



Rialtas na hÉireann  
Government of Ireland

# Draft National Risk Assessment

## Overview of Strategic Risks 2021/2022

Prepared by the Department of the Taoiseach  
[www.gov.ie/taoiseach](http://www.gov.ie/taoiseach)

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# 1. Introduction

## 1.1 About the National Risk Assessment

The National Risk Assessment provides an opportunity to identify and discuss significant risks that may arise for Ireland over the short, medium and long term. Since its inception in 2014, it has provided a systematic overview of national-level risks and has drawn attention, at an early stage, to the importance of phenomena such as Brexit, housing shortages as well as pandemics.

The NRA process has a particular focus on strategic or structural risks. These risks can occur over different time horizons and have very different impacts in terms of immediacy, reach and costs. They can also be within varying degrees of national control. What is common is they present potentially significant risks to Ireland and the NRA contributes to a more rigorous process to identify these risks to inform policy.

The NRA process has been designed to ensure wide ranging consideration of the risks that Ireland may face, avoid the potential for 'group think' and enable consultation and inputs across the range of stakeholders. An overview of the process is set out in Box 1.

### Box 1: Overview of the NRA process

The NRA was introduced following the last financial crisis. The process has been designed to safeguard against 'group think,' to be inclusive and ensure that the full range of strategic risks facing the country are identified and considered.

Each year, a Steering Group, chaired by the Department of the Taoiseach and comprising representatives from all Government departments and relevant agencies works together to draw up an initial draft list of strategic risks. A comprehensive literature review is conducted to ensure an appropriate evidence-based analysis of the identified risks is drafted.

The Draft National Risk Assessment is then published for public consultation. This consultation period promotes inclusive engagement from the public to make certain that all viewpoints are collected and analysed, that no strategic risks are omitted and that the risks identified in the draft are sufficiently covered.

In addition, there are usually other opportunities for engagement of relevant stakeholders to stimulate a robust and extensive debate of the draft list of risks, sometimes through a dedicated seminar.

This final National Risk Assessment is then published by Government giving a comprehensive view of strategic risks facing the country based on engagement with Government departments and agencies, relevant stakeholders and the public. Copies of previous National Risk Assessments can be found [here](#).

The National Risk Assessment process is not intended to replace the detailed risk management and preparedness carried out by departments and agencies. It is important to stress that major strategic risks which pose a threat to Ireland are dealt with in a host of ways by a multitude of different public and private organisations, as well as in some cases at EU or international level. In this context, some examples of the specific risk management measures conducted by departments and agencies is provided in Box 2.

### **Box 2: Examples of risk identification and management by departments and agencies**

Detailed risk management being carried out includes the extensive work of the Department of Finance, the Central Bank of Ireland and the Irish Fiscal Advisory Council in relation to financial and macro-prudential risks.

It also includes the work of the Government Task Force on Emergency Planning, supported by the Office of Emergency Planning, which produces a National Risk Assessment for Ireland centred on risks relating to potential civil emergencies at national level. This is conducted in the context of the Strategic Emergency Management National Structures and Framework and Ireland's reporting commitments under the EU Civil Protection Mechanism.

All departments and agencies also carry out their own risk assessment processes as part of their own strategic planning and management responsibilities.

This National Risk Assessment aims to provide a high-level overview of strategic risks, and facilitate public and stakeholder engagement about these.

Risks by their nature are not confined to neat categories – however, to ensure a comprehensive approach to identifying and documenting risk it is helpful to provide a structure for the NRA process. In this context, the categories of risks are based on the approach used by the World Economic Forum in their 'Global Risks Report'; these are Geopolitical, Economic, Social, Environmental and Technological. The list of strategic risks for Ireland is at Table 1 overleaf and Section 1.2 provides a more detailed overview of these.

Although this categorisation is for analytical purposes, it should be emphasised that risks from one domain have effects upon others – for example labour shortages in the construction sector impact the delivery of housing. The cyber-attack on Ireland's health services in May 2021 at the same time as the country was still trying to manage the consequences of COVID-19 clearly illustrates the cumulative and cross-cutting nature of risks. An effort has been made to underline the over-lapping and compounding nature of these risks throughout the Report. A further consideration is that many of the most extreme risks are not domestic in nature or are outside purely national control. As such, the identification and management of them must be, in part, conducted through international alliances and processes. Ireland's membership of the EU, multilateral organisations and wider international relations are important in this regard.

**Table 1: Strategic risks – 2021/2022**

<b>Geopolitical risks</b>	<ul style="list-style-type: none"> <li>Rise of a multi-polar world</li> <li>Future direction of the European Union</li> <li>Ireland’s relationship, post-Brexit, with the United Kingdom</li> <li>Armed conflict, terrorism and hybrid threats</li> </ul>
<b>Economic risks</b>	<ul style="list-style-type: none"> <li>Economic scarring of individuals and firms</li> <li>Changes to the international tax and financial system</li> <li>Sustainability of public finances</li> <li>Labour shortages and capacity constraints</li> <li>Vulnerabilities arising from Ireland’s enterprise mix</li> <li>Changes to international trading relationships</li> <li>Disruption to secure and sustainable energy supply</li> </ul>
<b>Social risks</b>	<ul style="list-style-type: none"> <li>Social cohesion</li> <li>Housing and sustainable development</li> <li>Migration and integration</li> <li>Demographic change</li> <li>Digital exclusion</li> </ul>
<b>Environmental risks</b>	<ul style="list-style-type: none"> <li>Climate change</li> <li>Biodiversity loss</li> <li>Extreme weather events and other natural disasters</li> <li>Pandemics</li> <li>Antimicrobial resistance</li> <li>Food safety</li> </ul>
<b>Technological risks</b>	<ul style="list-style-type: none"> <li>Data flows, storage and security</li> <li>Disruptive technology</li> <li>Cybersecurity</li> <li>Nuclear contamination</li> </ul>

## Capturing the impact of COVID-19

The period since the NRA was last published in 2019 has been particularly turbulent with a number of major risks coming to pass, which have had and will continue to have significant repercussions. The COVID-19 pandemic is the most significant and wide ranging of these, not least in terms of the costs to health and life. Brexit and the cyber-security attack on the health services are also two major risks that have materialised. In addition, major risks including climate change and skills shortages persist and must also be considered.

Previously, the NRA has been an annual exercise but COVID-19 disrupted these plans in 2020. With the vaccination programme well advanced, it is now an appropriate time to think strategically about the changes brought about by the pandemic, how it has magnified already identified risks and the new risks it has introduced into our lives, as well as how a process such as NRA can help us to better prepare for and deal with major risks.

Geopolitically, the pandemic has tested alliances and multilateral allegiances as individual countries have sought, above all, to safeguard their own citizens. A key COVID-19 impact has been concern about the resilience of supply-chains and the risk of dependency on other countries. Whether this results in a weakened multilateralism and a starker multi-polar world remains to be seen. Other major geopolitical risks are those arising from Brexit and the possibility of hybrid-threats which impact on digital infrastructure.

Economically, the pandemic has stalled global growth through the necessity of lockdowns and restrictions although projections for 2021-22 have improved in recent months. However, there are major risks outstanding. The first is that the possibility of a resurgence of COVID-19 or related variants may require further restrictions further impeding growth. The second is that the pandemic may carry significant legacy risks, be it individuals or firms unable to resume productive lives or countries erecting barriers to free trade, as well as backlogs in delivery of public services. Combined with Brexit, the experience of the pandemic has demonstrated the absolute importance of strong international transport and freight links. These sectors have been severely impacted by the pandemic and their recovery is important to support wider economic and social development. Other major risks for Ireland come in the form of prospective changes to corporation tax and the working through of Brexit which will continue to have major frictional effects on trade.

Every person has been affected by the pandemic in one way or another and this is true writ large for our society. Many of the social risks documented previously still hold true but have been accentuated. Notwithstanding the very strong demonstration of community during the pandemic, social cohesion will be tested as we struggle with high levels of unemployment and housing shortages and these issues will bear particularly on young people. COVID-19 has underlined the necessity of countries embracing digitalisation in a comprehensive way but this will give rise to associated vulnerabilities such as misinformation and cyber-threats.

Environmentally, the great challenge remains climate change and the associated unpredictable weather events it throws up as well as the risk of biodiversity loss. One of the ways in which Ireland can reduce carbon emissions is through more compact growth underpinned by sustainable transport but this will require considerable planning and resources.

And in terms of technological risks, COVID-19 has shown us how fundamentally we rely on digital connectivity and the associated data-flows between nations. Although these are often taken for granted like other infrastructures, their continuance is at some risk. Other risks in this category remain such as cyber-security and experience has shown how impactful risks in this area can be.

A principal aim of the NRA is to foster debate about the major risks facing our country and stimulate discussion about how Ireland should orientate toward them. The experience of COVID-19 should make every organisation, and not just Government, question how they approach risk and ask whether more could be done.

## **Risk assessment – lessons from COVID-19**

Internationally, there are two emerging lessons for risk governance processes arising out of the experiences of confronting COVID-19. The first arises from systemic risks which have an impact on entire economies or societies rather than being contained within a discrete policy domain. COVID-19 was not a purely medical issue pertaining to the health of individuals. It cascaded beyond the health domain and impacted on entire economies and societies and global relations more generally. One could imagine a similar cascade effect if there was a major cyber-attack which could impact on energy supply, welfare payments or traffic management to name just a few. A greater appreciation of these kinds of cascade effects arising from systemic risks and how to mitigate them is required.

Precisely because the impact of these risks is systemic, they and their consequences are hard to predict.<sup>1</sup> This is one of the reasons why policymakers are emphasising more and more the idea of cultivating resilience, which is the second major learning from the pandemic. Resilience has been defined as a capacity to cope with challenges and undergo transformations in a sustainably fair manner. It is a response to coping and managing the vulnerabilities in many countries as revealed by the pandemic, from a shortage of vital medical equipment to the fragility of supply chains. The European Commission has recommended that resilience should be a new compass for EU policies so that all member-states are better prepared to deal with unexpected shocks or crises in the future.

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<sup>1</sup> See Risk Assessment Austria: Five Challenges to Watch in 2021: ‘an exact prediction of such systemic risks spreading in cascades is difficult to make due to the manifold interconnections and interdependencies’

To ensure that the concept of resilience becomes embedded, the Commission considers that appropriate monitoring tools are required to indicate where corrective action is necessary and has proposed 'resilience dashboards' that would highlight existing vulnerabilities and resilience capacities. The Commission is proposing that these would focus on multiple dimensions of resilience and their interlinkages and would be developed across four dimensions: social and economic; green; digital; and geo-political. They are not intended as league tables to rank member states in one way or another but to indicate where medium-term corrective actions could be undertaken.

These are worthwhile suggestions and the NRA process will continue to track them and respond appropriately. This would be in keeping with one of the originating intentions behind the NRA, namely to engage in a broad-based discussion about major strategic risks to Ireland and consider a broad range of voices in order to achieve better outcomes for the country.

There will be scope in the months ahead, as the COVID-19 pandemic recedes further, for more detailed and deeper reflection on lessons from the experience including for how risk assessment and mitigation, and building resilience against future risks, can be taken forward.

## **1.2 Overview of strategic risks**

### ***Geopolitical risks***

Although the geopolitical risks facing Ireland mostly fall within the same categories as the 2019 National Risk Assessment, they have shifted and evolved in the intervening period driven by a range of factors but most notably the pandemic and Brexit.

The degree of global interconnectedness, emphasised by the pandemic, has likely affirmed the rise of a multi-polar world as evidenced by trade tensions between the US and China and the EU. Geopolitically, COVID-19 has inspired a more assertive nationalism as countries seek to safeguard their populations. The pandemic has highlighted Ireland's dependence on access to global supply chains. The EU itself remains vulnerable to these geopolitical forces and has identified a clear need to strengthen its resilience. Therefore, the future direction of the EU remains a key issue for Ireland. In addition to ongoing work at the EU level, the Conference on the Future of Europe will be important in this regard.

The withdrawal of the United Kingdom from the EU and the ensuing consequences are dealt with in this section. Brexit has introduced a destabilising element into the politics, economy and social cohesion of Northern Ireland and so instability in the region remains a risk.

The potential of an armed conflict or terror attack also remains a risk, with the resulting significant public safety and security impacts. This year, the report highlights the increasing risk presented by hybrid threats, including in relation to cyber-security, which has intensified over the past year.

## **Economic risks**

Though the risks facing the economy are not entirely a function of the pandemic, there is little question that COVID-19 has had a severe impact on parts of the economy and has heightened economic risks overall.

One of the most significant risks arising from COVID-19 is failing to prevent long-term economic scarring. Despite the extensive and unprecedented measures implemented by Government to support individuals and businesses totalling over €38 billion over 2020 and 2021, most recent forecasts are that unemployment will remain above the pre-pandemic level of 5% until at least 2025. There is also a risk that a number of businesses, particularly in those sectors most impacted by the restrictions including hospitality, retail and tourism, will not recover sufficiently and may have to cease trading.

In addition, the measures required to respond to the pandemic have greatly increased our overall level of public indebtedness. Combined with higher expenditure expectations which may have become embedded during the pandemic, investment demands in the future due to climate action and other investment needs, demographic pressures in areas such as pensions and healthcare, and possible impacts of international tax changes, the risk to the sustainability of our public finances has increased and is a significant risk.

It is likely that 2021 will be a critical year for international tax agreements. Fundamental changes to European or international tax frameworks may impact the state's overall competitive offering and the level and type of trade carried out by multinationals based in Ireland. Given that multinationals contribute circa 80% of total corporation tax, this could have very significant implications for the exchequer which must be factored into overall fiscal and enterprise policy.

Risks also arise from the relatively high degree of concentration in a small number of sectors and markets and reliance on the multinational sector for exports which leaves Ireland somewhat vulnerable to global shifts, and company/sector specific shocks and decisions. Trade with our main trading partners in the EU and the US is largely holding steady, indeed 2020 was a record year for pharma and ICT exports. However, and while it is relatively early, indications are that Brexit is impacting trade with the UK. It remains to be seen how much of this is a short run effect and/or influenced by the pandemic but it does point to an increased risk for businesses trading with or through the UK. And at the same time as overall unemployment remains high, shortages of skills and capacity in certain areas and sectors, in particular digital and construction, is constraining growth and exacerbating issues in relation to housing and infrastructure.

In terms of energy-related risks, disruptions to the supply or price of oil, gas, or electricity could have significant economic, social or competitive impacts, and our geographic position renders us particularly vulnerable to such disruptions. Ireland imports the vast majority of its energy requirements from or via the UK. Further pressures on the security of supply arise in relation to the expected closure of power stations that make up approximately 25% of

conventional electricity generation capacity over the period to 2025. This is at the same time as increasing demands from a growing population and economy – including energy intensive activities such as data centres. In the short to medium term these issues have been compounded by the pandemic which is impacting on the upgrading and development of existing infrastructures.

### **Social risks**

Social cohesion and migration and integration remain as key social risks in this year's assessment. Issues concerning the cohesion and inclusive growth of society identified in this section include; unemployment, trust in government and media, the facilitation of the integration of migrants and the effects of the pandemic on various social groups and age cohorts.

