

# 04

## Urban governance and resilience building in Arab cities

### 4.1 Urban governance for disaster and climate resilience: framework for analysis

This chapter provides an overview of the proposed analytical framework for urban governance for resilience-building against natural hazards. It also reflects, as data allows, on current state and emerging governance dynamics with special focus on the governance regime for resilience-building in the Arab States. The governance and resilience-building praxis in Arab cities is further explored through case studies.

If governance is the software that enables the urban hardware to operate, the question is how to design a software that will enable avoiding the potential devastating consequences of disaster risk.

UNDP (2012) has defined disaster risk governance (DRG) as *“the way in which public authorities, civil servants, media, private sector and civil society coordinate at community, national and regional levels in order to manage and reduce disaster and climate-related risks. This means ensuring that sufficient levels of capacity and resources are made available to prevent, prepare for, manage and recover from disasters. It also entails mechanisms, institutions and processes for citizens to articulate their interests, exercise their legal rights and obligations and mediate their differences.”*

A broader definition of risk governance is offered by the International Risk Governance Council (IRGC 2008): *“Risk governance deals with the identification, assessment, management and communication of risks in a broad context. It includes the totality of actors, rules, conventions, processes and mechanisms and is concerned with how relevant risk information is collected, analysed and communicated, and how management decisions are taken. It applies the principles of good governance that include transparency, effectiveness and efficiency, accountability, strategic focus, sustainability, equity and fairness, respect for the rule of law and the need for the chosen solution to be politically and legally feasible as well as ethically and publicly acceptable.”* This approach emphasizes the shift from disaster-centred to risk-centred governance at all levels, highlighting the conditions necessary to effectively address risks as they evolve. It also leaves room to address risks that have emerged from a complex interplay of various domains: natural, economic, social, or political.

A resilience approach requires understanding of the complexity of urban settings by acknowledging risks in their interconnected and networked nature as well as the cascading effect they may trigger across sectors, generations and jurisdictions. Some indications of such a shift towards risk-centred development are noticeable in the Sendai Framework.<sup>1</sup>

Urban governance can be explained in terms of an enabling environment requiring adequate legal frameworks, efficient political, managerial and administrative processes, as well as strong local institutions capable of responding to the citizens' needs.<sup>2</sup> It is based on the principle of decentralization and expressed as:

#### FOOTNOTES

<sup>1</sup> Issue Brief: Disaster Risk Governance, UNDP, 2013. [[http://www.undp.org/content/dam/undp/library/crisis%20prevention/20121112\\_Issue\\_brief\\_disasterriskgovernance.pdf](http://www.undp.org/content/dam/undp/library/crisis%20prevention/20121112_Issue_brief_disasterriskgovernance.pdf)]

<sup>2</sup> UN-Habitat 2015b.

- political decentralization based on the principle of subsidiarity that guarantees a degree of independence for a lower authority in relation to a higher body or for a local authority in relation to central government;
- fiscal decentralization or the availability of sufficient resources through own revenues (e.g., local taxes), grants, etc.;
- institutional decentralization providing channels that encourage proper accountability among all stakeholders (state and non-state).

Therefore, from the perspective of resilience-building against natural hazards, urban risk governance is concerned with the enabling application of autonomy (political, fiscal, and institutional) of all the relevant local decision makers (the municipal authorities in the first place) in terms of how they identify, assess, manage and communicate risks of disasters and climate change while planning and implementing service provision (basic infrastructure services, social services, quality of life services).<sup>3</sup> It is also concerned with the entire spectrum of measures necessary to implement if risk materializes, which includes disaster response and recovery. Importantly, such enabling autonomy needs to be compatible with the “risk footprint” (i.e., ensure involvement of those who could directly contribute to or be impacted by a risk). This should help avoid a fundamental, but less visible, weakness of decentralization: placing responsibility for risk management on those who can only address local-level causes of vulnerability,<sup>4</sup> leaving thereby deep-rooted issues unaddressed.

Urban governance is exercised with the aim both to *develop capacities* and actually *implement* resilience-building interventions ranging from risk assessment and risk response through preparedness, disaster response, and post-disaster recovery (covering the whole spectrum of disaster risk management). Such a perspective provides a room for varying interpretations of governance: *multilevel governance* (emphasizing the multiplicity of actors at different levels contributing or being affected by risk), *preventive governance* (emphasizing the focus on prospective or emerging risks through a broad set of governance instruments), *adaptive governance* (emphasizing governance of common pool natural resources and environmental assets), etc. – all emphasizing one or more aspects of coping with risk.

The importance of effective decentralization is highlighted in the New Urban Agenda: “*Effective decentralization*, based on the principles of subsidiarity and the recognition of local-self-governance, that strengthen urban governance and management, with co-responsibility and effective contributions from local authorities as well as civil society, within a transparent and accountable framework”.<sup>5</sup> For the analysis of urban governance of resilience-building against disaster and climate risk in Arab cities, this report provides an indicative analytical framework that addresses decentralization of building resilience capacities.

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<sup>3</sup> UCLG 2013.

<sup>4</sup> Twigg 2004.

<sup>5</sup> UN-Habitat 2016, p. 3.

Obviously, the principles of good and democratic governance<sup>6</sup> (fostering inclusive participation, strengthening accountable and responsive governance institutions, and respecting international principles)<sup>7</sup> are applicable across the whole framework. Table 12 illustrates the proposed analytical framework.

The separate components of the framework provide the focus for this analysis.

- 1. Develop risk anticipation capacities and anticipate risks:** This encapsulates the efforts of municipal government as well as other stakeholders towards building capacities to identify and assess risks, by setting up processes, mechanisms and structures to ensure that risks are identified and assessed. This implies the need for legal and regulatory provisions as well as the allocation of funds and a proper accountability system to ensure inclusive and accurate risk assessment. This entails both gaining scientific knowledge and understanding how risks are interpreted by various stakeholders.
- 2. Develop risk management capacity and manage risks:** This includes collective and individual efforts of multiple stakeholders to respond to various risks, including risk reduction strategies, risk transfer (through insurance), risk mitigation, adaptation, etc.
- 3. Develop coping capacity and cope with disaster:** This encapsulates the entire spectrum of disaster preparedness and response capacities that need to be cultivated and available to effectively cope with a disaster. Again, this requires legal and financial provisions by municipal authorities, as well as an adequate accountability mechanism for implementation.
- 4. Develop disaster recovery capacity and recover from a disaster:** This covers the need for an enabling environment (i.e., legal, fiscal, institutional) to ensure effective recovery based on the “build back better” principle.
- 5. Develop adaptive capacity and adapt/transform (by learning) to a changing context:** This relates to the importance of building capacities, raising awareness and crafting learning processes across the spectrum of resilience-building. Importantly, the learning should encompass lessons learned from the past, as well as upfront learning from understanding possible risk scenarios and the capacity gap to respond to those scenarios.

The UNISDR-promoted ‘Ten Essentials’ could be seen through the prism of this framework:

1. Organize for disaster resilience (the foundational essential that covers the whole spectrum of resilience-building processes).
2. Identify, understand and use current and future risk scenarios (extends across the whole spectrum of resilience-building processes).
3. Strengthen financial capacity for resilience (extends across the whole spectrum of resilience-building processes).
4. Pursue resilient urban development and design (for the case of urban risk governance this essential covers the whole spectrum of efforts to build capacities and respond to risk).

#### FOOTNOTES

<sup>6</sup> Despite the variability of its definitions provided by UN, OECD, WB, and other stakeholders.

<sup>7</sup> Decentralized Governance for Development in The Arab States: A background paper on decentralization and local governance policies, legal frameworks, programs, lessons learned and good practices, UNDP, 2003.

5. Safeguard natural buffers to enhance the protective functions offered by natural ecosystems (this is a specific effort that is largely covered by risk response and learning processes).
6. Strengthen institutional capacities for resilience (goes through the whole vertical of institutional decentralization across the whole processes of resilience-building).
7. Understand and strengthen societal capacity for resilience (covers all resilience-building processes).
8. Increase infrastructure resilience (zooms in to a specific sector – infrastructure; however, this requires the whole spectrum of resilience-building processes to be activated and therefore, this essential could be included in all sections in the urban risk governance framework).
9. Ensure effective disaster response (requires the whole strength of risk governance for this particular resilience-building process).
10. Expedite recovery and build back better (requires the whole strength of risk governance for this particular resilience-building process).

**Table 12**  
**Analytical framework: urban risk governance for building resilience to natural hazards**

Processes	Political (decision-making) decentralization	Fiscal decentralization	Institutional (accountability) decentralization
Develop risk anticipation capacities to <b>AND</b> anticipate risk	1, 2, 3, 4, 7, 8	1, 2, 3, 4, 7, 8	1, 2, 3, 4, 6, 7, 8
Develop risk management capacities to <b>AND</b> manage risks	1, 2, 3, 4, 7, 8	1, 2, 3, 4, 7, 8	1, 2, 3, 4, 6, 7, 8
Develop coping capacity <b>AND</b> cope with disaster, crisis, stress, disruptions	1, 2, 3, 4, 5, 7, 8, 9	1, 2, 3, 4, 5, 7, 8, 9	1, 2, 3, 4, 5, 6, 7, 8, 9
Develop disaster recovery capacity <b>AND</b> recover from a disaster, crisis, stress, disruptions	1, 2, 3, 4, 7, 8, 10	1, 2, 3, 4, 7, 8, 10	1, 2, 3, 4, 6, 7, 8, 10
Develop adaptive capacity <b>AND</b> adapt (by learning) in a changing context	1, 2, 3, 4, 5, 7, 8	1, 2, 3, 4, 5, 7, 8	1, 2, 3, 4, 5, 6, 7, 8

This analytical framework, with the ten essentials designated by their respective numbers, identifies performance domains where governance is to be exercised to ensure urban resilience against natural hazards. However, due to data limitations at the city level, instead of exploring each and every aspect of this analytical framework, the report addresses only some aspects, leaving a more comprehensive analysis for the next editions.

Importantly, future reports should also address the new urban forms – megacities, urban corridors, metropolises – which requires revisiting the notion of urban and therefore, a more careful look at the urban governance for resilience-building against disaster and climate change.

## 4.2 Governance and praxis of urban resilience- building

### 4.2.1 National and urban governance in Arab States

There are many similarities and differences between countries in the quality of the governance regime in general, and governance for resilience in particular. However, the latter should be seen through the prism of the general governance regime (political, fiscal and institutional) in each country.

Prior to colonial rule, the Arab region was regulated according to a decentralized power structure.<sup>8</sup> While building post-colonial nation States, some countries (like Morocco, Tunisia, Lebanon and Jordan) used centralization to consolidate state power, while others (such as Yemen) preferred to use it as a tool to balance the power of the regions. Today, the Arab region has several monarchies: Morocco and Jordan, where kings rule as individuals, and the GCC countries or dynastic monarchies governed by extended families.<sup>9</sup> However, all the countries in the region have enacted decentralization policies and laws, strongly supported by the international donor community.

Despite years of public administration reforms, most countries in the region are still “characterized by a top-down, personalized and highly concentrated and noncontestable mode of governing. Economically, the region exhibits highly skewed income and asset accumulation, as well as resource allocation.”<sup>10</sup> Local municipal budgets are centrally-controlled in all countries of the region, with the exception of Palestine, where local political and fiscal autonomy is relatively strong due to the territorial fragmentation caused by Israeli occupation.

The general governance indicators as defined and measured by the World Bank across all countries in the region raise multiple concerns (Table 13). The parameters of all indicators demonstrated no significant improvement over time and revealed minor difference between subregions. Thus, the corruption indicator shows the lowest parameter for Somalia (-1.69), Yemen (-1.55), Sudan (-1.45) and Libya (- 1.61). The indicator on governance effectiveness is lowest in Somalia (-2.48), Syria (-1.44), Sudan (-1.61), Yemen (-1.41). There are some exceptions among the GCC countries (UAE, Qatar and Oman) where five out of six governance indicators have positive parameters: namely, corruption control, government effectiveness, political stability and absence of violence/terrorism, regulatory quality, and rule of law. The parameters for “voice and accountability” are negative across all countries of the Arab region.

#### FOOTNOTES

<sup>8</sup> Mona Harb and Sami Atallah, “An assessment of decentralization and service delivery in the Arab world,” *Local Governments and Public Goods: Assessing Decentralization in the Arab World*, edited by Mona Harb and Sami Atallah (Beirut: The Lebanese Center for Policy Studies, 2015), p. 228.

<sup>9</sup> F. Gregory Gause, “Kings for all Seasons: How the Middle East’s monarchies survived the Arab spring,” Brookings Doha Centre Analysis, paper No. 8, September 2013.

<sup>10</sup> Daniel Kaufmann, “Governance and the Arab world transition: reflections, empirics and implications for the international community,” *From Aid to Global Development Cooperation, The 2011 Brookings Blum Roundtable Policy Briefs* (Washington, DC: Brookings, 2011), p. 29.

**Table 13**  
**All governance**  
**indicators per**  
**country in 2014**

Region	Country	Control of Corruption	Government Effectiveness	Political Stability and Absence of Violence/Terrorism	Regulatory Quality	Rule of Law	Voice and Accountability
STC	DJIBOUTI	-0.49	-0.97	-0.72	-0.55	-0.85	-1.41
STC	COMOROS	-0.53	-1.67	-0.19	-1.14	-0.94	-0.33
STC	SUDAN	-1.45	-1.61	-2.36	-1.39	-1.15	-1.73
STC	YEMEN	-1.55	-1.41	-2.53	-0.84	-1.17	-1.34
STC	SOMALIA	-1.69	-2.48	-2.49	-2.11	-2.39	-2.13
Mashreq	JORDAN	0.15	0.13	-0.56	0.08	0.48	-0.77
Mashreq	PALESTINE	-0.57	-0.53	-1.99	0.28	-0.44	-0.85
Mashreq	EGYPT	-0.59	-0.82	-1.58	-0.75	-0.60	-1.19
Mashreq	LEBANON	-1.06	-0.38	-1.72	-0.22	-0.76	-0.42
Mashreq	IRAQ	-1.34	-1.13	-2.47	-1.25	-1.36	-1.21
Mashreq	SYRIA	-1.55	-1.44	-2.76	-1.67	-1.34	-1.80
Maghreb	TUNISIA	-0.09	-0.13	-0.93	-0.35	-0.12	0.03
Maghreb	MOROCCO	-0.26	-0.14	-0.39	-0.01	-0.06	-0.70
Maghreb	ALGERIA	-0.61	-0.51	-1.17	-1.21	-0.73	-0.93
Maghreb	MAURITANIA	-0.92	-1.05	-0.58	-0.70	-0.82	-0.91
Maghreb	LIBYA	-1.61	-1.64	-2.32	-2.19	-1.52	-1.15
GCC	UAE	1.23	1.48	0.81	0.98	0.71	-1.06
GCC	QATAR	1.09	0.99	1.00	0.57	0.99	-0.98
GCC	BAHRAIN	0.30	0.59	-0.94	0.70	0.45	-1.32
GCC	OMAN	0.25	0.29	0.66	0.69	0.58	-1.05
GCC	SAUDI ARABIA	0.10	0.23	-0.24	-0.01	0.27	-1.78
GCC	KUWAIT	-0.26	-0.15	0.14	-0.13	0.05	-0.65

\* Estimates range from approximately -2.5 (weak) to 2.5 (strong)

Source: <http://info.worldbank.org/governance/wgi/index.aspx#home>.

An alternative measurement of governance index among African states is offered by The Ibrahim Index of African Governance (IIAG)<sup>11</sup> and could be a useful tool to compare governance performance among African states and across various subcategories: safety and rule of law, participation and human rights, sustainable economic opportunity, and human development. The governance context and the policy process in Arab region could probably best be described as “opaque”. Rarely do we get a sense of the interplay of public opinion, interest groups, legislatures, executive authorities and international actors that set agendas, formulate policies, and apply them.”<sup>12</sup>

The city configures as a weak entity in the governance framework in the Arab States, barring exceptions. The administrative tiers revolve around the National, Governorate (Mohafazah, Wilaya, Department), District and Commune levels.<sup>13</sup> The concept of an autonomous city government does not exist as such, except in the metropolises in North Africa, in special economic zones and in weak states like Palestine and Lebanon. Nationally the city administration falls within the mandates of the Ministry of Decentralization, the Ministry of Interior, the Ministry of Local Affairs or the Ministry of Municipalities, which manages the affairs of cities and towns through its local officials (e.g., governors, mayors, administrators, etc.). The delivery of services to citizens is directly managed by the respective sectoral line ministries. In the absence of autonomous city governments, the budget allocations for urban development are received in the form of the sectoral budget of line ministries to be spent at the local level. Municipal governments receive limited funds from the government centre for operating costs. The share of local governments in GDP in the Arab States is about 5 per cent, compared to 20 per cent in the OECD.<sup>14</sup> In some countries, the governments have established funds for the municipal governments to borrow money to meet their expenses (e.g., the Independent Joint Municipal Fund in Lebanon). Bahrain and Kuwait also allow cities to “get loans” to meet expenses. Such funds, however, disburse money at high interest rates. Due to weak and financially starved municipal governments wherever they exist, many municipal services are subcontracted to the private sector by the sectoral ministries or governorate governments. The role of the private sector is therefore highly important in urban management in the Arab region, unlike elsewhere. An additional factor that adds to the complexity is that, due to the lack of a democratic system, the bureaucratic and technocratic officials responsible for urban management are appointed as local agents of their mother departments (ministries, governorates), rather than being elected representative of their constituencies. The development agenda of these officials is driven by the priorities defined by their mother departments to serve a political system that relies upon elite patronization rather than public service. Due to the fragmented nature of urban stakeholders, cities lack a commonly-defined vision and development agenda. This system of urban governance has led to many pitfalls, including poor urban planning, weak stakeholder coordination, poor citizen participation, lack of transparency and accountability, and poor service delivery. Consequently, the majority of Arab cities suffer from chronic challenges of water supply, waste management, public transport, pollution, protection of natural resources,

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**FOOTNOTES**

<sup>11</sup> <http://mo.ibrahim.foundation/iiag/downloads/>.

