# OECD PUBLIC GOVERNANCE POLICY PAPERS FRAMEWORK ON MANAGEMENT OF EMERGING CRITICAL RISKS





#### FRAMEWORK ON MANAGEMENT OF EMERGING CRITICAL RISKS

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### **ABSTRACT**

The global risk landscape is rapidly evolving due to interconnected economies, societies, and technologies. To manage emerging critical risks, governments must anticipate, understand, and address these risks, which are transboundary, highly uncertain, and systemic. This Framework, supporting the OECD Recommendation on the Governance of Critical Risks, outlines a seven-step process for managing such risks. The steps include identifying and assessing risks, sharing information, evaluating management maturity, and developing strategic recommendations. Exercises are conducted to validate gaps and proposed solutions, while strategic plans ensure flexibility and adaptability in response to risks. Implementation integrates these emerging risks into traditional risk management processes, fostering resilience against current and future challenges. It provides a structured process for governments to validate identified gaps in knowledge, authorities and capabilities needed to manage emerging risks and to validate plans for building-in flexibility and adaptability to unforeseen or poorly understood risks.

## INTRODUCTION

The global risk landscape is constantly changing, and while it is impossible to look to the past to know what the future will hold, the past can help us to understand the scale of how the world will change. The interconnected world of today would have been hard to imagine for most policy makers when the internet opened to the public in 1991, yet it is now foundational to many of the world's greatest opportunities and risks.

As economies, societies and technologies become more interdependent, risks become more complex and interconnected. Profound changes in the exposure and vulnerability of societies have occurred in the past 30 years, and in many cases the seeds of continuous transformations have already been sown. Advances in technology, shifts in the geopolitical environment, and a changing climate will continue to accelerate the pace of this evolution. These changes will also increase the complexity of crises, exposing gaps in knowledge, assigned responsibility, authorities to act, and capabilities to respond and recover.

The future is uncertain, but governments can take steps to understand, build resilience against and manage emerging critical risks before they occur. These risks may be characterised along a spectrum of understanding, from those that have not materialised but are very well understood, to deeply uncertain glimpses of events in possible futures. Governments should prepare to manage these new, but well understood, risks (as they would any other), and invest in research to transition uncertain futures into well understood risks, while preparing to manage future risk that remains deeply uncertain.

Whether and how much to focus on managing specific emerging critical risks or the inherent uncertainty associated with future risk is a challenging balance to strike. How that balance is struck will differ from country to country. Countries with stronger assessment capabilities or less uncertain risks may focus more on research to better understand emerging critical risks and integrating them into existing risk management processes. While countries experiencing greater uncertainty may focus more on preparing for and building resilience against the unknown.

This Framework will describe both opportunities, providing guidance for how governments can develop:

- A repeatable process for anticipating, assessing, and classifying these risks, with a goal of developing a clear enough picture of the risks that they can be managed alongside all other risks; and
- Strategies for managing risks with deeply uncertain futures and resilience against unexpected shocks.

This Framework is intended to support the implementation of the OECD Recommendation on the Governance of Critical Risks, which calls on Members to build preparedness through foresight analysis and anticipate complex and wide-ranging impacts. The Framework defines emerging critical risks and describes a seven-step process for identifying, assessing and developing strategies for managing them.

# PROCESS FOR MANAGING EMERGING CRITICAL RISKS

Management of emerging critical risk is a cycle and constant practice. At some point in the future, all "emerging critical risks" will either cease to be a risk or transition to "critical risks" and different risks will manifest as emerging. The seven-step process below is designed to support that transition and help governments manage the challenges of emerging critical risks.

1

# IDENTIFY EMERGING CRITICAL RISKS

Conduct horizon scanning and develop alternative futures to explore potential changes to the strategic operating environment. Identify risks within those future environments and prioritise a research agenda for further analysis.

2

# ASSESS AND SHARE INFORMATION

Assess and characterise the risks, identify possible conditions for emergence, explore implications for management, measure confidence in the assessment; and share with responsible stakeholders. Continually monitor for and report on indications of emergence.

