



The Midterm Review of the Implementation of the Sendai
Framework for Disaster Risk Reduction 2015-2030 in the Arab
States:

Preliminary results

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Abstract

Prone to multiple types of natural hazards and characterized by several acute risk drivers, all Arab countries have adopted the Sendai Framework (SF) for disaster risk reduction (DRR). Since 2015, the implementation of SF has been impacted by conflicts, climate change and the covid-19 pandemic among other impediments. Half-way into the lifespan of the SF, assessing its midterm implementation in the Arab region is necessary. To this end, the current study presents the preliminary results the Midterm review (MTR) for the implementation of SF. These results are based on conducted national and regional consultations along with desk review of existing reports and studies. Key preliminary findings reveal insights on the region's collective progress towards achieving the goal and targets of SF. In parallel, uncovered gaps, setbacks and challenges pinpoint areas where greater efforts are required to accelerate the progress and pursue the outcome of the SF leading the Arab region towards resilience.

Exposés à plusieurs types d'aléas naturels et caractérisés par plusieurs facteurs de risque, tous les pays arabes ont adopté le cadre de Sendai (CS) pour la réduction des risques de catastrophe (RRC). Depuis 2015, la mise en œuvre du CS a été impactée par des conflits, par les conséquences du changement climatique et par la crise pandémique du Covid-19, entre autres obstacles. À mi-parcours de la durée du CS, il est nécessaire et important d'évaluer sa mise en œuvre à moyen terme dans la région arabe. À cette fin, l'étude actuelle présente les résultats préliminaires de la revue à mi-parcours (RMP) pour la mise en œuvre du CS dans la région arabe. Ces résultats provisoires à ce stade sont basés sur des consultations nationales et régionales menées ainsi que sur un examen documentaire des rapports et études existants. Les principales conclusions révèlent des informations sur les progrès collectifs de la région vers la réalisation de l'objectif et des cibles de la FS. En parallèle, les lacunes et défis dévoilés pointent où davantage d'efforts sont nécessaires pour accélérer l'avancement et poursuivre les résultats du CS menant la région arabe vers la résilience.

نظرًا لتعرضها لأنواع متعددة من الأخطار الطبيعية وللعديد من عوامل مخاطر الكوارث، اعتمدت جميع الدول العربية إطار سندي للحد من مخاطر الكوارث. منذ عام 2015، تأثر تنفيذ إطار سندي بالنزاعات وتغير المناخ ووباء covid-19 من بين عوائق أخرى متعددة. في منتصف المدة لتنفيذ الإطار، من الضروري تقييم تنفيذه في المنطقة العربية. وتحقيقاً لهذه الغاية، تقدم الدراسة الحالية النتائج الأولية لاستعراض منتصف المدة لتنفيذ الإطار في المنطقة العربية. تستند هذه النتائج إلى المشاورات الوطنية والإقليمية التي أجريت بالإضافة إلى مراجعة مكتبية للتقارير والدراسات الحالية. تكشف النتائج الرئيسية عن التقدم الجماعي للمنطقة نحو تحقيق هدف وغايات إطار سندي. في موازاة ذلك، تحدد الفجوات والنكسات والتحديات المجالات التي تتطلب بذل جهود أكبر لتسريع التقدم ومتابعة نتائج إطار سندي لقيادة المنطقة العربية نحو الصمود

Short executive summary

The Arab region is prone to multiple natural hazards. The regions' acute features of poverty, lack of development, poor governance, conflicts, environmental degradation, rapid demographic growth, and internally displaced population and refugees constitute important risk drivers. The latter often turn natural hazards into disasters. Disaster risk reduction (DRR) concerns resonate in the Arab region by the adoption of the Sendai Framework (SF) for DRR 2015-2030 by all Arab countries.

Despite the adoption of SF, the region still foresees intensifying and increasingly complex risk configurations. Climate change is imposing additional pressures on the Arab region, especially in countries already suffering from water scarcity and food insecurity. Emerging systemic risks such as those triggered by the covid-19 pandemic have exposed serious fault lines and vulnerabilities in societies, institutions and economies of the Arab countries. The pandemic has in most countries of the Arab region become an exacerbating factor for existing development challenges, and an impediment for achieving the SF's outcomes.

Half-way into the lifespan of the SF, there is an urgent need to better understand the current status of its implementation and progress in the Arab states. In the light of what was presented, the current study presents the **preliminary** results of the Midterm review (MTR) for the implementation of SF. A critical analysis of conducted consultations and existing documents will allow taking stock of the implementation of the SF to date and to assess progress made and challenges experienced in preventing and reducing disaster risk.


The adopted methodology consisted of: conducting national and regional consultations along with a desk review of the SF Monitoring System reports; Global Assessment Report (GAR)s 2015, 2019 and 2022, as well as GAR Special Reports; Regional Assessment Reports (RARs); the Arab Strategy for Disaster Risk Reduction (ASDRR); studies of Stakeholders groups; National DRR Strategies in Arab countries and related documents sourced through prevention web.

A scientific literature review was also conducted using a database search query in Scopus repository of academic research papers (published by ScienceDirect, SpringerLink, Taylor & Francis Online, Wiley Online Library, Emerald Insight, etc.). In addition, the outcomes of national and regional events (e.g., Arab Regional Platforms for Disaster Risk Reduction) were gathered. Collected documents were filtered and analyzed to assess SF's progress in relation to: 1) SF's outcome and goal, 2) SF's four priorities for Action, 3) SF's targets, and 4) Collaboration, partnership and cooperation.

Key findings revealed that, despite the specific constraints of the region, the Arab governments, stakeholders and communities have shown commitment in implementing SF. The region's collective progress towards achieving the goal and targets of SF has been highlighted with several success stories.

However, the overall progress in the Arab region is currently at an average level. The assessment in relation to the SF four priorities for action unraveled that the effort done for advancing "Priority for action 3: Investing in Disaster Risk Reduction for Resilience" was not enough. The analysis also uncovered geographical discrepancies in the progress of SF and accordingly highlighted priorities of actions in the Arab region. On a national scale, countries under conflicts still face considerable socio-economic and political challenges hampering the implementation of SF.

The conducted MTR also unraveled new and emerging issues as well as shifts in contexts since the adoption of the Sendai Framework in 2015.



On the basis of key findings related to gaps, setbacks and challenges, areas where greater efforts are required to accelerate the progress and to pursue the outcome of the SF were pinpointed. Accordingly, the conducted review will assist Arab countries and stakeholders to formulate recommendations for prioritized, accelerated and integrated regional, national and local cooperation and action in the period 2023 to 2030, and beyond.

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Abbreviations and Acronyms

<i>AGIR</i>	The Arab Geographical Information Room
<i>ASDRR</i>	The Arab Strategy for Disaster Risk Reduction
<i>AWC</i>	The Arab Water Council
<i>BBB</i>	Build Back Better
<i>CADRI</i>	Capacity for Disaster Reduction Initiative
<i>CNRS</i>	Conseil National de la Recherche Scientifique
<i>DRM</i>	Disaster Risk Management
<i>DRR</i>	Disaster Risk Reduction
<i>ECTAD</i>	Emergency Centre for Transboundary Animal Diseases
<i>GAR</i>	Global Assessment Report
<i>GNDR</i>	The Global Network of Civil Society Organizations for Disaster Reduction
<i>GRAF</i>	Global Risk Assessment Framework
<i>HFA</i>	The Hyogo framework for Action
<i>IDPs</i>	Internally displaced population
<i>JICA</i>	Japan International Cooperation Agency
<i>MCR</i>	Making Cities Resilient
<i>MENA</i>	Middle-East and North Africa
<i>MHEWS</i>	Multi-hazard early warning systems
<i>MTR</i>	Midterm Review
<i>NUA</i>	New Urban Agenda
<i>SF</i>	Sendai Framework
<i>SFM</i>	Sendai Framework Monitoring
<i>SFDRR</i>	Sendai Framework for Disaster Risk Reduction
<i>STAG</i>	Science & Technology Advisory Group
<i>S&T</i>	Science & Technology
<i>SUNAR</i>	Natural Resources Management Platform and Early Warning System
<i>UNDP</i>	United Nations Development Program
<i>UNDRR</i>	United Nations office for Disaster Risk Reduction
<i>UNDRR-ROAS</i>	UNDRR Regional Office for Arab States

I. HIGHLIGHTS AND INTRODUCTION

The Sendai Framework (SF) for Disaster Risk Reduction (DRR) 2015-2030 was adopted during the Third United Nations World Conference on DRR. SF was subsequently endorsed by Member States in the United Nations General Assembly and provided for all-of-society and all-of-State institutions engagement in preventing and reducing disaster risks posed by both natural and man-made hazards and related environmental, technological and biological hazards and risks.

