The EU,
Irish Defence Forces and
Contemporary Security

Edited by
Jonathan Carroll
Matthew G. O'Neill
Mark Williams

The EU, Irish Defence Forces and Contemporary Security

"This book is a critical and insightful contribution to the debate on Irish defence and the role of the Defence Forces. Uniquely, it brings together the voices of both scholars and practitioners to assess where Ireland stands in the face of contemporary threats but also its potential across multiple defence domains. Irish defence policy is in urgent need of serious and sustained attention. The authors of this important text fulfil that mission perfectly."

—Ben Tonra, *Professor, MRIA, The School of Politics and International Relations (SPIRe), University College Dublin, Ireland*

"By mainly examining Ireland's defence policy and the Irish Armed Forces, this edited volume provides valuable knowledge to both practitioners and scholars. The book is structured around five highly relevant themes, each contributing to the debate on the contemporary challenges of security policy and military transformation. Undoubtedly, any reader interested in international relations and/or security studies, and especially those focusing on small states studies and/or comparative strategy, will gain new insights by exploring this book."

—Håkan Edström, *Associate Professor in Political Science, Swedish Defence University, Sweden*

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The EU, Irish Defence Forces and Contemporary Security

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Foreword

I welcome this publication, which shines a light on all things defence both in Ireland and beyond. The publication entitled "The EU, Ireland, and Contemporary Security" provides a critique of, but also valuable inputs on the changing strategic environment and future challenges and potential future orientations for defence in Ireland. We should never be afraid of objective criticism and evidence-based assertions, but rather, reflect positively on them and consider how we can enhance the understanding and appreciation of defence in Ireland, particularly among civil society.

I would like to thank all the contributors who have contributed to this publication. They come from a wide range of backgrounds and perspectives, from academia to practitioners and geographically from Ireland and, also, significant international contributions. I would like to congratulate the editors, Jon Carroll from Texas A&M University, and Matthew O'Neill and Mark Williams both from Queen's University, Belfast. I would also like to thank the publishers at Palgrave Macmillan for their support and without whom we would not have this important publication.

From a situation of negligible discussion on defence, this year we have had an abundance of riches with a number of key publications. In February 2022, we had the Report of the Commission on the Defence Forces, probably the most far-reaching and detailed review of the Defence Forces in the history of the State. And now, we have this international

publication which examines and explores a wide range of issues from land and naval operations to cyber, peacekeeping, and military strategy.

These publications will hopefully lift the discourse on defence in Ireland to a new level, reflecting the realities of the changing strategic environment, the return of power politics, and the implications of this for Ireland. They are a wake-up call to the new realities.

Again, I would like to thank the editors and publisher for this contribution to the debate and wish you every success in this publication.

Dublin 2, Ireland   Mr. Simon Coveney, T.D.
                              Ireland's Minister for Defence
                          and Minister for Foreign Affairs

Acknowledgements

The genesis of this volume was a chance meeting by the Editors at the Defence Forces Review annual conference at University College Dublin in December 2019. At that conference, collegial and at times heated debate occurred throughout the day between Defence Forces personnel, the Department of Foreign Affairs and Trade, defence and security academics, and a multitude of other stakeholders about the future direction of Irish defence. While intriguing, constructive, and indeed valuable, the Editors were struck by the fact that this debate was largely happening behind closed doors, leaving the wider political and public debates on defence shaped by journalists and social media. The expertise on Irish defence needed to be brought out into the open to ensure a more robust, accessible, and informed debate, and thus, this project began.

Introduction

Defence is a contentious issue in Ireland, both politically and publicly. In recent years, the utility, capabilities, and indeed the necessity of having the Defence Forces has been the focus of public, political, and academic discourse due to several events: increased tensions in Northern Ireland due to Brexit, Ireland's accession to the UN Security Council, repeated incursions by Russian aircraft into Irish airspace, the COVID-19 Pandemic, Russian naval exercises off Ireland's coast, and most recently, the Russian invasion of Ukraine. Despite the litany of security issues, the question has still been repeatedly asked by politicians and the public alike, why does Ireland need a military? Even more provocatively, some ask why a supposedly "neutral" country should invest in defence, instead of housing, social welfare, or healthcare. Heated political and public debates have questioned, and continue to question, the contribution of the Defence Forces to Irish life, society, and national security. For those advocates of Irish defence, the question is not whether Ireland needs a military, but whether the Defence Forces are fit for the security challenges the country currently faces, or for those ahead. These are all valid questions, and this volume aims to provide some answers, but also thought-provoking discussion on the future direction of Irish defence in a world of emerging and hybrid threats.