<sup>12</sup> John Waterbury, *The Political Economy on Climate Change*, AHDR Research Series, 2013, p. 14.

<sup>13</sup> UCLG 2008.

<sup>14</sup> *Ibid.*

informal settlements and urban sprawl. In this context, promoting urban resilience remains a remote concern in spite of the fact that many cities face recurrent flooding, storms, heatwaves, and industrial and urban fires.

Civil society and media, two important players in advocating issues of common concern, remain very weak in the region, primarily due to the autocratic nature of the regimes where space for dialogue and advocacy is extremely limited. Lobbying is a more common strategy to seek policy changes. It is however highly personalized due to the culture of *wasta* - , using one's political connections and influence to get things done.

The governance landscape in the Arab cities is changing, however, due to the opportunities offered by tourism, trade and investment. Many cities have been transformed into autonomous entities in order to exploit the full potential of growth and development. A few of these include cities in Jordan (Aqaba, Petra), UAE (Dubai, Abu Dhabi and Sharja) and Iraq (Erbil). The growing complexity of urban management has also encouraged some countries to set up more efficient urban governance systems. For example Algeria and Saudi Arabia have established a system of urban observatories to monitor urban development and management indicators, and provide feedback to authorities to introduce improvements in a timely manner.

### 4.2.2 Urban resilience-building against disaster and climate risks

With growing urbanization, urban risk governance is emerging as an important concern. The idea of urban resilience, however, is new to most cities. Disaster risk management, a key element of urban resilience-building, remains predominantly a Civil Defence issue. Civil Defence is the focal point agency on disaster risk issues in 14 out of the 22 member states of the Arab League,<sup>15</sup> especially at the local level. There has been notable progress at the national level to improve coordination mechanisms for multisectoral engagement in disaster risk management. Various countries have set up specific entities for multisectoral coordination, including Algeria, Djibouti, Egypt, Lebanon, Morocco, Somalia and the United Arab Emirates. In other countries however, the National Civil Defence Councils remain the primary forum for coordination and policy development. The Civil Defence councils do not meet regularly in times of peace. Their meetings are mostly held in the aftermath of a disaster with the aim of organizing response. These meetings are attended by political leadership to the exclusion of managerial and technical experts. The specialized coordination mechanisms that have been established by different countries (listed above), have certainly helped to shift the focus of national efforts from response to preparedness and in some cases to disaster risk reduction. However, such entities lack organizational presence beyond the national level, and especially at the city level. Therefore, even in these countries at the local level, the Civil Defence by default remains the primary department concerning disaster risks (e.g., Algeria, Egypt, Lebanon, Morocco). Like the sectoral ministries, the Civil Defence has a presence

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<sup>15</sup> National HFA reports and websites of the Civil Defense Department of the Arab States.



at the national, governorate and local levels, where it is typically stationed in the district headquarters. Due to the competing sectoral priorities and the sporadic nature of disaster events, the Civil Defence remains a weak link in the national bureaucratic machinery. The department is starved of financial, technical (personnel) and material resources (equipment and machinery). The Civil Defence department, also by its mandate, remains concerned primarily with disaster response and to a lesser extent with preparedness. In terms of its multidisciplinary coordination role, unlike the National Civil Defence Councils, coordination councils are either non-existent or non-functional at the governorate and local levels. The only exception to this rule seems to be the Algerian Civil Protection that has, over the years, transformed into an effective entity for disaster risk reduction.

In spite of the weaknesses of the Civil Defence system, some countries have achieved significant success in promoting urban resilience to disaster and climate risks. Among these are Algeria, UAE and, to a lesser extent, Jordan and Lebanon. In Algeria, the work has been led by the Civil Protection, mainly as a response to high level of risks faced by the country from earthquakes and other disasters. In the UAE, the National Emergency Crisis and Disaster Management Authority (NCEMA) has been engaged in a nationwide disaster preparedness process, including urban resilience.<sup>16</sup> According to Nathalie Zaarour, UNDP's National Disaster Reduction project manager in Lebanon, many Arab cities (280 municipalities) have joined the Making Cities Resilient campaign, although over 80 per cent of those cities are in Lebanon. This is not to say that a large number of municipalities in Lebanon are on track with building resilience to natural hazards: far from it. Although the first step of committing to Making Cities Resilient (MCR) is important, it is even more important to actually start building capacities and integrating risk consideration in urban planning. To this end, there is only one city in the region that has made a significant progress and has become a role model for MCR: Aqaba City, where UNDP has been implementing its Arab Cities Disaster Resilience Programme.

In other countries, the role of international aid organizations has been more important in promoting urban resilience in the region. Among these are included UNDP, UN-Habitat, UNISDR, the World Bank and the Rockefeller Foundation through its 100 Resilient Cities project.<sup>17</sup> Through the Arab Cities Disaster Resilience Project, UNDP has supported cities in Jordan (Aqaba, Amman and Petra), Lebanon (Sidon, Metn, Byblos and Baalbek), Sudan (Khartoum) and Tunisia (Ain Draham) to improve city level governance and capacities for DRR. In Lebanon, UNDP has worked with the Unions of Municipalities to promote joining of Making Cities Resilient Campaign by Lebanese cities. UNISDR has reached out to cities in numerous countries to enrol them in the Making Cities Resilient Campaign and to implement the Local Government Self-Assessment Tool (LG SAT) including Egypt, Lebanon, Palestine and Tunisia. The World Bank has conducted risk assessments of Djibouti city (Djibouti), Alexandria (Egypt) and Tunis (Tunisia) concerning climate change and it is supporting capacity development there. UN-Habitat is working with the Saudi government to implement the Future Saudi Cities Programme to promote sustainable development in 17 cities. It has also worked with the Governments of Madagascar, Malawi, Mozambique and the Union of Comoros to establish the

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**FOOTNOTES**

<sup>16</sup> <http://www.ncema.gov.ae/en/home.aspx>.

<sup>17</sup> <http://www.100resilientcities.org>.

Technical Centre for Disaster Risk Management, Sustainability and Urban Resilience (DiMSUR) in 2014. The 100 Resilient Cities project of the Rockefeller Foundation is supporting Amman (Jordan), Byblos (Lebanon), Luxor (Egypt) and Ramallah (Palestine) in developing city resilience strategies and building capacity.

Climate change is anticipated to have severe impact upon the Arab region, in terms of chronic challenges in the areas of water, food, health, agriculture, environment and economy, as well as in terms of greater frequency and intensity of disasters (e.g., droughts, flooding, sandstorms, cyclones, forest fires and coastal inundation, among others). However, climate change adaptation, like DRR, remains a lower priority for many governments. The mandate for climate change adaptation remains sectoral, broadly having been assigned to the Ministries of Environment or Water Resources. Few countries have established national level committees or councils for multisectoral coordination on climate change adaptation (CCA). Such coordination mechanisms are lacking at the governorate and city levels and it remains the job of the concerned ministry to address CCA issues. National financing for climate change adaptation remains absent. The least developed countries (LDC) in the region have initiated numerous local level projects on CCA with financing through global mechanisms; e.g., the GEF, Green Climate Fund (GCF), Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDCF), especially Djibouti, Egypt, Lebanon, Morocco, Somalia, Sudan, Tunisia and Yemen.<sup>18</sup>

Another important consideration while addressing urban governance for resilience-building is the particular importance of cultural and natural heritages and their preservation. The Arab region is home to a large number of cultural and natural sites listed on the World Heritage List. Protection of these sites is also important from the perspective of sustainable urban development, which is underlined also in Goal 11 of the SDGs. Many Arab cities are economically dependent on tourism and, therefore, protection of these properties is vital to the functioning of cities. There are 80 cultural and natural properties in total in the region that have been officially included on the World Heritage List (see Annex 7).

Financing for both disaster risk reduction and climate change adaptation remains a major challenge, though more so for DRR. Whatever national financing exists for DRR and CCA is difficult to estimate due to the sectoral nature of allocations aimed at addressing risk reduction (e.g., early warning systems, risk assessment, flood mitigation infrastructure, water resources management, drought mitigation, desertification control, natural resource management, health sector preparedness, etc.). However, a generic impression remains that national financing is limited. The LDCs and the MICs are highly dependent upon international funding in terms of both aid and loans. Comparatively speaking, in terms of global aid, there is significantly more funding available to countries in the region for climate change adaptation than for DRR.

A critical gap is the lack of coordination and cooperation between the CCA and DRR communities. Separate policy, institutions and coordination mechanisms for both subjects adversely affect the ability to address the mutually inclusive challenges posed by climate change and disaster risks. Especially given the fact that many of the natural hazards in the region are induced by

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<sup>18</sup> Support for the Arab States region in Adapting to Climate Change (Draft report), UNDP 2016, Istanbul.

climate change, it is highly sensible to integrate DRR capacity development within the climate change adaptation framework.

Robust city governments and multidisciplinary coordination mechanisms at the city level are crucial to promote urban resilience. Legal and institutional capacities of the relevant focal point departments also need to be enhanced in the areas of risk mapping, early warning, risk education and risk reduction. The insurance sector in the Arab States is weak, therefore the possibility to transfer risk remains limited. Land use planning and building codes are the weakest areas of urban development.

Decentralization and the empowerment of urban authorities is the most important requirement in order to enable them to lead urban development. It requires engagement at various levels with numerous stakeholders. The role of national ministries of Interior, Decentralization and Local Affairs is crucial in terms of undertaking necessary legislative and policy measures to empower the city authorities and provide them sufficient finances for DRR and CCA. The sectoral ministries also need to be more cognizant of the expanding development needs of cities due to growing population, climate change and related pressures. The provincial governors, with their role in charge of cities within their jurisdictions, are critical stakeholders. Governors need to be engaged in an awareness and advocacy process to improve their knowledge about challenges to urban resilience, and the actions that can be taken to reduce risks.

The regional, subregional and supraregional intergovernmental bodies concerned with national and urban development have an important role in lobbying and advocacy to promote urban resilience through their networks of ministers: e.g., the League of Arab States (and its numerous ministerial committees), the Emergency Management Centre of the GCC, the Intergovernmental Authority for Development (IGAD), United Cities and Local Governments of Africa (UCLGA), and the African Conference on Decentralization and Local Development (CADDEL). The networks of Arab cities like the Arab Towns Organization (ATO) and its subsidiary organizations provide important vehicles to reach out to a vast number of member cities. The subsidiary organizations of the ATO, which have specific mandates related to cities, include the Arab Urban Development Institute (AUDI), Arab Environment Development, the Development Fund for Arab Cities and the Arab Forum for Information Systems. The ATO has about 500 member cities. The Organization of Islamic Capitals and Cities (OIICC) is another important stakeholder.

In addition, engagement with private sector service providers is critical due to their strong involvement in performing some of the municipal functions in service delivery (e.g., water supply, solid waste management, education, health etc.).

International development assistance organizations and lending agencies will continue to play an important role as advocates, capacity developers and financiers of urban resilience-building. Given the fact that the cost of resilience-building runs into millions of dollars per city, the role of lending institutions becomes crucial, especially since metropolises have the mandate to borrow directly from international sources and national governments cannot afford to allocate the required amounts.

## 4.2.3 Overview of governance for urban resilience-building in the subregions

### 4.2.3a The Arab Gulf States

All the GCC member states are monarchies. In the GCC member states, national authorities play a primary role at all levels in a centralized vertical system. Therefore governance for urban disaster risk management is also centralized. In most of the GCC countries, the Civil Defence department, under the Ministry of Interior, is the primary focal point for DRM. The efforts of the civil protection authorities are largely concentrated at the national level and geared to high-level policy-making and planning. The lower levels within administrations (specifically, the municipal level) are largely seen as implementers of the national plans/programmes/policies and have limited authority. In the case of UAE, there is a higher level of decentralization of civil protection and the disaster risk management system, which is also largely explained by the federal configuration of the national administration system.

Both disaster and climate risk issues are addressed by different administrative branches within the national authorities. Each country has a dedicated state authority to address disaster risk, whereby civil protection systems are usually tightly linked with the security establishment. Climate change considerations fall instead under the jurisdiction of environmental authorities.

Urban resilience-building against natural hazards needs to be addressed through the prism of the critical sustainability risks that GCC countries face. Climate risks have become a priority to be addressed by national and municipal authorities, in particular, from the perspective of managing energy and water demand in the built environment.

There is a growing need to explore the multi-hazard risk assessment perspective. Water scarcity and rising temperatures, for example, pose significant risks in urban settings. Bahrain, Kuwait, Qatar and Saudi Arabia are among the world's most water-stressed countries.<sup>19</sup> While many cities in the GCC countries may be classified as cities with extreme drought; some, like the coastal city of Jeddah, also face flood risks. Adequate resilience-building requires a more integrated approach to risk consideration, and more authority and inclusiveness in the areas of risk identification, assessment and response.

The GCC countries are facing existential risks derived from the nexus of energy/oil-sustainable development. With an already high per capita energy consumption in the GCC countries, which is expected to double between 2008 and 2020,<sup>20</sup> much of the governments' efforts on resilience-building are geared towards addressing energy efficiency needs and exploring alternative energy sources. Thus, the UAE is already importing natural gas to meet its growing energy needs;<sup>21</sup> Saudi Arabia, similarly, may need to start importing

#### FOOTNOTES

<sup>19</sup> <http://www.fao.org/nr/water/aquastat/main/index.stm>.

<sup>20</sup> Economist 2010.

<sup>21</sup> Carbone 2011.

oil within the next 20 years if its consumption continues to grow and energy production remains at current levels.<sup>22</sup> Therefore, urban resilience-building is very much linked to their search for solutions for renewable energy.

All the GCC countries show a high commitment to addressing climate change risks, which is further reflected in urban planning and urban resilience-building processes. The ruler of Dubai, Sheikh Mohammed bin Rashid Al Maktoum, for example, was the first to set a policy on green building standards in his Emirate, in 2007.<sup>23</sup> The focus is on improving energy efficiency and water conservation in new building, a Leadership in Energy and Environmental Design (LEED) standard. The Bahraini Ministry of Housing has also launched a Green Building initiative and announced the development of new building code.<sup>24</sup> As a result of such policies and initiatives, over 2,000 buildings in the GCC region (with UAE taking the lead) are currently either LEED registered or certified as such from 2015.<sup>25</sup> Another example is Masdar City in Abu Dhabi – the world's first eco-city. The non-state actors are largely active in humanitarian and charitable fields.

### **Bahrain**

- The Ministry of Works, Municipalities Affairs and Urban Planning is responsible for management of municipalities.<sup>26</sup>
- The General Directorate of Civil Defence, the national focal point for disaster management is part of the Ministry of Interior in Bahrain.<sup>27</sup>
- Bahrain is divided into 24 subdivisions and municipalities.

The General Directorate of Civil Defence is the national focal point for disaster management in Bahrain. A National Civil Defence Council has been set up to coordinate all activities related to resilience-building. Bahrain also has a National Committee for Disaster Management that reports directly to the Council. Bahrain has initiated a National Multi-Agency Risk Assessment process. One of the outputs of this initiative is the hazard profile of the country.<sup>28</sup> Local level engagement in resilience-building and disaster risk management is extremely limited.<sup>29</sup>

The Ministry of Works, Municipalities Affairs and Urban Planning is a very important player due to its role in the realization of the objectives of Bahrain's 2030 Vision. The Vision emphasizes the importance of sustainable economic growth, and therefore, the Ministry is seen as a key partner in the development of policies, application of development plans, and provision of municipal services that are responsive to the local needs, thereby encouraging citizens to become proactive participants in the initiatives intended to promote their local

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### FOOTNOTES

<sup>22</sup> Bloomberg 2012.

<sup>23</sup> Arabian Business 2007.

<sup>24</sup> Arab Sustainability Association, "Bahrain implements green building codes," September 15, 2012.

<sup>25</sup> <https://www.gbrionline.org/headlines/leed-certified-projects-gulf-cooperation-council-gcc-numbers/>

<sup>26</sup> [http://websrv.municipality.gov.bh/mun/index\\_en.html](http://websrv.municipality.gov.bh/mun/index_en.html).

<sup>27</sup> <http://www.moic.gov.bh/En/MoIC%20Centers/BahrainInvestorsCenter/Licensing%20Authorities/MinistryOfInterior/GeneralDirectorateofCivilDefence/Pages/GeneralDirectorateofCivil%20Defence.aspx>.

<sup>28</sup> HFA 2013.

<sup>29</sup> Ibid.

communities. Also, the focus of the activities of the Ministry and respective local authorities is largely on providing a safe environment for businesses to flourish.

The largest humanitarian organizations are Bahrain Red Crescent Society<sup>30</sup> and the Royal Charitable Organizations (RCO).<sup>31</sup>

No city in Bahrain is engaged in the UNISDR MCR Campaign.

### Emirates

- The Emirates is a Constitutional Federation of seven Emirates,<sup>32</sup> whereby Abu Dhabi Emirate makes up 87 per cent of the entire country, 70 per cent of which is an open desert.
- The Emirates has six cities.

The NCEMA is the National Focal Point for DRR in UAE. It works under the Supervision of the Supreme Council for National Security. The work of NCEMA is focused on the development, consolidation and maintenance of laws, policies and procedures for emergency and crisis management at the national level.<sup>33</sup> It has the following departments: operations, local centres, planning and preparedness, support services, information and communication technology, media and public information, and safety and prevention.