The period to 2023 marks the midpoint in implementing the SF, as well as other related agreements, conventions and agendas (e.g., 2030 Agenda for Sustainable Development, Paris Agreement, etc.). Accordingly, the need to hold a midterm review (MTR) of the implementation of the SF was emphasized by the United Nations General Assembly. The main aim of the MTR is to 1) assess progress on integrating DRR into policies, programs and investments at all levels, 2) to identify good practices, gaps and challenges and 3) to accelerate the path to achieving the goal of the SF and its seven global targets by 2030. The SF MTR comes at a critical period when governments, stakeholders and communities face major setbacks caused by the covid-19 and seek SF's guidance to identify and address underlying systemic risk drivers in order to sustainably recover from the pandemic.

The Arab region is considered one of the world's regions most in need of a sustainable recovery from covid-19. In fact, the region has been heavily impacted by Covid-19 pandemic that generated complex interactions between different biological, technological, health, and economic risks (UNDP, 2021). The latter has magnified issues affecting the region since decades including violence and conflict, inequalities, unemployment, poverty, inadequate social safety nets, human rights concerns, and insufficiently responsive institutions and governance systems (United Nations 2020). The pandemic has exposed serious fault lines and vulnerabilities in societies, institutions and economies of the Arab countries, constituting a risk multiplier to disasters. According to United Nations (2020), the pandemic has become in most countries of the Arab region an exacerbating factor for existing development challenges. Consequently, despite some progress prior to the pandemic, the region will be facing more impediments in achieving the 2030 Agendas' goals.

Achieving SF's goal is of a major importance for the Arab region (in 2015, along with all United Nations Member States, the 22 Arab countries adopted the SF). Arab countries are prone to multiple types of natural hazards (El-Kholei 2019), such as hydro-meteorological, geological, environmental, biological, chemical and technological hazards. Most Arab countries also present acute factors of vulnerability to natural hazards. Developing countries and those in fragile contexts (e.g. Small Island Developing States (SIDS): Comoros and Bahrain, LDCs (Least-developed countries), and (post)-conflict areas (Yemen, Iraq and Syria) constitute around 83% of the region. The regions' acute features of poverty, lack of development, poor governance, conflicts, environmental degradation, rapid demographic growth (UN-Habitat et al., 2012; World Bank, 2020), and internally displaced population (IDPs) and refugees constitute important risk drivers that often turn natural hazards into disasters (Eltinay and Harvey 2019). During the past 30 years, the Arab region was affected by more than 270 disasters, resulting in more than 150,000 deaths, 20 billion US dollars of economic losses and approximately 37 million affected people (EM-DAT 2021).

Climate change (CC) is imposing additional pressures on the Arab region. CC adverse impacts are being felt largely on the quantity and quality of freshwater resources and the ability of the region to ensure food

security, satisfy energy demand, sustain rural livelihoods, protect human health and preserve ecosystems (ESCWA 2017). A higher frequency and intensity of floods, droughts and extreme weather events has also been experienced in many Arab States. According to IPCC (2021), this upward trend continues, and there will be more frequent hot temperature extremes over most land areas as global mean surface temperature increases. Several major Arab cities located in low-lying coastal zones (Osman Elasha 2010), are under serious threat from sea-level rise induced by climate change.

The Arab region is one of the most conflict-affected in the world (Institute for Economics & Peace 2019). In the past five years, 40 per cent of Arab countries have had some type of armed conflict that has increased the vulnerability of the population to disaster risk (UNDDR-ROAS 2021). Conflicts have undermined the region’s efforts to blend DRR approaches and added additional challenges to achieving SF’s goal (UNDRR 2019). The demographic landscape of the region has also been changed dramatically; multifaceted humanitarian crises, conflict and political turmoil in several Arab countries have led to large-scale displacement of people within and across borders (UNDDR-ROAS 2021). The massive influx of internally displaced persons into already overpopulated cities is a major stress on governments and local authorities (Peters, Holloway, and Peters 2019), and impedes their ability to manage sustainable growth and DRR efforts.

Despite the continuous efforts to limit the economic and lives losses, the region still foresee intensifying and increasingly complex risk configurations. The implementation of SF in the Arab region is impacted to a large extent due to all the emerging issues and shifts in contexts mentioned above. These shifts, in turn, have increased the vulnerability of people to disaster and climate risk tremendously and hindered the aspired achievement of sustainable development and SF’s targets by 2030. To escape the vicious cycle towards resilience (figure 1), accelerating all-of-society concerted efforts in the remaining seven years of SF’s lifespan is a must.

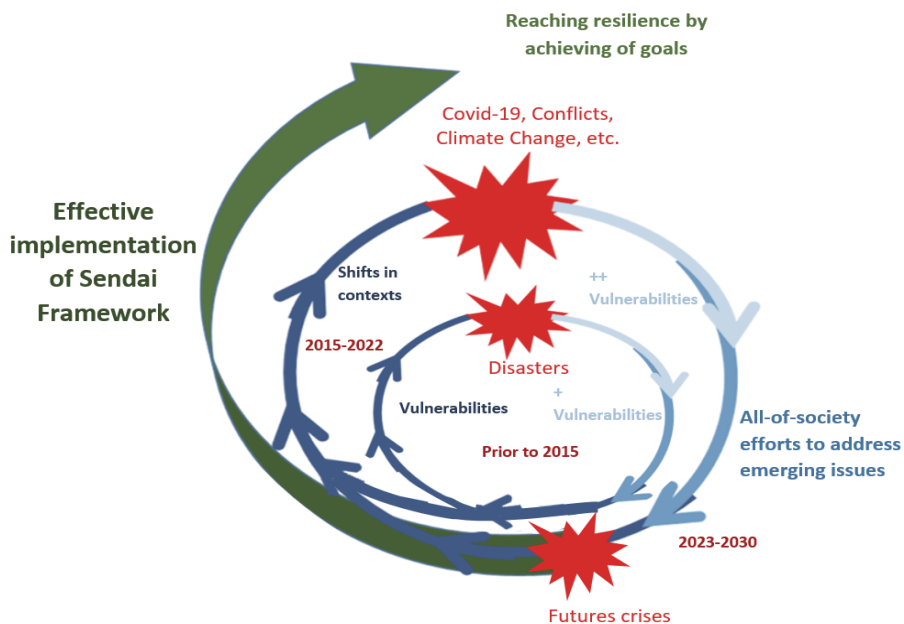



Figure 1. Addressing emerging issues to escape the vicious cycle of risk, the case of the Arab region.