The supply and affordability of housing persists as a significant risk in the NRA with a range of economic, social and environmental implications and compounded by the impact of the pandemic on activity in the construction and housing sector. Inadequate supply of affordable and quality housing is increasingly one of the most significant risks facing the country – impacting people's life choices and our overall competitiveness. A principal issue is ensuring that appropriate housing is built in suitable locations.

The change in the demographic profile of our population in the coming decades remains a challenge as it relates to the provision of social care, public services and health services. This year, there is a focus on intergenerational tensions and how these have been exacerbated by the pandemic.

A new risk arises from COVID-19 accelerating the path toward digitalisation and ensuring that society is adequately prepared for this. There is an acknowledgment of the need for an inclusive approach to digital transformation to bridge digital divides, and of the risk of the rapid dissemination of disinformation online. This section also touches on the necessity of a flexible education system to nurture digitalisation and the knowledge economy and the need for public investment in research and development to ensure Ireland's reputation as a competitive research centre.

### **Environmental risks**

Climate change and biodiversity loss continue to be major risks. Like many of the risks covered by the NRA, the nebulous nature of these risks makes them challenging to quantify. However, it is well understood that the costs of inaction far exceed action – in terms of risks to human health, economic development, property, infrastructure and ecosystems, reputational damage, as well as risks to food, water and energy security and population displacement/mass migration. Additionally, natural disasters and extreme weather remain risks to Ireland. This may take the form of storms, flooding, temperature increases, or coastal erosion. In addition, Irish biodiversity is highly vulnerable to the impacts of climate change and has a low adaptive capacity compared to other vulnerable sectors.

Anti-microbial resistance and major pandemics have been re-categorised as Environmental risks. The risks arising from a major pandemic, as has occurred in the COVID-19 outbreak, show the impact of a pandemic globally and locally. The pandemic has impacted across every risk category, changed life greatly for the population and most significantly has come with great costs to people's health and livelihoods. The next pandemic cannot be predicted with any certainty, however the lessons learned from battling COVID-19 will contribute to managing it when it occurs.

Anti-microbial resistance is an increasing concern globally, with the extensive use, misuse, and overuse of antimicrobials in human health raising levels of resistance in a wide range of pathogens in all countries and in patients of all age groups. In the animal population, the rate of development and spread of antimicrobial resistance has also increased. Additionally, risks around food safety continue to be relevant, as in previous years, with significant health, trade, and reputational implications should a food scare or incident occur.

### ***Technological risks***

COVID-19 has shown how strongly societies rely on digital infrastructure, and resultant data flows, to maintain connectivity. Cross-border transfers of data have become an intrinsic part of how modern economies and societies function, and the safe and legal transfer of data is necessary for organisations and the public. Global data transfers are increasingly being called into question as a result of the dissonance between different countries data protection arrangements. It is important that this is resolved in terms of providing certainty for businesses and citizens in both jurisdictions alike.

The risk of failures in cybersecurity, as demonstrated from the recent cyberattack on the health services, highlights the impact on disruption to critical information infrastructure, and data fraud or theft. The necessity to address this risk rises as the extent to which society relies on digital technology increases. With Ireland positioning itself as a digital leader, with a growing adoption of online services, the impact of an attack or incident on the provision of services, and on the reputation of businesses is significant.

Disruptive technology trends continue to advance. These advances create a range of opportunities; however, they also give rise to risks that need to be considered including the potential for automation to displace or reshape existing jobs and sectors. Irrespective of the sector, research indicates that the risk of automation is particularly concentrated in roles held by people with medium and lower levels of education. The risks therefore, if our education and skills system and enterprise policy do not respond appropriately and in time, are substantial.

In relation to nuclear contamination, while the probability for Ireland is low, the risks to public health and well-being, as well as negative economic impacts are clear, and awareness and planning are important in this regard.

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## 2. Geopolitical risks

As underlined in the last section, the effects of COVID-19 are reverberating through all levels of life, from the individual to the global. In respect of the geopolitical environment, there are several important trends.

### 2.1 Rise of a multi-polar world

COVID-19 is testing the cooperative, rules-based system known as multilateralism. Given the life and death issues raised by COVID-19, it is not surprising that governments have taken urgent action to guarantee the safety of their people even if this has been at the expense of commonly agreed rules or processes.

Free movement of people, international travel and tourism have been curtailed; countries have tried to secure vital commodities for their own populations with disputes over what is legitimately owed to other countries; and supply-chains are being scrutinised more carefully with a view to reducing vulnerabilities.

Yet, it is important not to overstate the extent to which states have pursued isolationist policies. The EU agreed to the historic creation of a €750 billion recovery fund and has continued to export vaccines beyond its own borders; and there are considerable efforts underway to try and secure multilateral agreement on a response to the tax challenges of digitalisation, and to cooperate more extensively on climate change. The World Health Organisation (WHO) has played a key role in coordinating the global response to the pandemic, and there has been significant international support for the Covax global vaccine-sharing initiative.

COVID-19 has not signalled the dissolution of global cooperation, but it has highlighted the degree of global interdependence and it has probably affirmed the rise of a multipolar world in which no bloc can presume hegemony. Inevitably the existence of such blocs and the assertion of their interests can cause difficulties as evidenced in recent times by trade tensions between the US and China and the EU. It has also brought into relief different models of government and competing ideologies underpinned by sophisticated misinformation programmes.

The risk for Ireland is that competitive pressures drive blocs to pursue a path of economic self-sufficiency, and weaken the open, rules based international system. While this would make every country poorer, larger nations with bigger internal markets are better placed to weather such difficulties. As a small, trading economy Ireland depends on and has prospered from openness. There is also a risk, as discussed below, that a disunited EU is left behind by a rising Asia Pacific region in tandem with a US that maintains its pivot to Asia.

## 2.2 Future direction of the European Union

Ireland's strategic interests are intrinsically linked to the EU. We have prospered as a result of membership and as the single market has expanded, Ireland has capitalised on its opportunities. But the EU is not immune to the geopolitical forces outlined above. In reflecting on these forces, the Commission has expressed the view that Europe's economic sovereignty is at stake. Other global powers are combining geopolitical, economic and other interests to increase their influence in the world with the implication being that the EU should do likewise.

The Commission has identified resilience as a new compass for European policies to enable the Union to withstand shocks as COVID-19 has shown up a number of vulnerabilities. This relates not just to vital medical equipment but also to critical raw materials. This has led to what has been dubbed a mission of pursuing open strategic autonomy to secure Europe's competitiveness and global leadership in the future and to strengthen its resilience. It is admittedly a difficult balance to strike in terms of preserving openness and protecting Europe from the unfair or disproportionate assertion of others' interests.

Supporting the green and digital transitions have become core EU policy priorities, including through EU recovery funds. Lockdowns have magnified the importance of connectivity yet nearly all of the major digital platforms do not originate from the EU.

Furthermore, the definitive withdrawal of the UK from the EU changes its political complexion. As a medium-sized power, the UK carried considerable influence within the EU. Ireland and the UK took a similar approach to many trade policies. Ireland, in concert with others, now have to intensify efforts to ensure that the EU retains its overall liberal trading ethos, building resilience through diversifying trusted trading partners, rather than through increased protectionism.

In addition to trade, the UK and Ireland were often closely aligned in justice and home affairs. This is particularly the case given our common legal heritage, similar opt-in/out positions, and as two common law jurisdictions within the EU. With the departure of the United Kingdom, Ireland is the only fully common law Member State, and our position on justice and home affairs matters is now more of an outlier.

As the law in this area develops, it may be more challenging for Ireland to ensure that our perspective is taken on board, and that the law is developed in a manner that does not conflict with obligations related to the Common Travel Area with the UK, or our close bilateral cooperation with the UK on justice and home affairs issues.

## 2.3 Ireland's relationship, post-Brexit, with the United Kingdom

The UK's withdrawal from the EU has introduced profound shifts in the relationship between Ireland and the United Kingdom.

The outworkings of the referendum on UK withdrawal have resulted in strains within the UK's system of devolved government. Repatriating EU powers has also led to differences about where decision-making powers should be sited and have given rise to tensions between the UK Government and the devolved administrations.

The Scottish pro-independence parties increased their majority following the 2021 Scottish Parliament elections. However, the pathway to a second referendum on independence remains uncertain, adding to ongoing debate about the state of the Union across the UK.

Brexit introduced a destabilising element into the politics of Northern Ireland at a time when the political parties were finding it difficult to reach consensus. The Northern Ireland Executive had been in abeyance for nearly three years when it was reformed in January 2020.

Negotiations concerning Brexit took account of the particular circumstances of Northern Ireland. Paramount for the Government has been protecting the Good Friday Agreement (GFA), ensuring that there is no hard border on the island of Ireland, and protecting the integrity of the EU Single Market – and Ireland's place within it.

An integral part of the EU-UK Withdrawal Agreement, the Protocol, was designed to meet the Government's paramount objectives outlined above. Under the Protocol, Northern Ireland remains part of the UK's customs territory, but it is also subject to provisions of EU law necessary to protect the integrity and operation of the Single Market in goods. The Protocol fully recognises the constitutional position of Northern Ireland in accordance with the GFA. It also provides for a vote in the Northern Ireland Assembly to take place four years after it has come into operation on whether certain elements of the Protocol should continue to apply. If no vote takes place, all of the Protocol continues to apply.

The new arrangement means that some checks are required on goods moving from Great Britain to Northern Ireland. The implementation, and symbolism, of this has led to considerable opposition, particularly on the part of Unionist political parties. Some businesses in Northern Ireland have expressed practical concerns with regard to certain elements of implementation, but most continue to support it.

In December 2020, the EU and UK agreed a number of grace periods, including a three-month period to allow retail, wholesale and logistics operations time to adjust to the new arrangements. On 3 March 2021, the Secretary of State for Northern Ireland informed the UK Parliament of the UK Government's intention to unilaterally extend this grace period for at least a further six months. In response to this and other breaches of the terms of the

Protocol, the EU launched infringement proceedings against the UK, which are ongoing. At the end of June, the EU agreed to a UK request to extend a grace period relating to the import of chilled meats to 30 September. At the same point, the European Commission made clear its commitment to ensuring security of supply of medicines to Northern Ireland from Great Britain, as well as ensuring NI and GB motorists ability to drive within the EU without insurance green cards, among other issues.

Post-Brexit, the UK now has the capacity to set its own standards in a range of areas such as manufactured goods, agri-food, services, transport networks and energy markets – and so may lead to regulatory divergence from the EU. This may pose competition and supply-chain challenges for Ireland and internal political issues for the UK, including the possibility of greater trade frictions between Great Britain and Northern Ireland. Further considerations in relation to Brexit and the impacts on trade are covered in section 3.6 below.

The Government continues to encourage constructive efforts to deliver stability in the North, particularly through the institutions established under the GFA, and by working through the established EU-UK governance arrangements under the Protocol. More generally, Government has recognised that there is a need to strengthen bilateral relations with the UK, in light of the UK's departure from the EU, and the Programme for Government contains a series of commitments to give effect to this.

## **2.4 Armed conflict, terrorism and hybrid threats**

The risks arising from terrorist incidents and armed conflicts, as highlighted in previous Reports, remain. Armed conflicts could have significant repercussions for Ireland and the EU, including potential impacts on energy supplies, transport routes or the environment. On the island of Ireland, the Good Friday Agreement has delivered a stable peace process that commands overwhelming cross community support. Nonetheless, certain groups in both communities, albeit with very limited levels of support, remain intent on disrupting the significant progress which has been achieved and perpetrating acts of violence. The disruptions caused by Brexit could play a role here and will have to be carefully watched.

Ireland and its citizens could be negatively affected by terrorist incidents, depending on the location of such incidents and their wider impact. Such an attack here could have significant impact in terms of public safety and security in the short term, and there could possibly be longer-term reputational damage to Ireland as a safe and secure place to live and work in, and to visit.

One consequence of a more assertive multi-polar world is a readiness to pursue aggressive actions through non-conventional means particularly through attacks on digital infrastructure. Malicious cyber activities are among the most frequently employed elements in hybrid campaigns. Hybrid threats involve the coordinated use of conventional and unconventional methods by state and non-state actors to achieve their strategic objectives. These are often designed to be ambiguous and difficult to detect. They can combine

disinformation, malicious cyber incidents, covert influence activities, and leveraging of economic dependencies, in addition to more traditional security threats such as attacks on critical infrastructure and espionage. Another threat which may impact on Ireland includes aviation security, as demonstrated by the interception of a Ryanair flight over Belarusian airspace.

There is growing awareness and coordination within the EU in response to the increasing risks presented by hybrid threats. This has intensified over the past year, as uncertainty arising from the COVID-19 pandemic has provided new opportunities for actors to develop and deploy sophisticated disinformation and hybrid campaigns targeting the EU. Should such activities target Ireland, they could present a risk to the State's democratic institutions and Government decision-making processes, exacerbate divisions in society, and undermine our relations with the EU and with other countries. They could also seek to target Ireland as a means to destabilise the EU. Reinforcing coordination across Government and with EU and like-minded partners, and keeping pace with the evolving risks is critical to improve awareness and to effectively counter and respond to hybrid threats.

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## 3. Economic risks

### 3.1 Economic scarring of individuals and firms

One of the greatest economic challenges arising from COVID-19 is to prevent irreparable economic scarring by which the life chances of individuals are impaired and businesses are irretrievably damaged.

Government has taken extensive and unprecedented measures to mitigate the damage to people and the economy arising from the pandemic. Across 2020 and 2021, approximately €38 billion has been allocated for COVID-19 related spending programmes, nearly half of which are direct income supports via the Pandemic Unemployment Payment and wage subsidy schemes. The Economic Recovery Plan commits to further substantial expenditure on labour market and enterprise supports, including just under €1 billion additional funding under the National Recovery and Resilience Plan.

While these supports have enabled many firms to retain staff and remain operational and a number of sectors including pharma and ICT performed very strongly over 2020 and 2021, many individuals, firms and sectors have been severely impacted by the pandemic.

This is particularly the case for the more domestically focussed sectors, such as retail, events, tourism and hospitality, which tend to be more contact-intensive and so more impacted by public health restrictions. These sectors account for a high share of employment, are largely comprised of SMEs<sup>2</sup> and are typically regionally distributed. SMEs in manufacturing, wholesale/retail, construction, business services and a group of miscellaneous sectors all experienced average revenue declines of between 20 and 25%. According to one survey, only 3 in 10 Irish SMEs were able to remain fully operational, with smaller and rural-based businesses more likely to have partial or full closures.<sup>3</sup>

As the economy recovers and society opens up, a key risk is that some businesses will not recover sufficiently and may have to cease trading. Though widespread insolvencies have been so far avoided, as the Central Bank has commented, 'it would be a mistake to continue with protection and forbearance in perpetuity, just as it would be wrong to allow all companies making losses currently to fail'.<sup>4</sup> The May 2021 Financial Stability Review from the ECB flags Ireland as a high-risk country in term of number of potential insolvencies and the

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<sup>2</sup> SMEs are the backbone of the Irish economy, representing 99.8% of all active enterprises, and having over 1 million employees

<sup>3</sup> [COVID-19 and the Irish SME Sector: Supporting Recovery and Growth](#), 2021, Vodafone

<sup>4</sup> [Governor Makhoul Opening Remarks, Webinar - Enterprise Financing and Investment in Ireland](#), 2021, Central Bank of Ireland

impact of these on the wider economy.<sup>5</sup> And even those firms that face a decent prospect of survival may struggle with high levels of corporate debt as revenue streams have been curtailed for a considerable period of time.

