European Committee of the Regions

Commission for Citizenship, Governance, Institutional and External Affairs

CIVEX

Cities and regions' potential role in Mediterranean civil protection

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Acronyms and Abbreviations

ARLEM	Euro-Mediterranean Regional and Local Assembly
CSOs	Civil Society Organisations
DRR	Disaster Risk Reduction
EU	European Union
EUCPM	European Union Civil Protection Mechanism
GDP	Gross Domestic Product
LRA	Local and Regional Authorities
NUTS	Nomenclature of Territorial Units for Statistics
PPRD	Prevention, Preparedness and Response to natural and man-made Disasters
SMAR	River and aquatic syndicate
UK	United Kingdom
UN	United Nations

Summary

The objective of the study is to explore the role cities and regions could play in the national civil protection system. This will be done by clarifying the role of local and regional authorities (LRAs) and providing them with a roadmap to implement this role within their respective national systems. This study is linked to the intention of the Secretariat of the Union for the Mediterranean to "lay the foundations for an online platform, serving as repository of knowledge and a forum for dialogue, and a Mediterranean pool of experts who can provide advice." LRAs need the civil protection mechanism and the LRAs to work together to build resilience.

The analytical framework of this study is based on the concept of resilience, which is aligned with civil protection, disaster risk reduction and climate adaptation. The framework consists of three elements: key principles, activity scope, and activity type. The key principles are subsidiarity and shared responsibility. Subsidiarity is the principle that decisions should be made at the lowest possible level of governance. Shared responsibility is the principle that all stakeholders take action to manage the risk and respond to emergencies for their own activities and assets, and work in solidarity with their peers when needed. The activities cover before (risk management), during (disaster management) and after (recovery management) shocks and stresses. And the activity types refer to whether the intent is to improve decision mechanisms, knowledge products and information or operational capacity.

The roadmap converges with the European Union Civil Protection Mechanism (EUCPM) in its first phase and then diverges for the second and third phases. The roadmap considers the fundamental differences in posture, structure, and capacity of LRAs within ARLEM countries. The roadmap converges with the EUCPM in giving the priority to disaster management (during phase) as it consists of a race against time to save lives. But the roadmap diverges from the EUCPM and most EU Member States in the second and third priorities. Some LRAs are proactive and should focus on risk management while other LRAs are reactive and should focus on recovery management (Figure 1).

	10 years of time for a given community (%)			
Proactive LRAs	70 normal		5D	25 recovery
Reactive LRAs	20 normal	5D	75 recovery	

Figure 1 – Proactive and reactive LRAs (D stands for disaster management)

Part 1: Introduction and framework

Key civil protection principles

The report case studies will investigate how LRAs work within or in support to their civil protection mechanisms in place through two key principles: subsidiarity and shared responsibility. Subsidiarity is the principle that decisions should be made at the lowest possible level of governance. It works particularly well when it comes to civil protection as local authorities are the closest to impact and affected persons. Subsidiarity governs the vertical relationships where the higher level comes in support of the lower level but does not override it. All civil protection mechanisms have a multi-level activation mechanism to mobilise the adequate resources required for the situation at hand. Shared responsibility is the principle that all stakeholders take action to manage the risk and respond to emergencies for their own activities and assets, and work in solidarity with their peers when needed. While the main objectives of civil protection towards citizens do not change, civil protection, however, can become a lot more efficient in promoting safety in a shared responsibility environment. This principle is very effective in governing horizontal relationships, such as those among municipalities, business communities, civil societies, etc. of the same city.

EU civil protection

The EU Civil Protection Mechanism (EUCPM) mandate is based on the international humanitarian law:

- it addresses human suffering, with particular attention to the most vulnerable groups of people, while respecting the dignity of all victims (humanity);
- it does not favor any side in a conflict (neutrality);
- it is provided solely based on needs, without any kind of discrimination (impartiality);
- it is independent of any agenda, be it political, economic, military, or else (independence).

Key civil protection activities

The civil protection operations are aligned with the United Nations disaster risk reduction agenda. Disaster risk reduction (DRR) framework is also commonly used for the climate change adaptation agenda and is the reference of the EU Civil Protection Mechanism. The risk profile of LRAs may differ in terms of hazards they face, their exposed population and assets, as well as their vulnerabilities; but each LRA aims to build resilience, which can be defined as "the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions."[1] LRAs can thus build resilience through various interventions of the DRR framework, covering before (risk management), during (disaster management) and after (recovery management) as shown in Table 1.

Disaster Risk Reduction / Civil Protection		
Risk management	**Disaster management**	**Recovery management**
Before	**During**	**After**
Risk assessment	Early warning	Impact assessment
Risk reduction (prevention, mitigation)	Mobilisation and coordination	Socioeconomic recovery
Risk transfer	Response operations	Reconstruction
Preparedness	Communication	

Table 1 – DRR pillars and intervention themes

Definition of LRAs

Every country makes their own definitions for cities and regions, as they exist in all countries in one form or another. The size, the legal status, the responsibilities and the available resources of regions and cities are defined by each country. The European Union has developed a classification system to divide economic territory into regions for statistical purposes. The Nomenclature of Territorial Units for Statistics (NUTS) systems has specific guidelines based on population. The average population size of the regions is indicated in Table 2. The NUTS system has several limitations: (1) it leaves no space for other variables such as area, distance, topography, jurisdiction level, etc., (2) it is not applicable to countries outside of the European Union. To facilitate its implementation, the roadmap suggests focusing first on cities with a population of 150,000 or more. The European Adaptation Strategy follows similar approach, giving priorities to cities of 150,000 inhabitants or more[2].