The NCEMA has a relatively high level of decentralization in line with the general administration system in the country. There are seven NCEMA centres across all Emirates (Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Quwain, Ras Al Khaimah, and Fujairah), which are in-charge of local coordination. Their work is supervised by the Local Centres Department of the NCEMA. Local centres organize events and take the necessary measures to implement local response plans, improve readiness and preparedness, prepare the local risks register, review the local recovery plans, perform coordination to prepare joint activities in the Emirates, and develop the local resources. The local Centres collect available data on local resources and share it with the Local Centres department at the NCEMA to create a national sustainable database. The Centres coordinate the management of these resources after emergencies, crises and disasters.

The Department of Civil Defence<sup>34</sup> under the Ministry of Interior<sup>35</sup> is also an important player at the local levels. Acknowledging the boom of housing construction, urbanization, and industrialization in last years, the civil defence keeps the focus on civil and industrial safety and on sustainable development. This work is guided by the principles of Total Quality Management and are geared to obtain Quality Management System certification ISO 9001, Occupational Health and Safety Management System certification OHSAS 18001 and finally the Environment Management System ISO 14001 certification.

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### FOOTNOTES

<sup>30</sup> <http://www.rcsbahrain.org>.

<sup>31</sup> <http://www.orphans.gov.bh>.

<sup>32</sup> <http://government.ae/en/web/guest/home>.

<sup>33</sup> <http://www.ncema.gov.ae/en/about-ncema/ncema-in-focus.aspx>.

<sup>34</sup> <http://adcd.gov.ae/en/>.

<sup>35</sup> <https://www.moi.gov.ae/en/>.

The Emirates is home to the International Humanitarian City (IHC),<sup>36</sup> which is located in Dubai. IHC provides a regional platform for local and international humanitarian organizations, including several UN agencies and the International Federation of Red Cross and Red Crescent Societies. Established by the Government of Dubai in 2007, it is an independent free zone that has become a base for logistics and procurement and partnership and capacity-building through initiatives such as Sphere training.

One city in the UAE is engaged in the UNISDR MCR Campaign: Abu Dhabi.

**Box 6**  
**Masdar City:**  
**applying**  
**traditional**  
**knowledge**  
**and modern**  
**technology**  
**to build resilience**  
**to climate change**

In 2006 the Government of Abu Dhabi initiated an unprecedented project: Masdar City. It is the world's first full eco-city, with zero carbon emissions and zero waste. Construction is still in progress, but the city is already functioning and hosts the headquarters of the International Renewable Energy Agency (IRENA) and multiple cleantech companies.

The design of Masdar City is empowered by the unique mixture of age-old Middle-Eastern urban planning knowledge and modern technology. The city planners used the ancient trick of building cool streets: short (no longer than 70 m) and narrow streets that usually blocked off at the end by a building. These buildings create enough turbulence so that as the air hits the building it flicks upwards, creating a flushing effect and reducing the heat in the street. As a result, the temperature in the streets of Masdar City is as low as 20°C, whereas just meters away in the desert sand, the temperature is as high as 35°C.

There are no cars in the city, replaced by driverless electric vehicles that ferry residents around the city. There are no light switches or taps either. Instead, there are sensors that helped to cut electricity consumption by 51 per cent and water usage by 55 per cent. The walls of the building are designed to limit heat-radiation and have reduced the demand for air conditioning by 55 per cent.

The entire community is powered by a 22-hectare field, a 100 MW solar field located about 150 km south-west of Masdar, called Shams 1. It is one of the largest concentrating solar power (CSP) plants in the world, and the largest solar plant operating in the Middle East. Concentrated solar power generates electricity from the heat of the sun rather than sunlight, as is the case with solar photovoltaic technology. The heat created at Shams 1 generates electricity that saves 175,000 tons of CO<sub>2</sub> a year, equivalent to planting 1.5 million trees or removing 15,000 cars from Abu Dhabi's roads.

Source: Official webpage of the Abu Dhabi Future Energy Company, Masdar [[www.masdar.ae](http://www.masdar.ae)].

FOOTNOTES

<sup>36</sup> <https://www.ihc.ae>.

### Box 7 UAE National Volunteer Program for Emergencies, Crises and Disasters

Acknowledging the importance of forming a distinguished base of volunteers in the field of emergency, crises and disaster, the NCEMA of UAE has embarked on a National Volunteer Program for Emergencies, Crises and Disasters.

The objectives of the program comprise:

- Attracting individuals in the community who are interested to volunteer and encouraging them to effectively assist in social development.
- Establishing, qualifying and training a team of volunteers that will contribute to the assistance during emergencies, crises and disasters.
- Establishing a database of volunteers to coordinate their work within the efforts of the national response.
- Supporting programs specialized in the management of the National Career Level to guarantee the continuity of work during emergencies, crises and disasters.
- Instilling and promoting the culture of volunteerism within the society.
- Strengthening the sense of belonging, and social cohesion between community members and the State authorities, and collaborating during emergencies, crises and disasters.

Source: <http://www.ncema.gov.ae/en/home.aspx>

### Kuwait

- The Directorate General of Civil Defence falls under the jurisdiction of the Ministry of Interior.<sup>37</sup>
- The activities of municipalities are coordinated through the State Minister for Municipal Affairs.<sup>38</sup>
- Kuwait is divided into six governorates, with several areas in each. Areas, sometimes called towns, do not exceed 5 km<sup>2</sup>.

The Kuwait Cabinet discussed the possibility of establishing a Civil Defence Authority only in 2001. Within the DRM discourse, the primary focus of the Ministry of Interior is on prevention and response to industrial accidents (fires, explosions, chemical/biological/radiological).

UNDP is supporting the Government of Kuwait to establish the Centre of Excellence for Humanitarian Response and Resilience to institutionalize humanitarian and relief work. The Centre is deemed to support "...the resilience based approach to development, aimed at strengthening communities and systems to withstand shock... with the aim of ultimately limiting damage and reducing costs."<sup>39</sup>

No city in Kuwait is engaged in the UNISDR MCR Campaign.

### FOOTNOTES

<sup>37</sup> <https://www.moi.gov.kw/portal/venglish/>.

<sup>38</sup> <http://moc.gov.kw>.

<sup>39</sup> State of Kuwait and UNDP, Country Programme Action Plan 2015 to 2018, Between the Government of Kuwait and the United Nations Development Programme (UNDP), [<http://www.kw.undp.org/content/dam/kuwait/documents/CPAPandCPA/CPAP%202015-2018.pdf>], p. 13.



### Oman

- Municipalities in Oman are under the jurisdiction of the Ministry of Regional Municipality and Water Resources.<sup>40</sup>
- Oman is divided into five regions and four governorates, which are further divided into 61 provinces.
- Oman has 43 cities, towns and municipalities.
- Total population of Oman estimated at 4,944,875.

The Civil Defence department under the Ministry of Interior is the national focal point for DRR. The civil defence system has been to a large extent shaped by the history of frequent tropical storms. After the Cyclone Gonu of 2007, the National Committee for Civil Defence (NCCD) was reformed to take a more proactive role in disaster preparedness. After Cyclone Phet in 2010, the Sultan ordered the NCCD to establish a national-level crisis management experts' panel to actively work on future plans for emergency management.

The National Council for Civil Defence (NCCD) was initially coordinated by the Ministry of Interior since 1999. In 2002, the NCCD became a semi-autonomous entity within the overall structure of the Royal Oman Police. In 2003, specialized regional-level emergency management subcommittees were formed and tasked to carry out emergency preparedness activities in eight regions of Oman. Since 2003, smaller specialized emergency response teams were also formulated under the Royal Oman Police. These include the first national emergency medical service, the national Chemical, Biological, Nuclear and Radiological (CBNR) response team, and other search and rescue teams.

Also, the National Emergency Management Centre in Oman (PACDA) is a part of the national emergency management system in Oman. It is responsible for management and coordination of search and rescue operations and hazardous substance incident response.<sup>41</sup>

The NCCD has developed a number of disaster management plans: relief operation plan, emergency medical response and public health plan, search and rescue plan, risk assessment and early warning system, infrastructure recovery plan, CBNR plan, communication and media plan.

Two laws regulate the emergency management system in the Sultanate of Oman. The first is the Civil Defence Law that was instituted by the Royal Decree 76 in 1991. The second is the State of Emergency Law, which was outlined by the Royal Decree 75 in 2008.

The current emergency management system remains largely centralized and resources are concentrated at the national level. The local level response is under-developed, local authorities are largely unprepared to handle emergencies and therefore regional and national support is almost always needed. The local response level is coordinated by the local governor and representative from various governmental organizations such as local

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#### FOOTNOTES

<sup>40</sup> <http://mrmwr.gov.om/new/en/Page.aspx?id=143&li=7&Type=&Slide=true#>.

<sup>41</sup> <http://www.pacdaoman.gov.om:8080/en/national-committee-en>.

police, local health authorities, and the local municipality. The function of local response is to assess the emergency, address local needs, and when needed, request the regional response. It can be activated by the local governor of the affected area after the approval of the national NCCD representative.

Since its establishment, the Oman Charitable Organization (OCO) runs relief and humanitarian programmes both in Oman and abroad.

No city in Oman is engaged in the UNISDR MCR Campaign.

### **Qatar**

- Municipalities in Qatar are under the jurisdiction of the Ministry of Municipality and Environment.<sup>42</sup>
- Since 2004, Qatar is divided into eight municipalities,<sup>43</sup> which are further subdivided into 87 zones (as of 2004).

The Civil Defence system is responsible for disaster risk management in Qatar at both national and local levels, the latter through its branches. The General Directorate of Civil Defence is in charge of disaster management operations. The activities of the General Directorate of Civil Defence under the Ministry of Interior in Qatar are divided between its four departments (operations, prevention, procurement and administrative affairs) and largely concentrated at the national level. Starting in 2004, the Civil Defence system in Qatar has undergone significant reforms.<sup>44</sup> The *Qatar National Development Strategy 2011-2016* stipulates to “establish a high-level coordinated approach to national disaster management.”<sup>45</sup>

A new law approved in December 2015 proposed to set up a Supreme Council for Civil Defence. The Council is responsible to draw up a general policy, and declare a state of emergency in case of a disaster. The Council is in charge of preparedness and response activities with the engagement of all ministries.

Building fire is a major urban risk in Qatar, and the number of fires is growing. In 2013 alone there were 1,158 fires, or an average of more than three fires a day, most of which occur either in homes or in vehicles.<sup>46</sup> An important preventive function of the Civil Defence is to issue licenses to commercial, industrial and general stores to ensure building safety.

The Ministry of Interior (previously the parent ministry of Civil Defence) has set up the Ras Laffan Emergency and Safety College (RLESC) at Doha in partnership with Qatar

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### FOOTNOTES

<sup>42</sup> <http://www.mme.gov.qa/cui/index.dox?sitelD=2>.

<sup>43</sup> <http://www.mme.gov.qa/cui/view.dox?id=585&sitelD=2>.

<sup>44</sup> <http://civil-defence-exhibition.com/civil-defence/information-about-civil-defence-qatar>.

<sup>45</sup> General Secretariat for Development Planning (GSDP), *The Qatar National Development Strategy 2011-2016, Towards Qatar National Vision 2030* (Doha, Qatar: Qatar General Secretariat for Development Planning, 2011), p.19. General Secretariat for Development Planning (GSDP), *The Qatar National Development Strategy 2011-2016, Towards Qatar National Vision 2030* (Doha, Qatar: Qatar General Secretariat for Development Planning, 2011), p.19.

<sup>46</sup> <http://dohanews.co/new-civil-defense-council-formed-to-manage-qatars-emergency-response/>.

Petroleum. It is an emergency and safety training college, designed to provide advance training to professionals in the oil, gas, petrochemical, civil defence, civil and military aviation industries in the MENA region and Africa.<sup>47</sup> Such focus is largely explained by the fact that Qatar is the world's biggest natural gas liquefaction site.

Numerous social and developmental organizations address aspects of disaster risk management in Qatar. These include the Qatar Foundation, Qatar Red Crescent Society, Qatar Charity, Shafallah Centre, Sheikh Eid Bin Mohammed Al Thani Charity Foundation, Al Fakhora Campaign and Reach Out To Asia (ROTA).<sup>48</sup> These organizations address issues of aid and development response, from education in conflict areas to water and sanitation projects and disaster and emergency response missions.<sup>49</sup>

No city in Qatar is engaged in the UNISDR MCR Campaign.

**Box 8**  
**Qatar: National Command Centre (NCC) - a unified geospatial response infrastructure**

Since 1973 Qatar has been building its operational capacities to respond to emergency situations. In 2006, during the organization of the 15th Asian Games, its Operations Room was shifted from Ministry of Interior to the National Command Centre (NCC). The NCC is fully equipped with necessary up-to-date technical solutions (including the TETRA System).

- NCC manages a coordinated response to both local and national emergencies based on real-time information dissemination about the emergency. It includes the country's Emergency Service Centre, the Ministry of Interior, Internal Security Forces, and the Hamad Medical Corporation, operator of Qatar's national ambulance services.
- NCC uses NJM (Unified Geospatial Infrastructure) – a web-based, bilingual (Arabic and English) geographic security system built on the ArcGIS platform. It includes a number of interactive applications and a unified geodatabase that hosts all geographic and tabular data in a single repository. NJM integrates all NCC functions into a single system and seamlessly interfaces with other systems when needed.
- NCC covers the entire emergency workflow, including receiving calls about emergency incidents, tracking the location of the incident with an automatic call and a location identification system. The application also provides records of nearby incidents, hazardous materials, and critical infrastructure. NJM also provides the location of responding vehicles and their availability status. The application then uses the ArcGIS Network Analyst extension with an integrated automatic vehicle location (AVL) service to determine the nearest available units and match the response needs with predefined unit capabilities and their current location.

Source: Ministry of Interior, Qatar, Central Operations Department [<https://www.moi.gov.qa/site/english/departments/cod/sections/sec1197/1197.html>]. Accessed 20 February 2018.

FOOTNOTES

<sup>47</sup> Ras Laffan Emergency and Safety College: <http://www.rlsc.qa>.

<sup>48</sup> The Qatar Foundation: <https://www.qf.org.qa/home>.

<sup>49</sup> <http://www.unocha.org/romena/about-us/about-ocha-regional/qatar>.

### Saudi Arabia

- The Ministry of Interior is the national focal point for emergency and disaster management.<sup>50</sup> A special focus area is the provision of security during Ramadan and Hajj seasons in Makkah and Medina.
- The Civil Defence (CD) and Fire Services departments and Public Security Directorate (PSD) are placed under the jurisdiction of the Ministry of Interior.
- Saudi Arabia is divided into 13 provinces with a varying number of governorates in each province (118 governorates in total).
- Saudi Arabia has 106 cities and towns.

The Ministry of Municipal and Rural Affairs, jointly with the National HABITAT Consultation Group in the KSA, has articulated the need to “promote disaster-resilient cities through integration of disaster risk management measures into spatial planning” among three priorities for future sustainable development.<sup>51</sup> As of September 2014, the Government is developing a long-term strategy on disaster risk reduction in cooperation with the World Bank/GFDRR to manage and mitigate the impact of disasters.<sup>52</sup>

The General Directorate of Civil Defence (GDCCD) is chaired by the Minister of Interior. The Civil Defence structure has three layers: Board of the GDCCD, Executive Committee, and volunteers. The Board is responsible for the overall policy development and planning at the national level. The Executive Committee implements decisions of the Board. Its members are appointed by the Board. GDCCD volunteers are the citizens who committed to support the GDCCD task during the times of increased need.<sup>53</sup>

The Ministry of Interior has set up the Emergency Call and Operation Centre (ECO). The ECO is a network of control rooms across the country tasked with providing multi-agency event reporting and dispatch operations for civil defence or security events. The centre's headquarters is located in Makkah.<sup>54</sup>

Decision-making and resource allocation in the civil protection system is highly centralized. It is response-oriented with a focus on particular security concerns. Also, the system is designed to incorporate the charitable giving concepts of *zakat* (a religious tax) and *sadaqa* (optional charity) under the Saudi National Campaign structure. The humanitarian aid is therefore understood by the community and respected by the government.

Growing attention is paid to urban resilience-building. In 2013, a four-year cooperation agreement was signed between the Government and UN-Habitat for the development of the “Future Saudi Cities Programme.” The four-year Programme will be implemented by UN-Habitat in 17 cities, in collaboration with the Ministry of Municipal and Rural Affairs. One city in Saudi Arabia – Dammam – is engaged in the UNISDR MCR Campaign.

#### FOOTNOTES

<sup>50</sup> <http://www.saudinf.com/main/c6p.htm>.

<sup>51</sup> UN-Habitat 2016b, p. 47.

<sup>52</sup> *Ibid.*

<sup>53</sup> <http://www.998.gov.sa/Ar/eServices/Pages/default.aspx>.

<sup>54</sup> Yao et al. 2013.

**Box 9****Jeddah: flood risk and urban planning in an ancient city**

Known as the “Bride of the Red Sea,” Jeddah is considered the economic and tourism capital of the country. It is the second largest city after Riyadh, with a population of around 3.8 million. The origins of the city date back around 3,000 years, when the fishing tribe of Quda’ah came to Jeddah and settled there. The founding of the city may be dated to A.D. 647 when the third Muslim Caliph Othman Bin Affan ordered the city to be transformed into a port to welcome pilgrims (Hajjis) coming by sea for the Holy Pilgrimage to Makkah.\* Today too, Jeddah continues in its role as the gateway to the holy cities of Makkah and Madinah.

On 25 November 2015, the worst flood of the past 27 years hit the coastal city of Jeddah and the surrounding areas of Makkah Province in Saudi Arabia. Heavy rains also lashed western, northern and central parts of Saudi Arabia, including the cities of Makkah, Medina, Hail and Arar. More than 90 millimetres of rain fell in just four hours in Jeddah, which is nearly twice the annual average and the heaviest rainfall in Saudi Arabia in decades. It resulted in over 100 lives lost and billions of riyals in damage caused to homes, cars and public infrastructure.