Over the medium to longer term, the experience of COVID-19 may impact the risk appetite of existing and potential business owners in terms of establishing or expanding a business with knock on implications for employment and rates of entrepreneurship. It is important that enterprise and fiscal policy works to address these risks.

Furthermore, COVID-19 has driven changes in behaviours and consumption patterns, with one of the most important being a switch to online retail. Analysis by the Central Bank shows that online retail consistently accounts for between 45 and 60% of point-of-sale card spending.<sup>6</sup> In addition, as outlined above, certain sectors have been more affected than others, for example tourism, hospitality, events and arts, and may continue to be impacted by public health measures such as social distancing requirements over the near term. Developments in relation to domestic and international travel over time will also play a key role in the recovery of these sectors.

The labour market has borne the brunt of the economic impacts of the pandemic. COVID-19 adjusted unemployment, including PUP recipients remains high at 18.3% in June.<sup>7</sup> As set out in Chart 1 overleaf, within this overall higher rate of unemployment, the effects have been more profound on younger age cohorts and as outlined above public-facing sectors have been more severely impacted overall.<sup>8</sup>

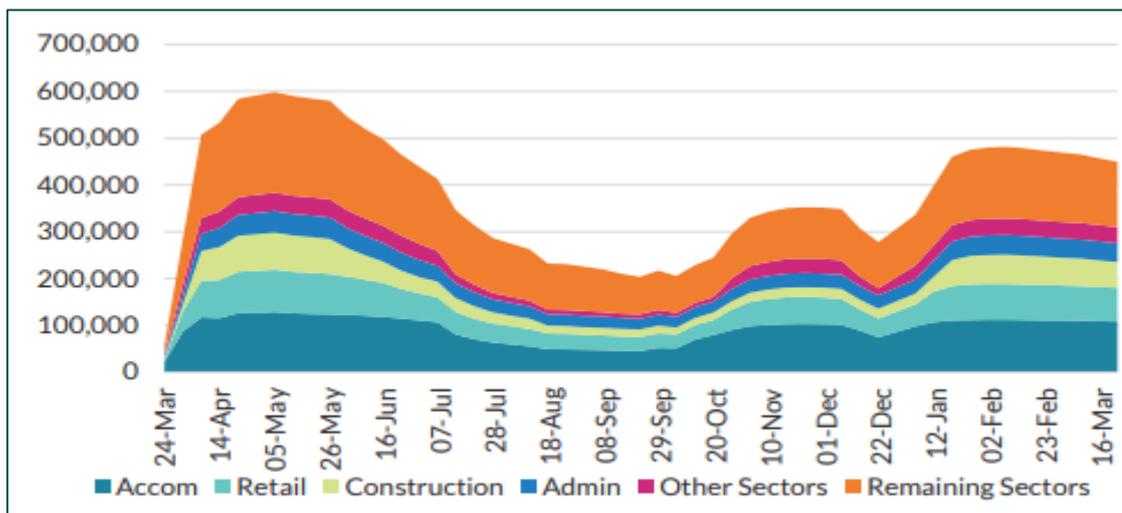
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<sup>5</sup> [Financial Stability Review](#), May 2021, European Central Bank

<sup>6</sup> [Shining a light on sectoral spending behaviours through the most recent phases of the pandemic](#), February 2021, Central Bank

<sup>7</sup> [June - Monthly Unemployment](#), June 2021, CSO

<sup>8</sup> [Quarterly Economic Commentary](#), Spring 2021, ESRI

**Chart 1: PUP recipients by Sector – March 2020 to March 2021**

Source: Quarterly Bulletin QB2 – April 2021, Central Bank of Ireland

Table 1 is a snapshot in time which demonstrates the more pronounced impact of restrictions on younger age cohorts via the numbers of PUP recipients per cohort.

**Table 1: Breakdown of PUP recipients by age and payment level, 2 March 2021**

Age (Years)	No. ('000)	%	Payment (€)	No. ('000)	%
<25	111.1	23.7	350	230.5	49.2
25-34	103.6	22.1	300	79.3	16.9
35-44	107.1	22.8	250	76.3	16.3
45-54	83.9	17.9	203	82.8	17.7
55+	63.1	13.5			
<b>Total</b>	468.8	100	<b>Total</b>	468.8	100

Source: Quarterly Economic Commentary, ESRI, Spring 2021

The unemployment rate is projected to average around 16.3% in 2021 before declining to 8.2% in 2022 as the economy is fully re-opened. It is forecast to remain above the pre-pandemic rate of 5% until at least 2025, reflecting some scarring.<sup>9</sup>

A further consideration is that approximately 100,000 people have been in receipt of PUP for a year or more, with associated impacts on their opportunity to accumulate experience and training. This may impact the potential for them to secure employment as the economy recovers with a need for appropriate activation measures to be in place. In addition, the participation rate in the labour force may decline due to discouragement after lengthy periods of inactivity.<sup>10</sup>

The economy as a whole is showing signs of recovery with Modified Domestic Demand (MDD), an indicator of domestic economic conditions, projected to grow by 2.5% this year and 7.5% in 2022.<sup>11</sup> The emerging consensus is that, on foot of the supports put in place, the economic impacts of the pandemic will not be as deep or as long as in the financial crisis. Similar approaches have been taken in many countries based on both the gravity of the impacts and the lessons learned from the financial crisis and indications are that scarring, whilst still significant, will be markedly less than might otherwise have been the case.

However, the extent of economic scarring is dependent on the structure of the economy in question - how reliant is it on high-contact industries such as hospitality or tourism - and the scale of the policy response. In addition, investment in innovation and digitalisation could help to overcome adverse productivity shocks more quickly.<sup>12</sup> In the Irish context, it is essential that training, activation and enterprise supports are appropriately targeted to minimise scarring.

## **3.2 Changes to the international tax and financial system**

2021 will be a critical year for international tax as discussions at the OECD conclude in respect to reframing the international tax architecture to address the tax challenges of digitalisation and globalisation. Ireland has been clear in a desire to achieve a

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<sup>9</sup> [Summer Economic Statement](#), July 2021, Department of Finance and Department of Public Expenditure and Reform

<sup>10</sup> [Quarterly Bulletin, Quarter 2](#), 2021, Central Bank of Ireland

<sup>11</sup> [Summer Economic Statement](#), July 2021, Department of Finance and Department of Public Expenditure and Reform

<sup>12</sup> [World Economic Outlook](#), 2021, IMF

comprehensive, sustainable and equitable agreement on the international tax rules at the OECD that meets the needs of all countries, large and small, developed and developing.

In July 2021, the OECD Inclusive Framework reached agreement but not unanimous consensus on the key aspects of the two-pillar solution to address tax challenges arising from digitalisation and globalisation. Pillar One proposes a re-allocation of a proportion of tax to the market jurisdiction, while Pillar Two seeks to apply a global minimum effective tax rate. Work will now continue with a view to finalising a comprehensive agreement in October.

Ireland re-iterated its support for the Pillar One proposals at the Inclusive Framework. This is in recognition that the way in which business is conducted has evolved and the taxation system must evolve with it. There will be a cost to Ireland for this in terms of reduced corporation tax receipts, but overall Pillar One will bring stability and certainty to the international tax framework and will help underpin economic growth from which all can benefit.

Ireland expressed broad support for the agreement on Pillar Two but noting a reservation about the proposal for a global minimum effective tax rate of 'at least 15%'. As a result of this reservation, Ireland is not in a position to join the consensus. The broad rationale for our reservations with regard to the rate relate to the hindering of legitimate, fair and healthy tax competition.

While Ireland is not yet in a position to join the consensus on the agreement and, specifically, a global minimum effective tax rate of 'at least 15%', we remain very committed to the process and aim to find an outcome that Ireland can support. It should also be noted that while Ireland is among nine countries who have reservations on key issues such as the rate, other countries have reservations on critical issues such as the proportion of the reallocation of profits under Pillar One, on how any agreement will be consistently implemented, on the roll-back of unilateral measures such as digital services taxes, and importantly also on the very ambitious implementation timeframes. Countries will also have processes within their parliaments, and we understand that in some jurisdictions there are reservations within parliaments in respect to this agreement.

G20 Finance Ministers endorsed the proposals at its meeting in July and further technical work will continue with a view to achieving a comprehensive agreement in October. Ireland will constructively engage in these further discussions and technical work over the coming months. The Department of Finance has launched a short public consultation on the proposed agreement.

Fundamental changes to European or international tax frameworks may impact the state's overall competitive offering and the level and type of trade carried out by multinationals based in Ireland. Given that multinationals contribute circa 80% of total corporation tax, this

could have very significant implications for the exchequer which must be factored into overall fiscal and enterprise policy.

It is important that Ireland's tax offering continues to be competitive for firms seeking an EU base for operations, and to attract and develop knowledge-based investment related to research and development and intellectual property. As the international tax environment is changing rapidly, maintaining a good reputation has become increasingly important for the sustainability of corporation tax policy here in Ireland. In this context, and in parallel with domestic reforms and restructuring, it is essential that the Government continues to be proactive in the ongoing international efforts to coordinate tax standards.

### 3.3 Sustainability of public finances

COVID-19's impact on the economy has elicited an unprecedented intervention from the Government in terms of direct support for individuals and businesses. In May 2020, about a million people were in receipt of these new payments and even though there had been some fluctuations throughout the year, by April 2021, around 910,000 people were receiving some form of income supports. These are in addition to the traditional jobseeker supports.

The cost of these supports has been evident. In 2020, a general government deficit of €18.4 billion (5% of GDP) was recorded. For this year, a deficit of €20.3 billion (5.1% of GDP) is in prospect. Public indebtedness is projected to be close to quarter of a trillion euros this year, the equivalent of 112% of Gross National Income (GNI); this would put the Irish debt-income ratio amongst the highest in the developed world.<sup>13</sup>

Whilst the stock of public debt has risen significantly, the cost of servicing this burden has decreased due to a fall in borrowing costs brought about by a decline in interest rates. The funding environment is expected to remain favourable over the medium term, reflecting sustained support from monetary authorities.<sup>14</sup> However, Ireland's elevated debt represents a challenge over the longer term, increasing the State's vulnerability to future shocks. Interest rates may rise in the future, thereby increasing the cost of servicing the debt. However, the fixed nature of the debt means it would take a sustained period of higher interest rates to significantly increase this cost. Similarly, the cost of borrowing may increase if the ECB were to reduce its bond purchase programmes or begin to increase interest rates or if the State pursued a debt trajectory significantly different to its peers.

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<sup>13</sup> [Summer Economic Statement](#), July 2021, Department of Finance and Department of Public Expenditure and Reform

<sup>14</sup> [Global economic outlook: Will faster economic growth bring higher price inflation?](#), March 2021, IHS Markit

There is also a risk that some revenue streams accruing to the State may decline, particularly in the area of corporation tax as outlined above, which would, if not compensated for, put further pressure on the exchequer. In addition, the State will face higher expenditure demands over the coming years in order to mitigate issues relating to a range of concerns, including housing, health, infrastructure, and climate change.

As the economy recovers, it is the Government's intention to phase out many of the temporary supports introduced during the COVID-19 pandemic. This is important given the volume of funding needed to preserve services at existing levels. The Department of Finance's Stability Programme Update notes that doing this by 2030 would require an extra €7 billion. In this context, it is critical that the temporary supports introduced to respond to COVID-19 are unwound as the impact of the pandemic recedes, as such an approach is required to ensure that these significant costs do not enter the core expenditure base and lead to permanently higher levels of expenditure. In addition, increases in core (non-COVID-19) Government expenditure need to be supported by sustainable revenue streams.<sup>15</sup>

Account must also be taken of significant public expectations of continuing increases in levels of public expenditure, which may have become embedded during the COVID-19 pandemic when normal fiscal constraints did not apply.

### **3.4 Vulnerabilities arising from Ireland's enterprise mix**

It is well established that Ireland's base of more than 1,600 multinationals plays a major role in the economy - accounting for 82% of corporation tax in 2020<sup>16</sup> and employing c. 245,000 people in 2020.<sup>17</sup> Ireland is internationally recognised for its strengths in a number of key sectors including the life sciences, digital technologies and business services (including finance and insurance). The majority of leading companies in those sectors have operations here and together these sectors account for more than 60% of Ireland's merchandise and services exports.<sup>18</sup>

This profile is a testament to Ireland's competitive strengths, attractiveness as a location of choice for mobile investment and continued ability to adapt to new technologies and

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<sup>15</sup> In their December 2020 [Fiscal Assessment Report](#), the Irish Fiscal Advisory Council also raised that a considerable portion of the increase in public spending announced in Budget 2021, amounting to €5.4 billion, was committed to without a clear-medium term as to how these commitments might be met

<sup>16</sup> [Corporation Tax 2020 Payments and 2019 Returns](#), 2021, Revenue

<sup>17</sup> [IDA Ireland Announces Results for 2020](#), 2021, IDA Ireland

<sup>18</sup> [Statistical Yearbook of Ireland 2019](#), 2020, CSO

emerging business sectors. However, it does give rise to a number of well acknowledged risks and issues that have to be factored into national enterprise and fiscal policy.

A recent OECD report, commissioned by IDA Ireland, outlined that the lack of diversification among Ireland's FDI base, in terms of sector, geography and region could expose the Irish economy to risks related to macroeconomic trends in trade and investment and to policy changes in partner countries.<sup>19</sup> In addition, just 10 companies account for about 50% of corporation tax, such that relocation decisions or similar taken by a single entity could pose a significant challenge. However, it should be noted that the latest figures reflect a significant increase from the previous year, which was consistent with the relatively stable trend concentration of receipts previously.<sup>20</sup> Further considerations arise regarding the regional distribution of companies as well as impacts on the cost of living, availability of housing (see section 4.2) and competition for talent (see section 3.5).

These risks notwithstanding, and as outlined in section 3.6 below, Ireland's multinational sector demonstrated remarkable resilience in the face of the pandemic, with a number of sectors including pharma and digital technologies experiencing record exports. Similarly, the internationally traded food and drinks sector performed well overall with exports declining by just 2% in 2020 to €13 billion.<sup>21</sup>

However, the experience across the domestically trading and SME sectors has been very different. While the gross value added of foreign-owned sectors expanded by 18% in 2020, value added from Irish-owned firms contracted by 9.5%.<sup>22</sup> And though as the Stability Programme Update 2021 outlines, these figures mask a wide range of differences across firms - within both the domestic and foreign-owned sectors - they demonstrate that broadly speaking the pandemic has been particularly severe for SMEs and has widened the gap between the indigenous and multinational sectors in Ireland.<sup>23</sup> For example, in 2019, labour productivity in Ireland grew by 3.1%. However, the headline figure masks a divergence in the performance of foreign and domestic firms. In 2019, while productivity in the foreign-owned sector grew by 4.5%, the domestic sector only recorded 1.8% growth in labour productivity.<sup>24</sup>

This has heightened the importance of strengthening the SME sector and of addressing a number of challenges that have previously been identified.<sup>25</sup> These include a relative lack of productivity growth among established SMEs, scope to increase levels of entrepreneurship

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<sup>19</sup> [FDI Qualities Assessment of Ireland](#), 2020, OECD

<sup>20</sup> [Corporation Tax 2020 Payments and 2019 Returns](#), 2021, Revenue

<sup>21</sup> [Export Performance & Prospects 2020 / 2021 Report](#), 2021, Bord Bia

<sup>22</sup> [Stability Programme Update](#), 2021, Department of Finance

<sup>23</sup> [Ibid.](#)

<sup>24</sup> [Productivity in Ireland 2019](#), 2021, CSO

<sup>25</sup> [SME and Entrepreneurship Policy in Ireland](#), 2019, OECD

and new business start-ups - particularly outside urban centres, and low direct engagement by SMEs in international trade; only c. 6% directly trade across borders – that is c.15,000 out of a possible 250,000 SMEs.