[1] UNDRR Terminology: https://www.undrr.org/terminology/resilience
[2] https://climate-adapt.eea.europa.eu/en/eu-adaptation-policy/strategy/index_html

Level	Minimum	Maximum
NUTS 1	3 million	7 million
NUTS 2	800,000	3 million
NUTS 3	150,000	800,000

Table 2 – Nomenclature of Territorial Units for Statistics (NUTS)

LRA posture difference

LRAs in ARLEM offer a vast spectrum of contrast in their risk profiles and capacities, which leads to a fundamental difference of posture. This difference in posture stems from the strong differences in the stress and shocks they face and the resources they have. ARLEM LRAs vary in terms of: (1) whether they have a strong system of norms and regulations, and whether they are efficiently enforced or not, (2) indicators such as GDP per capita, % of population with a university degree, number of registered civil society organisations (CSOs) per 1,000 habitants, etc., (3) availability and access to formal and informal safety nets (e.g., insurance, social services, civil society led campaigns, etc.) which reduces risk but also improves recovery capacity, and (4) degree of trust and collaboration between neighboring cities, regions, countries. These differences lead to a fundamentally different posture: some LRAs experience long periods of normality, disrupted by brief crisis periods, and followed by relatively faster recovery periods. These LRAs will be more proactive, having more time and resources to allocate to risk management (before) and will deal with lesser adverse impact. Other LRAs will be more reactive, experiencing much shorter periods of normality, disrupted by brief but more frequent crisis periods, and followed by longer periods of recovery. These LRAs will focus their resources on disaster management (during) and on recovery needs (after) and will have far less time and/or resources for risk reduction (before). Figure 2 provides a sample illustration of the difference between the proactive and reactive LRAs.

	10 years of time for a given LRA (%)			
Proactive LRAs	70 normal		5D	25 recovery
Reactive LRAs	20 normal	5D	75 recovery	

Figure 2 – Proactive and reactive LRAs (D stands for disaster management)

Type of actions

LRAs activities and capacities are broadly divided into three categories: information, decision, and action. Currently, ARLEM LRAs' support to civil protection mostly occurs in terms of resources and operations (action). The roadmap applies subsidiarity by ensuring that LRAs are also involved in the information loop and decision-making process of civil protection mechanisms. Some ARLEM LRAs tend to work *in silos* with rather limited collaboration, both among local agencies, as well as and with the civil society at large. The roadmap applies shared responsibility by helping LRAs to mobilise and organise multiple actors in their LRAs for a more effective result. Figure 3 demonstrates that information and decision tools are just as important as taking action.

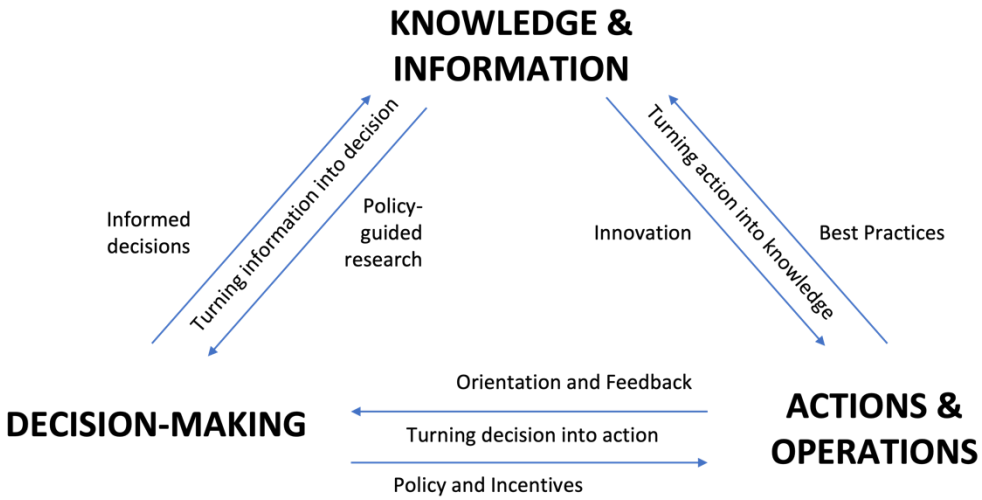

Figure 3 – Information-decision-action triangle

Part 2: Mapping the PPRD activities relating to cities and regions

Background & scope

The Prevention, Preparedness and Response to natural and man-made Disasters (PPRD) is a European Neighborhood Instrument, originated from the "Barcelona Process". Under the "Political and Security Chapter" of the "Barcelona Declaration", an initial programme on Civil Protection cooperation (1998-2008) was put in place to support the establishment of an effective system for the prevention, mitigation and management of disasters in the Euro-Mediterranean region. Building on this initial programme, three consecutive PPRD South projects (2009-2013, 2013-2016, and 2017-2021) were implemented, each with a budget of 5 million Euros.[3]

Eight ARLEM countries actively participated in all three PPRD South projects. These are: Egypt, Algeria, Morocco, Tunisia, Jordan, Israel, Lebanon and Palestine. Together, they represent 69% of the total population and 58% of the cities in ARLEM (see Table 6). Five ARLEM countries (Türkiye, Bosnia and Herzegovina, Albania, Croatia and Montenegro) participated only in the first PPRD. Libya started as an active country in both PPRD II and III, but no activities could be implemented due to crises. With the eight core countries, the three PPRD South projects aimed:
(1) to share the acquis of the EU Civil Protection Mechanism,
(2) to strengthen collaboration between countries, and
(3) to strengthen technical capacity of the national civil protection agencies.

