



**URBAN–RURAL LINKAGES FOR
SUSTAINABLE TERRITORIAL
DEVELOPMENT:
ADDRESSING URBAN TRANSITION
IN THE NENA REGION**

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This background paper was meant to contribute to the chapter on “Territorial governance and the urban-rural interface” prepared by FAO. However, its preparation confirmed the importance for both UN-Habitat and FAO of urban–rural linkages for territorial development – which go beyond land and water dimensions, *stricto sensu* – and evidenced the challenges related with embarking on an emerging issue, such as limited evidence and lack of institutional ownership. It is therefore suggested that the paper could provide a basis for future inter-agency collaboration.

The paper aims to draw attention to the need for some degree of re-localization of development strategies for sustainable development and bridging the current urban–rural divide.

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ABBREVIATIONS AND ACRONYMS

CLIMA-M	Acting for Climate in Southern Mediterranean
ANCUA	Arab Network of Cities for Urban Agriculture
AOAD	Arab Organization for Agricultural Development
CBD	Biological Diversity
CEDARE	Centre for Environment and Development for the Arab Region and Europe
CRFS	City region food system
CES-MED	Cleaner Energy Saving Mediterranean Cities
COP	Conference of the parties
DRA	Darfur Regional Authority
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
FAO	Food and Agriculture Organization of the United Nations
GUPAP	Gaza Urban and Peri-Urban Agriculture Platform
HLP	Housing, land and property
HDPN	Humanitarian–development–peace nexus
ICT	Information and communication technology
IGUTP	Integrated urban and territorial planning
IPCC	Inter-governmental Panel on Climate Change
IDPs	Internally displaced persons
IFAD	International Fund for Agricultural Development

IOM	International Organization for Migration
MLG	Multi-level governance
NENA	Near East and North Africa
NCDs	Non-communicable diseases
OECD	Organisation for Economic Co-operation Development
MoLG	Palestinian Ministry of Local Government
RCREEE	Regional Centre for Renewable Energy and Energy Efficiency
RSPSD	Regional Spatial Planning Strategy of Darfur
RUAF	Resource Centre for Urban Agriculture and Forestry
STDM	Social tenure domain model
SSAPs	Spatial state action plans
SDGs	Sustainable Development Goals
CIHEAM	International Centre for Advanced Mediterranean Agronomic Studies
UfM	Union for the Mediterranean
UNFCCC	United Nations Framework Convention on Climate Change
UCLG	United Cities and Local Governments
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UWAF	Urban Women Agripreneurs Forum
URL:GP	Urban–Rural Linkages: Guiding Principles
WHO	World Health Organization



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1. DEVELOPMENT CHALLENGES IN A HIGHLY URBANIZED REGION

1.1 URBANIZATION

The Near East and North Africa (NENA) region¹ saw the birth of agriculture and some of the first cities 7 000 years ago, along important rivers such as the Euphrates, Orontes, Jordan and Nile. However, over the past 50 years, the region has experienced the highest rate of population growth of any region in the world, with an additional 280 million people. Governments are therefore increasingly challenged to provide the basic needs for a growing number of people in both rural and urban areas – adequate housing, sanitation, health care, education and jobs – and to reduce poverty, narrow the gap between rich and poor, and improve the standard of living for all.

TABLE 1. POPULATION GROWTH, 1998 TO 2018

Year	Rural Population	Urban Population	Population growth (2008-2018)
2018	174 085 030	247 363 364	81 915 046 - 19.44 percent
2008	151 456 000	188 077 348	
1998	129 781 410	157 691 914	52 060 024 - 15.33 percent

Source: Arab Development Portal (ADP). 2021. ADP. Beirut, Lebanon. Cited 16 February, 2021. <https://www.arabdevelopmentportal.com>

Most of the NENA region is hyper-arid, arid or semi-arid. Ninety percent of the region's population live on 4 percent of the total area of 1.4 billion hectares, with more than 63 percent of the population living in large cities and small towns (UNDP, 2021). In many countries, the bulk of the population, physical assets, and government and administrative centres are located close to, or along, the region's 37 000 km of coastline.

¹ The NENA region includes Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, the Sudan, The Syrian Arab Republic, Tunisia, United Arab Emirates and Yemen.

BOX 1. DEFINITION OF URBAN AREAS

UN-Habitat, in collaboration with New York University, European Commission's Joint Research Centre, and other partners, recommend the following two definitions of cities:

1. A city as defined by its urban extent (built-up and urbanized open space):
 - » urban built-up area: pixels where the walking distance circle has a built-up density greater than 50 percent;
 - » suburban built-up area: pixels where the walking distance circle has a built-up density of between 25 percent and 50 percent. It also includes subdivided land, whether it is wholly unbuilt or not; and
 - » rural built-up area: pixels where the walking distance circle has a built-up density of less than 25 percent and that are not on subdivided land.