Work is ongoing to address these issues; however, there is a significant risk that individual SMEs, which do manage to withstand the damage that the pandemic has wrought, will be understandably focused on the immediate questions of survival and recovery. Combined with the impacts of Brexit and with the financial crisis still a very vivid memory for many, there is a risk that these more framework type issues may not be addressed over the short to medium term.

### 3.5 Labour shortages and capacity constraints

One conundrum which will have to be confronted is the fact of extensive skills shortages in certain areas at the same time as an overall rise in unemployment. In their Global Competitiveness Report 2020, the World Economic Forum highlights that talent shortages have become more pronounced internationally, particularly in relation to digital and related skills.<sup>26</sup>

Data on the Irish jobs market shows similar shortages with over half of recruitment firms surveyed in both 2019 and 2020 reporting difficulties in filling IT and engineering roles. In the same survey, 27% reported challenges in filling construction roles in 2020; a close to four-fold increase on 2019.<sup>27</sup> Given the composition of our enterprise base<sup>28</sup>, identified national priorities in increasing housing supply, retrofitting and investing in infrastructure and the high degree of mobility of construction, engineering and IT talent – it is important that measures are put in place to address these shortages. An education and training system that is sufficiently adaptable and resourced is central in this regard.

Risks to a sustainable and competitive job market also arise in relation to skill mismatches. A 2017 study by the OECD found that almost half (44%) of Ireland's workforce was mismatched.<sup>29</sup> Skills mismatches are driven by a combination of factors including the education and training system not providing the skills demanded in the labour market, and/or the economy not creating jobs that correspond to the skills of individuals. There is also a locational component whereby jobs are not available in locations where there are adequate skills or people cannot find jobs at their skill level where they live. Delivery of the

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<sup>26</sup> [Global Competitiveness Report: How Countries are Performing on the Road to Recovery](#), 2020, World Economic Forum

<sup>27</sup> [Difficult to Fill Vacancies Survey](#), 2019 and [Difficult to Fill Vacancies Survey](#), 2020, SOLAS

<sup>28</sup> Circa 42% of exports in 2019 were from the technology sector rising to 63% if technology intensive sectors such as pharma and financial services are included. [Statistical Yearbook of Ireland 2019](#), 2020, CSO

<sup>29</sup> [Getting Skills Right: Skills for Jobs Indicators](#), 2017, OECD

National Planning Framework, the role of the Regional Skills Fora and of the enterprise agencies are important in this regard.

Finally, and notwithstanding the increase in remote working in recent years, an important element of having the right skills and talent available are places that are attractive locations to live and work. Addressing the risks associated with the delivery of affordable housing (see section 4.2) are important in this context.

Closely linked to the issue of skills shortages, particularly in the areas of digital and construction, is the risk that capacity constraints will limit the delivery of housing and critical infrastructures and inhibit the potential for economic growth. These constraints are driven by a number of factors including the need to increase capacity within the public sector to manage large infrastructure projects effectively.<sup>30</sup> There is also scope to enable greater certainty regarding processes and timelines in relation to the planning system – including the greater adoption of online planning tools. These issues tend to lead to longer timelines, greater uncertainty and relatedly an upward pressure on costs. This creates risks for the public in terms of achieving value for money from exchequer spending and for enterprise in terms of Ireland's competitiveness. A further issue arises where infrastructures, such as the energy grid and broadband, are not sufficiently developed to meet growing demand – impacting citizens and enterprise alike.

### **3.6 Changes to international trading relationships**

As a small open economy and one of the most globalised countries in the world<sup>31</sup>, Ireland is particularly sensitive to changes in the international trading environment - from exchange rate fluctuations and changing market demands through to trade agreements and changes in technology.

These developments can have very varying impacts across different sectors and the economy more widely – and as such demand differing responses. This is clearly demonstrated by 2020 data where despite the pandemic causing widespread disruption, Ireland experienced record exports of €391.4 billion.<sup>32</sup> This was driven by significant growth in the pharma and ICT exports, in turn driven by blockbuster immunological drugs, COVID-19 related products, and the shift to home-working. At the same time, other sectors such as tourism, hospitality, transport and retail experienced major declines. These sectors account for significant

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<sup>30</sup> [Supporting Excellence: Capital Project and Programme Delivery Capability Review](#), 2021, Ernst & Young

<sup>31</sup> In 2019, Ireland was ranked 31 in the world for trade in goods and 7 for trade in services. [Trade Profiles 2020](#), World Trade Organisation

<sup>32</sup> [Summary of Ireland's Trade Performance](#), 2021, DETE

employment and tend to be regionally dispersed and so developments affecting these sectors can have an outsized impact on the domestic economy.

Notwithstanding the strong ICT and pharma exports, there is a risk that the pandemic could result in more permanent shifts away from trade and globalisation, exacerbating previous trade tensions and trends, with adverse implications for a small, open economy such as Ireland. Though shortages of particular medicines are fairly routine in the life sciences sector; the shortages of medical and protective equipment experienced as part of the COVID-19 pandemic are of a different order. It is likely that this will heighten protectionist tendencies in this, and potentially other sectors, at least in the short term.<sup>33</sup> Despite these tendencies, research from the OECD shows that international trade is essential for the manufacture, distribution and administration of vaccines globally.<sup>34</sup> It will be important for Ireland, the EU and international institutions to maintain efforts to preserve and promote balanced international trade.

Though it remains challenging to predict how and when the global economy will recover from the impacts of the pandemic, many analysts predict a return to global growth in 2021 and international trade has already recovered to pre-pandemic levels. The IMF forecasts global growth of 6% in 2021, moderating to 4.4% in 2022.<sup>35</sup> These forecasts are predicated on the successful rollout of the vaccine programme and there is a risk to global, and by extension Irish, growth rates should this not occur.

Ireland's main trading partners are the EU, the US and the UK which accounted for 30%, 22% and 13% of exports and 23%, 18% and 12% of imports respectively in 2019.<sup>36</sup> Recent economic forecasts are that the EU and the US economies will return to growth this year and, notwithstanding the impacts of the pandemic, it is likely that overall trade with these economies will remain strong.<sup>37,38</sup>

However, a number of risks do arise. In particular, developments in the area of international tax reform may impact the level and type of trade carried out by multinationals based in Ireland (see section 3.4 above). In addition, Ireland's trade is highly concentrated in a small number of, albeit large, economies. While it remains important to continue to build on these strong trade relationships, in line with existing enterprise and trade policy there is scope to increase trade with other jurisdictions, thereby reducing downside risk of developments in

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<sup>33</sup> [The New Age of Protectionism](#), 2021, Foreign Affairs

<sup>34</sup> [Using trade to fight COVID-19: Manufacturing and distributing vaccines](#), 2021, OECD

<sup>35</sup> [World Economic Outlook: Managing Divergent Recoveries](#), 2021, IMF

<sup>36</sup> [Statistical Yearbook of Ireland 2019](#), 2020, CSO

<sup>37</sup> [Spring 2021 Economic Forecast](#), 11 February 2021, European Commission

<sup>38</sup> [Summary of Economic Projections](#), 16 June 2021, The Federal Reserve

specific markets. Further considerations relate to overall competitiveness and productivity to ensure Ireland is a location of choice for internationally mobile investment across all sectors.

Though the EU-UK Trade and Cooperation Agreement (TCA) avoided the introduction of tariffs, Brexit has resulted in significant changes to trading processes and regulatory procedures. New procedures apply for moving goods to, from, or through Great Britain. These have resulted in changes in trade flows to and from Ireland, with a significant reduction in flows to and from Great Britain and a sharp increase in flows directly to EU ports. Work has been undertaken together with EU partners and the UK authorities to ensure the land-bridge remains an efficient route to market and the frequency of direct sailings to continental ports has increased significantly. However, there is a risk that the changes to trade flows may increase the costs of importing and exporting some products. The impacts of Brexit on Irish ports, airports, shipping companies and the freight sector have also been compounded by the pandemic and the associated decline in passenger numbers.

Further Brexit related changes will occur for EU traders when the UK introduces its new customs and border procedures on EU imports to Great Britain on a phased basis on 1 October 2021, and 1 January and 1 March 2022. The Protocol on Ireland/Northern Ireland means that no new procedures will apply to goods moving between Northern Ireland and Ireland (and the other EU member states).

A further consideration is that while the TCA provides for a significant level of openness for most elements of trade and investment, it entails a more complex trading environment for services. This may give rise to issues from a non-tariff barrier perspective including access for the provision of services and the recognition of professional qualifications. Work continues on a memorandum of understanding on regulatory cooperation regarding financial services between the EU and the UK.

As outlined above, the UK is one of Ireland's main trading partners and data points to Brexit having a significant impact on our bilateral trade – although this impact has begun to show signs of moderating. Exports to the UK grew by 7% in the first four months of the year and imports from the UK fell 28% versus the same period in 2020.<sup>39</sup> However, data for February showed that exports and imports had fallen by 11% and 53% respectively compared to the previous year. Further time and data will be required to make a definitive assessment of post-Brexit trade flow patterns, as a number of factors need to be assessed; particularly the effects of the pandemic, the end of the Brexit transition period and any impacts that new trade agreements negotiated by the UK may have on Ireland's trade with the UK. Further geopolitical considerations in relation to Brexit and trade are covered in section 2.3 above.

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<sup>39</sup> [Goods Exports and Imports April 2021](#), June 2021, CSO

Additionally, given the geographic proximity, shared language and cultural similarities, and up to now shared membership of the EU, the UK has long been a first destination for indigenous companies looking to expand into international trade and markets. There is a risk that the changed trading relationship will affect the trajectory of Irish based companies in expanding into international markets. It is important that enterprise policy and supports address this issue.

### **3.7 Disruption to secure and sustainable energy supply**

Due to our location as an Island on the edge of Europe, Ireland is vulnerable to the impact of any disruptions in the supply or cost of energy that may arise from natural disasters, geopolitical tensions or economic trends.

Ireland imports the vast majority of its energy requirements, oil, gas and transport fuels, from or via the UK. The Protocol on Ireland / Northern Ireland provides for the continuation of the Single Electricity Market on the island of Ireland. In order to meet our climate change obligations, Ireland will electrify its vital services and so the costs and risks around energy security will evolve. There is therefore an incentive to increase the use of our renewable resources and diversify our sources of supply by further developing electricity interconnection to neighbouring markets including France.

Although a large proportion of our energy needs are met through imports, it is worth noting that energy production in Ireland is increasing. This will reduce the importation of fossil fuels and contribute to achieving our renewable energy targets as set out in the National Energy and Climate Plan.

There is increased pressure on global resources due to climate change, environmental concerns and geopolitical tensions which creates doubt over the security and price of energy supply. For example, the prices of fossil fuels, particularly oil, have been volatile in recent years with increased prices being passed to the consumer. It is vital that Ireland ensures an affordable, sustainable and diverse energy supply.

Further pressures on the security of supply arise in relation to the expected closure of power stations that make up approximately 25% of conventional electricity generation capacity over the period to 2025. This is at the same time as increasing demands from a growing population and economy – including energy intensive activities such as data centres. There is also a need for extensive investment in grid infrastructure to support ambitious renewable energy targets, with significant cost and delivery challenges.

In the short to medium term these issues have been compounded by the pandemic which is impacting upgrading and development of existing infrastructures, as well as maintenance of some existing plants, which is creating significant challenges in security of electricity supply in the immediate period ahead.

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## 4. Social risks

### 4.1 Social cohesion

Societies struggle in the aftermath of economic contractions as many people have to cope with being displaced from the labour market. From a situation of near full employment in 2019, the unemployment rate is predicted to average around 16.3% in 2021 before declining to 8.2% in 2022 as the economy is fully re-opened.<sup>40</sup>

It is widely accepted that young people have been impacted greatly during the pandemic, particularly in relation to labour market impacts. The profound and damaging effects that COVID-19 has had on the older age cohort are also widely acknowledged and are addressed in section 4.4 below.

In June 2021, if those in receipt of the pandemic unemployment payment are classified as unemployed, then the aggregate unemployment rate was 18.3%. Yet when this aggregate is broken down by broad age group, it indicates a rate of 16.7% for those aged 15 to 24 years and 6.7% for those aged 25 to 74 years even though many in the former category would be in full-time education.<sup>41</sup> Notwithstanding this, the differential would be explained by the fact that many of the sectors in which young people would typically find employment – bars, restaurants, hotels – have experienced the most severe closures. These sectors have been heavily affected by the COVID-19 lockdown measures and they offer scant scope for working from home. A third of those in their early 20s work in retail, hospitality, arts or leisure jobs, compared to a fifth of workers aged 40-60 doing so.<sup>42</sup> The hospitality and tourism sector is also one of the last sectors in the economy to fully re-open and so many young people will be in the latter cohorts to regain employment, thus extending the differential impact of disengagement from the labour market.

As outlined in an OECD report *Youth and COVID-19: Response, recovery and resilience*<sup>43</sup>, for young people the pandemic has posed considerable risks in the fields of education, employment, mental health and disposable income. Today's youth and future generations will likely shoulder much of the long-term economic and social consequences of the crisis, and their present well-being may also be superseded by short-term economic and equity considerations. As illustrated by previous economic shocks, young people graduating in times of crisis will find it more difficult to find decent jobs and income, which are likely to

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<sup>40</sup> [Summer Economic Statement](#), July 2021, Department of Finance and Department of Public Expenditure and Reform

<sup>41</sup> [June - Monthly Unemployment Release](#), June 2021, CSO

<sup>42</sup> [Poverty, Income Inequality and Living Standards in Ireland](#), 2021, ESRI

<sup>43</sup> [Youth and COVID-19: Response, recovery and resilience](#), 2020, OECD

delay their path to financial independence. These risks are confirmed in survey data from the *Growing Up in Ireland Study* in March 2021, which revealed that of the 76% of 22-year-olds tracked by the study who were in employment before the pandemic, almost half had either lost their job or been temporarily laid-off since. Furthermore, almost half of 22-year-olds had scores on a measure of depressive symptoms that indicated 'low mood', up from 27% when these data were collected from the same respondents at age 20.<sup>44</sup>

Prior to COVID-19, a notable trend had been that globally, youth satisfaction with democracy was in the decline – not only in absolute terms, but also relative to how older generations felt at the same stages in life. This is not a life-cycle effect whereby people may start off critical but mellow with age. In developed democracies, rising wealth inequality and youth unemployment have left younger generations struggling with higher rental costs early in life, greater difficulties accumulating savings, higher debt burdens, a lower chance of owning a home, greater challenges in starting a family, and greater dependence upon the support of parents and relatives. Obviously, the economic ramifications of COVID-19, particularly with regard to younger generations, could exacerbate these trends and may erode trust.<sup>45</sup>

Economic recovery and growth, and social recovery, post-pandemic must be a shared process involving all communities and cohorts of society. Supporting sustainable, inclusive and long-term economic growth, will be required to enable a recovery that is just, fair and leaves nobody behind.

