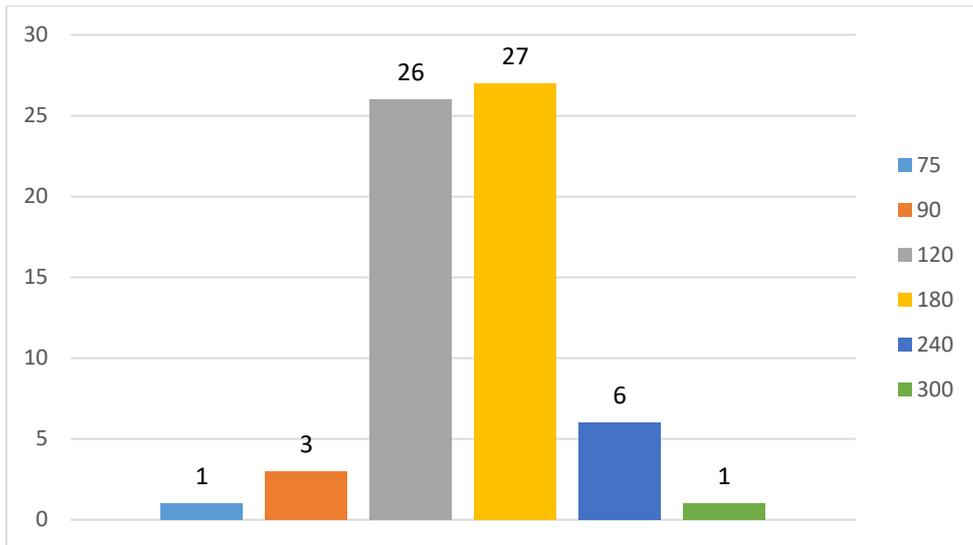
For all involved University, most of the courses are held in native language (42 overall); only a few courses are in English (9) and a discrete number of courses is blended native/English (13)(Figure 4);
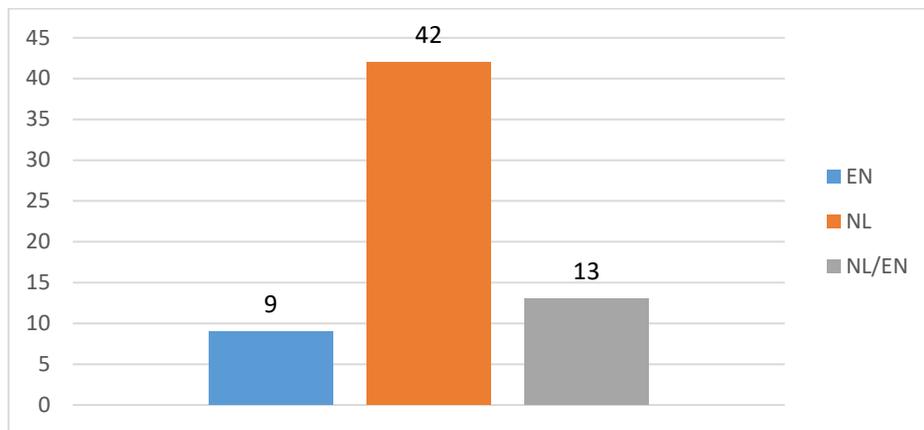
Finally, almost all courses guarantee a partial EuSecure Coverage Level, as can be seen in Figure 5 (Partial: 61; Total: 3).
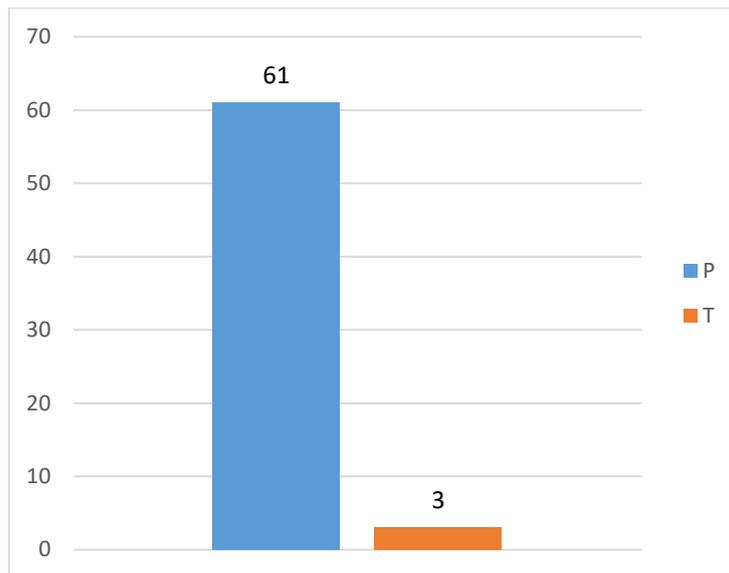
The current work doesn't considers some courses which are not still included in the official offer, because they are in the Ministry approval process: from interviews at Univeristy of Salento.it is known that two novel programs will start in Sept. 2021, namely International cooperation and Sustainability sciences. They are both Bachelor course, in Italian, and they will fully cover the Eusecure topic related to International development cooperation and Sustainable development, environmental protection and climate change, respectively.

In the Annex all the filled forms are reported.

Course Mapping results

The detailed answers provided are reported in the annexes. In the following some key figures to summarize the kind of answers and the first evaluations.

The 5 partners have all answered to the survey with 171 answers, related to respective courses. University of Salento has submitted the maximum number of courses, followed by Ludovika University, as shown in Figure 6.

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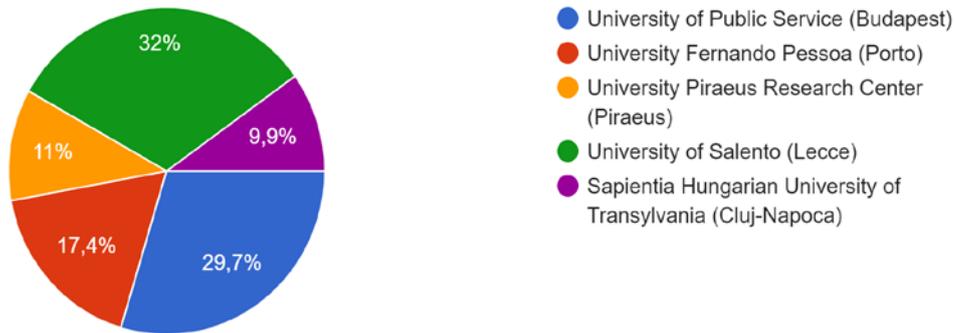
Figure 8: Number of Courses by Universities

Most of the semester courses are related to social sciences (Figure 7), followed by business administration and law and industrial engineering. The courses are equally split between bachelor and master, and mainly the universities have configured their bachelors duration in 3 years and the master class in 2 two years.
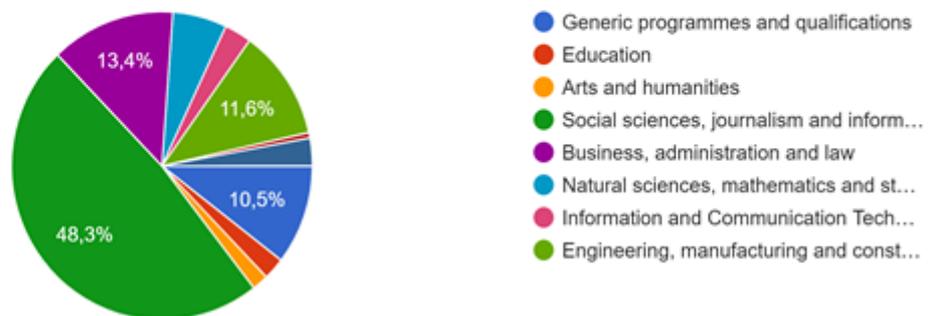
Figure 9: Main Europass Departments Domain

Degree Course Type (Bach/MSC) and Total Duration
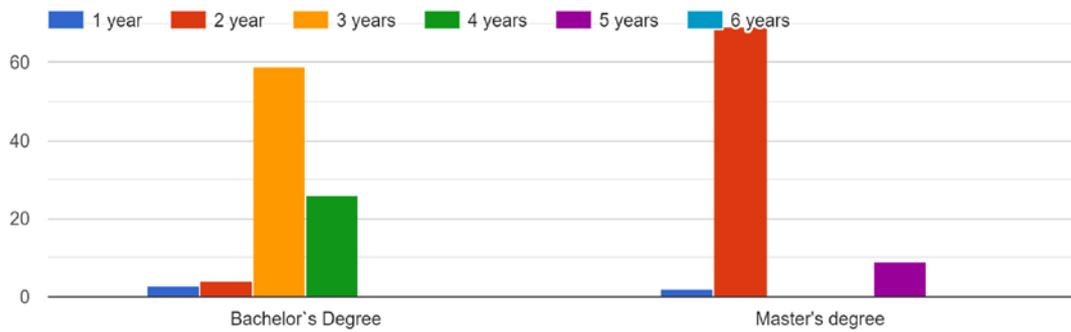
Figure 10: Split of course type (Bachelor/master)

The courses are homogeneously distributed over the years (Figure 9,Figure 10) and most of them are mandatory, while the elective actually can be attended in diverse years, according to the student's personal curriculum. The course language is mainly English (Figure 11), but in the database are present a lot of courses in Italian and in Hungarian. Courses are mainly held as lectures and a few as seminars and the final exam is usually oral or written mainly, but it is interesting noticing the presence of project or alternative types of evaluation(Figure 12).

Course Taught during Degree Year
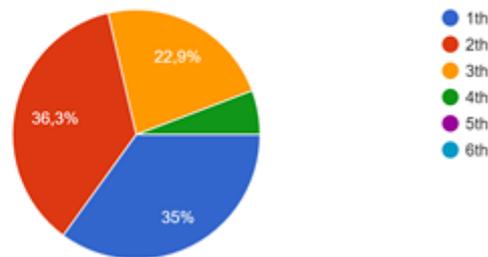
Figure 11: Year when the course is taught

Course type
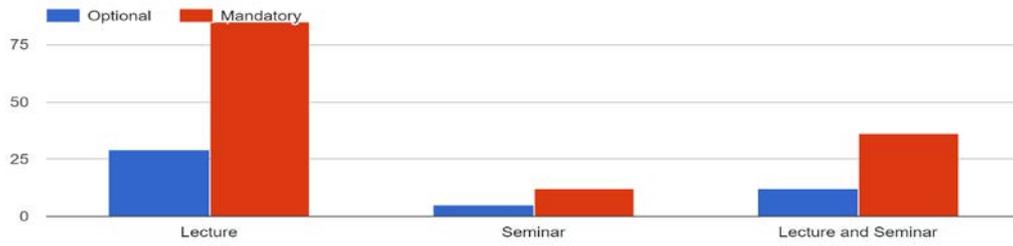
Figure 12: Split between mandatory and elective

Course language
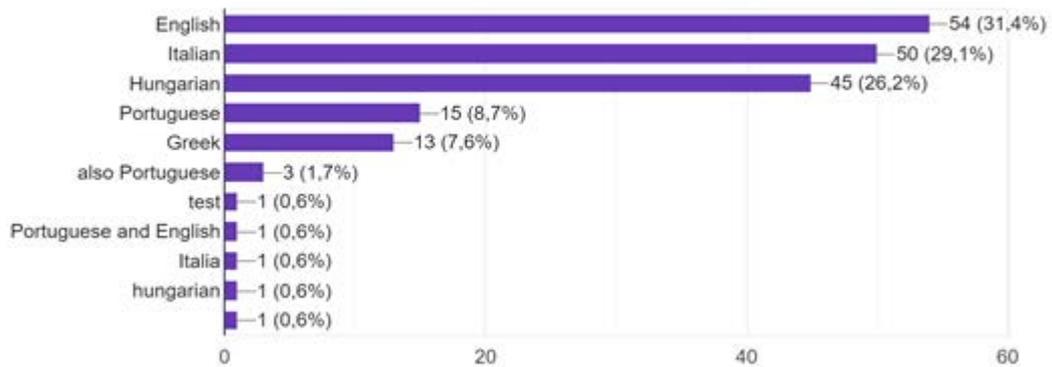
Figure 13: Official language of teaching

Semester / Annual Course Evaluation Method
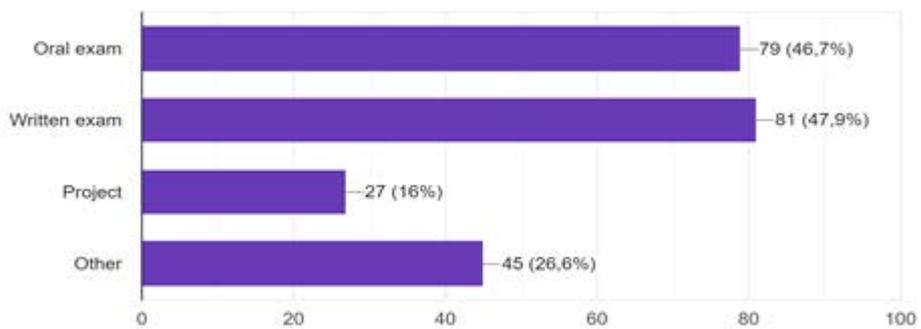
Figure 14: Evaluation methods

Course are equally distributed between the first and second period and mainly they correspond to 6 credits. The teaching methodology is mainly in class and blended, even if the choice is currently affected by the COVID-19 pandemic.
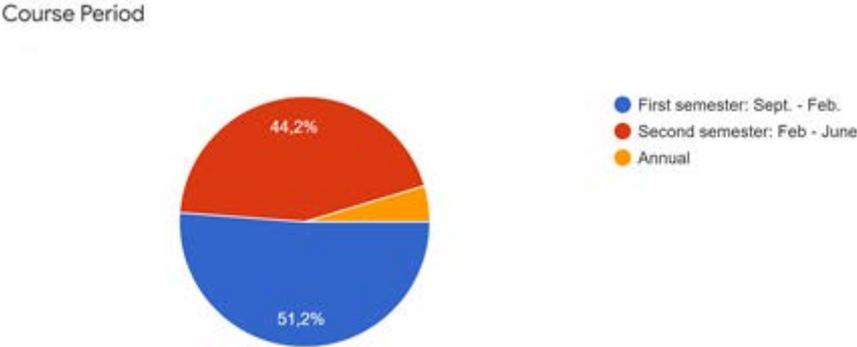
Course Period

Figure 15: Course Period

Corresponding University Credits
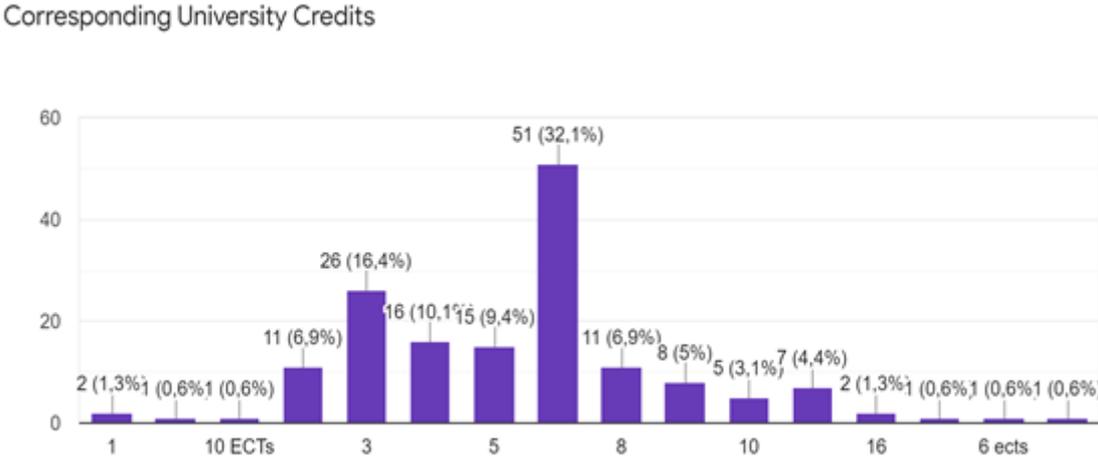
Figure 16: Corresponding University Credits
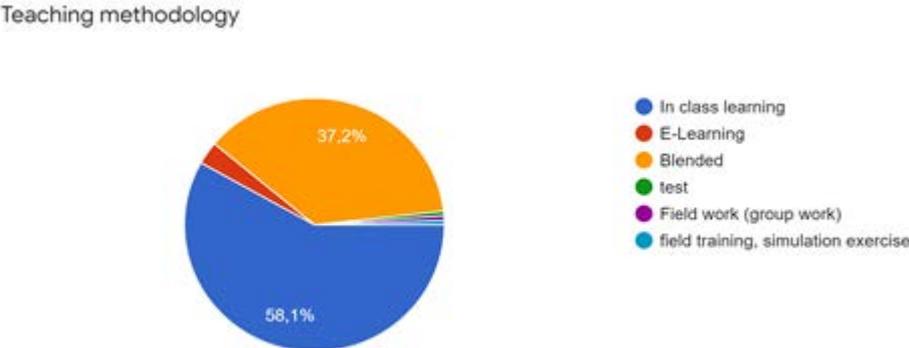
Teaching methodology

All the topics are covered even if the ones related to maritime security and water security and geopolitics seem very similar (Figure 16)
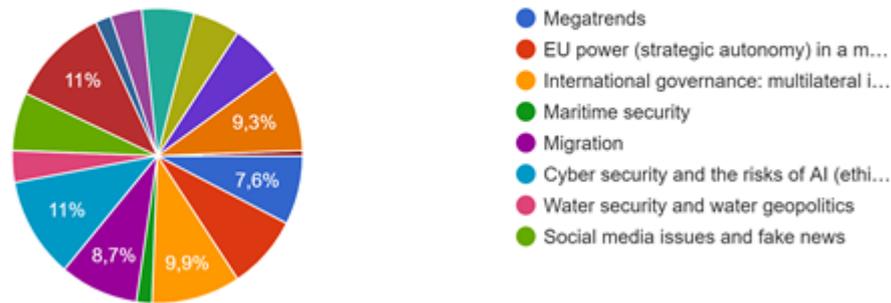
Figure 18: Corresponding EuSecure topic

CONCLUSIONS

The present report aims at mapping the programs and semester courses related to the 15 EuSecure topics in the universities consortium, with the aim to single out the main internal students and lectures stakeholders and study the structure of EuSecure course with the best fit to the universities courses.

The main source of the mapping has been the universities portal and interviews with University delegates. Currently 64 program courses have been mapped, which mainly partially cover EuSecure topics. They are both bachelor and master programs, mostly in national language.

The semester courses held at universities ' consortium cover all EuSecure topics, with different distribution.

Bachelor and master courses have homogeneous structure and duration. Even if half of semester courses are held in English more than half are held in national language different from English. This aspect will be taken into account in the requirement scenario of the MOOC design, in order to decide the requirement of language localization.

This aspects will be relevant for the design of the course, which will be developed in IO2.

END-USERS' NEEDS ASSESSMENT

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1. GENERAL INFORMATION

1.1. Introduction

The present survey was conducted in the framework of the Erasmus+ Project "EUSecure", in order to develop the "End-users' Needs Assessment". As the EUSecure project adopts a learner/user- centered approach, this task aims at identifying the target group needs. The main target audience of the course is the undergraduate and graduate students of the participating organizations, as well as their peers in Higher Education Institutions in the EU and beyond. Data collection on students' needs regarding the EUSecure SimMOOC has been achieved through the development, dissemination, gathering and analysis of a specifically-designed e-questionnaire in Google forms. Besides this questionnaire for end-users, has also developed an e-questionnaire, which has been disseminated to professors and stakeholders of the EUSecure focus group. Stakeholders include other Higher Education Institutions, academic staff, researchers, research institutions, project related networks and initiatives, and policy-makers in national, regional, EU and international level. Both questionnaires have been designed, developed and disseminated by University of Piraeus, with contribution of all partners. University of Piraeus collected the data, analyzed them and produced the present report on the survey results, outlining the needs to which the EUSecure course development should respond.

This report is divided into five main chapters. The first chapter is presenting general information concerning the survey conducted, i.e. the questionnaires' description, the duration of the research and the number of respondents. Chapters two and three focus on the results of the data collected by the questionnaires for Students and Professors/Stakeholders respectively. In Chapter four are presented the conclusions of the survey conducted and subsequently, in chapter five are listed the relevant links of the questionnaires and the questionnaires themselves.

1.2. Questionnaires' description

Both questionnaires, for students and professors/stakeholders, were agreed from the consortium of the project. The questionnaire for students consists of eleven questions. The first four questions are demographic and education- related. Subsequently, the questions five to eleven concern students' opinion on security issues. The questionnaire for professors/stakeholders consists of ten questions. The first three questions are demographic and profession- related. In case of professors, there are two more sub questions, linked to the third question, on their affiliated University and the teaching methodology on security issues. Subsequently, the questions four to ten concern professors/stakeholders' opinion on security issues.

1.3. Duration of research

The questionnaires were released and spread by all partners of the consortium. The survey was conducted in 20 days. In particular, both questionnaires were open to students and professors/stakeholders from January 16 to February 4, 2021.

1.4. Respondents' breakdown

1.4.1. Students

The first questionnaire "on students' needs" has been answered by 380 students. These pupils study and live in seven different European countries, **France, Greece, Hungary, Italy, Portugal, Romania** and **UK**[10] and one South American, **Ecuador**. The responded pupils are affiliated to eighteen (18) different Universities, as shown in the below table (Table 1).

Table 1

Students' breakdown

	Country	University	Responses
1	Ecuador	● Universidad Casa Grande	1
2	France	● Kedge school Marseille ● Sciences po Lille	2
3	Greece	● University Piraeus ● Athens University of Economics and Business ● University of Thrace	54
4	Hungary	● University of Public Service ● Nemzeti Közszolgálati Egyetem ● Szechenyi István University ● Budapest Business School	136
5	Italy	● University of Salento ● Polytechnic University of Turin	61

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[10] The countries are stated in alphabetical order

6	Portugal	● University Fernando Pessoa ● Veiga - Guimarães	60
7	Romania	● Sapientia Hungarian University of Transylvania ● Univerisity of Babes-Bolyai	64
8	UK	● University of Bristol ● University of Glasgow	2
Total			380

1.4.2. Professors and Stakeholders

The second questionnaire for Professors and Stakeholders has been answered, in total, by 258 respondents (Professors and Stakeholders).

In particular, 173 of the respondents were Professors by 24 different Universities in eight countries: **Greece, Hungary, Italy, Portugal, Romania, United Kingdom** (UK) and **United States of America** (USA). The total breakdown of the Professors is presented in the table below (Table 2).

Table 2

Professors' breakdown

	Country	University	Responses
1	Greece	● University Piraeus ● National and Kapodistrian University of Athens ● University of Macedonia ● Panteion University ● University of the Peloponnese ● The American College of Greece "Deree" ● University of Crete	16
2	Hungary	● University of Public Service ● University of Pannonia ● Kodolányi János Egyetem ● Peter Pazmany Catholic ● University Károli Reformist University ● Eötvös Loránd University	41

	Country	Field/ Organization(s)	Responses
3	Italy	● University of Salento ● Università degli Studi di Milano ● John Cabot University ● University of Turin ● University of Bari ● University of Public Service	25
4	Portugal	● University Fernando Pessoa ● University of Coimbra	61
5	Romania	● Sapientia Hungarian University of Transylvania	28
6	UK	● University of Lincoln	1
7	USA	● University of Virginia Tech	1
Total			**173**

As regards the Stakeholders that answered in the questionnaire, they were in total 85, originated by 11 different countries in EU and beyond: **Belgium, Brazil, China, Greece, Hungary, Italy, Northern Ireland, Portugal, Romania, Spain** and **UK.** The specialty of these stakeholders varies among several fields/ Organizations, such as **private and public sectors, NGOs, think tanks**, etc. The total breakdown of the Stakeholders is presented in the table below (Table 3).

Table 3

Stakeholders' breakdown

	Country	Field/ Organization(s)	Responses
1	Belgium	● Think tank	1
2	Brazil	● United Nations System	1
3	China	● Private Sector	1
4	Greece	● Research center ● Ministry ● Private sector	5
5	Hungary	● Research center ● Ministry ● Private sector ● IT Service Desk ● Local government ● Defence Forces	21
6	Italy	● Research center ● Private sector	4

7	Northern Ireland	● Research center	1
8	Portugal	● Research center ● Ministry ● Public sector ● Private sector ● International Network ● NGO ● Autarca ● Municipality ● Currently unemployed ● University student	27
9	Romania	● Research center ● Ministry ● Private sector ● Local administration	22
10	Spain	● Research center	1
11	UK	● Private sector	1
Total			**85**

2. RESULTS OF THE QUESTIONNAIRE FOR STUDENTS

This chapter presents the results of the data that has been collected from the questionnaire for students.

2.1. Demographics

This section of the "End-users' Needs Assessment" presents the demographic elements gathered from the Questionnaires of Students.

2.1.1. Student's gender

❖ Reference question (Question 1 of Students' Questionnaire):
"Please specify your sex."

As regards the gender, 55% of the students that responded to the questionnaire are **female** (207 pupils), 42% are **male** (161 pupils) and 3% of them **didn't want to specify the gender** (12 pupils). The graphic below depicts the corresponding percentages (Graphic 1).

Graphic 1

Students' gender
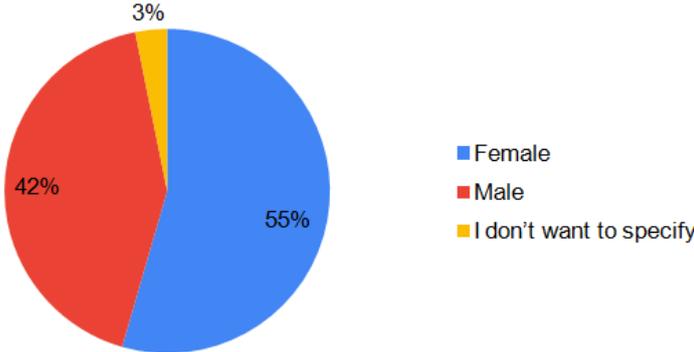
2.1.2. Students' highest level of education

❖ Reference question (Question 2 of Students' Questionnaire):
"What is the highest level of education you have completed?"

As regards the education highest level of the students, 53% of them have completed **Secondary School Level** (203 pupils), 38% have completed **Higher Education, BSC/BA program** (143 pupils) and 9% have completed **Higher Education, MSC/BA program** (34 pupils). The graphic below depicts the corresponding percentages (Graphic 2).

Graphic 2

Students' higher level of education completed

- Higher education, BSC/BA program — 38%
- Higher education, MSC/BA program — 9%
- Secondary school level — 53%
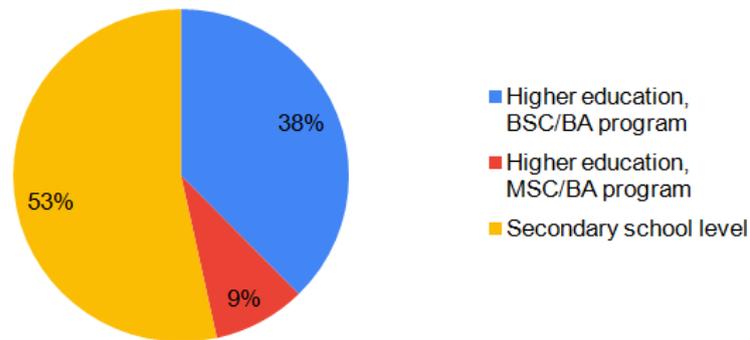
2.1.3. Students' Affiliated University and Country

❖ Reference question (Question 3 of Students' Questionnaire):
"In which university do you study?"

The students that answered to the questionnaire are affiliated to 19 different Universities. The distribution of students in Universities is reflected in the below table (Table 4).

The majority of the respondents studies at the **University of Public Services**, in Hungary (34.7%, i.e. 132 pupils).

16.6% study at the **University of Sapientia Hungarian University of Transilvania**, in Romania (63 pupils).

15.8% study at the **University of Salento**, in Italy (60 pupils).

15.5% study at the **University of Fernando Pessoa**, in Portugal (59 pupils).

13.4% study at the **University of Piraeus**, in Greece (52 pupils).

The rest 4% of the respondents study at 14 other Universities: **Athens University of Economics and Business and University of Thrace** (Greece), **Sciences po Lille and Kedge school Marseille** (France), **Universidad Casa Grande** (Ecuador), **Veiga – Guimarães** (Portugal), **Univerisity of Babes-Bolyai** (Romania), **Polytechnic University of Turin** (Italy), **University of Glasgow and University of Bristol** (UK), **Nemzeti Közszolgálati Egyetem, Budapest Business School, Nemzetszolgálati Egyetem and Szechenyi István University** (Hungary).

The graphic below depicts the correspondence of students to their affiliated Universities (Graphic 3).

Graphic 3

Students' Affiliated University
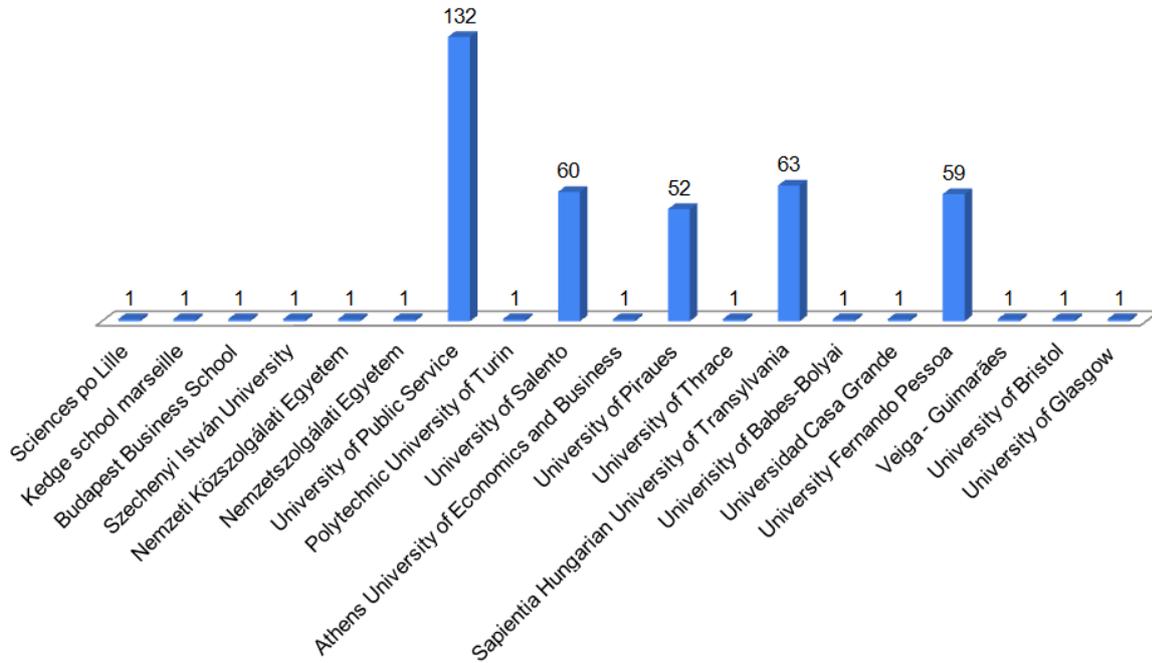
Table 4

Allocation of responded students in Universities

County	University	Student(s)	Total
France	Sciences po Lille	1	2
	Kedge school marseille	1	
Hungary	Budapest Business School	1	136

	Szechenyi István University	1	
	Nemzeti Közszolgálati Egyetem	1	
	Nemzetszolgálati Egyetem	1	
	University of Public Service	132	
Italy	Polytechnic University of Turin	1	61
	University of Salento	60	
Greece	Athens University of Economics and Business	1	54
	University of Piraeus	52	
	University of Thrace	1	
Romania	Sapientia Hungarian University of Transylvania	63	64
	University of Babes-Bolyai	1	
Ecuador	Universidad Casa Grande	1	1
Portugal	University Fernando Pessoa	59	60
	Veiga - Guimarães	1	
UK	University of Bristol	1	2
	University of Glasgow	1	

Out of the data collected, concerning the students' affiliated Universities, came up the students' countries of origin which are presented in the below graphics (Graphics 4 and 5).