3

# ASSESS MANAGEMENT MATURITY AND IDENTIFY GAP AREAS

Assess knowledge, responsibility, authorities, and capabilities for risks identified, to understand how prepared the country is to manage these risks and where critical gaps exist.

4

# DEVELOP AND PRIORITISE RECOMMENDATIONS FOR MANAGING IDENTIFIED RISKS AND COPING WITH UNCERTAINTY

Develop recommendations for building all-hazard preparedness and managing specific identified risks or groups of risks. Recommendations should focus on development of knowledge, assignment of responsibility, creation of authorities, and investment in capabilities. Prioritise the most impactful for validation and implementation.

5

# EMERGING RISK EXERCISE SERIES

Use tabletop exercises to explore the management of the risks identified in Step 1: discuss the possible emergence of the risk, the anticipatory context in which the risk is assessed, and what actions can be taken in advance to reduce future negative consequences and seize strategic opportunities to create advantage. When possible, use the exercise to validate the identification of gaps and capture recommendations on how to address them, drawing on lessons identified from the planning for and management of previous emergencies.

6

#### DEVELOP FLEXIBLE AND ADAPTABLE STRATEGIC PLANS

Identify how recommendations align to the likely timeline for emergence for risks to identify and synchronise priority actions. Revisit plans as understanding of the risk changes, including establishing a process for transferring analysis and management to national risk assessment process once emergence is confirmed.

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#### IMPLEMENT RECOMMENDATIONS

To ensure continuous improvement, integrate recommendations into existing strategic, policy, and budgetary processes to close identified gaps.

### 1 IDENTIFY EMERGING CRITICAL RISKS

Governments should engage in horizon scanning, leveraging forecasting and strategic foresight methods to develop alternative futures to explore potential changes to the strategic operating environment, identify emerging risks within those future environments and prioritise a research agenda for further analysis. This could help governments anticipate future hazards and threats, and when they may emerge, so they can plan to manage their consequences effectively. The aim of Step 1 is to examine plausible future developments that warrant further assessment because of their potential to significantly change risk management requirements for the country. Completing this step requires three primary actions:

# FRAME THE FUTURE CONTEXT SURROUNDING THE RISK MANAGEMENT ENVIRONMENT

Consider major possible structural changes countries may experience over the next 5-15 years. These futures may be driven by changes in society, technology, the environment, or geopolitics. The goal of this action is to better understand plausible future environments that risks could form in. The OECD strategic foresight products can be a useful resource for countries in this step.

#### **CONSIDER HOW PLAUSIBLE FUTURES COULD SHAPE RISKS**

The goal of this action is to identify risks and trends of concerns that may arise in the possible futures. Risks identified can be specific (such as the emergence of a synthetic pandemic) or a conditional driver of future risks (such as artificial intelligence). Governments should consider both risks that arise within their borders and transboundary risks with the potential to affect them. They should also cast a wide net and should not limit their assessment to risks with clearly defined responsibility. A major goal of this process is to identify and contextualise the emerging risks, and explore how these risks may stretch or change existing assumptions.

#### TRIAGE

In order to develop the required research agenda for further analysis in Step 2 and to begin identifying management options, governments should determine whether the following conditions apply to the emerging risks identified:

- There is enough information to manage this risk through normal risk management processes. If this is the case, governments may opt to remove the risk from further consideration under this process and manage it alongside other known risks.
- The country needs to make significant changes to prepare to manage this risk.

The ideal risks for Step 2 are those where enough information is not available and which have the potential to significantly impact responsibility and management requirements. In support of this analysis, governments should continually consider how the following characteristics of emerging risks affect management requirements:

**EXPANDING** Risks are familiar but growing in frequency or scale. These risks are familiar, and countries have existing capabilities and management practices However, because of new or unfamiliar conditions or changes in the threat, exposure, or vulnerability environment these incidents are becoming more frequent and/or imposing greater consequences. Essentially, the strategies for managing the risk are still effective, but more of those capabilities are required to maintain the previous level of resilience. These risks have the potential to change management requirements but are familiar and generally should be addressed through normal risk management processes. For example: more frequent extreme wildfires due to a combination of intense heat, drought and failed land management policies.