The Governorate of Makkah has confirmed that the flooding of streets and tunnels was the direct result of “a lack of adequate rainwater drainage systems at these sites.”\*\* Benefiting from the experience gained from the floods that hit the city in 2009 and 2011, Jeddah Municipality has prepared an integrated plan to deal with heavy rains or flooding in the city in 2014. As part of its efforts to deal with the hazards of heavy rains and floods, the municipality will liaise with the Presidency of Meteorology and Environment (PME), the Civil Defence, traffic police, the Ministry of Water and Electricity, the National Water Company and the Ministry of Transport.

The risk of flooding is constant and growing in Jeddah, as it is a coastal city with a rapidly increasing population. The main focus for the municipality is how to deal with the housing needs of the middle and low-income families (set to grow by around 2.25 million people between now and 2029) among Jeddah’s 3.8 million population.\*\*\*

\* <http://www.uksacb.org/uk-en1313/page/main-cities>

\*\* Arab News, 20 November, 2015 <http://www.arabnews.com/saudi-arabia/news/838371>

\*\*\* Construction Week, February, 2014 <http://www.constructionweekonline.com/article-26590-city-report-jeddah/>

**Box 10****Saudi Arabia: smart cities and youth urban innovation**

A new initiative has been recently launched by the Arab Urban Development Institute (AUDI) on Youth Urban Innovation to utilize youth ICT skills in the implementation of the KSA 2030 vision and engage youth in transforming cities into SMART CITIES. The programme emphasizes the importance of balancing “*soft infrastructure*” of local social network, youth civic empowerment, cultural aspects of urban planning and “*hard infrastructure*” of a smart built environment, while realizing the KSA 2030 vision.

The programme's official launch took place in May 2016, adopting the Saudi transformative 2030 Vision for Sustainable Development and paving the road for achieving the United Nations 17 Sustainable Development Goals (SDGs) over the next 15 years. The programme was launched in Riyadh city in collaboration with the Higher Development Authority of Riyadh, and will be implemented in 17 Saudi Cities in collaboration with the Ministry of Municipalities and Rural Affairs. The Saudi Arabia model will be analysed for knowledge dissemination and replication in the Arab region.

The aim of this seven-month programme is to develop smart and responsive contemporary technology-based services and resilient urban planning development schemes. The program is designed to inspire and support municipal officials as they develop the Saudi Smart City policies and implementation framework for their cities, while engaging youth in leading Smart City development in Saudi Arabia.

The programme is expected inter alia to develop a Youth Urban Visualization learning toolkit to empower youth civic engagement, as a sustainable approach for community participation in the space mapping, design and development of Smart Cities.

The Arab Urban Development Institute (AUDI) is a non-profit and non-governmental organization, working as the Arab Towns Organization (ATO) scientific body in 500 cities and local municipalities across 22 Arab countries. Established in Riyadh 1998, its five main programmes are: City Development Strategy, Capacity Building, Child and Youth, Urban Observatories, and Urban Poverty.

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#### 4.2.3b The Maghreb

The Maghreb features very diverse characteristics, a few of which can have significant impact on urban resilience-building: Morocco as a kingdom with many achievements in disaster and climate risk management including at the local level, Algeria with an advanced civil protection and disaster risk management system (particularly risk transfer and DRR integration into sectoral planning), and Tunisia demonstrating an increasing interest in urban resilience. Libya, on the other hand, is a failed state with conflict ongoing since 2011, while Mauritania is one of the poorest countries in the world, and suffering from challenges of food security due to climate change.

Yet there are similarities among these countries, especially in terms of risk exposure of urban areas to seismic, coastal and climate hazards. At least three countries (Algeria, Morocco and Tunisia) have established good practices in disaster risk management. Also, with the exception of Mauritania, the Maghreb countries are middle and high income. Urbanization is comparatively high in the region. Decentralization and democratization is stronger in Tunisia and Morocco. The local authorities, however, struggle to obtain and effectively exercise power over planning, financing, and implementing resilience-building initiatives. A lack of financial resources, lack of human capital, and lack of enabling legal framework, all contribute to this situation.

### Algeria

- Algeria is divided into 48 provinces,<sup>55</sup> 553 districts and 1,541 municipalities.<sup>56</sup> It has 38 cities with more than 100,000 inhabitants, and 134 towns (Brinkhoff 2017).
- Civil Protection Directorate is part of the Ministry of Interior and Local Governments

The civil protection system in Algeria is one of the most advanced in the subregion.<sup>57</sup> It has a long-standing history of disaster reduction in the country, triggered as often is the case, by disasters. After the El Asnam earthquake in 1980, the Government of Algeria issued the construction code in 1983. It implemented the first disaster reduction and management plan already in 1985.

The Boumerdès earthquake of 2003 heightened the importance of preparedness. The Law on Prevention of Major Risks and Disaster Management and new building regulations were adopted in 2004. DRR has become an important consideration for sectoral planning, whereby the National Scheme for Land Use planning was the first to integrate DRR. With UNDP support, DRR was also integrated into the National Planning Scheme 2030.

After the North Algerian earthquake, a disaster insurance scheme was introduced in 2003. The insurance scheme is mandatory for all property owners and covers physical damage to property (e.g., apartments, houses, villas, industrial and commercial buildings and their contents) affected by one of the following hazard events: earthquakes, floods and mudslides, violent storms and winds, landslides, or other similar disasters.

In 2006, the Government of Algeria adopted Law No 06-06 about city orientation. The law provides a common ground for shaping urban coherence scheme. Under this law a study will be carried out and solutions defined to address the existing and emerging problems in the urban context (including, but not limited to, the balance of development and economy, improving the living environment of citizens, etc.). The cities of Algiers, Oran, Constantine and Annaba will be the first cities to be tackled. In total it is envisaged to include 33 major cities, 39 cities with population over 10,000, 158 small towns, and 361 urban clusters.

Under this law, a National Observatory for the Cities was also established, followed in early 2007 by an executive decree establishing the organization and functioning of the Observatory. The Observatory is in charge of monitoring the implementation of the urban policy and proposes measures for its realization and the involvement of the citizens. The new Observatory is also responsible for developing indicators, statistics and information about the cities as well as new management models able to assist government and local authorities in improving the life of citizens and consolidating the role of the city in sustainable development.

### FOOTNOTES

<sup>55</sup> The regional structure (region) as a local authority granted legal status does not exist. However, the regional constituency covering a space comprising several *wilayas* is tangible to the extent that several State services as well as their public and private businesses have been established regionally.

<sup>56</sup> <http://www.interieur.gov.dz/Dynamics/frmlItem.aspx?html=3&s=25>.

<sup>57</sup> UNISDR-ROAS 2013.

The resilience agenda in Algeria has been taken to a higher level by the appointment and institutionalization of the Délégation Nationale aux Risques Majeurs in September 2012. Also, the response capacities of the civil protection authorities are strong. During the Nepal earthquake of 2015, Algeria was the only African and Arab country actively present in the field.<sup>58</sup>

“The strong centralization of powers and prerogatives, exacerbated by endemic bureaucracy, has largely reduced the role of community structures, supposed to be the counterpart of citizens to the extent that, in theory, they embody and express the will of the people.”<sup>59</sup> The decentralization law of 2004 requires municipalities to have specific disaster management responsibilities. However, resources and capacities at the municipality level remain limited. As such, additional support is required to empower municipalities to undertake effective DRM actions, through the provision of adequate budgets and capacities.

Non-governmental organizations are also active in resilience-building in Algeria. In September 2013, with the support of UN regional offices, the UN Country Team in Algeria started developing contingency plans to improve emergency preparedness. This included an earthquake simulation exercise.<sup>60</sup>

A major component of the Civil Protection’s mandate is to train and sensitize schools, municipalities and *wilayas* (provinces) on preparedness and prevention measures. The Civil Protection Directorate organizes regular public-awareness tours to reach remote sites and inform the general population about disaster risk preparedness and prevention measures.

Algeria is also part of the Euromed programme for the Prevention, Preparedness and Response to Natural and Man-made Disasters (PPRD). PPRD is an EU-funded programme aiming at raising the national resilience of each southern Mediterranean partner country (countries targeted by the European Neighbourhood Policy – ENP) affected by a natural or human-caused disaster, mainly through risk reduction (prevention, mitigation, public awareness) and preparedness (capacity building, contingency planning), including better cooperation at the international level.<sup>61</sup>

None of the Algerian cities is engaged in the UNISDR MCR Campaign.

**Box 11**  
**Algeria:**  
**insurance against**  
**natural hazards**

The unplanned urbanization and failure to comply with the seismic building codes has increased vulnerability to natural hazards. To address the growing financial risk from natural hazards, legislation on hazard risk insurance was enacted in August 2003 after the 2003 Boumerdès earthquake .

FOOTNOTES

<sup>58</sup> <http://www.aps.dz/en/algeria/7772-nepal-earthquake-algeria-hailed-for-its-“commitment,”-civil-protection’s-professionalism”>.

<sup>59</sup> United Cities and Local Governments (UCLG), Country Profile – Algeria.

<sup>60</sup> <http://www.unocha.org/romena/about-us/about-ocha-regional/algeria>.

<sup>61</sup> PPRD South program II: <http://www.euromedpprdsouth2.eu>.



It is a mixed insurance system, based on mandatory insurance, combining the principle of citizen mutuality, a fundamental principle of insurance, and that of national solidarity with State intervention as a financial guarantor. The compulsory insurance scheme is designed to limit the financial threat to the national budget, ensure risk-sharing by all owners, promote seismic building code practices, and build up long-term reserves to compensate future disasters losses.

The insurance scheme is mandatory for all property owners and covers physical damage to property (e.g., apartments, houses, villas, industrial and commercial buildings and their contents) affected by: earthquakes, floods and mudslides, violent storms and winds, or other similar disasters.

The cost of the insurance (the premium) is based on three parameters: the value of the property insured, the risk zone where the building is located, and compliance with the mandatory building standards. For example, an apartment type F3 (three bedroom apartment) with an area of 70 m<sup>2</sup> in Algiers (the capital), can be insured for up to 1,800 DZD (18 USD). The minimum income in Algeria is 20,000 DZD (200 USD). A significant fraction of the risk is transferred to international reinsurance companies until sufficient financial funds have been accumulated under the insurance scheme.

To enforce the insurance scheme, two types of sanctions are currently applied:

- Owners are required to take insurance and if they fail to do so, they will not be eligible for government compensation in the form of housing credits or reconstruction in the event of damage caused by a natural hazard.
- To sell, purchase or lease any type of housing or property, owners must present their insurance policy documents to real estate registration offices and the tax authorities at the time of making their tax declaration. The law also provides sanctions for non-compliance with this obligation: refusal of compensation and fines equal to the amount of the premium increased by 20 per cent.

The insurance scheme is designed as a multi-hazard insurer. Private and public insurance companies undertake policy distribution and marketing, and conduct loss assessments. Currently, five insurance companies are offering policies for this insurance scheme. However, it should be noted that the uptake rate is low (5.2 per cent for residential property and 7.6 per cent for industrial facilities in 2012), due to insufficient public awareness of the benefits of insurance, the habitual role of the government in compensating for disaster losses, and the difficult economic conditions experienced in recent years.

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des catastrophes naturelles et à l'indemnisation des victimes et textes d'application.

B. Conseil national des assurances (CNA), Bulletin des assurances No. 26 (Alger, Algérie : CNA, 2014). [<http://www.cna.dz/Documentation/Travaux-du-CNA/Publications-du-CNA/Bulletin-des-assurances-n-26>]. Accessed 22 February 2018.

C. AssurAl, Le portail de l'Assurance en Algérie, L'assurance contre les effets des catastrophes naturelles [<http://www.cna.dz/En-savoir-plus/Assurances-obligatoires/L-assurance-contre-les-effets-des-catastrophes-naturelles>]. Accessed 22 February 2018.

**Box 12****Algeria: flood forecasting and early warning system (UPI) for cities along the Mekerra Wadi**

A flood forecasting and early warning system (F-EWS) has been developed and implemented in Sidi Bel Abbas *wilaya* (province), through the EU-funded “Support program for the water resources sector in Algeria” aimed at flood risk prevention. The F-EWS is expected to be replicated in other provinces of Algeria.

The Oued Mekerra basin forms “a major part of the *wilaya* of Sidi Bel Abbas” and was chosen as a pilot area for implementing the methodology and procedures to set up and manage the forecasting and flood risk early warning system.

**The UPI main tasks:** The UPI (Unité de Prévision des Inondations, or Flood Forecasting Unit) is a scientific unit, not an operational one. Its work is based on real-time monitoring – necessary for flood forecasting – which consists of collecting data several times a day on the water level or flow data at key points along the monitored *wadis* (valleys). These key points were chosen for Wadi Mekerra in those areas where floods have occurred in the past. The prediction of rainstorms is the responsibility of the National Meteorological Organization (ONM). This body is responsible for transmitting Special Meteorological Bulletins (BMS) to the early warning system (UPI) and to the National Hydraulic Resource Agency (ANRH). The National Meteorological Organization regularly distributes these Bulletins. ANRH undertakes the hydrometric observation of *wadis* and is also responsible for the management of hydrometric and rainfall stations. Data transmitted by these stations are received by the UPI and by ANRH. The data transmission is routinely carried out by telephone landline or by using an ordinary GSM chip (every 30 minutes). Rainfall stations in the Oued Mekerra basin have been replaced by automatic units to provide this data (Figure 1). This procedure ensures that rainfall observation takes place in real time in the basin that is being monitored.

**Flood forecasting**

UPI compiles an empirical prediction based on its observations of the amount of water that has fallen in the catchment areas, as well as water levels in the wadi itself. These observations are mainly made upstream of the basin using the measurement data collected by the network of “automated data collection and flood warning systems.” This system provides sufficient time to analyse the data.

The data is then fed into several complex models that can predict water levels. There is a hydrological model which transforms rainfall into flow. Another model is a hydraulic simulation model which provides a “model of the distribution of flood water.” The triggering of the alarm related to the flood risk is based on a disaster risk plan that was previously established using the hydraulic model.

The UPI is responsible for the dissemination of information. This is carried out for different levels of risk and by hydraulic subdivision. Alerts have to be forwarded to the leaders of the *Dairas* as well as to the local civil protection service.

The flood early warning system serves numerous Algerian cities. A list of the cities with flood risks is provided in Table 14: *Projected threshold flood flows for some cities along the Mekerra Wadi.*

Sources

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- B. Abbas Merabet, Étude de la protection de la ville de Sidi Bel Abbès contre les inondations, Mémoire de magister, spécialité: Hydraulique, Université de Sidi Bel Abbès, 2008.
- C. Direction de l'hydraulique de la Wilaya de Sidi Bel Abbès, 2010, Système de prévision des inondations (U.P.I.).

**Table 14**  
**Projected threshold flood flows for some cities along the Mekerra Wadi**

City	Threshold Orange m <sup>3</sup> /s	Threshold Red m <sup>3</sup> /s	Description
Redjem Demouche	200		Water to the limit of the bridge (40 cm below)
Ras El Ma	150	175	Risk of flooding city and harbour
El Hacaiba	350		Water to the limit of the bridge (60 cm below)
Moulay Slissen	150	175	Tadjmout: Risk of flooding city and bridge
Moulay Slissen	550	575	Mekerra: Risk of flooding bridge
Sidi Ali Benyoub	750	775	Risk of flooding bridge
Mellinet	675	725	Risk of flooding bridge
Tabia	1500		Water to the limit of the bridge (30 cm below)
Boukhanefis	100	150	Bridges
Sidi Lahcene	100	150	Bridges and impact in the city

**Box 13**  
**Algeria: development of response and recovery capacities at the wilayas (provinces)**

Algeria has built a solid disaster response system across the country. The Civil Protection General Directorate is the primary actor responsible for coordinating implementation of comprehensive preparedness, response and recovery measures at the national and local levels. Every six months *wilayas* participate in simulation exercises as part of the national preparedness. Each *wilaya* is responsible for drafting a disaster management plan that is tested and updated through simulations according to the 04/20 Law on Prevention and Disaster Management.

Decisions about the recovery process are taken by the central government and they are implemented through the line ministries at the *wilayas* and municipalities. The example of the 2003 Boumerdès earthquake illustrates the regular process for the reconstruction and recovery after disasters in Algeria:

**Assistance Packages offered to Individuals for Reconstruction:** Government allocated a 100 billion Algerian Dinars (1.4 billion USD) for the reconstruction of 22,000 housing

units, 160 schools and 6 sanitary establishments and for the repair of damaged constructions in Algiers and Boumerdès *wilayas*.

**Urban reconstruction measures:** Government has decided to incorporate appropriate preventive measures into policies and programmes of urban zones. Thus, technical quality control has been made compulsory for public and private buildings alike since 2004. Also, a new law related to the procedures of elaboration and approbation of the land use, urban planning and construction has been adopted by the government.

**Relief Issues:**

- Homeless families were sheltered by the government (civil protection, Red Crescent) and international organizations, in tents built in camp sites.
- Each camp site was provided by a police bureau, a civil protection centre, a temporary hospital, a bureau of Algerian Red Crescent, an annex of local administration and a mosque.
- In the first four weeks after the disaster, cooked food was distributed three times a day.
- Camp administrators organized special tents for children to play, do manual work such as crafts, watch TV, and play games under the supervision of psychologists and social workers.
- High school students who had to pass the baccalaureate exam in September were provided with special sites in the affected zone or outside the zone assisted with professors to help them review their courses.
- Some nights, musical evenings were organized in the camps.
- The main problems reported in the camps were hygiene and collective toilets. The families had to stand in a queue to use the toilets.
- The government started building individual prefabricated houses “chalets” in about 150 sites where the victims were removed from the camp sites to these new sites.
- These “chalets” are equipped with water, electrical power, sewage and water systems and individual toilets.
- The president has promised that all the victims will be sheltered before the winter season.