In the light of what was presented, this interim report examines in a retrospective manner the progress of the Arab region in implementing SF. To capture the inputs/activities/processes of governments,



intergovernmental organizations, multilateral organizations, civil society, the private sector, academia, scientific and research institutions, the adopted methodology combined national and regional consultations with a desk review (SFM, GARs, RAR, GAR Special Reports, MCR reports, ASDRR, etc.) and a scientific literature review (based on Scopus repository of academic research papers). Collected documents were filtered and analyzed to assess SF's progress in relation to: 1) SF's outcome and goal, 2) SF's four priorities for Action, 3) SF's targets, and 4) Collaboration, partnership and cooperation. The MTR is an important step for taking stock and monitoring the implementation of the SF to date. The main aim of the MTR is revealing challenges experienced and emerging issues, as well as changes in context since the adoption of the SF in 2015, in order to advance the SF implementation in the Arab region. In a prospective manner, the MTR offers perspectives to assist Arab countries and stakeholders formulate recommendations for prioritized, accelerated and integrated regional, national and local cooperation and action in the period 2023 to 2030, and to initiate nascent thinking on possible arrangements for risk-informed sustainable development beyond 2030.

II. MTR SF METHODOLOGY AND PROCESS

To review the progress of the implementation of SF in the Arab region, a specific methodology was adopted (summarized in figure 2).

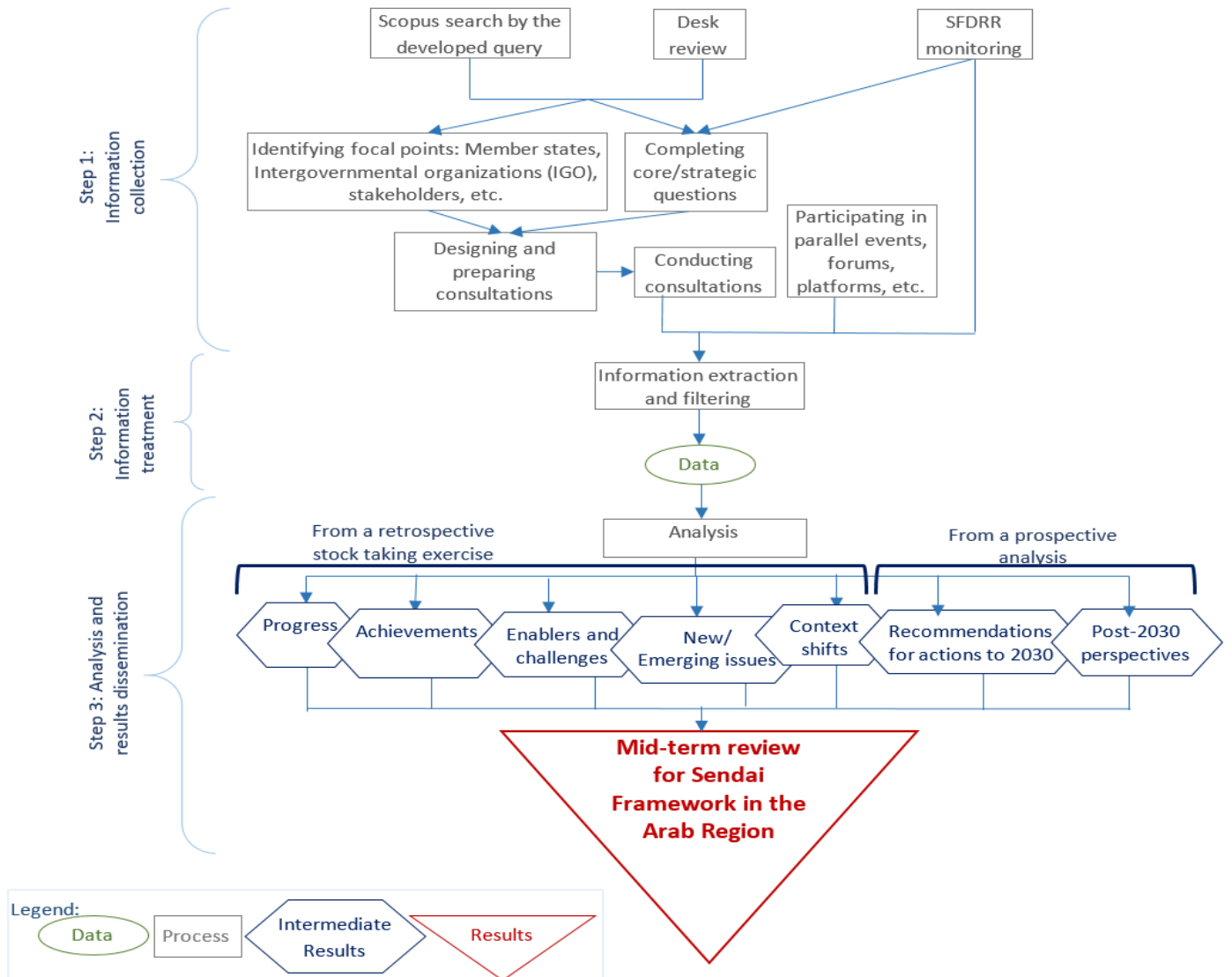


Figure 2. Adopted methodology to conduct a MTR SF in the Arab region.

In this context, the United Nations Office for Disaster Risk Reduction/Regional Office for Arab States (UNDRR-ROAS) organized to date two national consultations (in Tunisia and Qatar) and a regional consultation to discuss the implementation of SF since 2015 and the way forward (figure 3).



Figure 3. Consultations for the midterm review of the implementation of the Sendai Framework for DRR: a) Tunisia's National consultation, Tunis, 21-22nd of March 2022; b) Qatar's National consultation, Doha, 30-31st of March 2022; c) Regional consultation, Cairo- Egypt, 18-19th of April 2022.

These participatory consultations with the all-of-State institutions/ all-of-society approach, engaged: all DRR focal points, State entities, national and local stakeholders and actors involved in DRR actions (civil society, Red Crescent, private sector, scientific and technological communities, etc.), United Nations agencies and international organizations. During the regional consultation, the majority of Member States were represented. All stakeholders were also represented:

- 1- Arab Science and Technology Advisory Group for DRR (Arab – STAG)
- 2- Arab Civil Society Group for DRR
- 3- Red Cross Red Crescent National Societies Stakeholder Group for DRR (represented by IFRC)
- 4- Arab Gender Equality and Women Empowerment for DRR
- 5- Arab Children & Youth Group for DRR

6- Private Sector Alliance for Disaster Resilient Societies (ARISE)

The consultations were guided by UNDRR recommended questions¹. As both a retrospective and a prospective exercise, the questions 1) helped to take stock of the progress made, the changes in context and the faced challenges since 2015, and 2) guided participants in developing recommendations for prioritized, accelerated and integrated action in the period 2023 to 2030 and beyond. During the exercise, participants were divided into heterogeneous groups (with different affiliations and profiles). A time was given for groups to write their answers and a second time was given for presentation of answers and case studies/good practices in relation with the discussed theme. The presentations opened the discussion between all the groups. These consultation meetings took place in a participative and constructive atmosphere, which allowed for the exchange of a great deal of information and data.

III. Preliminary Results

A. RETROSPECTIVE REVIEW

This section presents a review of region's progress towards the outcome and goal, priorities for action, and application of the SF guiding principles.

i. Progress in Risk Assessment, Information and Understanding

Despite the specific constraints of the region, the Arab States and communities have shown commitment in advancing DRR knowledge.

Knowledge on the frequency and intensity of natural hazards, as well as on the exposure of people and assets, has been improved since 2015. This was reflected in:

- An increase in the number of countries' hazard profiles.
- An increase of spatio-temporal hazards mapping.
- The establishment of an Atlas on natural hazards in the Arab Region.
- The establishment of research centers, e.g., the Arab Center for the Prevention of Earthquake in Algeria.