Strategic and operational mapping of PPRD activities

In terms of hazards, PPRD South activities focused on natural and man-made hazards. The priority hazards show variation among countries and cities. They can also change over time, with systemic shocks such as climate change, or external dynamics such as conflicts. PPRD South activities focused on:

- natural hazards: floods and flash floods, hot weather, forest and wildfires, earthquakes, severe weather occurrences (storms, heavy rainfall),
- man-made hazards: pandemic, technological disasters (Beirut explosion), refugee crisis, environmental hazards, home-related hazards.

[3]PPRD I, II and III Reports

In terms of exposure, PPRD South activities focused on life safety. The mandate of the civil protection is extensive and similar across countries. It includes multiple elements at risk: population, buildings, lifelines, infrastructure, critical facilities, ecosystems, and environmental assets. The PPRD South activities focus is on population and life safety risks.

In terms of spatial and administrative scale, the PPRD has a rather limited link with LRAs. The majority of PPRD South activities were at national level, and some at international level. All three PPRD project activities focused on national civil protection agencies and their staff. They also conducted activities involving, in order of importance: line ministries, scientific agencies and local authorities. Local authorities were minimally involved, and businesses and civil society were involved even less.

The PPRD activities focus on risk and disaster management, with no coverage of the recovery process. As outlined in the introduction, civil protection includes multiple themes. Table 3 indicates in color the focus of PPRD projects.

Disaster Risk Reduction / Civil Protection		
Risk management	**Disaster management**	**Recovery management**
Before	**During**	**After**
Risk assessment	Early warning	Impact assessment
Risk reduction (prevention, mitigation)	Mobilisation and coordination	Socioeconomic recovery
Risk transfer/financing	Response operations	Reconstruction
Preparedness	Communication	

Table 3 – DRR pillars and themes, PPRD activities indicated in color

The PPRD projects focused on a narrow range of activities and products, designed to improve knowledge and operational capacity. There were fewer activities and products to improve decision-making capacities. The most common outputs of PPRD activities are risk assessment tools, website and online platforms, guidelines and technical visits, training and simulation exercises, workshops and awareness raising activities. PPRD activities did not purchase any equipment, build any structure, or recruit new staff. Annex 1 provides a list of PPRD activities conducted with the participation of local authorities.

Part 3: Two main case studies

Analytical framework

The two LRA case studies offer a strong contrast, as one is proactive and the other one - reactive. Part 2 outlined the indicators that could be used to identify the posture of LRAs, such as norms, Socioeconomic indicators, and safety nets. Table 4 illustrates some of these differences between the selected case studies.

	GDP per person (Euro)[4]	***% Population with university degree***	***Number of registered civil society organisations***[5]	***Number of registered businesses***[6]
France	40,802	32	1,300,000	3,400,000
Algeria	14,206	8	128,000	194,000

Table 4 – Selected indicators showing affecting coping capacity[7]

It is difficult to compare the LRA structure of both case studies as France uses the NUTS system while Algeria does not. As France is a member of the European Union, the NUTS system can be applied to its territory. France is divided into three levels of NUTS regions (Table 5). The NUTS system cannot be used directly for Algeria, but it may be safe to assume that if applied, wilayas would correspond to NUTS-3.

Level	
NUTS-1	France is divided into 13 regions, including Auvergne-Rhône-Alpes, Brittany, Corsica, Grand Est, Hauts-de-France, Île-de-France, Normandy, Nouvelle-Aquitaine, Occitanie, Pays de la Loire, Provence-Alpes-Côte d'Azur, Guadeloupe, and Martinique.
NUTS-2	France is divided into 22 metropolitan regions, which include the 13 regions mentioned above and 9 additional regions.
NUTS-3	France is divided into 96 departments

Table 5 – France NUTS system

[4] https://donnees.banquemondiale.org/indicator/NY.GDP.PCAP.CD
[5] https://www.echoroukonline.com/lalgerie-compte-pres-de-100-000-associations-dont-la-majorite-inactive
[6] https://www.aps.dz/economie/125936-plus-de-194-000-entreprises-dotees-du-nis-en-2020
[7] https://www.inegalites.fr/niveau-de-diplome-de-la-population

Case study 1 – Aude, France

In France, the LRAs are an integral part of the civil protection mechanism both at the regional and city levels, and they are active particularly in risk management (before) and disaster management (during). The department of Aude (NUTS-3), led by the provincial council, expressed a strong will to reduce risks following repeated floods, forest fire and a terrorist attack. It created new agencies, such as the SMMAR (Joint Syndicate of Aquatic Environments and Rivers) to assess and mitigate the risk for flooding. The department's strength is in promoting a culture of risk among public agencies and learn from each disaster to improve the system. Regarding disaster management, the department of Aude has clear plans and a culture of collaboration based on mutual trust among agencies, which leads to effective response operations. Aude is a strong regional model and offers three lessons for LRAs. First, it has succeeded to create a culture of risk despite the frequent turnover of staff due to short mandate duration (2 years on average) at the regional level. Second, it has succeeded in building a positive learning curve, where lessons from each disaster help strengthen the response capacity for the next disaster. And third, it has built a pool of highly trained experts who possess an extensive knowledge of the region. The above lessons help with the effectiveness of operations and the briefing of decision makers through their turnover. Table 6 indicates the coverage of LRA' civil protection role of the department of Aude, France.

