The United Nations Committee of Experts on Public Administration (CEPA) has developed a set of principles of effective governance for sustainable development. The essential purpose of these voluntary principles is to provide practical, expert guidance to interested countries in a broad range of governance challenges associated with implementation of the 2030 Agenda. CEPA has identified 62 commonly used strategies to assist with operationalization of the principles. This draft guidance note addresses risk management frameworks, which are associated with the principle of sound policymaking and can contribute to the effectiveness of institutions.
Understanding the strategy

What are risk management frameworks?

Risk is defined as the effect of uncertainty on objectives, and risk management, as the identification, measurement, monitoring and evaluation of diverse risks followed by a coordinated and cost-effective application of resources to minimize and control the probability and impact of exposure, and to possibly maximize the realization of possible returns. Risk management frameworks (RMFs) in the public sector entail the institution and incorporation of effective risk management systems, processes and strategies into the modus operandi of public institutions and governments.

Among the notable RMF applications are enterprise risk management and integrated risk management, which employ methods and tools like scenario analysis, stress testing, vulnerability assessment, gap analysis, risk heatmaps, contingency planning, and others. The choice of the relevant tool and method may depend on a host of factors including the type, sector and stage of risk(s) faced, probability-magnitude assessment of (actual and perceived) risk(s) in a given administrative context.

RMFs aim at sound policy-policy and informed decision-making while increasing productivity, effectiveness, value creation and sustainability. Governments taking risk into account in policy-making and effectively mainstreaming risk management in their development strategies and governance frameworks have stronger emergency and crisis management records including preventing, treating, recovering from and controlling hazards, shocks and disasters.

RMFs are related to SDG16’s focus on accountability and transparency through their focus on evidence-based analysis and data analytics, foresight and foreword thinking, information sharing and joined up responsibility, stakeholder engagement, use of accounting, reporting, auditing and related control systems and mechanisms to instil, uphold and further integrity, among others.

Some background conditions and catalysts for RMFs to emerge and evolve in the public sector, are:

(i) Ease of identification, operationalization and quantification of threats and opportunities, often prevalent in sectors like public finance, tax administration, debt and performance management, health and environment, including disaster and crisis management, anti-money laundering, counterterrorism financing and corruption, to name a few

(ii) Availability of technical means and tools to detect, measure and assess the relevant threats and opportunities including the financial resources, technical skills and human capital to adopt, apply and advance them. RMFs are more widespread in resource-rich public administrations which have faced threats. Most national risk assessment exercises are launched in the wake of major disasters and crises.
(iii) Prior institutionalization of risk management in any given sector or overall in the public sector (such as contingency planning, prevention, protection, vulnerability assessment, impact forecasting, insurance, regulation and modelling) and/or an enabling developmental and governance context for their adoption and implementation

(iv) Robust institutional coordination and integration mechanisms, (offline and online) interagency linkages, collaboration and cooperation frameworks including interoperability backed up by the appropriate digital government and information and communication technology (ICT)

(v) Adherence to regional, interregional and global agreements requiring or encouraging a national risk assessment or related process (such as FATF in AML/CFT, UNCAC in corruption and Sendai Framework in disaster management)

Public sector situation and trends

RMFs in the public sector are new in application, most public sector risk management initiatives dating back to 2000s with a considerable push noted in the aftermath of the economic and financial crisis of 2007/2008. Disaster risk management can be traced back to the preparatory work leading to the Hyogo Framework of Action (2005-2015) followed by the Sendai Framework for Disaster Risk Reduction (2015-2030), which builds on and expands the spectrum of disaster risks (natural and environmental, technological, cyber, nuclear and industrial), their implications (on health, education, national security, etc.) and their risk-informed treatment and control.

No global assessment of (sub)national RMFs exists to this day. Some sectoral and/or regional assessments (see Section 5) can be found in the form of comparative policy and institutional analysis. Below is a synthesis of the main trends they reveal:

(i) National Chief Risk Officer position is becoming prevalent in countries, often those that are resource-rich, with the policy fields and sector of national defence, finance and environmental sectors leading the way in risk-driven governance and governance of risk.

(ii) National Risk Assessment is undertaken by more and more countries, both developing and developed, often by those that have been, and/or are likely to be, hit by shocks and hazards.

(iii) (Sub)national governments and public institutions increasingly adopt integrated risk management beyond disaster and crisis management, interlinking various types and degrees of social, economic, political and sectoral risks and implications together, including particularly those related to the fourth industrial revolution and digital transformation.