**Psychological and medical rehabilitation:**

- All the sites of temporary sheltering (more than 150 campsites) were provided consultations, examinations, and a care programme, as well as the programmes of public health (vaccination, prevention against water-borne diseases, epidemiologic monitoring).
- The Ministry of Health, in order to avoid the occurrence of epidemics, employed 27 teams of epidemiologists and technicians for cleaning whose mission was the strict control of drinking water and hygiene in the camps.

Source: [Rapport officiel national sur la gestion de la catastrophe du séisme de Boumerdès du 21 mai 2003 \(Algérie, 2003\)](#).

### Libya

- Libya is divided into 22 districts.
- Libya has 97 cities, towns and municipalities.

After NATO-backed rebels toppled the former ruler Gaddafi, Libya plunged into chaotic unrest. Diverse warring factions are fighting to seize the power in the country. The conflict is largely between two groups: the Tobruk government of the General National Congress (GNC) and the Islamic government of the General National Congress (GNC) also called the National Salvation Government. The situation is complicated with the presence of so-called ISIS in Libya that has established its largest power centre outside of the caliphate's borders, with one city under its brutal brand of Islamic law and thousands of fighters across the country.<sup>62</sup>

In 2016, the UN-backed Government of National Accord (GNA) was formed. The rival Tripoli-based National Salvation government rejected the GNA transition. It is assumed that the GNA is eventually empowered to restore security and launch a comprehensive program to rebuild the economic and social infrastructures. However, it is uncertain whether the new unity government will be able to bring together the warring factions and re-establish stability in Libya.<sup>63</sup>

In this context, the primary concern is to stabilize the situation in the country and provide safety and security to the population. UNDP and the Libyan Government of National Accord initiated the Stabilization Facility to rehabilitate critical infrastructure destroyed by conflict and restore basic service provision.

The facility can finance rehabilitation and repairs of key public infrastructure including clinics, hospitals, police stations, water and waste water treatment facilities, power grids and stations, etc. The facility can also support businesses that were destroyed by the conflict or degraded, and are vital to communities as a whole, such as bakeries in places where they were destroyed and people are forced to bring bread from elsewhere.<sup>64</sup>

It remains important that humanitarian and development partners take due account of existing and emerging disaster and climate risks while designing and implementing necessary interventions.

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#### FOOTNOTES

<sup>62</sup> <http://europe.newsweek.com/watch-rise-isis-libya-445291?rm=eu>.

<sup>63</sup> <http://www.cfr.org/global/global-conflict-tracker/p32137#!/conflict/civil-war-in-libya>.

<sup>64</sup> <http://www.ly.undp.org/content/libya/en/home/presscenter/articles/2016/04/13/undp-libya-launches-the-stabilization-facility-plan-for-libya-during-the-senior-officials-meeting-in-tunis/>.

### Mauritania

- The national system of regional governors and prefects is modelled on the French system of local administration. Mauritania is divided into 15 regions, which are further divided into 44 departments. It has 43 cities, towns and municipalities.
- The Ministry of Interior and Decentralization<sup>65</sup> oversees the system of local administration.
- The Directorate of Civil Protection operates under the jurisdiction of the Ministry of Interior and Decentralization.
- Mauritania is one of the poorest countries in the world: it ranks 141 out of 185 countries based on GDP per capita (WB).<sup>66</sup>

Mauritania is taking its first steps towards building resilience in the country. The disaster and climate risk management is inevitably seen through the prism of the food and nutrition security. Thus, in its Poverty Reduction Strategy Paper, “the integration of risk and natural disaster management into sectoral policies” is highlighted with regard to climate change monitoring.<sup>67</sup>

The Civil Protection system needs support in capacity development in order to further the resilience-building agenda. Thus, with the support of the Prince’s Government of Monaco the first three fire-fighting stations have been set up in the capital Nouakchott.<sup>68</sup> Also, a radio communications network was established to support local firemen in dealing with emergency situations. Some ambulances and protective clothing were also provided.

In January 2015, with the support of NATO and the Canadian Department of Foreign Affairs, the first Mauritanian Centre for crisis monitoring, alerts and management was set up.<sup>69</sup> One of the objectives of this particular partnership is to give more power to the regional directorates for civil protection, each with an operational coordination centre (Centre de Coordination Opérationnelle – CCO). As part of West Africa, Mauritania is engaged in and benefiting from the Regional Committee for Disaster Management in West Africa (GECEAO) since 2009.<sup>70</sup>

The administrative system of Mauritania is highly centralized across all sectors including civil protection. The capacities of the local authorities for resilience-building are extremely limited in the capital city and largely non-existent outside it. The primary focus is very much on response.

None of the Mauritanian cities is engaged in the UNISDR MCR Campaign.

### FOOTNOTES

<sup>65</sup> <http://www.interieur.gov.mr>.

<sup>66</sup> [http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?order=wbapi\\_data\\_value\\_2013+wbapi\\_data\\_value&sort=asc](http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?order=wbapi_data_value_2013+wbapi_data_value&sort=asc).

<sup>67</sup> IMF 2013, p. 71.

<sup>68</sup> <http://en.gouv.mc/Policy-Practice/Monaco-Worldwide/Public-Aid-for-Development-and-International-Cooperation/News/Civil-Security-in-Mauritania-A-Field-Mission-for-Two-Monegasque-Firemen>.

<sup>69</sup> [http://www.nato.int/cps/en/natohq/news\\_117409.htm](http://www.nato.int/cps/en/natohq/news_117409.htm).

<sup>70</sup> [http://abdoukarimsow.org/geceao\\_VF/](http://abdoukarimsow.org/geceao_VF/).

### Morocco

- Directorate of Surveillance and Prevention of Risk falls under the jurisdiction of the Department of Environment of the Ministry of Energy, Water, Mines and Environment.
- Morocco is divided into multiple levels of local government, all directly under the Ministry of the Interior: 16 regions, 38 provinces and 1,544 municipalities.<sup>71</sup>

Morocco has taken steps to establish a strong foundation for risk-informed resilience-building, which is further based on two priority risks and their implications: seismic risk and climate risk with the focus on the nexus of water, food and agriculture. Understandably, the resilience-building priorities and tasks are largely divided between various ministries, including the Ministry of Interior, the Ministry of Water and Environment, the Ministry of Health, the Ministry of Energy and Mines, and the Ministry of Education.

Thus, the Department of Water has developed the Plan National contre les Inondations (PNI, or the National Plan against Floods/NPF). The plan identified 390 priority areas for which prevention measures are to be realized before 2020. Under this plan, Morocco has developed a forecasting and flood warning system. The country intends to develop a geographic information system (GIS) with data on natural and technological hazards across the country, called GIS risk assessment.

Risks and vulnerabilities in the agricultural sector is a priority for the country too. The National Irrigation Water Saving Programme (or Programme National d'Economie d'Eau en Irrigation/PNEEI), formulated in 2009, is considered the primary tool in implementing the Plan Maroc Vert (PMV)<sup>72</sup> as a response to the challenges of climate change and food security.

With the support of international partners (WB, GFDD and SDC), Morocco has made a shift from managing risk in "silos" to integrated risk management.<sup>73</sup> In April 2016, USD 200 million in funding was approved by the WB for the Integrated Disaster Risk Management and Resilience Program in Morocco for institutional reforms with disaster risk-reduction investments and the introduction of a catastrophe risk insurance program.<sup>74</sup>

Morocco has engaged in a series of reforms on decentralization since 1999. The primary focus is to ensure that the mission of local authorities is less about maintaining public order, but rather encouraging development and local initiatives and ensuring human rights (among others through the Local Initiatives for Human Development). There are 1,544 municipalities in Morocco, each of which elects municipal councils and mayors by general

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### FOOTNOTES

<sup>71</sup> Arab Political Systems: Baseline Information and Reforms – Morocco, Carnegie Endowment: [www.carnegieendowment.org/arabpoliticalsystems](http://www.carnegieendowment.org/arabpoliticalsystems).

<sup>72</sup> <http://www.finances.gov.ma/fr/Pages/Stratégies/Stratégie-de-développement-agricole--le-Plan-Maroc-Vert.aspx?m=Investisseur&m2=Investissement>.

<sup>73</sup> World Bank 2013.

<sup>74</sup> <http://www.worldbank.org/projects/P144539?lang=en>.

election. As part of its decentralization policy, Morocco's government has sought in recent years to increase the councils' autonomy. But the councils remain weak because the central government continues to control their finances and resources.

Two Moroccan cities are engaged in the UNISDR MCR Campaign: Agadir and Tata.

#### Box 14

#### Morocco: eradicating urban slums to reduce vulnerability

Like most developing countries, the government of Morocco is faced with the day-to-day demand on housing and better conditions of living. There are about 1,000 slum districts in Morocco. In total, about 212,000 families live in urban slums across 70 cities of Morocco, and about 80,000 families live in informal agglomerations.

In the year 2000, the government launched a strategy to reduce the vulnerability of informal construction, slums and ancient housing sites.

In order to implement the strategy, under the UN-Habitat program "Cities without slums" (2004-2005) nearly USD 450 million were invested and an allocation of about USD 140 million was dedicated to social housing from the State Solidarity Fund of Housing. In parallel, another programme was launched for urban rehabilitation of illegal districts, with funding from the State Housing Solidarity Fund (USD 20 million) and the government (USD 25 million).

There is also fair attention paid to creating incentives for rural development. In order to reduce the rural exodus to large cities, the government strategy is to encourage development in rural areas and remote villages.

Another important consideration is urban planning for suburban areas located in the close vicinity of large cities. The government has initiated a new programme to set up viable new urban agglomerations around the large cities. This programme was conducted in partnership with local authorities and the private sector. Public land grants were established in order to promote social housing units and for the prevention of illicit human establishments. To this end, a micro-zoning planning of Al Hoceima (Morocco) was initiated as a pilot project for countrywide replication.

The legal framework was revised and improvements were made to the main urban planning regulations to integrate the risk of natural hazards. Also, technical controls for constructions in hazard-prone zones were adopted which allow the imposition of fines and in certain case, demolition of unsanctioned constructions in hazard-prone zones.

In 2004, a financial incentive mechanism was introduced: all the taxes received from the sales of cement in the entire Kingdom during one year were used to establish two guaranty funds. Thus, USD 100 million were allocated to support low-income households and families with irregular income, and two major public banks were reorganized to support the social housing program in the Kingdom.

Source: A. Guedira and M. El Malti. "Evaluating and reducing the vulnerability of slums, traditional housing, and migrant populations – Experience from Morocco", Kingdom of Morocco/Ministry of Housing and Urban Planning. World Conference on Disaster Reduction, 18-22 January 2005, Kobe, Hyogo, Japan.



### Tunisia

- Tunisia is divided into 24 governorates, 264 districts (municipalities).
- Tunisia has 264 cities, towns and municipalities.
- The National Office of Civil Protection (NOCP) operates under the jurisdiction of the Ministry of Interior.<sup>75</sup>

The roots of Tunisian civil protection can be traced back to November 1894, when the Aid Association for Volunteer Firemen was founded in Tunis. Since then, it has grown, and in 1993 it became the National Office of Civil Protection (NOCP). It is established within the Ministry of Interior with the goal to organize civil protection on a national and regional scale. This involves responding to all types of accidents, calamities or disasters that threaten people, property or the environment. The NOCP also engages in prevention activities, including contributing to both the national plan and regional plans. In 2015, the NOCP established the National School of Civil Protection in Jebel Jelloud, Tunis in 2015. It is also involved in raising citizen awareness on prevention, as well as teaching people about civil protection and providing instruction in first aid.<sup>76</sup> Various international partners (EU, France, etc.) effectively support the activities of the NOCP and invest in its capacity development.

In addition, Tunisia established its DesInventar database on disaster loss and damage in 2012-2013. Tunisia is a part of the World Initiative on Safer Schools launched in Istanbul in 2014.<sup>77</sup> In 2012 Tunisia announced that it will establish a National DRR Platform, however during the third UN World Conference on DRR, no National Platform was reported.

Local-level resilience-building in Tunisia is highly restricted by a number of factors, including limited financial resources and limited human capacities.

Municipal institutions in Tunisia are relatively long-standing. The first modern municipality dates back to 1858. Article 7 of Tunisia's Constitution recognizes the legal status of municipalities allowing them to be seen as legally independent from the State, with their own capital, land and budget, financed by specific revenue. However, municipalities have low level of autonomous financial resources and limited control over municipal budget.<sup>78</sup> Moreover, municipalities appear detached from many services. Thus, services such as education, water distribution, drainage, transport, etc. are outsourced to other public organizations leaving the responsibilities of municipalities largely residual and inconsistent.<sup>79</sup> Also, municipalities have significant lack in human resources and technical capacities to address resilience issues at the local level. This situation limits the power of the municipalities to exercise the responsibilities for sustainable urban planning and urban resilience.

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#### FOOTNOTES

<sup>75</sup> <http://www.ministeres.tn>.

<sup>76</sup> <http://www.icdo.org/en/media/press-media/civil-protection-republic-tunisia/>.

<sup>77</sup> <https://www.unisdr.org/archive/42152>.

<sup>78</sup> UCLG County Profile: Tunisian Republic.

<sup>79</sup> *Ibid.*

Despite the challenges, many Tunisian municipalities are putting forth efforts to champion urban resilience. Thus, in 2013 the municipality of Ain Draham, with active support of UNDP, became the first city in Tunisia to join the Making Cities Resilient campaign. It was followed by 12 other municipalities.

#### 4.2.3c The Mashreq

The Mashreq is the most dynamic subregion when it comes to the legal and institutional framework for disaster risk management, the progress made on DRR, and the level of capacities of state and non-state actors.

All six countries of the subregion, including Syria before the 2011 uprising, have undertaken initiatives to improve national disaster risk management systems through institutional reform, strategy development, risk assessment, urban disaster resilience, disaster preparedness, disaster risk education and emergency response. Iraq has set up a national disaster management committee and is currently expanding the work to other levels and sectors. Of urgent concern and focus is the risk from the Mosul dam. Jordan has achieved significant progress on urban disaster resilience in numerous cities, but especially in Aqaba and Petra. Amman is a grant recipient of the 100 Resilient Cities programme of the Rockefeller Foundation. Egypt has achieved progress on national institutional and strategy development, governorate-level emergency preparedness, disaster response drills and city-level risk management. Lebanon is in the lead when it comes to promoting urban resilience. It has invested significant efforts in reform of the national system and improvement of emergency preparedness through emergency centres and drills. Palestine has initiated work on national strategy development, national risk assessment, and urban resilience. All the Mashreq countries have developed disaster damage and loss databases, namely the DesInventar.

This subregion is also, however, the most unstable of the MENA region. Syria is undergoing a full scale war with deep engagement of regional and international powers. Egypt and Iraq are trying to balance development with ongoing armed conflict. Palestine is fragmented and lacks full freedom for actions on resilience-building. Lebanon has a fragile peace and a weak political system. Jordan is the only “island of stability” in the subregion.

In terms of urban resilience, the municipal authorities in Jordan, Lebanon and Palestine enjoy relatively higher autonomy - in Palestine and Lebanon due to the weak state and in Jordan for economic reasons. In Iraq, certain governorates and regions also enjoy high autonomy vis-à-vis the national government. In Egypt, trends of centralization of authority have become stronger since the arrival of the current government. Another equally important challenge that the municipalities in the Mashreq face is the lack of financial resources, with few exceptions, including Aqaba, Petra and Beirut.

## Egypt

- Law 43/1979 defines the legal basis for the local Egyptian administrative system that is divided into five territorial units: 27 governorates, 25 cities and 217 towns and urban subdivisions. The Ministry of Local Development<sup>80</sup> oversees the local administration system.
- Egypt is a unitary country with one of the longest traditions of centralization.

Disaster risk management has made some progress at the national level in Egypt. Thus, the National Strategy for Crisis/Disaster Management and Disaster Risk Reduction and the National Strategy for Adaptation to Climate Change were adopted in 2010 and 2011, respectively. Other laws and decrees that provide the legal framework for DRM/DRR in Egypt include Law No. 179/1956 on civil defence, Presidential Decree No. 300 on establishing the Search and Rescue Centre at the Ministry of Defence (the Centre of "Search and Rescue" was established at the Ministry of Defence in Cairo), and the Prime Minister's Decree No. 1537/2009 of constituting the National Committee for Crisis/ Disaster Management and Disaster Risk Reduction.

The same decree established the institutional framework of crisis/disaster management and DRR in Egypt that comprises six main elements:<sup>81</sup> the Higher Ministerial Committee for Crisis/Disaster Management and DRR; the National Committee for Crisis/Disaster Management and DRR; the Advisory Committee for Crisis/Disaster Management and DRR; the Crisis/Disaster Management and DRR Sector at the Information and Decision Support Center (IDSC); and Crisis/Disaster Management Departments at different ministries, governorates, bodies, civil society organizations and in the private sector.

Also, in partnership with UNICEF, IDSC developed the Egypt National Communication Strategy for Raising Societal Awareness in the Area of Risk Reduction and Crisis Management in 2010.<sup>82</sup>

Even though each governorate has a designated "crisis/disaster management department," the central authorities maintain a high level of control, particularly with regard to financial issues. For instance, the free transfer of movable and immovable assets or rental fees carried out by the governorate popular council for amounts of over 50,000 Egyptian pounds (about 5,000 Euros) must be approved by the Council of Ministers.<sup>83</sup>

Minor progress on community participation and delegation to the local level has been noticed so far. Egypt is considered one of the most centralized countries in the world, ranking 114 out of 158 countries on decentralization and the closeness of government to the people, a so-called "decentralization index,"<sup>84</sup> and this is despite years of the USAID-funded Egyptian Decentralization Initiative 2008-2012.

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## FOOTNOTES

<sup>80</sup> <http://www.mold.gov.eg/arabic/default.htm>.