To a lesser extent, countries also performed vulnerability analyses (for one or more dimensions) yielding qualitative and/or quantitative results of the damage susceptibility to an individual external shock, natural or human-made, of a community, a system or the built environment. For instance, the State of Comoros conducted a study on vulnerabilities to different hazards. Furthermore, a better understanding of risk root causes and underlying drivers of disaster risk has been observed. For instance, articulating conflict as a key driver in the region has resulted to increased attention on DRR in conflict-affected areas.

The number of risk modeling/assessment studies also increased since 2015 and covered the national (e.g., mapping volcanic risk in Comoros, dashboards and risk models in Lebanon), sub-national (e.g., risk assessments for Lebanon's governorates) and local levels (e.g., local risk assessment at Ain Drahim-Tunisia). The Arab Geographical Information Room (AGIR) was established by the League of Arab States

¹ This questionnaire model is adopted by UNDRR for the consultation processes on a global scales for all countries and region all around the world.

in 2015 to produce enhanced information and analytical studies. AGIR, which is hosted by the Arab Water Council (AWC), works to unpack complex topics, such as how emerging climate-related risks interact with structural challenges, and how to foster coherence between regional, national and local actions and rationalize trade-offs between sectors while establishing development plans. On the other hand, regional risk assessments taking into account transboundary risks are rare.

With the increasing complexity and interaction of human, economic and political systems with natural systems, risk becomes increasingly systemic. While the era of hazard-by-hazard risk reduction is over, few countries are directing attention to understanding the large-scale dynamic risks that cut across the economic, social and environmental dimensions. The systemic nature of risk is still not addressed across all sectors, administrative levels and disciplines in the region.

Concerning data collection, most Arab states have made significant progress in collecting disaster related information. Nine out of the 22 Arab countries have either completed or initiated the development of national disaster loss databases. They include Djibouti, Egypt, Jordan, Lebanon, Morocco, Palestine, Syria, Yemen and Tunisia. The United Arab Emirates and Comoros have begun the development of similar databases (UNISDR, 2015). Ten Arab states have a DesInventar database (DesInventar, 2021), with varying degrees of regular updating of these databases. During Covid-19 pandemic, a number of health ministries enhanced their data systems. For example, the Qatari Ministry of Public Health developed monitoring and data management systems.

A better understanding of risk among all community members has been noticed since 2015 due to increased risk communication and awareness. Arab decision-makers and societies have acquired a culture of risk. For example, a better understanding of seismic risk was observed among Algerian citizens; often Friday sermons at the mosque stress the importance of disaster risk. However, the role of the media in communicating risk still needs to be defined and improved. This issue is a major finding of the consultation processes on regional and local levels.

Only few risk assessments are informed by indigenous knowledge (e.g., FAO Community-based DRR Action plan in Lebanon, Sudan flood forecasting). Traditional, indigenous and local knowledge is not sufficiently integrated to scientific and technological insights and risk assessments. The link between science and technology (S&T) communities and people is not close, highlighting the need to strengthen S&T-society partnerships at many levels.

It is important to note that the overall Science and Technology status for DRR in the Arab region is currently at an average level. The number of DRR experts is limited compared to the international experts. The number of PhD thesis in the field of DRR increased since 2015 but is still low compared to other regions of the world.

ii. Progress in Risk Governance and Management

Since 2015, national public policies, legislation, planning, governance systems and organizations changed in the Arab States to align with the SF. Within the framework of action to reduce natural, economic, social and environmental disasters, risk governance has been strengthened. This was translated through:

- The development of DRR strategies
 - On a regional level: At the regional level, the Arab Strategy for Disaster Risk Reduction (ASDRR) was developed in 2018 to coherently implement the SF with the other global post-2015 frameworks. It takes account of the SDGs, with specific emphasis on SDG 11

- for sustainable cities. Furthermore, the ASDRR focuses on mitigating food insecurity, water access constraints and the ongoing conflict in the region.
- On a national level: 13 countries have developed and updated their National DRR Strategies (NDRRS): Lebanon, Mauritania, Tunisia, Somalia, Egypt, Jordan, Sudan, Comoros, Djibouti, Bahrain, UAE, Morocco, and Kuwait.
 - On a local level: A considerable number of local DRR strategies has been developed. For instance, local DRR strategies have been developed for the Tunisian towns of Mateur, Tataouine, Ain Draham and Gabes, etc.
 - On a sectoral level: A significant number of ministries have established their sectoral DRR strategies: Qatar National Food Security Strategy 2018-2023, Lebanon's DRR strategy for agricultural sector, Egypt water security, etc.
- Decentralization of risk governance has been promoted and institutional capacities have been improved in some countries. For example, after 2015, risk governance in Tunisia has been shared between central government and relevant local authorities, sectors and stakeholders. Prior to 2015, DRR responsibilities were primarily those of the Ministries of Interior and Defense. SF drove the Arab States to a better definition of responsibilities, distribute roles and duties in DRR as stated by the guiding principles.
 - This decentralization reflects the paradigm shift from Disaster risk Management (DRM) to DRR, and from reactive and silo-based approaches of managing disaster to proactive resilience noticed since 2015. SF guided the Arab States in making more prevention-oriented policy decisions.
 - Horizontal governance has been favored over vertical governance, fostering inter-ministerial cooperation (often through national focal points). DRR joint sectoral committees were established in Qatar, Algeria, Kuwait, and Tunisia. Cooperation in risk governance has been improved especially during Covid-19.
 - Some Arab countries reviewed and strengthened the legislative frameworks, amended existing laws and enacted new laws in relation to DRR. For instance, the National Civil Defense Council, a department under the State of Qatar Ministry of Interior, was created in 2018 and its role in National DRR and disaster response was reinforced. In Kuwait, the Fire Force Act has been developed to cover all types of disasters and the SF follow-up procedures have been developed in the job description. The State of Qatar has also enacted laws on humanitarian and non-governmental organizations and donor institutions that direct support and relief to all affected countries due to natural or man-made disasters. It is also noteworthy that building codes have been enforced since 2015. Moreover, legislation for insurance has been put into place in Palestine to allocate a fund for reducing disaster risk in the agricultural sector.
 - Women's role in risk governance has been empowered.
 - Only few countries articulate and align DRR, SDGs and CC strategies and policies. The State of Qatar has worked to include DRR in sustainable development policies and plans. Qatar National Vision 2030 is being integrated within plans and actions supporting the realization of the goals and targets of inter alia the SF, 2030 Agenda for Sustainable Development and the Paris Agreement.
 - Few regional and sub-regional strategies and mechanisms for DRR exist to address common and transboundary disaster risk: Algeria and Tunisia/Palestine and Jordan policies for floods and forest fires, drought strategies, transboundary plant pests and animal diseases (Desert Locust Commission).

Significant progress has been made in risk governance in the Arab region since 2015, and existing systems show promise in the mitigation, prevention, and response to risks and disasters. However, discrepancies exist in the region and this is mainly triggered by political instability in some countries. In fact, developing

countries and those in fragile contexts (e.g., Small Island Developing States (SIDS): Comoros and Bahrain, LDCs (Least-developed countries), and (post)-conflict areas (Yemen, Iraq and Syria) constitute around 83% of the Arab region.

iii. Progress in Investment in Risk Reduction and Resilience

The Arab States recognize that investing in DRR is investing in resilience and sustainable development. This evolution is important as these investments are based on long-term considerations. Accordingly, resources have been allocated and investments in resilience (through structural and non-structural measures) have increased since 2015, on all levels and in all sectors (e.g., emergency response, education, agriculture, industry, infrastructure, etc.):