The timing of this volume is significant. The Irish State as we know it today was established after the War of Independence and the Anglo-Irish Treaty of 1921. The Irish Free State was formally recognised in

December 1922. At the time of writing, Ireland as a nation has just marked its centenary. In February 2022, the much-anticipated *Report of the Commission on the Defence Forces* was published, the most in-depth evaluation of Ireland's security environment and defence capabilities in the history of the State, with recommendations to fundamentally reform the Irish defence framework to face current and future threats. The Report's recommendations were not binding. There will, undoubtedly be renewed debate about the direction, shape, and even the nature of Irish defence going forward. Accordingly, one hundred years on from the foundation of the Irish State, and indeed from the establishment of the Defence Forces in 1923, it is only prudent to take stock of Irish defence, especially against the backdrop of an unprecedented and deteriorating security environment and an increasingly globalised Ireland. It is particularly appropriate to evaluate how well-prepared Ireland is, as an island state, for the evolving security environment, to ask tough questions, and to face uncomfortable, even stark, realities.

Small nations often rely on military policies that aim to mitigate the underappreciation of threats, or lack of investment, with innovation, flexibility, and force multipliers through technology, the strategic use of reserve forces, and cooperative defence agreements with regional neighbours. Like many small nations in a world of emerging conventional and hybrid threats, Ireland is facing these same challenges, these same strategic choices. However, in some areas, there is a disconnect between the ways and means of Irish defence policy, and indeed, the ends. Solving this disconnect requires the evaluation of the threat environment facing Ireland and the Defence Forces, and an appraisal of where Irish defence is currently, and where it should go. Critically, what are the contemporary and future threats, and how should the Defence Forces adapt to meet them?

The EU, Irish Defence Forces, and Contemporary Security provides a detailed exploration of Irish defence and the Defence Forces at the strategic, operational, and historical levels across six central themes. The six themes are Defence Forces capabilities and the threat environment, the Reserve Defence Forces, peacekeeping operations, cyber security in the digital age, Defence Forces institutional innovation and civil–military relations, and finally, the debates surrounding the principle of Irish neutrality. Within these six themes, this volume has gathered military practitioners, policymakers, and scholars from Ireland and the European Union in the first in-depth conversation and analysis on modern Irish defence to

discuss, and in turn promote discussion, on where Irish defence is, and where it should go in the future, especially in terms of implementing the recommendations of the seminal *Report of the Commission on the Defence Forces*.

PART I: DEFENCE FORCES CAPABILITIES AND THE THREAT ENVIRONMENT

The first and largest theme within *The EU, Irish Defence Forces, and Contemporary Security* explores Defence Forces capabilities, highlights key strategic issues, and most importantly, provides an evaluation of the threat environment Ireland faces now, and going forward. This theme provides the "ends" with which defence "ways and means" must be aligned to adequately counter existing threats. Opening this discussion is former Defence Forces Chief of Staff Vice Admiral Mark Mellett, providing the foundational context to this volume's analysis by discussing Ireland's defence obligations, his appraisal of the security challenges that lie ahead, and the Defence Forces' ability to meet those challenges. Brigadier General Brian Cleary of the Irish Army joins this discussion with a personal exploration of how Ireland's perception of security has transitioned over the course of his career, from an inward-looking focus on internal security during the Troubles to Ireland's outward-looking heavy involvement in multilateralism through peacekeeping operations in the post-Cold War era. Cleary highlights that over the course of forty years, Ireland's Defence Forces have only diminished, while emerging threats and operational commitments have only increased, and that doing more with less has consequences for Irish security. Defence correspondent and former army officer, Tom Clonan, highlights attitudes towards communication and intellectual discourse within the Defence Forces that have led to a suboptimal articulation of threats to policymakers and even more so, to the Irish public. Consequently, Clonan argues that this culture has caused an underappreciation in public and political spheres as to why a neutral country such as Ireland, needs a military, and even more, why defence requires significant ongoing investment. Concluding this theme, discussion then turns to the Irish Naval Service, with a focus on maritime capabilities and innovation. Captain Brian Fitzgerald, former Chief of Naval Operations for the Irish Naval Serviceexamines the current and future challenges of protecting one of the largest maritime zones within the European Union and defending the western frontier of the European