<sup>81</sup> The National Strategy for Crisis and Disaster Risk Reduction 2010. [[http://www.preventionweb.net/files/13353\\_nationlstrategyforcrisisdisasterman.pdf](http://www.preventionweb.net/files/13353_nationlstrategyforcrisisdisasterman.pdf)]. Accessed 26 February 2018.

<sup>82</sup> <http://www.preventionweb.net/english/professional/policies/v.php?id=21623>.

<sup>83</sup> United Cities and Local Government: Country Profile: Egypt.

<sup>84</sup> <http://www.economics-ejournal.org/economics/journalarticles/2014-3>.

Four cities in Egypt are committed to the UNISDR MCR campaign: Alexandria, Cairo, Ismailia and Sharm el-Sheikh.

**Box 15**  
**Egypt: linking national and local levels with legal and institutional frameworks**

The institutional arrangements for resilience-building in Egypt are confined to the National Committee for Crisis/Disaster Management and Disaster Risk Reduction (Prime Minister's decree No. 1537/2009), while specific thematic tasks are allocated to all ministries. The NCCMDRR was established in April 2006. It serves as the National Platform. The Committee also includes the IDSC and a scientific advisory committee comprising a panel of experts and professional scientists.

The institutional framework of crisis/disaster management and DRR in Egypt has six main elements. Crisis management entities were established in all 28 governorates (the local level), as well as at various ministries, agencies and institutions.

In 2010, Egypt adopted the National Strategy for Crisis/Disaster Management and Disaster Risk Reduction.\* The strategy allocates tasks and responsibilities to national authorities as well as to governorates and "concerned authorities" (which leaves room for the municipal authorities). However, the lack of financial and human capacities means that these tasks go largely unattended. Importantly, the National Strategy emphasizes the significance of raising awareness on disaster risk reduction and disaster management issues. This is further emphasized in order to promote a Safety First culture in the National Strategy for Adaptation to Climate Change and Disaster Risk Reduction.

The system of crisis and disaster management and disaster risk reduction in Egypt has been designed around the 'incident' and not the risk. Although many efforts were invested to shift the focus of the system from response to prevention and preparedness issues, and risk considerations have been integrated in the legal and institutional frameworks, the application of disaster risk governance interventions is still lagging.

A further concern is the capacity of local authorities to reduce disaster risks. For municipalities this usually takes the form of responsibilities for controlling construction through the development of land-use regulations, environmental protection measures and building codes. Since 1956, Egypt has continually developed and updated its building codes. In 2001, the Egyptian Code for the Calculation of Loads and Forces on Structural and Masonry Works was completely revised and now follows the Eurocode 8 standards. The main challenge, however, remains the enforcement of these building codes in cities, by the municipal authorities as well as by the organizations that are called on to provide quality control and supervision of construction, such as the Housing and Building National Research Centre of Egypt.

\* [http://www.preventionweb.net/files/13353\\_nationlstrategyforcrisisdisasterman.pdf](http://www.preventionweb.net/files/13353_nationlstrategyforcrisisdisasterman.pdf)

Sources

A National Strategy for Crisis/Disaster Management and Disaster Risk Reduction, 2010, Egypt, IDSC;  
 B HFA Progress Report, 2014, Egypt, IDSC

## Iraq

- Iraq has a federal parliamentary system of government. Iraq is composed of 19 governorates, which are subdivided into 111 districts. Iraq has 46 cities.
- The Ministry of Municipality and Public Works supervises the local administration in Iraq.
- The Ministry of Interior is responsible for dealing with large scale emergency situations.
- The National Committee for Disaster Risk Reduction is under the chairmanship of the Minister for Science and Technology. It has responsibility for policy, coordination, capacity development and information management with regards to DRR.

In 2007, the Government of Iraq established a National Disaster Risk Reduction (DRR) Committee, chaired by the Minister of Science and Technology (MoST) with membership from ten ministries and departments. The committee has drafted a new disaster risk management policy and proposed the establishment of a National Disaster Risk Management Centre (NDRMC). However, modern Iraq has inherited weak policies and institutions to deal with disaster risks.<sup>85</sup> It has a predominantly response-focused system.

The Province Law enacted in 2008 granted significant autonomy to governorates to undertake specific measures in case of any disaster. Article 31 prescribes the establishment of Emergency Response Cell in each Governorate. Currently nine out of 19 governorates have operational Emergency Response Cells. In case local capacities are not sufficient to respond to a disaster, the Governor may request the support of the federal Ministry of Interior. However, local capacities and financial resources are extremely limited to address existing and emerging disaster risks at the municipal level.

No Iraqi city is engaged in the UNISDR MCR campaign.

### Box 16 Iraq: legislation to support disaster resilience

The administrative framework for governorates, districts and local government is organised according to the Province Law 2008. The law empowers governors of respective provinces to undertake specific measures in case of disaster, including the establishment of Governorate Emergency Cells (GECs) to address humanitarian emergencies in accordance with a 'Master Plan' for response functions.

There are also several specific laws that were enacted before 2003 and remain in force today. These include the Emergency Use Law 1961; the Civil Defence Law 1978 and the Social Care Law 1980. The Emergency Use Law 1961 was enacted to respond to disasters, calamities and accidents. The Civil Defence Law, introduced in 1978, established the Civil Defence in Iraq. Other laws that have a bearing on DRR include the Cities Land Use Law 1965, the Public Health Law 1981, Rangelands and their Protection Law 1965, Maintenance of Networks of Irrigation and Drainage Law 1995, Regulation of Landfills Law 1986 (updated in 2009 as Law No 29), Protection from Ionic Radiation Law 1980, and the Preservation of Water Resources Law 2001.

Source: UNDP 2014b.

## FOOTNOTES

<sup>85</sup> [http://www.iq.undp.org/content/iraq/en/home/operations/projects/environment\\_and\\_energy/DRR.html](http://www.iq.undp.org/content/iraq/en/home/operations/projects/environment_and_energy/DRR.html).

### Jordan

- Jordan is divided into Northern, Central, and Southern regions each of which is further subdivided into governorates (12 in total).
- Jordan has 40 cities and towns.

Jordan has one of the longest-standing and advanced civil protection systems in the region having established its first Disaster Risk Reduction (DRR) Program in 1991. The primary focus remains largely on civil defence from the response, reconstruction and recovery perspective. However, there is a growing recognition of the importance of DRR, especially at the city levels.

The General Directorate of Civil Defence (GDCCD) was established in 1959, under the umbrella of the Ministry of the Interior. It provides daily operational duties in the form of ambulance services, firefighting and rescue operations. Over the last few years, the engagement of Jordan in the fight against terrorism has placed additional responsibilities on the civil defence services.

The GDCCD has around 172 centres across the kingdom's governorates.<sup>86</sup> On 23 February 1991, a Disaster Department was established within the GDCCD to serve as focal point for various cooperative programmes related to disaster risk reduction with other state and non-state organizations.

The Higher Council of Civil Defence (HCCD)<sup>87</sup> in Jordan is authorized by law to undertake appropriate procedures to deal with disasters. The Minister of the Interior is its President, and the Director General of Civil Defence is Vice President, with membership drawn from deputies of all ministries and institutions.

In 2006, Jordan embarked on establishing the National Centre for Security and Crisis Management (NCSCM).<sup>88</sup> The vision of the centre is to build national resilience through coherent cross-sector emergency preparedness capabilities in all sectors of society, both public and private, and at the national level (strategic, operational and tactical).<sup>89</sup> Acknowledging the importance of climate risk considerations, the NCSCM hosts the permanent office for the National Meteorology Department.

There is a network of voluntary civil defence teams in the country, as stipulated by the main law governing disaster management system, the Civil Defence Law No. (18) 1999.<sup>90</sup> Also, the Prince Hussein Bin Abdullah II Academy for Civil Protection<sup>91</sup> is considered one of the best civil defence academies in the Middle East and North Africa.

### FOOTNOTES

<sup>86</sup> Civil Protection in Jordan: Building the Future. [<http://www.icdo.org/en/media/press-media/civil-protection-jordan-building-future/>]. Accessed 26 February 2018.

<sup>87</sup> <http://www.cdd.gov.jo>.

<sup>88</sup> <http://ncscm.jo>.

<sup>89</sup> <http://www.preventionweb.net/english/professional/policies/v.php?id=7351>.

<sup>90</sup> UNDP and General Directorate of Civil Defence, *Analytical Study on Legislations effective in the Hashemite Kingdom of Jordan related to Disaster and Disaster Management*. [[http://www.preventionweb.net/files/31204\\_legislativerevision28englishedition.pdf](http://www.preventionweb.net/files/31204_legislativerevision28englishedition.pdf)]. Accessed 26 February 2018.

<sup>91</sup> <http://www.pha.edu.jo/Default.aspx?tabid=486&language=en-US>.

There is growing attention paid to resilience-building at the municipal level in Jordan. The most prominent example is Aqaba, which hosted the first Arab Regional Conference on Disaster Risk Reduction in 2013 with the support of UNDP. It started working on disaster risk reduction in 2009. Since then, it has become an example for local-level risk reduction and was recognized as a UNISDR MCR role model in 2013. Following the example of Aqaba, the tourist city of Petra has also replicated disaster risk management endeavours, with support from UNDP.

Also following the path of Aqaba, five other municipalities became engaged in the UNISDR MCR campaign, including Salt, Jerash, Ma'an, Zarqa and Irbid. Each of these cities has set up a disaster risk management unit to oversee activities in close cooperation with the Higher Council of Civil Defence.

**Box 17**  
**Jordan:**  
**protecting critical**  
**infrastructure –**  
**getting Amman**  
**airport ready for**  
**disasters (GARD)**

The Getting Airports Ready for Disaster (GARD) program was implemented at Amman Queen Alia Airport from September 2014 with the aim of improving the efficiency of the airport at times of abnormal stress, for example during a disaster. In partnership with Deutsche Post DHL Group (DHL), an in-depth analysis of the airport's areas of weakness was conducted in order to ascertain its capacity for response during times of high activity. The Airport Assessment Reports and Action Plan were prepared and handed over to the GARD Jordan Owner (the Civil Aviation Regulatory Commission) and UNDP. The airport was found to be in a good position to respond, with a variety of organisational and logistical improvements needed to further enhance its response capability. Since then, numerous simulations on disaster preparedness have been conducted at the airport involving all agencies concerned with the management of the airport.

Source: Progress Report on GARD Programme, (Jordan: UNDP, 2015).

**Box 18**  
**Jordan:**  
**enhancing**  
**resilience in**  
**the touristic**  
**city of Petra**

In 2013, UNDP, in partnership with the Petra Development and Tourism Regional Authority (PDTRA), commissioned an Integrated Risk Assessment study for Petra. The study looked at the three main risk factors in Petra-Wadi Musa region, namely, earthquakes, landslides and flash floods. The study analysed those risks in an integrated manner and produced numerous maps that quantified the potential loss in property and lives with different disaster scenarios, and in case of combined disasters as well. The integrated Risk Assessment was the first of its kind in the country, and is expected to inform the decision-making in PDTRA.

Based on the outcomes of the risk assessment, competency training was carried out for the DRM District Committee and DRM Directorate in PDTRA.

The PDTRA City Profile was also developed. While the integrated risk assessment of the Petra region addressed the physical aspects of vulnerability, the PDTRA City Profile aimed at defining the current situation of PDTR DRM, and produced a comprehensive summary of the essential data and statistics of the city. It also provided analysis of the

disaster management structures of the city within the national institutional framework, with a special focus on land use planning and management practices. The study also defined the specific areas pertaining to how the city manages public safety issues resulting from natural or human-caused hazards. Another important outcome of this was to investigate for the Disaster Risk Management Vision and to understand what city decision-makers and/or other sectors want to put into place with respect to DRM.

To further insure proper institutionalization of disaster risk consideration in local planning, the PDTRA management has set up a DRR Unit and earmarked annual funding for DRR.

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Sources

A UNDP Jordan, 2015, Amman

B Hussain Al-Hasnat, DRR Focal Point, Petra Development and Tourism Authority (PDTRA)

### Box 19

#### **Jordan: making Aqaba the Arab role model city for disaster resilience**

The city of Aqaba, with technical assistance from UNDP since 2009, has implemented a variety of initiatives with regards to earthquake risk reduction, including risk assessment, public awareness, urban search and rescue capacity, community volunteer teams, training of officials, establishment of a disaster risk reduction unit and a multi-stakeholder coordination committee. Based upon the risk assessment report, the city government also relocated one flash-flood-prone community to a safer area. Aqaba is using the results of the seismic risk assessment for safer land use planning through the Aqaba Development Company. Given the strong leadership that Aqaba has shown in setting up DRR systems, in 2013 it was declared the Arab Role Model City on DRR.

One of the initiatives that the Aqaba Special Economic Zone Authority (ASEZA) has pioneered with support of UNDP is the Aqaba Neighbourhood Disaster Volunteers (ANDV). The reasoning behind this initiative is very simple – DRR is more effective when communities are engaged in the process. Neighbourhood volunteer teams were selected and trained, and they have been provided with the necessary equipment to facilitate rescue and aid missions during and/or after a disaster.

Source: UNDP Jordan, 2015, Amman



### Lebanon

- Lebanon is divided into 8 governorates that are further divided into 26 districts, and further subdivided into 51 municipal unions and 1,108 municipalities.<sup>92</sup>
- The Ministry of Interior and Municipality<sup>93</sup> oversees the local administration system.

Lebanon is the only country in the region where 57 cities committed to the UNISDR MCR campaign. This highlights the importance of the DRM agenda at the city level. Lebanon is making progress at both the national and municipal level in addressing the DRR agenda. In 2009, UNDP and the Government of Lebanon initiated the *Strengthening Disaster Risk Management Capacities in Lebanon* project. Among the main achievements<sup>94</sup> of the project was the establishment of a fully operational Disaster Risk Reduction Management Unit at the Office of the Prime Minister, and the development of the National Response Plan and the Draft Disaster Law. Building city and community resilience is a key priority in Lebanon.<sup>95</sup> The project further supported local level DRR efforts to develop city response plans for the districts of Byblos and Metn, and the municipalities of Byblos and Beirut.

Donors are trying to actively support DRM efforts in Lebanon. In 2014, the JTI Foundation began supporting the DRM Unit of the Government of Lebanon with (a) the development of disaster preparedness plans for the key ministries and agencies and (b) strengthening the resilience of five pilot municipalities against disasters.<sup>96</sup> In 2011, UNDP Lebanon, SDC and UNISDR ROAS developed the *Lebanon disaster guide* to help general public prepare for disasters, such as earthquakes, tsunamis, landslides, storms, floods and fires.<sup>97</sup> Another interesting initiative with respect to seismic risks management has been initiated by the National Council for Scientific Research (CNRS, for its initials in French). The aim of this initiative is to develop a risk map for Beirut to develop scenarios and corresponding response plans, as well as to increase awareness of the local public. The new project is implemented in partnership with the municipality of Beirut and the Île-de-France region.

#### Box 20 Byblos: working with international partners for disaster resilience

Byblos is one of the oldest inhabited cities in the world, largely exposed to natural hazards, such as landslides, storms and earthquakes. Acknowledging the importance of resilience-building, the municipality of Byblos, in close cooperation with the Lebanese Government, embarked upon improving disaster risk reduction in the area.

The municipality of Byblos was among the first municipalities to engage in the “Making Cities Resilient Campaign” in 2010. Since the campaign was launched, the UNDP DRM

#### FOOTNOTES

<sup>92</sup> The Lebanese Center for Policy Studies, *About Administrative Decentralisation in Lebanon*, 2015. [<http://www.lcps-lebanon.org/publication.php?id=279&category=500&title=8>]. Accessed 26 February 2018.

<sup>93</sup> <http://www.moim.gov.lb>.

<sup>94</sup> UNDP 2014a.

<sup>95</sup> The Lebanese Center for Policy Studies, *op. cit.*

<sup>96</sup> <http://jtifoundation.org/projects/strenghtening-governmental-disaster-risk-management-capaciti/>.

<sup>97</sup> <https://www.unisdr.org/we/inform/publications/27111>.

Unit has been supporting the local authorities in adopting the principles of the campaign, conducting Local Governance Self-Assessment Tool (LGSAT), drawing up action plans, establishing partnerships and implementing the action plan. With the support of UNDP, the municipal authorities drafted a City Risk Assessment Report in 2013 and an Action Plan for 2015. Through funding obtained from 100 Resilient Cities and direct technical assistance provided by UNDP, the municipality of Byblos completed its first ever Byblos Resilience Strategy Report in 2016. The strategy sets out the resilience vision and goals for the city, the challenges and strategic principles for resilience-building, as well as the steps to be taken towards achieving this vision.

Effective response and resilient recovery are among the priorities included in the Byblos Resilience Strategy. A decade's worth of efforts aimed at preparing and responding more effectively to disasters were highlighted when the seasonal storm Zina struck Lebanon in January 2015. Zina brought heavy snow and rain, as well as high winds and severe cold. In the days after the storm, the Byblos municipality mobilized a team to assess the damage to Byblos-sur-Mer, and evaluate preparedness in the event that another storm should strike. The assessment was carried out partly to determine reconstruction and recovery needs, as well as to underscore the importance of greater preparedness for similar risks. Following Zina, the municipality also deployed a crisis disaster unit for the first time to support the local population. The unit forms part of the Response Plan of the Caza (district) of Byblos, in line with the Lebanese National Response Plan for Disasters. It has been developed through the partnership between the municipality and UNDP.

Karine Zoghby and Nathalie Zaarour  
Source: [www.medicities.org](http://www.medicities.org)

However, the capacities to address DRR issues remain largely limited: the system remains predominantly response-oriented and lacks adequate financial means and technical capacities to build resilience at the national and local levels.