### ***Trust in government and media***

Broad trends indicate that globally the pandemic has put trust in government and the media to the test and may have heightened issues of trust that existed prior to the pandemic.

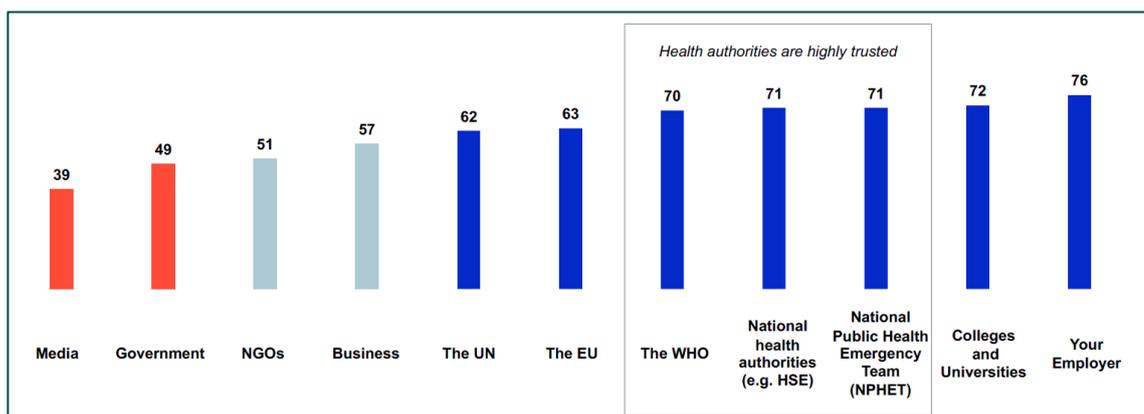
The global trend of rising populism and anti-establishment sentiment is further contributing to risks around this erosion of social cohesion and trust in institutions. This international populism can be seen as partly rooted in great divides, such as those based on age, geography and wealth. Issues arising from growing inequality coupled with a rise in populism may be further exacerbated by the role of social media in public debate. Conversely, there is potential for an increasing sense of isolation and exclusion for those who may not have the necessary resources or skills in terms of access to social media and services delivered online.

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<sup>44</sup> [Growing up in Ireland Key Findings: Special COVID-19 Survey](#), March 2021

<sup>45</sup> [Youth and Satisfaction with Democracy: Reversing the Democratic Disconnect?](#), 2020, Cambridge, Centre for the Future of Democracy

**Chart 2: The pandemic highlights health authorities among Ireland’s most trusted institutions**



Source: Edelman Trust Barometer, 2021. Country Report Trust in Ireland February Supplement (% trust)

In a 2017 report, the OECD noted a decline of people’s trust in institutions in the aftermath of the global financial crisis. Furthermore, lower public trust in institutions limits the capacity of governments to implement their policies, and has been linked to increasing dissatisfaction with democracy.<sup>46</sup> According to the report, Ireland was below the OECD average in terms of the percentage of the working-age population who felt that they have a say in what the government does.<sup>47</sup>

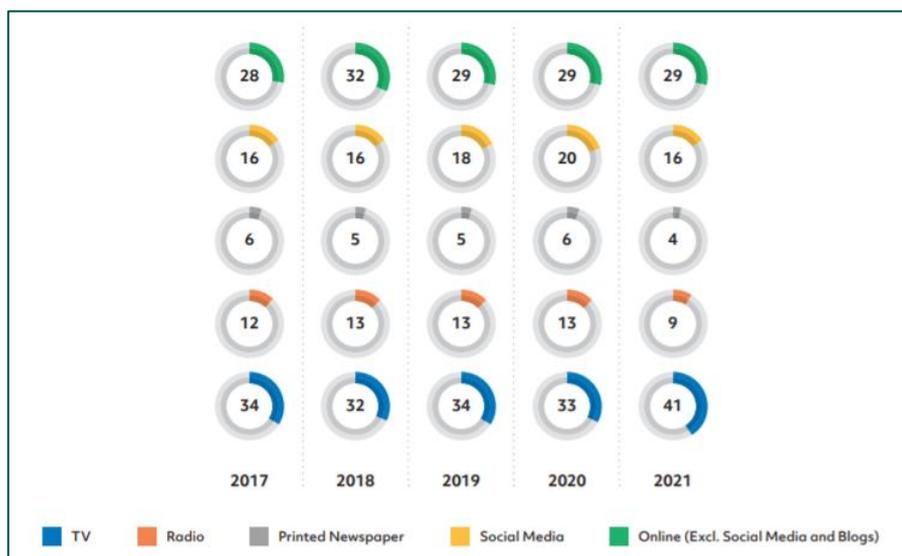
The factors outlined in this section might lead to an easy assumption that social cohesion will weaken and that public trust is on the wane in Ireland. However, it is not clear that this is the case. Recent survey work shows that trust in government has increased in recent years from 38% in 2018 to 49% in February 2021. Trust in public health authorities is appreciably higher and they are among Ireland’s most trusted institutions.<sup>48</sup> The past year has seen trust in the news media increase, particularly in established news brands, with 78% saying they trust RTÉ, the public service broadcaster. Local news sources are also highly trusted.<sup>49</sup> It is important to work towards maintaining and then increasing public trust in government to ensure as strong a possible social cohesion in Irish society.

<sup>46</sup> [How’s Life? 2017, Measuring Wellbeing](#), 2017, OECD

<sup>47</sup> [Ibid.](#)

<sup>48</sup> [Edelman Trust Barometer, Country Report - Trust in Ireland](#), 2021, Edelman

<sup>49</sup> [Digital News Report - Ireland](#), 2021, Reuters

**Chart 3: Main sources of news by year, Ireland (%)**

Source: *Digital News Report 2021, Reuters*

## 4.2 Housing and sustainable development

Shortages in the supply of housing had been identified as a risk in previous iterations of the NRA. Although progress was being made in terms of the number of dwellings being made available, COVID-19 and its associated restrictions have reduced the number of housing completions.

In 2020, just under 21,000 housing units were finished and it is expected that the figure for 2021 will be in the range of 15-20,000. Severe restrictions, with some exceptions, were placed on construction activity in the first quarter of 2021 which explains the relatively low level of expected output. Forecasts for 2021 have to be set against the overall level of demand for housing and meeting the backlog in pent-up demand which the ESRI estimates to be 33,000 per annum.<sup>50</sup>

Given that there has been a shortfall in the required number of housing units and this situation is unlikely to be rectified quickly, it is quite possible that a shortage of housing may drive up prices. It is estimated that the pandemic has given rise to an increase in household savings of between €11-12 billion.<sup>51</sup> If even a portion of this figure is spent on housing, it would represent significant inflationary pressure in the market at a time when supply is

<sup>50</sup> [Regional Demographics and Structural Housing Demand at a County Level](#), December 2020, ESRI

<sup>51</sup> The Department of Finance's [Stability Programme Update](#), considers that households will unwind about 60% of the total €11.5 billion in excess deposits, spread between consumption and housing investment

constrained. With supply being relatively constrained, there is a risk that housing prices could rise significantly. However, the Central Bank's macro-prudential rules will act as an inhibitor to such rises. The gap between the price of new housing built to Nearly Zero Emission Building standards and second-hand homes is also increasing.

Additionally, infrastructure constraints and ongoing construction of and under-supply (and affordability) of housing and commercial properties, could further inflate construction sector costs. Some suppliers warn of price increases ranging from 5% to as much as 20%<sup>52</sup> and industry figures have noted that prices have risen due to worldwide and local shortages, Brexit, COVID-19 and spikes in demand. There are also growing difficulties arising from local opposition to housing and other infrastructure, as well as the increased willingness of the courts to intervene in planning matters through judicial reviews adding delays and costs.

If housing purchases are unaffordable for many people, then it stands to reason that more people will rent. And in the absence of a sufficient increase in the supply of rental properties, rents will rise. This has been the case between 2013-2019 where rents increased by 6.3%, on average, each year,<sup>53</sup> even though they have largely stabilised during COVID-19. This has led to a phenomenon where some commentators speak of a 'locked-out' generation, unable to afford a household but paying out more in monthly rent than they would on a monthly mortgage.<sup>54</sup> In addition, high rents impact Ireland's overall competitiveness and attractiveness as a place to live and work for internationally mobile talent.

There are also legitimate concerns about the effect rental pressures have on homelessness. Homelessness has significant human, social and financial costs. In addition to the increased number of rough sleepers recorded in recent years, many families have been living for long periods of time in emergency accommodation with considerable impacts on family life although these figures are at their lowest since February 2016.

One of the principal issues pertaining to housing is ensuring that appropriate housing is built in suitable locations. The National Planning Framework (NPF) sets out a strategy of compact growth whereby 50% of all new homes will be provided within the footprint of the five major cities and their suburbs and that 30% will be provided within the footprint of other major towns.

This objective aims to prevent a dispersion of homes at the edge of our cities and towns which produces a high car dependence and makes it difficult to provide adequate public transport. It also aims to ensure the development and preservation of vibrant town and villages. Achieving compact growth would inject life into these locations and reduce

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<sup>52</sup> [Builders facing double-figure raw material price hikes](#), 27 April 2021, The Irish Times

<sup>53</sup> [Housing Affordability in Ireland: Economic Brief](#), 2020, European Commission

<sup>54</sup> [The Irish Equity Home Loan, Discussion Report](#), 2020, Property Industry Ireland – Ibec

emissions by making car journeys less of a necessity. Achieving compact growth will require strategic investment in key enabling infrastructure, such investment will require exchequer support.

The NPF extends far beyond this vision of compact growth and is the overarching spatial strategy to guide Ireland's planning up to 2030. It has been accompanied by a National Development Plan which sets out the investment priorities to underpin the NPF. Overall funding of €116 billion has been allocated up to 2027. The NDP is currently being reviewed to ensure it is fit for purpose to accomplish the ambitions outlined in the Programme for Government. The review will have to meet difficult challenges of addressing fundamental issues such as decarbonisation and digitalisation as well as assisting in re-orienting the economy whilst also helping to maintain the sustainability of the public finances.

### 4.3 Migration and integration

Migration remains one of the most contentious and contested issues in political debates across many countries in recent years. Ireland's location in Europe means that to date it has not felt significant migratory pressures, however, this should not induce complacency about the effects that migration and integration can generate. The fact that COVID-19 has pushed millions of people into extreme poverty may increase these pressures.

In terms of internal integration risks, Ireland has become a much more multi-ethnic society in slightly over a generation; a transformation reflected in both urban and rural communities. The 2002 Census was the first to include a question on nationality<sup>55</sup>, and Census 2016 shows a 139% increase in the number of people without Irish nationality, that is 17.3% of the population was born outside the State<sup>56</sup>, and 11.6% of the population do not hold Irish nationality.<sup>57</sup> Accordingly, this brings with it a requirement to be cognisant to the changes in society, for example the potential for language to become a barrier in accessing Government communications and services.

The ESRI's *Monitoring Report on Integration 2020* states that integration not only allows immigrants to contribute to the economic, social, cultural and political life of their host country, but is also important for social cohesion and inclusive growth.<sup>58</sup> The COVID-19 pandemic has tended to worsen existing disadvantage experienced by migrants and ethnic minorities in Ireland. The ESRI's December 2020 report on *COVID-19 and non-Irish nationals in Ireland* notes that non-Irish nationals are over-represented in sectors severely affected by

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<sup>55</sup> In the 2002 Census, 224,261 people were recorded as not having Irish nationality

<sup>56</sup> This figure includes people of Irish nationality who were born outside the State, including in Northern Ireland

<sup>57</sup> [Census 2016 Summary Results – Part 1](#), Dublin: 2017, CSO

<sup>58</sup> [Monitoring Report on Integration](#), 2020, ESRI

COVID-19 closures.<sup>59</sup> Those of Black/Black Irish ethnicity, those of Asian ethnicity and particularly Irish Travellers are over-represented in COVID-19 cases compared to their proportion of the population.

**Table 2: Profile of COVID-19 deaths by ethnicity and nationality in Ireland**

Ethnicity	Deaths	% of deaths	% of population (2016)	% aged over 65 (2016)	Deaths as proportion of cases (%)
White Irish	1,056	92	82.2	10.2	2.7
White Irish Traveller	*	*	0.7	1.7	*
Any Other White Background	26	2.3	9.5	2.9	0.8
Black or Black Irish	*	*	1.4	0.6	*
Asian or Asian Irish	5	0.4	2.1	1.2	0.2
Other incl. Mixed Background	*	*	1.5	2.6	*
Not Stated	49	2.6	2.6	11.7	2.5
<b>Total</b>	<b>1,145</b>	<b>100</b>	<b>100</b>	<b>9.1</b>	<b>2.3</b>

Nationality	Deaths	% of deaths	% of population	% aged over 65	Deaths as proportion of cases (%)
Irish	1,057	92.3	87	14.4	2.5
Non-Irish	59	5.2	11.4	4.8	1
Not Stated incl. No Nationality	29	2.5	1.5	14.7	14.7
<b>Total</b>	<b>1,145</b>	<b>100</b>	<b>100</b>	<b>13.3</b>	<b>2.3</b>

\* Indicates a cell number < 5 or a cell number < 5 can be identified so is suppressed in the table. This explains why the total of deaths by ethnicity is higher than sum of deaths by ethnic groups.

Source: COVID-19 and Non-Irish Nationals in Ireland, 2020, ESRI (CSO - Computerised Infectious Disease Reporting up to 25 November 2020 data matched to 2016 census data)

<sup>59</sup> [COVID-19 and Non-Irish Nationals in Ireland, 2020, ESRI](#)

The pandemic focused attention in particular on the inadequacies of the direct provision system for asylum seekers. The Government's White Paper on Direct Provision will address this by changing the accommodation model and providing other supports to International Protection applicants. The Department of Justice is also working to reduce processing times for International Protection applications. The effective implementation of these planned reforms will be vital to ensure that applicants can integrate with independence into the community.

Ireland has long depended on migrants to alleviate shortages in the tightest sectors of the labour market, including for example in the health, social care, digital and IT sectors. While the medium to long term effects of COVID-19 on the labour market, are not yet fully known, what is clear is that would be a risk to certain sectors of our economy if migrants did not continue to choose to live and work in Ireland.

Brexit has introduced new potential risks around immigration including an increase in illegal movement of third country nationals into Ireland from the UK, potentially resulting in an increase in international protection applications, as well as legal divergence possibilities in relation to asylum matters. There may also be labour market implications as Brexit evolves whereby EEA nationals choose to work in Ireland rather than the UK, post-Brexit. The effects of any such outcomes will depend on the scale of such applicants and workers into Ireland.

Notwithstanding the issues outlined, the increase in the immigrant population in Ireland has occurred in a short time frame and with relatively limited upheaval compared to other countries. However, as above, Ireland should not be complacent. Failing to maintain an ongoing level of cohesion, especially as second and third generation migrant communities emerge, represents a significant risk of negative consequences, in line with those experienced in other countries. It is crucial that we continue to support migrants to participate fully in our society.