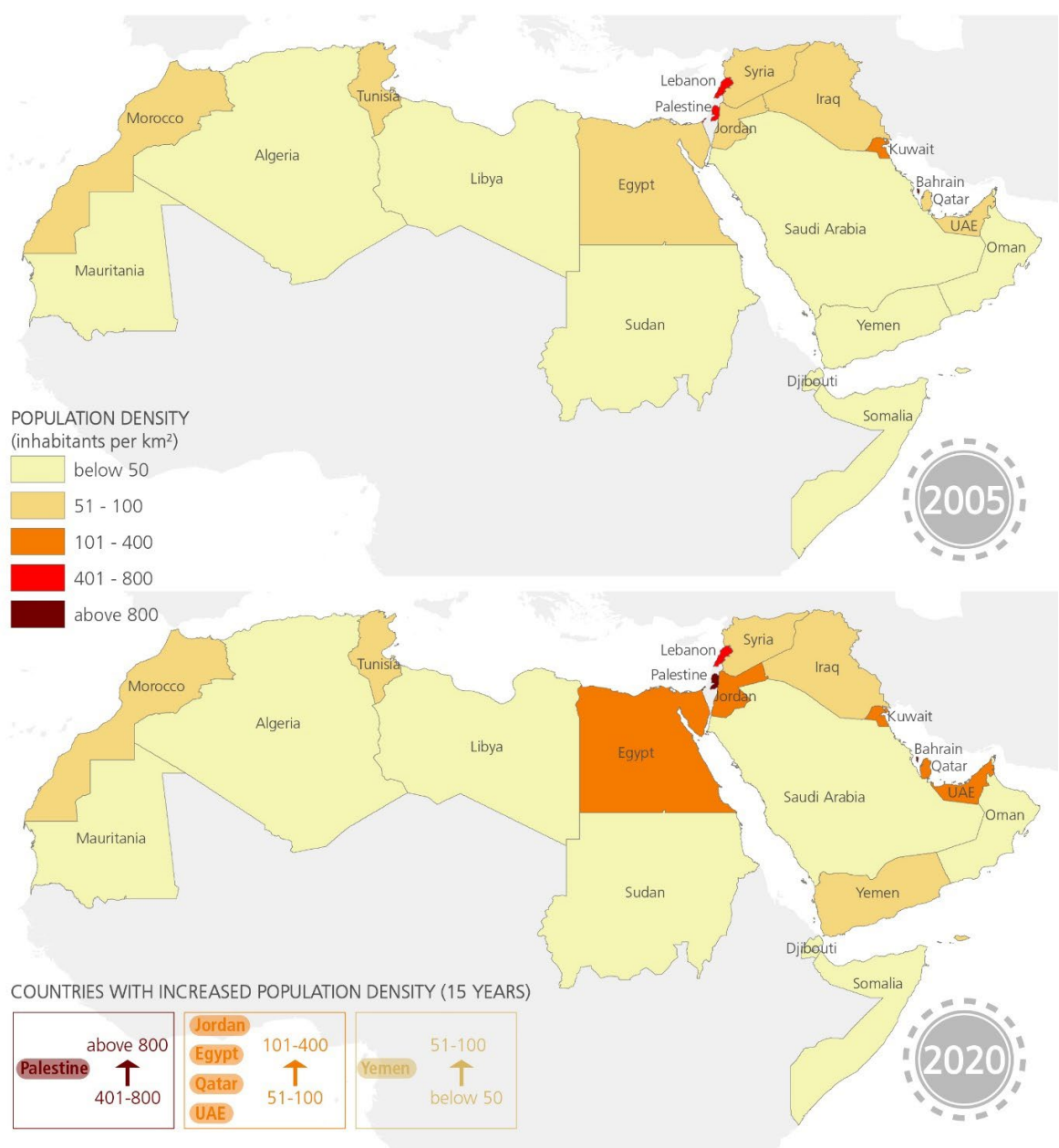
2. A city as defined by its degree of urbanization:
 - » High-density cluster or urban centre: contiguous grid cells of 1 km² with a density of at least 1 500 inhabitants per km² and a minimum population of 50 000;
 - » Urban cluster: cluster of contiguous grid cells of 1 km² with a density of at least 300 inhabitants per km² and a minimum population of 5 000; and
 - » Rural grid cell: grid cell outside high-density clusters and urban clusters.

Source: UN-Habitat. 2019. *National Sample of Cities. A Model Approach to Monitoring and Reporting Performance of Cities at National Levels*. Nairobi, UN-Habitat. https://unhabitat.org/sites/default/files/download-manager-files/National_Sample_of_Cities.pdf.