Graphic 4

Students' country of origin

Country	Count
France	2
Greece	54
Italy	61
Romania	64
Hungary	136
Ecuador	1
Portugal	60
UK	2
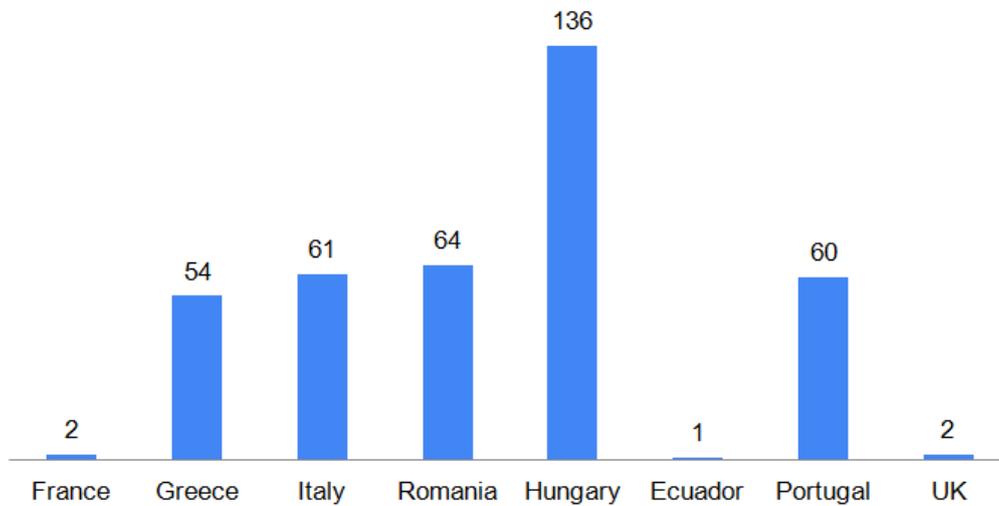
Graphic 5

Students' country in percentage

■ France ■ Greece ■ Italy ■ Romania ■ Hungary ■ Ecuador ■ Portugal ■ UK

0,5% France — 0,25% Ecuador
0,25% UK
16% Portugal — 14% Greece
16% Italy
36% Hungary
17% Romania
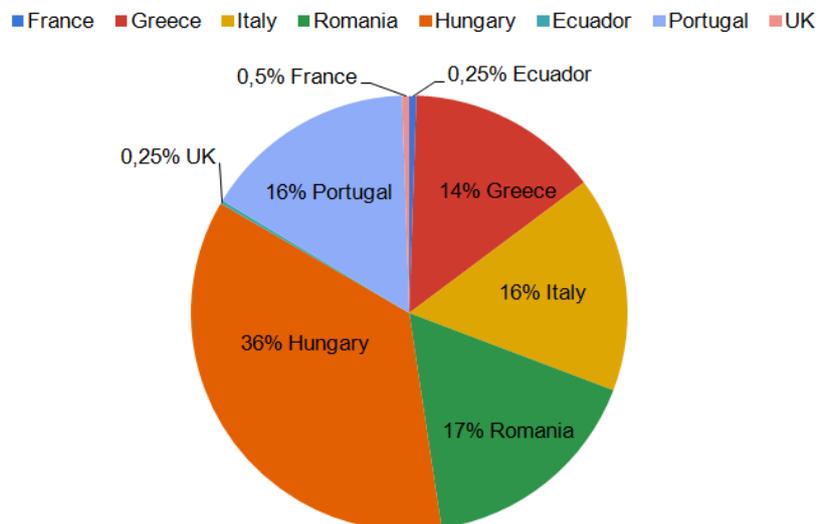
2.1.4. Students' degree program

❖ Reference question (Question 4 of Students' Questionnaire):
"Please indicate your degree program."

146

The students were asked to indicate their degree program. The responses were categorized into 16 specific areas as shown in the below Table (Table 5).

Table 5

Student's degree program

	Degree Program	Responses
1	International Public Administration	51
2	International Business Administration	13
3	Communication Sciences	13
4	Digital Management	2
5	Economics, Finance, Logistics	9
6	International and European Policies on Education, Training and Research	2
7	Health and Nature Sciences	27
8	Humanities (Anthropology, Psycology, Literature, Sociology Criminology)	29
9	Political Sciences, International and European Relations, Diplomacy	77
10	Law	15
11	Military Sciences and Leadership	5
12	Security, Defence, Intelligence, Strategic Studies, Cyber Security	23
13	Engineering Science and Technology (Civil, Landscape, Industrial, Management Engineering)	21
14	Information and Computer Sciences	23
15	Environmental Sciences and Energy	6
16	Not identified	64
Total		**380**

The majority of the respondents (77 students) study **Political Sciences, International and European Relations, Diplomacy**, i.e. 20,3%.

16.8% of the students that participated in the questionnaire didn't want to identify their degree program, i.e. 64 students.

13.4% of the respondents, i.e. 51 students, study **International Public Administration**, while 8%, i.e. 29 students, study aspects of Human society.

7.1% of the respondents (27 students) study **Health and Nature Sciences**, 6.1% (23 students) study **Security, Defense, Intelligence, Strategic Studies, Cyber Security**, 6,1% **Information and Computer Sciences** (23 students) and 5.5% **Engineering Science and Technology** (21 students).

The rest respondents study in other fields, such as: **Law** (15 students, i.e. 3.9%), **Communication** (13 students, i.e. 3.4%), **International Business Administration** (13 students, i.e. 3.4%), **Economics** (9 students, i.e. 2.4%), **Environment** (6 students, i.e. 1.6%), **Military Sciences** (5 students, i.e. 1.3%), **Engineering Science and Technology** (2 students, i.e. 0.5%), **Education** (2 students, i.e. 0.5%).

The percentages mentioned above are depicted in the below graphic (Graphic 6)

Graphic 6

Students' degree program

148
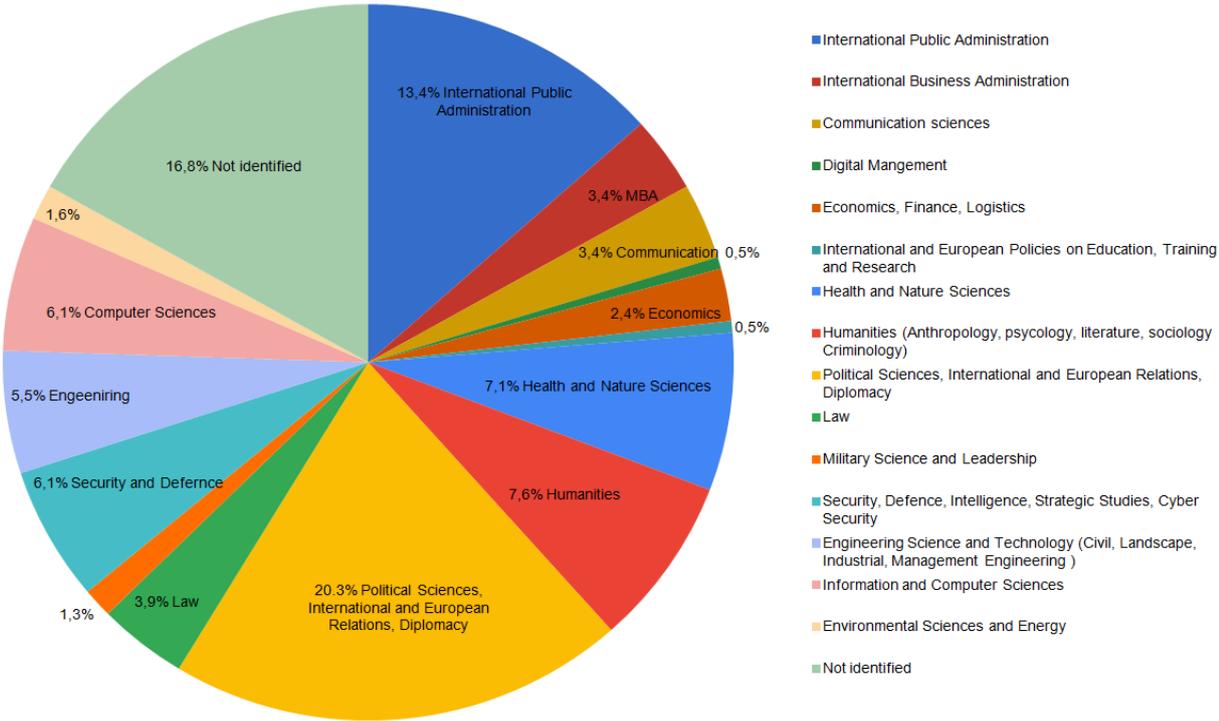
2.2. Students' opinion on security issues

This chapter is dealing with the students' opinion on specific security issues and challenges for the EU.

2.2.1. Main challenges/security issues for EU

❖ Reference question (Question 5 of Students' Questionnaire):
"Which do you think the most important challenges or security issues are for the EU? You can mark more than one answer."

The majority of the students mentioned **"Terrorism"** as the most important security challenge for EU (226 students). Follow **"Diffusion of misinformation and fake news. Armed conflicts in the neighborhood"**, answered by 219 students and **"Irregular migration"**, answered by 197 students. Fourth in the students' list is **"Cyber threats"**, answered by 188 students, fifth **"Risks of pandemic"**, answered by 144 students and sixth **"Hybrid threats"**, answered by 141 students.

Latest on the students' list are **"Natural disasters"**, answered by 117 students and **"Risks of artificial intelligence"**, answered by 49 students.

Twelve of the students identified other challenges or security issues that were mentioned as important for the EU.

The following graphic (Graphic 7) depicts the students' opinion regarding the importance of specific challenges or security issues for the EU.

Graphic 7

Main challenges/security issues for EU
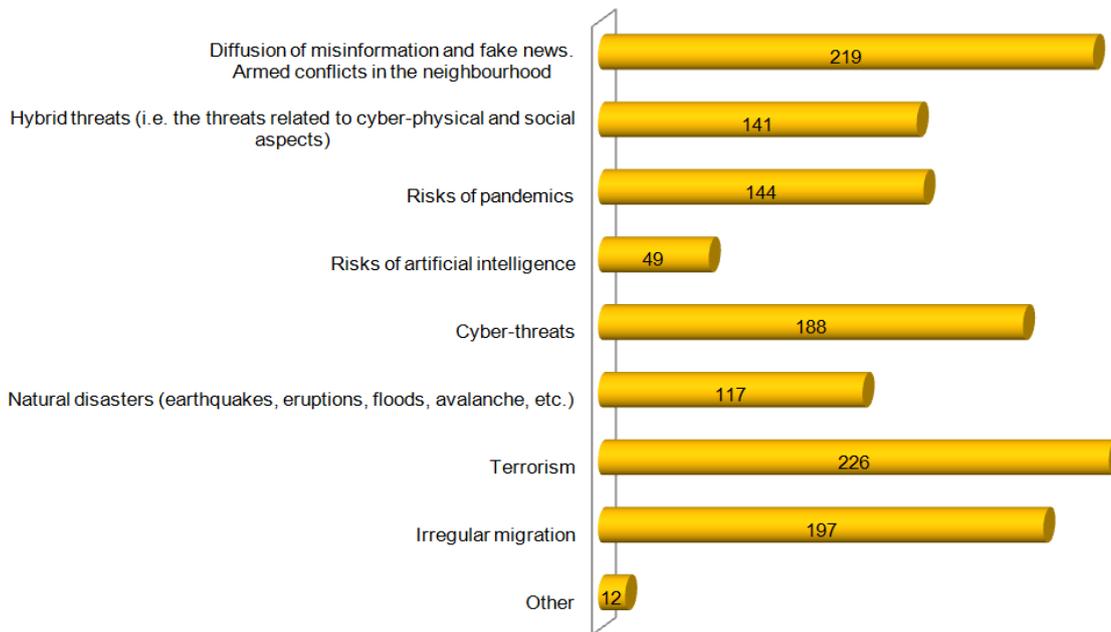
Other challenges that the students mentioned as important are presented in the below table (Table 6).

Table 6

Other important EU challenges or security issues

1	Risks of non-solidarity due to economic differences
2	Internal problems
3	Racism & close- mindedness
4	Education, Health
5	Organized Crime
6	Ignorance, discrimination, inequality
7	Bad politicians

8	Growth of Fascist Regimes in Europe
9	Rise of the far-right and other xenophobic nationalist movements
10	Circular Energy
11	Climate change, water supply
12	The threats of global warming

2.2.2. Efficiently tackling of challenges/issues on EU security

❖ Reference question (Question 6 of Students' Questionnaire):
"Do you think that these issues can be efficiently tackled at European or national level? It is possible to mark both levels at the same time."

The below graphic (Graphic 8) depicts the opinion of students on whether several issues could better be tackled at European or national level.

According to the results all provided issues can be more efficiently tackled at European level. In particular:

"Risks of artificial intelligence" is the issue that, according to students, should be better addressed at European level (223 responses).

Follow **"Hybrid threats"** (217 responses), **"Terrorism"** (211 responses), **"Armed conflicts in the neighborhood"** (196 responses), **"Cyber threats"** (185 responses), **"Irregular migration"** (181 responses), **"Risk of pandemics"** (151 responses), **"Diffusion of misinformation and fake news"** (115 responses).

Graphic 8

Do you think that the below issues can be efficiently tackled at National or European level?

Legend: ■ At European Level, At national Level   ■ At national level   ■ At European level

Armed conflicts in the neighborhood
- At European Level, At national Level: 98
- At national level: 86
- At European level: 196

Diffusion of misinformation and fake news
- At European Level, At national Level: 130
- At national level: 135
- At European level: 115

Hybrid threats
- At European Level, At national Level: 92
- At national level: 71
- At European level: 217

Risks of pandemics
- At European Level, At national Level: 143
- At national level: 86
- At European level: 151

Risks of artificial intelligence
- At European Level, At national Level: 66
- At national level: 91
- At European level: 223

Cyber-threats
- At European Level, At national Level: 95
- At national level: 100
- At European level: 185

Terrorism
- At European Level, At national Level: 102
- At national level: 67
- At European level: 211

Irregular migration
- At European Level, At national Level: 108
- At national level: 91
- At European level: 181

2.2.3. Important aspects in preserving security in the EU

❖ Reference question (Question 7 of Students' Questionnaire):
"In your opinion, which aspects are the most important in preserving security in the EU? You can mark more than one answer."

According to the student's opinion, **"Economic cooperation"** is the most important aspect in preserving security in the EU (265 responses). Important also are **"Education"** (262 responses) and **"Social cooperation"** (247 responses).

Follow **"International cooperation with third countries"** and **"Military cooperation"** (180 responses each), **"Sustainability measures"** (170 responses), **"EU common juridical regulations"** (161 responses), **"Humanitarian Aid to third countries"** (143 responses) and **"Development policy towards third countries"** (139 responses).

The students' responses are depicted in the below graphic (Graphic 9).

Graphic 9

Aspect most important in preserving security in the EU
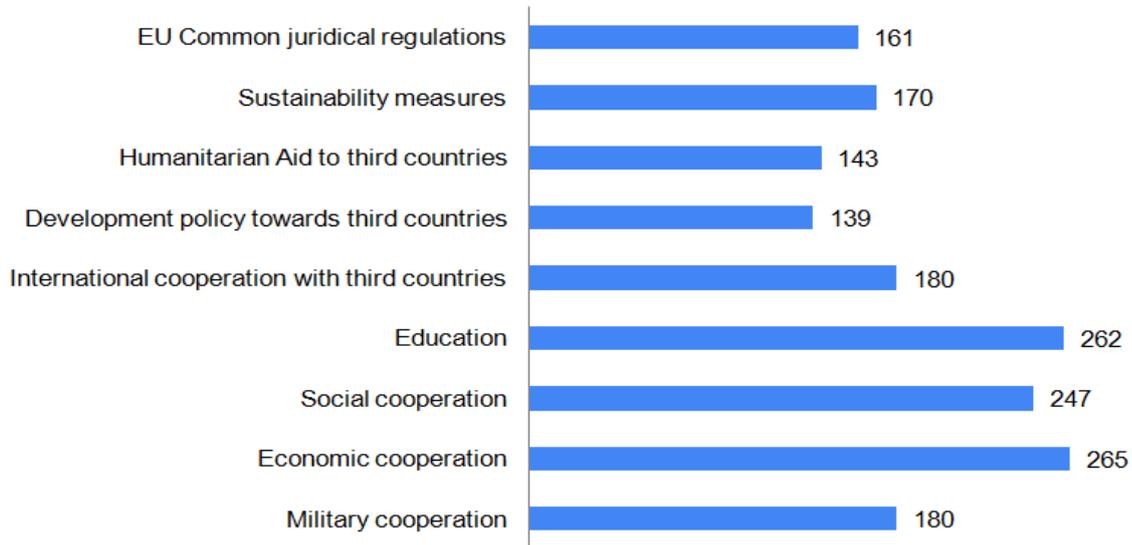
Aspect	Value
EU Common juridical regulations	161
Sustainability measures	170
Humanitarian Aid to third countries	143
Development policy towards third countries	139
International cooperation with third countries	180
Education	262
Social cooperation	247
Economic cooperation	265
Military cooperation	180

Apart from the aspects mentioned above, seven students indicated other aspects that they believe to be important in preserving security in the EU. These aspects are stated in the below table (Table 7).

Table 7

Other aspects important for in preserving security in the EU

1	Cultural cooperation enhancing the roots and role of a common European identity forms by multitudes (a variety of subsequent identities)
2	Further integration
3	Better and unified justice in EU
4	Information sharing (Intelligence)
5	Multilateral cooperation
6	Multiculturalism and inclusive immigration policies
7	Border defense cooperation - Closing all outer borders - land, air, sea - in order to prevent migration from non European countries

2.2.4. Aspects of an interdisciplinary training on EU security

❖ Reference question (Question 8 of Students' Questionnaire):
"In your opinion, which aspects should be entailed in the framework of an interdisciplinary training on EU security? You can mark more than one answer."

Students were asked to indicate the aspects that according to their opinion should be entailed in the framework of an interdisciplinary training on EU security.

There were given twelve separate aspects, for which students voted and the results are presented in the below graphic (Graphic 10).

"Terrorism" is believed to be the aspect that should most be entailed in the framework of an interdisciplinary training on EU security (249 students). Follow **"Cyber-threats"** (215 students), "**Diffusion of misinformation and fake news"** and **"Pandemic management"** (203 students each), **"Irregular migration"** (200 students), **"Armed conflicts in the neighborhood"** (170 students), "**Security and resilience of critical infrastructures"** (158 students), "**Hybrid threats"** (143 students), "**Natural disasters"** (134 students), **"Approaches to security management"** (120 students) and "**Risks of artificial intelligence"** (104 students).

Graphic 10

Aspects that should be entailied in the framework of an interdisciplinary training on EU security
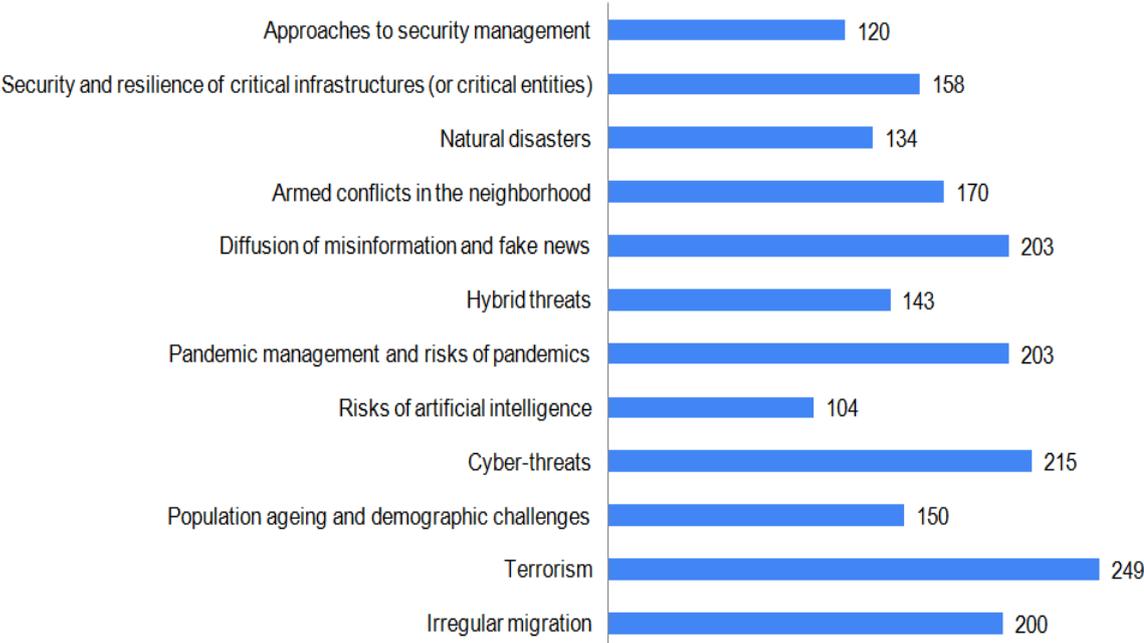
Apart from the aspects mentioned above, seven students indicated other aspects that they believe to be important in preserving security in the EU. These aspects are stated in the below table (Table 8).

Table 8

More aspects that should be entailed in the framework of an interdisciplinary training on EU security

1	Transnational organized crime
2	Climate change and its economic/societal effects.
3	Futurology (future scenario building and forecasting)
4	Geopolitics (focus on Africa)/ EU CSDP
5	Pollution
6	Cultural differences - European contra non-European cultures Fall of multiculturalism in western Europe
7	Security problems with 2nd and 3rd generations of Muslim immigrants

2.2.5. Interest in studying specific EU security challenges

❖ Reference question (Question 9 of Students' Questionnaire):
"On a scale from 1 to 5, to what extent would you be interested in studying about each of the following topics and EU security challenges? Mark 1 for the least and 5 for the most"

According to the responses received, what interest students most in studying are the below topics/ EU security challenges: "**Sustainability and Development, Environmental protection**" (156 students are extremely interested), **"Climate change"** (152 students are extremely interested), "**Spread of misinformation and fake news**" (142 students are extremely interested) "**Cybersecurity and information security**" (141 students are extremely interested) and "**Security of critical infrastructures**" (122 students are extremely interested).

In the below table are presented the results for each topic (Table 9) and in Graphic 11 are depicted diagrammatically.

Table 9

Students' interest in studying specific EU security challenges

Topic	1	2	3	4	5
Megatrends	58	76	**128**	67	51
Climate change	17	42	91	78	**152**
Food security	23	62	**111**	100	84
Maritime security	35	83	**127**	85	50
EU power (strategic autonomy) in a multipolar world	21	43	**107**	103	106
International governance: multilateral institutions, norms, regimes	29	55	**105**	103	88
Water security and water geopolitics	42	58	87	**98**	95
Public health security	25	38	101	103	**113**
Irregular migration	24	52	96	100	**108**
Cybersecurity and information security	11	35	86	107	**141**
Risks of Artificial Intelligence	28	48	**113**	93	98
Sustainability and Development, Environmental protection	12	27	92	93	**156**
Spread of misinformation and fake news	21	30	84	103	**142**
International development cooperation	11	46	**107**	111	105
Armed conflicts in the neighbourhood	26	47	94	**111**	102
Security of critical infrastructures (like ports, airports, water, electrical, digital infrastructures)	26	44	86	102	**122**

1. The majority of the students are **moderately interested** in studying "**Megatrends"** (128/380 students)
2. The majority of the students are **extremely interested** in studying "**Climate change**" (152/380 students)
3. The majority of the students are **moderately interested** in "**Food security**" (111/380 students)
4. The majority of the students are **moderately interested** in "**Maritime Security**" (127/380 students)

5. The majority of the students are **moderately interested** in "EU **power (strategic autonomy) in a multipolar world**" (107/380 students)
6. The majority of the students are **moderately interested** in "**International governance: multilateral institutions, norms, regimes**" (105/380 students)
7. The majority of the students are **very interested** in "**Water security and water geopolitics**" (98/380 students)
8. The majority of the students are **extremely interested** in "**Public health security**" (113/380 students)
9. The majority of the students are **extremely interested** in "**Irregular migration**" (108/380 students)
10. The majority of the students are **extremely interested** in "**Cybersecurity and information security**" (141/380 students)
11. The majority of the students are **moderately interested** in "**Risks of Artificial Intelligence**" (113/380 students)
12. The majority of the students are **extremely interested** in "**Sustainability and Development, Environmental protection**" (156/380 students)
13. The majority of the students are **extremely interested** in "**Spread of misinformation and fake news**" (142/380 students)
14. The majority of the students are **very interested** in "**International development cooperation**" (111/380 students)
15. The majority of the students are **very interested** in "**Armed conflicts in the neighborhood**" (111/380 students)
16. The majority of the students are **moderately interested** in "**Security of critical infrastructures**" (122/380 students)

Graphic 11

On the scale from 1 to 5, to what extent would be interested in studying about each of the below EU security challenges: 1 for the least and 5 for the most

■1 ■2 ■3 ■4 ■5

Category	1	2	3	4	5
Megatrends	58	76	128	67	51
Climate change	17	42	91	78	152
Food security	23	62	111	100	84
Maritime security	35	83	127	85	50
EU power (strategic autonomy) in a multipolar world	21	43	107	103	106
International governance: multilateral institutions, norms, regimes	29	55	105	103	88
Water security and water geopolitics	42	58	87	98	95
Public health security	25	38	101	103	113
Irregular migration	24	52	96	100	108
Cybersecurity and information security	11	35	86	107	141
Risks of Artificial Intelligence	28	48	113	93	98
Sustainability and Development, Environmental protection and climate.	12	27	92	93	156
Spread of misinformation and fake news	21	30	84	103	142
International development cooperation	11	46	107	111	105
Armed conflicts in the neighbourhood	26	47	94	111	102
Security of critical infrastructures (like ports, airports, water, electrical, digital.	26	44	86	102	122

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2.2.6. Awareness of aspects on EU security

❖ Reference question (Question 10 of Students' Questionnaire):
"On a scale from 1 to 5, to what extent are you aware of the following aspects of EU security? Mark 1 for the least and 5 for the most"

As regards the students' awareness on several aspects of EU security, the results of the responses have shown that the students are moderately aware of almost all of the provided aspects of EU security.

In the below table are presented the results for each aspect (Table 10) and in Graphic 12 are depicted diagrammatically.

Table 10

Students' awareness on specific EU security challenges

Topic	1	2	3	4	5
Megatrends	83	98	**110**	69	20
Climate change	19	43	120	**123**	75
Food security	61	110	**129**	53	27
Maritime security	102	**110**	99	54	15
EU power (strategic autonomy) in a multipolar world	41	70	**122**	90	57
International governance: multilateral institutions, norms, regimes	41	73	**112**	106	48
Water security and water geopolitics	79	90	**116**	62	33
Public health security	35	79	**149**	77	40
Irregular migration	35	53	109	**114**	69
Cybersecurity and information security	33	87	**110**	96	54
Risks of Artificial Intelligence	74	98	**112**	68	28
Sustainability and Development, Environmental protection	27	70	**124**	102	57

Spread of misinformation and fake news	32	67	**115**	100	66
International development cooperation	41	78	**115**	112	34
Armed conflicts in the neighbourhood	38	91	**111**	94	46
Security of critical infrastructures (like ports, airports, water, electrical, digital infrastructures)	66	97	**106**	76	35
Pandemic management	22	62	**122**	107	67

Graphic 12

On a scale frome 1 to 5, to what exent are you aware of the following aspects of EU Secure: 1 for the least and 5 for the most

■1 ■2 ■3 ■4 ■5
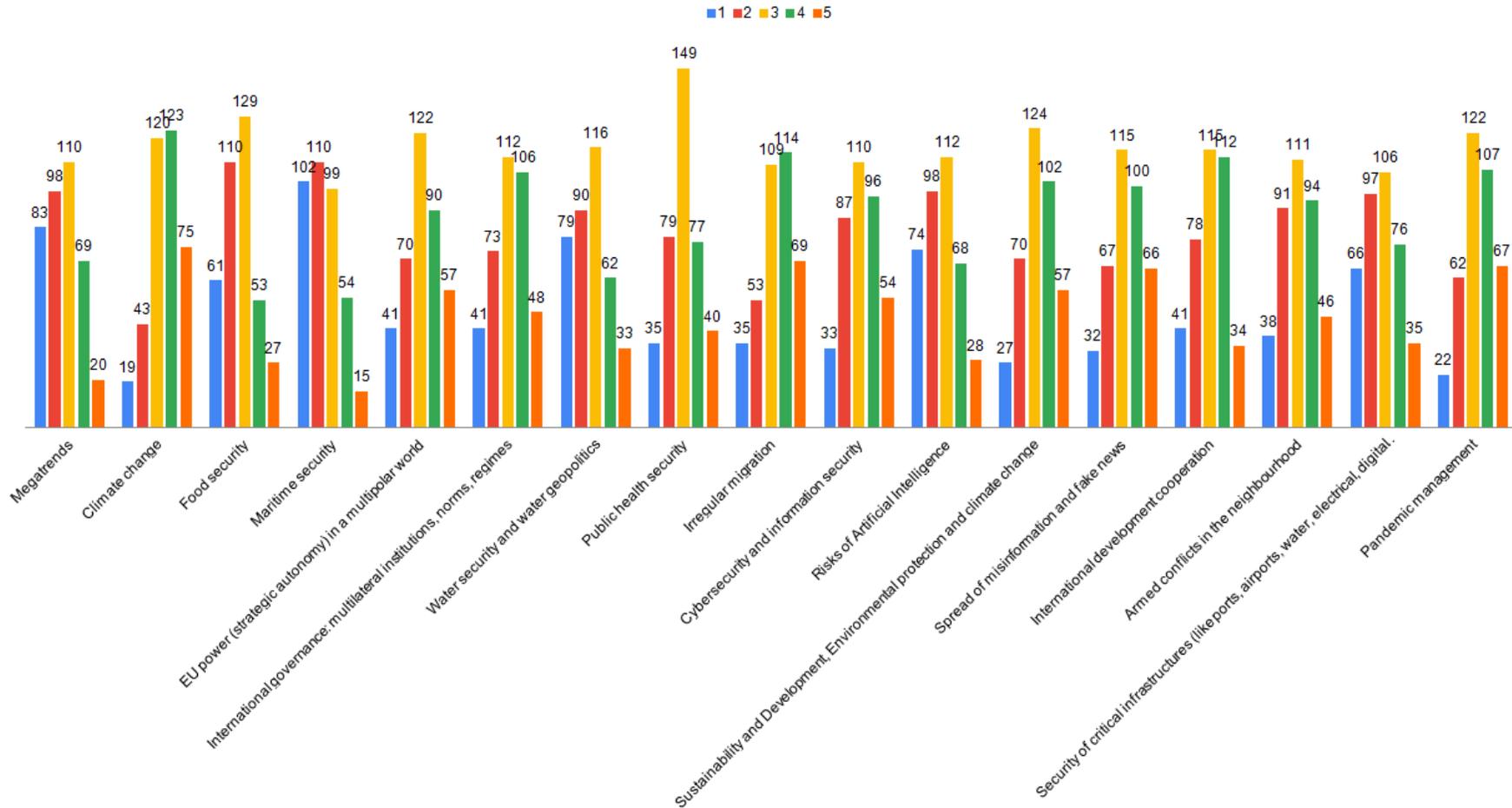
2.2.7. Familiarity with other EU security aspects

❖ Reference question (Question 11 of Students' Questionnaire):
"Please mention any other EU security aspects you are familiar with."