## 4.4 Demographic change

### *Ageing population and associated challenges*

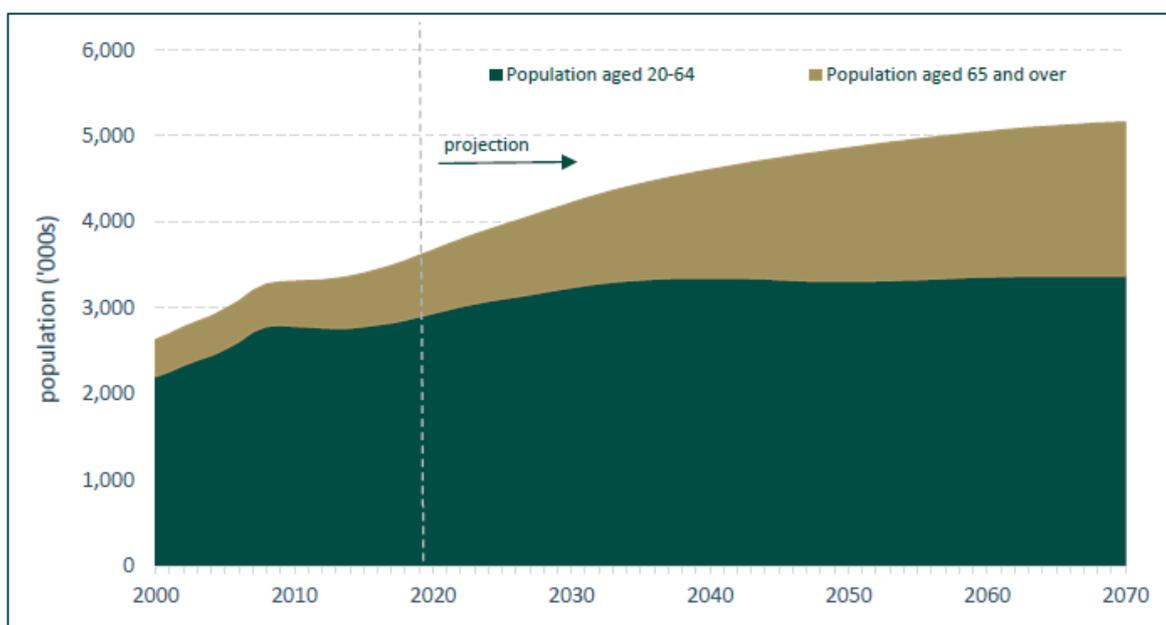
Ireland's demographic profile is set to change significantly over the coming decades. The population aged 65 and over is projected to grow significantly faster than the population aged 20 to 64, i.e. the working age population over the projection period. Reflecting these changes, the old age dependency ratio is set to increase from approximately 24% in 2019 to 47% by 2050. Put another way, while there are currently around 4 persons of working age for each person aged 65 and over; by 2050, the figure will be just over 2.<sup>60</sup>

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<sup>60</sup> [Stability Programme Update](#), 2021, Department of Finance

Though Ireland has a comparatively young population relative to other European countries, it faces the same longer-term ageing related challenges, particularly the sustainability and coverage of pensions. The Irish pension system faces a number of very serious demographic, adequacy and sustainability challenges. The task of financing increasing pension spending will fall to a diminishing share of the population and substantially increase the pressure on the Social Insurance Fund. In addition, Ireland has a very low level of private pension coverage, with approximately only 35% of the private sector employed population covered by a supplementary pension. This suggests that a high percentage of the working population is not saving enough, or is not saving at all, for retirement, reflecting a significant risk.

**Chart 3: Projection - Population aged 20 and over by age group, 000s**



Source: Ireland's Stability Programme Update, April 2021 (CSO Population and Migration estimates, Eurostat EUROPOP 2019 and Eurostat demography and migration database)

In addition to the private pension challenge, Ireland's ageing demographics will have implications for the economy and the evolution of the public finances. Older age cohorts tend to be the highest users of health, social care and social services and have more complex care needs. Ageing costs are expected to increase by 10.2% of GNI by 2070. Pension-related expenditure, the biggest component of age-related expenditure, is projected to increase by 4.9 percentage points by 2070, while expenditure on healthcare and long-term care is projected to increase by 2.3 and 3.2 percentage points of GNI respectively. Operating in the other direction, the projected expenditure on education is expected to decrease by 0.2 percentage points of GNI over the projection period.

In the more immediate term, many in the older adult population have been adversely affected by the COVID-19 pandemic. The burden of COVID-19 illness has been borne by

people over 65 years and mortality rates approach close to 20% in the oldest group. International data emerging has highlighted high rates of post COVID-19 complications in the older age group. There is a need for a structured response to identify older post COVID-19 survivors and support them with an evidence-based approach to rehabilitation and coordinated access to services.

In addition to the impacts on those that had COVID-19, prolonged cocooning in older people is leading to what is now being called a 'deconditioning pandemic'.<sup>61</sup> Restrictions and cocooning have greatly reduced opportunities for social participation. Increased loneliness and social isolation have negative consequences for the physical and mental wellbeing of older adults with many reporting limited levels of physical activity and low levels of life satisfaction.<sup>62</sup>

The pandemic has also exposed fragilities in the configuration and design of older persons services. The need to move as much care as possible away from congregated settings is highlighted in extensive national and international learning arising from the pandemic. The *COVID-19 Nursing Homes Expert Panel Report*<sup>63</sup> highlights a number of the issues and risks associated with current services, particularly the configuration of nursing homes services. It noted in particular the change over time of the public-private mix, where the previous 80% of public delivery of service has now evolved into 80% private provision of nursing home care services. HIQA's recent publication, *The Need for Regulatory Reform*, similarly highlights the risk concerned with the ongoing consolidation of the market.<sup>64</sup>

The moderating pace of population growth also presents a challenge as additional labour supply becomes scarcer, with labour productivity becoming the main source of improved living standards. In the absence of improbably large immigration of people of working age, the increased dependency ratio will impact on areas such as education, child income supports, healthcare, long-term care, housing and pension provision. Each of these will be an area of concern but as referenced above pensions and health/social care will likely be the most significant.

Over and above the share of the population of working age, there is a risk of limiting participation in the labour market if there is a lack of perspective on meeting the needs of different groups of citizens. For example, a lack of affordable childcare options acts as a

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<sup>61</sup> [The impact of COVID-19 pandemic and societal restrictions on service delivery](#), May 2021, HSE

<sup>62</sup> [Altered lives in a time of crisis: The impact of the COVID-19 pandemic on the lives of older adults in Ireland](#), 2021, tilda

<sup>63</sup> [COVID-19 Nursing Homes Expert Panel: Final Report](#), 2020, HSE

<sup>64</sup> [The Need for Regulatory Reform](#), 2021, HIQA

significant constraint on participation in the labour force by women, single parents or the lower-earner in a couple.

### ***Intergenerational tensions***

As outlined in section 4.1 above there is obvious an age differential in how citizens experienced the effects of the pandemic.<sup>65</sup> While older people were most vulnerable to severe illness and death from COVID-19, young people were the group most affected by increased unemployment and may find it more difficult to forge a path to financial independence. To avoid exacerbating intergenerational inequalities and to involve young people in building societal resilience, governments need to anticipate the impact of mitigation and recovery measures across different age groups.

It is likely that young people and older workers will face the impact of the economic challenges posed by COVID-19. The younger cohort have suffered disruption to their education and may find it difficult to enter a contracting labour market and are more likely to be working in exposed sectors. The older cohort of workers may be at risk of ageism, redundancies, and may find it more difficult to re-enter the labour market. It is vital that we understand the demographic impact of a post COVID-19 environment and we seek to promote intergenerational fairness, build consensus between generations and avoid any further development of intergenerational tension.

## **4.5 Digital exclusion**

### ***Drive towards digitalisation***

When the COVID-19 pandemic led to restrictions and lockdowns, much of the world moved online. This was an accelerated digital transformation that had been underway for decades. Remote working and learning and e-commerce have surged. There is a growing importance of digital technologies and communications infrastructures in our daily lives which necessitates an inclusive digital transformation, with coordinated and comprehensive strategies that build resilience and bridge digital divides for a post-COVID-19 era.<sup>66</sup>

Ireland is investing heavily in its National Broadband Plan to ensure universal connectivity and this is a work in progress and many organisations such as schools and firms will seek to be digitally ready. Government must also play its part in putting more services online and offering its citizens greater convenience in terms of access.

As important as the 'hard' infrastructure is, it is equally important that people have the capabilities needed to avail of opportunities online. Digital inclusion is a priority and if left

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<sup>65</sup> [Youth and Covid-19: Response, recovery and resilience](#), 2020, OECD

<sup>66</sup> [Digital Transformation in the Age of COVID-19: Building Resilience and Bridging Divides](#), 2020, OECD

unaddressed represents a risk to the Irish society and economy.<sup>67</sup> The National Recovery and Resilience Plan published in June 2021 has included, as one of its three priorities, accelerating and expanding digital reforms and transformation.<sup>68</sup> Under the Plan, there will be investments to a total value of €295 million to support Irish businesses and citizens to adapt to, and reap the benefits from digitalisation.

The pandemic has acted as a catalyst for digitalisation in some sectors and it is unlikely that economies and societies will return to 'pre-COVID-19' patterns. Faced with a future where jobs, education, health, government services and even social interactions may be more dependent on digital technologies than ever before, failing to ensure widespread and trustworthy digital access and effective use risks deepening inequalities, and may hinder countries' efforts to emerge stronger from the pandemic. An inclusive approach to digital transformation will be vital.

Data-intensive technologies offer greater consumer choice and personalisation, but also pose new risks to safety, privacy and security, and may discriminate against the disadvantaged. In 2019, over 80% of OECD countries reported artificial intelligence and big data analytics as the biggest challenges to privacy and personal data protection, followed closely by the internet of things and biometrics.<sup>69</sup> It is vital that policies developed in the drive towards digitalisation are cognisant of privacy, data protection and enforcement and accountability for data controllers.

### ***Digital literacy and misinformation***

Social media, as a means of helping billions of people around the globe connect and communicate, has become effectively essential. However, while social media platforms offer users many benefits, the limited oversight of users and their data has led to a substantial risk of spreading disinformation, with the associated challenges and risks around regulatory systems readily apparent.

This can have an effect on different levels from individuals to institutions and can exacerbate divisions and already growing levels of public distrust and rising populism. There remains a considerable concern about the targeting of individuals on social media platforms with advertisements and sponsored news stories to influence beliefs, opinions and possibly voting intentions. A driver of this risk is that large numbers of citizens now get their news from social media platform. However, in the Irish context, a recent study carried out by Reuters with support from the Broadcasting Authority of Ireland shows that the number of people citing social media as their main source of news has dropped four percentage points to 16%

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<sup>67</sup> [Digital Inclusion in Ireland](#), 2021, NESC

<sup>68</sup> [National Recovery and Resilience Plan 2021](#), Department of Public Expenditure and Reform

<sup>69</sup> [Digital Economy Outlook 2020](#), OECD

from 20% last year.<sup>70</sup> There is also a risk that the multiplicity of information platforms could lead to more polarised societal viewpoints.

Ireland remains vulnerable to this risk, as was seen, for example, during the referendum in May 2018 on the Thirty-sixth Amendment of the Constitution Bill 2018, whereby it was found that ads from untraceable groups were used to “mislead voters, discredit political figures and groups, mimic official or neutral information sources, gather voter data and share disturbing images.”<sup>71</sup>

Studies have shown that false information spreads “farther, faster, deeper and more broadly” due to its sensationalist and emotive nature.<sup>72</sup> Online disinformation poses a risk to citizens when it comes to, for example, the adherence to public health measures, the uptake of vaccinations and the integrity of any referendum or electoral process. Given the pace of technological change and the rapid dissemination of disinformation online, it is vital to have comprehensive policy responses and adjust policy objectives in light of its evolution. Ultimately, countering this risk will rest upon citizens having the capabilities to distinguish the well-grounded information from the baseless, competencies which the educational system should help instil and underpinned by effective regulation.

### ***A flexible education system to nurture digitalisation and the knowledge economy***

An adequately resourced and flexible higher education and further education and training system is crucial for Ireland to be on a sustainable process of digitalisation. Skills are the global currency of 21<sup>st</sup> century economies, and many countries are placing a major focus on talent development and investment in education and training. Ireland’s higher education institutions have played an important role in differentiating Ireland’s talent pool in an international context. The sector has also been crucial in aiding the establishment of a successful entrepreneurship ecosystem, growing indigenous multinational enterprises, and ensuring our continued attractiveness for foreign direct investment.

The *National Strategy to Improve Literacy and Numeracy among Children and Young People* refers to the importance of developing and enhancing digital literacy skills throughout the continuum of education. All levels of education, from the early years upwards, have an important role to play in nurturing digitalisation among young people.

Notwithstanding the progress made in recent budgets in increasing investment in higher education as well as other developments such as a new Human Capital Initiative, it is of paramount importance to ensure adequate levels of funding for the sector are maintained, and that an appropriate, sustainable model of funding is in place. This is especially the case

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<sup>70</sup> [Digital News Report Ireland](#), 2021, Reuters

<sup>71</sup> [Policy proposals for regulating online advertising](#), 2018, Transparent Referendum Initiative

<sup>72</sup> [Disinformation in the digital age: The need to regulate](#), 28 November 2019, IIEA

in light of the demographic growth and strong demand for further and higher training and education places forecast over the immediate decade ahead, the infrastructure pressures associated with such growth, and the need to maintain and build on the quality of the sector.

Supports for research and innovation ensures countries are enabled to prepare for the crises of tomorrow but public investment in research and innovation in Ireland is below the EU average and other OECD advanced economies.<sup>73</sup> The complexity of some emerging technologies exceeds the research capacities of even the largest individual firms. This necessitates a spectrum of public-private research partnerships. Ireland would risk losing the benefit of being a competitive research centre and of not maximising its talent and knowledge, if we do not maintain a smart, innovative approach to our investment and ensure that we prioritise this investment.

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<sup>73</sup> [The Research and Development Budget 2019-2020: Government budget allocations for R&D, 2020](#), Department of Enterprise, Trade and Employment

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## 5. Environmental risks

### 5.1 Climate change

It is widely acknowledged that inaction against climate change risks severe consequences, including for the viability of the State's economy, infrastructure, public health, biodiversity, and ability to sustainably produce food.

Extreme weather events in recent years have demonstrated the risks to Irish society and observations show that the rate and scale of Ireland's climate change is consistent with global trends. Immediate risks to Ireland are those associated with changes in extremes, such as droughts or floods and storms. Future impacts include water shortages in summer, wildfires, and rising sea levels. Globally, sea level rises have already been observed and are projected to continue increasing flood and erosion risk to coastal communities.

There is consensus that many of the effects of climate change are unavoidable at this stage and that severe weather can be a risk to lives, property and the natural environment. It is crucial that Ireland take steps to develop measures and ensure our systems are resilient and can cope with conditions that will arise in the future.