continent. Fitzgerald is joined in this examination of the Naval Service by Deborah Sanders of King's College, London, with an explanation of the broader challenges and threats small navies face, and recommendations on how they are best mitigated to influence the future development of the Naval Service. Finally, Niall Buckley and Raymond Martin examine the Irish Air Crops (IAC) and how key technological and conceptual changes will likely impact on how the IAC address the problems and challenges that its second century of operations will bring. One hundred years ago, Ireland was at the forefront of aviation advances and the new State rapidly adopted the latest aviation developments.

Part II: The Reserve Defence Forces

On the topic of Ireland's Reserve Defence Forces, the second theme of this volume, three contributors discuss the future of the Army Reserve and the Naval Service Reserve in terms of operationalising the recommendations of the *Report of the Commission on the Defence Forces*. Jonathan Carroll of Texas A&M University, a former Army Reserve officer who has published extensively on the topic, argues for a fundamental revitalisation of the Army Reserve, no longer based on the existing Single Force Concept, but on a Total Force Policy instead. Carroll details what such an Army Reserve could and should look like, where *dependence* on the Army Reserve promotes positive reforms and operational utilisation, to fundamentally benefit the Defence Forces as a whole. Joining Carroll in providing recommendations for the future Army Reserve is Neil Richardson, a serving reserve officer, and current Secretary-General of the Reserve Defence Forces Representative Association. Like Carroll, Richardson proposes a reformed Army Reserve based on three distinct cohorts to argue how reforms can transform the Reserve into a force multiplier for the Irish Army. Concluding the evaluation of the Reserve Defence Forces are David Rodgers and Gavin Murphy with an analysis of the Irish Naval Service Reserve's capabilities and role, and a discussion of what the future should look like for Ireland's reserve maritime component to adequately support Naval Service operations.

Part III: Peacekeeping Operations

Ireland has the longest unbroken record of contributing to UN peace-keeping and stabilisation operations in history. As such, the third theme within this volume explores this critical contribution to international peace and security with three excellent chapters on Peacekeeping Operations. Natalia Hapek, of the University of Warsaw, explores the legacy of Irish overseas participation in the United Nations Interim Force in Lebanon (UNIFIL). Hapek details the history of UNIFIL and how Ireland's largest and longest overseas commitment has shaped the Defence Forces. For Hapek, UNIFIL provided the foundational experiences in operational peacekeeping abroad for the Defence Forces. Lebanon was also an environment that matured Irish troops militarily and culturally, acclimating them for future, and more robust, peace-keeping and peace enforcement operations in Liberia, Chad, and Kosovo. Taking a different approach to Irish peacekeeping is Neil Dee, from the Azure Forum for Contemporary Security Strategy. Dee evaluates the impact of Irish history on Ireland's approach to peacekeeping. Considering Ireland's joining of the United Nations Security Council, Dee explores how decolonisation, conflict, and independence, three elements often highlighted as integral to Irish history, have interacted to shape Ireland's peacekeeping policy and operations. Concluding the discussion on Ireland and peacekeeping, Dr. Annika Hansen explores the threats and capability requirements for peacekeeping in the digital age, specifically how information operations can be a force multiplier and misinformation mitigator at the operational level during peacekeeping missions in the twenty-first century.