- Financial resources:
 - Through DRR budgets that have been allocated and funds that have been dedicated in some countries:
 - The Sudanese government allocated a budget for DRR through a clause in the Ministry of Finance.
 - Comoros allocated a budget for DRR in the form of subsidies, which can only be mobilized in the event of disasters.
 - The Qatari government created a \$1 Million Disaster Response Fund for the Qatari Red Crescent.
 - Budget in local governments increased (e.g., municipalities). This is the case in Tunisia, Morocco where the decentralization processes are undergoing.
 - To improve critical infrastructure's resilience based on projected scenario, supported by MCR program (e.g., investing in building resilience to the infrastructure of the Ministry of communications in Qatar).
 - To carry out awareness campaigns (at schools, malls, etc.).
 - For reducing exposure. For example, the government of Djibouti invested in the relocation and construction of a new city for people living near the bed of the main wadi.
- Technical and technological resources:
 - To ensure cyber security, e.g., inauguration of the first phase of the Electronic Security Shield project to raise the level of electronic and cyber security and enhance the vital information infrastructure in Qatar.
 - To ensure energy security, e.g., investment in energy storage batteries (Ras Laffan-Qatar).
 - To establish Early Warning Systems (EWS), e.g., Dubai and Sudan multi-hazard EWS
 - To upgrade response equipment, e.g., drones, operation rooms, etc. This is common investment to many Arab countries.
- Human resources/capacity building:
 - By training for first responders, e.g., the State of Qatar has also invested in qualified personnel to work in the areas of rescue, development and relief.
 - By conducting simulations, exercises and drills.
 - By organizing workshops, trainings, conferences and forums.

- By granting PhD scholarships in the field of DRR (e.g., PhD scholarships from CNRS Lebanon).
- By integrating DRR science in teaching and research programs, e.g., in the Remote Sensing Center at the University of Mosul and the College of Science at Al-Mustansiriya University in Iraq.
- To empower local communities, e.g., the 1 million euros dedicated to DIP ECHO project "Support for the local capacities of the municipalities of Ain Draham and Tataouine in the area of Disaster Risks", implemented in Tunisia and supported by the French government.

Investment in resilience is somewhat lagging behind, investment in the Arab States is mainly focused on response and recovery actions.

In the Arab region, DRR considerations are not yet integrated into fiscal instruments/taxes, in order to incentivize risk-informed investment orientations. However, private sector investment is increasing in some countries. Especially after Covid-19, investments to build the resilience of business and industry sectors to disaster risk from natural and man-made hazards have significantly increased.

Insurance legislation has been put in place in Palestine to allocate funds for DRR in the agricultural sector. However, the region is lagging behind in risk transfer mechanisms. Disaster insurance in the region is low, evidenced by the lack of comprehensive disaster loss information in insurance databases. Global insurance, as a percentage of GDP, is about 3 per cent, compared with 1 per cent in the Arab region. At national level, high-income countries, such as the United Arab Emirates, have greater insurance, with values above 2 per cent of their GDP.

iv. Progress in Disaster Preparedness, Response and ‘Build Back Better’

In general, preparedness for response, as well as for recovery, rehabilitation and reconstruction, has improved in the Arab region since the adoption of the SF. This improvement was noticed on the basis of these elements:

- Allocation of responsibilities, identification of roles and better coordination of the response; e.g., the State of Qatar has reinforced the National Command Center (NCC) to manage a coordinated response to both local and national emergencies. The NCC works with different national agencies to evaluate emergencies and implement the appropriate response. In Algeria, the executive decree No. 19-59 of Jumada Al-Oula 26 1440 was established specifying the modalities for preparing and managing emergency plans.
- Better response competences due to periodic drills. For instance, Qatari Patrol arrival speed has been improved. The average arrival speed of security, civil protection and traffic patrols is now of 7-10 minutes.
- Establishment of operation rooms (national, local, ministerial), e.g., in Sudan and in Lebanon.
- Design and implementation of EWS. Some countries like Jordan, Bahrain, Sudan, UAE, and Qatar have advanced early warning technologies. However, availability and access to people-centered multi-hazard early warning systems (MHEWS), as envisaged by SFDRR target G, is yet to be achieved. Countries like Algeria, Comoros, and Djibouti depend upon regional weather forecasts provided to them. Other countries like Lebanon are making efforts to develop and maintain a National Early warning Platform (SUNAR). A local EWS was developed in Ain Draham-Tunisia.

- Development of local response plans (e.g., in Tunisia).
- Preparedness through awareness, e.g., Sudan was awarded to the best covid-19 awareness add.
- More inclusive preparedness and response, e.g., participation of youth in Egypt, participation of people with disabilities in Palestine and Yemen. The State of Qatar has developed of an emergency distress service (Aounak) under the supervision of the Technical Affairs Department at the NCC: A device that enables the elderly, people with special needs and those with chronic diseases to easily contact the emergency service.
- Preparing for disasters by improving redundancies. The State of Qatar believe that emergency situations, pollution of the Gulf waters, natural disasters and wars should be addressed by the construction of water reservoirs sufficient for several days. Kahramaa has started the water security Mega Reservoirs Project. The first phase of the project will provide the 7 days of storage for the expected water demand at horizon 2026, with 5 mega reservoir sites. The second phase will provide the 7 days of water storage for expected demand in 2036 by adding additional reservoirs within the 5 mega reservoirs sites.

The Arab States made significant efforts especially in preparedness and response actions. However, a number of challenges still face relief work and immediate response to disasters. These are mainly due to:

- Lack of proactive plans to all hazards.
- Lack of coordination between the intervening parties.
- Disaster preparedness strategies and plans are not periodically updated to keep up with population growth, CC, etc.
- Lack of coordination with the media.
- Lack of real-time data.

It is important to note that additional efforts are needed to plan the recovery, rehabilitation and reconstruction phases, especially on a regional level. No regional response plans exist but coordinated regional approaches and operational mechanisms have been developed to prepare for and ensure rapid and effective disaster response in situations that exceed national coping capacities.

Women, persons with disability, youth and other marginalized groups should contribute more to these efforts.

The Arab States should also put more emphasis on the “Build Back Better” concept. The “BuildBackBeirut” project is being implemented to build back better critical infrastructure after the explosion of Beirut.

v. Progress in Collaboration, Partnership and Cooperation

Cooperation and collaboration mechanisms for DRR evolved since the adoption of the SF. The most successful partnerships and initiatives in reducing disaster risk have been:

- UNDRR has convened biannual meetings of the Arab Partnership for DRR since 2017 to create a forum for technical and operational deliberations on the progress, challenges and gaps in the regional implementation of the SF and ASDRR 2030. The Arab Partnership seeks to facilitate discussion on innovative solutions to climate risk management and DRR integration in the SDGs in the region. The aim is to achieve coherent implementation of the post-2015 global agendas and risk-

informed sustainable development. These periodic discussions also inform the deliberations of the Arab regional platforms on DRR.

- The Arab-African Regional Forum held in Tunis in October 2018. All Arab States expressed their support for the platform's final declaration, stressing the importance of building regional and international partnerships to reduce disaster risk.
- Arab voluntary stakeholder groups. Arab governments endorsed five Arab voluntary stakeholder group action plans on DRR at the Africa-Arab Platform on DRR in October 2018. The groups were established under the aegis of UNDRR:
 - Arab Science and Technology Advisory Group for DRR (Arab – STAG)
 - Arab Civil Society Group for DRR
 - Arab Gender Equality and Women Empowerment for DRR
 - Arab Children & Youth Group for DRR
 - Private Sector Alliance for Disaster Resilient Societies (ARISE)

The action plans, supporting governments to implement the SF, seek to: 1) generate knowledge on DRR in their thematic areas, 2) support the design, finance and implementation of DRR policies, plans and programs targeting Sendai priority groups, 3) build the capacity of government and civil society for greater DRR engagement, 4) ensure DRR stakeholders (women, youth, scientific community and CSOs) working on DRR and the humanitarian response are represented on DRR policy mechanisms, and 5) engage globally on DRR.