Students were asked to mention if they are familiar with any other EU security aspects.

71 of them answered and the results that came up have been categorized in 30 fields that are presented in the below table (Table 11).

Table 11

	Other EU security aspects that students are familiar with	Responses
1	Cyber security/Intelligence	11
2	Security and defense	7
3	Economic challenges	6
4	Energy security	5
5	Climate change and environmental security	5
6	Organized crime and trafficking	5
7	Human rights/political liberties/workers' rights and stability/abuse within family	5
8	Migration	5
9	Imperialism/Marxism/Authoritarian regimes	5
10	Military issues	4
11	Multiculturalism, national minorities and religion issues	4
12	Nuclear warfare/weapons	3
13	Fake news/ misinformation	3
14	Space infrastructure	3
15	Terrorism	2
16	Threats to the rule of law and democracy	2

17	Arctic and Scandinavian geopolitics	1
18	EU battlegroups	1
19	GDPR	1
20	Education	1
21	Public health	1
22	Gender discrimination issues	1
23	Pandemic - Covid-19	1
24	Turkish threat	1
25	Portuguese representatives in the European Parliament	1
26	Lithuania	1
27	Cooperation among EU countries	1
28	Corruption in European governments	1
29	Increasing influence of China and Russia in Eastern Europe and the Balkans	1
30	EU as an international actor	1

3. RESULTS OF THE QUESTIONNAIRE FOR PROFESSORS/STAKEHOLDERS

This chapter presents the results of the data that has been collected from the questionnaire for Professors and Stakeholders.

3.1. Demographics

This section of the "End-users' Needs Assessment" is presenting the demographic elements concerning Professors and Stakeholders.

3.1.1. Professors/ Stakeholders' gender

❖ Reference question (Question 1 of Professors/Stakeholders' Questionnaire):
"Please specify your gender."

According to the responses received, 57% of the respondents are male and 43% female. The total breakdown of both professors and stakeholders are presented below in Table 12 and depicted in Graphic 13.

Table 12

Professors and Stakeholders gender breakdown

Respondents	Male	Female
Professors	100	73
Stakeholders	48	37
Professors + Stakeholders	148	110

Graphic 13

Professors and Stakeholders gender
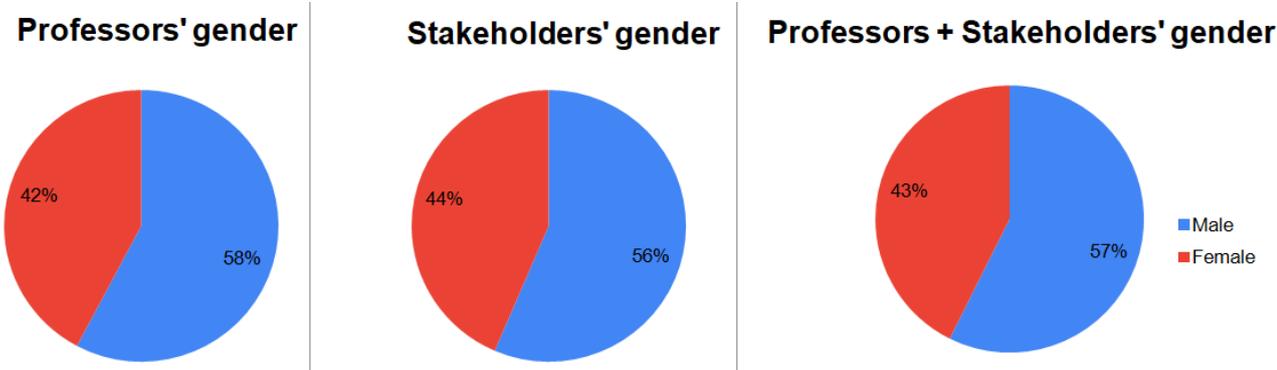
3.1.2. Professors/ Stakeholders' country of work

❖ Reference question (Question 2 of Professors/Stakeholders' Questionnaire):
"Please select the country where you work."

As regards the country that they work, the professors are allocated as follows:

- **Portugal:** 61 professors (25%)
- **Hungary:** 41 professors (24%)
- **Romania:** 28 professors (16%)
- **Italy:** 25 professors (14%)
- **Greece:** 16 professors (9%)
- **UK:** 1 professor (1%)
- **USA:** 1 professor (1%)

The below graphic depicts the professors' country of work (Graphic 14).

Graphic 14

Country of Professors
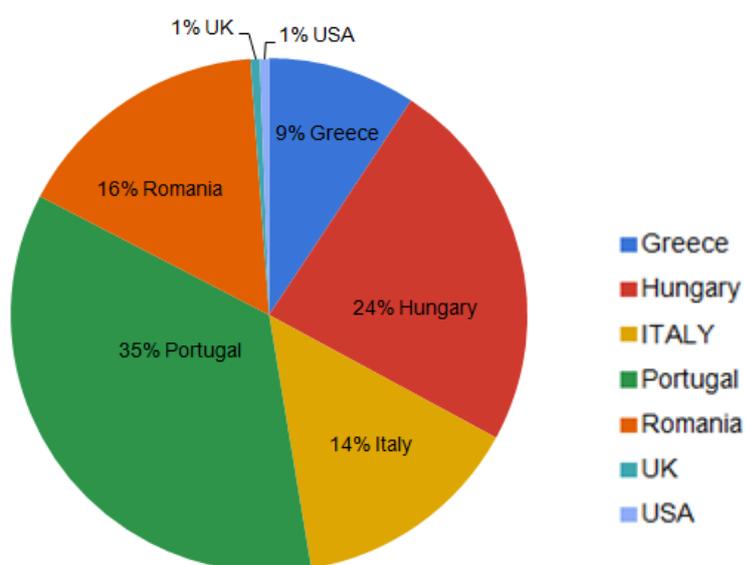
Respectively, follows the allocation of the Stakeholders in the country that they use to work:

- **Portugal:** 27 stakeholders (32%)
- **Romani**a: 22 stakeholders (26%)
- **Hungary:** 21 stakeholders (25%)
- **Greece:** 5 stakeholders (6%)
- **Italy:** 4 stakeholders (5%)
- **China:** 1 stakeholder (1%)
- **UK:** 1 stakeholder (1%)
- **Northern Ireland:** 1 stakeholder (1%)
- **Belgium:** 1 stakeholder (1%)
- **Brazil:** 1 stakeholder (1%)
- **Spain:** 1 stakeholder (1%)

The below graphic depicts the stakeholders' country of work (Graphic 15).

Graphic 15

Country of Stakeholders
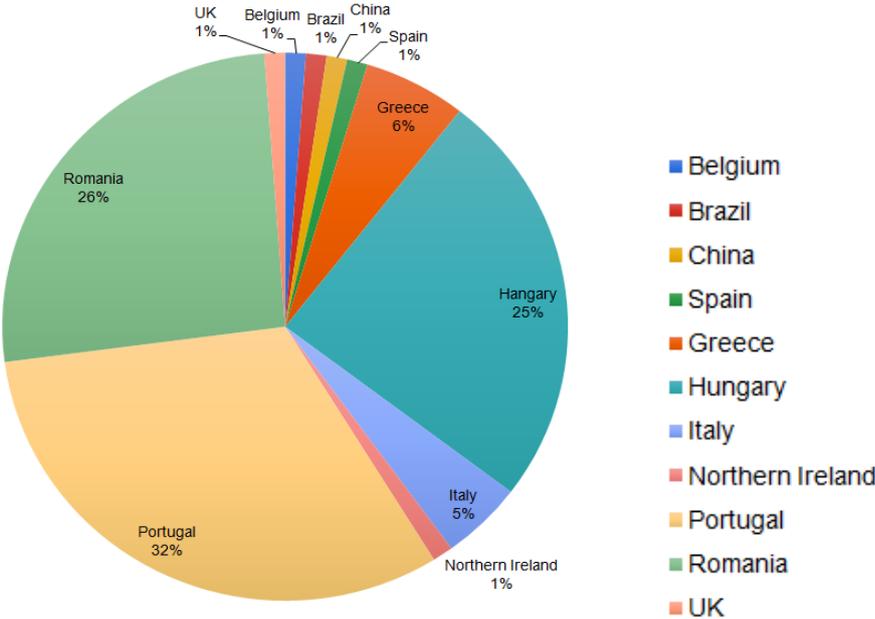
3.1.3. Respondents' profession

❖ Reference question (Question 3 of Professors/Stakeholders' Questionnaire):
"Where do you work?"

The majority of the respondents (67%, i.e. 173 respondents) are Professors working at
Universities.

The rest respondents are Stakeholders, who are affiliated to several other Organizations,
including: **Private companies** (11%, i.e. 29 respondents), **Research centers** (9%, i.e. 23
respondents) and **Ministries** (6%, i.e. 15 respondents).

Some of the respondents (7%, i.e. 18 respondents) declared that they are working in other
fields/Organizations.

All relevant data and the corresponding percentages are depicted below in Table 13 and Graphic
16. Concerning the "other category", the responses are presented in Table 14.

Table 13

Respondents' profession

	Work area	Responses
1	Ministry	15
2	University	173
3	Private sector	29
4	Research center	23
5	Other	18

Graphic 16

Respondents' profession in percentages
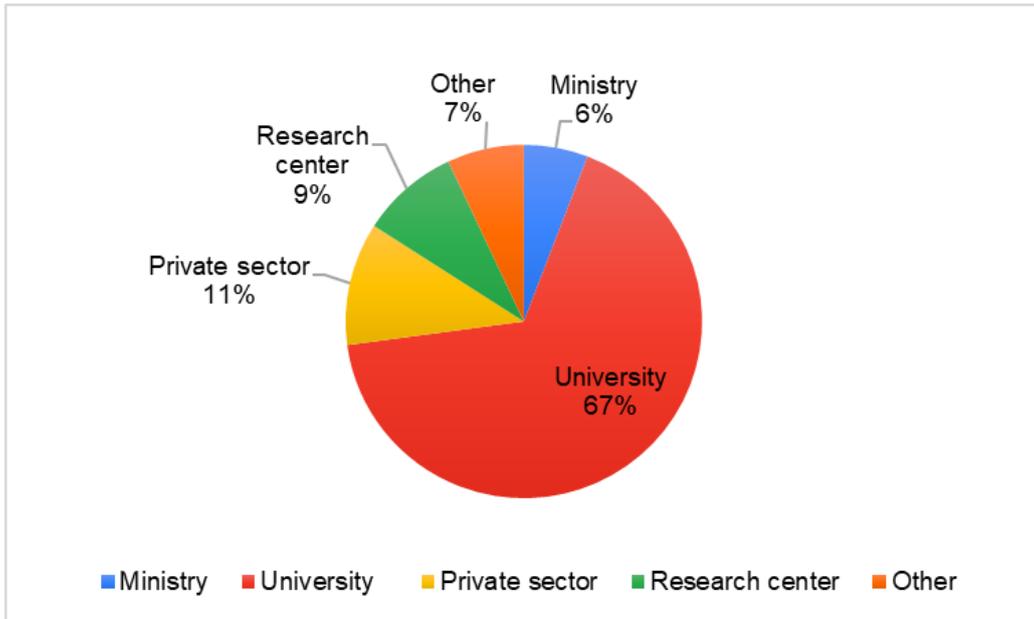
Table 14

Other affiliated Organizations

	Affiliated Organization(s)	Responses
1	Local Authority	5
2	Public administration	3
3	NGOs	2
4	National Authority	1
5	Defense Forces	1
6	I am not working currently	1
7	International Network	1
8	IT Service Desk	1
9	University student	1
10	Think tank	1
11	United Nations System	1

The next two questions were addressed only to those that replied "University" in the previous question.

3.1.3.a. Professors' Affiliated University

❖ Reference question (Question 3a of Professors/Stakeholders' Questionnaire):
"Please choose from the below list, in which University are you occupied."

(This question was answered only by Professors)

The majority of the professors that responded to the questionnaire are occupied in **University Fernando Pessoa**, in Portugal (60 professors).

37 professors are occupied in **University of Public Service** (Hungary), 28 professors in **Sapientia Hungarian University of Transylvania** (Romania) and 20 professors in **University of Salento** (Italy).

Follow other Universities in smaller amount:

In Greece: **University of Piraeus** (6 professors), **National and Kapodistrian University of Athens** (2 professors), **Panteion University in Greece** (2 professors), **University of the Peloponnese** (2 professors), **University of Macedonia** (2 professors), **University of Crete** (1 professor), **The American College of Greece, Deree** (1 professor).

In Hungary: **Eötvös Loránd University** (1 professor)**, Kodolányi János Egyetem** (1 professor)**, Károli Reformist University Budapest** (1 professor)**, Peter Pazmany Catholic University** (1 professor)**, University of Pannonia** (1 professor)**.**

In Italy: **University of Bari** (1 professor)**, Università degli Studi di Milano** (1 professor)**, University of Turin** (1 professor)**, John Cabot University** (1 professor)**.**

In UK: **Uni of Lincoln** (1 professor)**.**

In USA: **Virginia Tech** (1 professor)**.**

The Table 15 presents the Universities in total in which the respondent professors are occupied in and the Graphic 17 depicts the relevant results.

Table 15

Professors' allocation according to their affiliated University

Country	University	Professors
Hungary	Eötvös Loránd University	1
	Kodolányi János Egyetem	1
	Károli Reformist University Budapest	1
	Peter Pazmany Catholic University	1
	University of Pannonia	1
	University of Public Service	37
Greece	University Piraeus	6
	National and Kapodistrian University of Athens	2
	Panteion University	2
	University of the Peloponnese	2
	The American College of Greece, Deree	1
	University of Crete	1
	University of Macedonia	2
Romania	Sapientia Hungarian University of Transylvania	28
UK	Uni of Lincoln	1
Portugal	University Fernando Pessoa	60
	University of Coimbra	1
Italy	University of Bari	1
	University of Salento	20
	Università degli Studi di Milano	1

	University of Turin	1
	John Cabot University	1
USA	Virginia Tech	1

Graphic 17

Professors' Affiliated University
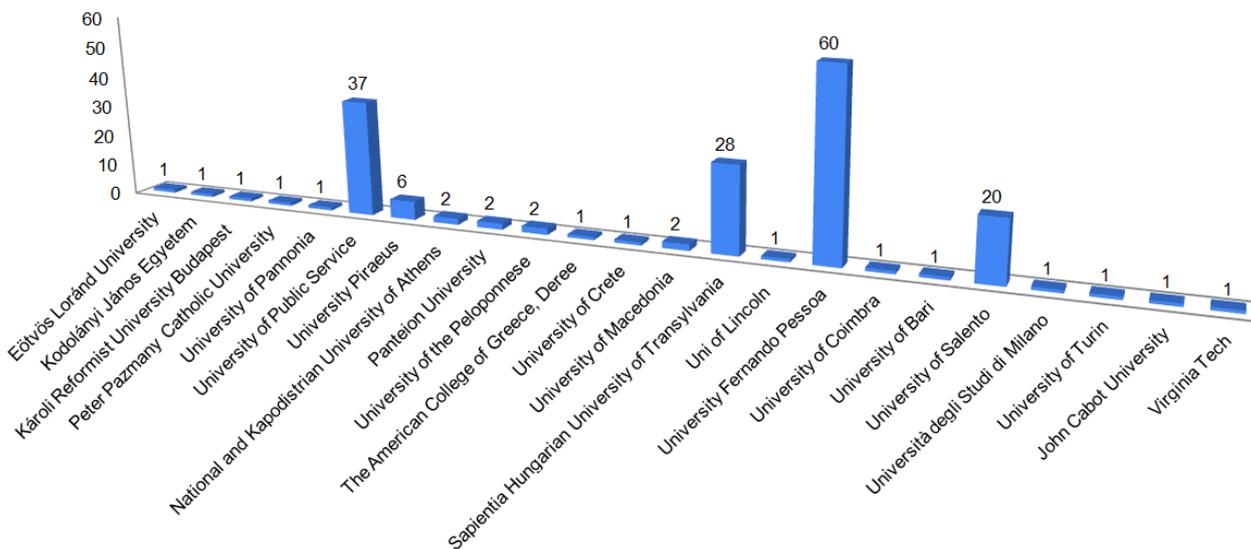
3.1.3.b. Professors' opinion on teaching methodology

❖ Reference question (Question 3b of Professors/Stakeholders' Questionnaire):
"In your opinion, what should be changed in the teaching methodology with respect to EU security-related subjects? You can mark more than one answer."

(This question was answered only by Professors)

According to the professors, what should be changed most in the teaching methodology with respect to EU security-related subjects is to "**include more practical training**" (116 responses, i.e. 41%).

79 professors answered that it is crucial to "**make teaching more personalized with the use of an increased number of seminars**" (28%) and 72 of them believe that it is important to "**develop soft skills, such as oral presentations**" (26%).

A small number of professors (3%, i.e. 8 professors) mentioned that they are **not interested in teaching methodology**, while 6 of the professors (2%) indicated **other aspects** that should be changed in the teaching methodology with respect to EU security-related subjects that are stated below in Table 16.

Graphic 18

Appropriate changes in the teaching methodology on EU security - related subjects

- Include more practical training
- Help develop soft skills, such as oral presentations
- Make teaching more personalized with the use of an increased number of seminars
- I'm not interested in teaching methodology
- other
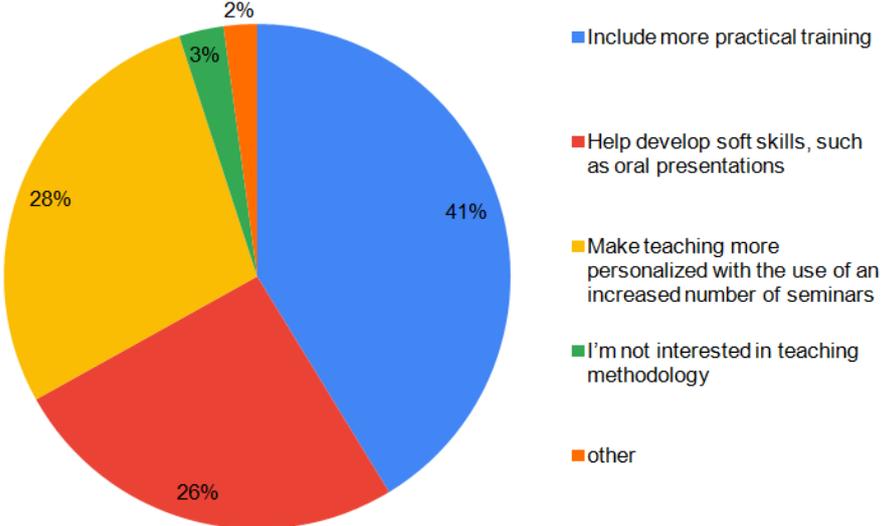
Table 16

	OTHER:
1	Introduce a strong systems thinking base. Do not separate the ecological and the social crises. Start from the global level and zoom down.
2	At times involve EU practitioners to seminars and lectures
3	Students lack theoretical depth in these subjects - more emphasis should be put on this

4	The problems of sustainability require "epistemic ruptures" in the knowledge of the different disciplines (think of the conflictual relationship between "growth and competitiveness vs. planetary boundaries"). Therefore, it is necessary to promote critical thinking on these "ruptures", otherwise universities become places of "repetition" and not instead of "transformation"
5	Increasing the time of contact with Students inside some curricular units; and increasing the dialogue between Teachers about the curricular plan of studies in Psychology courses.
6	Reinforce active participation of the student in the learning process

3.2. Professors/Stakeholders' opinion on security issues

This chapter is dealing with the professors/stakeholders' opinion on specific security issues and challenges for the EU.

3.2.1. Main challenges/security issues for EU

❖ Reference question (Question 4 of Professors/Stakeholders' Questionnaire):
"Which do you think the most important challenges or security issues are for the EU? You can mark more than one answer."

The majority of the respondents (156 professors and stakeholders) indicated **"Terrorism"** as the most important challenge for EU (14%).

Follow the other given aspects: **Cyber-threats** (12%), **Irregular migration** (12%), **Diffusion of misinformation and fake news** (11%), **Hybrid threats** (11%), **Risks of pandemic** (11%), **Armed conflicts in the neighborhood** (7%), **Natural disasters** (7%), **Protection and resilience of critical infrastructures** (5%), **Crisis and disaster Management** (5%), **Risks of artificial intelligence** (4%), **Other** (1%).

The below graphic (Graphic 19) depicts the opinion of Professors and Stakeholders of which are the most important challenges or security issues for the EU.

Graphic 19

Professors + Stakeholders

- Crisis and disaster Management 5%
- Other 1%
- Protection and resilience of critical infrastructures 5%
- Irregular migration 12%
- Terrorism 14%
- Armed conflicts in the neighbourhood 7%
- Natural disasters 7%
- Diffusion of misinformation and fake news 11%
- Cyber-threats 12%
- Hybrid threats 11%
- Risks of artificial intelligence 4%
- Risks of pandemic 11%
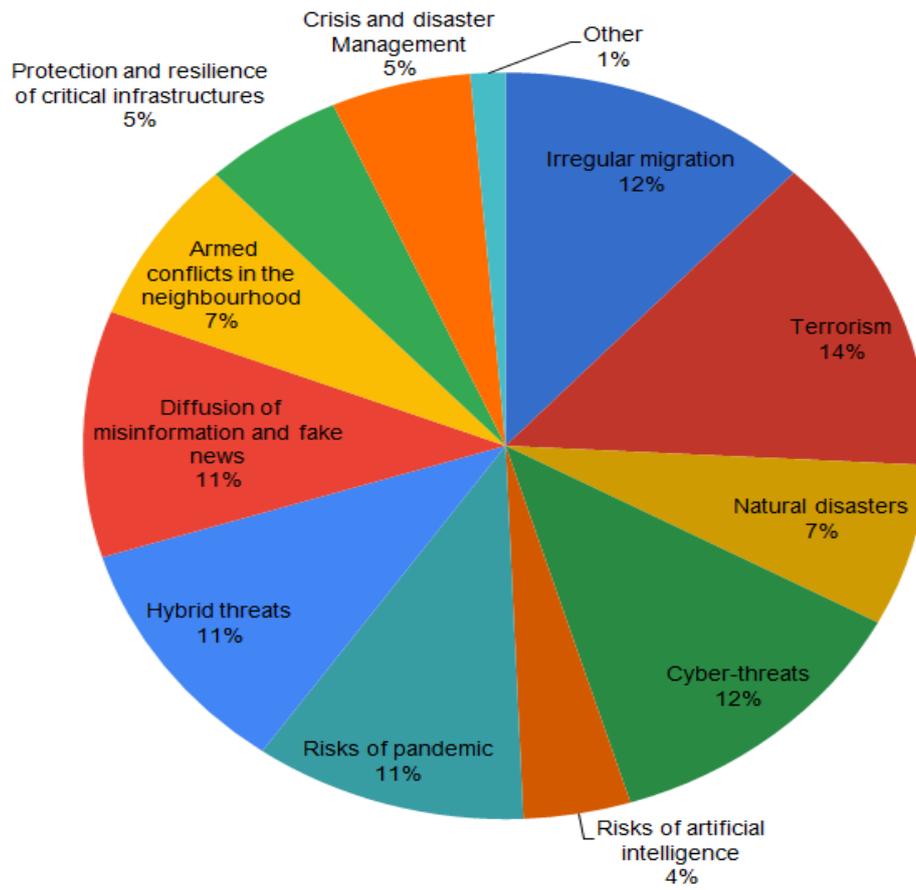
Graphic 20

The most important challenges or security issues for EU

	Irregular migration	Terrorism	Natural disasters	Cyber-threats	Risks of artificial intelligence	Risks of pandemic	Hybrid threats (i.e. the combination of physical, cyber and social threads)	Diffusion of misinformation and fake news	Armed conflicts in the neighbourhood	Protection and resilience of critical infrastructures	Crisis and disaster Management	Other
Professors	89	103	54	97	36	82	78	80	50	42	38	10
Stakeholders	45	53	25	42	10	35	39	40	30	18	22	5
Professors + Stakeholders	134	156	79	139	46	117	117	120	80	60	60	15

Table 17

	Other important challenges or security issues for EU	Respondent
1	Economic espionage, weapons of mass destruction and their linkage with terrorism	Professor
2	Turkish aggression toward (at least) two member states	Professor
3	Authoritarian regimes and the erosion of rule of law	Professor
4	Crises in the water-food-energy triangle. Loss of soils and biodiversity	Professor
5	Human stupidity and populism	Professor
6	Education about Terrorism and irregular migration	Professor
7	Climate/environmental crisis and loss of biodiversity/death of pollinating insects	Professor
8	Sustainability	Professor
9	Climate change Law, Human Rights, and Rights of Nature	Professor

10	The artificialism of relationships between people and institutions due the digital contact of society, as pandemic had come to accelerate.	Professor
11	Opposition to nationalism, an irrational super national vision by totally ignoring the nations	Stakeholder
12	Retarded and hypocrite politicians	Stakeholder
13	Protection and resilience of critical infrastructures	Stakeholder
14	Pollution, loss of biodiversity, climate change and anthropogenic driven changes in the Natural Capital	Stakeholder
15	Falling behind in digital competition	Stakeholder

3.2.2. Proposed changes in the EU governance of security

❖ Reference question (Question 5 of Professors/Stakeholders' Questionnaire):
"In your opinion, what should be changed in the EU governance of security? You can mark more than one answer."

According to professors and stakeholders, the "**Decision- making process**" should mostly be changed in the EU governance of security (40% of the respondents). 31% of the respondents answered that it is the "**Institutional governance**" that should be changed and 18% the "**Funding**".

8% of the respondents answered that **they don't know** what should be changed in the EU governance of security and 3% indicated **other aspects** that are stated in the below table (Table 10).

The responses of the respondents are depicted in the below graphics (Graphic 21 and Graphic 22).

Graphic 21
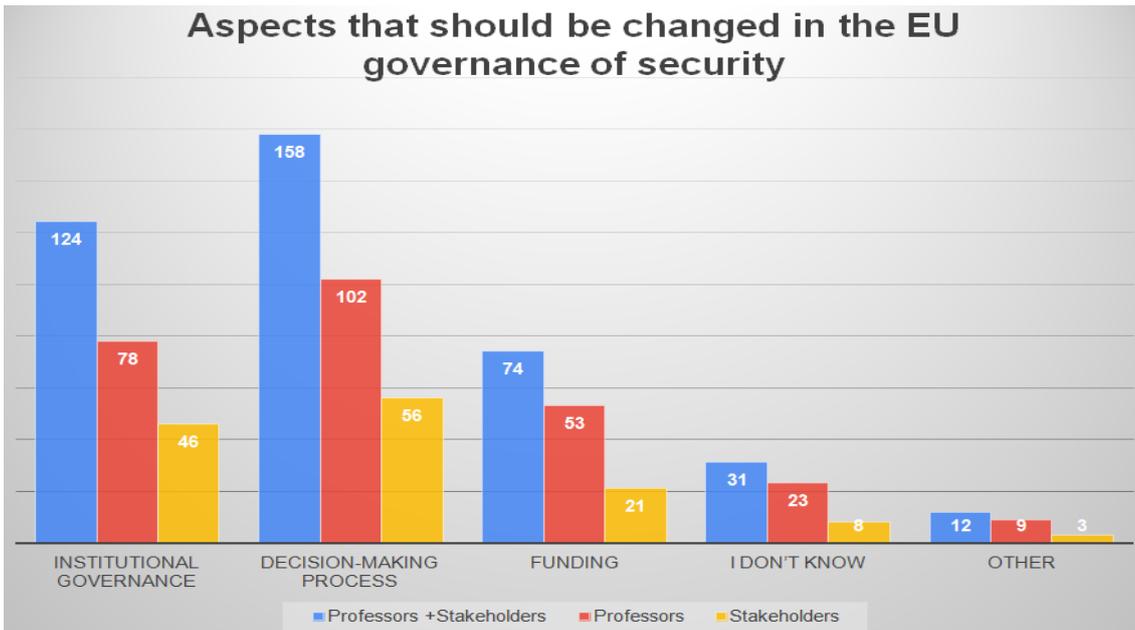
Graphic 22
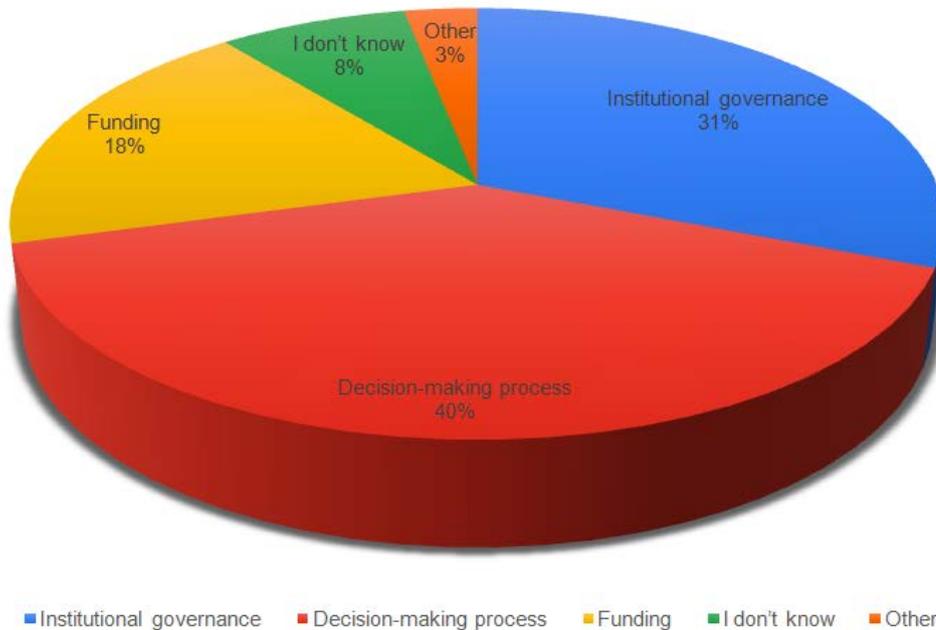
The below table shows what other aspects should be changed according to the respondent professors/stakeholders

Table 18

	Other aspects that should be changed in the EU governance of security	Respondent
1	Creation of a Central European Intelligence Agency	Professor
2	Public opinion support and member states commitment	Professor
3	More emphasis on global crisis mitigation. Emphasis on building general social resilience.	Professor
4	Corvid pandemic showed that long decision chains may delay effective steps (i.e. in the field of vaccine acquisition)	Professor
5	Much closer cooperation between national security organizations	Professor
6	Common defense and security policy / European army and police with enhanced powers/strong common policy for the defense of ecosystems and biodiversity/common policy against the uncontrolled expansion of artificial intelligence	Professor
7	Recognize the rights of nature and the human right to the climate	Professor
8	Mechanisms and areas of institutional, civic and professional dialogue and exchange, should be increased in a way to develop and consolidate democracy on a transversal levels of society	Professor
9	Security Management Methods	Professor
10	Shift from capabilities-based to threats-based. Differentiation of threats among member-states should be taken into consideration.	Stakeholder
11	Informed decisions based on scientific facts is crucial. In some activity sectors corporative lobbies still have dominate some decisions	Stakeholder
12	The EU should control its borders from migrants	Stakeholder

3.2.3. Topics related to EU security teaching

❖ Reference question (Question 6 of Professors/Stakeholders' Questionnaire):
On a scale from 1 to 5, how important do you think each of the below topics is as regards EU security teaching? Mark 1 for the least and 5 for the most

According to the professors' opinion, the topics most important as regards EU security teaching are: "**Terrorism"** (75/173), "**Cyber threats"** (73/173), "**Risk of pandemic"** (62/173), "**Hybrid threats"** (62/173), "**Irregular migration"** (61/173) and "**Diffusion of misinformation and fake news"** (29/173).