Note: Pixels are being used here as a unit of analysis.

The urban population in the region has more than quadrupled between 1970 and 2010 and is expected to more than double again by 2050. Figure 1 shows the population density increase between 2005 and 2020. Sixty-three percent of the current NENA population lives in urban areas which is higher than the global average (UNDP, 2021), and this figure is projected to grow to 73 percent by 2050, mostly in secondary cities, totalling more than 450 million people. In 1950, only two cities in the region had a population above one million people, whereas by 2025 the number of cities is expected to have increased to 31 (UNDP, 2021).

FIGURE 1. COUNTRIES WITH INCREASED POPULATION DENSITY BETWEEN 2005 AND 2020



Source: Arab Development Portal (ADP). 2021. ADP. Beirut, Lebanon. Cited 16 February, 2021. <https://www.arabdevelopmentportal.com>

In the past 50 years there has been a major shift in the population, with people increasingly moving from rural to urban areas. This has been due to following economic opportunities voluntarily (such as migration to oil-rich countries) or escaping from mounting political conflicts or natural disasters (droughts, floods, earthquakes) or a combination of the above. While migrants from the region constitute 50 percent of all migrants in the world, the region also hosts 38 million international migrants, including registered refugees. They make up 14 percent of the world's international migrants, 45 percent of the world's refugees and around 16 percent internally displaced persons (Khechen, 2018), with more than half settling in urban areas. The region's recent large-scale migratory outflows have also been driven by other key triggers, such as an increase in unemployment, social injustice and exclusion. The implication for urbanization therefore varies according to the geographical context, but the protection and inclusion of these new entrants falls primarily on local government.

Most of the growth has taken place on the peripheries of primary cities, several of which have become extended metropolitan regions, or actual or emerging mega-urban regions with complex issues of regional-wide urban governance and governance voids. Today, secondary cities are experiencing the fastest rates of growth.

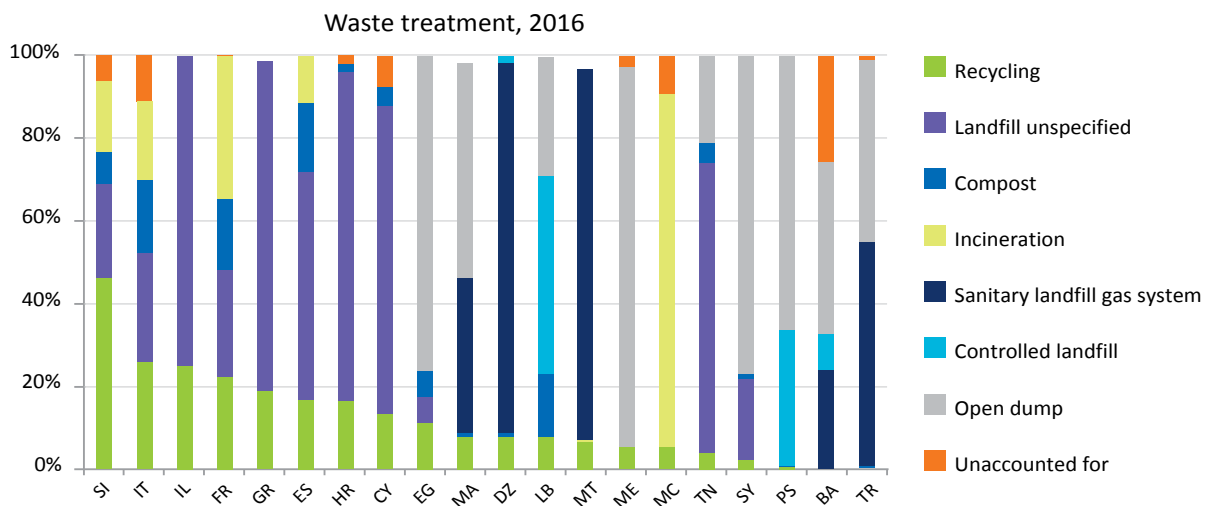
For the purpose of this paper, the context or status of major development challenges in the NENA region, as they relate to urbanization (such as water security, food security and malnutrition, weak land management, climate change, drought and desertification, poverty and vulnerability, conflicts and displacement, and now the COVID-19 pandemic) are described in the next section.

1.2 WATER SECURITY

Water security is essential to national security in NENA countries, as the region is one of the most water-scarce regions in the world. While it is home to 6.3 percent of the world's population, it holds only 1.4 percent of the world's accessible water, and the current use of water resources is estimated at 76.6 percent, compared to about 7.5 percent worldwide (Mallah *et al.*, 2019). While the average annual water usage per capita in the region is 800 m³, in arid countries such as Jordan, Kuwait and Saudi Arabia, the national average is below 200 m³/person/year. Sixty-seven percent of the water used in the region comes from nonNENA areas.