Part IV: Cyber Security in the Digital Age

The fourth theme of *The EU, Irish Defence Forces, and Contemporary Security* deals with Cyber Security in the Digital Age and examines the critical issue of developing adequate cyber defence in the Irish context to confront the most potent hybrid threats that often can bypass conventional defence capabilities. In this regard, the discussion is opened by Mark Williams and Matthew O'Neill of Queen's University, Belfast, with their analysis of the strategic and operational consequences of new technologies' role in a changing conflict environment. Arguing that the evolving role of technology in conflict settings, as well as emerging hybrid

threats encountered in peace operations, necessitates adaptation of the Defence Forces' approaches, tools, and capabilities, while also noting the opportunity this presents for the Defence Forces to be at the forefront of the development and deployment of new capabilities needed to support modern peace operations, and to champion a normative framework for the deployment of these capabilities. Lieutenant General Michael Vetter, Director-General of Cyber and Information technology at the German Ministry of Defence, then provides an overview of the cyber security threat environment from the perspective of EU cyber defence to argue the critical need for "cyber resilience" in European militaries. In a detailed discussion on current and future drone capabilities, Andy Scollick, argues for greater investment by the Irish Defence Forces in drone technology. By providing a comparative analysis of other small nations entering the "Drone Age," Scollick lays out the potential for drone technology as both an emerging threat to, and a key force multiplier for, the Defence Forces.

Part V: Defence Forces Institutional Innovation and Civil–Military Relations

The penultimate theme within *The EU, Irish Defence Forces, and Contemporary Security* is an exploration of the Defence Forces' institutional innovation and civil–military relations, a key requirement for small nation militaries in a modern threat environment. Commandant Sharon McManus of the Defence Forces, and Sharon Breen from the Department of Defence, discuss the newly established joint Defence Forces/DOD Research, Technology, and Innovation (RTI) unit, formed to consider the significant potential of Ireland's wider technology and research ecosystem to contribute towards the Irish defence framework, and especially the development of technology with defence applications. Discussing the potential pitfalls for RTI, Michael Mulqueen from the University of Central Lancashire, explores how different institutional understandings and perceptions of *market norms* created tensions between the Defence Forces, the Departments of Defence, Finance, and Transport when considering options for providing Ireland with Search and Rescue aviation services. Mulqueen's analysis highlights the significant civil–military challenges in Ireland when the Defence Forces and government departments have differing conceptions of how to conduct and provision national defence, and how these challenges can impact defence innovation in the future. In terms of civil–military relations, Senior Chief Petty

Officer Ruari DeBarra, illustrates that historically, defence reforms, when they come, are usually at the behest of the various Defence Forces' representative associations. Yet these reforms and the practice of representative association lobbying, DeBarra argues, are neither the most productive, nor efficient means of obtaining beneficial reforms due to the adversarial climate created by such civil–military relations, especially when different associations diverge or disagree about what reforms should take priority.

Part VI: The Principle of Irish Neutrality

The final theme within this volume surrounds the often-contested topic of Irish neutrality. Quite often, small nations seek to mitigate domestic defence shortfalls by joining military alliances or cooperative security arrangements. In the Irish context, as a perceived neutral country, there is significant public and political resistance to Ireland increasing its involvement with NATO beyond membership in the NATO affiliated Partnership for Peace (PfP). There is similar resistance to suggestions of Irish participation within an "EU Army." Tackling this very issue of political and public opposition is Eoin McNamara from the Finnish Institute of International Affairs, Helsinki, and the Johan Skytte Institute of Political Studies at the University of Tartu in Estonia. McNamara argues that Ireland is currently in a defence "no-man's land" due to the return of geopolitics to Europe and the resurgence of tensions between NATO and the Russian Federation. This "no-man's land," McNamara explains, originates from the European desire for greater defence integration and capabilities development through NATO or EU CSDP which is politically infeasible in Ireland's case, and the resultant need for independent Irish defence investment and innovation which is similarly inhibited by domestic political and public attitudes towards the Defence Forces and Irish neutrality. McNamara presents a solution to escaping this no-man's land through a compromise, where Ireland moves to an arrangement lying somewhere in between current PfP membership and full NATO membership, to alleviate, at the very least, the significant pressure on the Defence Forces in the areas of cyber defence, and maritime and air policing operations.