Disaster Risk Reduction / Civil Protection		
Risk management	**Disaster management**	**Recovery management**
Before	**During**	**After**
Risk assessment	Early warning	Impact assessment
Risk reduction (prevention, mitigation)	Mobilisation and coordination	Socioeconomic recovery
Risk transfer	Response operations	Reconstruction
Preparedness	Communication	

Table 6 – DRR pillars and themes, Aude' activities indicated in colour

The case of Aude is a strong model of interdisciplinary collaboration, effectively covering both risk and disaster management activities. It is the result of adapting the French administrative system to the needs of the department. Its approach is laudable, but it has limitations too. Other ARLEM LRAs can benefit from the Aude experience, especially for what concerns disaster management: (1) learning from disasters should become common practice, as it is accessible and offers high reward, (2) inter-agency collaboration starts with two agencies talking to each other, and then grows from there, and (3) trust between agencies allows for effective operation, even without written instructions, outlining procedures and protocols. Aude illustrates a proactive posture as: (1) Aude agencies have a clear mandate, regulations and sufficient resources, (2) Aude can focus more on risk management, (3) Aude overcomes a frequent turnover through continuity of highly trained local technical staff within the municipality, whereas such expertise may not always be accessible in other ARLEM LRAs.

Case study 2 City – Algeria

In Algeria, "the LRAs' voice is not heard enough" as indicated by a former mayor, although it plays a significant role in civil protection. Cities in Algeria seem to be more active than the wilayas (regions), which may be attributed to their proximity and resources. Cities are involved in civil protection activities, in order of importance, for during, after and before phases. The allocation of time and resources fit with the posture difference indicated at the beginning of this chapter. In disaster management (during), cities carry key activities such as warning, coordination of operations & mobilisation of resources, and response activities. They work effectively with local entities and specialised institutions, such as the Algerian Red Crescent. When it comes to recovery management (after), cities in Algeria have a narrower mandate. They tend to focus more on socioeconomic recovery of the affected population, providing social services to it, and occasionally, - financial assistance to affected families. Cities also work on risk management (before), but to a lesser extent: they mostly focus on awareness raising activities of citizens. Table 7 indicates the coverage of LRA civil protection role in Algeria.

Disaster Risk Reduction / Civil Protection		
Risk management	**Disaster management**	**Recovery management**
Before	**During**	**After**
Risk assessment	Early warning	Impact assessment
Risk reduction (prevention, mitigation)	Mobilisation and coordination	Socioeconomic recovery
Risk transfer	Response operations	Reconstruction
Preparedness	Communication	

Table 7 – DRR pillars and themes, Algeria LRA activities indicated in color

The LRAs of Algeria potentially can offer more in terms of civil protection. The municipalities have a clear mandate for response, but they are not linked to the national civil protection mechanism; instead they coexist and collaborate on an ad-hoc basis. Cities lack human, technical and financial resources to carry out their assigned tasks. They have enduring and 'close' relationships with their citizens, which builds trust but also creates and raises expectations. The protocols of collaboration and task assignment/division between LRAs and civil protection agencies need to be better defined. This will allow to switch from a mostly reactive, ad-hoc coordination to a pre-planned and predictable response. The current model makes greater use of LRAs for field action than it does for information collection and analysis, as well as for improvement of decision-making. LRAs can be more effective in civil protection if they share their extensive knowledge and existing data sets, and serve as an active voice at a decision-making table, both of which seem to occur on a limited basis in Algeria.

Part 4: Identification of broader opportunities in the region

The roadmap of LRAs in ARLEM countries is conditional to the risks they face now and are expected to face in the near future. ARLEM countries face various shocks and stresses and they have different structures and capacities. This section analyses the risks they face and the most common organisational models of LRA/civil protection agencies' interaction, in order to identify broader opportunities in the region.

Shocks and stresses

Demographic increase and demographic shift are leading to a population more at risk and with less recovery capacity. According to the UN World Population Prospects 2022[8], the population in the Northern Africa, some of which are ARLEM countries, and Western Asia Region will continue to follow its slow (compared to other regions of the world) but steady growth trend. So, if population in the region was of approximately 549 Million people, and is currently of 617 Million, this is expected to reach 771 Million people by 2050. At the same time, the slower pace of this growth will end up in an ageing population, with a percentage of population above 65 years of age that is expected to grow from 7% in 2020 to 12,5% in 2050. This shift creates concerns for a population that is both more vulnerable to stress factors and particularly to disasters, and, with reduced capacity of recovery and reconstruction of infrastructures, buildings, and businesses due to the decrease of working age classes, which stresses the increased importance to rapidly put in place prevention and emergency preparedness mechanisms and tools to improve this capacity.