Article 1 of Legislative Decree No. 118 of 30 June 1977 states that the municipality is a local government. It enjoys financial autonomy and power of self-management.<sup>98</sup> The law stipulates that any work having a public character or utility within the area of the municipality falls under the jurisdiction of the Municipal Council. However, municipalities remain constrained administratively and fiscally: most of the municipalities, of which 70 per cent are small, do not have the administrative capacity to provide many of the designated services.

Almost 400 municipalities do not have one single employee and another 400 have very weak municipal administration.<sup>99</sup>

#### FOOTNOTES

<sup>98</sup> Centre de ressources sur le développement local au Liban. [<http://www.localiban.org/rubrique1023.html>].

<sup>99</sup> The Lebanese Center for Policy Studies, *Decentralization in Lebanon*, March 2012. [<http://www.lcps-lebanon.org/featuredArticle.php?id=6>]. Accessed 20 November 2016.

**Box 21**  
**Saida:**  
**integrating**  
**resilience into**  
**city development**  
**strategy**

The municipality of Saida (or Sidon) was among the first to join the MCR campaign in 2010 and become a signatory to the 2013 Aqaba Declaration. The municipality was actively engaged in a vulnerability assessment in preparation for national simulation exercises that were organized in Saida in 2015. It also took part in an international city-to-city exchange programme with Dutch cities in 2015. In 2013 the municipality developed the Saida Urban Sustainable Development Strategy with the support of Medcities. Furthermore, with technical support from UNDP, the municipality of Saida drafted its City Resilience Action Plan for 2015.

The city of Saida is the third city of Lebanon with a population of approximately 225,000, and has one of the oldest and most important harbours in the Levant, as well as a unique ancient inner city which is considered a living urban heritage site. The population of the city, their properties, and the critical infrastructure, including cultural heritage sites inside the old city, are increasingly at risk due to natural hazards. The city faces growing multidimensional urban problems, putting the operation of the municipality in a constant state of crisis management.

Acknowledging the importance of resilience-building, part of which is having an effective disaster response, UNDP has supported the municipality in the procurement of multipurpose small-scale equipment suitable for specific operations in the context of Saida's old city architecture. Old cities require more careful consideration of the special equipment to be used during delicate disaster response and risk mitigation activities. This equipment is to be used in the old city for preparedness against flooding along the river banks (e.g., keeping the Awwali and Sayniq riverbanks clean) and to respond to natural hazards or human-caused disasters (e.g., lifting debris from old houses, etc.).

Karine Zoghby and Nathalie Zaarour  
 Source: [www.medcities.org](http://www.medcities.org)

### **Palestine**

- The High Council for Civil Defence is under the jurisdiction of the Ministry of Interior.
- Palestine has 36 cities and towns.

Palestine has a non-member observer state status at the UN. Administratively Palestine is divided into three areas (A, B, and C), whereby area A is controlled by the Palestine National Authority, Area B by the joint Israeli-Palestinian security control, and Area C is fully under the Israeli control. Areas A and B are further subdivided into 165 separate units of land that have no territorial contiguity and restrictions on access. The latter explains high level of autonomy of the local municipal authorities in Palestine.

After the winter storm Alexa in December 2014,<sup>100</sup> the need to prioritize the adoption of a DRM strategy for Palestine become more vivid. The current Civil Defence Law No. 3

### FOOTNOTES

<sup>100</sup> <http://www.dailymail.co.uk/news/article-2523259/Historic-snow-fall-turns-Holy-Land-scenes-Christmas-cards.html>.

adopted in 1998 is the main law addressing disasters in Palestine. Based on this law, the High Council of Civil Defence (HCCD) is the highest body for disaster risk management. It was established in 1998. The members of the Council include all ministries and national bodies. The Ministry of Interior serves as chair of the HCCD.<sup>101</sup>

The National Agency for Disaster Risk Mitigation (NADRM) was founded in 2004 with the mission to form a national framework that gathers all NGOs working in disaster management and emergency support. Due to the restrictions put on the Palestinian Authority's institutions, the role of Palestinian NGOs has become increasingly important in providing assistance and services before, during and after disasters.

At the local level, the Governorate Emergency Committees (GEC) are the primary mechanisms for response; they are composed mainly of security entities. The GECs are chaired by the Governor, who reports in turn to the President, with a delegated decision-making authority.

The system of disaster management is very much response-oriented. It provides some mechanisms for response in case of small-scale disasters and not the large-scale ones. The system lacks technical capacities and adequate resources at local and national levels. The situation is further constrained by the complications related to the fragmented land and the relationship with Israel.

In case of Palestine it is also important to mention the strong role of the international donor community: the UN Working Group on DRR was established in 2012 under the Humanitarian Country Team (HTC). Organizations such as UNDP, UNISDR, UNICEF, WFP, FAO, UNRWA, UNOPS and many others actively support national and local authorities in building disaster and emergency response capacities as well as building long-term resilience in Palestine.

Nine cities in Palestine have already committed to the UNISDR MCR campaign: Al-Khalil/Hebron, Bethlehem Municipality, Gaza, Jabalia Al Nazlah, Ariha Municipality, Nablus, Qalailia Municipality, and Ramallah.

**Box 22**  
**Ramallah:**  
**building social**  
**and disaster**  
**resilience under**  
**occupation**

The municipality has played an important role in building the capacity of Ramallah city to face the challenges of rapid population increase and the resulting pressure on limited resources and space. Ramallah municipality is a member of the emergency council of Ramallah district and coordinates efforts in the event of threats such as natural hazards (e.g., severe weather conditions) or human-caused disasters (e.g., Israeli incursions).

Ramallah municipality has implemented several projects aimed at enhancing the security and safety of its citizens toward building a smart city. Many of the initiatives focus directly on reducing vulnerability as well as building trust and social capital in Ramallah city. Examples include interventions that are designed to provide access to

FOOTNOTES

<sup>101</sup> UNDAC 2014.

Internet and rapid information about the latest news on the weather, security, traffic congestions, available services, etc. The municipality has also built many cultural centres that have contributed to strengthening local identity, social belonging, and a sense of pride and commitment among citizens.

The municipality is further actively engaged in disaster risk reduction efforts. It is currently in the final stages of implementing a large-scale environmental project to create a sanitary landfill to dump huge amounts of solid waste and reduce public exposure to toxic hazards. Acknowledging the importance of resilience-building in Ramallah city, the municipality recently joined the 100 Resilient Cities initiative, which has enabled Ramallah city to hire a Chief Resilience Officer and to develop its Resilience Strategy. As part of this international network, Ramallah is engaged in sharing experiences and expertise with other cities in the network. More than 100 private sector companies offer support to member cities of the network in the development and implementation of city resilience strategies worldwide.

Ramallah municipality is aiming to embed resilience into its managerial and technical capacities, including budget allocation and policy provision for city stakeholders. The resilience team at the municipality has set up its organizational structure such that the political leadership at both municipal and national levels are directly involved in facilitating resilience strategy development and implementation efforts. The municipality's resilience program is dedicated to raising awareness of the importance of the initiative among major city stakeholders. Most importantly, the program involves marginalized groups in strategy formulation and implementation in order to improve their level of social protection, food security and social cohesion, as well as improve leadership and decision-making capacities among key players in the city.

Finally, Ramallah city is well positioned to integrate disaster risk reduction into its Resilience Strategy given that it is also a member of the national DRM committee and keen to capitalize on both initiatives.

Mohammed Shaheen and Husam Tubail

**Box 23**  
**Nablus:**  
**a multi-**  
**stakeholder**  
**approach to**  
**resilience-**  
**building**

Situated around 60 kilometres north of Jerusalem and with a population of more than 150,000, Nablus has experienced more than 20 major earthquakes in the last 1,000 years, with the last devastating quake occurring in 1927.

In February 2013, the city mayor confirmed his commitment to take the necessary steps to join the Making Cities Resilient campaign. An advisory board comprising various city stakeholders and professionals was formed to steer and advocate the incorporation of DRR into the city's strategies and policies. There are 20 experts on the board, with members from Al-Najah University, as well as private and public sector institutions.

Since 2014 the city has implemented various DRR-oriented activities, including the following:

- In coordination with the Engineers Association – Jerusalem Centre (EAJC), the Nablus Municipality and other relevant institutions, a plan was prepared to set up a mechanism to ensure inspection of building construction by engineers.
- A set of rules and regulations was developed for excavation work in projects, especially where the land has a large incline or weak structure with the potential for landslides or failure of the land structure itself and the surroundings. This included the preparation of a safety plan, excavation plan, securing the surrounding areas, carrying out the necessary tests, as well as insurance policies, etc.
- Studies were conducted to identify areas with the potential for landslides and seismic amplification for the purpose of land use policy. Unfortunately, the Municipality does not yet have detailed maps.
- The Municipality completed the construction of a Wastewater Treatment Plant in 2014 with funding from the German Development Bank KfW. This plant is now operational and handles the waste from the western part of the city, representing around 70 per cent of the total waste flow. The Municipality is currently working on a plan to cover the east of Nablus. This plan is in the early design stage.
- In order to reduce population density and thus the exposure factor, the Municipal Council has approved a plan to expand the city by about 50 per cent. The plans have been submitted to the Ministry of Local Government for approval.

Jalal Al-Dabeek

### Syrian Arab Republic

- The Ministry of Local Affairs was responsible for local authorities.
- The Civil Defence Department under the Ministry of Interior was responsible for disaster management.
- Syria *de jure* has 64 cities and towns.

Syria *de jure* is divided into 14 governorates, which are further subdivided into 61 districts. Syria has been in a devastating, multi-sided war for the last seven years, whereby large parts of the country have been under the control of the rebels and ISIS.

The primary focus in the Syrian conflict has been to cease fire and stabilize the situation. There are over 13.5 million people in need<sup>102</sup> of urgent humanitarian aid, provision of which is a life-saving activity given the protracted and severe nature of the conflict. Emergency response has been provided to cultural heritage that are damaged or under a significant risk of being destroyed by ISIS.<sup>103, 104</sup>

### FOOTNOTES

<sup>102</sup> UNOCHA 2015a.

<sup>103</sup> Prince Claus Fund [<http://www.princeclausfund.org/en/programmes/cultural-emergency-response>].

<sup>104</sup> International Centre for the Study of the Preservation and Restoration of Cultural Property [<https://www.iccrom.org/news/first-aid-cultural-heritage-times-crisis>].

Not being able to end the violence in Syria is a collective failure of the risk governance efforts of national authorities and the international community at all levels that is resulting in human, cultural, environmental and generational disasters of today and tomorrow.

#### **4.2.3d Southern Tier Countries**

Resilience-building in the STC can be characterized by a complex interplay of a high degree of vulnerability, considerable exposure to hazards, and a significant of coping capacities. The region remains predominantly rural, agrarian and pastoral with the exception of Djibouti.

Recurrent and prolonged drought and floods on one side, and civil war on the other, define the context of this subregion. As a result, many challenges need to be addressed including: rural-urban immigration in search of employment opportunities; social disruption because of displacement; violent conflicts over the resource base; and health burdens such as malnutrition and epidemics like malaria and cholera. The situation is further complicated due to the lack of institutional capacity, financial resources, technical expertise, and centralized legal and administrative frameworks, and the power of tribes and clans. Resilience-building is primarily exercised in response to an immediate risk of a humanitarian crisis with some effort towards reducing vulnerability. In this context, disaster risk governance remains an endeavour that requires plentiful efforts to build resilient societies.

DRM in all countries of this subregion remains at a rudimentary level. Understandably, the capacities of the local authorities at city level are hardly evident. Scarcity of resources, untrained laborers, weak institutional frameworks and a lack of accountability and participation characterize the urban authorities in the STC subregion. Some efforts, however, have been made in Djibouti, Sudan and Somalia with support from UNDP and the World Bank. Primary priorities for the countries are house construction, urban improvements, provision of basic services, resettlement of returnees and refugees, economic recovery and job creation, neighbourhood protection, and grassroots reconciliation. Water resourcesmanagement is the topmost priority for the subregion, remaining a “strategic currency” for all countries in the STC. Effective water management would make critical contributions to reducing risks in the region.

While the pressure to address the immediate needs of the population is high, the changing climate and growing urbanization are posing new risks, calling for joint efforts on the part of the international community to address them.

### Comoros

- Comoros is the third-smallest African state with a total territory of 2,034 km<sup>2</sup> and total population of 798,000. It has the worst income inequality and is ranked in the lowest quantile of the Human Development Index.
- The country consists of three major islands – Grande Comore (with the capital Moroni), Mohéli and Anjouan –and numerous smaller islands. The presidency rotates among the three islands.
- The legal system is based on French and Sharia (Islamic) Law.
- Comoros has 48 cities, towns and municipalities.

DRM efforts in Comoros consist of rebuilding after extreme events (flood, storm, cyclone or volcanic eruption) rather than prevention or even response. Comoros has just started to establish institutional entities with the explicit mandate to manage disaster risks.

In 2010, the National Platform for DRR (PNRRC for its initials in French) was set up. Then in 2012 The Directorate General of Civil Protection (DGSC for its initials in French) was established by Decree No. 12-054/PR and mandated to protect population, property and the environment. It also coordinates the development of the national DRM strategy and its implementation. The DGSC is also charged with the coordination of the National Platform.

However, the DGSC lacks the expertise and resources for effective disaster risk management. Financial resources are extremely limited at both the Union and island levels. Public investment needs are generally covered by international partners, including multilateral (EU, UNDP, WB) and bilateral (China, France, Japan, Qatar, Kuwait, Dubai, Saudi Arabia, Oman, etc.).

The local level is governed by the island governments that enjoy a high level of fiscal and political autonomy – even though the Union Government takes precedence over island law, the island governments may establish their own “basic law” or constitution. Island government is also responsible for the provision of basic services.

DiMSUR was launched in 2014 by the Union of Comoros, Madagascar, Malawi and Mozambique, which show similar vulnerabilities to disasters. UN-Habitat and DiMSUR have recently developed the City Resilience Action Planning (CityRAP) Tool with the objective of enabling local governments of small to intermediate sized cities to understand risks and plan practical actions to progressively build urban resilience.<sup>105</sup>

No city is engaged in the UNISDR MCR campaign.

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### FOOTNOTES

<sup>105</sup> UNISDR 2015.



### Somalia

- Somalia is divided into 18 administration regions, which in turn are subdivided into 90 districts.
- Somalia has 135 cities, towns and municipalities.

Somalia has only recently been lifted out of the category of “failed state” to a “fragile state” status.<sup>106</sup> Disaster management in Somalia should be seen through the prism of complex political, security and development processes taking place in the country. Somalia topped the Failed States Index (FSI) between 2008 and 2013. Somalia remains a country in conflict over scarce resources and power, state fragility, environmental degradation, organized armed groups and proliferation of small arms and light weapons. The parties to the conflict including clans, Al Shabab militia, the international community, Somalia National Forces, African Union Mission to Somalia (AMISOM), The federal government of Somalia, Puntland and Somaliland governments, and a high density of local and international agencies. Prolonged droughts and regular floods resulted in famine, which in turn triggered a large number of refugees and IDPs in and from Somalia.<sup>107</sup>

There are 4.5 million people in need of life-saving humanitarian aid in Somalia. Therefore, disaster management in Somalia is inevitably linked to humanitarian aid.<sup>108</sup> This is also the focus of donor community: FAO-managed Food Security and Nutrition Analysis Unit (FSNAU), Somalia Water and Land Information Management (SWALIM), USAID-created Famine Early Warning Network (FEWSNET). On 16 September 2013, the Federal Government of Somalia (FGS) and its international partners launched the New Deal Compact for Somalia, which provided a comprehensive vision towards peace and stability by clearly identifying the most vital political, security, social and economic priorities in the country.

Somalia comprises the semi-autonomous and self-proclaimed southern Puntland State of Somalia, Somaliland, and South Central (Galmudug). The state is governed by one President and the provisional constitution developed with UNDP support and adopted in 2012.

The National Disaster Council (NDC), under the Office of the President, provides overall leadership; however, the focal agency for coordination of emergency response is the National Environmental Research and Disaster Preparedness Agency (NERAD). Capacities of disaster management authorities in Somalia are at a rudimentary stage to adequately respond to emergencies and manage disaster risk.

**In South Central:** The Somalia Disaster Management Agency (DMA) was set up under the Ministry of Interior and Federalism in 2013. It is mandated to formulate and enforce national disaster policies and regulations at regional and federal levels. Financial capacities are

### FOOTNOTES

<sup>106</sup> <http://www.theguardian.com/world/2015/dec/23/somalia-no-longer-a-failed-state-just-a-fragile-one-says-un>.

<sup>107</sup> Humanitarian crisis analysis: Somalia (including Kenya), SIDA

[<http://www.sida.se/globalassets/sida/sve/sa-arbetar-vi/humanitart-bistand/somalia-including-kenya--humanitarian-crises-analysis-2015.pdf>].

<sup>108</sup> UNOCHA 2015b.

very low, dependent on donors for any programme.<sup>109</sup> Likewise, human resources are still at the very early stage and logistical capacities are minimal.

**In Somaliland:** The National Environment Research and Disaster Preparedness and Management Authority (NERAD) was created in 2003 and put in place in 2006. The agency is under the direct supervision of the President of Somaliland and has a fully developed legal framework defining its mandate, functions and accountability.<sup>110</sup> Low capacities and a lack of financial resources remain persistent.

**In Puntland:** Puntland operates with a high degree of decentralization. With the support of UNOCHA and Diakonia Sweden, the Government of Puntland developed in 2011 the Puntland Disaster Management Framework<sup>111</sup> to guide DRM efforts of the Puntland Humanitarian Affairs and Disaster Management Agency (HADMA). It has an extremely limited annual budget and some expertise in humanitarian actions, but lacks capacities, logistical and financial means for effective DRR and DRM.