**EVOLVING** Risks are familiar but changing in a way that requires updated management strategies. Both expanding and evolving risks appear as risks that have been managed before; however, unlike expanding risks, where historical management strategies remain effective, evolving risks require new management tools. These risks may present with relatively certain or deeply uncertain futures. Even a risk that looks familiar may warrant consideration if its future is deeply uncertain.

**NOVEL** Risks are unfamiliar and require the development of novel management strategies. Novel risks have never been encountered—and in some cases, have never been seriously contemplated—before. These risks can typically be driven by drastic shifts in society, technology, climate, or Geo- politics or economics. These 'Novel' risks often have deeply uncertain futures and are the most likely to require emerging critical risk specific analysis and management.

## 2 ASSESS AND SHARE INFORMATION

Taking the results of Step 1 as material for a research agenda, Step 2 assesses risks in a structured way and communicates the results to key stakeholders. Before developing any individual assessments, governments should identify a consistent methodology for conducting the analysis. This methodology should be consistent and applicable across all emerging risks. This should include both how governments plan to collect information and report on the findings. Given the uncertainty of emerging critical risks and the broad range of stakeholders associated with these risks (including those in the private sector), developing a shared understanding of the risks and their potential impacts is critical.

This step requires existing risk management structures to accommodate the greater level of external expertise and cross-sectoral and trans-boundary communication required to understand and address the complexity of emerging critical risks. Governments should build relationships with scientific communities and leverage the best available information to inform their technical understanding of these risks.

The methodology should cover five areas:

#### **RISK CHARACTERISATION**

This section will describe the background information required to understand the context under which this risk may form and the basic characteristics of the emerging risk.

#### CONDITIONS FOR EMERGENCE

This section will describe what conditions have the potential for leading to the emergence of the risk and the likelihood of its emergence. Depending on the risk, conditions may be societal changes, technological progress, physical realities of climate, or geo-political or economic environments. This section is intended to frame when a risk may emerge and how we will know it is emerging.

#### **RISK UPON EMERGENCE**

This section will describe the features of a risk once it has emerged, such as the probabilities or likelihoods of occurrence, plausible threat vectors, and potential impacts. This section should also explore the potential for systemic impacts that could drive management requirements. This section is intended to frame how that risk could create consequences requiring management. This section should also consider how conditions post emergency could aggravate or attenuate the risk post emergence.

#### IMPLICATIONS FOR MANAGEMENT

This section will describe how the potential consequences of the risk impact management requirements for the country, including what changes to existing practices may be required to successfully manage the risk. This section is intended to frame how organisational and national capabilities need to change (expanding, evolving, or new) to successfully manage the emerging risk (see Step 3). Risks with lower potential implications for management may be left on the list for future monitoring, but may not require the completion of additional steps.

#### CONFIDENCE ASSESSMENT

This section should articulate how confident the country is in its understanding of this risk. This can help to identify risks that are sufficiently well understood and can be removed from this process and incorporated into traditional risk management processes. For risks with lower confidence, the level of confidence will provide useful context for prioritisation in the next steps.

Once the assessment has been completed, and to the extent it is appropriate, it should be shared across their government, with private sector, and with other countries. Sharing this information is critical to improving whole of society management of these risks. Sharing the characteristics identified with the OECD and other intergovernmental organisations will strengthen their strategic foresight products that characterise specific global emerging risks of concern. Sharing the assessment of emerging critical risks will help build common situational awareness, further understand the nuances of those futures, and collaborate towards collective defence.

These assessments should be updated on a regular cycle, with newly identified risks being added and risks crossing a certain confidence threshold being removed.

# 3 ASSESS MANAGEMENT MATURITY AND DETERMINE GAP AREAS

In Step 2 countries developed a stronger understanding of how specific risks may emerge and how those risks may change management responsibilities. Step 3 is intended to determine how prepared countries are to manage emerging risks: including their ability to tackle changing requirements and how the gaps identified may hinder their ability to effectively manage the risks.