In terms of immigration, among the 40 countries that experienced a net inflow of more than 200.000 migrants in 2020, the first three countries are ARLEM members. Türkiye hosted the largest number of refugees and asylum seekers worldwide (nearly 4 million), followed by Jordan (3 million) and Palestine (2 million). Though population will grow slower compared to other regions, Mediterranean countries are surrounded to the South and East by countries with much higher expected birth rates (Central and Southern Asia and sub-Saharan Africa are the regions with the highest expected population growth in the next 30 years), and countries that are already experiencing extremely distressful events such as wars, civil wars, drought and insufficient economic growth, together with increased life expectancy rates at birth due to the general

[8] https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf

improvement of health conditions and medical progress. The above indicates the need to think about specific tools to reach this even more fragile population, taking into account additional challenges, such as: 1) language and cultural differences, 2) difficult access to national and local media that may help population accessing help, 3) precarious health conditions due to years of migration and living in camps, 4) insufficient access to clean water and proper sanitation infrastructures, 5) low level of integration into the regional and national economic system, that makes migrating populations even more in need of help for all basic needs and less able to take part in economic relaunch after any event.

The changing urbanisation patterns will require an adjustment of LRAs in their core functions. According to the World Cities Report 2022[9], in Northern Africa (including ARLEM countries) and Western Asia, the number of cities will increase very little until 2050. However, cities of 1 million people will grow in number from 45 for the time being to approximately 77 between 2020 and 2050, and cities of 5 million people will grow from 8 in 2020 to 13 in 2050. As human settlements expand to include presently rural or peri-urban areas, often attracting low-income classes, urban planning should take into account 1) natural hazards such as earthquakes, 2) natural specificities and risks of territories e.g. landslide prone terrain, 3) climate change and extreme weather events, 4) reduced consumption of soils for human activities; and construction regulations' control should be performed at the local level to avoid uncontrolled and potentially dangerous urbanisation processes. Moreover, the growth in size of cities makes it important to act locally by having local authorities with civil protection institutions able to act immediately and independently from centralised institutions, equipped with tools to receive rapid alerts to localise population in need and means to reach remote areas to rescue people. This would mean, for example, a widespread net of firehouses rather than fewer big ones, trained human resources and allocated funds.

The Mediterranean region is one of the hotspots for climate change. The region is home to more than 610 million people and its basin represents one of the world's busiest shipping routes with about 30 percent of international maritime freight traffic, with many of the Mediterranean countries' economies largely dependent on natural resources, particularly along the southern rim of the Basin[10]. The urbanisation processes along with changing lifestyle is expected to cause water demand to double or triple by 2050; this, while the Mediterranean region is warming 20% faster than the global average[11], and expected precipitation is being reduced (expected 10-15% by 2050), increasing desertification trends, water

[9] https://unhabitat.org/sites/default/files/2022/07/chapter_2_wcr_2022.pdf
[10] https://www.iemed.org/publication/climate-change-in-the-mediterranean-environmental-impacts-and-extreme-events/
[11] https://www.unep.org/unepmap/resources/factsheets/climate-change

temperature rising, all of which contribute to increased occurrence of the so-called "Medicanes"[12] (**Medi**terranean + hurri**cane**), coastal erosion, floods, as well as extreme wildfire events. However, not all the regions of the Mediterranean will experience the same type, frequency, and magnitude of these events.[13]. Despite the fact that climate change affects the whole region, it is key to consider climate projections at the regional and local levels when designing policies and putting in place tools adapted to these scales, ensuring their effectiveness in forecasting and mitigating disaster impact.

The region is at increased risk of diseases, including infectious ones, as has already been the case in the Eastern Mediterranean region[14] in recent years. Due to climate change and increasing temperatures, scientists notice a worsening of several diseases throughout the world, particularly vector-borne and waterborne diseases[15]. With factors such as 1) reduced availability of clean water for all due to urbanisation and demographic pressure, 2) wars and migrations that lead to socioeconomic inequalities, and 3) climate change, it is probable that diseases will increase both in frequency and impacts on health. The risk of diseases and pandemics must be considered when designing policies in many fields of action, including natural and man-made disasters not only for the naturally increased likelihood of those outbreaks under such circumstances, but also in relation to sewerage networks' disruption and lack of access to clean water, caused by these events.

Structure and capacity

Every country defines cities and regions in its own way, as they exist in all countries, in one form or another. The size, the legal status, the responsibilities and the available resources of regions and cities are defined by each country. Table 8 provides a synopsis of country population, number of administrative departments and number of cities with a population of 100.000 habitants or more for ARLEM countries. France was added for reference as it is one of the case studies.

Country	Population	Departments	Cities
Egypt	112.716.598	27	25
Türkiye	85.816.199	81	81
Algeria	45.606.480	48	40

[12] https://www.easa.europa.eu/community/topics/medicanes
[13] https://www.iemed.org/publication/climate-change-in-the-mediterranean-environmental-impacts-and-extreme-events/
[14] https://www.emro.who.int/pandemic-epidemic-diseases/information-resources/infectious-disease-outbreaks-reported-in-the-eastern-mediterranean-region-in-2019.html
[15] https://www.nature.com/articles/d41586-022-02167-z

Morocco	37.840.044	12	35
Tunisia	11.754.806	24	10
Jordan	10.459.531	12	8
Israel	9.174.520	6	15
Palestine	5.371.230	0	24
Lebanon	5.353.930	10	12
Mauritania	4.959.607	3	3
Bosnia and Herzegovina	3.210.847	2	4
Albania	2.832.439	12	4
Montenegro	626.485	21	3
Monaco	36.297	0	1
Libya (observer)	7.587.000	3	14
North Macedonia (observer)	2.087.402	8	1
France	64.756.584	96	43
Total ARLEM	**343.346.013**	**365**	**323**

Table 8 – Regions and cities in ARLEM[16]

Another key difference between LRAs in ARLEM countries is their technical and financial capacities. A UN Habitat study of 2010 looked into the expenditure per capita pattern between various states (Figure 4)[17]. Although the study does not consider ARLEM countries, it is fair to assume there will be differences in technical and financial resources among various ARLEM LRAs.