"**Readiness and preparedness approaches for security management**" seems to be very important for professors (72/173), while "**Security and resilience management**" (104/173), "**Security and resilience of critical infrastructures**" (99/173), "**Natural disaster**" (92/173) and "**Risks of artificial intelligence**" (78/173) are voted as of moderately importance.

Respectively, according to the stakeholders' opinion, the topics most important as regards EU security teaching are: "**Terrorism**" (45/85) and "**Irregular migration"** 38/85), while "**Cyber threats**" is believed to be very important (32/85)

Other topics, such as "**Security and resilience management**" (35/85), "**Crisis and disaster management**" (33/85), "**Security and resilience of critical infrastructures**" (33/85), "**Readiness and preparedness approaches for security management**" (32/85), "**Natural disaster**" (31/85) are rather moderately important.

Less important seems to be "**Risks of artificial intelligence**" (25/85 stakeholders indicate this topic to be moderately important and 25/85 less important)

In the following graphics (Graphic 23 and Graphic 24) are depicted professors and stakeholders' opinion on this issue.

Graphic 23

(Professors)

How important is each of the below topics as regards the EU secure teaching?

■1 ■2 ■3 ■4 ■5

Graphic 24

180
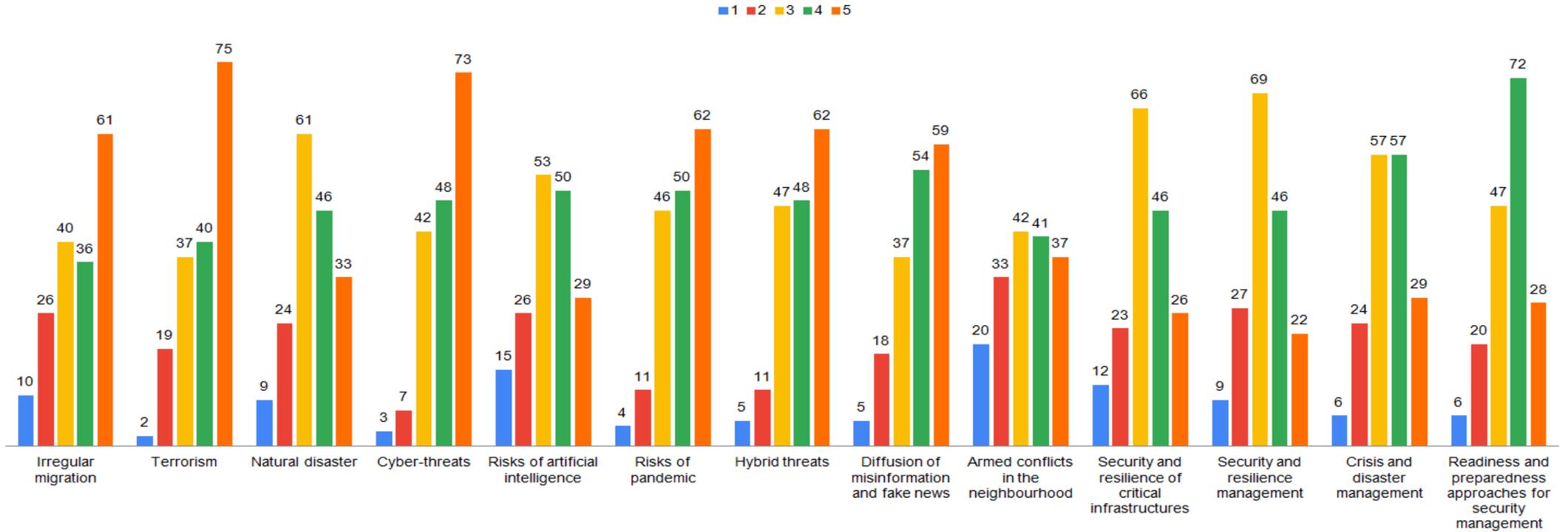
(Stakeholders)

How important is each of the below topics as regards the EU security teaching

Legend: ■ 1 ■ 2 ■ 3 ■ 4 ■ 5
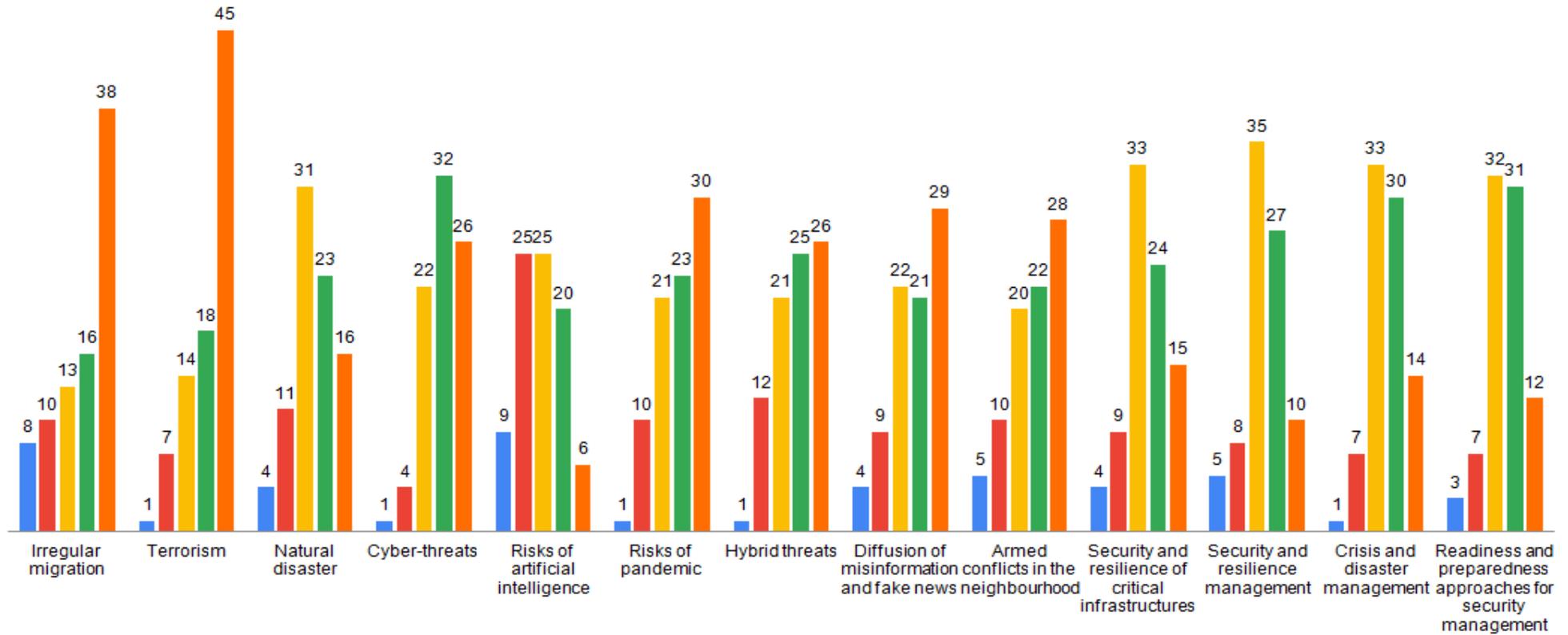
3.2.4. The possibility of a genuinely transdisciplinary course

❖ Reference question (Question 7 of Professors/Stakeholders' Questionnaire):
In your opinion, would it be reasonable to establish a genuinely transdisciplinary course on EU security?

In the below graphics (Graphic 25 and Graphic 26) is presented the opinion of professors and stakeholders of whether it is reasonable to establish a genuinely transdisciplinary course on EU security.

The majority of both categories (professors and stakeholders) provided positive answers (66% and 79% respectively).

Would it be reasonable to establish a genuinely transdisciplinary course on EU security?
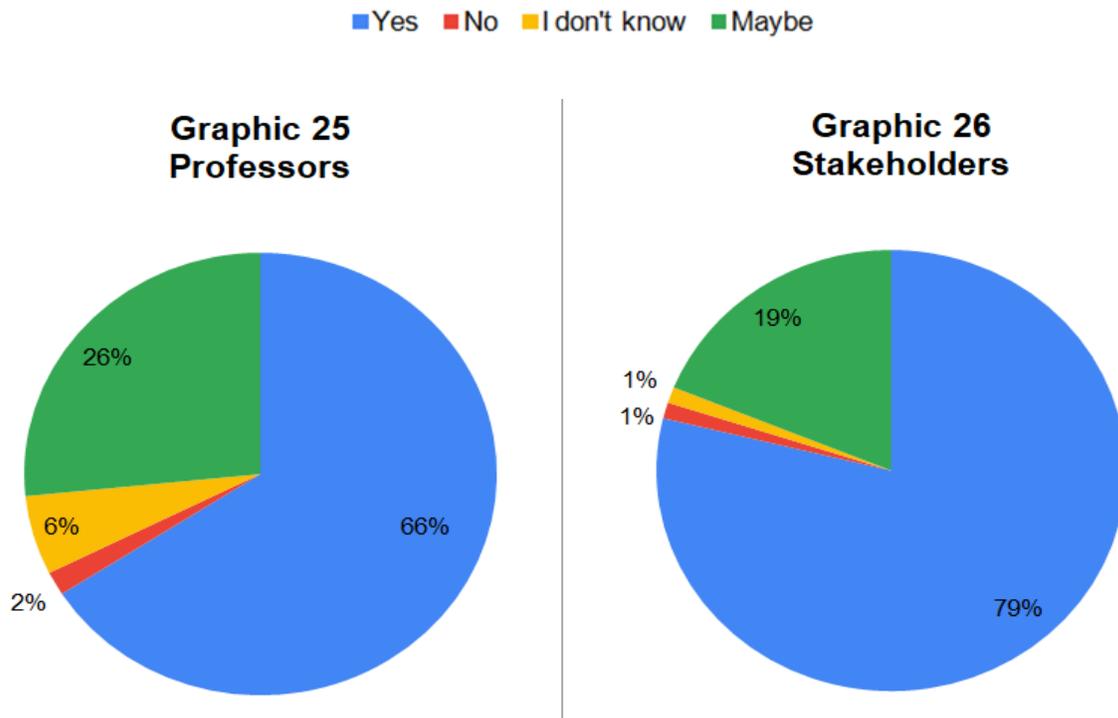
3.2.5. EU competencies in protecting security

❖ Reference question (Question 8 of Professors/Stakeholders' Questionnaire):
Do you think that the EU should have more or fewer competencies in protecting security?

The majority of the respondents indicated that the EU should have **more competencies** in protecting security (211 professors and stakeholders, i.e. 81,8%).

7% of the respondents (18 professors and stakeholders) answered that the EU should have **fewer competencies** in protecting security, while 11.2% (29 professors and stakeholders) answered that **they don't know**.

All answered are depicted in the below graphic (Graphic 27)

Graphic 27
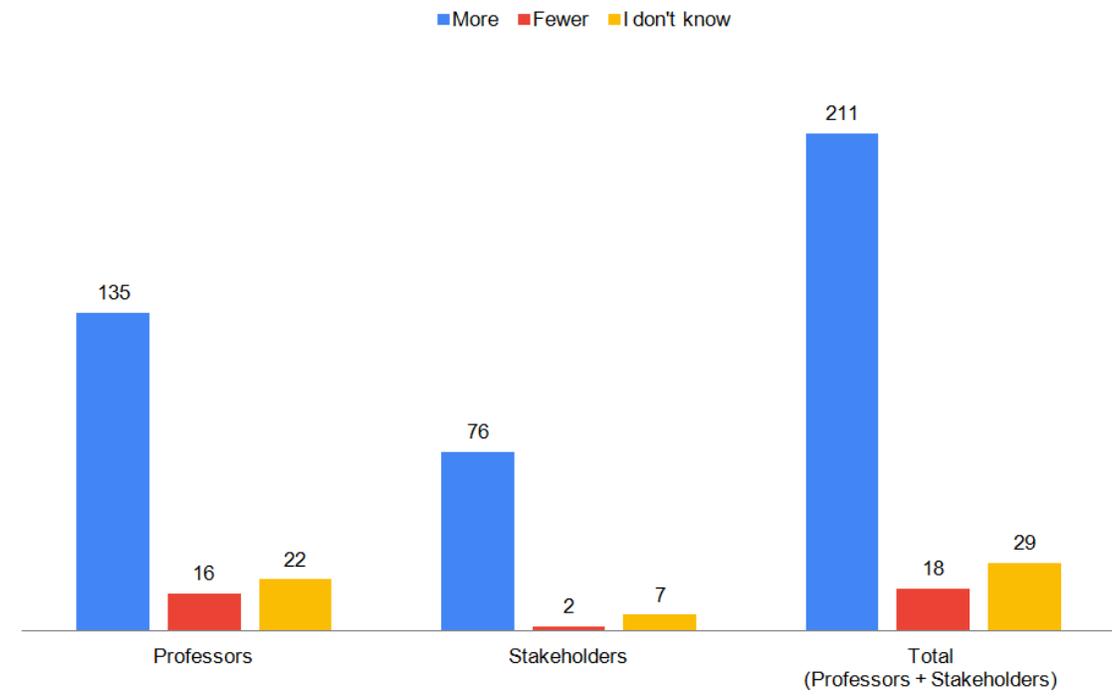
3.2.6. The influence of EU as a geopolitical and strategic actor

❖ Reference question (Question 9 of Professors/Stakeholders' Questionnaire):
"In your opinion, as a geopolitical and strategic actor the influence of the EU is ...?"

The majority of the respondents indicated that the influence of the EU as a geopolitical and strategic actor is rather weak (102 professors and stakeholders, i.e. 39,5%) and mediocre (102 professors and stakeholders i.e. 39,5%).

Only 39 of the 258 respondents believe that EE has a strong influence as a geopolitical and strategic actor (i.e. 15,2%).

A small amount answered that they don't know exactly how strong is the influence of the EU as a geopolitical and strategic actor (15 respondents, i.e. 5.8%)

The results of this question are presented diagrammatically in the graphics below (Graphic 28 and Graphic 29).

Graphic 28

The influence of the EU, as geopolitical and strategic actor, is ...?
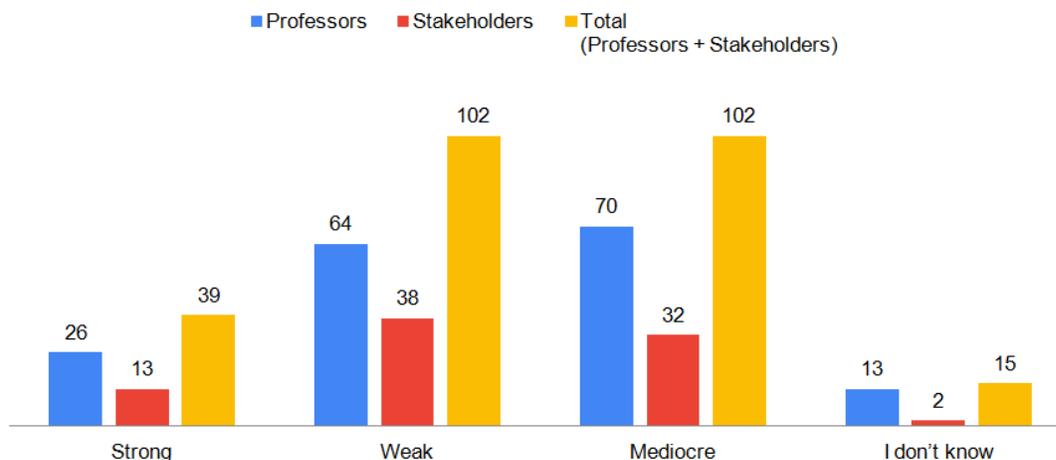
Graphic 29

How did Professors and Stakeholders characerized the influece of EU as geopolitical and strategic actor?

■ Strong ■ Weak ■ Mediocre ■ I don't know

6%
15%
39,5%
39,5%
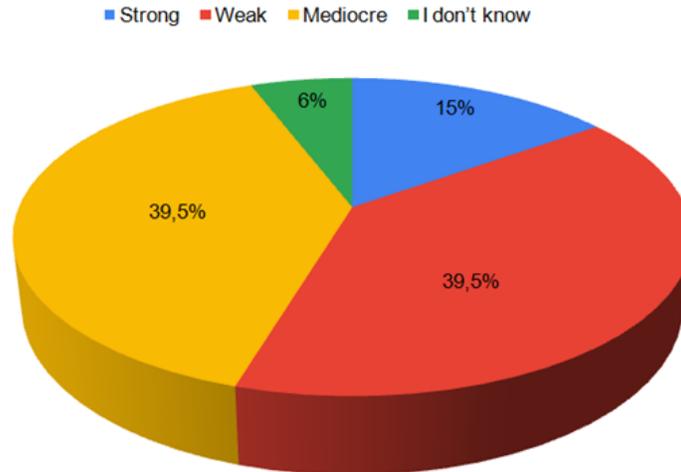
3.2.7. EU as an international actor

❖ Reference question (Question 10 of Professors/Stakeholders' Questionnaire):
"In your opinion, what kind of power the EU is as an international actor? You can select more than one issue."

According to the majority of the professors and stakeholders that replied to the questionnaire, the EU is mostly a normative power as an international actor (26%).

22% of the respondents mentioned that the EU is a soft power in lines with its international role and 20% indicated the EU as a civilian power in the globalized world.

In the below graphics (Graphic 30 and 31) are depicted all the responses of professors and stakeholders as regards the kind of power that the EU is, as an international actor.

Graphic 30

What kind of power is the EU as international actor?

Legend: ■ Professors + Stakeholders ■ Stakeholders ■ Professors

Normative: Professors 110, Stakeholders 47, Professors + Stakeholders 157
Civilian: Professors 84, Stakeholders 37, Professors + Stakeholders 121
Military: Professors 13, Stakeholders 8, Professors + Stakeholders 21
Liberal: Professors 70, Stakeholders 33, Professors + Stakeholders 103
Soft: Professors 80, Stakeholders 50, Professors + Stakeholders 130
Hard: Professors 9, Stakeholders 3, Professors + Stakeholders 12
Smart: Professors 39, Stakeholders 14, Professors + Stakeholders 53
Other: Professors 3, Stakeholders 2, Professors + Stakeholders 5

Graphic 31

The power of EU, as international actor, according to interviewees Professors and Stakeholders

Other 1%
Hard 2%
Smart 9%
Normative 26%
Civilian 20%
Military 3%
Liberal 17%
Soft 22%
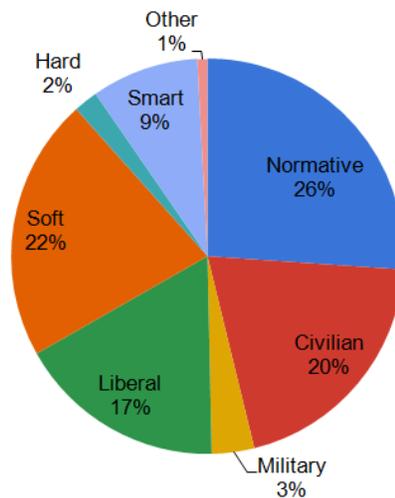
In the field "other", Professors and Stakeholders indicated how else to consider the power of the EU to be, as an international actor. The responses were gathered and are presented to the below table (Table 19).

Table 19

Other type of power that the EU could be as *an international actor*

	Other	Respondent(s)
1	Economic	2
2	Diplomatic	1
3	Moral	1
4	Industrial	1
5	Cultural	1
6	The EU is a melting pot of diversity and that brings huge challenges to define strategies and policies for the common good and well-being. It is also a challenge to fight polarization, xenophobia and extremism. But the EU must be an international example of diplomacy, tolerance and inclusion of its cultural diversity	1
7	Fake and national interest-driven	1

4. CONCLUSIONS

The present survey was conducted in the framework of the Erasmus+ Project "EUSecure". For reasons of creating the Needs Assessment were developed two questionnaires, one for students and one for professors/stakeholders. Both questionnaires were released and spread by all partners of the consortium.

The first questionnaire "on students' needs" has been answered by 380 students, who study and live in seven different countries: France, Greece, Hungary, Italy, Portugal, Romania and UK and Ecuador. 55% of the students that responded to the questionnaire are female (207 pupils), 42% are male (161 pupils) and 3% of them didn't want to specify (12 pupils).

As regards their education highest level, 53% of them have completed Secondary School Level (203 pupils), 38% have completed Higher Education, BSC/BA program (143 pupils) and 9% have completed Higher Education, MSC/BA program (34 pupils).

The majority of the respondents studies at the University of Public Services, in Hungary (34.7%, i.e. 132 pupils), 16.6% study at the University of Sapientia Hungarian University of Transilvania, in Romania (63 pupils), 15.8% study at the University of Salento, in Italy (60 pupils), 15.5% study at the University of Fernando Pessoa, in Portugal (59 pupils), 13.4% study at the University of Piraeus, in Greece (52 pupils). The rest 4% of the respondents study at 14 other Universities: Athens University of Economics and Business and University of Thrace (Greece), Sciences po Lille and Kedge school Marseille (France), Universidad Casa Grande (Ecuador), Veiga – Guimarães (Portugal), University of Babes-Bolyai (Romania), Polytechnic University of Turin (Italy), University of Glasgow and University of Bristol (UK), Nemzeti Közszolgálati Egyetem, Budapest Business School, Nemzetszolgálati Egyetem and Szechenyi István University (Hungary).

The majority of the respondents (77 students) study Political Sciences, International and European Relations, Diplomacy, i.e. 20,3%. 16.8% of the students didn't want to identify their degree program (64 students), 13.4% of the respondents (51 students) study International Public Administration, 8% of the respondents (29 students) study aspects of Human society, 7.1% of the respondents (27 students) study Health and Nature Sciences, 6.1% (23 students) study Security, Defense, Intelligence, Strategic Studies, Cyber Security, 6,1% Information and Computer Sciences (23 students) and 5.5% Engineering Science and Technology (21 students). The rest respondents study in other fields, such as: Law (15 students, i.e. 3.9%), Communication (13 students, i.e. 3.4%), International Business Administration (13 students, i.e. 3.4%), Economics (9 students, i.e. 2.4%), Environment (6 students, i.e. 1.6%), Military Sciences (5

students, i.e. 1.3%), Engineering Science and Technology (2 students, i.e. 0.5%), Education (2 students, i.e. 0.5%).

The majority of the students mentioned "Terrorism" as the most important security challenge for EU (226 students). Follow "Diffusion of misinformation and fake news. Armed conflicts in the neighborhood", answered by 219 students and "Irregular migration", answered by 197 students. Fourth in the students' list is "Cyber threats", answered by 188 students, fifth "Risks of pandemic", answered by 144 students and sixth "Hybrid threats", answered by 141 students. Latest on the students' list are "Natural disasters", answered by 117 students and "Risks of artificial intelligence", answered by 49 students. Twelve of the students identified other challenges or security issues that were mentioned as important for the EU.

According to the results all provided issues can be more efficiently tackled at European level. In particular: "Risks of artificial intelligence" is the issue that, according to students, should be better addressed at European level (223 responses). Follow "Hybrid threats" (217 responses), "Terrorism" (211 responses), "Armed conflicts in the neighborhood" (196 responses), "Cyber threats" (185 responses), "Irregular migration" (181 responses), "Risk of pandemics" (151 responses), "Diffusion of misinformation and fake news"

According to the student's opinion, "Economic cooperation" is the most important aspect in preserving security in the EU (265 responses). Important also are "Education" (262 responses) and "Social cooperation" (247 responses). Follow "International cooperation with third countries" and "Military cooperation" (180 responses each), "Sustainability measures" (170 responses), "EU common juridical regulations" (161 responses), "Humanitarian Aid to third countries" (143 responses) and "Development policy towards third countries" (139 responses).

"Terrorism" is believed from the students to be the aspect that should most be entailed in the framework of an interdisciplinary training on EU security (249 students). Follow "Cyber-threats" (215 students), "Diffusion of misinformation and fake news" and "Pandemic management" (203 students each), "Irregular migration" (200 students), "Armed conflicts in the neighborhood" (170 students), "Security and resilience of critical infrastructures" (158 students), "Hybrid threats" (143 students), "Natural disasters" (134 students), "Approaches to security management" (120 students) and "Risks of artificial intelligence" (104 students).

According to the responses received, what interest students most in studying are the below topics/ EU security challenges: "Sustainability and Development, Environmental protection" (156/380 students are extremely interested), "Climate change" (152/380 students are extremely interested), "Spread of misinformation and fake news" (142/380 students are extremely interested) "Cybersecurity and information security" (141 students are extremely interested), "Public health security" (113/380 students), "Irregular migration" (108/380 students). Quite a few of the students are very interested in "Water security and water geopolitics" (98/380 students), "International development cooperation" (111/380 students), "Armed conflicts in the

neighborhood" (111/380 students) In addition, students are moderately interested in studying "Megatrends" (128/380 students),"Food security" (111/380 students), "Maritime Security" (127/380 students, "EU power (strategic autonomy) in a multipolar world" (107/380 students), "International governance: multilateral institutions, norms, regimes" (105/380 students), "Risks of Artificial Intelligence" (113/380 students), "Security of critical infrastructures" (122/380 students).

As regards the students' awareness on several aspects of EU security, the results of the responses have shown that the students are moderately aware of almost all of the provided aspects of EU security. In particular, Students are moderately aware of the following issues: "Megatrends" (110/380 students), Food security (129/380 students), EU power (strategic autonomy) in a multipolar world (122/380 students), International governance: multilateral institutions, norms, regimes (112/380 students), Water security and water geopolitics (116/380 students), Public health security (149/380 students), Cybersecurity and information security (110/380 students), Risks of Artificial Intelligence (112/380 students), Sustainability and Development, Environmental protection (124/380 students), Spread of misinformation and fake news (115/380 students), International development cooperation (115/380 students), Armed conflicts in the neighbourhood (111/380 students), Security of critical infrastructures (like ports, airports, water, electrical, digital infrastructures) (106/380 students), Pandemic management (122/380 students). In addition, students are very aware of "Climate change" (123/380 students) and "Irregular migration" (114/380 students), while some of them are little aware of Maritime security (110/380 students).

Students were asked to mention if they are familiar with any other EU security aspects. 71 of them answered and the results that came up have been categorized in 30 fields: Cyber security/Intelligence (11 responses), Security and defense (7 responses), Economic challenges (6 responses), Energy security (5 responses), Climate change and environmental security (5 responses), Organized crime and trafficking (5 responses), Human rights/political liberties/workers' rights and stability/abuse within family (5 responses), Migration (5 responses), Imperialism/Marxism/Authoritarian regimes (5 responses), Military issues (4 responses), Multiculturalism, national minorities and religion issues (4 responses), Nuclear warfare/weapons (3 responses), Fake news/ misinformation (3 responses), Space infrastructure (3 responses), Terrorism (2 responses), Threats to the rule of law and democracy (2 responses), Arctic and Scandinavian geopolitics (1 response), EU battlegroups (1 response) GDPR (1 response), Education (1 response), Public health (1 response), Gender discrimination issues (1 response), Pandemic - Covid-19 (1 response), Turkish threat (1 response), Portuguese representatives in the European Parliament (1 response), Lithuania (1 response), Cooperation among EU countries (1 response), Corruption in European governments (1 response), Increasing influence of China and Russia in Eastern Europe and the Balkans (1 response), EU as an international actor (1 response).

The second questionnaire, for Professors and Stakeholders, has been answered by 258 respondents (Professors and Stakeholders). In particular, 173 of the respondents were Professors by 24 different Universities in eight countries: Greece, Hungary, Italy, Portugal, Romania, United Kingdom (UK) and United States of America (USA). The rest 85 interviewers are stakeholders, originated by 11 different countries in the EU and beyond: Belgium, Brazil, China, Greece, Hungary, Italy, Northern Ireland, Portugal, Romania, Spain and UK. The specialty of these stakeholders varies among several fields/ Organizations, such as private and public sectors, NGOs, think tanks, etc.

According to the responses received, 57% of the respondents are male and 43% female.

As regards the country that they work, the professors are allocated: 25% in Portugal (61 professors), 24% in Hungary (41 professors), 16% in Romania (28 professors), 14% in Italy (25 professors), 9% in Greece (16 professors), 1% in UK (1 professor) and 1% in USA (1 professor). Respectively, the allocation of the Stakeholders in the country that they work is as follows: in Portugal: 27 stakeholders (32%), in Romania: 22 stakeholders (26%), in Hungary: 21 stakeholders (25%), in Greece: 5 stakeholders (6%), in Italy: 4 stakeholders (5%), in China: 1 stakeholder (1%), in UK: 1 stakeholder (1%), in Northern Ireland: 1 stakeholder (1%), in Belgium: 1 stakeholder (1%), in Brazil: 1 stakeholder (1%), in Spain: 1 stakeholder (1%).

The majority of the respondents (67%, i.e. 173 respondents) are Professors working at Universities. The rest respondents are Stakeholders, who are affiliated to several other Organizations, including: Private companies (11%, i.e. 29 respondents), Research centers (9%, i.e. 23 respondents) and Ministries (6%, i.e. 15 respondents). Some of the respondents (7%, i.e. 18 respondents) declared that they are working in other fields/Organizations.

The majority of the professors that responded to the questionnaire are occupied in University Fernando Pessoa, in Portugal (60 professors). 37 professors are occupied in University of Public Service (Hungary), 28 professors in Sapientia Hungarian University of Transylvania (Romania) and 20 professors in University of Salento (Italy). Follow other Universities in smaller amounts. Particularly, in Greece: University of Piraeus (6 professors), National and Kapodistrian University of Athens (2 professors), Panteion University in Greece (2 professors), University of the Peloponnese (2 professors), University of Macedonia (2 professors), University of Crete (1 professor), The American College of Greece, Deree (1 professor). In Hungary: Eötvös Loránd University (1 professor), Kodolányi János Egyetem (1 professor), Károli Reformist University Budapest (1 professor), Peter Pazmany Catholic University (1 professor), University of Pannonia (1 professor). In Italy: University of Bari (1 professor), Università degli Studi di Milano (1 professor), University of Turin (1 professor), John Cabot University (1 professor). In the UK: Uni of Lincoln (1 professor). In the USA: Virginia Tech (1 professor).

According to the professors, what should be changed most in the teaching methodology with respect to EU security-related subjects is to "include more practical training" (116 responses, i.e. 41%). 79 professors answered that it is crucial to "make teaching more personalized with the use of an increased number of seminars" (28%) and 72 of them believe that it is important to "develop soft skills, such as oral presentations" (26%). A small number of professors (3%, i.e. 8 professors) mentioned that they are not interested in teaching methodology, while 6 of the professors (2%) indicated other aspects that should be changed in the teaching methodology with respect to EU security-related subjects.

The majority of the respondents (156 professors and stakeholders) indicated "Terrorism" as the most important challenge for EU (14%). Follow the other provided aspects: Cyber-threats (12%), Irregular migration (12%), Diffusion of misinformation and fake news (11%), Hybrid threats (11%), Risks of pandemic (11%), Armed conflicts in the neighborhood (7%), Natural disasters (7%), Protection and resilience of critical infrastructures (5%), Crisis and disaster Management (5%), Risks of artificial intelligence (4%), Other (1%).

According to professors and stakeholders, the "Decision- making process" should mostly be changed in the EU governance of security (40% of the respondents). 31% of the respondents answered that it is the "Institutional governance" that should be changed and 18% the "Funding". 8% of the respondent answered that they don't know what should be changed in the EU governance of security and 3% indicated other aspects that are stated in the below table (Table 10).