**Box 24**  
**Mogadishu:**  
**resilience in the**  
**face of chronic**  
**crises and**  
**disasters**

Somalia displays exceptional resilience in the face of civil war, armed conflict, terror attacks, climate hazards and economic adversity. Mogadishu, the capital of Somalia, provides the most extreme example of resolve to carry on with daily life amidst material deprivation, disasters, poor basic services and extreme physical insecurity. The capital city has a port and an airport, and it lies on a stretch of coveted East African coastline – dotted with palm trees and bordered by crystal waters.

However, over the last few decades, natural and human-caused disasters, poor public service and scarce government resources displaced many in Mogadishu and created a gap in basic service delivery. The flash flood risks within Mogadishu are high and environmental vulnerability is intensified with recurrent droughts and flooding due to changing climatic conditions, combined with growing pressure on land and coastal resources.

The weakness of the Federal Government of Somali (FGS) makes it unable to prepare for, prevent and respond to disasters which lead to new displacements on a recurring basis. The majority of the displaced move to cities, mainly Mogadishu; making it the second fastest growing city in the world in terms of population, and increasing the strain on urban services.

In this context of often ineffectual administration in Mogadishu, international aid organizations and the local private sector are playing an important role in providing

FOOTNOTES

<sup>109</sup> *A fresh analysis of the humanitarian system in Somaliland, Puntland and South Central*, Oxfam Research Report, 2015 [[https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/rr-humanitarian-system-somaliland-puntland-south-central-somalia-010515-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/rr-humanitarian-system-somaliland-puntland-south-central-somalia-010515-en.pdf)].

<sup>110</sup> *Ibid.*

<sup>111</sup> HADMA 2011.

basic services, jobs and livelihoods, infrastructure and institutions. The private sector has a lot of flexibility (space to operate) in Somalia as result of the absence of restrictive government policies, state provision, regulation and control. The role of courts have been replaced in commercial matters by traditional elder-driven dispute resolution mechanisms, which is a relatively quick procedure and is free. For example, basic services like water, electricity and transport are delivered to existing and new IDPs settlements within and at the outskirts of Mogadishu by local private utility companies. Private companies like Hormud, the biggest telecommunication company in Somalia, play an important role as part of its corporate social responsibility in supporting the municipality firefighting emergency unit together with other private companies. Turkish International Cooperation and Development Agency (TIKA), in partnership with the Mogadishu Municipality, has rehabilitated main roads and supports waste management and it has built IDPs settlements in Mogadishu.

Moreover, the local residents also join hands with the municipality and the private sector in dealing with disasters when they occur. For example, the Shamo area of Wadajir district, was flood prone, and the drainage system and road were destroyed during one of the floods. The community, including residents, business people and the municipality, came together to rehabilitate the drainage system and to reduce the impact of the flooding.

There is also a growing commitment on the part of the FGS to take a lead role in providing and coordinating disaster response and assistance to affected people. The Somali Disaster Management Agency (SoDMA) was established in 2014. The FGS has also established a ministerial-level Emergency Response Committee tasked with disaster response and coordination responsibilities. The SoDMA is under the Ministry of Interior and federalism. It is mandated to formulate and enforce national disaster policies and regulations at regional and federal levels, as well as collaborate closely with various government ministries, NGOs, and UN agencies to jointly coordinate efforts in disaster management and emergency operations in the country. SoDMA has developed a strategic plan to coordinate and establish a common disaster management approach, but more structural investments are needed to implement this strategy.

[Abdul Qadir and Abdirisak Hussein Aden](#)

### Djibouti

- Djibouti is divided into six administrative regions, including Djibouti city itself. The regions are further divided into 11 districts.
- Djibouti has 11 cities, towns and municipalities.

Djibouti is highly vulnerable to prolonged droughts and flooding. The last major drought claimed 4 per cent of GDP annually between 2008 and 2011 and impacted more than 50 per cent of the country's 860,000 residents. With over 60 per cent of the population dependent on agriculture-based livelihoods, and an influx of long-term refugees from southern Somalia and new refugees from Yemen, the primary humanitarian challenge remains in providing life-saving assistance in food security, as defined in the 2016 Humanitarian Response Plan (HRP). This situation inevitably affects urban settlements and the capacity of local authorities to address urban resilience-building challenges.

Acknowledging, however, that disasters are the main source of poverty in the country, the Government of Djibouti has developed the National Strategy on DRM and Disaster Risk Management Action Plan in 2006.

The Executive Secretariat for Risk and Disaster Management (SEGRC for its initials in French) serves as the national focal point. Permanent regional offices of DRM have been established under the Ministry of Interior and Decentralization. Due to the lack of local sources of revenue, the country is dependent on external funding.<sup>112</sup> Djibouti has recently implemented projects on disaster risk management with support of international donors (e.g., the World Bank/GFDRR and UNDP). Djibouti is the first among African countries to establish a vulnerability and risk assessment and communication platform for early warning of disasters. One of the main purposes of the system is to inform infrastructure investment and integration of the risk assessment in the urban development efforts for the capital, Djibouti city.

In November 2012 Djibouti city became the first city in the country to join the UNISDR MCR campaign.

### Sudan

- Sudan is the third largest Arab country by area after Algeria and Saudi Arabia. It is divided into 18 states and 133 districts. Sudan has 29 cities.
- The Sudanese legal system is based on Islamic Law.
- After a prolonged civil war that resulted in the independence of South Sudan in 2011, Sudan continues to face immense security challenge.

Flood and drought are the main natural hazards threatening the development of Sudan. More than 65 per cent out of over 40 million population of Sudan resides in rural areas that are highly prone to drought. Floods caused by the Nile and rain storms regularly

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#### FOOTNOTES

<sup>112</sup> UNISDR 2014.

cause massive losses. In this context, flood and drought risk early warning, and adequate preparedness, response and mitigation remain the primary concern of DRM institutions.

The Council for Disaster Management under the Ministry of Interior is responsible for disaster management in Sudan. It includes three high-level bodies: the High Council for Civil Defence, the Humanitarian Aid Commission, and the Higher Council for Environment and Natural Resources. The primary responsibility for disaster management and civil protection lies with the National Council for Civil Defence (NCCD) that is headed by the Minister of Interior Affairs. The structure of Civil Defence is replicated at all levels, including the municipal level. The Civil Defence mainly deals with flood response, including early warning, awareness, relocation of affected villages and contingency plans.

The UNDP National Disaster Risk Management Programme supported the NCCD to prepare a National Disaster Risk Management profile and the National Disaster Management Strategy in 2016. Also, UNDP supported Khartoum State to develop the Khartoum State Strategy for Disaster Risk Reduction (KSSDRR) 2016-2030.

The Emergency Operation Centres (EOCs) are established at the national and local levels to respond to critical situations. Many of the efforts are geared towards capacity development concerning the use of space-based information in natural resource management, environmental monitoring and DRR, particularly through the support of UN-SPIDER. The University of Khartoum hosts two institutes – the Desertification and Drought Studies department and the Remote-sensing Research Centre – which play a crucial role in promoting disaster risk reduction and an early warning system both for floods and droughts.

Other major international development actors are present in Sudan focusing on eco-system based DRR (UNEP), dam rehabilitation and de-silting (Practical Action), water resource management (WB), and more.

A significant lack of technical capacities and extremely limited resources, as well as the overlap in mandates and lack of cooperation, remain significant problems in the DRM field. In addition, the country lacks a culture of preparedness and risk reduction. DRR efforts at the municipal level are hardly evident.

**Box 25**  
**Khartoum:**  
**building**  
**resilience of**  
**a capital city**  
**through Aqaba**  
**Declaration**

Khartoum is the capital of Sudan, as well as the capital of Khartoum State. The State has a population of 8 million people and an area of 22,000 km<sup>2</sup>. The major disasters that affect Khartoum are the seasonal flooding from Nile River and flash flooding due to heavy rainfall in summer and autumn seasons.

In 2014, UNDP initiated the Arab Cities Resilience Project in Khartoum city. As a result of the project, the Khartoum municipality has made significant progress in achieving the objectives of the Aqaba Declaration on DRR. It has especially achieved progress in following areas:

- *Set up a dedicated local unit for planning and management of DRR strategies.* Specifically, in October 2015 a dedicated unit with 12 employees was established under the High Council for Environment, Urban and Rural Promotion. To date, it has already implemented a number of capacity development activities in the area of a geographic information system (GIS), strategic planning, and e-waste management.
- *Allocate between 1 and 5 per cent of city's annual budget for DRR works to be spent on integrating risk reduction measures.* Specifically, the Khartoum State allocated 8 per cent of its annual budget (which is about USD 36 million) to disaster risk reduction in 2013-2014. These funds covered activities such as development of a rain water drainage canal and water pump-stations for drainage in flood areas; river embankment; water harvesting structures, and others.
- *Prepare the city's DRR strategy through consultations with stakeholders to define realistic schemes for risk reduction and link it to national strategy for DRR.* Specifically, in partnership with the National Ribat University and in consultation with all relevant stakeholders, the Unit has developed the Khartoum Disaster Risk Management Strategy 2016-2030. The Strategy has been approved by the Governor of Khartoum and the Minister for Environment.
- *Develop education and training programs on DRR in schools and universities and integration of DRR in educational curricula.* Specifically, the National Ribat University, the University of Africa and the Ahfad Women University already offer masters, diploma and certificate programmes on disaster risk management. The Khartoum State DRR Unit is currently developing a curriculum for integration of DRR concept into the school syllabus.
- *Set up community volunteer groups and train them to support search and rescue, fire-fighting and medical aid.* Specifically, in a training course organized in partnership with the Red Crescent Society of Sudan at least 140 community volunteers have been trained as first responders. Together with the Arab Organization for Agricultural Development (AOAD) the DRR Unit of Khartoum State is planning to conduct a city risk assessment and establish a 'green belt' to address desertification challenges.

Jalal Al-Dabbeek

Source: Final Progress Report of the Arab Cities Resilience Programme, Amman: UNDP (2016).

**Box 26**  
**Khartoum:**  
**urban risks from**  
**solid waste and**  
**e-waste**

The municipalities in Sudan face major issues with regards to solid waste (SW) management in urban areas and its cascading effects on health and environment.

Increased rural to urban migration due to drought and desertification, along with population growth, has caused a sharp population rise in major cities in Sudan. The quantity of solid waste is increasing rapidly, contributing to health-related hazards. Studies indicate the value of the per person generation rate of solid waste to be 0.6 kg/day. Translating this number into total amount of SW for Khartoum through the prism of the total population in 2015 (5.1 million) and the projected population in 2030 (8.2 million)

means 3.6 million kg SW a day in 2015 and 4.9 million kg SW a day in 2030 respectively. The local authorities lack the necessary capacity to handle the immense problems of SW management. Study shows that the poor municipal SW management in Khartoum is posing high risks to human health and the environment.

The e-waste in Sudan generated per person per year equals to 1.2kg.\* This is the result of large amount of electronic waste disposals in Sudan. In the report on waste crime from 2015,\*\* UNEP indicates that 90 per cent of the world's electronic waste, worth nearly USD 19 billion, is illegally traded or dumped each year largely in Africa and Asia. Khartoum gets its share of the illegal e-waste.

This situation illustrates interconnectedness of various emerging risks from natural and human-caused hazards. The solutions therefore will also require a more integrated perspective acknowledging the "supply chain" of various risks: through natural hazards or human activities.

\* Abubaker B. M. A, Mohammed Alhadi, Aisha Magzoub, Alnail Mohmmmed, Gamareldawla Hussein, Nabil M. Elamin, Bashir H. Osman, Mukhtar Adam, *Investigating the Solid Waste Management Problems in Urban Area, Sudan*, International Journal of Engineering Research & Technology, June 2014.

\*\* [http://www.step-initiative.org/Overview\\_Sudan.html](http://www.step-initiative.org/Overview_Sudan.html).

## Yemen

- Since 2014, Yemen's administrative division includes six regions creating a federalist model of governance.
- Yemen has 39 cities.

Yemen today is in civil war. It is not a single conflict, but a mosaic of multifaceted regional, local and international power struggles, emanating from both recent and long-past events.<sup>113</sup> Currently, North Yemen is under the control of the Houthis – a Zaidi Shia-led rebel group. South Yemen is split between a portion controlled by Al Qaida in the Arabian Peninsula (AQAP) and Hadi remnants.

Yemen remains extremely vulnerable to climate risks including droughts, storms and floods. It faces severe challenges in terms of food security. Sustainable and fair management of natural resources is one of the critical elements of the reconciliation process. Here is where disaster risk governance can offer entry points for the creation of the conditions necessary for resilience. Before the war, the High Council for Civil Defence had the overall responsibility for DRM, while the civil defence department was concerned with disaster preparedness. Yemen's Red Crescent Society was also an important player. Many Yemeni cities are at high risk to climate-induced water scarcity, flash flood and cyclones, including Sanaa.

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## FOOTNOTES

<sup>113</sup> <http://www.ecfr.eu/mena/yemen>.

**Box 27**  
**Aden:**  
**managing debris**  
**to reduce post**  
**disaster risks**

In June 2016, UNDP and the Government of Japan launched the support to the local authorities to remove debris and rubble from Aden, which was considered the most devastated city as a result of the ongoing military conflict in the country. There is a huge amount of solid waste and debris, estimated at over 350,000 tons, which has accumulated from the complete destruction of about 163 public and private buildings and partial destruction of about 327 buildings. The cash-for-work modality has been used, guaranteeing emergency employment for the local population.\*

Source: <http://reliefweb.int/report/yemen/undp-and-government-japan-support-removal-debris-and-rubble-aden>

#### 4.2.4 Urban governance and resilience: concluding remarks

Throughout the whole region, urban management and service delivery are relatively centralized and led by national public agencies. At the local level, the limited authority and capacities (human, financial and administrative) of the municipal authorities have created a huge gap in the provision of public services. Here private sector and civil society organizations often fill the critical service gaps and, in some cases, are the most efficient service providers for the urban poor.

The partial autonomy of the municipal authorities also limits the scope for local risk governance. Public participation and bottom-up approaches to decision-making continue to be weak throughout the region. This situation largely explains the challenge of urban governance for resilience-building against natural hazards in Arab cities. It must be acknowledged that there are differences between countries and cities in how urban governance for resilience-building is shaped and exercised. This depends largely on the exposure to disasters, the degree of priority given to disaster risk by various stakeholders, the engagement of civil society, the role of the donor community, local leadership, and engagement of the private sector and academia among others.

In general, many of the processes, strategies and programmes (including budgeting) for resilience-building against natural hazards are happening at regional and national levels. The UNDP-implemented Arab Cities Resilience Programme 2014-2019 is one of the few interventions focused on resilience-building at the city level. It is also important to acknowledge the existing city networks that have a strong potential to become a vehicle for promoting urban resilience in the region. They include, for instance, the Arab Towns Organization (ATO)<sup>114</sup> and its subsidiaries: the Arab Urban Development Institute, the Development Fund for Arab Cities, the Arab Forum for Information Systems, Arab Foundation for Heritage, and Arab Award Foundation. Another example is the Organization of Islamic Capitals and Cities (OICC).<sup>115</sup>

#### FOOTNOTES

<sup>114</sup> Arab Town Organization [[http://www.araburban.com/index.php?page\\_id=187](http://www.araburban.com/index.php?page_id=187)].

<sup>115</sup> <http://www.oicc.org>.



Throughout the region some progress has been made in improving legal and institutional frameworks for risk governance. Internationally-accepted protocols and targets have started to be integrated *de jure* into national legal and institutional frameworks. Some progress has been made to achieve a cultural shift from the predominant response approach to prevention and preparedness throughout the region. Most of the countries have joined international reference frameworks, such as HFA in 2005, and subsequently, the Sendai Framework for DRR in 2015, MDGs in 2000 and subsequently SDGs in 2015, and many more.

All countries in the region are members of the International Civil Defence Organization (ICDO).<sup>116</sup> The capacities of the national Civil Defence organizations are being upgraded by the Euromed PPRD project. The Euromed programme for the Prevention, Preparedness and Response to Natural and Man-made Disasters (PPRD) is an EU funded programme aiming at raising the national resilience of each southern Mediterranean partner country (countries targeted by the European Neighbourhood Policy - ENP).<sup>117</sup> There is also growing engagement of civil society actors in various phases of the disaster risk management cycle, further combined with a growing awareness among the general public of disaster and climate risk issues. Multiple EU-funded initiatives are being implemented in the Mediterranean region by civil society organizations.<sup>118</sup>

However, there are still significant gaps to be addressed in order to bring about resilience-building at urban level. These challenges impact more strongly the secondary cities that are growing at a rapid pace. The hosting of Syrian refugees in Lebanese and Jordanian cities has exacerbated the exposure and vulnerability of both the refugees and the host populations to disaster risks. The millions of internally displaced Syrians have also become highly vulnerable to the impact of droughts and other disasters.

The primary challenges in relation to urban governance for resilience-building against natural hazards in the region are highlighted below:

- **Policy and institutional fragmentation of civil protection, disaster risk management, and climate risk management in the region:** the three interrelated subjects are largely addressed separately in terms of planning and implementation of resilience-building interventions. There is a need to overcome such fragmentation by embracing a more holistic and synergized approach to risk management, acknowledging the cascading effect of risk that goes beyond narrowly defined institutional borders. An important entry point could be to organize national risk assessments and use the results for multidisciplinary interventions including city risk profiling. This is tightly linked with the following point.
- **Lack of risk-centred development programming:** not only local authorities but also development partners need to explicitly factor risk in development planning and implementation. It is not about mainstreaming risk consideration, instead, this requires

#### FOOTNOTES

<sup>116</sup> <http://www.icdo.org/en/about-icdo/members/member-states>.

<sup>117</sup> <https://eeas.europa.eu/topics/european-neighbourhood-policy-enp>.

<sup>118</sup> [http://www.enpi-info.eu/list\\_projects\\_med.php?](http://www.enpi-info.eu/list_projects_med.php?)