All risk management strategies require a successful alignment of four factors: knowledge, responsibility, authorities, and capabilities. At this point in the process, the emerging risks still being considered will typically be characterised by deep uncertainty. This step is intended to help countries understand where gaps may exist and how uncertainty may affect those requirements.

To accomplish this, countries should develop an approach to assess the knowledge, responsibility, authorities, and capabilities required to manage the most important challenges identified in Step 2. This may include considering multiple different possible futures associated with those risks, to understand how those futures may challenge countries. This assessment should be done collaboratively with key stakeholders to understand the broad trends and unique challenges that different stakeholders will face in managing emerging risks as well as any coordination needed across those stakeholders.

#### **KNOWLEDGE**

While Step 2 provides context for the risk and a confidence interval, this assessment should focus on how well the government and stakeholders understand the emerging risk and its likely impacts on them. Stakeholders should ideally identify specific knowledge gaps to inform further research into the risk. Partnerships can be built and leveraged with the research community to address these gaps.

#### RESPONSIBILITY

Understanding how a risk may affect a stakeholder, do they understand how much and which parts of the risk they will be responsible for managing? Countries should consider where responsibility for the management of all aspects of the emerging risk lie. This may include responsibilities across all aspects of managing the risk, including prevention, mitigation, response, and recovery. This assessment can also serve as an opportunity to clarify expectations of responsibility between government and non-government sectors, as well as between national governments and international organisations.

#### **AUTHORITIES**

To the extent that a stakeholder has responsibility for some aspect of managing a risk, do they have the necessary authorities to do so? For example, this could be a government entity requiring proactive authorities to take actions or non-government organisations being prohibited from taking actions (or being required to cease certain activities) in order to manage an emerging risk.

#### **CAPABILITIES**

Do responsible organisations have the resources they need to manage the emerging risks? Unlike the other three areas, the value of this question is to identify where there are existing capabilities—in other words, where gaps do not exist. Even though a risk may be new, existing capabilities may be leveraged to manage multiple risks simultaneously. Stakeholders should be considering whether and to what extent existing capabilities can be used to address these emerging challenges.

The result of this key step should be an identification of the most significant areas where gaps exist and a prioritised list to be addressed in Step 4. Regularly completing this standard assessment enables progress to be monitored in future years as futures become clearer and action is taken to close gaps. In general, because a foundation in one area enables the maturity of the next area, investments in the lowest area of gap are often a priority (such as knowledge or responsibility); however, depending on how close to emergence a risk is, or its relationship to other risks, areas such as authorities or capabilities may become a higher priority. It may also be beneficial to identify multiple appropriate and/or lower priority areas that will be considered for joint-management in Step 4.

# 4 DEVELOP AND PRIORITISE RECOMMENDATIONS FOR MANAGING RISKS AND COPING WITH UNCERTAINTY

Emerging risks with deep uncertainty require a different management approach than known risks. With known risks, the goal is to manage the risk directly, with deeply uncertain risks, the goal is to understand responsibility for and manage exposure to that uncertainty. Managing uncertainty may in some cases require a focus on specific sets of risks, for example, regulation to diminish the likelihood that new technology becomes dangerous. While in other cases, managing uncertainty may require looking across many risk types or broad trends to understand common exposure, for example, growing digitalisation and interconnectedness of society increases a country's exposure to a number of different types of risks that may be partially managed together by securing a common underlying vulnerability. Finally, managing uncertainty requires accepting that countries may be caught off guard by uncertain risks and should be prepared to manage sudden changes in risk and impacts from those risks.

The first action for developing recommendations is to understand options for managing deeply uncertain risks and how they can be applied to the management of risks of varying levels of uncertainty. The same risk, with three different potential futures, may require three different courses of action to be managed effectively. The approaches for managing deeply uncertain risks are very similar to managing known risks, but they are applied in slightly different ways. Countries should consider their risks both individually and as a group when deciding which approach is most appropriate.