Groundwater reserves and aquifers are depleting at alarming rates, with available freshwater resources per capita projected to decline to around 1 000 m³ by 2025 (The World Bank, 2011), which is the internationally recognized threshold for water scarcity. In Gaza, the coastal aquifer on which Gazans rely for water is heavily over-extracted and may already be irreversibly damaged due to the high population density, combined with weak environmental management. Much of the region is already below the international standard, with water scarcity being a major issue in most countries. Inadequate quantity or quality of water supplies increase the risk of waterborne diseases, pose health risks for people in both urban and rural areas, and put related livelihoods at risk. Wastewater discharge in open fields – including the resulting pollution in the Southern Mediterranean – has become a major concern (see Figure 2).

FIGURE 2. POLLUTION HOT SPOTS AND AREAS OF ENVIRONMENTAL CONCERN ON THE MEDITERRANEAN COAST



Source: United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP) and Plan Bleu. 2020. *State of the Environment and Development in the Mediterranean*. Nairobi, UNEP. <https://planbleu.org/wp-content/uploads/2020/11/SoED-Full-Report.pdf>

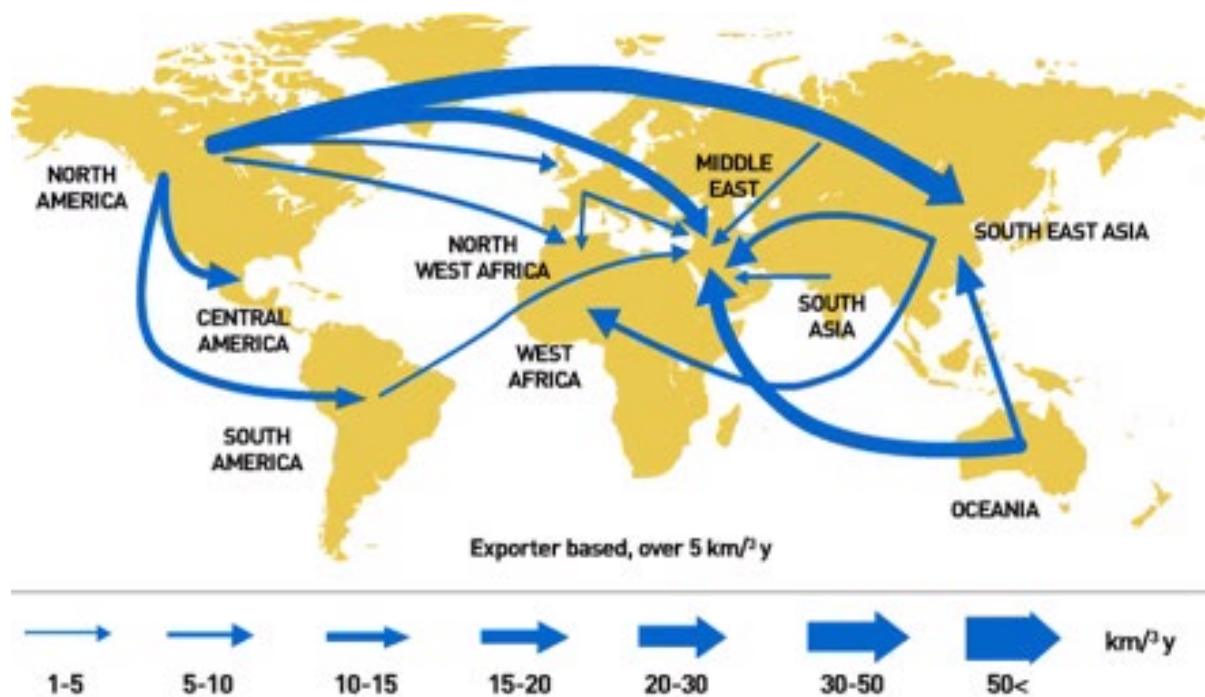
The tourism sector is one of the most water-consuming sectors, due to drinking, sanitation and other services related to swimming pools, green areas and golf courses. The sector will inevitably be affected by the scarcity of water resources and it is expected that there will be tension over the use of water, especially with local communities and agriculture. Tourism is very sensitive to climate change, as climate has an impact on many of its resources, such as biodiversity, landscapes, and water quantity and quality.