According to the professors' opinion, the topics most important as regards EU security teaching are: "Terrorism" (75/173), "Cyber threats" (73/173), "Risk of pandemic" (62/173), "Hybrid threats" (62/173), "Irregular migration" (61/173) and "Diffusion of misinformation and fake news" (29/173). "Readiness and preparedness approaches for security management" seems to be very important for professors (72/173), while "Security and resilience management" (104/173), "Security and resilience of critical infrastructures" (99/173), "Natural disaster" (92/173) and "Risks of artificial intelligence" (78/173) are voted as of moderately importance. Respectively, according to the stakeholders' opinion, the topics most important as regards EU security teaching are: "Terrorism" (45/85) and "Irregular migration" 38/85), while "Cyber threats" is believed to be very important (32/85) Other topics, such as "Security and resilience management" (35/85), "Crisis and disaster management" (33/85), "Security and resilience of critical infrastructures" (33/85), "Readiness and preparedness approaches for security management" (32/85), "Natural disaster" (31/85) are rather moderately important for stakeholders. Less important seems to be "Risks of artificial intelligence" (25/85 stakeholders indicate this topic to be moderately important and 25/85 less important).

The majority of professors and stakeholders (66% and 79% respectively) indicated that it is reasonable to establish a genuinely transdisciplinary course on EU security.

The majority of the respondents indicated that the EU should have more competencies in protecting security (211 professors and stakeholders, i.e. 81,8%). 7% of the respondents (18 professors and stakeholders) answered that the EU should have fewer competencies in protecting security, while 11.2% (29 professors and stakeholders) answered that they don't know.

The majority of the respondents indicated that the influence of the EU as a geopolitical and strategic actor is rather weak (102 professors and stakeholders, i.e. 39,5%) and mediocre (102 professors and stakeholders i.e. 39,5%). Only 39 of the 258 respondents believe that EE has a strong influence as a geopolitical and strategic actor (i.e. 15,2%). A small number answered that they don't know exactly how strong is the influence of the EU as a geopolitical and strategic actor (15 respondents, i.e. 5.8%)

According to the majority of the professors and stakeholders that replied to the questionnaire, the EU is mostly a normative power as an international actor (26%). 22% of the respondents mentioned that the EU is a soft power in lines with its international role and 20% indicated the EU as a civilian power in the globalized world.

CASE STUDIES AND BEST PRACTICES IN

IR MOOCS

INTRADUCTION AND CONCEPT DEFINITIONS

"An online course designed for large number of participants that can be accessed by anyone anywhere, as long as they have an internet connection, is open to everyone without entry qualifications and offers a full/complete course experience online for free"

Brouns et al. (2014)

"Designed for in theory unlimited number of participants. This means that the course is designed such that the efforts of all services does not increase significantly as the number of participants increases."

Bates (2015)

Key catehgories:

- access to the course is free without entry qualifications
- the full course is available through the internet
- the offering is a course, meaning that it offers a complete learning experience, i.e. structured around a set of learning goals in a defined area of study and includes the course materials, quizzes, feedback, examination and certificate of completion.

Massive, and Open, and Online Courses are a non-formal learning experience, although they will always have some kind of certification based on peerassessment. Further formal accreditation that recognizes this learning experience may be obtained for a fee, but is not a part of the course itself.

Differences between MOOC and other online learning:

- In relation to the MOOC definition it is essential to understand the differences with other educational provision. For example MOOC differ from 'regular' online courses in at least four aspects
- MOOC are designed for in theory unlimited number of participants and as such requires the scalability of the education services.
- It is accessible at no charge.
- It requires no entry qualifications
- All elements of course provision are provided fully online

	cMOOCs	xMOOCs
Learner role	Active	Passive
Instructor role	Facilitator/ co-learner	Guide on side/ sage on video stage
Learning theory	Connectivism/ socio-con-structivism	Behaviorism/cognitivism
Pedagogy	Knowledge construction	Knowledge duplication
Delivery of in-struction	Personal learning envi-ronment (PLE)	Learning management sys-tem (LMS)
Assessment	Self-assessment/ peer as-sessment	External assessment/ in-structor assessment
Certification	Rarely	Usually
Business model	Non-profit	For profit

Saadatmand (2017)

Table 3. Business Model comparison between cMOOCs & xMOOCs

Areas	Dimensions	cMOOCs	xMOOCs
Product Innovation	**Value Proposition**	Knowledge creation, autonomy, social network, social recognition, informal learning	Knowledge acquisition, certification, tutoring, collaborative groups, access certified experts
Customer/ user Relationship	**Customer**	Students, practitioners, peers	Students, practitioners, enterprises
	Distribution Chanel	Internet, Web, social learning platforms, MOOCs platforms	Internet, Web, MOOCs platforms
	Relationship	Communities of Practice	Global learning environment
Infrastructure Management	**Partnership**	Universities, schools, enterprises	Universities, schools, enterprises, other MOOCs platforms
	Value Configuration	Promotion, sharing, collaboration	Platform, universities, organizations
	Capability	Promotion of motivational processes to continuous usage	Promoting process of usage, cloud hosted MOOC services
Financial Aspects	**Revenue**	Sponsoring, platform analytics	Sponsoring, platform analytics, certification, potential on-campus students, tailored training courses for enterprises, SaaS services, tuition fees
	Cost	Platform infrastructure, maintenance	Platform infrastructure, maintenance, tutoring, courses development

Patricio et al (2014)

Other cathegories:

SPOC   (Small Private Online Courses)

ROOC   (Regional Open Online Course)

TORQUE   (Tiny, Open-with-Restrictions courses focused on QUality and Effectiveness)

DOCCs   (Distributed Open Collaborative Course)

SMOC   (Synchronous Massive Online Course)

MOORs   (Massive Open Online Research

OOC   (Open Online Course)

Cost considerations

Production

- o staff costs – number of faculty, administrative and instructional support personnel taking part in the process
- o length of the MOOC
- o hours of video material produced and quality of videography
- o programming for special features (computer code auto-graders, simulations, gamification, etc
- o production of further cost-intensive resources, such as graphs, animations, overlays etc
- o copyright permissions
- o type of delivery platforms
- o post-production services and technical support for participants

Costs connected with the MOOCs development and implementation can be reduced by

- o involving the target audience in either the development and/or the operation of the MOOC
- o providing the MOOC on your own institutional platform and not outsourcing it to one of the MOOC platforms
- o using open source software for MOOC platforms or use freely available (social media) tools on the internet in network MOOCs
- o cost efficient video recording tools

Opportunities

- o Raising institutional visibility
- o Building a stronger brand
- o Improved pedagogy (large samples of data contribute to increasing teaching and learning effectiveness)
- o Increasing student enrolment
- o Reaching new students in conditions of continuously changing student demographics
- o New projects and partnerships due to enhanced exposure

BEST PRACTICES FROM EADTU

Course Dimension

- the total study time of a MOOC should be minimal 1 ECTS and should include:
- educational content
- facilitation interaction among peers (including some but limited interaction with academic staff)
- activities/tasks, tests, including feedback
- some kind of (non-formal) recognition options
- a study guide / syllabus

At least the course content of a MOOC should be accessible anytime (i.e. not only between start and end date for a scheduled course)

MOOCs should offer courses of best quality and as such be part of quality assurance of the institution

MOOCs should be using proven modern online learning pedagogies

BEST PRACTICES FROM MOOKBOOK

Practice	Content	Resources
Learning Design Principles and Tools for MOOCs	Develop the structure and content of the MOOC using proven learning design principles and tools	https://www.youtube.com/watch?v=tA5K7nlQ2e0
Templates, Questionnaires and Surveys to Identify Your MOOC Target Group	Conduct research on the characteristics and needs of the target groups in the early phase of the design process.	http://mooc-book.eu/index/learn-more/further-readings/
Prototyping in MOOC Design	Involve experts, learners and peers in the evaluation of the design and course prototype well in advance of its launch.	
Schedule Time for MOOC Design	Take sufficient time for the design of the MOOC	
Linguistic Tools for Translating MOOCs	Use linguistic tools to overcome language issues / machine translation options	http://tramooc.eu/
Balance Out Unequal Experience Levels within MOOC Design Teams	Acknowledge and address unequal knowledge and experience with MOOCs within the design team	
Use a Course Planner Sheet to assign tasks and responsibilities	Assign tasks and responsibilities according to team member's areas and levels of expertise in support of an overall vision	
Quality Dimensions Review	Establish the goals, learning outcomes, characteristics and quality criteria of the MOOC before developing the MOOC	
Key Performance Indicator Dashboard	Select and measure key performance indicators that are most appropriate for the MOOC.	
MOOC Evaluation Design	Plan the overall evaluation and quality process, including who will review what elements using which template with applicable criteria, beforehand.	
MOOC Platforms	Review a range of MOOC platforms and carefully select one to ensure that the chosen platform is accessible for the identified target groups	
Make MOOC Content Accessible	Ensure the accessibility of content and assets (such as videos) **on different devices** when developing your MOOC	

Think About Licensing	Consider the medium- to long-term life of the MOOC. For example, by openly licensing course content and/or by using open education resources (OER)	
Flexible Course Tracks	Whenever necessary, introduce flexible course options (fast track and full track)	http://mooc.house/bizmooc2018/.
Overview of Deadlines, Certification and Course Tracks	Provide a clear graphic overviews of deadlines, certifications and different pathways through the MOOC.	
"E-tivities"	Consider introducing e-tivities as good practice examples for ice-breaking activities	https://www.gillysalmon.com/e-tivities.html
Self-Training Options	Introduce self-training options by providing learners with an opportunity to prepare themselves	
MOOC Farewell Party	Consider hosting an online closing event which recaps the most important take-aways and enables learners to reflect informally on their experience	
Encouraging Active Learning	This can be done through forum discussions; sharing work; creating shared tools/approaches; encouraging peer support, etc	https://moocbook.pressbooks.com/chapter/participation-and-completion/
Ongoing Learning from your MOOC	outline the vast potential which a smartly designed MOOC with a critical mass of learners holds to improve general teaching and training approaches	
	in professional lifelong learning and university & company-training settings.	

Pedagogical best practices

Learner is key	learner has a central role. Due to the high heterogeneity characteristic of MOOC participants in terms of competences, prior knowledge, personal motivation and goals, and also because of the non-formal, community-like nature of these courses, learners are expected to take an active role n, and be responsible for their own learning, but also to actively engage in helping build a supporting learning community. Knowledge is built through reflection and practice (creation, production) and dialogue in a social collaborative context.
Learning through interaction	Interaction takes place at various levels. It can happen with the materials and resources provided and those contributed and produced by participants; but also with other participants (in the learning community/network and/or in a group); and with community facilitators.
Flexibility	There need to be an articulation between autonomous and self-directed learning with a strong social dimension (collaborative learning), and also between the flexibility that online learners need with the pacing necessary to help them get things done.
Digital inclusion	to make learning available to as many people as possible, bringing these people into the digital online environment, where a crucial part of modern life happens, thus helping curb the digital divide.
Ubiquitous learning	In accordance, whenever possible or adequate, courses should support context information and tasks by ubiquitous, pervasive and contextualized learning through mobile technologies.

Pedagogical approach

Access and registration	Courses are open to everyone who wants to participate. Registration is required to add contributions and publish in the learning environment
Duration and structure	The course should run for about six weeks, a duration which seems, from empirical data, to work well. The first week should be dedicated to the familiarization process to get participants acquainted and familiar with the environment, technologies and work and communication processes to be used throughout the course. This is a key phase in the process and may contribute ignificantly to a better retention rate, not only because it gives participants enough time to become sufficiently proficient to be able to work and communicate before starting to engage with course contents, but also because it fosters the development of the learning community The remaining weeks should be organized around topics, with suggested activities and resources tied to these activities to explore these topics and support learning.
Learning environment	should be intuitive and require only a short adjustment period, which can be achieved in the introductory, boot camp week. If a typical virtual learning environment is used (VLE/LMS), it needs to be enhanced with social features, or with a community/network-like environment It is imperative to avoid "school-like" or "classroom-like" environments as the main space where activities take place and participants publish and interact
Learning process	Learning is learner-centred and based on the realization of e-tivities. Learning should be evidenced through the creation of artifacts (texts, videos, presentations, audio podcasts, mind maps, etc.), published online and freely accessible The learning process combines autonomous self-study and reflection with interaction with other participants in an open social context.

Teacher's role	A non-formal, free course cannot rely heavily on teacher time and presence. Teacher participation in the course needs to be very well thought through. Learning support cannot be assured through direct and ongoing teacher intervention, nor through direct and systematic intervention of the facilitators. Teacher presence is created through the Learning Guide, the detailed instructions for the tasks, some resources (video and/or audio presentations) and a weekly feedback message, based on the information prepared by the facilitators' team
Learner's role	Success in a MOOC needs to be measured against participants own goals, interests and satisfaction level, not against predefined learning outcomes.
Facilitators team	A small team of volunteers should be recruited in order to collaborate with the teacher or teachers leading the course.
Activities	Typically, activities have a weekly schedule. Activities shouldn't be too rigid, with heavy dependencies between tasks and very structured paths, which makes it impossible for people to recover or come back in the course if they lag behind at some point.
Learning materials	Resources provided as support for learning are presented in the context of a learning activity, not as items in a repository. All resources and materials should be licensed as Open Educational Resources or freely available on the Internet. Ideally, the video and audio resources provided, besides being available through streaming, should also be made available for download in formats compatible with most devices. Artifacts produced by participants as evidence of their reflection and learning become part of the course materials
Communication	Communication needs to be carefully planned. Regular messages, such as the weekly feedbacks, help to maintain the focus and the "teaching presence"

Feedback and assessment	Formative assessment with self-correction should be made available (through tests, quizzes, etc.), focusing on relevant aspects of the topics being discussed or important elements in the resources provided. Participants must also be encouraged and are expected to discuss and give feedback to one another throughout the learning activities. A regular, more general feedback on the work done each week should be provided by the teacher. Additionally badges for completion of tasks or challenges, and the points/status/likes/pluses etc. gained from reputation systems, can be used. Self-assessment quizzes can also be used as diagnostic, to anticipate relevant content presented in a resource.
The gamification element	Gamification, at higher or lower levels of implementation and complexity, depending on the needs and intent of course organizers, can be used to enhance communication and interaction in the learning community and provide a more rewarding and meaningful learning experience

COURSES MAPPED

MOOC	HEI	PLATFORM	AREA	Number of Weeks	Workload /week	Link	Country	Obs
Security, Terrorism and Counterterrorism	Murdoch University	Future Learn	Politics & Society	4	2 hours	https://www.futurelearn.com/courses/security-terrorism	Australia	
Global Studies: Risks and Threats in International Relations	Grenoble école de Management	Future Learn	Politics & Society	4	6 / 10 hours	https://www.futurelearn.com/courses/global-studies-risks-threats	France	part of 3 course program in Global Studies: International Relations and World Politics
International Relations: Politics in Turbulent Times	University of Kent	Future Learn	Politics & Society	12	10 hours	https://www.futurelearn.com/microcredentials/politics-turbulent-times	UK	Paid Microcredential
Digital Diplomacy: International Relations in the Digital Age	Global Diplomatic Forum	Future Learn	Politics & Society	4	6 hours	https://www.futurelearn.com/courses/digital-diplomacy-in-the-changing-global-landscape		Paid course
Migration, Mobilities and Citizenship	University of Bristol	Future Learn	Politics & Society	2	3 hours	https://www.futurelearn.com/courses/migration-mobilities-bristol-online-short-course-essentials	UK	

Ocean Science in Action: Addressing Marine Ecosystems and Food Security in the Western Indian Ocean	National Oceanography Centre	Future Learn	Science, Engineering & Maths	4	3 hours	https://www.futurelearn.com/courses/ocean-science-in-action-addressing-marine-ecosystems-and-food-security-in-the-western-indian-ocean	UK
Next Generation Biosecurity: Responding to 21st Century Biorisks	University of Bath	Future Learn	Politics & Society	6	4 hours	https://www.futurelearn.com/courses/biosecurity	UK
Governing Religion: Global Challenges and Comparative Approaches	European University Institute	Future Learn	Politics & Society	3	3 hours	https://www.futurelearn.com/courses/governing-religion-global-challenges-and-comparative-approaches	Italy /EU
Right vs Might in International Relations	University of Glasgow	Future Learn	Politics & Society	6	4 hours	https://www.futurelearn.com/courses/right-vs-might	UK
The European Union: Crisis and Recovery	Dublin City University	Future Learn	Politics & Society	4	4 hours	https://www.futurelearn.com/courses/the-european-union-crisis-and-recovery	Ireland
International Affairs: Global Governance	Graduate Institute Geneva	Future Learn	Politics & Society	4	3 hours	https://www.futurelearn.com/courses/global-governance	CH
Migrations internationales : un enjeu mondial	SCiencePo	Coursera	Governance & Society	9	3 hours	https://www.coursera.org/learn/migrations-internationales	France
Digitalization in International Relations	Saint Petersburg State University	Coursera	Information Technologies	8	2 hours	https://www.coursera.org/learn/digitalization-in-international-relations	Russia

Terrorism and Counterterrorism: Comparing Theory and Practice	University of Leiden	Cours era	Governance & Society	6	4 hou rs	https://www.coursera.org/learn/terrorism	NL	
Geopolitics of Europe	ScienceP o	Cours era	Governance & Society	7	4 hou rs	https://www.coursera.org/learn/geopolitics-europe	Fra nce	
Security & Safety Challenges in a Globalized World	University of Leiden	Cours era	Governance & Society	6	3 hou rs	https://www.coursera.org/learn/security-safety-globalized-world	NL	
Global Health Security, Solidarity and Sustainability through the International Health Regulations	Universit é de Genève	Cours era	Public Health	7	4 hou rs	https://www.coursera.org/learn/international-health-regulations	CH	
International Security Management	Erasmus Universit y Rotterda m	Cours era	Governance & Society	7	3 hou rs	https://www.coursera.org/learn/international-security-management	NL	
Seguridad hídrica	Universid ad N.Autono ma de Mexico	Cours era	Governance & Society	5	3 hou rs	https://www.coursera.org/learn/seguridad-hidrica	Me xic o	
Homeland Security and Cybersecurity	University of Colorado	Cours era	Governance & Society	4 mon ths	3 hou rs	https://www.coursera.org/specializations/homeland-security-cybersecurity	US A	Integrated program (4 courses)
International Cyber Conflicts	State Universit y of New York	Cours era	Network Security and Comput ing	5	3 hou rs	https://www.coursera.org/learn/cyber-conflicts	US A	

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Information Security: Context and Introduction	University of London	Cours era	Network Security and Comput ing	5	5 hou rs	https://www.coursera.org/lea rn/information-security-data	UK	
The Changing Global Order	University of Leiden	Cours era	Governa nce & Society	7	4 hou rs	https://www.coursera.org/lea rn/changing-global-order	NL	
Global Health and Humanitarianism	University of Manchest er	Cours era	Governa nce & Society	6	3 hou rs	https://www.coursera.org/lea rn/health-humanitarianism	UK	
Global Health Diplomacy	State University of New York	Cours era	Governa nce & Society	7	4 hou rs	https://www.coursera.org/lea rn/global-health-diplomacy	US A	
Introduction to Contemporary Geopolitics	National Research U- H School of Economics	Cours era	Governa nce & Society	9	4 hou rs	https://www.coursera.org/lea rn/contemprorary-geopolitics	Rus sia	
Refugees in the 21st Century	University of London	Cours era	Governa nce & Society	6	5 hou rs	https://www.coursera.org/lea rn/refugees-21st-century	UK	
Food Security and Sustainability	Wagenin gen University	ed X	Biology & Life Sciences	5 mon ths	7-9 hou rs	https://www.edx.org/xseries/f ood-security-sustainability	NL	Integrated program (3 courses)
Governance for Transboundary Freshwater Security	SDG Academy	ed X	Environ mental Studies	6	4-6 hou rs	https://www.edx.org/course/g overnance-for-transboundary-freshwater-security	Uni ted Nat ion s	

Cyber Security Economics	TU Delft	ed X	Computer Science	10	2-4 hours	https://www.edx.org/course/cyber-security-economics	NL	
Rule of Law and Democracy in Europe	KU Leuven	ed X	Law	8	2-3 hours	https://www.edx.org/course/rule-of-law-and-democracy-in-europe	Belgium	
Introduction to Political Science IPSAMOOC	Uni di Napoli Federico II	ed X	Political Science	8 months	4-6 hours	https://www.edx.org/xseries/federicax-introduction-to-political-science	Italy	Integrated program (5 courses)
Europe without borders?	University of Hong Kong	ed X	Social Sciences	4	2-3 hours	https://www.edx.org/course/europe-without-borders	China	
De la granja a la mesa: La seguridad alimentaria en la Unión Europea	U Autonoma de Madrid	ed X	Food & Nutrition	6	3-5 hours	https://www.edx.org/course/de-la-granja-a-la-mesa-la-seguridad-alimentaria-en	Spain	
Governance & Policy Advice: How Political Decisions Come to Life	Hartie School of Governance	iversity	Political Science	10	3 hours	https://iversity.org/en/courses/governance-policy-advice-how-political-decisions-come-to-life-march-2016	Germany	
From International Relations to Global Politics	Luiss Università Carlo Guidi	iversity	Political Science	12	4 hours	https://iversity.org/en/courses/from-international-relations-to-global-politics	Italy	
Understanding EU-Russia Relations: Foreign Policy Actors, Institutions and Policy-Making	University of Tartu	UT	Social Sciences	5	7-11 hours	https://www.ut.ee/en/mooc/understanding-eu-russia-relations-foreign-policy-actors-institutions-and-policy-making	Estonia	2 ECTS

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COURSE CONFIGURATIONS

Structure	divided into sections with activities to be completed each week
	at least one video per section (most common between 4 and 5)
	lenght pf videos between 10 and 20 minutes
	besides videos, each section should contain quizzes, tasks, exercises and additional readings/ educational materials
	at the begginning of each section learners should know what activities will be carried and when
	students should be able to navigate different sections of the course
Duration	most between 4- 10 weeks
Dates	enrolment dates and deadlines in the course description page; after the end of the course registered students should have access to archived
	materials
Engagement	recommended engagement time between 3-4 to 10 hours a week (course description page)
Certification	ideally free certificate of attendance
	verified identity certificates subject to fee (?)
Communication	network of cooperation / forum
Collaboration	opportunity to become instructor and learner
Assessment	quizzes; practical exercises; specific tasks
	peer reviewed projects
Download ability	all educational materials should be downloadable to allow for off line study
Accessibility	compatible with Web Content Accessibility Guideline (WCAG)

EDUCATIONAL MATERIALS

Videos	inbuilt questions
	average 60% of the MOOC material in video format
	5 to 20 minutes long (each video)
	file size up to 1GB
	720p or higher definition
	visual presentations within the video
	transcripts
	clear, attractive and easy to follow
Additional materials	online literature (e-books)
	Online articles
	open access
	downloadable
	student wikis

SUPPORT AND COMMUNICATION

General	virtual office hours / coaching / feedback
	encourage posting on course forum
	technical support staff
	email and announcements
Discussion forum	students, academic staff, technical staff
Social media	quick and immediate updates, questions, discussions, community engagement

CONCLUSIONS

The term MOOC was introduced in 2008 by David Cormier after Stephen Downes and George Siemens produced the course Connectivism and Connective Knowledge. The first MOOC, Introduction to Artificial Intelligence, was launched in 2011 by Stanford University and enrolled more than 160,000 users.

Since its early stages, the MOOC trend has seen a steady growth and there are currently "110 million learners, 13.5 thousand courses, 900+ universities, and 50 online degrees from providers all over the world" (https://www.classcentral.com/report/mooc-stats-2019/, 2019.)

The initial narrative of democratization and disruption of higher education seems to have been replace by branding and internationalization of educational offer focusing more on online degrees and, at the same time, on a broader portfolio aimed at diverse and less academic audiences (V. Reda, R. KerrThe MOOC BA, a new frontier for internationalizationI EEE Proc. on Learning With MOOCS (LWMOOCS) (2018)

MOOCs are divided into two main categories: as a network of multiple resources available online to be aggregated or remixed by learners, as in the Downes' course (connectivist MOOCs, or cMOOCs), or as structured paths, offered by and through online platforms like Coursera or edX (eXtended MOOCs, or xMOOCs). MOOCs were originally structured in lessons or weeks, just like traditional university courses, but the changing demographics of the market – with an increase in numbers of lifelong learners (LLL) – has changed MOOCs duration and structure to reflect the needs of such a diverse audience. Now they are frequently offered in flexible, self-paced versions. If MOOCs are to provide a successful response to the demands of lifelong learning market enabling users to gain the competencies required the 21st century workplace, great attention needs to be paid to their design: learning should move from foundational knowledge to skill and attitude training. (S. Downes Connectivism and connective knowledge Innovate: J. Online Educ., 5 (1) (2008), pp. 1-6)

While the potential for global reach of MOOCs is extremely high, levels of participation and conclusion tend to be extremely low; need to define ways to increase / guarantee participation and conclusion (gamification?)

Specialized experts with specific competences need to be involved. Such expertise should be in line with the "elevation of instructional design, learning engineering and UX design" EDUCAUSE HORIZON 2020: Report teaching and learning. https://library.educause.edu/resources/2020/3/2020-educause-horizon-report-teaching-and-learning-edition

"Simulation Supported MOOC" – clarify concept; related to the use of gamification in the MOOC development. If so analysis of best practices and technical requirements for gamification is still needed

ANNEXES

ANNEXES OF CHAPTER 2

DETAILED PROGRAM MAPPING

UNIVERSITY OF SALENTO

MANAGEMENT DIGITALE - DIGITAL MANAGEMENT

PROGRAM COURSE MAPPING	
Program Name	MANAGEMENT DIGITALE - DIGITAL MANAGEMENT
Program Awarded	Bachelor
Corresponding EuSecure Topic	Cyber security and the risks of AI
Duration	3
ECTS	180
Program Language	Italian / English
Department/ Faculty	Department of Economic Science
Program Objectives	The course provides business, economic and legal skills at the same time, aimed at managing the significant changes resulting from the introduction of digital technologies in business organizational models and competition on the markets.
Program Description	The course includes: - knowledge of business economics, microeconomic and macroeconomic theory, mathematical and statistical methods for the interpretation and analysis of data and their use in the decision-making processes of companies

	that integrate digital technologies, on the legal foundations of technological and digital development and on the main digital technologies adopted by companies - specific technical and operational skills in the IT field - management, organizational and financial models of companies operating in a digital context; - models for the analysis and evaluation of business decisions; - Big Data analysis, interpretation and representation models; - regulatory aspects of digital markets and Big Data. The third year is divided into two different curricula: economic and managerial. The economic curriculum is characterized by disciplines oriented towards the knowledge of public policies for innovation, the taxation system on digital markets, the regulation of intellectual property and the bargaining mechanisms of the information society. The managerial curriculum aims to increase the skills related to the use of digital information systems to support decision-making and control processes of the performance of companies and public administrations, as well as regarding management aspects and innovative strategies for financing companies operating in the digital economy.
Postgraduate Opportunities	Marketing specialist, Data analyst, Financial Manager
Initial Required Skills	High school diploma. In addition, logical skills and basic knowledge of English and mathematics are required.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LB46/management-digitale

GESTIONE DELLE ATTIVITA' TURISTICHE E CULTURALI

PROGRAM COURSE MAPPING

Program Name	GESTIONE DELLE ATTIVITA' TURISTICHE E CULTURALI
Program Awarded	Master
Corresponding EuSecure Topic	9. Sustainability and Development, Environmental protection and climate change;
Duration	2
ECTS	120
Program Language	Italian
Department/ Faculty	Department of Economic Science
Program Objectives	The study path trains highly qualified professionals with skills in the various activities concerning the enhancement and management of the territory.
Program Description	The course allows the acquisition of specific knowledge, of an economic, legal and social nature, concerning culture, environment and tourism. In particular, the focus is placed both on the organizational, managerial and economic-financial aspects, and on the legal issues relating to the legislation of local authorities and that in the environmental field.
Postgraduate Opportunities	Tourism manager in associations, private entities and public administrations.
Initial Required Skills	High school diploma. In addition, logical skills and basic knowledge of English and mathematics are required.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LM02/gestione-delle-attivita-turistiche-e-culturali

GOVERNANCE EURO-MEDITERRANEA DELLE POLITICHE MIGRATORIE - EURO-MEDITERRANEAN MIGRATION POLICIES AND GOVERNANCE

PROGRAM COURSE MAPPING	
Program Name	GOVERNANCE EURO-MEDITERRANEA DELLE POLITICHE MIGRATORIE - EURO-MEDITERRANEAN MIGRATION POLICIES AND GOVERNANCE
Program Awarded	Master
Corresponding EuSecure Topic	Megatrends - EU power (strategic autonomy) in a multipolar world - Migration
Duration	2
ECTS	120
Program Language	Italian
Department/ Faculty	Department of Legal Science
Program Objectives	The course focuses on the governance of immigration (especially in the Euro-Mediterranean area), from a legal, economic, geographical, political, historical and sociological perspective. Graduates have a multidisciplinary background.
Program Description	The subject of study are the policies and practices of governance of the migratory phenomenon in the multiple governance system of the European Union. Furthermore, the activation of a euro-planning laboratory is envisaged with the task of providing students with

	the necessary tools to promote welcoming and integration projects, even resorting to European resources. The relationship with the territory will be guaranteed by the stipulation of specific agreements for carrying out internships and / or stages.
Postgraduate Opportunities	Experts in reception and integration policies
Initial Required Skills	Bachelor's Degree
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LM67/governance-euro-mediterranea-delle-politiche-migratorie

GIURISPRUDENZA - LAW

PROGRAM COURSE MAPPING	
Program Name	GIURISPRUDENZA - LAW
Program Awarded	Master
Corresponding EuSecure Topic	EU power (strategic autonomy) in a multipolar world - International governance: multilateral institutions, norms, regimes - Migration - Sustainability and Development, Environmental protection and climate change - Humanitarian Aid (Food security) - Critical infrastructure protection.
Duration	5
ECTS	300
Program Language	Italian
Department/ Faculty	Department of Legal Science
Program Objectives	The course aims to train law experts with a solid multidisciplinary background
Program Description	The Master's degree program in Law provides the student with: a) elements of national, international and European basic legal culture, both on the level of historical and theoretical-philosophical knowledge, and on case studies techniques and methodologies; b) economic and financial knowledge; c) ability to produce and use clear and effective legal texts (regulatory and / or contractual and / or procedural); d) interpretative skills of legal qualification; e) basic tools for legal research; f) language skills up to at least level B1. To this end, the Master's Degree Course is structured over a common two-year period and, starting from the third year, on the possibility of choosing between three different training courses: 1. Classic; 2. Environment and Territory; 3. European and International. The Classic Path deals with the study of the traditional sectors of positive law and historical and methodological profiles. The Environment and Territory course focuses on the protection of the environment and landscape and the management of territorial resources (tourism, cultural heritage, agri-food

	heritage). The European and International course focuses on a more intense approach to supranational and community sources.
Postgraduate Opportunities	Legal specialist
Initial Required Skills	High School Diploma. Good general knowledge, particularly in the historical-institutional field.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LMG2/giurisprudenza

Digital Humanities

PROGRAM COURSE MAPPING	
Program Name	Digital Humanities
Program Awarded	Master
Corresponding EuSecure Topic	Cyber security and the risks of AI
Duration	2
ECTS	120

Program Language	ENGLISH
Department/ Faculty	Department of Cultural Heritage
Program Objectives	The objectives of the study program are the creation of a "European Area for Higher Education" characterized by the interaction between traditions of high quality academic studies focused on cultural heritage, European history and cultural diversity, and the needs of contemporary Information Society. Integration with information and communication technologies contributes to making the humanistic studies more appropriate to the needs of the labor market, increasing employment prospects for graduates. The curriculum is mainly focused on methodologies for the production of content, as a key factor for the success of the information and knowledge society.
Program Description	The Degree Course was designed in order to allow graduates to possess: - an in-depth knowledge of Cultural Heritage - archeology and history of art in the Mediterranean area between classical antiquity and the modern age; - advanced computer skills with particular reference to their applications in the Cultural Heritage sector: Web, multimedia, augmented and virtual reality, Geographic Information System (GIS) applications and databases; - skills in the analysis of ancient monuments and cartographic representations of historical phenomena; - ability to organize the interactions of different disciplinary knowledge. The international degree course will also enable graduates to acquire written and oral command of the English language, with particular reference to the terminology of the sector.
Postgraduate Opportunities	Expert in the use of digital technologies applied to the cultural heritage sector.
Initial Required Skills	Bachelor's Degree. Furthermore, knowledge of basic computer skills, of the English language at level B2 and of the Italian language at level B2 is required.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM70/digital-humanities