RISK SPECIFIC CONTROLS While uncertain futures can make developing hazard specific mitigations a challenge, they can be one of the most effective methods for preventing uncertain risks from crossing a crucial threshold. For example, the future of a developing technology may be uncertain, but regulations on that technology could limit negative impacts and prevent it from reaching its risk tipping point. Countries should begin their analysis by asking whether there are specific actions that can be taken to prevent, delay, or limit the emergence of the risk.

**ALL-HAZARDS VULNERABILITY REDUCTION** For individual risks, groups of risks, or broad trends that lack clear options for preventing emergence, countries should consider which critical assets and systems may be threatened by the risk and whether there are steps that can be taken to reduce those risks. These actions may be particularly important for emerging critical risks that are also systemic risks and have the potential for cascading consequences. This strategy is effective because it has the potential to address emerging risks across multiple possible futures and will likely provide collateral benefits for current risks.

**INCIDENT RESPONSE** Essential to managing deeply uncertain risks is the understanding that countries cannot account for all hazards and eliminate all vulnerabilities: eventually, they will need to manage consequences. There are actions that can be taken in advance to prepare countries to manage consequences from uncertain risks. Understanding how to respond to incidents is essential for both the tactical level execution of capabilities against familiar risks and strategic level execution for risks that catch organisations entirely off guard.<sup>2</sup> Regardless of whether a risk is expected or a surprise, having flexible, scalable, and modular incident response structures is vital. Ideally, these capabilities and resources do not just support impact response, but also the ability to pivot flexibly and quickly increase preparedness once a risk has become more certain. This should include a mechanism to capture lessons which may be identified for feeding back into the process for managing risks.

**RECOVERY** When countries are effectively impacted by catastrophes or shock events related to emerging risks, there will typically be some form of recovery required. Having effective capabilities for recovery improves incident response by enabling prioritisation and mitigation of second order impacts that arise as a result of longer-term failures of critical systems. While recovery is always incident specific, many recovery capabilities are all-hazard. Quick and equitable recovery can reduce the long-term consequences from an incident. Lessons identified through the recovery process should also inform the management of risks.

Risk management options should be considered against the gaps that have been identified, to understand which interventions are most effective at closing those gaps. Recommendations may be targeted at closing a gap for a single risk, multiple risks, or building resilience against all risks. Those recommendations should then be prioritised by considering the importance, effectiveness, timeliness, and feasibility of implementation. Countries should also consider whether an emerging risk has the potential to become existential, which would significantly increase the scale of the potential impacts. Recommendations can also be entirely within national borders or international in nature, recognising that many uncertain risks may have cross-boundary implications. The output of Step 4 should be a series of actionable recommendations that will be further evaluated in Step 5.

### 5 EMERGING RISK EXERCISE SERIES

Countries should conduct exercises for managing emerging risks. These serve two valuable purposes—to validate identified gaps (Step 3) and proposed solutions (Step 4). Also they serve to inform leadership about the decisions required. Recognising the longer timeline for emerging risks, exercises should seek to explore those gaps and decision requirements across multiple points in time, focusing on key junctures and critical decision points, including:

#### **EMERGING**

A risk has crossed a tipping point and has moved from hypothetical to likely in the short to medium term

#### **EMERGED**

The risk is present and could potentially cause immediate impacts. Depending on the nature of the risk, the exercise may focus on a fast onset risk, such as a sudden event, or a slow-burn risk that has reached a critical inflection point.

Consistent with good practice, exercises should include:

#### A HOT-WASH

Where participants review key lessons identified, including where actions could have been taken in advance of emergence to improve management, and provide guidance around next steps; and

#### AN AFTER-ACTION REPORT (AAR)

Documenting the key findings from the exercise and validating Step 4 recommendations and/or identifying new recommendations for closing gaps.

The findings from the exercise and the written after-action report should serve as leadership guidance to inform Step 6.