- Red Cross Red Crescent National Societies Stakeholder Group for DRR (represented by IFRC).
- Arab Network for Environment and Development (RAED) has participated in preparing the National Strategy for DRR & organizes national & regional events on DRR
- The network of Gulf Cooperation Council (GCC) for disaster preparedness and response ensuring multi-stakeholder DRR partnerships at regional level.
- The Climate Risk Nexus Initiative will help develop capacities of regional and local partners to address gaps that exist to achieving more risk-informed development and help to strengthen the resilience of people.
- Partnerships with the Japan International Cooperation Agency (JICA).
- The Global Network of Civil Society Organizations for Disaster Reduction (GNDR) joined the Capacity for Disaster Reduction Initiative (CADRI) Partnership in 2018. GNDR provides advisory guidance to the development of CADRI Partnership products and services, such as good practices, training modules and other capacity development tools.
- The International Civil Defense Organization (ICDO) is an intergovernmental organization with the objective to contribute to the development by States of structures ensuring the protection and assistance of population and safeguarding property and the environment from natural or man-made disasters.
- Desert locust commission and Emergency Centre for Transboundary Animal Diseases (ECTAD) for forecast, monitoring, capacity building and response.
- Local partnerships like Jarash Municipality and youth partnership-Jordan, and Aqaba farmers' partnerships for DRR.
- The majority of Arab States attached since 2015 greater importance to strengthening partnership with specialized agencies in the field of development and national capacity-building (e.g., with UNDRR).

It is important to note that cooperation mechanisms developed since 2015 allowed the Arab States to help each other during the pandemic of Covid-19. For example, Qatar is cooperating with WHO for COVID-19 Vaccines Global Access (COVAX), a worldwide initiative aimed at equitable access to COVID-19

vaccines: Qatar Red Crescent Society (QRCS) has started its neutral vaccination monitoring program in Syria. Furthermore, Qatar is working with the World Food Program (WFP) to meet food security needs in Yemen: A US\$2.9 million contribution from Qatar has allowed the United Nations WFP to provide vital food assistance to over 160,000 vulnerable Yemenis. Qatar’s support enabled WFP to distribute food vouchers over a two-month period to families in four governorates – Lahj, Al Jawf, Dhamar and Taiz. In a similar manner, some Arab States offered help in the aftermath of Beirut Port explosion.

It is noteworthy that UN agencies in the Arab region integrate SF in sectorial policies (health, urban planning, food, environment, etc.) and support DRR strategies and actions plans, e.g., UNESCO took SF into account in the creation of management effectiveness toolkit to expand protected areas, FAO Resilience agenda is structured around the SF, UN Habitat urban resilience program, etc. On the other hand, more cooperation between UN agencies is necessary to break silos.

vi. Progress in achieving the Targets of the Sendai Framework

The Arab region has made progress in achieving the seven global Targets of the SF. Information to monitor SF are being collected and show the progress of the Arab States in the validation SF global Targets. Based on Sendai Framework Monitor (SFM), Figure 4 shows the regional reporting levels of Sendai targets for Arab States. There is a lack of progress in some targets validated as well as in data availability after 2018.

The lack of reporting of the global targets using internationally agreed indicators can be explained by the following challenges:

- SFM includes many details that are not necessarily perceptible in the field.
- Many details could not be filled in because they differ from the characteristics of the country itself.

Training workshops were held in 2018 and 2019, with reporting on any year taking place the following year. This explains the apparent reversal in progress due to the Covid-19 crisis, which shows the wider effect of this crisis, and other potential pandemics, on government effectiveness.

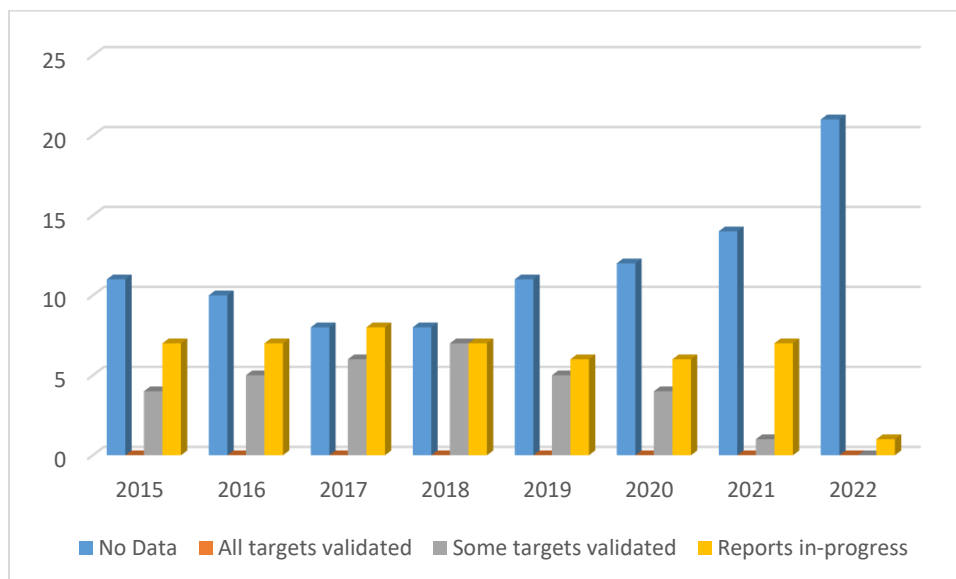


Figure 4. Status of reporting by Arab States, 2017–2019. Source: Sendai Framework Monitor, 2018 (accessed on 6 May 2022).

Regional progress on global targets as reported by the SFM for 2018 shows that 8, 10, 12, 10, 16 and 14 countries have not yet started reporting for targets A (mortality), B (people affected), D (critical infrastructure and services), E (DRR strategies), F (international cooperation) and G (early warning and risk information), respectively. However, 8, 8, 8, 7, 5 and 7 countries report progress for targets A, B, D, E, F and G, respectively. No country reported on target C (economic loss).

Global targets A to D, reduction of losses: The Arab region registers an increase in disruption of basic services compared with the world level, but a relative decrease, comparatively, in the number of deaths and people affected by disasters.

Global target E. National and local DRR strategies by 2030: 13 countries have developed and updated their National DRR Strategies (NDRRS): Lebanon, Mauritania, Tunisia, Somalia, Egypt, Jordan, Sudan, Comoros, Djibouti, Bahrain, Morocco, UAE and Kuwait. A considerable number of local DRR strategies has been developed. For instance, local DRR strategies have been developed for the Tunisian towns of Mateur, Tataouine, Ain Draham and Gabes, for Nouakchott, Khartoum and Aqaba. These issues related to the involvement of local authorities are important.

Global target F. Substantially enhance international cooperation to developing countries: Regional data for tracking ODA and DRR expenditure – similar to that at global level is incomplete. For Arab countries to meet global targets on international cooperation, and to make an evidence-based case on the effectiveness of DRR measures, there is a need to: 1) improve efforts to track expenditure on DRR by line ministries and DRR agencies, and 2) track incoming and outgoing international cooperation by line ministries and specialized DRR agencies.

Global target G. Availability of multi-hazard early warning systems and disaster risk information: Few States have a multi-hazard monitoring and forecasting systems that covers meteorological, climatological, biological, technological and environmental hazards. The four elements of people-centered multi-hazard early warning system (PCMHEWS), even when developed at national/city level, are not sufficiently linked to act as a functioning system. Widespread availability and access to people-centered MHEWS, as envisaged by the Sendai Framework, are yet to be achieved.

vii. Progress towards the Outcome and Goal

In light of the above results, all Arab States have been implementing the SF since 2015 according to its guiding principles, and making progress towards achieving its outcome and goal. However, a lot of discrepancies were observed. Developing countries, those with fragile contexts (e.g. Small Island Developing States (SIDS): Comoros and Bahrain, LDCs (Least-developed countries), and (post)-conflict areas (Yemen, Iraq and Syria) constituting around 83% of the Arab region, have witnessed a slower progress.