From a health perspective, many of the factors which contribute to the climate crisis— such as increasing urbanisation, intensive agriculture, air travel and lifestyles powered by fossil fuels - are also risk factors for future pandemics, as outlined in the Lancet's fifth annual report on the health and climate change.<sup>74</sup>

#### ***Emissions and renewables targets***

The Programme for Government commits to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (a 51% reduction over the decade) and to achieving net zero emissions by 2050. Recent figures released by the Environmental Protection Agency (EPA) and the Sustainable Energy Authority of Ireland (SEAI) highlight estimated emissions reductions of c. 6% in 2020, largely due to the shutting down of the economy and travel as a result of the COVID-19 pandemic. The Programme for Government has also committed to delivering at least 70% renewable electricity, which is approximately equivalent to tripling Ireland renewable electricity capacity. Overall, Ireland has committed to increasing the share of renewable energy, across electricity, heat and transport sectors, threefold by 2030 as part of the EU's current 2030 energy and climate objectives. This

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<sup>74</sup> [Fifth Annual Report - Countdown on health and climate change](#), 2020, The Lancet

indicates the scale of transformation required to meet ambitious emissions reduction targets and avoid rebound in the post-COVID-19 recovery period.

In terms of climate change, there are environmental, social and moral imperatives to act. Early action is needed across all sectors to mitigate greenhouse gas (GHG) emissions and establish adaptation measures to the effects of climate change. From a distributional perspective, the UN Refugee Agency outlines how the impacts of the climate crisis “are unevenly weighted against the world’s most vulnerable people”, especially displaced or stateless people. According to the Agency, weather-related hazards displaced 24.9 million people across 140 countries in 2019, with the potential for this number to double annually without demonstrable climate action.

The cost of inaction exceeds the cost of action and this cost differential will rise steeply with time. It will be critical to take action on climate change, as set out in the National Development Plan and the Climate Action Plan to avoid threats to human health, economic development, property, infrastructure and ecosystems, reputational damage, as well as risks to food, water and energy security and population displacement/mass migration.

There are also potential costs to the exchequer if we fail to achieve compliance with our EU GHG emissions and renewable energy targets. While being mindful of Just Transition and the need to protect the vulnerable in our society from potential impacts of transition, there remains an economic risk if Ireland fails to price the cost of carbon into our economic model. Appropriate long-term signals to all societal cohorts must be provided to support behavioural change. Failing to adequately plan for a successful Just Transition would be a risk to the quality of our natural environment in addition to our island’s green reputation.

We need to plan our approach towards carbon neutrality for the agricultural sector in a manner that recognises the essential economic and social role of the sector and must invest in innovative economic opportunities, for example in the bio-economy.

### ***Decarbonise the economy***

Societal willingness to tackle the longer-term risks of climate change could present a challenge if not targeted and supported correctly, as significant up-front investment is required, which may not yield benefits for many decades. Fundamental behavioural change will be necessary in this regard, from the public and private sectors as well as the general public, given that our efforts to tackle climate change effectively are predicated on significant buy-in from these groups. There is a necessity for realistic and frank discussion about what investments will be needed to meet EU 2030 targets and ensure that Ireland is on a verifiable and just pathway to decarbonisation. This is underscored by the EPA projections that indicate that Ireland's non ETS emissions in 2020 could be 7% below 2005 levels as against the binding EU target of emissions being 20% below 2005 levels.

Failure to rapidly move to a carbon-neutral economic model will have far reaching negative impacts on the economy and the public finances; undermine the long-term, sustainable

competitiveness of the economy; and lock Ireland into a redundant fossil-fuel based economic model. A whole of Government approach to climate action will be required to ensure policy coherence and to meet the EU requirements. Embracing the transition will support further job creation through the development of new and emerging sectors. Maximising the potential of our renewable energy resources, energy efficiency measures and electricity interconnectors is core to ensuring a secure and sustainable energy supply. Having appropriate processes and policies in place in terms of planning, technology, skills and community engagement are central in this regard.

## 5.2 Biodiversity loss

A 2019 UN biodiversity report outlined the impact of humans on nature and noted that nearly one million species are at risk of becoming extinct within decades and that unless profound action is taken, current attempts to preserve the earth's resources will likely fail. The World Wildlife Fund noted in a 2018 report that the Earth is losing biodiversity at a rate seen only in mass extinctions. In 2017, the Biodiversity Indicator Survey showed significant threats to Ireland's biodiversity and that 91% of Irish habitats designated under EU law are inadequate or of bad status.<sup>75</sup> In addition, Irish biodiversity is highly vulnerable to the impacts of climate change and has a low adaptive capacity compared to other vulnerable sectors.

The National Biodiversity Plan<sup>76</sup> will address these threats and the need for increased funding for biodiversity is addressed in the National Development Plan. Ireland is a party to the UN Convention on Biological Diversity and is committed to producing action plans to meet the Convention's targets. The risks of not delivering on these commitments are stark and far-reaching, and include loss of habitats and consequent pollinator decline, with one third of Irish bee species threatened with extinction.

## 5.3 Extreme weather events and other natural disasters

In recent years there has been an increase in the number of severe weather events in Ireland, particularly those leading to flooding, coastal flooding and erosion, severe cold/snow events and prolonged periods of drought. This rise in extreme weather events is in part attributable to climate and is likely to escalate in frequency and severity. A failure to address the root

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<sup>75</sup> [Biodiversity Ireland Indicators](#), 2019, National Biodiversity Data Centre

<sup>76</sup> [National Biodiversity Plan](#), National Parks and Wildlife Service

causes of climate change both domestically and globally will lead to increased occurrences and severity of these events and associated risks<sup>77,78</sup>.

Storm<sup>79</sup> events are experienced in Ireland typically four or five times each year, with considerable variability from year to year. Storms normally impact at local or regional level, with the southwest, west and northwest regions of the country most often affected.<sup>80</sup> Along with damage caused directly by the strong winds, storms can give rise to considerable damage in coastal regions caused by high waves, or by storm surges leading to flooding.

Ireland has experienced a number of significant flooding events in recent years with major impacts on the local environment and economy, and in particular on the people living and working in the affected areas. It is projected that the number of heavy rainfall days per year may increase, which could lead to an increase in flooding incidents. The Government Task Force on Emergency Planning has noted a reasonable worst-case scenario as that of a flood of the magnitude of the 2015/16 Shannon river flood, when one third of river-level gauges recorded their highest readings ever and the area experienced a sustained duration of flooding.

Citizens are particularly financially exposed to extreme weather events, most notably flooding, as they may find it more difficult to acquire insurance for their premises and belongings following a flood. Damage to infrastructure can result in significant longer-term effects. This includes disruption related to the availability of clean water and the discontinuity of electricity supply and inhibited access to the transport and telecommunications networks. In addition, flooding can lead to reduction in purchasing power, reductions of land value and, subsequently, increased economic vulnerability of the affected areas. Moreover, the costs associated with recovery and rehabilitation may divert the capital needed to maintain the normal levels of production and services.<sup>81</sup>

The Office of Public Works has highlighted that coastal erosion presents a significant risk to Ireland's coastline. Approximately 74,000 hectares of land are at risk of being lost to the sea, and one third of the nineteen coastal local authorities have land zoned for housing, commercial and industrial use in areas of contemporary coastal erosion. The highest rates of coastal erosion typically occur along the east and south east coast. The OPW estimates that

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<sup>77</sup> [Over 70,000 Irish addresses at risk of coastal flooding by 2050](#), 21 May 2020, The Irish Times

<sup>78</sup> [Irish floods becoming more severe due to climate impact](#), 2 September 2019, greennews.ie

<sup>79</sup> Storms are defined as having mean wind speeds between 65 km/h and 80km/h and/or gusts between 110 km/h and 130km/h. These are Orange level winds in the colour coded system used internationally by National Meteorological Services

<sup>80</sup> [National Risk Assessment 2020](#), 2021, Office of Emergency Planning

<sup>81</sup> [Flood Management in Ireland](#), 2018, European Association of Remote Sensing Companies

80% of the damages associated with a 1 metre rise in sea level are expected by the year 2050, with the balance of the damages up to the year 2100.

Prolonged periods of drought such as that of summer 2018 may have significant impacts on the supply and quality of water and on food production (growing crops and livestock). Marine environments may also be impacted by climatic effects such as increasing sea temperatures and increasing CO<sub>2</sub> levels in seawater with effects on marine ecosystems – impacting on certain fisheries and coastal communities. Ireland's geographic position means that it is less vulnerable to large scale natural disasters such as earthquakes, tsunamis and on-island volcanoes. However, there is the potential that events elsewhere could cause adverse effects; for example, the eruption of Katla in Iceland, which could cause disruption to aviation services in Ireland.

## 5.4 Pandemics

Recent experience of COVID-19 has emphasised that in addition to the potential to cause death and illness on a significant scale, pandemics have the potential to dramatically disrupt normal social and economic activity. Advance planning and preparedness are critical to help mitigate the impact of any future pandemic.

Every so often a new pathogen emerges, which is capable of spreading rapidly through the human population. Most previous pandemics have been associated with influenza virus. In recent decades, newly emerging influenza viruses and other infectious diseases have spread across the globe faster than would have been the case historically.

While the timing and precise cause of the next pandemic cannot be predicted with any certainty, events which may contribute to future pandemics includes human effects on the climate, encroachment on wildlife habitats or the mutation of drug-resistant virus or bacterium (section 5.6). It is increasingly likely that any new and emerging infectious disease will spread rapidly throughout the global population because of the speed and reach of human mobility, increasing volumes of trade and tourism, and climate-associated changes in the geographic distributions of disease vectors (e.g. mosquitoes). International travel is now a major driving force for the spread of diseases into previously non-endemic settings.

The current COVID-19 pandemic presented the reasonable worst-case scenario and at the time of writing represents a significant continuing risk. While the national vaccination programme continues to make significant progress and is allowing the gradual easing of public health restrictions, the future trajectory is uncertain, and the virus is likely to be in circulation in future years. New variants continue to emerge, and challenges in producing sufficient quantities of vaccines and equitably distributing them across the world means that COVID-19 remains a global challenge. Ongoing monitoring and management of the virus will be required at a national and international level for some time. Ireland's response throughout the COVID-19 pandemic has been guided by expertise and has evolved in light

of emerging evidence. This will continue to be the case over the coming months as a clearer understanding of the medium to longer term impact of COVID-19 emerges.

COVID-19 has had an enormous impact right across the globe. It has resulted in significant mortality and illness, has had severe consequences for economic and social activities and has impacted on general wellbeing, both individual and societal. The extent of impact was unthinkable before the pandemic began and has demonstrated first-hand the risk posed by pandemics. As set out above, we are likely to be living with the ongoing risks associated with COVID-19 for some time, but in addition we remain susceptible to future pandemics. While new pathogens generally emerge every few years, and often at the interface between humans, animals and the environment, there is no way of predicting the nature and scale of impact. However, the experience and learnings from COVID-19 will assist in enhancing and strengthening future preparedness and mitigation plans.

While understandably the focus remains on managing COVID-19, it is important to consider how Ireland's emergency planning and protocols can be strengthened in relation to the management and prevention of future pandemics. Work is already underway on strengthening and building capacity across our public health infrastructure and workforce. We must also ensure sustainable public laboratory capacity and investment in increased capacity across a range of key specialities. COVID-19 has also demonstrated the need for a whole of Government response to pandemic management to ensure that threats to public health and disruption of services and society are minimised and this should be a central consideration for future preparedness planning. In this regard and given the clear interdependency between human health, animal health and the shared environment, further enhanced engagement between departments on such matters should be advanced – in line with the One Health approach discussed under section 5.6 below.

The COVID-19 pandemic has also demonstrated the importance of global cooperation across many aspects, from data and information sharing to management of supply chains. The International Health Regulations 2005, together with the EU's Decision no. 1082/2013/EC on serious cross-border threats to health, provide the legal framework for the management of a broad range of serious and potentially international public health risks and events. Through these, Ireland is represented on the EU Health Security Committee. The Department of Health and the Health Services Executive also maintain close contact with other regional and international health bodies, including the European Centre for Disease Prevention and Control (ECDC), the European Medicines Agency (EMA) and the World Health Organisation. These linkages are used to monitor, predict and mitigate the spread and impact of pandemic influenza or other infectious diseases, occurring globally which may arrive in Ireland.

There is an increased international focus on strengthening health emergency preparedness in the context of the COVID-19 pandemic. The European Commission's plan *Building a*

*European Health Union*<sup>82</sup> sets out the aim to strengthen the EU's health security framework and to reinforce crisis preparedness and response roles of key EU agencies. This will be achieved through, inter alia, the upgrading of Decision 1082/2013/EC on serious threats to cross-border health to a regulation; strengthening the mandates of the ECDC, the EMA and the establishment of the new European Health Emergency Preparedness and Response Authority (HERA). HERA has already commenced work focused on strengthening disease surveillance systems. The EU has also endorsed the goal of working towards an international pandemics treaty. A series of reviews initiated by WHO have recommended a Framework Convention on Pandemic Preparedness and Response. This may lead to a revision of the legally binding International Health Regulations, which would have domestic implications.

As the pandemic is ongoing at the time of writing, the final impacts on people, the economy, and society remain to be established.

## 5.5 Antimicrobial Resistance

Antimicrobials are treatments such as antibiotics used to prevent and treat diseases in humans, animals, plants and crops. These treatments have had a transformative effect on global health and well-being. However, increasing levels of antimicrobial resistance (AMR) in micro-organisms that cause infection and disease – through adaptation and natural selection – is threatening this progress.

AMR means that increasingly the antimicrobials used to treat infections are no longer effective, limiting the treatment options available and making the most common infections more difficult to treat.

The global growth in AMR is being driven by a range of factors including overuse, lack of access to adequate sanitation, as well as poor infection and disease prevention and control practices in health-care facilities and farms. There are concerns about the possible role the environment plays in the spread of AMR, for example through water contamination and agricultural run-off, however, a greater understanding of the environmental role is needed.

This rise in AMR is considered to be one of the greatest risks to human and animal health in the world, with the WHO declaring that AMR is one of the top 10 global public health threats facing humanity.<sup>83</sup> The risks presented by AMR are compounded by there being relatively

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<sup>82</sup> [Building a European Health Union: Reinforcing the EU's resilience for cross-border health threats](#), November 2020, European Commission

<sup>83</sup> [Ibid.](#)

few new antimicrobials, diagnostics tools or alternatives to antimicrobials for the treatment and control of infectious diseases under development.<sup>84</sup>

In recognition of the significant and global nature of the threat, in 2016 the UN established the Interagency Coordination Group on Antimicrobial Resistance. In their 2019 report, the group clearly set out the scale of the issue and potential risks of not tackling rising AMR<sup>85</sup>, including:

- A conservative estimate of 700,000 deaths globally per year from drug-resistant diseases, a figure that they predict could rise to 10 million per annum by 2050. The same report cites that c. 2.4 million people could die in high-income countries between 2015 and 2050 without a sustained effort to contain antimicrobial resistance. Across the OECD, resistance to second and third-line antibiotics, which present the final line of defence to prevent infections, is expected to be 70% higher in 2030, compared to AMR rates in 2005.<sup>86</sup>
- Economic impacts comparable to the shock of the 2008-2009 global financial crisis in terms of significantly increased health care costs; impacts on food and feed production, trade and livelihoods; and increased poverty and inequality.
- In addition, the availability and use of antimicrobials is vital in protecting animal health and welfare, as well as plants and crops. If antimicrobials lose their efficacy there will be a lack of suitable treatments that farmers can avail of. This will impact on animal well-being, farm productivity and the food supply.