# 6 DEVELOP FLEXIBLE AND ADAPTABLE STRATEGIC PLANS

The recommendations for managing emerging risks will often cross multiple different time horizons. Step 6 encourages countries to think of the possible evolution of the risk over time and synchronise recommendations based on where in its timeline of emergence a risk is situated. Recommendations should be aligned to specific periods based on what aspect of risk they are intended to manage and how long they take to develop. For example, recommendations may be aligned to:

#### **EMERGING**

This refers to a continuum ranging from a risk identified as a possible condition of a hypothetical future to a risk identified as likely to emerge in the near future but which lacks a critical tipping point. Example actions on one end of this continuum may focus on research to better understand the risk or regulation to prevent or slow its emergence. At the other end of this continuum, example actions may focus on broad governance issues, such as who is responsible for managing the risk and ensuring responsible entities have necessary authorities.

#### **EMERGED**

A tipping point has transformed a risk from a future risk to a current risk and an impacts could occur at any time. This risk should now be treated alongside other non-emerging risks, with a focus on preparedness actions such as planning, capability development, training, and exercising.

#### **CONSEQUENCES**

When countries experience direct impacts from an incident, they should consider whether there are any unique requirements of emergency response that would require changes to existing response plans.

A strategic plan for emerging risks is intended to synchronise planning from research to response and can be either independent or incorporated into existing planning efforts. Depending on the nature of the risk and their existing risk management processes, countries may choose to include pre-emerging and emerging into an existing strategic planning effort. However countries decide to synchronise, this effort should not be duplicative of any other strategic planning effort.

Once the periods have been outlined, countries should consider the recommendations developed in Step 4, as well as any additional insights gained in Step 5, assigning those recommendations to a time phase. This will help with understanding when each intervention would be most effective and how to sequence the deployment of those interventions for maximum effect. Depending on the nature of the risk, the plan may be either time based (1 year, 5 year, etc.), event based (critical technology developed, validated, adopted, etc.) or a combination of both. This strategic plan should also be paired with future assessments of these risks to understand how changes in the risk's timeline for emergence may change recommendations and prioritisation.

Multiple organisations may be responsible for a piece of managing an emerging critical risk. Clarity and coordination of those responsibilities are essential to long-term management of those risks. To the extent possible, this strategic plan should also answer key questions, such as responsibility, so that responsible parties understand their role in executing the recommendations and how those roles and responsibilities may change over time. For example, in a pre-emerging phase, a scientific body may have primary responsibility for monitoring and evaluation, while an emerged risk will likely have a different, more preparedness—or response-oriented organisation with primary responsibility.

Regardless of how the plan is structured it should be a living document, using adaptive planning approaches to keep the plan pragmatic and relevant.

### 7 IMPLEMENT RECOMMENDATIONS

Following the identification of time- or event- aligned strategic priorities in Step 6, the next step is to implement those recommendations. How this result is achieved will be unique to every country or organisation. The primary goal for this step is to bring priority actions from the emerging critical risk management process into traditional risk management processes, so that they can be considered together as one set of recommendations for further prioritisation and implementation. As part of this process, countries should determine whether existing processes are equipped to implement these recommendations or whether changes to that system are required. While changes may be required to accommodate both traditional and emerging critical risks, countries should have a single process capable of addressing both challenges together.

Countries should communicate with key stakeholders, including decision makers, first responders, private sector organisations, and communities about how recommendations integrate with existing risk and crisis management systems and, when possible, build resilience for both current and future risk. Most solutions cannot be achieved by government alone, and therefore, this process should focus on creating unity of effort between government and non-government stakeholders.

To ensure continuous improvement, governments should integrate lessons identified from each iteration of this process into the next iteration of the emerging risk cycle.