1.3 FOOD SECURITY AND NUTRITION

The main challenge of water resources scarcity and desertification is the threat to food security. Traditional agriculture in the region is heavily dependent on often infrequent and poorly distributed rainfall, as 81 percent of cereal crops are rainfed (AFED, 2014). In 2014, this was approximately 75 percent of the cultivated area in the Arab region. In some countries, the adoption of intensive commoditybased production practices and policies for export based on irrigation, mechanization and high dependence on energy and agricultural inputs have led to the depletion of the water tables of fossil aquifers and the collapse of livestock production in rainfed areas. This has contributed to the erosion of rural societies and fuelled the expansion of urban slums and related social unrest. In terms of agricultural trends, there is evidence that productivity gains are slowing. Agricultural yields are below their potential, especially in rain-fed areas – which account for 70 percent of cultivated land in the region – and are expected to decline further.

As a result, the region has both the highest food deficit and the highest food-imports of any region in the world, making it dependant on international trade (see Figure 3). It currently imports 70 percent of its food requirements at an ever-increasing cost. The 2007 to 2008 food crisis led NENA leaders and executive bodies to review food security and agriculture strategies in a context of increased globalization and urbanization. Families, communities and countries in the NENA region shoulder the double burden of malnutrition (undernutrition, including child wasting and stunting), and obesity levels that are among the highest in the world, particularly for women. Conflicts and crises continue to be major drivers of hunger in the region, while pockets of deep and often chronic hunger exist in many countries, including several middle- and high-income countries. Rural areas and locations occupied by minority groups are the most affected, as malnutrition is often the result of exclusion and uneven distribution of food resources rather than of scarcity. Obesity on the other hand has been rapidly increasing in the region in the last two decades, affecting nearly a quarter of the NENA population.

FIGURE 3. INTERNATIONAL FOOD TRADE



Source: Oki, T., Sato, M., Kawamura, A., Miyake, M., Kanae, S. & Musiaka, K. 2003. Virtual water trade to Japan and in the world. Proceedings of the International Expert Meeting on Virtual Water Trade (Ed. A.Y. Hoekstra), 12–13 December 2002. Delft, The Netherlands, IHE Delft.

The consumption patterns of families and societies have changed with urbanization and lack of farmland. Individuals have become increasingly dependent on processed foods that are usually high in salt, sugar and fat and on meals purchased from food service outlets. This change is increasing the risk and prevalence of food- and diet-related diseases. Dependence on food imports, a shift from domestic food demand and traditional diets (and in particular the Mediterranean diet, acknowledged to be a model of healthy diet, in the Mediterranean bio-region), urbanization and related lifestyles changes have resulted in a nutrition transition, characterized by the coexistence of an epidemic of obesity and diet-related diseases, along with under-nutrition. Traditional diets are abandoned in favour of “fast” foods, resulting in the reduction of dietary diversity and, often, a less nutritious diet. This is particularly surprising in countries where plant-based, micronutrient-rich and fresh foods are widely available in street foods and cheap restaurants.

Food distribution and catering in many countries is concentrated in the hands of a few operators who influence product supply, safety and price. The media, advertising and retail sectors, and the food industry all have a powerful influence on dietary choices, sometimes opposing those recommended by public health specialists. According to the World Health Organization (WHO) Eastern Mediterranean Region (2021), non-communicable diseases (NCDs, such as diabetes, cardiovascular diseases and some kinds of cancers) are responsible for around 60 percent of all deaths, a total of 1.7 million a year. This figure is expected to increase to more than 3.8 million annual deaths by 2030 unless major steps are taken to combat this rise.

BOX 2. WHEAT: THE STAPLE FOOD IN THE NENA REGION

1. Wheat consumption contributes 37 percent of total food supply (calories) in NENA.
2. Average annual per capita wheat consumption:
 - » North Africa (Algeria, Morocco, Mauritania and Tunisia) = 174 kg
 - » Near and Middle East = 158 kg
 - » Total NENA region = 166kg
 - » World average = 66 kg
3. Currently the region imports more than half its wheat needs, at an increasing cost.

Source: Solh, M. 2013. *The Outlook for Food Security in the Middle East and North Africa*. Beirut, ICARDA

1.4 CLIMATE CHANGE, DROUGHT, DESERTIFICATION AND LAND DEGRADATION

The NENA region is also one of the regions of the world most vulnerable to the negative impacts of climate change and its various manifestations of high temperatures, coastal erosion, increased drought, desertification and land degradation, increased variability of rainfall, increased risk of salt intrusion in coastal aquifers, scarcity of water resources, increased salinity of groundwater, and the spread of epidemics, pests and diseases. Climate change multiplies threats and exacerbates vulnerability, with severe environmental, economic, social and political repercussions, affecting not only national and regional security, but also human security. Just as the impacts of climate change vary among the regions of the world, the combination of these impacts at a territorial level also vary according to climatic zones and economic sectors.