While McNamara discusses Ireland and NATO, Commandant Dan Ayiotis of the Military Archives explores the historical origins of Irish neutrality and compares these origins to modern social and political discourse in Ireland on maintaining neutrality. Ayiotis highlights that,

historically, and in the present, Ireland has never been truly neutral, but instead has adopted a preferential pseudo-neutrality where tacit support for other nations' military operations has been provided based on the Irish political and social perception of who is a friend and who is a foe. Ayiotis identifies three periods in Irish history, which he terms as neutrality as necessity, neutrality as expedience, and neutrality as convenience. Thus, since the creation of the State, Ireland may have claimed a status of neutrality, but has practised a policy of preferential favouritism during ongoing conflicts. Finally, like McNamara's treatment of Ireland and NATO, and Ayiotis's exploration of Irish neutrality historically, John Mulqueen explores the historical Cold War political and public debates on Irish neutrality, membership of NATO, and participation in an EU Army, and how these debates colour current and future discussions on Ireland's attitudes towards increased EU military integration.

Modern defence policy entails making difficult decisions, taking risks based on informed calculations as to where finite financial, personnel, and materiel resources are or should be allocated. These challenging decisions are even more acute for small nations like Ireland. With limited budgets and competing social and political priorities, Ireland has long faced the dichotomy of proximate conventional and hybrid threats that remains underappreciated either by policymakers or by the electorate. The following chapters aim to end this dichotomous approach to defence policy, to promote meaningful discussion, even debate, on providing for Ireland's national defence now, and into the future.

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Mark Mellett

Introduction

Every Nation has an Army. If not its own then someone else's.[1] So it was in Ireland over a hundred years ago with British forces underwriting the sovereignty of Great Britain and Ireland, shaping the character of Irish society. The right to live in a civil society is a human right of every man, woman, and child. It is where people are free, the institutions of state function and where the vulnerable are protected. In the lead up to the Irish War of Independence, the vulnerable were not protected and Irish people were not free, nor was the Irish State sovereign. A state's sovereignty is inalienable, it being a paradox for the sovereignty and

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[1] In a letter to the Minister for Defence on 18 Apr 1948, Lt Gen Dan McKenna observed "if we are not prepared to garrison and defend our country someone else will come and do it for us," in Michael Kennedy and Victor Laing (eds), *The Irish Defence Forces 1940–1949: The Chief of Staff's Reports* (Dublin, 2014), 440.

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sovereign rights of a state to be upheld by another's military. Ireland's sovereignty and sovereign rights, just like the freedom of her people were more imaginary than real, and so they remained until the Irish Free State and the Defence Forces were established. For almost 100 years *Óglaigh na hÉireann* has been the bedrock of Irish sovereignty, underpinning the framework for the institutions of Ireland's civil society.

Today our national, regional, and global security landscape has changed dramatically. One hundred years after the foundation of the Irish State it is only right to take stock against the backdrop of a deteriorating security environment, to see how well-prepared Ireland is for the evolving security environment as an island state in an interconnected world, and to comment on our future. It is impossible to cover all aspects of Ireland's defence considerations in one chapter, accordingly by necessity some themes will be dealt with in a cursory manner. But, in examining Ireland's approach to Defence this chapter will draw on several threads.

(a) Examine Ireland's geographical location and jurisdiction, where the State exercises sovereignty, has sovereign rights, duties, and obligations.

(b) Analyse the current security environment from national, regional, and global perspectives.

(c) Comment on the multilateral framework within which National Interests are exercised with a particular focus on the implications for the Defence Forces.

(d) Assess, from the standpoint of Ireland's Defence Policy, the prospects of a policy-strategy match in the context of capabilities, resourcing, and risk.

Ireland's Geographical Location and Jurisdiction: Where the State Exercises Sovereignty, Has Sovereign Rights, Duties, and Obligations

On foundation of the State, *Óglaigh na hÉireann*, had a responsibility to defend approximately 70,000 square kilometres on the island of Ireland, given that defence from the sea was to be undertaken by His Majesty's Imperial Force.[2] Today the Defence Forces have responsibility for a

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[2] Article 6 of the Anglo-Irish Treaty 1921.

growing jurisdiction where the State has expanding sovereign rights over an area ten times as large, with one of the largest maritime to land ratios in Europe, and a growing de facto multilateral responsibility and obligations encompassing the western approaches to the EU.[3] In addition to more traditional interpretations, defence is increasingly considered from the perspective of multi domain integration across land, air, maritime, cyber, and space.[4] The five military operational domains are not equal: space is global and encompasses the air, land, and maritime domains while the cyber and electromagnetic domain permeates and pervades all the others. Indeed, for clarity it is necessary to consider subdivisions when assessing roles and responsibilities with, for example, the maritime domain having air, surface, sub-surface, seabed, and sub-seabed domains.