#### **DEFINING EMERGING CRITICAL RISKS**

The 2014 OECD Recommendation on Governance of Critical Risks defines 'Critical Risks' as "Threats and hazards that pose the most strategically significant risk, as a result of (i) their probability or likelihood and of (ii) the national significance of their disruptive consequences, including sudden onset events (e.g. earthquakes, industrial accidents, terrorist attacks), gradual onset events (e.g. pandemics), and steady-state risks (notably those related to illicit trade or organised crime)." (OECD, 2014)

'Emerging Critical Risks' are any risks that meet those criteria and are also: "Either new risks or familiar risks that are evolving due to new or unfamiliar conditions" 1

#### PRINCIPLES OF EMERGING RISK MANAGEMENT

'Emerging Critical Risks' share some common attributes with traditional risks, but also differ in important ways. The characteristics of these risks and how they are managed are affected both by their "emerging" and "critical" nature. The confluence of these characteristics affect how they should be managed and the imperative to do so. This section describes characteristics that are more prominent in emerging critical risks than traditional risks, and key strategies that cut across the seven steps outlined in the next section.

#### CHARACTERISTICS OF EMERGING CRITICAL RISKS

**TRANSBOUNDARY** Because emerging critical risks typically arise from some form of structural change (e.g. Technology, Geo-politics and economics, and Climate), the risks and their impacts are far more likely to be transboundary in nature. To manage these risks, governments should take a collaborative approach, sharing information and when appropriate building common resilience capabilities.

**HIGHLY UNCERTAIN** All risks have elements of uncertainty, but the lack of historical precedent, and the uncertainty that accompanies that, is foundational to emerging critical risks. When facing emerging critical risks, governments often face a choice between committing to one possible future that may never occur or waiting until a risk becomes clearer to begin to prepare. Managing uncertainty is a fundamental component of managing these risks and approaches for managing uncertainty often differ from managing more well understood risks.

**SYSTEMIC** As societies grows more interconnected disruptions to any one country, sector, or network can have far reaching consequences, causing impacts to quickly expand. Additionally, emerging critical risks are more likely to intersect and compound one another requiring governments to manage multiple risks together.

To effectively manage emerging critical risks, governments should design strategies that account for these challenges and integrate well into existing risk management processes.

#### **CROSS-CUTTING STRATEGIES**

**WHOLE OF SOCIETY** Whole-of-society engagement is fundamental to managing any critical risk, but the importance can be even greater for emerging critical risks. As emerging critical risks are often structural in nature, they can have profound and long-term impacts on society. Engaging early and often and working in partnership with all levels of the public sector, as well as with the private sector, academia, civil society, and individuals, will be critical to understand the risks and their likely impacts, determine viable management options, and build consensus towards solutions.

**FOCUS ON RESPONSIBILITY** Governments systems of risk and emergency management were built with a set of risks in mind. Emerging Critical Risks will challenge governments' understanding of whether, and if so how, these future risks fit within those systems. Determining responsible parties for possible futures lays an important foundation for managing emerging critical risks as they materialise.

**PREPARE TO BE UNPREPARED** While governments should try to assess and plan for specific emerging critical risks, they also must accept that it will never be possible to proactively address every risk individually. Governments should consider how they can take actions that build resilience to many emerging critical risks and prepare themselves to absorb and rebound from a shock.

**LOW-COST AND COOPERATIVE BENEFITS** It is understandably difficult for governments to invest in managing emerging critical risks at the expense of today's risks. To account for this, governments should focus on investments that are low-cost, such as contingency planning, or have management benefits for existing risks (in addition to the emerging critical risks), such as improvements in basic cyber hygiene. Some public investments, such as identifying coordination structures for contingencies, are both low cost and present management benefits for existing risks.

The seven-step process outlined in the next section is intended to provide a structured method of considering these challenges and applying these cross-cutting strategies.

## **ENDNOTES**

- <sup>1</sup> The framework is intended to describe a process for governments to manage external risk to their countries and the whole of society. Private sector entities and specific government and civil society organisations may also find value in aspects of this framework.
- <sup>2</sup> While countries will typically use the same practices to manage consequences from an incident that was uncertain as any other known incident, there are certain challenges from uncertain risks that can be planned for in advance. For example, development of flexible capabilities in advance can help countries manage incidents with unclear responsibility, unexpected scale, and unanticipated consequences.

### REFERENCES

OECD (2014) Recommendation of the Council on the Governance of Critical Risks, OECD/LEGAL/0405 https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0405



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