- Sea level rise could affect many coastal areas. In most countries, the bulk of the population, physical assets and government and administrative centres are located close to, or along, the region's 37 000 km of coastline. The significant growth in the size and intensity of economic and development activities in coastal cities, and in coastal and marine areas in general, in addition to the importance of international waterways, increase vulnerability to climate change. According to IPCC (2014), sea level predictions of 2014 warned that within two decades the city of Alexandria (Egypt's principal port and a major industrial centre), faces the loss of

the majority of its industrial area, its port infrastructure and housing for most of its urban population, in addition to its priceless heritage. The warning about the impacts of climate change on the Nile Delta, with all related scenarios, shows that effects of sea level rise can be primary or secondary, indicating exaggerated threats to soil fertility and deteriorating groundwater quality due to sea water intrusion in coastal aquifers (Mabrouk et al., 2018). The overlapping of seawater and groundwater degrades and increases pressure on already limited freshwater resources and supplies. Sea level rise threatens industrial facilities, tourist resorts, infrastructure, and natural and cultural heritage. Port facilities can be subject to submergence, impeding the import and export of goods and products, as well as their production inputs.

- The decline in agricultural production affects both inland and coastal areas. The temperature rise and the increased variability of precipitation caused by climate change is likely to decrease precipitation and aggravate drought, with an adverse impact on rainfed agriculture. Crop yields are expected to drop by 30 percent with a 1.5 to 2.5 °C increase in temperatures, and by 60 percent with a 3 to 4 °C increase. Some estimates indicate that agricultural output in the region as a whole may decline by 21 percent by 2080, with a decline of up to 40 percent in parts of North Africa (Mallah et al., 2019). The limited availability of fertile agricultural land in the region makes the erosion and degradation of low coastal areas particularly alarming, as seawater intrusion affects the soils and groundwater, as well as agricultural activity and productivity. Egypt is expected to lose up to half of its sandy coastlines and fertile delta. The percentage is likely to be even higher in countries like Saudi Arabia and Libya (Vousdoukas et al., 2020). The decrease in production and availability of food commodities will also affect food processing. This is particularly worrying given the export-oriented policies and the high dependence on imported foods, in a context where the world's major food exporters will themselves have to adapt to drought.
- Climate change is widely acknowledged as a driver of migration. "Climate migrants" move to urban areas in search of income or employment opportunities, to cope with the intensification of the effects of climate change and environmental degradation and the decline in agriculture production. It is often difficult to draw the line between different categories of migrants expelled by land grabbing deals, large infrastructure projects, urban renewal programmes, internally displaced people, and refugees fleeing conflict. But addressing climate migration provides a neutral entry point to promote rights-based and sustainable territorial development.
- Climate change impact on *health* is increasingly visible in the region.
 - » In addition to projected temperature increases, night-time temperatures in cities are expected to rise an additional 3 °C because of the urban heat island effect, which, combined with the poor air quality of cities, will increase health risks (Mallah et al., 2019). Heat waves cause death directly through heat-related illnesses or indirectly by aggravating pre-existing heat-sensitive medical conditions.
 - » Inadequate or low-quality water supplies or storage conditions increase the risk of waterborne diseases such as diarrhoea, typhoid, hepatitis, dysentery, giardiasis, bilharziasis, leishmaniosis, schistosomiasis and cholera.
 - » Vector-borne diseases closely related to temperature and humidity conditions, such as malaria, dengue fever, Rift Valley fever, and West Nile virus, are also expected to spread, re-emerge in previously endemic areas, or emerge in previously unaffected areas and countries.
 - » In cities with joint storm and wastewater drainage systems, flash floods can lead to public health disasters because of the overflowing of heavily polluted floodwater. For example, inadequate drainage contributed significantly to the 2009 flash flooding in Jeddah, Saudi Arabia, where more than 90 mm of rain, equal to twice the yearly average, fell within four hours.
 - » Extreme weather events can also have psychological impacts due to loss, social disruption, displacement and repeated exposure to natural disasters.
- Land degradation is defined as the "reduction or loss, in arid, semi-arid and dry subhumid areas, of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or range, pasture, forest and woodlands" (UNCCD, 1996). Extreme weather conditions, particularly drought, and human activities are among the main factors contributing to land degradation which, if not managed or mitigated appropriately, can lead to reduced food production and livelihood opportunities, and increased migration and conflict. Looking into the root causes of land degradation, land tenure insecurity can lead to implementation of unsustainable short-term land and natural resources management strategies, while weak and inequitable land and resource governance (together with a dysfunctional land management

system), further exacerbate land degradation patterns through unsustainable land use planning and natural resource exploitation.

→ Tourism is very sensitive to climate change, as climate has an impact on many of the resources it depends on, such as biodiversity, landscapes, and water quantity and quality.