From a sovereignty and sovereign rights perspective Ireland's current and future jurisdiction is significant with a potential to encompass up to one million square kilometres with one of the richest food producing ecosystems and renewable energy environments on the planet. By necessity therefore this chapter will look in greater detail at our maritime, air, and evolving domains, not necessarily well covered in the past, thereby providing a greater sense of Irish State responsibilities, obligations, and the required direction of defence for Ireland.

It is widely acknowledged that the process of globalisation transforms both the concept and practice of state sovereignty.[5] It is also argued that the idea that state sovereignty can be defined territorially or that the concept of state sovereignty denotes an autonomous international actor are no longer valid descriptions. Accordingly, while *sovereignty* is a relevant concept in the context of jurisdiction, defence and security there are also wider considerations in political, diplomatic, economic, societal, technological, legislative, and cultural terms. In terms of sovereign jurisdiction the Irish State exercises sovereignty over the land domain of the

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[3] Department of Housing, Planning and Local Government, *Project Ireland 2040: National Planning Framework* (Dublin: Government Printing Office, 2018), 98.

[4] British Ministry of Defence, *Joint Concept Note 1/20: Multi-Domain Integration* (London: Ministry of Defence, 2020).

[5] Suzanne E. Gordon, "Changing Concepts of Sovereignty and Jurisdiction in the Global Economy: Is There a Territorial Connection?," available at http://ccges.apps01.yorku.ca/wp/wp-content/uploads/2008/12/gordon-changing-concepts-of-sovereignty-and-jurisdiction-in-the-global-economy-is-there-a-territorial-connection.pdf.

26 counties and the sea area out to the limit of the Territorial Seas at 12 nautical miles beyond which it exercises sovereign rights.

Maritime Jurisdiction and Responsibilities

By the late 1900s in the words of the Chairman of the United Nations Law of the Sea drafting committee, Alan Beesley, "the law of the sea was in state of disorder bordering on chaos."[6] It is only in recent decades that coastal state sovereign rights have been codified. The introduction of new technology, evolutions in science, changes in market conditions, and the rate of resource usage have inter alia combined to necessitate more sophisticated ocean governance regimes. All of these add to the sophistication of the security arrangements such as those required to suppress unlawful acts in the case of maritime navigation and on fixed platforms which under the 2004 Maritime Security Act, ironically, are the primary responsibility of *An Garda Síochána*, not the Defence Forces.[7] Concurrently, Ireland is obliged under international treaty to protect and preserve the marine environment. Furthermore, Ireland is signatory to the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), obliging it to have a National Contingency Plan (NCP) for oil pollution in place applicable throughout the Exclusive Economic Zone (EEZ).

Marine-based critical national infrastructure is set to increase exponentially in the coming decades in the renewable energy sector. With offshore gas production declining, gas field infrastructure presents opportunities for the production and storage of "green hydrogen."[8] The growth in fibre optic subsea cables provides for trans-Atlantic and regional interconnectivity, conveying trillions of euros per day, adding to the state's critical national infrastructure and vulnerabilities. Electrical interconnectors, current and planned, link with the United Kingdom and EU, adding to the sea-based critical national infrastructure. In the *Climate Action*

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[6] Alan Beesley, "The Negotiating Strategy of UNCLOS III: Developing and Developed Countries as Partners—A Pattern for Future Multilateral International Conferences?" *Law and Contemporary Problems* 46, no. 2 (1983), 183–194.

[7] Irish Statute Book, "Maritime Security Act 2004," available at https://www.irishstatutebook.ie/eli/2004/act/29/enacted/en/print#sec1.

[8] ESB, "ESB and dCarbonX launch Kinsale Head Hydrogen Storage project," Press Release 12 August 2021.