SCIENZE DELLA COMUNICAZIONE - SCIENCES OF COMMUNICATION

PROGRAM COURSE MAPPING	
Program Name	SCIENZE DELLA COMUNICAZIONE - SCIENCES OF COMMUNICATION
Program Awarded	Bachelor
Corresponding EuSecure Topic	Megatrends - Social media issues and fake news;
Duration	3
ECTS	180
Program Language	ITALIAN
Department/ Faculty	Department for Humanistic Studies
Program Objectives	The course aims to provide a broad cultural and professional preparation on both theories and communication practices to operate: a) in the various sectors of the cultural industry; in information-communication services and in understanding the languages of new media; b) in public services that involve the ability to manage communication processes; c) in the cooperation and creation of multimedia communication services companies, companies for cultural tourism, all oriented towards lifelong learning. Students must achieve: - an adequate knowledge of the theories and methodologies of analysis of functional and literary languages;

	- an adequate knowledge of historical-political phenomena and of the juridical and philosophical tools for their analysis; - an adequate knowledge of the principles and methods of socio-economic analysis of a certain territory; - an adequate knowledge of artistic communication techniques aimed at promoting cultural tourism; - an adequate knowledge of psycho-pedagocic principles and methods aimed at adults. The course will also ensure the acquisition of adequate computer skills.
Program Description	The three-year degree course in Communication Sciences focuses on a multidisciplinary training, which allows the student to acquire the basic elements of communication theories and practices, through the contribution of sociological, philosophical, historical, economic, pedagogical, linguistic and literary disciplines.
Postgraduate Opportunities	Communication expert
Initial Required Skills	High Scool Diploma, logical-linguistic skills; basic computer skills; general background in the social sciences.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LB36/scienze-della-comunicazione

COMUNICAZIONE PUBBLICA, ECONOMICA E ISTITUZIONALE - PUBLIC, ECONOMIC AND INSTITUTIONAL COMMUNICATION

PROGRAM COURSE MAPPING

Program Name	COMUNICAZIONE PUBBLICA, ECONOMICA E ISTITUZIONALE - PUBLIC, ECONOMIC AND INSTITUTIONAL COMMUNICATION
Program Awarded	Master
Corresponding EuSecure Topic	Social media issues and fake news
Duration	2
ECTS	120
Program Language	Italian
Department/ Faculty	Department for Humanistic Studies
Program Objectives	The master's degree course in Public, Economic and Institutional Communication constitutes the natural completion of the training course started with the three-year degree in Communication Sciences. The course offers a specialization in the fields of Public and Business Communication Sciences, advanced and interdisciplinary training with a strong openness to the business world in the local and national context, and to the communication activities of public and political institutions and organizations.
Program Description	In the first year, the student will acquire skills in the area of languages (Sociology of journalistic writing, General Linguistics, Theory of Signs and Language, English Language and Translation, Computer Science) and skills in the area of Law (Private law and communication processes , Sociology of Law and Social Change). The second year will deal with disciplines more directly linked to the three areas of communication (public, economic, institutional) that constitute the educational objective of the course (Administrative law, Economic journalism, Legal informatics of digital media / Political philosophy, Economics of media and ICT). In addition, the course guarantees the acquisition of communication and economic skills in relation to the universe of new media and communication theories and techniques. In conclusion, the course provides master's students with advanced training:

	• in the theory and communication techniques of companies and public and social institutions; • in the knowledge and use of information and communication technologies; • knowledge of elements of administrative law; • in economics and in the communication of related events.
Postgraduate Opportunities	Economic and institutional public communication Specialist, Expert in advertising campaigns and communication strategies.
Initial Required Skills	Bachelor Degree.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM64/comunicazione-pubblica-economica-e-istituzionale

LINGUE MODERNE, LETTERATURE E TRADUZIONE - MODERN LANGUAGES AND TRANSLATION

PROGRAM COURSE MAPPING	
Program Name	LINGUE MODERNE, LETTERATURE E TRADUZIONE - MODERN LANGUAGES AND TRANSLATION
Program Awarded	Master
Corresponding EuSecure Topic	Migration, Sustainability and Development, Environmental protection and climate change
Duration	2

ECTS	120
Program Language	Italian
Department/ Faculty	Department for Humanistic Studies
Program Objectives	The master's degree program in Modern Languages will provide graduates with the appropriate tools to carry out diversified professional activities of high responsibility that require solid skills in the field of European and American languages and cultures, in local, national and international organizations; to teach foreign languages in private facilities and in Italian schools. a) The training course includes 4 distinct learning areas. The Foreign Language area will guarantee the possibility of acquiring theoretical and technical skills in the field of language, literature and culture of one of the European and extra-European linguistic-cultural fields chosen by the student among French, English, Spanish and German. b) The Linguistic-pedagogical area will allow the acquisition of specific professional skills that can be spent in the field of teaching for the purpose of a job placement in the school world; c) The historical-political-cultural area enriches the student through the study of literary criticism, comparative literature, the history of literature, various sectors of the historical area. d) The Linguistics area, the teaching of Italian Linguistics, completes the training of students, and provides even more specific skills for the use and critical reflection on language as a means of communication.
Program Description	The master's degree program in Modern Languages, Literatures and Translation makes graduates capable of: - carry out translation, editing and revision of texts in public and private institutions; - work in the various fields that require translation skills, in local, national, European and international organizations; - teach foreign languages of specialization in private and public structures. The graduate will have: - an in-depth knowledge of the languages, literature and cultures relating to two selected European and extra-European languages; - a basic humanistic preparation;

	- knowledge of the mechanisms of linguistic comparison in relation to the text.
Postgraduate Opportunities	Linguists and philologists, Text reviewers, Literary translators
Initial Required Skills	Bachelor's Degree
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM57/lingue-moderne-letterature-e-traduzione

COASTAL AND MARINE BIOLOGY AND ECOLOGY

PROGRAM COURSE MAPPING	
Program Name	COASTAL AND MARINE BIOLOGY AND ECOLOGY
Program Awarded	Master
Corresponding EuSecure Topic	Sustainability and Development, Environmental protection and climate change
Duration	2
ECTS	120

Program Language	ENGLISH
Department/ Faculty	DEPARTMENT OF SCIENCE AND ENVIRONMENTAL AND BIOLOGICAL TECHNOLOGIES
Program Objectives	Graduates in the Master Course in Coastal and Marine Biology and Ecology will possess a solid preparation in basic biology, and in the various sectors of applied biology aimed at the understanding of the ecological phenomena at the level of the various scales in coastal, transitional, and marine ecosystems.
Program Description	The Coastal and Marine Biology and Ecology Course delivers qualified education on fundamental and applied biological and ecological marine sciences, integrating e-Science and more traditional approaches with the aim of understanding of the fundamental ecological mechanisms underlying the phenomena occurring at various scales in coastal, transitional, and marine ecosystems. Two curricular programs are foreseen, focusing either on the MARINE BIOLOGY AND ECOLOGY curriculum or the E-BIODIVERSITY AND ECOSYSTEM SCIENCES curriculum. a) MARINE BIOLOGY AND ECOLOGY: biodiversity of coastal and marine vegetation, community ecology, marine life cycles, ecological indicators and biomonitoring, ecology and biology of transitional and marine waters (two modules: ecology and biology of transitional waters + marine biology), biodiversity and ecosystem functioning, oceanography of marginal seas and of the coastal zone, pelagos biology (zooplankton and nekton); environmental microbiology; environmental physiology. b) E-BIODIVERSITY AND ECOSYSTEM SCIENCES: theoretical foundations of biodiversity organization and ecosystem functioning, devoted to the issue of eco-informatics, i.e. of biodiversity and ecosystem data management, recognizing the biodiversity-ecosystem nexus as an information enterprise, requiring analytical and synthetic capabilities in the generation of services for solving environmental challenge (climate change, emerging ecosystem threats, biodiversity loss, waning natural resources) and the promotion of sustainability.
Postgraduate Opportunities	Work in public and private laboratories dealing with environmental issues, holding positions of responsibility as researchers and/or consultants; practice the profession of environmental-focused biologist; work as members of environmental offices in the Municipalities of coastal towns; become directors or Staff members of Marine Protected Areas and any other public environmental agency or office; create/participate start-up and other types of private companies of environmental-related services to the private and public sector related to the marine and maritime domain.
Initial Required Skills	Related Bachelor's Degree

EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM51/coastal-and-marine-biology-and-ecology

SCIENZE AMBIENTALI - ENVIRONMENTAL SCIENCES

PROGRAM COURSE MAPPING	
Program Name	SCIENZE AMBIENTALI - ENVIRONMENTAL SCIENCES
Program Awarded	Master
Corresponding EuSecure Topic	Megatrends - Sustainability and Development, Environmental protection and climate change;
Duration	2
ECTS	120
Program Language	Italian
Department/ Faculty	DEPARTMENT OF SCIENCE AND ENVIRONMENTAL AND BIOLOGICAL TECHNOLOGIES
Program Objectives	The Master's Degree Course in Environmental Sciences aims at training graduates with a high and interdisciplinary preparation in the field of Environmental Sciences, among others, Impact Assessment,

	Strategic Environmental Assessment (VAS) and Environmental Certification, for high responsibility role in various areas of public administration (universities, state and para-state bodies, territorial public bodies) and private bodies and companies (research and design and control and consultancy).
Program Description	The course provides knowledge of the key concepts and procedures for the application of Impact Assessment, Strategic Environmental Assessment (Dir. E. 2001/42 / EC) to plans and programs at various institutional levels, as well as for the EMAS registration for different organizations; knowledge on environmental modeling and optimization between different design alternatives; knowledge of the legal-administrative and economic aspects of environmental assessment and certification processes; knowledge of local scale modeling relating to the diffusion of pollutants in the air; knowledge of biodiversity and habitat conservation aspects; knowledge relating to environmental physiology and environmental hygiene; knowledge of the chemical processes that govern the formation and transformation of pollutants in the various environmental compartments, and of the analytical methods for their determination; knowledge of marine and continental sedimentary environments and their dynamics, of the geophysical methodologies of data acquisition and interpretation for the determination of the geological structures, of the physical characteristics of the subsoil and, finally, of the evaluation of geomorphological risks for the protection of the natural resources of the subsoil; knowledge of the objectives and methods of dynamic climatology; knowledge of physical methodologies for environmental investigation and knowledge of the relationships between energy production and consumption and the environment; knowledge of methodologies for the sustainable use and enhancement of the fish resource.
Postgraduate Opportunities	Consultant at local administrations, public organizations and private companies in the field of: - environmental impact assessment (EIA) and strategic environmental assessment (SEA), - achievement of European and international certifications (EMAS, UNI EN ISO, Ecolabel, Ecoaudit); - design and management of environmental monitoring and control systems; - participation in projects aimed at the sustainable use of the fish resource; - promotion and coordination of environmental policy initiatives; - the design and implementation of territorial information systems and geo-data-base.
Initial Required Skills	Related Bachelor's Degree
EuSecure Coverage Level	Partial

Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea/-/dettaglio/corso/LM60/scienze-ambientali

SCIENZE E TECNOLOGIE PER L'AMBIENTE - ENVIRONMENTAL SCIENCES AND TECHNOLOGIES

PROGRAM COURSE MAPPING	
Program Name	SCIENZE E TECNOLOGIE PER L'AMBIENTE - ENVIRONMENTAL SCIENCES AND TECHNOLOGIES
Program Awarded	Bachelor
Corresponding EuSecure Topic	Cyber security and the risks of AI Sustainability and Development, Environmental protection and climate change;
Duration	3
ECTS	180
Program Language	ITALIAN
Department/ Faculty	DEPARTMENT OF SCIENCE AND ENVIRONMENTAL AND BIOLOGICAL TECHNOLOGIES
Program Objectives	The training activities are aimed at providing a systemic vision of components (biotic and abiotic), environmental factors and processes, as well as environmental frailties subject to various anthropogenic pressures. Knowledge of these relationships is essential for assessing the state of environmental systems.
Program Description	The basic training, which refers to mathematical, physical, chemical, earth sciences and biological disciplines, represents a solid basis for botany, analytical chemistry, stratigraphic geology, geophysics, meteorology and physical oceanography, physiology and of environmental microbiology. A specific space is dedicated to ecological issues both in terms of foundations, both with regard to the role of biodiversity, and in the application

	to planning.
Postgraduate Opportunities	Technical and collaboration activities with local administrations, public organizations and private companies in the field of sampling, monitoring and analysis of ecosystems and related environmental processes, as well as environmental and territorial planning activities for sustainability.
Initial Required Skills	High School Diploma and basic notions of Biology, Chemistry, Physics and Earth Sciences.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea/-/dettaglio/corso/LB03/scienze-e-tecnologie-per-l-ambiente

BIOLOGIA SPERIMENTALE ED APPLICATA - EXPERIMENTAL AND APPLIED BIOLOGY

PROGRAM COURSE MAPPING	
Program Name	BIOLOGIA SPERIMENTALE ED APPLICATA - EXPERIMENTAL AND APPLIED BIOLOGY
Program Awarded	Master
Corresponding EuSecure Topic	Public Health
Duration	2
ECTS	120
Program Language	Italian
Department/ Faculty	DEPARTMENT OF SCIENCE AND ENVIRONMENTAL AND BIOLOGICAL TECHNOLOGIES
Program Objectives	The degree course in Experimental and Applied Biology aims to provide the student with the theoretical knowledge and practical tools to manage research in its basic and applicative aspects in the biological health, cellular and molecular, nutritional and agri-food fields.
Program Description	The Master's Degree Course in Experimental and Applied Biology at the University of Salento includes a common year, the first year, and a differentiation, the second year, in the following four curricula: - Agro-food; - Bio-sanitary; - Cellular and Molecular - Human nutrition.
Postgraduate Opportunities	- Basic and applied research in life sciences; - biological, microbiological, genetic and biomolecular analyzes, in research laboratories of companies in the pharmaceutical and biotechnology sector; - study and analysis of chemical-biochemical, cellular, genetic, immunological, microbiological and nutritional parameters relevant to human health, including in the forensic field; - promotion and development of typical local food products; - quality control and certification of agro-food products.

Initial Required Skills	Bachelor's Degree in the same field of study
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM68/biologia-sperimentale-ed-applicata

SCIENZE MOTORIE E DELLO SPORT - MOTOR AND SPORT SCIENCES

PROGRAM COURSE MAPPING	
Program Name	SCIENZE MOTORIE E DELLO SPORT - MOTOR AND SPORT SCIENCES
Program Awarded	Bachelor
Corresponding EuSecure Topic	Public Health
Duration	3
ECTS	180
Program Language	Italian
Department/ Faculty	DEPARTMENT OF SCIENCE AND ENVIRONMENTAL AND BIOLOGICAL TECHNOLOGIES
Program Objectives	The course aims to respond more adequately to the significant social changes of recent years.

	For this purpose, the course provides for the acquisition of the anatomical, biochemical, biomechanical and physiological knowledge essential to understand the biological basis of movement and adaptations to physical exercise. In addition, the training course provides for the learning of motor and sports techniques and methodologies suitable for measuring and evaluating the effects of physical exercise with particular reference to the biomechanical aspects of movement aimed at implementing programs for the recovery of postural defects and " use of techniques and tools for a correct performance of motor and sports activity.
Program Description	The course provides for the acquisition of the anatomical, biochemical, biomechanical and physiological knowledge essential to understand the biological basis of movement and adaptations to physical exercise.
Postgraduate Opportunities	Professional operators capable of planning and guiding activities and athletic training plans at an amateur and competitive level.
Initial Required Skills	High School Diploma
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea/-/dettaglio/corso/LB45/scienze-motorie-e-dello-sport

SCIENZE BIOLOGICHE - BIOLOGY

PROGRAM COURSE MAPPING	
Program Name	SCIENZE BIOLOGICHE - BIOLOGY
Program Awarded	Bachelor

Corresponding EuSecure Topic	Pandemic Management - Public Health
Duration	3
ECTS	180
Program Language	Italian
Department/ Faculty	DEPARTMENT OF SCIENCE AND ENVIRONMENTAL AND BIOLOGICAL TECHNOLOGIES
Program Objectives	The course ensures an adequate knowledge of general scientific methods and contents in the field of biology.
Program Description	The course provides for the acquisition of: basic elements of mathematics, statistics, computer science, physics and chemistry; the fundamentals of plant biology, microorganisms, animals (including man) at the morphological, functional, cellular, molecular, and evolutionary level; the mechanisms of reproduction, development and heredity; of the fundamentals of ecology.
Postgraduate Opportunities	Biologists; Biochemicals; Botanicals; Zoologists; Ecologists; Laboratory technicians; Food technicians
Initial Required Skills	basic knowledge of Mathematics, Physics, Chemistry and Biology. High School Diploma.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea/-/dettaglio/corso/LB02/scienze-biologiche

BIOTECNOLOGIE - BIOTECHNOLOGY

PROGRAM COURSE MAPPING

Program Name	BIOTECNOLOGIE - BIOTECHNOLOGY
Program Awarded	Bachelor
Corresponding EuSecure Topic	Pandemic Management - Public Health
Duration	3
ECTS	180
Program Language	Italian
Department/ Faculty	DEPARTMENT OF SCIENCE AND ENVIRONMENTAL AND BIOLOGICAL TECHNOLOGIES
Program Objectives	The course of study aims to train graduates who must possess adequate knowledge of tools and skills in the various sectors of the biotechnological disciplines either for the production of goods and services or to continue their studies addressing more specific aspects of biotechnology.
Program Description	The learning areas in which the degree program is divided are: Mathematics, Physics, Statistics; Chemistry; General Biology, Cell Biology and Microbiology; Biochemistry, Physiology, Biophysics and biomedical disciplines; Genetics and Molecular Biology.
Postgraduate Opportunities	Biotechnology expert
Initial Required Skills	Knowledge of mathematics, physics, chemistry and biology, adequate logic and understanding skills and High School Diploma.
EuSecure Coverage	Partial

Level	
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea/-/dettaglio/corso/LB01/biotecnologie

SCIENZE POLITICHE E DELLE RELAZIONI INTERNAZIONALI - POLITICAL SCIENCE AND INTERNATIONAL
RELATIONS

PROGRAM COURSE MAPPING	
Program Name	SCIENZE POLITICHE E DELLE RELAZIONI INTERNAZIONALI - POLITICAL SCIENCE AND INTERNATIONAL RELATIONS
Program Awarded	Bachelor
Corresponding EuSecure Topic	EU power (strategic autonomy) in a multipolar world - International governance: multilateral institutions, norms, regimes
Duration	3
ECTS	180
Program Language	Italian
Department/ Faculty	DEPARTMENT OF HISTORY, SOCIETY AND HUMAN STUDIES
Program Objectives	To prepare students for the analysis of the theoretical, historical, economic, political and legal elements that mark the complexity of contemporary society.
Program Description	The Degree Program is multidisciplinary and examines subjects in the historical, historical-political,

	sociological, philosophical, legal, economic-social fields. The course also includes an English language course (as a compulsory exam) and a second compulsory language to be chosen between Spanish and French.
Postgraduate Opportunities	Consultancy in the public and private sector; Access to employment in the public administration; Employment in the private sector and in particular in services and commerce.
Initial Required Skills	Adequate knowledge in the historical-political field.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LB17/scienze-politiche-e-delle-relazioni-internazionali

SOCIOLOGIA - SOCIOLOGY

PROGRAM COURSE MAPPING	
Program Name	SOCIOLOGIA - SOCIOLOGY
Program Awarded	Bachelor
Corresponding EuSecure Topic	Critical infrastructure protection
Duration	3
ECTS	180

Program Language	Italian
Department/ Faculty	DEPARTMENT OF HISTORY, SOCIETY AND HUMAN STUDIES
Program Objectives	The Degree Course in Sociology aims to train graduates able to analyze complex social phenomena through the acquisition of the theoretical and methodological tools of sociological analysis, within a training course characterized by strong interdisciplinarity. The interdisciplinary skills, together with the operational skills related to the methodologies and techniques of social research, provide the student with cultural tools to understand the complex phenomena typical of contemporary society and to analyze them empirically in the multiplicity of their dimensions.
Program Description	The course of study offers interdisciplinary training, suitable for the preparation of sociologists to be employed in social research, in the planning and management of social policies, in particular those related to the processes of exclusion and marginalization. The course distinguishes two curricula: the "Professional and Didactics of Human Sciences" curriculum and the "Crime and Deviance" curriculum. The latter focused in particular on the sociological study of marginalization processes, as well as on the legal and psychological aspects of crime.
Postgraduate Opportunities	Sociologis
Initial Required Skills	Appropriate study method, basic knowledge relating to the development of contemporary society, as well as fundamental notions relating to the structure of the state, citizenship, emerging social problems.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LB26/sociologia

EDUCAZIONE SOCIALE E TECNICHE DELL'INTERVENTO EDUCATIVO - SOCIAL EDUCATION AND EDUCATIONAL INTERVENTION TECHNIQUES

PROGRAM COURSE MAPPING

Program Name	EDUCAZIONE SOCIALE E TECNICHE DELL'INTERVENTO EDUCATIVO - SOCIAL EDUCATION AND EDUCATIONAL INTERVENTION TECHNIQUES
Program Awarded	Bachelor
Corresponding EuSecure Topic	Public Health
Duration	3
ECTS	180
Program Language	Italian
Department/ Faculty	DEPARTMENT OF HISTORY, SOCIETY AND HUMAN STUDIES
Program Objectives	The course trains first-level experts on educational dynamics as support and accompaniment in different age groups, from infancy to adulthood up to seniority, therefore professional figures capable of operating at a micro and macro level.
Program Description	The course offers disciplinary skills in the educational sciences (highlighting the differences of intervention for the various age groups) and in the historical-philosophical-social disciplines, providing intervention models to operators, integrated by skills developed in internship activities, Workshops and Seminars. The training is completed with the knowledge of at least one foreign language and the acquisition of the four language skills (reading, writing, listening, and dialogue) may be envisaged.
Postgraduate Opportunities	SOCIO-CULTURAL EDUCATOR in public and private structures.
Initial Required Skills	High School Diploma

EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea/-/dettaglio/corso/LB47/educazione-sociale-e-tecniche-dell-intervento-educativo

SOCIOLOGIA E RICERCA SOCIALE - SOCIOLOGY AND SOCIAL RESEARCH

PROGRAM COURSE MAPPING	
Program Name	SOCIOLOGIA E RICERCA SOCIALE - SOCIOLOGY AND SOCIAL RESEARCH
Program Awarded	Master
Corresponding EuSecure Topic	Social media issues and fake news
Duration	2
ECTS	120
Program Language	Italian
Department/ Faculty	DEPARTMENT OF HISTORY, SOCIETY AND HUMAN STUDIES
Program Objectives	The Course prepares specialists in the empirical analysis of social phenomena. At the end of the training course, therefore, graduates of the Master's Degree Course will have: developed adequate methodological skills relating to the various phases of research (from research design to data analysis) within both quantitative and qualitative methodological traditions; developed methodological skills also in other sectors of the human sciences with particular reference to historical sciences; developed specific skills in

	the linguistic field; acquired advanced tools for the analysis of social phenomena, both quantitative and qualitative; developed the ability to place data analysis within the theoretical reflection, both socio-political and anthropological.
Program Description	Student training takes place along four fundamental axes: the acquisition of theoretical skills in the sociological and philosophical fields, such as to guarantee tools and categories useful for the analysis of social phenomena; the development of empirical skills, connected in particular with the ability to develop research designs, to collect and analyze qualitative and quantitative data, to analyze the latter also by making use of statistical skills; sociological skills, connected in particular with the analysis of territorial development processes (for students enrolled in the curriculum in Territorial Development and Didactics of Human Sciences); sociological, psychological, legal and anthropological skills for the analysis and understanding of deviant phenomena (For students enrolled in the curriculum in Social Deviance and Crime); interdisciplinary skills as an indispensable complement for a non-native analysis of social processes in advanced modernity.
Postgraduate Opportunities	Sociologist in research centers; local authorities; Third sector organizations; public or private administrations; School.
Initial Required Skills	Basic knowledge relating to sociological disciplines and to the methodology of social research, as well as interdisciplinary knowledge relating to economic, legal, political and statistical disciplines. Bachelor's Degree.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LM41/sociologia-e-ricerca-sociale

INGEGNERIA INFORMATICA - COMPUTER ENGINEERING

PROGRAM COURSE MAPPING	
Program Name	INGEGNERIA INFORMATICA - COMPUTER ENGINEERING
Program Awarded	Master

Corresponding EuSecure Topic	Cyber security and the risks of AI
Duration	2
ECTS	120
Program Language	English
Department/ Faculty	DEPARTMENT OF ENGINEERING FOR INNOVATION
Program Objectives	The Master's Degree course in Computer Engineering studies the different application areas of Computer Engineering: computer networks; software architectures, software applications and information systems; high-performance computing; automation.
Program Description	Theoretical-scientific aspects of mathematics to interpret and describe engineering problems that are complex or that require an interdisciplinary approach; theoretical-scientific aspects of computer engineering; knowledge of context and transversal skills; English language.
Postgraduate Opportunities	IT engineer: project management, analysis, development, integration and system validation activities in the IT industries operating in the areas of hardware and software production; in the industries for automation and robotics; in companies operating in the area of information services and computer networks; in IT service companies for the private industry, for citizens and for the Public Administration.
Initial Required Skills	An appropriate level of knowledge to the general educational objectives of the Bachelor's Degree in Information Engineering. Bachelor's Degree in Information Engineering.
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM55/computer-engineering

MANAGEMENT ENGINEERING - INGEGNERIA GESTIONALE

	PROGRAM COURSE MAPPING	
Program Name	MANAGEMENT ENGINEERING - INGEGNERIA GESTIONALE	
Program Awarded	Master	
Corresponding EuSecure Topic	Cyber security and the risks of AI	
Duration	2	
ECTS	120	
Program Language	English	
Department/ Faculty	DEPARTMENT OF ENGINEERING FOR INNOVATION	
Program Objectives	At the end of the Degree Course, Graduates in Management Engineering must: - be able to use the knowledge of the theoretical-scientific aspects of mathematics to interpret and describe complex engineering problems that require an interdisciplinary approach; - to know in depth the theoretical-scientific aspects of engineering; - be able to identify, formulate and solve complex problems; - be able to Design and Manage a Business; - be able to conceive, plan, design and manage complex and / or innovative systems, processes and products /	

	services; -be able to model and design production, logistic, administrative, technical-commercial processes, to identify the measure of their performance; - be able to plan and implement incremental or radical improvement actions for the Business Processes; - be able to plan, manage and direct the information flows relating to the main processes of the Company; - know industrial and energy technologies and related economic and organizational aspects; - understand the fundamental principles inherent in the design and management of company information systems; - be able to conceptualize engineering models, systems and processes with reference to systems for energy and the environment; - be able to use the English language fluently, in written and oral form.
Program Description	The course offers a solid basic preparation and broad technical-applicative contents in the field of technology, innovation, and the enhancement of technologies in an economic and social key.
Postgraduate Opportunities	Management engineer. Sectors: manufacturing of industrial transformation; energy and plant engineering; traditional services (transport etc.); advanced knowledge intensive services (telecommunications, information technology, business consultancy, etc.); Public administration; research in public and private institutes and research centers and in universities.
Initial Required Skills	Bachelor's Degree in Industrial Engineering
EuSecure Coverage Level	Partial
Link	https://www.unisalento.it/didattica/cosa-studiare/percorsi/-/dettaglio/corso/LM54/management-engineering

INGEGNERIA MECCANICA - MECHANICAL ENGINEERING

PROGRAM COURSE MAPPING

Program Name	INGEGNERIA MECCANICA - MECHANICAL ENGINEERING
Program Awarded	Master
Corresponding EuSecure Topic	Migration - Sustainability and Development, Environmental protection and climate change
Duration	2
ECTS	120
Program Language	Italian
Department/ Faculty	DEPARTMENT OF ENGINEERING FOR INNOVATION
Program Objectives	The Master's Degree course in Mechanical Engineering aims at creating a professional figure with in-depth knowledge both in the basic sciences and in the sciences of Mechanical Engineering. Therefore able to interpret, describe and solve complex engineering problems or those requiring an interdisciplinary approach in an autonomous and innovative way.
Program Description	The preparation achieved will provide the mechanical engineer with the professional versatility necessary to tackle different issues, contribute to the realization of projects carried out in groups and dialogue with technicians and experts in the most varied sectors. The training course is divided into curricula (addresses) in order to guarantee the understanding of particular advanced themes of mechanics with a significant level of specialization.
Postgraduate Opportunities	Mechanical Engineer, public bodies and private companies, both in the design areas and in the areas of effective management of technologies and industrial systems.
Initial Required Skills	Bachelor's Degree in Industrial Engineering
EuSecure Coverage	Partial

Level	
Link	https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM07/ingegneria-meccanica

UNIVERSITY PIRAEUS RESEARCH CENTER (PIRAEUS)

Διεθνών και Ευρωπαϊκών Σπουδών [International and European Studies]

PROGRAM COURSE MAPPING	
Program Name	Διεθνών και Ευρωπαϊκών Σπουδών [International and European Studies]
Program Awarded	Bachelor
Corresponding EuSecure Topic	- Megatrends; - EU power (strategic autonomy) in a multipolar world; - International governance: multilateral institutions, norms, regimes; - Maritime security; - Migration; - Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects); - Social media issues and fake news; - Sustainability and Development, Environmental protection and climate change; - International development cooperation
Duration	Four (4)
ECTS	240

Program Language	Greek
Department/ Faculty	Department of International and European Studies (DIES) of the University of Piraeus
Program Objectives	The curriculum of the program has been designed with an interdisciplinary approach covering a wide range of courses aiming to contribute to the familiarization of undergraduate students with the academic fields of International Relations, European Studies, International Political Economy and International Law. One of the program's main missions is to equip undergraduate students with a comparative advantage in the labor market by enhancing skills and knowledge of undergraduates that are required so as to be able to occupy positions within International Organizations, European institutions, Public Administration as well as private enterprises.
Program Description	The program promotes excellence in teaching and research based on three pillars: international political economy, international relations and European issues enhancing undergraduates' foreign language skills and the use of relevant terminology in international relations and European issues. The courses of the program offer the opportunity to undergraduates to study regions of the world, European issues, international relations, strategic studies, world governance, international politics, diplomacy, international dispute resolution and mediation, international law, international trade, international and European institutions, international financial markets, European law, European policies, major global political and economic problems, domestic political systems and foreign policy, as well as, aspects of the international economy and of the new technologies. To receive a bachelor's degree the student is required to attend and be successfully examined to 44 courses in total, out of which 24 courses are mandatory during the 1st, 2nd, 3rd and 4th semester (being taught in class of 4 academic hours per week for 13 weeks of each semester) with 5 ECTS and 20 courses are elective/ optional during the 5th, 6th, 7th and 8th semester (being taught in class of 3 academic hours per week for 13 weeks of

	each semester) with 6 ECTS.
Postgraduate Opportunities	Access to second cycle-postgraduate studies
Initial Required Skills	National level examinations at the end of secondary education
EuSecure Coverage Level	Partial
Link	https://www.des.unipi.gr/en/

Διεθνείς και Ευρωπαϊκές Πολιτικές στην Εκπαίδευση, Κατάρτιση και Έρευνα [International and European Policies on Education, Training and Research]

PROGRAM COURSE MAPPING	
Program Name	Διεθνείς και Ευρωπαϊκές Πολιτικές στην Εκπαίδευση, Κατάρτιση και Έρευνα [International and European Policies on Education, Training and Research]
Program Awarded	Master

Corresponding EuSecure Topic	- Migration; - Qualitative Research Methodologies
Duration	One (1)
ECTS	75
Program Language	Greek
Department/ Faculty	Department of International and European Studies (DIES) of the University of Piraeus
Program Objectives	One of the program's main aims is to train teachers and executives with an interdisciplinary approach strengthening their skills in policy planning and implementation, as well as, in the design and submission of international and European programs. It develops postgraduates' skills in evaluating complex issues making the most of their existing knowledge and experience and addressing issues of methodological research in the scientific fields of their interests.
Program Description	The program provides specialized knowledge in the area of education, training and research policies focusing on their international and European dimension. It combines the expertise and practical skills that characterize the development, design and implementation of policies in the fields of education, training and research at international, European and national level and provides postgraduate students, such as interested young scientists, researchers, teachers and education administrators, with all the necessary tools and knowledge for

	the analysis of relevant policy fields of social sciences, political science and public administration or pedagogy and humanities. The curriculum includes 2 semesters and a summer period for the preparation of the diploma dissertation and to receive a master's degree the postgraduate student is required to attend and be successfully examined to 10 courses, out of which 6 are mandatory and 4 are elective/ optional, as well as, to prepare and submit his/her dissertation.
Postgraduate Opportunities	Access to doctoral studies
Initial Required Skills	First cycle-bachelor's degree
EuSecure Coverage Level	Partial
Link	https://www.des.unipi.gr/en/postgraduate/msc-education-research

Πληροφορικής [Informatics]

PROGRAM COURSE MAPPING	
Program Name	Πληροφορικής [Informatics]
Program Awarded	Bachelor

Corresponding EuSecure Topic	- Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects)
Duration	Four (4)
ECTS	240
Program Language	Greek
Department/ Faculty	Department of Informatics of the University of Piraeus
Program Objectives	The program aims to fulfill to the greatest extent possible the following objectives: (i) Alignment with current guidelines internationally defined in the IT sector and the labor market needs, (ii) Identifying and establishing guidelines for undergraduate level domains-edge IT, (iii) Creating a "nursery" for young scientists integrating modern subjects and courses.
Program Description	The program provides necessary and useful specialization for undergraduates in order for them to be competitive in the labor market and ready to meet the modern requirements in the scientific arena of Information Technology. The first four (4) semesters (1st and 2nd year) are common to all undergraduate students of the program and in the four (4) last semesters (3rd and 4th year) three directions are established: (i) Technology of Software and Intelligent Systems (TSIS): The rapid development of computers that is marked

by increased computing power, increased memory capacity and specialized peripherals, has allowed the dissemination of advanced and demanding programming techniques and even in personal computer level. These techniques are treated by the disciplines of Software Engineering, Graphics and Virtual Reality, Artificial Intelligence and Intelligent Systems of pattern recognition as well as the most advanced techniques Human Computer Communication. This orientation aims to provide undergraduate students on the one hand the necessary background, on the other, those special knowledge to be able to meet development and research in the area of modern and advanced software development techniques.