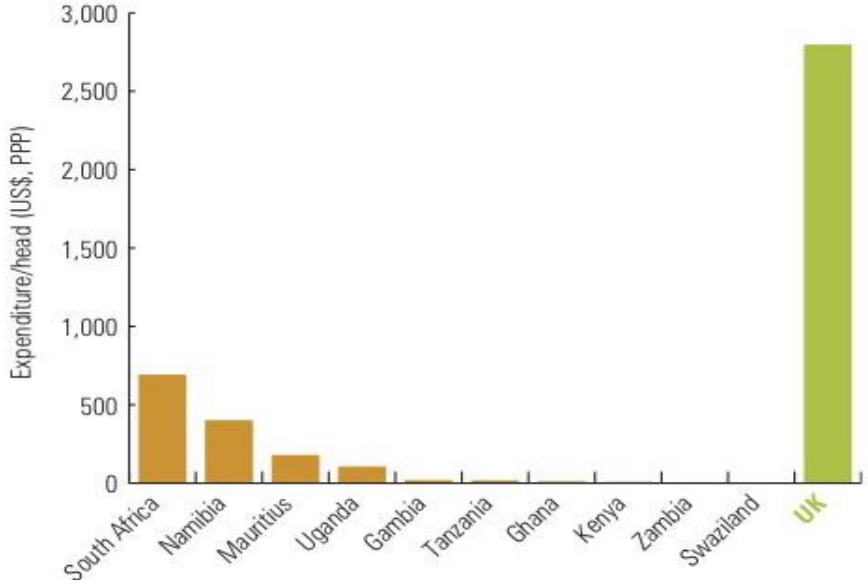

Figure 4 - Relative city expenditure levels in the UK and Africa

[16] https://worldpopulationreview.com/countries
[17] UN Habitat, 2010, The State of African Cities 2010 – Governance, Inequality and Urban Land Markets

Country models

The studies outline different models of LRA/ civil protection collaboration[18]. Within the EU Civil Protection Mechanism, countries have different models regarding the role of LRAs in civil protection. In some countries, such as Sweden, LRAs are directly responsible for the response within their respective territories. In this model, unless it is a major event, the LRAs manage the operations and act as an information/decision hub and at the same time, provide resources for action. In second common model, - Italy, LRAs are integral parts of the civil protection system. In this model, LRAs are trained in civil protection and properly equipped, and during response, resources are channeled through the LRAs. Third and less common model is Finland, where LRAs are responsible for civil protection and the military is responsible for civil defense. This legal distinction makes coordination and resource allocation more challenging for LRAs. Likewise, civil protection models and roles of LRAs show variation among ARLEM countries.

The needs of ARLEM LRAs will vary based on these parameters. The broader opportunities for collaboration can best be identified by building typologies of ARLEM LRAs and matching them with the most pertinent EUCPM tools and solutions. Part 5 provides the roadmap to doing so.

[18] Local and Regional Impact of the Union Civil Protection Mechanism, EUCPM 2012

Part 5: Sketching a roadmap towards increasing the role of cities and regions in civil protection

Analytical framework

The roadmap is based on the principles of civil protection, the needs of the population and the capacities of the LRAs. This section offers a three-phased roadmap to build LRA civil protection capacity in ARLEM. The roadmap suggests focusing first on cities with a population of 150,000 or more. The European Adaptation Strategy follows a similar approach, giving priorities to cities of 150,000 inhabitants or more[19]. Some ARLEM LRAs tend to work *in silos* with very limited collaboration both among local agencies and with the civil society at large. The roadmap applies shared responsibility by helping LRAs to mobilise and organise multiple actors in their jurisdiction for a more effective result.

The roadmap is based on the reality that ARLEM LRAs have different needs but a common goal - building resilience. The risk profile of each LRA may differ in terms of hazards they face, their exposed population and assets and their vulnerabilities. Each LRA can thus build resilience through the various interventions of the DRR framework, before (risk management), during (disaster management) and after (recovery management) as demonstrated in Table 9. Each phase of the roadmap focus on a set of specific intervention areas.