Despite all the efforts, actions taken and approaches adopted in implementing the SF since 2015, the substantial reduction of disaster risk and losses on all levels and sectors is yet to be achieved in the Arab region. Further efforts are also needed to prevent new risks. The impact of Covid-19 and Beirut explosion are examples highlighting this need.

B. CONTEXTUAL SHIFTS, NEW AND EMERGING ISSUES AND CHALLENGES

This section presents a review of the contextual changes that have occurred since 2015 and anticipates key changes/emerging issues/concerns that may arise over the period 2022 to 2030 and beyond.

i. Context Shifts and New Issues – Retrospective 2015 – 2022

Although the SF has broadened the scope of hazards and risks to be taken into account for DRR, some contextual changes since 2015 at local, national, regional and global levels have impacted the implementation of SF in the Arab region. These shifts in context have reshaped Arab States' perspective of risk and approaches to risk reduction:

- The Covid-19 pandemic: From health to transport, and agriculture to tourism sectors, the virus has had a significant impact in the Arab region, with more than 8 million people potentially pushed back into poverty and food insecurity (ESCWA-RAR). Some measures have been taken for the existing risk governance and risk management mechanisms and approaches to fare in the Covid-19 pandemic. In fact, Covid-19 has improved the emergency services and response in the several governments. Several measures were taken to overcome Covid-19: daily statistics were produced, official contact tracing applications were developed, awareness campaigns increased, field hospitals were built, and medicines home delivery was provided. Financial systems have also been developed in some countries to support the society during Covid-19. Business continuity during covid-19 were implemented.
 - In line with Qatar's efforts to address the Covid-19 pandemic, the Prime Minister's resolution No. (4) of 2020 was issued to organize the Supreme Committee for Crisis Management, and a strategic plan to address the pandemic was developed in cooperation with the WHO and in partnership with countries of the world. The State of Qatar was also able to support other countries to cope with this crisis. The State of Qatar was committed to implementing the SF for DRR (2015-2030) during Covid-19.
 - UAE Covid-19 multi-stakeholder multisectoral strategy: The United Arab Emirates has cultivated the first private sector alliance for DRR, the ARISE initiative. Officially launched in November 2020, ARISE was conceived to close a number of preparedness gaps identified by private sector actors against a backdrop of the Covid-19 pandemic.
 - The government of Kuwait enacted laws, for example, the Epidemiology Law at the Ministry of Health.
- The deepening climate change crisis: For instance, intense thunderstorms produced strong winds and dropped heavy rain over GCC in 2018, causing severe flash flooding. These shifts are highlighting the importance of implementing SF.
- Lack of political instability, wars and conflicts situations in the region and around the world are also reshaping the region's perspective of risk and approaches to risk reduction.
- Local emerging issues (e.g., Beirut port explosion).

ii. Emerging Issues and Future Contexts – Prospective (to 2030 and beyond)

The Arab region foresees some changes/emerging issues/areas of concern for the period 2022-2030 and for the post-2030 period:

- The worsening environmental degradation and natural disasters are increasing the movements of refugees and forced migration around the world (vicious cycle of climate change-disasters-conflict-migration).
- More droughts, rising sea water levels, floods, higher temperatures (more heatwaves) and more hurricanes (Climate change surpassing current projections).
- Nuclear risk. Nuclear security will become a priority.
- More land degradation, drought and desertification. Consequently, food security issues will aggravate.
- Declining access energy.
- Cyber security, especially in cities with advanced infrastructure systems
- More soil, air and water pollution.
- More poverty triggered by Covid-19, leading to an urbanization that is more haphazard and anarchic.
- More acute water scarcity.
- New pandemics and more transboundary biological hazards (diseases in plants and animals).
- Overdependence on natural resource extraction and more non-sustainable production and consumption patterns with population growth.

The Arab States are aware that these emerging issues will have to be considered in determining governance and DRR approaches, systems and mechanisms capable of coping with the risks of the 21st century, and that they should be taken into account to prioritize, accelerate and amplify actions for DRR.

C. PROSPECTIVE REVIEW AND RECOMMENDATIONS

In light of the retrospective review's outcome and the examination of contextual shifts and emerging issues presented in the previous section, below are presented recommendations for potential policy adjustments and new implementation modalities for the second half of the SF until 2030.

i. Recommendations for accelerating progress in Risk Assessment, Information and Understanding

To deal with emerging issues, an adequate knowledge of risk in all its dimensions and an understanding of its systemic and interconnected nature are necessary. For this, it is recommended to:

- Risk assessment:
 - Support research about cascading effects for a better understanding of indirect and intangible damage.
 - Enhance research about the systemic and interconnected nature of risk based on the Global Risk Assessment Framework (GRAF) of DRR.
 - Advance people-centered and people-based Risk Assessments.
 - Participatory mapping of risk.
 - Encourage local level consultations and bottom up approach.
 - Better deploy the expertise, capacities and knowledge of women, indigenous peoples, young people and people with disabilities.
 - Focus on the needs of vulnerable groups, including people with special needs when assessing risk.
 - Strengthen partnerships for sharing experience, expertise and new technologies for risk assessment and understanding.
 - Assessment of uncertainties: a new way of thinking to be developed at all levels.
- Science and Technology:
 - Strengthen the commitment and participation of academic and scientific communities in support of DRR actions (applied research).
 - Support Science and Technology communities.
 - Support young scientists to integrate DRR fields and to foster DRR research among a new generation of scholars.
 - Establish Masters Degrees in DRR and support the development of Ph.Ds. funds.
 - Promote the shift from interests-oriented to needs-oriented approach providing more applied, usable, solution-oriented and user-friendly outcomes.
- Information:
 - Clarify the role of the National Statistical Systems within DRR frameworks; for instance, risk identification can be enhanced with information from national statistical offices by making available exposure, vulnerability, resilience and risk data for setting baseline scenarios.
 - Establish legislation that stresses the exchange of data and its availability.
 - Report on direct economic losses per sector and hazard, and differentiate between direct economic losses due to extensive versus intensive risk.

- Periodically update databases and information.
- Establish databases with local participation.
- Refining the resolution of disaster loss data disaggregation.
- Understanding:
 - Improve risk communication.
 - Strengthen the contribution of media and developing their capacities in term of risk communication
 - Raise awareness among housewives and rural communities.

ii. Recommendations for accelerating progress in Risk Governance and Management

While progress has been made in risk governance and preparedness, several challenges still need to be addressed. The Arab States believe that policies and procedures that go beyond the idea of reducing the current risks to prevent the accumulation of new risks are needed. Based on current and anticipated contextual shifts, future risk governance arrangements should be put in place:

- DRR Strategies:
 - National DRR Strategies should be ratified at the council of Minister to result in implementation regulatory measures and national allocation.
 - Action plans to implement DRR strategies should be put in place within a clear time frame and with clear targets, indicators and stakeholders' roles.
 - Increase ownership of the DRR strategy (review the approach used so far in engaging country/sectoral representations and commitments, empowered/mandated DRR focal points/coordination mechanisms).
 - More legal and institutional support at country and local level in order to design financial mechanisms to implement national and local level strategies.
- Legislative frameworks:
 - Strengthening the institutional base and enriching the legislative and regulatory framework for reducing systemic disaster risk.
 - Put in place legislation for risk-informed land use planning.
 - Reforming the legislative system for urbanization, taking into account the major dangers and their impact on development plans and strategies, in order to invest in urban risk reduction and resilient cities.
 - Put in place laws requiring the integration of DRR into the national education curriculum.
 - Ensure that there is strict enforcement of laws.
 - Promote women's empowerment and leadership in DRR and enhance their participation in risk governance.
 - Put in place legislative support to EWS.
 - Decrease centralization effect on DRR measures, promote decentralization and strengthen local capacities.
 - Put in place laws that identify the role of media during disasters and the regulatory mechanisms for their cooperation with other emergency actors.
 - Apply a risk lens to sustainable food systems, food security and peace (cf. war in Ukraine)
 - Renovation of national and international biological risk governance.
 - Strengthen regulations, policies and legal frameworks to support investment in DRR