Plan, the Government has committed to the installation of 7 GW of offshore renewable energy (ORE) by 2030 with a further commitment of more than 30 GW beyond that serving as a key enabler for EU Strategic Autonomy, helping to attain energy security.[9] For Ireland, this requires the installation of significant fixed and floating offshore renewable energy infrastructure with an estimated value exceeding €60 billion.[10] The designation of a network of Marine Protected Areas will help meet Ireland's international obligations, contributing to a wider ecosystem-based management framework with the ultimate aim of achieving Good Environmental Status in the coming years. The *Maritime Area Planning Act 2021* provides for the biggest transformation in marine governance since the foundation of the State establishing the Maritime Area Regulatory Authority (MARA).[11] Finally, Ireland's Search and Rescue (SAR) system conforms with several international conventions ensuring adequate provision of SAR services.[12]

Air Domain Jurisdiction and Responsibilities

In the context of the Air Domain, Ireland has air traffic management responsibilities within the area encompassing the Irish Flight Information Regions (FIR(s)) of Shannon FIR, the Shannon Oceanic Transition Area (SOTA) and Northern Oceanic Transition Area (NOTA). Through the Irish Aviation Authority (IAA), Ireland provides air traffic management services for 451,000 square kilometres of airspace.[13] Though a crucial gateway for 90 per cent of air traffic between Europe and North America,

[9] Department of the Environment, Climate and Communications, *Climate Action Plan 2021: Securing Our Future* (Dublin: Government Printing Office, 2021); Jennifer Bray, "Taoiseach Tells French Summit That Ireland Aims to Become Exporter of Energy," *The Irish Times*, February 11, 2022.

[10] UK prices for 30 GW of ORE were in the order of £48 Billon in 2018. Renewable UK, "A Sea of Opportunity," available at https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/offshore_wind_industry_counc.pdf.

[11] Houses of the Oireachtais, "Maritime Area Planning Act 2021," available at https://www.oireachtas.ie/en/bills/bill/2021/104/.

[12] Such as the Convention for the Safety of Life at Sea (SOLAS) 1974: Chapter V "Search and Rescue." Department of Transport, Tourism, and Sport, *National Search and Rescue Plan* (Dublin: Government Printing Office, 2019).

[13] Irish Aviation Authority, "En Route Services," available at https://www.iaa.ie/air-traffic-management/en-route-services.

Ireland does not have primary radar coverage over its FIRs which can and has given rise to security concerns such as the risk of potential disruption of civilian airspace by Russian Federation military aircraft and a reported agreement for UK military overflights.[14]

Space Domain

Three fundamental principles guide the conduct of space activities, firstly the notion of space as the province of all humankind, secondly the freedom of exploration and use of outer space by all states without discrimination, and thirdly the principle of non-appropriation of outer space. These principles are codified in the five treaties and agreements of international space law. In the context of responsibilities from the Irish State perspective is the fact that each state is responsible for all space-related activities arising within its jurisdiction. This includes those relating to non-state actors or commercial interests. This places a particular responsibility for Ireland to have appropriate intelligence and governance structures to ensure space-related infrastructure in Irish jurisdiction is not used, especially by foreign states, for activities that are contrary to international law or to undermine State sovereignty. In recent years there have been growing concerns regarding inappropriate access to space infrastructure by foreign militaries.[15]

Cyber Domain

Ireland ranks among the leading EU Member States in terms of the uptake and use of digital technologies which play a central role in supporting and facilitating economic and social life. Ireland's economic growth is very much linked with the development of a global data ecosystem, our geographic position, open economy, and EU membership. As a result, Ireland has become host to a significant amount of data and economic activity. The National Cyber Security Centre (NCSC) works collaboratively with the Defence Forces, *An Garda Síochána* and

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[14] Edward Burke, "What Are Russian Bombers Doing in Irish Airspace?" *The Irish Times*, March 10, 2020; George Allison, "Why Do British Jets 'Protect' Irish Airspace?" *UK Defence Journal*, March 10, 2020.

[15] Jonathan Barrett and Johan Ahlander, "Swedish Space Company Halts New Business Helping China Operate Satellites," *Reuters*, September 21, 2020.