Disaster Risk Reduction / Civil Protection		
Risk management	**Disaster management**	**Recovery management**
Before	**During**	**After**
Risk assessment	Early warning	Impact assessment
Risk reduction (prevention, mitigation)	Mobilisation and coordination	Socioeconomic recovery
Risk transfer	Response operations	Reconstruction
Preparedness	Communication	

Table 9 – DRR pillars and intervention themes

[19] https://climate-adapt.eea.europa.eu/en/eu-adaptation-policy/strategy/index_html

The roadmap converges with the EUCPM in its first phase and then diverges for the second and third phases. The roadmap considers the fundamental differences in posture, structure, and capacity of LRAs within ARLEM countries, as discussed in Part 4. The roadmap converges with the EUCPM in giving the priority to disaster management as it consists of a race against time to save lives. But the roadmap diverges from the EUCPM in its second and third priorities. EUCPM focuses on proactive approach and risk management by strengthening norms and regulations. For those ARLEM countries where LRAs have less clearly defined roles within their respective national civil protection mechanisms, the roadmap advocates to focus on recovery management and then on risk management. Once disaster management is taken care of, the priority of these LRAs in ARLEM shifts to ensure faster and better recovery. This will liberate resources and time for risk management, and not the other way around. Figure 5 illustrates this fundamental difference in posture.

	10 years of time for a given community (%)			
Proactive LRAs	70 normal		5D	25 recovery
Reactive LRAs	20 normal	5D	75 recovery	

Figure 5 – Proactive and reactive LRAs (D stands for disaster management)

Roadmap – Phase 1

The first priority of ARLEM LRAs without clearly defined roles yet within their national civil protection systems should be protection of their citizens through hardship - thus, disaster management. This priority is aligned with priorities of national civil protection systems of ARLEM countries, these countries' constitutions, as well as the EUCPM. Disaster management consists of four distinct activities: warning, coordination & mobilisation, response operations and crisis communication. For this phase, the strategic approach is to proceed in the following order: response, communication, warning and coordination. This order represents the technical difficulty starting from the easiest to the most difficult. For this phase, the operational approach is to strengthen first capacity (action) and gradually improve their knowledge products (information) and decision-making capabilities. Table 10 provides an overview of key actions for Phase 1.

	Action	Information	Decision
Warning	Warning dissemination equipment, public awareness, simulations	Forecasting stations, modelling, scenarios, list of shelters	Warning thresholds, evacuation protocols
Coordination	Volunteering pools, emergency plan, mobilisation and collaboration protocols	Available resource list, key staff list	Escalation thresholds, emergency disbursement protocols
Response	Technical training for staff, response equipment	Situation reports, emergency operation set up	Critical decisions and timeline, performance indicators
Communication	Crisis briefings	Communication channels	Key messages and timeline

Table 10 – Phase 1 overview of key actions

Roadmap – Phase 2

The second priority of ARLEM LRAs without clearly defined roles within their national civil protection mechanisms should be strengthening their recovery management capacity. This priority is a continuity of life safety, as people may survive the initial impact but their physical or psychological injuries may cause further harm. Proper recovery reduces morbidity and increase in mortality (measured over 5 years) generally associated with disasters. Recovery aims at the exit from humanitarian assistance scheme, is provided free of charge, and contributes to self-sufficiency of affected population and community. Recovery management consists of three distinct activities: impact assessment, socioeconomic recovery and physical reconstruction of destroyed housing, businesses and infrastructure. For this phase, LRAs should build partnership with civil society (business community, NGOs, religious groups, etc.) to ensure the mobilisation of adequate financial means and expertise. In fact, in the area of recovery management, the most significant improvements can be achieved with minimal investment, which is at times overlooked in some ARLEM countries. For this phase, the strategic approach is to proceed in the following order: impact assessment, socioeconomic recovery and reconstruction. This order represents the degree of relevance with the EUCPM and national civil protection mechanisms. Reconstruction is not covered by civil protection, and socioeconomic recovery is covered partially at best. For this phase, the operational approach is to strengthen first decision-making capacity and gradually improve their knowledge products

(information) and operational capacity (action). This order reflects the mandate of LRAs and civil protection, as they will be more active in decisions and sharing information than doing the actual work. Table 11 provides an overview of key actions for Phase 2.

	Action	Information	Decision
Impact assessment	Remote sensing, on-site light damage assessment, detailed damage and loss assessment	Impact assessment forms and methodology	Identify impacted sectors, set up impact assessment team, recovery financing strategies
Socioeconomic recovery	Cash for work, food for work programs, subsidies, stock recapitalization, vocational training, business loans	Socioeconomic profile, local customs and traditions, community dynamics	Key decisions and timeline, use of labor vs machines for debris removal
Reconstruction	Engineering trainings, debris removal, temporary and permanent housing, business, school, hospital, infrastructure	Construction codes, urbanisation plans, construction techniques and material	Key decisions and timeline, reconstruction financing, revision of plans and norms

Table 11 – Phase 2 overview of key actions

Roadmap – Phase 3

The third and last priority of ARLEM LRAs, facing the same realities as the ones stated above, should be strengthening their risk management capacities. UNISDR[20] studies indicate a 1:4 return on investments for risk reduction; this ratio is likely to be even higher for ARLEM countries, therefore, investing in risk reduction measures seems to be a good course of action. One may wonder, why isn't it done more often then? For the exact reasons stated above: some LRAs in ARLEM need to first take care of their recovery to liberate resources and time for risk management. And while EU member states carry out risk management activities following the leadership of LRAs and other agencies, some ARLEM countries proceed differently. Because of the limitations in laws and regulations, the risk is not created by ill-guided collective action but rather by individual actions. ARLEM countries should work with LRAs to raise awareness and change behavior among the population living in cities. This would be more effective than trying to change laws or norms that have limited application in the first place. Risk management consists of four distinct activities: risk assessment, risk reduction, risk transfer and preparedness. For this phase, LRAs should build partnership with the civil society and in particular profession chambers (insurances, structural engineers, etc.) to ensure the mobilisation of adequate expertise. Among the three interventions, risk management might be the most neglected in some ARLEM countries, focusing on it, however, might result in disproportionally large improvement in comparison to the minimal investment needed for this change. For this phase, the strategic approach is to proceed in the following order: preparedness, risk assessment, risk reduction, and risk transfer. This order represents the degree of relevance with the EUCPM and national civil protection mechanisms, as well as the complexity of each theme. Preparedness and risk assessment are fully covered by civil protection but the other two, - to a lesser extent. For this phase, the operational approach is to strengthen (for preparedness and risk assessment) the knowledge products and gradually operational capacity (action) and decision-making; and for risk reduction and risk transfer, to strengthen first decision-making capacity and gradually improve their knowledge products (information) and operational capacity (action). Table 12 provides an overview of key actions for Phase 3.