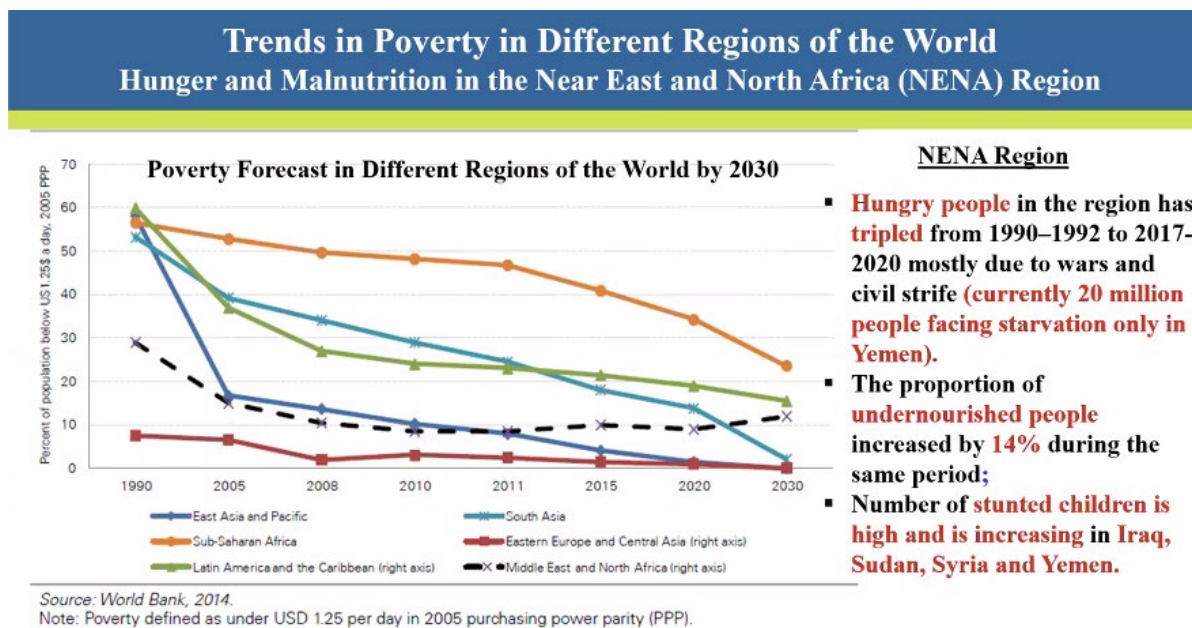
Droughts, desertification and land degradation affect most countries, with droughts increasing in frequency, intensity and duration. Rising temperatures increase drought severity due to increased evaporation. Droughts contribute to a reduction in the amount of dam water and reservoirs and leads to a shortage of the hydropower generation used in various fields, including industry. They also exacerbate desertification, land degradation and poverty, and increase the frequency of sand and dust storms. The challenge for the region is therefore to figure out how water security and food security can be improved with less available water and land, and more fragile ecosystems, while still providing a decent and healthy life for the people of the region. Hitherto, the awareness of environmental issues within the region has not been widely acknowledged, leading to a poor response to international environmental standards. Furthermore, there is a lack of, and weak enforcement of environmental legislation and regulations for the protection of the natural environment and biodiversity.

1.5 POVERTY AND VULNERABILITY

Although largely a middle-income region, poverty and vulnerability affect a large and growing proportion of the population (see Figure 4). The Middle East is one of the most unequal regions in the world, with a top decile income share as large as 64 percent, both between countries (oil-rich or not) and within countries. The NENA region is the only region in the world where poverty increased between 2011 and 2016 and is projected to increase even further by 2030. Hence, as many as 17 percent of Egyptians, 15 percent of Yemenis and 10 percent of Moroccans have consumption levels which are no more than 50 cents per day above the international line of USD 2 per day, suggesting a high vulnerability to economic shocks (World Bank, 2018).

The increasing vulnerability of the population is alarming in a region that witnesses frequent conflicts and natural disasters, and which suffers from major natural resource constraints, especially water supply. This puts enormous pressures on cities to deliver infrastructure, services, housing and jobs to meet the growing demands and needs of the urban poor. Migrants (including labour and climate migrants) usually end up in overcrowded and underserved settlements or in remote urban areas that lack basic infrastructure, social services and connectivity to labour markets. They are denied access to formal job opportunities and social protection systems and are excluded from the urban advantages that they are seeking in cities. They can only establish themselves in the informal sector where they have limited workers' rights. Migration has widened social inequalities and is a key dimension in the urbanization of poverty.