Most recent data shows that in 2016, Ireland ranked 9<sup>th</sup> highest of 25 EU/ EEA member states for antibacterial consumption in humans and there has been an increasing trend in antimicrobial use over the preceding decade.<sup>87</sup> Also in 2016, Ireland ranked 17<sup>th</sup> highest of 30 EU/EEA member states for antimicrobial use in animals.

The concept of One Health has been developed to tackle AMR globally, based on the WHO Global Action Plan on AMR and the European One Health Action Plan against AMR.<sup>88</sup> It

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<sup>84</sup> [Antimicrobial Resistance Factsheet](#), 2020, World Health Organisation

<sup>85</sup> [No Time to Wait: Securing the Future from Drug-Resistant Infections, Report to the Secretary-General of the United Nations](#), 2018, Interagency Coordination Group on Antimicrobial Resistance

<sup>86</sup> [Stemming the superbug tide: Just a few dollars more](#), 2019, OECD

<sup>87</sup> [One Health Report on Antimicrobial Use and Antimicrobial Resistance](#), 2017, Department of Health and the Department of Agriculture, Food and the Marine

<sup>88</sup> [Global action plan on antimicrobial resistance](#), 2015, World Health Organisation, [A European One Health Action Plan against Antimicrobial Resistance](#), 2017 European Commission. The One Health approach is supported by the European Commission and the Antimicrobial Resistance Tripartite group consisting of the WHO, the Food and Agriculture Organisation of the UN and the World Organisation for Animal Health, together with the UN Environment Programme

advocates a multi-sectoral, whole of society response to AMR. In this context, in 2017 the Departments of Health and of Agriculture, Food and the Marine jointly published the National Action Plan on Antimicrobial Resistance (iNAP1). The plan was developed and implemented using the One Health approach.

A further risk to dealing with AMR is that governments and health systems are necessarily focused on the pandemic and this may constrain the required focus on AMR. Given that the natural responses of microbes to the use of antimicrobials is resistance, they need to be used as prudently as possible to retain their efficacy.

## 5.6 Food safety

There is an ever-present risk to both human health and the trade in food internationally due to food safety and animal disease. To safeguard public health and to ensure confidence in Irish food products, high food safety and production standards are essential. Ireland's Official Food Control system aims to mitigate the risks of unsafe food. A food scare associated with a food product, animal feed or the outbreak of a major disease in farmed animals could have implications for the health of citizens and could have adverse consequences on the international trade of Irish food, if such a threat affects Irish food or animals.

Given the vital importance of the agri-food sector, and its high dependence on exports, this would lead to significant implications for the Irish economy, particularly in rural areas. The agri-food sector is highly export dependent and Ireland's strong reputation as a provider of high quality, safe and reliable food is centrally important to Ireland's competitive offering. Despite the challenges in relation to the pandemic, the value of food and drinks exports in 2020 declined by just 2% to €13 billion.<sup>89</sup>

Food-borne diseases are caused by contamination of food and occur at any stage of the food production, delivery, and consumption chain. They can result from several forms of environmental contamination including pollution in water, soil, or air. Preserving the quality and safety of the food supply chain is of critical importance. Failing to do so could pose a significant threat to the population, the wider environment, and the economy.

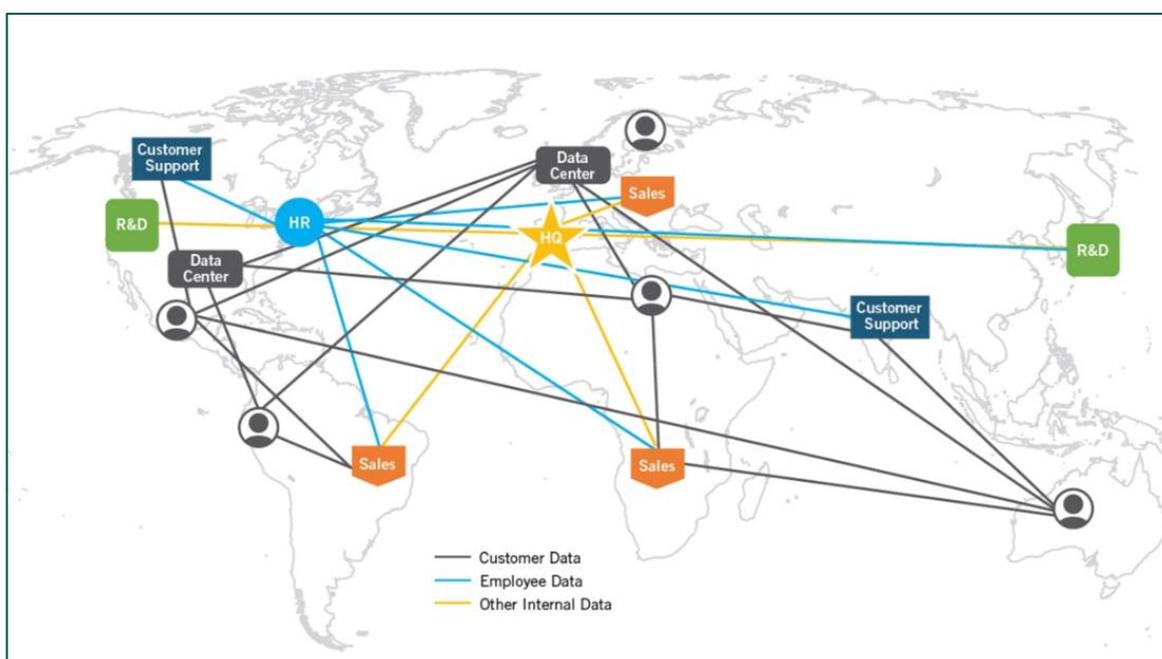
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<sup>89</sup> [Export Performance & Prospects 2020 / 2021 Report](#), 2021, Bord Bia

## 6. Technological risks

### 6.1 Data flows, storage and security

COVID-19 has shown how strongly societies rely on digital infrastructure to maintain connectivity. A less noted aspect of this connectivity is how data flows are essential to it. Cross-border transfers of data have become an intrinsic part of how modern economies and societies function as illustrated below in the example below of a typical corporate headquarters located in Europe.



Source: *How to Build Back Better the Transatlantic Data Relationship, 2021, Information Technology and Innovation Foundation*

The flow of data traffic has increased tenfold over the last decade<sup>90</sup> and is vital to diverse areas such as remote medical diagnosis to gaming to HR data processed abroad. Transatlantic data flows are the largest in the world. Recent estimates put their total value at nearly \$295 billion. Governments also rely on these flows for various regulatory and law-enforcement purposes. These flows will only become more important as companies rely on the availability of information in real time to improve their products and services often driven by machine-to-machine interconnections. This is why one manufacturer of vehicles noted

<sup>90</sup> [Crossing Borders, World Development Report, 2021, World Bank](#)

that they are hindered as much by international obstructions to its data as by physical roadblocks.

One of the principal risks to data flows across the Atlantic arises from what is known as the Schrems II judgement. This ruling from the Court of Justice of the European Union invalidated the Privacy Shield framework which had been the EU-US framework for regulating transatlantic exchanges of personal data for commercial and other purposes. In the same judgement, the Court upheld the main tool, outside of the Privacy Shield, known as Standard Contractual Clauses (SCCs), used by businesses to transfer personal data to third countries. However, the Court also stated that in using SCCs, organisations had to satisfy themselves whether conditions in 3rd countries offer adequate safeguards, commensurate with the EU's regime to enable data transfers to take place. If there is no such equivalency and alternatives cannot be found, then data transfers must cease.

This judgement has raised considerable uncertainty about whether and how data transfers can continue. Both the European Commission and the European Data Protection Board have issued guidance which organisations now have to take on board. In addition, the Commission and the US administration have pledged to intensify negotiations on an enhanced EU-US Privacy Shield framework that would comply with the Schrems II judgement.

## 6.2 Disruptive technology

Advances in science, technology and business models are driving and enabling major changes in how goods and services are produced and delivered, how we work and how we go about our daily lives. These advances create opportunities for existing sectors to be more productive and grow, for new jobs and specialisms as well as for the emergence of entirely new sectors.

Indeed, much of our national economic policy is about making sure Irish based enterprise is well placed to drive and take advantage of these opportunities, including through the €500 million Disruptive Technologies Innovation Fund, and the €10 million Climate Enterprise Action Fund as well as the development of the National Strategy on Artificial Intelligence. This overall approach has broadly served Ireland well to date and Ireland is very successful in generating high-growth firms, which are a key driver of employment, innovation, and productivity growth in the economy.<sup>91</sup>

However, the pace of technological change and advances does give rise to range of risks that need to be considered. These include the potential for automation to displace existing jobs or dramatically impact how these jobs are carried out. A 2018 study by PWC estimates that

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<sup>91</sup> [SME and Entrepreneurship Policy in Ireland](#), 2019, OECD

automation has the potential to displace circa 20% of jobs by the mid-2020s rising to 31% by the mid-2030s.<sup>92</sup> The increased use of artificial intelligence, big data and machine learning are major drivers of this trend. Research by the OECD similarly forecasts that two in every five jobs in Ireland face a significant risk of automation in the next two decades.<sup>93</sup>

The PWC study and research by IGEES<sup>94</sup> forecast that the sectors most impacted by automation will be agriculture, manufacturing, retail and construction driven in part by the relatively high share of routine tasks involved in these sectors. Jobs in sectors that traditionally rely on greater face to face contact, subject matter expertise, judgement and context such as education and health are considered to be the least at risk from automation. Though this largely remains the case, the pandemic has accelerated the adoption of digital solutions in these sectors which may in turn lead to increased levels of automation. The pandemic has also highlighted long-term risks to retail sector from online sales, with potentially significant impacts on employment and the future of cities and towns.

Irrespective of the sector, the risk of automation is particularly concentrated in roles held by people with medium and lower levels of education. Though it is generally accepted that these sectors and roles will not be automated out of existence, it is essential that the impact of automation and the importance of digital and communications skills are fully considered in the development of education and enterprise policy. They are also important considerations in relation to policy objectives around balanced regional development and the transition to a climate neutral society.

In relation to disruptive technologies, other issues arising include:

- Ensuring that the necessary infrastructures and skills are available including high quality broadband so that citizens and enterprise can avail of opportunities presented.
- Further exacerbating the digital divide, that is individuals being excluded from an increasingly digital society because of socio-economic reasons or low digital skills. The 'digitally disengaged' risk further isolation as communication and social interaction continue to move online, and Government services, internet banking, and online shopping increasingly been completed online.<sup>95</sup>
- Ensuring that the regulatory and policy environment is responsive and fit for purpose such that it encourages and promotes innovation, keeps pace with change and provides protections for citizens. And that it is resourced with the expertise, tools and capability to meet the challenges of new and emergent threats.

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<sup>92</sup> [How will automation impact jobs?](#), 2018, PWC

<sup>93</sup> [Job Creation and Local Economic Development 2018, Preparing for the Future of Work](#), 2018, OECD

<sup>94</sup> [Automation and Occupations: A Comparative Analysis of the Impact of Automation on Occupations in Ireland](#), 2018, IGEES

<sup>95</sup> [Bridging the Gap - Ireland's Digital Divide](#), 2020, Accenture

The risks discussed about around digital exclusion and misinformation (section 4.5), data flows (section 6.1) and cybersecurity (section 6.3) are particularly pertinent in these regards.

## 6.3 Cybersecurity

Cybersecurity, the protection of IT systems, data services and communication networks, is vitally important to the economy and society. Almost all aspects of our lives have a digital dimension, and over the past year, in response to COVID-19, there has been an increase in the use of digital and cloud technologies in both the public and private sectors.

The ubiquity of connected devices has brought truly massive benefits to our society. However, it also opens up various new and unpredictable threat vectors, and a wide range of significant risks for major national infrastructure including energy, transport, telecoms, health and financial systems. Breakdowns in cybersecurity have the potential to be not only very disruptive and expensive but also to undermine trust and confidence in our digital systems.

With Ireland positioning itself as a technological society with a growing dependence on online services, the impact of an attack or incident on the provision of services, and on the reputation of businesses and the public service is significant. The past year has seen an increased number globally of identity frauds, payment frauds, ransomware attacks, and crude attacks on insecure cloud services. Later in 2020, there was more complex attacks targeting supply chains, major cloud environments, remote working applications, security product providers, and even critical infrastructure services.<sup>96</sup> Here in Ireland, the major ransomware cyber-attacks against the health services caused their IT systems to be temporarily shut down in May 2021, followed by a lengthy process of restoring and bringing systems back online. The cyber-attack impacted on all national and local systems involved in all core HSE services, impacting the provision of services to patients and causing concern in the public that their medical information may be illegally released.

The risk of further attacks continues, attacks which could have serious effects on the economy and on the cohesion of society in general. The potential impact on the provision of services has the potential to lead to civil unrest in addition to significant disruption for citizens, while prolonged or repeated incidents risk creating a backlash against digitisation, with further economic consequences and reputational damage to businesses and the public service. Related to this is the risk of cyber-activism where civil unrest or protest is expressed through disruptive practices on public bodies or critical infrastructure.

The risk of cyber-attacks highlights the need for action at organisational and state level to prevent such attacks, including maintaining robust digital infrastructure and raising public awareness. The *National Cyber Security Strategy 2019* emphasises the need to improve the

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<sup>96</sup> [A new approach to cybersecurity](#), 2021, KPMG

protection of government ICT and other critical national infrastructure and expanding education, research and training in the area.

In order to protect national interests, mitigate risks, and enhance the security of internet users, there is also a need for continued cyber diplomacy between countries. This is achieved through ongoing engagement via the EU and the UN with a focus on governance and application of international law in cyberspace, including protecting the free and open Internet, reducing cybercrime, building capacity including to tackle the global digital divide, enhancing international stability, and protecting the digital economy.

## 6.4 Nuclear contamination

The risk of contamination in Ireland as a result of nuclear accident is broadly considered to be low. However, it is a risk that has to be fully recognised and considered, most significantly in relation to the potential harm to public health and well-being. Such an event could have a major public health impact (e.g. fatalities, injuries, and latent cancer fatalities) plus innumerable associated societal and financial costs to these health effects.

There is also the potential for negative economic impacts, particularly in relation to the agriculture and food sector where there is a significant risk of consumer resistance and reputational damage if there were even trace levels of radioactivity in the food supply. The Office of Emergency Planning and the Environmental Protection Agency report that the worst-case scenario is a nuclear incident in the UK or north-western Europe.<sup>97</sup> Analysis by the ESRI puts the economic impact of such an incident at anywhere between €4 billion (even where there is no actual contamination in Ireland) and €115 billion.<sup>98</sup>

Though the risk of such an event is considered to be low, the nature of the risk demands significant cross-border cooperation with the UK and with European states in relation to the monitoring and sharing of radiological data.

Given the potentially devastating impacts of nuclear detonation, continued international engagement regarding nuclear safety, nuclear disarmament and non-proliferation remains essential.

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<sup>97</sup> [A National Risk Assessment for Ireland 2020](#), 2021, Office of Emergency Planning and [Potential radiological impact on Ireland of postulated severe accidents at Sellafield](#), 2016, Environmental Protection Agency

<sup>98</sup> [The Potential Economic Impact of a Nuclear Incident — An Irish Case Study](#), 2016, ESRI