- Collaboration:
 - Enhance collaboration and partnerships between S&T-governments to break down silos, improve DRR knowledge among decision-makers and efficiently implement SF.
 - Participation of people with special needs, and all civil society in risk governance. All-of-society engagement, promoting empowerment and participation of all groups in reducing risk.
 - Strengthen horizontal governance.
 - Stimulate cooperation between the different sectoral strategies.
 - Implement measures to ensure that “no one is left behind” in DRR actions.
 - Implement measures to ensure that “no ecosystem is left behind” in DRR actions.
 - Support expertise exchange and international cooperation.
 - Increase bilateral cooperation opportunities and options.

iii. Recommendations for accelerating progress in Investment in Risk Reduction and Resilience

Amidst emerging issues, it is urgent to invest as effectively as possible in optimizing risk control and reduction by 2030 and beyond. Recommendations for accelerating progress in DRR investments in the Arab region are:

- Financial resources:
 - Put in place DRR funding strategies and promote DRR funding mechanisms.
 - Allocate budget for DRR at national and local levels (including prevention measures, and not only response and recovery measures). Invest more in DRR than in DRM.
 - Design and implementation of sustainable investment plans.
 - Promote mechanisms for disaster risk transfer and insurance and financial protection, as appropriate, for both public and private investment in order to reduce the financial impact of disasters on Governments and societies
 - Promotion of investment incentives (taxes, enforcing laws, penalties, audit)
 - Raising awareness about the importance of investment in DRR
 - Further investment is required to strengthen the resilience of business and industry sectors to disaster risk (investments in business continuity plans). Invest a toll or mechanism for monitoring and measuring business losses and guide the development of business continuity plans
 - More investment projects to provide sustainable resources for humanitarian and relief work in many conflict, disaster and vulnerable areas.
 - Strengthen the contribution and role of the private sector as a proactive partner in investment and insurance. Converting the private sector from risk producer to risk reducer.

- Technical and technological resources:
 - Investment in developing data infrastructure.
 - Investment in research, innovation and development.
 - More investment in early warning systems.

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- More investment in electronic protection/cyber security to face the rapid development of threats
 - More investment in resilient critical infrastructure
 - Invest in studies of the resizing of certain critical infrastructures (e.g., dams, rainwater networks, etc.) to cope with the effects of climate change.
 - Human resources/capacity building:
 - Invest in human resources (preparing qualified national skills), equipment and technical means at the local and national level.
 - Invest in grants dedicated to capacity building (e.g., scholarships/fellowships, training, etc.).
 - Invest in the development of a risk education program.
 - Invest in DRR media plans to raise awareness. Invest in DRR media plans to combat forgetting through recurrent, objective and measured information.
 - Invest in DRR workshops.
 - Invest in simulations, drills and exercises.
 - More investment in expertise exchange from other countries.

iv. Recommendations for accelerating progress in Disaster Preparedness, Response and ‘Build Back Better’

To anticipate context shifts and emerging issues, innovative disaster preparedness, response and build back better (BBB) mechanisms are necessary:

- Response and recovery plans should be updated in each country to respond to emerging issues.
- BBB ideas should be integrated and focused on in the long-term policies.
- Enhance the coordination mechanism between the different agencies and major stakeholders working on response. For instance, reducing the massive fires that break out at the same time and in more than one country, the need to establish a regional warning mechanism that predicts before the outbreak of fires.
- Advocate for countries to equip themselves with multi-risk early warning systems.
- Improve regional forecasting capacities.

v. Recommendations for accelerating progress through collaboration, Partnership and Cooperation

To anticipate context shifts and emerging issues, effective and intensified partnerships and collaborations at local, national and international levels will be necessary:

- Promote the engagement and participation of civil society, local communities, including youth and women, and the private sector as stakeholders in DRR.
- Develop partnerships with EU universities to co-fund and co-direct PhD thesis in the field of DRR.

- Strengthen coordination between all stakeholders and sectors (ministerial departments, public or semi-public bodies) to break silos and promote multi-stakeholder engagement.
- Enhance collaboration and partnerships between S&T-governments to break down silos and efficiently implement SF.
- Prioritized, accelerated and integrated cooperation and action at the international, national and local levels during the period 2023-2030, to reflect on possible international mechanisms promoting sustainable development taking into account the risks for the post-2030 period.
- Promote societies collaboration in the co-design, co-production, and co-delivery of science-based DRR knowledge.
- Develop more partnerships to support the implementation of the SF in conflict zones.
- Novel, inclusive, multi-scale partnerships for DRR that promote systems thinking through problem framing, synthesis, option identification and learning approaches.
- More cooperation with media is needed.
- More north-south partnerships for sharing experiences and technologies in the field of DRR.
- More partnerships articulating DRR-CC linkages.

vi. Recommendations for realizing the Outcome and Goal of the Sendai Framework

The Arab States have faced some challenges and barriers to the implementation of the SF since 2015, especially with the emergence of issues that have led to shifts in context. Recognizing that new and emerging challenges pose threats to the achievement of the SF and all of the 2030 Global Agendas and conventions, below recommendations can accelerate and amplify action pursuing the outcome and goal of the SF in the Arab region:

- Make the Sendai framework known to the whole society. The lack of knowledge of all sectors and at all levels in this framework, which made work with it limited only to the body that follows up on its implementation at the national and local levels.
- Put in place more detailed indicators measuring the change in the impacts of disasters.
- Promote disaster risk awareness and education.
- Update DRR strategies (national and local) to respond to emerging issues.
- Study of the resizing of some critical infrastructures (e.g., dams, rainwater networks, etc.) to monitor the effects of climate change.
- Integrate DRR in poverty reduction, sustainable development, and efforts to address climate change, threats to biological diversity, as well as in the humanitarian, development and peace nexus.
- Improve response to disasters by ensuring proactive plans and coordination among agencies.
- Empower and work with local communities, improving the roles of women and youth in DRR.

In addition, the main measures to be taken to strengthen the resilience of critical infrastructure and basic services will be:

- For health systems: more equipment and creation of a crisis unit and a contingency plan within each hospital.
- For food systems: updating DRR agricultural strategy according to projected scenarios.

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- For water and sanitation systems: the development of a multi-risk DRR strategy that responds to droughts, water shortages, torrential rains, floods, etc.
 - For energy systems: Development of plans for renewable energy and sustainable and resilient energy systems.
 - For financial systems: Development of business continuity plans in times of crisis.

The Arab States will continue implementing SF to achieve full DRR and develop a flexible and constantly updated framework of DRR responding to emerging issues.

IV. Conclusion and way forward

These preliminary results show that Priority one of the SF has been the easiest to align in the region, with gaps remaining in addressing priorities two, three and four. Other areas where improvement is required include strengthening economic, social, health and environmental resilience. Little progress is observed in achieving policy coherence to DRR, in addition to major gaps in follow-up mechanisms.

For further development of the Midterm review (MTR) for the implementation of SF in the Arab region, the upcoming steps are:

- Carrying out more national consultations in: Kuwait, Bahrain, KSA, Djibouti, Palestine and Somalia. Other consultations and specific member States/stakeholders reports will be realized by UNDP. Are concerned at this stage Iraq and Lebanon.
- Stock taking information from upcoming events (e.g., Global platform, Arab partnerships meeting, COP 27, etc.).
- Continuing Desk and literature review.

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