(iv) Risk management in the areas of illicit financial flows, anti-money laundering and counter-terrorism financing (AML/CFT) and in the areas of cybersecurity is growing rapidly pushed by global, interregional and regional networks and institutional agreements across the globe.

(v) Prevention, response, preparation, control, review and monitoring of diverse risks are increasingly tied in together with effective risk communication and risk governance including
perspectives and assessments on both the hard, cost-benefit analyses and the soft, behavioural underpinnings of risk management strategies and risk perceptions.

(vi) Increasing use of technology and technology-based risk management tools and products encourage the uptake of RMFs across the world.

(vii) The overall focus and objective of RMFs shows signs of shifting from short-term loss prevention and damage mitigation concerns to long-term resilience building and sustainability.

Fault of systematic trend analysis on (sub)national RMFs, it is hard to assess evidence of impact. Nevertheless, several sectoral analyses have estimated the value-added brought in by the effective application of risk management techniques in diverse areas. For instance, the World Health Organization estimated that had Western Africa built a proper disease prevention and control system ahead of the Ebola crisis in 2014, it would have required less than one half of a percent of the cost of dealing with the epidemic ex post.

Nationally, some of the indicators used to assess risk impact (of different types and degrees) in integrated fashion include but are not limited to:

<table>
<thead>
<tr>
<th>Human life and health</th>
<th>Numbers of fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Numbers of seriously injured</td>
</tr>
<tr>
<td></td>
<td>Extent to which numbers of injured exceeds regional healthcare resources</td>
</tr>
<tr>
<td>Economic impact/Asset damage</td>
<td>Cost of damage to infrastructure (incl. critical infrastructure)</td>
</tr>
<tr>
<td></td>
<td>Harm to GDP</td>
</tr>
<tr>
<td>Natural environment</td>
<td>Change in the population of any species</td>
</tr>
<tr>
<td></td>
<td>Change in the ecosystem function</td>
</tr>
<tr>
<td></td>
<td>Need for intervention to restore environment</td>
</tr>
<tr>
<td>Critical services</td>
<td>Extent and duration of disruption</td>
</tr>
</tbody>
</table>

**Critical services and areas**—
Energy production and distribution, ICT systems, financial services, transport and logistics, water supply, waste management, food supply and distribution, healthcare system, industry, military defence, internal and external security,

**Types of risks**—
flood, winter storm, severe weather, drought, earthquake, tsunami, pandemic, forest fire, compromised water supply, maritime accidents, chemical accidents, oil spills, radioactive discharge, nuclear power plant accidents, cyberattacks, space weather and solar storms, violent attacks and civil unrest, terrorist attacks, interstate conflict, severe transport accidents, corruption, power outages, biosecurity threats, supply chain threats, arms proliferation, weapons of mass destruction, (global) financial crisis, resource shortages,
### Degrees of risks

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very unlikely</td>
<td>Insignificant</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Minor</td>
</tr>
<tr>
<td>Somewhat likely</td>
<td>Moderate</td>
</tr>
<tr>
<td>Likely</td>
<td>Significant</td>
</tr>
<tr>
<td>Very likely</td>
<td>Disastrous</td>
</tr>
</tbody>
</table>


## Methods of implementation

Risk management starts with the stage of identification of all possible risks followed by the stage of their measurement (probability and expected impact) and the stage of evaluation (acceptable/core versus non-acceptable/critical risks) based on a Risk Appetite Framework, which outlines the thresholds/benchmarks for risk acceptance/tolerance and assesses capacity to withstand risk in any given institution.

Response stage is when risk management strategies that are deemed adequate (risk mitigation, avoidance, acceptance, transfer, exploitation) are selected, and the owners of risk (risk officer, project manager, audit) and their relationship with one another are identified.

Risk must be continuously monitored and controlled supported by robust risk communication strategies and in line with the overall workplan of any given organisation and the overarching institutional mission and objectives.

Stages of implementing risk management can be adapted to the organizational needs and adjusted according to the shifting demands of times. For effective implementation, however, certain common elements stand out. Accordingly, effective RMFs should be:

(i) integral parts of all organizational activities with explicit backing on the part of the top management and ownership by public managers

(ii) comprehensive yet customized and should be also proportionate to the objectives of the organization

(iii) flexible and dynamic responding to changes in an appropriate and timely manner

(iv) inclusive seeking the feedback of all relevant stakeholders

(v) using effective information, data and knowledge management techniques and processes.