(ii) Network and Computing Systems (NCS): The convergence of information technology and telecommunications, the explosive growth of the Internet and the exponential changes in complexity and system speeds that support these technologies, requires the acquisition of specialized knowledge in the disciplines of web or net-centric systems and computer systems necessary for the deployment of these technologies. The curriculum in this direction enables students to gain in principle the basis for understanding, operation and use of these technologies and then be provided with the necessary skills for the development, maintenance and optimization of systems operating in a web environment.

(iii) Information Systems (IS): The development, implementation and management of modern information systems requires a wide range of knowledge mentioned in information and communication technologies, and business administration, as information systems are acceptable to users and to successfully integrate the business operations. The aim of the direction of this is to provide to students the necessary knowledge department, theoretical and practical, on the methodologies and technologies for the development of modern information systems, project management processes related to the development of information systems and established information management methods systems. Illustration, special emphasis is placed on issues analysis methodologies and systems planning, design and development of efficient databases, computer networks, development of information systems based on business processes, workflow systems and information security.

To fulfill its objectives the curriculum is structured as shown in the table below:

1st YEAR		2nd YEAR	
1st Semester	2nd Semester	3rd Semester	4th Semester
6 mandatory courses	6 mandatory courses	5 mandatory courses + 1 selective course + 1 foreign language	5 mandatory courses + 1 selective course + 1 foreign language
3rd YEAR		4th YEAR	
5th Semester	6th Semester	7th Semester	8th Semester
4 mandatory courses (core) + 2 mandatory courses (direction) + 1 selective course + 1 foreign language	2 mandatory courses (core) + 3 mandatory courses (direction) + 1 selective course + 1 foreign language	1 dissertation + 3 mandatory courses (direction) + 2 selective courses	1 dissertation + 3 mandatory courses (direction) + 2 selective courses

Postgraduate Opportunities	Access to second cycle-postgraduate studies
Initial Required Skills	National level examinations at the end of secondary education
EuSecure Coverage Level	Partial
Link	https://www.cs.unipi.gr/index.php?lang=en

Ναυτιλιακών Σπουδών [Maritime Studies]

PROGRAM COURSE MAPPING

Program Name	Ναυτιλιακών Σπουδών [Maritime Studies]
Program Awarded	Bachelor
Corresponding EuSecure Topic	- Maritime security; - Sustainability and Development, Environmental protection and climate change
Duration	Four (4)
ECTS	240
Program Language	Greek
Department/ Faculty	Department of Maritime Studies of the University of Piraeus
Program Objectives	The main objectives of the program are: (i) To provide students with scientific theoretical knowledge as well as practical training to pursue careers as financial and economic executives in the field of Shipping and Transportation, (ii) To identify existing problems and to develop research in the field of maritime transport with extensive, diverse and interdisciplinary research programs, and (iii) To develop international cooperation with other university institutions abroad.

Program Description	The program promotes education and research of the highest caliber in the area of maritime studies with the aim to create a continuous impact in the global maritime community and to create marine scientists with deep knowledge of the multilevel peculiarities of shipping capable to stand out in the business and personal arena. To fulfill its objectives the curriculum is structured with an understanding of how the maritime world works, as well as, with respect for the environment and to receive a bachelor's degree the undergraduate student is required to attend and be successfully examined to 40 courses in total, out of which 32 courses are mandatory and 8 courses are elective/ optional with 6 ECTS each.
Postgraduate Opportunities	Access to second cycle-postgraduate studies
Initial Required Skills	National level examinations at the end of secondary education
EuSecure Coverage Level	Partial
Link	https://maritime-unipi.gr/en/

UNIVERSITY OF PUBLIC SERVICE (BUDAPEST)

International Public Management

PROGRAM COURSE MAPPING	
Program Name	International Public Management
Program Awarded	Bachelor
Corresponding EuSecure Topic	Megatrends EU power (strategic autonomy) in a multipolar world International governance: multilateral institutions, norms, regimes Migration Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects) Sustainability and Development, Environmental protection and climate change Qualitative Research Methodologies
Duration	3

ECTS	180
Program Language	English
Department/ Faculty	Faculty of Public Governance and International Studies
Program Objectives	The aim of the programme is to train experts capable of performing duties related to international relations in national and EU institutions, in the domestic central and regional public administration, in the foreign affairs, defence and law enforcement administration.
Program Description	This six-semester-long BA programme aims to educate and train students who want to pursue career in public service and administration in positions with international focus. The program structure consists of the following related disciplines, professional fields: international and development studies 15-30 ECTS; state and law studies 10-30 ECTS; military science 5-20 ECTS; economic science 3-9 ECTS; political science 2-8 ECTS and technical science 2-6 ECTS.

Postgraduate Opportunities	The program will be launched in English for the first time in September 2021, but a very similar program has been taught in Hungarian for various years, so we have basis for the following expectations: after graduating students can either continue studying in MA programmes such as International Relations, International Public Service Studies, or work at the international liaison and planning units of ministries and their background institutions.
Initial Required Skills	Baccalaureate, min. B2 English language exam
EuSecure Coverage Level	[partial]
Link	https://en.uni-nke.hu/study-programs/full-time-degree-programs-for-international-students/babsc-programs/ba-in-international-public-management

International Public Service Relations

PROGRAM COURSE MAPPING	
Program Name	International Public Service Relations

Program Awarded	Master
Corresponding EuSecure Topic	EU power (strategic autonomy) in a multipolar world International governance: multilateral institutions, norms, regimes Migration Social media issues and fake news
Duration	1.5
ECTS	90
Program Language	English
Department/ Faculty	Faculty of Public Governance and International Studies

Program Objectives	The aim of the programme is to train experts capable of performing duties related to international relations in national and EU institutions, in the domestic central and regional public administration, in the foreign affairs, defence and law enforcement administration.
Program Description	This three-semester-long MA program is offered both to Hungarian and foreign citizens, focusing on security and defence studies and European studies. The program is synthetizing the methods and approaches of the disciplines of international relations, public administration, law and economics. The effects of globalization, the law and policy making of international organizations, the institutional and sectoral policies of the EU as well as good governance and integrity management are among the topics covered.
Postgraduate Opportunities	Work as experts at international and EU institutions or in the students' respective national public administration.
Initial Required Skills	-BA degree (At least 60 ECTS should be acknowledgeable for the student on the basis of his or her earlier studies in the following knowledge fields: political science studies; international law and international public law studies; studies related to the EU and international organisations and strategic and security policy studies). -C1 English knowledge
EuSecure Coverage Level	[partial]
Link	https://antk.uni-nke.hu/oktatas/mesterkepzes/international-public-service-relations-mesterkepzesi-szak

International Relations

PROGRAM COURSE MAPPING

Program Name	International Relations
Program Awarded	Master
Corresponding EuSecure Topic	Megatrends International governance: multilateral institutions, norms, regimes Social media issues and fake news Qualitative Research Methodologies
Duration	2
ECTS	120
Program Language	English

Department/ Faculty	Faculty of Public Governance and International Studies
Program Objectives	The aim of the training is to train experts who have adequate knowledge and are capable of examining current political and economic tendencies. They are prepared to understand the interconnections of the globalizing international system, based on their knowledge related to international economics, international law, IR theory, regional-civilization and interdisciplinary studies as well as specialized foreign language skills. They can conduct an in-depth analysis of the economic, political and social conditions of a given region.
Program Description	The curriculum of the MA program in International Relations was framed in collaboration with the Ministry of Foreign Affairs and Trade to fulfil practical needs. Topics related to foreign economy and economic diplomacy are dominant segments of the study program. The following specializations are available: International Economic Relations; Regional and Civilizational Studies, and European Studies.
Postgraduate Opportunities	Graduates can continue studying for a PhD degree, for example in one of the doctoral schools of the UPS, or can build careers in the field of public administration, in the private sector, in the academic sphere and in the field of international relations.
Initial Required Skills	BA degree (At least 60 ECTS obtained in previous studies should cover the following knowledge fields: social science; law; economics; political science; history; cultural studies). C1 English knowledge
EuSecure Coverage	[partial]

Level	
Link	https://en.uni-nke.hu/study-programs/full-time-degree-programs-for-international-students/ma-programs/ma-in-international-relations

Kiberbiztonság[Cyber Security]

PROGRAM COURSE MAPPING	
Program Name	Kiberbiztonság[Cyber Security]
Program Awarded	Master
Corresponding EuSecure Topic	-Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects) -Social media issues and fake news
Duration	2

ECTS	120
Program Language	Hungarian
Department/ Faculty	Faculty of Public Governance and International Studies
Program Objectives	The aim of the training is to prepare professionals who are able to effectively carry out the planning, organization and management of cyber security tasks in managerial and expert positions in organizations belonging to the fields of public administration, defense administration and foreign administration.
Program Description	The master's program focuses on the cyber security issues, current and future challenges that the public and private sectors, as well as society, face. Students will gain a broad knowledge of the theoretical and practical aspects, security, environmental, social and economic aspects of cyber security. Via the acquisition of differentiated professional curriculum (international relations in cyber security, public service cybersecurity management, protection of vital electronic information systems) they will be able to perform research, development and planning tasks, to analyze security issues and draw conclusions in accordance with their field.
Postgraduate	The programme was launched for the first time in September 2020, so we have no available data with respect to employment statistics, but we expect students to work in in organizations belonging to the fields of public

Opportunities	administration, defense administration and foreign administration, or to carry on studying, and do a PhD.
Initial Required Skills	bachelor degree (previous studies covering min. 30 ECTS in certain areas, such as IT, social science, law, economics)
EuSecure Coverage Level	[total]
Link	https://antk.uni-nke.hu/oktatas/mesterkepzes/kiberbiztonsagi-mesterkepzesi-szak

Nemzetközi biztonság- és védelempolitikai alapszak (International Defence and Security Policy)

PROGRAM COURSE MAPPING	
Program Name	Nemzetközi biztonság- és védelempolitikai alapszak (International Defence and Security Policy)
Program Awarded	Bachelor

Corresponding EuSecure Topic	Megatrends EU power (strategic autonomy) in a multipolar world Migration Social media issues and fake news Sustainability and Development, Environmental protection and climate change Qualitative Research Methodologies
Duration	3
ECTS	180
Program Language	Hungarian
Department/ Faculty	Faculty of Military Science and Officer Training

Program Objectives	The aim of this civilian training is to prepare students for participating in the activities of the defense sector in the domestic and international fields.
Program Description	This six-semester-long programme provides theoretical knowledge and contributes to developing practical skills of the students coupled with a strategic analytical view in the field of security and defence policy. The degree course has decades-long history in training experts in the defence sector. Subjects in the core curriculum include areas such as political science, law, military science, and European integration, as well as security policy, national and international security, and military strategy.
Postgraduate Opportunities	After graduating, students can either continue studying in MA programmes such as International Defence and Security Policy, International Public Service Studies, or may be employed by regional, county or local administrative bodies in Hungary, or by international organizations, in positions where they are responsible for various basic tasks of security policy.
Initial Required Skills	Baccalaureate, min. B2 language exam
EuSecure Coverage Level	[partial]
Link	https://hhk.uni-nke.hu/oktatas/alapkepzes/nemzetkozi-biztonsag-es-vedelempolitikai-alapkepzesi-szak

Nemzetközi biztonság- és védelempolitikai mesterszak (International Defence and Security Policy)

PROGRAM COURSE MAPPING	
Program Name	Nemzetközi biztonság- és védelempolitikai mesterszak (International Defence and Security Policy)
Program Awarded	Master
Corresponding EuSecure Topic	Megatrends EU power (strategic autonomy) in a multipolar world International governance: multilateral institutions, norms, regimes (UFP) Humanitarian Aid, Food security (UFP) Qualitative Research Methodologies
Duration	2

ECTS	120
Program Language	Hungarian
Department/ Faculty	Faculty of Military Science and Officer Training
Program Objectives	The basic goal is to train professionals with well-founded and in-depth theoretical knowledge who, with their knowledge, are able to plan and create Hungary's security and defense policy.
Program Description	The four-semester-long program in-depth complex education with an analytical focus on the following issues: EU Common Security and Defence Policy, humanitarian and peace operations of NATO, conflict prevention and peace-keeping, the tasks of combat forces in crisis management, disarmament policies, military advice and assistance in post-conflict stabilization.
Postgraduate Opportunities	Graduated students might continue studying in the Doctoral School of Military Science, or can be employed in Hungary in the Ministry of Defense, the Hungarian Armed Forces, secret services, law enforcement agencies and government offices; or abroad by international organizations and companies in defence and security related fields.

Initial Required Skills	-BA degree (previous studies covering 15 ECTS from areas related to political science, international law and public law and 45 ECTS from international relations and international institutions, strategic and security policy, military history and military science). -Either a C1 English language exam or two B2 language exams (one English and one other language)
EuSecure Coverage Level	[partial]
Link	https://hhk.uni-nke.hu/oktatas/mesterkepzes/nemzetkozi-biztonsag-es-vedelempolitikai-mesterkepzesi-szak

Nemzetközi kapcsolatok mesterképzés (International Relations)

PROGRAM COURSE MAPPING	
Program Name	Nemzetközi kapcsolatok mesterképzés (International Relations)
Program Awarded	Master

Corresponding EuSecure Topic	Megatrends International governance: multilateral institutions, norms, regimes Social media issues and fake news Qualitative Research Methodologies
Duration	2
ECTS	120
Program Language	Hungarian
Department/ Faculty	Faculty of Public Governance and International Studies
Program Objectives	The aim of the training is to train experts who have adequate knowledge and are capable of examining current political and economic tendencies. They are prepared to understand the interconnections of the globalizing international system, based on their knowledge related to international economics, international law, IR theory,

	regional-civilization and interdisciplinary studies as well as specialized foreign language skills. They can conduct an in-depth analysis of the economic, political and social conditions of a given region.
Program Description	The curriculum of the MA program in International Relations was framed in collaboration with the Ministry of Foreign Affairs and Trade to fulfil practical needs. Topics related to foreign economy and economic diplomacy are dominant segments of the study program. The following specializations are available: International Economic Relations; Regional and Civilizational Studies, and European Studies.
Postgraduate Opportunities	Graduates can continue studying for a PhD degree, for example in one of the doctoral schools of the UPS, or can build careers in the field of public administration, in the private sector, in the academic sphere and in the field of international relations.
Initial Required Skills	BA degree (At least 60 ECTS obtained in previous studies should cover the following knowledge fields: social science; law; economics; political science; history; cultural studies).
EuSecure Coverage Level	[partial]
Link	https://antk.uni-nke.hu/oktatas/mesterkepzes/nemzetkozi-tanulmanyok-mesterkepzesi-szak

Nemzetközi igazgatási alapszak (International Public Management)

PROGRAM COURSE MAPPING	
Program Name	Nemzetközi igazgatási alapszak (International Public Management)
Program Awarded	Bachelor
Corresponding EuSecure Topic	Megatrends International governance: multilateral institutions, norms, regimes Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects) Sustainability and Development, Environmental protection and climate change Qualitative Research Methodologies

Duration	3
ECTS	180
Program Language	Hungarian
Department/ Faculty	Faculty of Public Governance and International Studies
Program Objectives	The programme is aimed at training professionals who are able to serve as international administrators, organisers, and contact persons in the international relations of public bodies, with a special focus on cooperation within the European Union and its Member States.
Program Description	This six-semester-long BA programme aims to educate and train students who want to pursue career in public service and administration in positions with international focus. Core subjects include International Organizations; International Law, EU legal framework and European economic integration.
Postgraduate Opportunities	After graduating, students can either continue studying in MA programmes such as International Relations, International Public Service Studies, or work at the international liaison and planning units of ministries and their background institutions.

Initial Required Skills	Baccalaureate, min. B2 English language exam
EuSecure Coverage Level	[partial]
Link	https://antk.uni-nke.hu/oktatas/alapkepzes/nemzetkozi-igazgatasi-alapkepzesi-szak-2015-tol

International Public Service Studies

PROGRAM COURSE MAPPING	
Program Name	International Public Service Studies
Program Awarded	Master

Corresponding EuSecure Topic	Megatrends EU power (strategic autonomy) in a multipolar world International governance: multilateral institutions, norms, regimes Migration
Duration	2
ECTS	120
Program Language	Hungarian
Department/ Faculty	Faculty of Public Governance and International Studies
Program Objectives	The aim of the programme is to train experts capable of performing duties related to international relations in national and EU institutions, in the domestic central and regional public administration, in the foreign affairs, defence and law enforcement administration.
Program Description	It is a four-semester-long interdisciplinary comprehensively synthetizing the methods and approaches of the disciplines of international relations, public administration, law and economics. The focus points of the program are: the effects of globalization, the law and policy making of international organizations, the

	institutional and sectoral policies of the EU, good governance and integrity management. The program has four possible specializations: International administration studies; Security studies, Law enforcement studies and European studies.
Postgraduate Opportunities	Work as experts at international and EU institutions or in the students' respective national public administration.
Initial Required Skills	-BA degree (At least 60 ECTS should be acknowledgeable for the student on the basis of his or her earlier studies in the following knowledge fields: political science studies; international law and international public law studies; studies related to the EU and international organisations and strategic and security policy studies). - Either a C1 English language exam or two B2 language exams (one English and one other language)
EuSecure Coverage Level	[partial]
Link	https://antk.uni-nke.hu/oktatas/mesterkepzes/nemzetkozi-kozszolgalati-kapcsolatok-mesterkepzesi-szak

International Water Governance and Water Diplomacy

PROGRAM COURSE MAPPING

Program Name	International Water Governance and Water Diplomacy
Program Awarded	Master
Corresponding EuSecure Topic	-Water security and water geopolitics -Sustainability and Development, Environmental protection and climate change
Duration	2
ECTS	120
Program Language	English
Department/ Faculty	Faculty of Water Sciences
Program Objectives	The two year MA programme in International Water Governance and Water Diplomacy offers up-to-date, practice-oriented education for practicing and future water managers, diplomats, national and international civil servants engaged in transboundary or global environmental issues. Based on a blend of natural and

	social sciences, extensive field training and project-based teamwork, the programme is aimed to enable students to master complex water policy challenges, decision and conflict situations. While water war theories have been a popular feature of international politics for decades, reality shows that even bitter interstate tensions surrounding water tend to become a source of cooperation rather than conflict. The potent megatrends of our era, such as demographic change, urbanisation or climate change, however, create new pressures on how countries manage water domestically and in their international relations. Scientific consensus suggests that the current water crisis is a crisis of governance. The root of the problem, therefore, lies not necessarily in the limited availability of water. Rather, how laws, policy and financial decisions on water are made, implemented and followed up by government and society. Such challenges surface with even greater force in intestate context where the action or inaction of a country may give rise to disproportionate negative impacts on the water resources available to others. Consequently, the knowledge of how to prevent, manage and resolve water conflicts at the domestic and international level will be a critical asset for the prosperity and stability of any nation in the 21st century.
Program Description	The programme comprises five broad knowledge clusters as follows: • *General questions of water management* provides and introduction to the scientific and technical fundamentals of water governance: hydrology, integrated water resources management and environmental/sustainability challenges of water policy, • *Introduction to water governance and conflict management* covers the institutions, politics and economics of water governance from a general perspective. It also touches upon the fundamentals of decision-systems, conflict management and communication, • *Water law* comprises three different courses dedicated to the legal regulation of water at national, international and European Union level, • *International water governance* focuses on theoretical, political and institutional questions of water governance (save conflict resolution). It also provides an introduction to water project management from an international perspective, • *Water diplomacy and international conflict management* is dedicated to the prevention and resolution of water-related interstate conflicts and disputes. It also covers a general introduction to diplomacy and the military dimensions of water.

Postgraduate Opportunities	We have no available data with respect to graduate students as the program started in September 2020, but there exist opportunities for PhD studies as well as for possible employment in fields related to transboundary or global environmental issues.
Initial Required Skills	• bachelor degree in political science, law, engineering, water management, economics, natural sciences, social sciences, international relations, • proof language proficiency (min. B2 English)
EuSecure Coverage Level	[total]
Link	https://vtk.uni-nke.hu/oktatas/mesterkepzes-waterdiplo/waterdiplo

UNIVERSITY FERNANDO PESSOA (PORTO)

Ciência Política e Relações internacionais/ Political Science and International Relations

PROGRAM COURSE MAPPING	
Program Name	Ciência Política e Relações internacionais/ Political Science and International Relations
Program Awarded	Bachelor
Corresponding EuSecure Topic	Megatrends EU power (strategic autonomy) in a multipolar world International governance: multilateral institutions, norms, regimes Qualitative Research Methodologies
Duration	3 years
ECTS	180
Program Language	English Portuguese
Department/ Faculty	Faculty of Human and Social Sciences

Program Objectives	**Introduction** This programme provides solid and comprehensive knowledge in Political Science and International Relations and several related areas of study, providing the student with the intellectual means to confidently pursue his/her studies at a higher level. One can expect to get in-depth critical analysis of the world's political, economic, social and cultural features, combining theoretical study with the debate of practical cases. **Objectives** At the end of the course of study the graduate will be able to: • understand the fundamental concepts of Political Science and International Relations; • understand the great shifts in International Relations in the Contemporary age; • perform a professional activity in the fields of Politics, International Relations, civil service and mass media; • analyse, interpret and debate the major events in Politics and International Relations.
Program Description	The degree covers the following topics: Introduction to Law and Political Science/ Theory and History of International Relations/ Social and Cultural Anthropology/ Communication Grammar/ Methodology of Social Sciences/ Great Subjects of History and Journalism (18th-21st centuries)/ Macroeconomics/ Ethics and Political Science/ State Theory and Public Administration/ Political Economy/ Portuguese Constitution and the European Union/ International Political and Economic Order: Globalization and Glocalization/ Political and Economic Diplomacy/ Public International Law/ Population Policy and Migration Movements/ Human Capital and Competitiveness/ Political Marketing/ Democracy and Citizenship/ Psychosociology of Organizations/ English I-IV/ Spanish I-II/ Optional I-IV (Geostrategy is optional here) Internship and Graduation Project
Postgraduate Opportunities	Humanitarian Action, Cooperation and Development (Master)
Initial Required Skills	**Admission Conditions:** - To have completed secondary education in Portugal/ abroad equivalent to the Portuguese secondary education; - To have taken, in the current year or two years before school-leaving exams that are equivalent to the Portuguese admission exams required for the undergraduate course to which you are applying. - To have achieved, in those exams, a minimum of 95 points, in a scale of 0 to 200.
EuSecure Coverage Level	Partial

Link	http://international.ufp.pt/academics/political-science-and-international-relations-undergraduate/

Ação Humanitária e Cooperação para o Desenvolvimento/ Humanitarian Action, Cooperation and Development

PROGRAM COURSE MAPPING	
Program Name	*Ação Humanitária e Cooperação para o Desenvolvimento/ Humanitarian Action, Cooperation and Development*
Program Awarded	Master
Corresponding EuSecure Topic	Humanitarian Aid, Food security International development cooperation Qualitative Research Methodologies
Duration	One and a half years
ECTS	90

Program Language	English Portuguese
Department/ Faculty	Faculty of Human and Social Sciences
Program Objectives	The Master Course in Humanitarian Action, Cooperation and Development (HACD) degree programme prepares professionals or future professionals to deal with humanitarian responses. Emergency situation happens in different types of disaster, which can either be conflict situations, natural disasters, health emergencies or major security risks. The framework for addressing these situations revolves around a humanistic approach and specific strategies, namely: health and welfare promotion, preparation of disaster and security risk scenario, crisis prevention and analysis, contingency and emergency planning, emergency inter-agencies coordination of humanitarian service delivery, logistical tools and support, post-emergency evaluation and post-crisis development.
Program Description	Core Themes The Master Course HACD offers a wide approach to issues concerning humanitarian action as well as to methodological research procedures. The courses offered in this Programme include: — Crisis and Disaster Management; — Public Health and Humanitarian Issues; — Crisis, Reconstruction and Development; — Applied (Humanitarian) International Law; — Humanitarian Action Projects and Fieldwork; — Methodology and Master Research techniques; — International Cooperation and Development Policies. — Specific framework and role of International Organizations; — Strategic Management of NGOs and Humanitarian Missions; — Main problems in Development and Humanitarian Action issues.
Postgraduate Opportunities	

Initial Required Skills	Undergraduate degree, or legal equivalent,
EuSecure Coverage Level	Partial
Link	http://international.ufp.pt/academics/humanitarian-action-cooperation-and-development-master/

Criminologia/ Criminology

<table>
<tr><td colspan="2" align="center">**PROGRAM COURSE MAPPING**</td></tr>
<tr><td>**Program Name**</td><td>Criminologia/ Criminology</td></tr>
<tr><td>**Program Awarded**</td><td>Bachelor</td></tr>
<tr><td>**Corresponding EuSecure Topic**</td><td>Maritime security
Migration
Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects)
Social media issues and fake news</td></tr>
<tr><td>**Duration**</td><td>3 years</td></tr>
<tr><td>**ECTS**</td><td>180</td></tr>
<tr><td>**Program Language**</td><td>English
Portuguese</td></tr>
<tr><td>**Department/ Faculty**</td><td>Faculty of Human and Social Sciences</td></tr>
<tr><td>**Program Objectives**</td><td>Graduates will be able to perform duties not only at the level of criminal investigation, but also in the consultancy and drafting of criminal policy programs, victim support programs, programs for the prevention and reintegration of offenders and penitentiary programs; support for security forces, courts and private security companies; training, teaching and research. The Criminologist can develop his/her professional activity in institutional contexts as: security forces; Ministry of National Defense; Immigration and</td></tr>
</table>

	Borders Service; Courts of Justice; Directorate-General for Reinsertion and Prison Services; educational centers; municipalities; educational institutions; research centers; victim support institutions; mediation offices; law firms; private security services and even as a liberal professional.
Program Description	The degree covers the following topics: History of Criminal Thought Social Psychology Methodology of Social Sciences Ethics and Professional Deontology Communication Grammar English I-II Biological and Psychological Perspectives of Crime Sociological Perspectives of Crime Juvenile Delinquency Criminal Law Portuguese Constitution and the European Union Techniques of Criminal Inquiry Psychosociology of Conflict: Negotiation and Mediation Family and Minors Law Criminal Law and Procedure I Psychopathology and Crime

	Criminology and Victimology
	Criminal Law and Procedure II
	Skills: Legal Medicine and Toxicology
	Crime and Addictions
	Crime: Prevention and Social Reintegration
	Sex Crimes and Gender
	Correctional Systems and Execution of Sentences
	Optional I-III (includes: Terrorism and Security Measures/ Public Opinion and Criminal Justice/ Criminal Policies and International Law/ Contemporary Violence and the Mass Media/ Organised Crime/ Economic Crime)
	Internship
	Graduation Project
Postgraduate Opportunities	Criminology (Master)
Initial Required Skills	**Admission Conditions:** - To have completed secondary education in Portugal/ abroad equivalent to the Portuguese secondary education; - To have taken, in the current year or two years before school-leaving exams that are equivalent to the Portuguese admission exams required for the undergraduate course to which you are applying. - To have achieved, in those exams, a minimum of 95 points, in a scale of 0 to 200.
EuSecure Coverage Level	Partial

Link	https://ingresso.ufp.pt/en/criminology/

Criminologia/ Criminology

PROGRAM COURSE MAPPING	
Program Name	Criminologia/ Criminology
Program Awarded	Master
Corresponding EuSecure Topic	Migration (UNIPI) Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects)
Duration	2 years
ECTS	120
Program Language	English Portuguese
Department/ Faculty	Faculty of Human and Social Sciences

Program Objectives	**Introduction and aims** We are experiencing a time that is socially marked by the global crime phenomenon, which is continuously increasing its diversity and sophistication. The causes of this phenomenon need to be studied in depth, as well as its consequences, which should be scientifically analyzed, in order to get the best answers and solutions to protect society. Finding those answers requires scientific knowledge and skills, in order to deal with the crime complexity, and to help preventing the criminal act, and to proceed to criminal's rehabilitation. The Master in Criminology allows students to learn the most important aspects of contemporary crime, such as economic, environmental, and cybercrime, also enabling them to know more about the ethnic and gender motivated crimes. Also, conditions and opportunities are offered and created in order to trigger a reflective attitude on current crime reaction systems, and on its prevention mechanisms, along with the criminals' social reintegration. The diversification of contents and skills development, with added practical approaches, seeks to provide students with the necessary abilities to work in the field.
Program Description	**The degree covers the following topics:** Justice, Ethics and Fundamental Rights (6 ECTS) Criminal Profiles and Prognosis of Crime: Risk and Protection Factors (6 ECTS) Culture and Comparative Criminology (6 ECTS) Crime, Development and Community Safety (6 ECTS) Information Sources in Crime: Criminology and Criminal Investigation (6 ECTS) Social Reintegration: Intervention Programs and Alternative Sentencing (6 ECTS) Biosocial Criminology and Gender Issues (6 ECTS) Environmental, Cyber and Transnational Crime (6 ECTS) Judicial and Police Organization and Intervention Models (6 ECTS) In-depth Issues in Criminal Law and Criminal Procedure (6 ECTS) Scientific Work Methodology (4 ECTS) Dissertation (56 ECTS)
Postgraduate Opportunities	

Initial Required Skills	Undergraduate degree, or legal equivalent,
EuSecure Coverage Level	Partial
Link	http://international.ufp.pt/academics/criminology-master/

Gestão da Qualidade, Ambiente e Segurança/ Quality Management, Environment and Safety

PROGRAM COURSE MAPPING	
Program Name	*Gestão da Qualidade, Ambiente e Segurança/ Quality Management, Environment and Safety*
Program Awarded	Bachelor
Corresponding EuSecure Topic	Water security and water geopolitics Sustainability and Development, Environmental protection and climate change
Duration	3 years
ECTS	180

Program Language	English Portuguese
Department/ Faculty	Faculty of Science and Technology
Program Objectives	Considering the organizational and technical challenges in the various activity sectors, this course is designed to develop practical skills and knowledge constantly updated in the areas of Quality Management, Environment, Health and Safety, Social Responsibility and Innovation. Increasingly, organizations rely on a professional able to work on all these aspects, to be at ease with different management systems, and able to integrate them in his/her activity, including the monitoring of internal audits to the different systems. This course instructs Quality, Environment and Safety Managers able to deal with the referentials ISO9001: 2015, ISO14001 environment: 2015 and safety OHSAS 18001, among others. The completion of the degree allows to obtain a professional certificate of "Internal Auditor in Integrated Management Systems – Quality, Environment and Safety", issued by SGS.
Program Description	The degree covers the following topics: Quality Management Principles (6 ECTS) Chemistry (4 ECTS) Mathematics (4 ECTS) Waste Management (6 ECTS) Organizations Management (4 ECTS) Safety and Health in the Workplace (6 ECTS) People Strategic Management (4 ECTS) Quality Tools (6 ECTS) Statistics (4 ECTS) Management of Energy Efficiency (6 ECTS) Legislation and Regulations on Safety and Health in the Workplace (6 ECTS) Psychosociology of Work (4 ECTS) Risk Management (6 ECTS)

	Quality Management Systems I (6 ECTS) Water Resources Management (6 ECTS) Environmental Management Systems (6 ECTS) Safety and Health Management Systems in the Workplace (6 ECTS) Social Responsibility and Management Ethics (4 ECTS) Marketing and Development of Customer Loyalty (4 ECTS) Quality Costs (6 ECTS) Quality Management Systems II (6 ECTS) Buildings Environmental Quality Management (6 ECTS) Ergonomics (4 ECTS) Planning of Quality (6 ECTS) LEAN/Six Sigma Production (6 ECTS) Metrology (3 ECTS) Optional (5 ECTS) (*) Professional Risks Assessment and Control (6 ECTS) Psychosociology of Conflict: Negotiation and Mediation (4 ECTS) Innovation Management (6 ECTS) Internal Audits (6 ECTS) Case Studies: Management Systems Integration (6 ECTS) Internship (8 ECTS) Impact Assessment (4 ECTS)
Postgraduate Opportunities	
Initial Required Skills	**Admission Conditions:** - To have completed secondary education in Portugal/ abroad equivalent to the Portuguese secondary education; - To have taken, in the current year or two years before school-leaving exams that are equivalent to the Portuguese admission exams required for the undergraduate course to which you are applying.