[20] European Committee of the Regions, Action Plan on the Sendai Framework for Disaster Risk Reduction 2015-2030, 122nd plenary session, 22-23 March 2017

	Action	Information	Decision
Risk assessment	Field survey, data collection and analysis, modelling, simulations	Hazard maps, exposure maps, vulnerability analysis, risk maps	Risk management strategy
Risk reduction	Structural risk control, retrofitting, repair & maintenance	Return periods, asset lifecycle, cost benefit analysis	Risk prevention vs reduction, notion of accepted risk
Risk transfer	Insurance, derivatives, social safety nets	Community spending & saving habits, insurance coverage	Risk financing strategies and mechanisms
Preparedness	Awareness programs, volunteering, simulations & drills, pre-positioning, stock piling	Household and business level of preparedness,	Responsibility sharing between state and citizen

Table 12 – Phase 3 overview of key actions

Part 6: Policy recommendations

Further involvement of ARLEM LRAs in civil protection systems is aligned with the international policy framework. In the face of increasing disaster frequency and intensity, global challenges such as the Covid-19 pandemic and climate change, LRAs will experience greater stress and shocks. LRAs play a crucial role before, during and after disasters, the importance of which is underscored by all leading international policy documents such as the Sendai Framework for Disaster Risk Reduction 2015-2030, the Paris Agreement on Climate Change, the EU Green Deal, identifying cities and LRAs as critical actors.

The following policy recommendations are specific and cover different needs of LRAs. Some LRAs may already have achieved them partially. The recommendations use the before/during/after classification and are classified as either information, decision or action. Table 13 provides a summary of the recommendations.

	Before	**During**	**After**
Information	Develop a risk map	Build an early warning system for climatic hazards	Conduct impact assessment (for damage and loss)
Decision	Review land use plans according to risk maps	Develop local response plans and ensure effective collaboration with local actors	Conduct lessons learned exercises for each event, with the active participation of all stakeholders
Action	Conduct public awareness raising activities and simulations	Develop technical capacity and purchase equipment based on scenarios	Renew, repair, upgrade operational material on a regular basis

Table 13 – Recommendation for ARLEM LRAs

Annexes

Annex 1 - List of PPRD activities conducted with the participation of LRAs

PPRD	Activity	Phase
I	Euro-Mediterranean Civil Protection Operational Manual: source of relevant information for national civil protection systems, competent authorities for assistance in case of major disasters	Risk assessment
I	"Community disaster resilience" (Madrid, Spain, 2011) "Increasing disaster resilience in urban settings" and "multi-hazard risk assessment in urban environment", (Lisbon, Portugal, 2012) workshops: develop the capacities of civil protection services and municipalities' staff with technical expertise and planning background on urban risk reduction, as to make their cities more resilient to disasters	Risk reduction
I	Training workshop for staff-level officials: "Beyond response: better preparedness for environmental emergencies", (Istanbul, Turkey, 2013): identify, assess, plan for, prepare for, and respond to the environmental impact of the secondary effects of a natural disaster or a complex emergency	Risk assessment, risk reduction, preparedness, response
I	PPRD South study visit "Good practices for the integration of disaster risk preparedness in school curricula", (Tel Aviv, Israel, 2013): to learn more on the Israeli experience for the integration of risk awareness and preparedness in school curricula	Risk reduction, preparedness
I	PPRD south web portal: 54 articles further developed to ensure effective exchange of Civil Protection information among all the concerned stakeholders	Communication
I	Public risk awareness raising activities: reach a greater number of school children but also housewives or public in general for people to be aware on daily risks or risks of disasters	Preparedness
II	Conferences on the European Civil Protection Mechanism and on the Host Nation Support concept: targeting high level decision-making staff from the national civil protection and line ministries that have a role to play in risk and crisis management	Preparedness
II	Risk assessment and mapping workshops: identify, assess, and map risks, (for National Civil Protection	Risk assessment

	Authorities, and other members of the National Platform for Disaster Risk Management)	
II	Media and crisis communication training: for the participation of a wider audience beyond the civil protections	Communication
II	Country profiles: a clear and complete vision on the levels reached by each partner country, in terms of disaster risk and crisis management	Risk assessment
III	Emergency planning is improved by enhanced coordination between national organisations involved in disaster management: operational manuals, protocols, emergency plans, procedures or directives produced by the national organisations	Preparedness
III	National workshop to foster first aid trainings for women in collaboration with civil society organisations	Preparedness

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