Different regions and countries subject to different types and degrees of threats can develop their own home-grown approaches to managing risk sectorally, such as Netherlands’ well-known flood risk management systems, and advanced disaster risk management technologies and processes in disaster-prone Asia and the Pacific.
ISO 31000 publishes international risk management standards (latest ISO 31000: 2018) as does COSO—Committee of Sponsoring Organizations (latest 2017 COSO ERM Framework). Many national and subnational governments and public entities base their RMFs on these and related international standards such as ISO 91000 and ISO/IEC 27001 on Quality and Information Security Management Systems, respectively. Other leading institutions such as the International Risk Governance Council, the Global Institute of Internal Auditors, Public Risk Management Organisation, and INTOSAI have also published standards and guidelines. INTOSAI GOV 9100 guidelines for good governance and internal controls in the public sector include also those related to entity risk management.

Case studies

[To be provided at a later date]

Peer-to-peer learning and research

United Nations system is active in spreading awareness and supporting the development of RMFs in the public sector. World Bank convenes the Understanding Risk Forum bringing together 7,000+ experts and practitioners of disaster risk management. United Nations University’s Risk Management and Adaptive Planning Section develops and applies conceptual frameworks and scientific methods to assess socio-economic vulnerability and risks of natural hazards, environmental change and societal transformation. UNU’s Institute for the Advanced Study of Sustainability undertakes research, particularly in the field of water management. UNEP provides training on Environmental and Social Risk Analysis.

Regional bodies of governance like the European Commission, Council of Europe and similar institutions and formations in other regions often have their own learning and research networks. OECD organizes a High-Level Risk Forum providing the space for risk managers from government and the private sector to exchange good practices in critical risk management. It also holds a Global Forum on digital security.

Private sector is also active in promoting peer-to-peer learning activities. Risk.net holds the Risk and Regulation Forums. Several other international, regional and national risk management institutes and organizations also foster peer-to-peer learning by organizing conferences, forums, seminars and workshops (e.g. Asia Risk Congress, Institute of Risk Management, Risk Management Association, Risk Management Society, Public Risk Management Association).

International development cooperation

United Nations supports countries in reducing and managing major risks to sustainable development. The United Nations Development Group, through UN Development Assistance Frameworks integrates risk
management into programming and seeks to reduce risks and build resilience through national capacity development and policy support. UNDG has guidance and toolkits on Adaptive Governance covering risk and its management. UNU publishes the World Risk Report and Index, measuring vulnerability and exposure to natural hazards of over 170 countries.

Overall, the UN system support to Member States takes place across all developmental areas covered by the SDGs, with particular emphasis on three issue areas:

- **Post-conflict risk management** – UNDAF provides the largest percentage of international financial flows to fragile states in the aftermath of a disaster and to states in transition to recovery with an eye to preventing regress to conflict
- **Disaster risk management** – UNISDR’s Sendai Framework for Disaster Reduction, provides guidance to on national reporting indicators and targets to improve the strategic capacity for national planning and priority-setting in risk reduction and resilience
- **Financial risk management** – The Interagency Taskforce on Financing for Development comprising over fifty United Nations agencies, programs and offices, assesses and makes recommendations on debt crisis tackling several high-risk issue areas such as trade financing gap, data gap, illicit financial flows, tax avoidance and evasion. UNDP’s Financing Solutions Platform for Sustainable Development links risk management with specific SDG targets. UNDP also provides risk management support at the local and community levels.

United Nations Regional Commissions are also active supporters of public sector RMFs. UNESCAP’s Regional Cooperative Mechanism for Drought Monitoring and Early Warning aims to enhance government capacity to use space-based data for effective drought monitoring and early warning. UNECE has developed risk management methodologies and standards, including in the fields of trade and statistics. It has a Working Group of Risk Management Experts in Regulatory Systems.

Specialized agencies bring their own expertise to sectoral risk management. UNEP has a knowledge repository on risk exposure and a Global Risk Data Platform on global natural hazards. UN-Habitat has a City Resilience Profiling Tool. WHO has a Human Health Risk Assessment Toolkit. OECD offers a Public Procurement Risk Management Toolbox and Guidelines for Resilience Systems Analysis.

Acknowledgements

The members of the group are...

To contact the group or nominate a member...