	- To have achieved, in those exams, a minimum of 95 points, in a scale of 0 to 200.
EuSecure Coverage Level	Partial
Link	http://international.ufp.pt/academics/qmesafety-undergraduate/

Criminologia/ Criminology

PROGRAM COURSE MAPPING	
Program Name	Criminologia/ Criminology
Program Awarded	Bachelor
Corresponding EuSecure Topic	Maritime security Migration Cyber security and the risks of AI (ethical, legal, technological, decision making etc. aspects) Water security and water geopolitics Social media issues and fake news
Duration	3 years

ECTS	180
Program Language	English Portuguese
Department/ Faculty	Faculty of Human and Social Sciences
Program Objectives	Graduates will be able to perform duties not only at the level of criminal investigation, but also in the consultancy and drafting of criminal policy programs, victim support programs, programs for the prevention and reintegration of offenders and penitentiary programs; support for security forces, courts and private security companies; training, teaching and research. The Criminologist can develop his/her professional activity in institutional contexts as: security forces; Ministry of National Defense; Immigration and Borders Service; Courts of Justice; Directorate-General for Reinsertion and Prison Services; educational centers; municipalities; educational institutions; research centers; victim support institutions; mediation offices; law firms; private security services and even as a liberal professional.
Program Description	The degree covers the following topics: History of Criminal Thought Social Psychology Methodology of Social Sciences Ethics and Professional Deontology Communication Grammar English I-II Biological and Psychological Perspectives of Crime Sociological Perspectives of Crime

	Juvenile Delinquency
	Criminal Law
	Portuguese Constitution and the European Union
	Techniques of Criminal Inquiry
	Psychosociology of Conflict: Negotiation and Mediation
	Family and Minors Law
	Criminal Law and Procedure I
	Psychopathology and Crime
	Criminology and Victimology
	Criminal Law and Procedure II
	Skills: Legal Medicine and Toxicology
	Crime and Addictions
	Crime: Prevention and Social Reintegration
	Sex Crimes and Gender
	Correctional Systems and Execution of Sentences
	Optional I-III (includes: Terrorism and Security Measures/ Public Opinion and Criminal Justice/ Criminal Policies and International Law/ Contemporary Violence and the Mass Media/ Organised Crime/ Economic Crime)
	Internship
	Graduation Project

Postgraduate Opportunities	
Initial Required Skills	**Admission Conditions:** - To have completed secondary education in Portugal/ abroad equivalent to the Portuguese secondary education; - To have taken, in the current year or two years before school-leaving exams that are equivalent to the Portuguese admission exams required for the undergraduate course to which you are applying. - To have achieved, in those exams, a minimum of 95 points, in a scale of 0 to 200.
EuSecure Coverage Level	Partial
Link	https://ingresso.ufp.pt/en/criminology/

SAPIENTIA UNIVERSITY

Közegészségügyi szolgáltatások és politikák (HU) - Public Health Services and Policies

PROGRAM COURSE MAPPING	
Program Name	Közegészségügyi szolgáltatások és politikák (HU) Public Health Services and Policies
Program Awarded	Bachelor
Corresponding EuSecure Topic	Public health Pandemic management
Duration	3 years (6 semesters)
ECTS	180

Program Language	Hungarian
Department/ Faculty	Faculty of Technical and Human Sciences, Tirgu Mures Department of Applied Social Sciences
Program Objectives	The study program aims at forming public health professionals in state and local administration as well as in the state and private medical sector.
Program Description	The program offers knowledge in health administration, information processing technology and health promotion activities, with the aim to enhance community health and quality of life. Graduates may get employed in the public administration, in medical services, schools, NGOs and research. Students are initiated into the fundamental organizational and functional notions and principles of administrative structures, and are taught to identify and analyse health issues in different age groups. Another core competence is the oral and written communication of structured messages in public health issues in Hungarian and English/German. Students gain competence in applying strategic measures for institutional development.

	Future public health professionals aquire the skill of guidance and consultation for the prevention of illnessess and maintanance of health
	Students develop competences for interpersonal relations typical for public health issues.
Postgraduate Opportunities	Administrative sciences
	Management
	Health management
	Health policy
	Health promotion
	Paedagogy
Initial Required Skills	Baccalauerat
	General knowledge and skills
EuSecure Coverage Level	Partial – Public Health
	Partial - Pandemic management

Link	https://ms.sapientia.ro/en/5ed8b210e8a58892423151/study-programs/public-health-services-and-policies

Kommunikáció és közkapcsolatok (HU) - Communication and Public Relations

PROGRAM COURSE MAPPING	
Program Name	Kommunikáció és közkapcsolatok (HU) Communication and Public Relations
Program Awarded	Bachelor
Corresponding EuSecure Topic	Social media issues and fake news
Duration	3 years (6 semesters)

ECTS	180
Program Language	Hungarian
Department/ Faculty	Faculty of Technical and Human Sciences, Tirgu Mures Department of Applied Social Sciences
Program Objectives	The study program aims at forming communication and public relation specialists for the state and private sector.
Program Description	The program offers knowledge in theoretical and applied communication sciences. Graduates may get employed in the media as editors, reporters and presentors (printed and online media, radio and television), at news agencies, in state of private organizations, at NGOs, in research. Students are initiated into the fundamental organizational and functional principles of an institutions' public relations activity, and are taught to identify, analyse and apply communicational structures. Another core competence is the oral and written communication of structured messages in Hungarian and English/German.

	Students gain competence in applying rhetorical schemes and giving public talks.They will acquire the skill to design the corporate image of an institution and to plan a political campaign and to organize different kinds of public events.
	Future professionals aquire the skill of guidance and consultation for organization leaders in efficiently communicating their messages towards partners, clients and members.
	Students develop competences for interpersonal relations typical for communication specialists.
Postgraduate Opportunities	Communication Public relations Marketing Journalism Human resources Management Paedagogy Political studies European Studies

	Philosophy
Initial Required Skills	Baccalauerat General knowledge and skills
EuSecure Coverage Level	Partial – Social media issues and fake news
Link	https://ms.sapientia.ro/en/5ed8b210e8a58892423151/study-programs/communication-and-public-relations

Kommunikáció és PR (HU) - Communication and Public Relations

PROGRAM COURSE MAPPING	
Program Name	Kommunikáció és PR (HU) Communication and Public Relations

Program Awarded	Bachelor
Corresponding EuSecure Topic	Social media issues and fake news
Duration	3 years (6 semesters)
ECTS	180
Program Language	Hungarian
Department/ Faculty	Faculty of Economics, Socio-Human Sciences and Engineering, Miercurea Ciuc Department of Social Sciences
Program Objectives	The main purpose of the program launched in 2003 is the formation of communication specialists familiar with the institutional environment of the society, economy, media and civil sector.

Program Description	The program is both rich in theory and practice-oriented. The purpose of the theoretical training is that students acquire a culture of the basic social sciences with which they can interpret the various social phenomena. Besides the acquisition of basic knowledge in the social sciences (communication theory, cultural anthropology, sociology basics, political science, IT, Introduction to social research), students can acquire specific knowledge in marketing communications and media (PR management, writing commercials, editing TV programs and radio, PR campaigns, publications, PR), which provides specialized training and prepare students for advancement to master courses. Besides this, we focus on developing students' communication skills, and the acquiring of specific persuasion, argumentation, public speaking and presentation techniques. Practical training is also a priority during the three years the familiarization of students with the practical side of the profession is provided through internships, workshops, summer school, practice in the TV studio, seminars based on teamwork and practical field projects. Our licensees have good opportunities to find jobs in various companies, government and cultural institutions, non-profit organizations, media and advertising agencies, as well as event organizers and spokespeople.
Postgraduate Opportunities	Communication Public relations Marketing Journalism

	Human resources Management Paedagogy Political studies European Studies Philosophy
Initial Required Skills	Baccalauerat General knowledge and skills
EuSecure Coverage Level	Partial – Social media issues and fake news
Link	http://csik.sapientia.ro/en/study-programs-1/communication-and-public-relations

Kommunikáció és PR mesterszak (HU) -Master in Communication and Public Relations

PROGRAM COURSE MAPPING

Program Name	Kommunikáció és PR mesterszak (HU) Master in Communication and Public Relations
Program Awarded	Master
Corresponding EuSecure Topic	Social media issues and fake news
Duration	2 years (4 semesters)
ECTS	120
Program Language	Hungarian

Department/ Faculty	Faculty of Economics, Socio-Human Sciences and Engineering, Miercurea Ciuc Department of Social Sciences
Program Objectives	The purpose of the program is the formation of communication specialists familiar with the institutional environment of the society, economy, media and civil sector.
Program Description	The program is both rich in theory and practice-oriented. The purpose of the program is that MA students acquire specific knowledge in communication sciences to be used in the diverse spheres where this is required. MA students can acquire specific knowledge in marketing communications and media (PR management, writing commercials, editing TV programs and radio, PR campaigns, publications, PR). Besides this, communication skills, specific persuasion, argumentation, public speaking and presentation techniques are acquired. For the familiarization with the practical side of the profession is provided through internships, workshops, summer school, practice in the TV studio, seminars based on teamwork and practical field projects. Our alumni are hired at companies, government and cultural institutions, non-profit organizations, media and advertising agencies.
Postgraduate Opportunities	Communication sciences Public relations

	Marketing
	Journalism
	Political studies
	European Studies
	Philosophy
Initial Required Skills	BA or BSC in a related field
EuSecure Coverage Level	Partial – Social media issues and fake news
Link	http://csik.sapientia.ro/en/masters-degree/communication-and-public-relations-ma

Nemzetközi kapcsolatok és európai tanulmányok (HU) - International Relations and European Studies (ENG)

PROGRAM COURSE MAPPING

Program Name	Nemzetközi kapcsolatok és európai tanulmányok (HU) International Relations and European Studies (ENG)
Program Awarded	Bachelor
Corresponding EuSecure Topic	EU power (strategic autonomy) in a multipolar world International governance: multilateral institutions, norms, regimes
Duration	3 years (6 semesters)
ECTS	180
Program Language	Hungarian

Department/ Faculty	Faculty of Sciences and Arts Cluj-Napoca Department of International Relations and European Studies
Program Objectives	Graduates can be employed in various institutions, so training in many areas is essential. So, students can gain deeper knowledge in setting up the European Union, its law and institutions. The other part of the courses focus on the functioning of state bodies, from local to central. Also, the focus is on minority and regional issues.
Program Description	The International Relations and European Studies Bachelor`s Degree from the Sapientia Hungarian University of Transylvania is one of the most dynamic BA programs with accreditation at the Faculty of Sciences and Arts, Cluj-Napoca. It was founded in the year 2006, before the EU-integration of Romania, in order to form specialists of high qualification in the field of International Relations. The development of the program was based on the Bologna System, which made possible interactions with other similar Faculties in Europe. Among the faculty members there are professors with large experiences as well as young professors, who offers dynamic impulse for the educational process. In every academic year we have some invited professors too, specialists in different fields of science, who extends the sphere of subjects in this study program.
Postgraduate Opportunities	Public administration Management Public relations

	International Relations Diplomacy International institutions
Initial Required Skills	Baccalauerat General knowledge and skills
EuSecure Coverage Level	Partial - EU power (strategic autonomy) in a multipolar world Partial - International governance: multilateral institutions, norms, regimes
Link	**http://et.sapientia.ro/index.php?id=introduction**

Környezettudomány (HU) - Environmental Studies (ENG)

PROGRAM COURSE MAPPING	
Program Name	Környezettudomány (HU) Enviromental Studies (ENG)

Program Awarded	Bachelor
Corresponding EuSecure Topic	Water security and water geopolitics Sustainability and Development, Environmental protection and climate change
Duration	3 years (6 semesters)
ECTS	180
Program Language	Hungarian
Department/ Faculty	Faculty of Sciences and Arts Cluj-Napoca Department of Enviromental Studies
Program Objectives	The purpose of the preparation is the multidisciplinary knowledge and the ability to cultivate science, to solve global and local nature issues and thus to help create a healthy environment. Research activity of the students,

	the vocation of the teachers, the modern laboratory equipment creates the conditions for a high-level education, research and the training practices.
Program Description	Basic Subjects: After acquiring the basic disciplines of the first two years (general and environment physics, general and environment chemistry, animal and plant biology, general ecology, geography and geology) students can choose from laboratory, field study or impact study disciplines.
Postgraduate Opportunities	Enviromental scientist Geography Biology
Initial Required Skills	Baccalauerat General knowledge and skills
EuSecure Coverage Level	Partial - Water security and water geopolitics Partial - Sustainability and Development, Environmental protection and climate change
Link	**http://kt.sapientia.ro/en**

Diplomácia és interkulturális tanulmányok (HU) - Diplomacy and Intercultural Studies (ENG)

PROGRAM COURSE MAPPING	
Program Name	Diplomácia és interkulturális tanulmányok (HU) Diplomacy and Intercultural Studies (ENG)
Program Awarded	Master
Corresponding EuSecure Topic	EU power (strategic autonomy) in a multipolar world International governance: multilateral institutions, norms, regimes
Duration	2 years (4 semesters)
ECTS	120

Program Language	Hungarian
Department/ Faculty	Faculty of Sciences and Arts Cluj-Napoca Department of International Relations and European Studies
Program Objectives	Graduates can be employed in various institutions, so training in many areas is essential. So, students can gain deeper knowledge in setting up the European Union, its law and institutions. The other part of the courses focus on the functioning of state bodies, from local to central. Also, the focus is on minority and regional issues.
Program Description	The MA Degree entitled Diplomacy and Intercultural Studies getting close the students to the fascinating world of diplomatic relations, while it offers for them the possibility to know the connections and interactions between different cultures. Our students developed remarkable professional relations in the last years in our institution, while they had their studies here in a friendly atmosphere.
Postgraduate Opportunities	Public administration Management Public relations International Relations Diplomacy

	International institutions Embassy
Initial Required Skills	Baccalauerat General knowledge and skills
EuSecure Coverage Level	Partial - EU power (strategic autonomy) in a multipolar world Partial - International governance: multilateral institutions, norms, regimes
Link	**http://et.sapientia.ro/index.php?id=introduction**

Génsebészet (HU) - Genetic Engineering

PROGRAM COURSE MAPPING	
Program Name	Génsebészet (HU) Genetic Engineering

Program Awarded	Bachelor
Corresponding EuSecure Topic	Sustainability and Development, Environmental protection and climate change Humanitarian Aid, Food security
Duration	4 years (8 semesters)
ECTS	240
Program Language	Hungarian
Department/ Faculty	Faculty of Economics, Socio-Human Sciences and Engineering, Miercurea Ciuc Department of Bioengineering
Program Objectives	The main purpose of the program is the formation genetic engineering's for different biotechnological applications.

Program Description	The undergraduate program in genetic engineering comprises techniques aimed at achieving targeted, broad modifications of the genetic material, thus artificially transferring genetic information from a living being to another. Genetic Engineering is the integration of molecular biology, microbiology and technical sciences, with which we can modify an organism's qualities, and then employ these in the industry, or for other purposes. Nowadays, we are witnessing a revolution in molecular biology, whose applications extend in the industry, agriculture and medicine. The undergraduate program prepares experts who can address these challenges. Main Subjects: molecular biology, biochemistry, genetic engineering, in vitro techniques, cell culture, molecular genetics, metabolomics
Postgraduate Opportunities	Researcher in a clinical or forensic laboratory Biotechnology engineer Researcher in the pharmaceutical or food industry Head of laboratory

Initial Required Skills	Baccalauerat General knowledge and skills
EuSecure Coverage Level	Partial - Public health Partial - Sustainability and Development, Environmental protection and climate change Partial – Pandemic management
Link	http://csik.sapientia.ro/en/study-programs-1/genetic-engineering

Ipari környezetmérnöki (HU) - Environmental Engineering and Environmental Protection in Industry

PROGRAM COURSE MAPPING	
Program Name	Ipari környezetmérnöki (HU) Environmental Engineering and Environmental Protection in Industry

Program Awarded	Bachelor
Corresponding EuSecure Topic	Sustainability and Development, Environmental protection and climate change Water security and water geopolitics
Duration	4 years (8 semesters)
ECTS	240
Program Language	Hungarian
Department/ Faculty	Faculty of Economics, Socio-Human Sciences and Engineering, Miercurea Ciuc Department of Bioengineering
Program Objectives	The main purpose of the program is the formation genetic engineering's for different biotechnological applications.

Program Description	Nowadays, environmental protection and environmental management have become areas of global importance, therefore requiring environmental engineers, who are familiar with the environmental issues as well as with the prevention and treatment methods. The main goal is to train environmental engineers who, in possession of an advanced technical and natural sciences knowledge are able to discover and analyze the environmental hazards and pollution sources, to design methods for neutralizing them to apply technical solutions that favourable environment. At the same time, this undergraduate program provides the theoretical knowledge and practical skills required to prevent environmental pollution, to undertake the tasks of waste management and recycling, water management, air and soil protection, etc.. Licensees of this program can be employed as environmental consultants, in the environmental damage control, as well as industrial systems engineer, heads of production or laboratory, can find jobs in local or specialized environmental authorities, design and / or production companies, as well as at water waste or management companies. Main subjects: chemistry, mathematics, ecology, biology, environmental microbiology, operations management, environmental biotechnology, soil, water, air and waste management, process planning, information technology and GIS technology
Postgraduate Opportunities	Remedying environmental damage Waste water treatment stations

	Industrial processes engineer
	Production manager
	Environmental consultant
	Head of laboratory
	Expert in environmental protection, environmental scientist
	Engineering
	Environemnt and agriulture
	Teaching and Education
	Climate, Environment & Sustainability
	Chemistry & chemical engineering
	Biology, Biotech & Biochemistry
Initial Required Skills	Baccalauerat General knowledge and skills
EuSecure Coverage	Partial – Climate Change

Level	Partial - Water security and water geopolitics
	Partial - Sustainability and Development, Environmental protection and climate change
	Partial – Pandemic management
Link	http://csik.sapientia.ro/en/study-programs-1/genetic-engineering

Fenntartható biotechnológiák (HU) - Sustainable biotechnologies

PROGRAM COURSE MAPPING	
Program Name	Fenntartható biotechnológiák (HU)
	Sustainable biotechnologies
Program Awarded	Master

Corresponding EuSecure Topic	Sustainability and Development, Environmental protection and climate change
Duration	2 years (4 semesters)
ECTS	120
Program Language	Hungarian
Department/ Faculty	Faculty of Economics, Socio-Human Sciences and Engineering, Miercurea Ciuc Department of Food Engineering
Program Objectives	The purpose of the program is the formation of engineers with in depth understanding of sustainability in industry.
Program Description	The program is both rich in theory and practice-oriented. The purpose of the program is that MA students acquire specific knowledge in food and environmental engineering to operate and design in a more sustainable manner.

	MA students can acquire specific knowledge in food engineering, sustainable biotechnologies, design aspects of technological processes, research practices and publication methods etc. For the familiarization with the practical side of the profession is provided through multiple research projects where the students are involved, the MA program emphasizes practical knowledge and experience in the University laboratories or at industrial partners. Erasmus internships, workshops, summer schools and seminars based on teamwork and practical field projects also help significantly to increase the in-depth knowledge of MA students. Our alumni are hired at companies, government, research institute's, academic institutions.
Postgraduate Opportunities	Engineering, Environemnt and agriulture Teaching and Education Climate, Environment & Sustainability Chemistry & chemical engineering Biology, Biotech & Biochemistry
Initial Required Skills	BA or BSC in a related field
EuSecure Coverage	Partial – Climate Change

Level	Partial - Food security
	Partial - Sustainability and Development, Environmental protection and climate change
	Partial – Pandemic management
Link	http://csik.sapientia.ro/en/masters-degree/sustainable-biotechnologies-ma

ANNEXES OF CHAPTER 3

5.1. Questionnaire for Students

The first annex provides the link that was sent to the target group and it is given the whole questions as were presented in the questionnaire.

5.1.1. Reference Google form link

The Questionnaire for Students is available at the below link:

https://docs.google.com/forms/d/1H16HAuB_PBlrxvAS-b3qiA0WyG7QRAWpvq4U7mb2Ptc/edit

5.1.2. Questionnaire for students at a glance

Questionnaire for students

The present questionnaire is developed in the context of the "EUSecure Project". In particular, its aim is the identification of end users' needs for the preparation of university courses (title: EU Security, Resilience and Sustainability).

Your opinion matters, please take a few minutes to answer to the below questions. Your answers will be used only for the purposes of this academic investigation.

The title of the project: EUSecure: An interdisciplinary training on EU security, resilience and sustainability – A simulation supported massive open online course
EUSecure Project ID: 2020-1-HU01-KA203-078719

1. Please specify your sex: *

○ Male

○ Female

○ I don't want to specify

2. What is the highest level of education you have completed? *

○ Secondary school level

○ Higher education, BSC/BA program

○ Higher education, MSC/BA program

3. In which university do you study? *

○ University of Public Service

○ University Fernando Pessoa

○ University of Salento

○ University Piraeus

○ Sapientia Hungarian University of Transylvania

○ Other...

4. Please indicate your degree program! *

Long answer text

5. Which do you think the most important challenges or security issues are for the EU? You can * mark more than one answer.

- [ ] Irregular migration

- [ ] Terrorism

- [ ] Natural disasters (earthquakes, eruptions, floods, avalanche, etc.)

- [ ] Cyber-threats

- [ ] Risks of artificial intelligence

- [ ] Risks of pandemics

- [ ] Hybrid threats (i.e. the threats related to cyber-physical and social aspects)

- [ ] Diffusion of misinformation and fake news. Armed conflicts in the neighbourhood

- [ ] Other...

6.   Do you think that these issues can be efficiently tackled at European or national level? It is * possible to mark both levels at the same time.

	At European Level	At national Level
Irregular migration	☐	☐
Terrorism	☐	☐
Cyber-threats	☐	☐
Risks of artificial intelligence	☐	☐
Risks of pandemics	☐	☐
Hybrid threats	☐	☐
Diffusion of misinformation and f...	☐	☐
Armed conflicts in the neighborho...	☐	☐

7. In your opinion, which aspects are the most important in preserving security in the EU? You *
can mark more than one answer.

☐ Military cooperation

☐ Economic cooperation

☐ Social cooperation

☐ Education

☐ International cooperation with third countries

☐ Development policy towards third countries

☐ Humanitarian Aid to third countries

☐ Sustainability measures

☐ EU Common juridical regulations

☐ Other...

8. In your opinion, which aspects should be entailed in the framework of an interdisciplinary   *
training on EU security? You can mark more than one answer.

☐ Irregular migration

☐ Terrorism

☐ Population ageing and demographic challenges

☐ Cyber-threats

☐ Risks of artificial intelligence

☐ Pandemic management and risks of pandemics

☐ Hybrid threats

☐ Diffusion of misinformation and fake news

☐ Armed conflicts in the neighborhood

☐ Natural disasters

☐ Security and resilience of critical infrastructures (or critical entities)

☐ Approaches to security management

☐ Other…

9. On a scale from 1 to 5, to what extent would you be interested in studying about each of the *
following topics and EU security challenges? Mark 1 for the least and 5 for the most

	1	2	3	4	5
Megatrends	○	○	○	○	○
EU power (strat...	○	○	○	○	○
International go...	○	○	○	○	○
Water security ...	○	○	○	○	○
Climate change	○	○	○	○	○
Public health se...	○	○	○	○	○
Food security	○	○	○	○	○
Maritime security	○	○	○	○	○
Irregular migrati...	○	○	○	○	○
Cybersecurity a...	○	○	○	○	○
Risks of Artifici...	○	○	○	○	○
Sustainability a...	○	○	○	○	○
Spread of misin...	○	○	○	○	○
International de...	○	○	○	○	○
Armed conflicts...	○	○	○	○	○
Security of criti...	○	○	○	○	○

10. On a scale from 1 to 5, to what extent are you aware of the following aspects of EU security? *
Mark 1 for the least and 5 for the most

	1	2	3	4	5
Megatrends	○	○	○	○	○
EU power (strat...	○	○	○	○	○
International go...	○	○	○	○	○
Water security ...	○	○	○	○	○
Climate change	○	○	○	○	○
Public health se...	○	○	○	○	○
Food security	○	○	○	○	○
Maritime security	○	○	○	○	○
Irregular migrati...	○	○	○	○	○
Cybersecurity a...	○	○	○	○	○
Risks of Artifici...	○	○	○	○	○
Sustainability a...	○	○	○	○	○
Pandemic man...	○	○	○	○	○
Spread of misin...	○	○	○	○	○
International de...	○	○	○	○	○
Armed conflicts...	○	○	○	○	○
Security of criti...	○	○	○	○	○

11. Please mention any other EU Security aspects you are familiar with.

Long answer text

5.2. Questionnaire for Professors/Stakeholders

The first annex provides the link that was sent to the target group and it is given the whole questions as were presented in the questionnaire.

5.2.1. Reference Google form link

The Questionnaire for Professors/Stakeholders is available at the below link:

https://docs.google.com/forms/d/1Ht_wp-US0xvCgq7jt8PLoqq-5QnUabTkOtJQl6SbXEU/edit

5.2.2. Questionnaire for Professors/Stakeholders at a glance

Questionnaire for professors and stakeholders

The present questionnaire is developed in the context of the "EUSecure Project". In particular, its aim is the identification of end users' needs for the preparation of university courses (title: EU Security, Resilience and Sustainability).

Your opinion matters, please take a few minutes to answer to the below questions. Your answers will be used only for the purposes of this academic investigation.

The title of the project: EUSecure: An interdisciplinary training on EU security, resilience and sustainability – A simulation supported massive open online course
EUSecure Project ID: 2020-1-HU01-KA203-078719

1. Please specify your gender: *

○ Male

○ Female

○ I don't want to specify

2. Please select the country where you work! *

○ Greece

○ Italy

○ Hungary

○ Portugal

○ Romania

○ Other…

3. Where do you work? *

○ Ministry

○ University

○ Research centre

○ Private sector

○ Other…

3.a. Please choose from the below list, in which University are you occupied. *

◯ University of Public Service

◯ University Fernando Pessoa

◯ University of Salento

◯ University Piraeus

◯ Sapientia Hungarian University of Transylvania

◯ Other…

3.b.In your opinion, what should be changed in the teaching methodology with respect to EU *
security-related subjects? You can mark more than one answer.

☐ Include more practical training

☐ Help develop soft skills, such as oral presentations

☐ Make teaching more personalized with the use of an increased number of seminars

☐ I'm not interested in teaching methodology

☐ Other…

4. Which do you think the most important challenges or security issues are for the EU? You can *
mark more than one answer.

☐ Irregular migration

☐ Terrorism

☐ Natural disasters

☐ Cyber-threats

☐ Risks of artificial intelligence

☐ Risks of pandemic

☐ Hybrid threats (i.e. the combination of physical, cyber and social threads)

☐ Diffusion of misinformation and fake news

☐ Armed conflicts in the neighbourhood

☐ Protection and resilience of critical infrastructures

☐ Crisis and disaster Management

☐ Other...

5. In your opinion, what should be changed in the EU governance of security? You can mark *
more than one answer.

☐ Institutional governance

☐ Decision-making process

☐ Funding

☐ I don't know

☐ Other...

6. On a scale from 1 to 5, how important do you think each of the below topics is as regards EU security teaching? Mark 1 for the least and 5 for the most *

	1	2	3	4	5
Irregular migrat...	○	○	○	○	○
Terrorism	○	○	○	○	○
Natural disaster	○	○	○	○	○
Cyber-threats	○	○	○	○	○
Risks of artifici...	○	○	○	○	○
Risks of pande...	○	○	○	○	○
Hybrid threats	○	○	○	○	○
Diffusion of mi...	○	○	○	○	○
Armed conflict...	○	○	○	○	○
Security and re...	○	○	○	○	○
Security and re...	○	○	○	○	○
Crisis and disa...	○	○	○	○	○
Readiness and ...	○	○	○	○	○

7. In your opinion, would it be reasonable to establish a genuinely transdisciplinary course on EU security? *

○ Yes

○ No

○ Maybe

○ I don't know

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8. Do you think that the EU should have more or fewer competencies in protecting security? *

○ More

○ Fewer

○ I don't know

9. In your opinion, as a geopolitical and strategic actor the influence of the EU is ...? *

○ Weak

○ Strong

○ Mediocre

○ I don't know

10. In your opinion, what kind of power the EU is as an international actor? You can select more *
than one issue.

☐ Normative

☐ Civilian

☐ Military

☐ Liberal

☐ Soft

☐ Hard

☐ Smart

☐ Other...