FIGURE 4. TRENDS IN POVERTY IN DIFFERENT REGIONS OF THE WORLD



Source: World Bank Group & International Monetary Fund. 2015. Global Monitoring Report 2014/2015 : *Ending Poverty and Sharing Prosperity*. Washington DC, World Bank Group. <https://openknowledge.worldbank.org/handle/10986/20330>
 Adopted from World Bank Open Data. <https://data.worldbank.org/>

1.6 CONFLICTS AND DISPLACEMENT

These challenges are aggravated by the protracted nature of conflicts and the resulting large-scale damage and massive displacement in some sub-regions and countries. The region is home to the largest refugee population in the world. According to the UNHCR and UN Population Division, the region hosts more than 40 million international migrants out of which 13.8 million are intraregional (UNDESA, 2019). In 2020, there were over 14.5 million IDPs (UNHCR, 2020; IDMC, 2020). The most vulnerable (including those most vulnerable to climate-related diseases), are the internally displaced, migrants, those with low socio-economic status, dwellers in low-lying lands and informal settlements, and members of specific occupations, such as construction workers operating in the open air under extreme weather conditions.

1.7 IMPLICATIONS OF URBANIZATION

Additional and associated urban-related challenges include: unsustainable land-use patterns, and a lack of effective urban planning and management of the urban growth; low-density urban sprawl that puts a strain on already inadequate infrastructure and services; a shortage of affordable housing; widespread informal settlements, hosting over 30 percent of urban population in the region; increased poverty and social exclusion; wealth disparities; youth unemployment; gender inequality; unequal access to land and property; air pollution; waste management; traffic safety and congestion; unsustainable patterns of water and energy consumption; and climate change.

The absence of an integrated system for solid waste and wastewater collection, treatment and safe disposal in several cities has led to health and environmental problems. This is clearly related to water security and hence food security. The disposal of urban waste fluids in nearby open surface water bodies is not only the main source of water pollution, but also threatens the livelihoods (for example, lake fisheries) of many families and important ecosystem services. In the city of Alexandria, Egypt, 65 percent of urban industries disposed of their waste fluids in a nearby lake. Lake fisheries produce 52 percent of the nation's total fish production and provide employment for 53 000 anglers (FAO, 2002). However, access to services, infrastructure, health

and education, while variable between countries and frequently insufficient and inadequate, is better in cities than in rural areas.

Overall, NENA countries are lagging behind in implementing much-needed economic policies and governance reforms. These are critical to improve the investment climate and address the inefficiencies (including the widening disparities between rural and urban areas), caused by a large and inefficient public sector, and a relatively non-dynamic private sector.

1.8 DIRECT AND INDIRECT IMPACTS OF THE COVID-19 PANDEMIC

When COVID-19 struck in early 2020, many countries were still facing food insecurity and malnutrition, inadequate access to water and sanitation in both urban and rural areas, and high child and maternal mortality, as well as major security threats, including armed conflict and the spread of terrorism and armed conflict. The impact of COVID-19 on vulnerable populations has been disproportionate, as migrants and refugees, the poor, homeless people, the elderly, informal settlements, people with disabilities and socially marginalized groups all face heightened levels of exposure and vulnerability, making it important to identify those vulnerable groups and tailor protective measures to support them during the response and recovery phases.

Population densities in some NENA cities made the implementation of physical distancing difficult. The health crisis confirmed the urgency of ensuring sufficient access to water (in particular, the marginalized neighbourhoods) to prevent the spread of pathogens and adopting appropriate hygiene practices, such as regular handwashing. But the pandemic is much more than a health crisis and stresses every one of the countries it touches. The response to COVID-19 in the NENA region has shown substantial variations in the measures adopted by governments and in the reactions of citizens to the crisis. The potential economic and political effects of COVID-19 on the region are worrisome, especially after a decade of instability and radical transformation.

Unemployment in the region was projected to increase by 1.2 percentage points due to COVID-19, suggesting that the region could have lost at least 1.7 million jobs in 2020. The Sudan, the Syrian Arab Republic and Lebanon recorded the highest increase in the cost of the food basket and reached “crisis” levels as the cost of the food basket increased by 167 percent, 135 percent and 116 percent respectively since January 2021. Libya recorded an “alert” level with an increase of 21 percent. The Islamic Republic of Iran recorded an alarming annual food inflation of 40.4 percent in October 2020, driven by the compound effect of sanctions and the pandemic (UN-Habitat, 2020b).

The severity of this complex crisis is generating significant discussions on the sustainability of development policies in the NENA region as it has clearly shown the weaknesses of the present system.



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2. CITIES AND NEIGHBOURING TERRITORIES IN THE NENA REGION: A TOPIC FOR FURTHER EXPLORATION

2.1 OVERVIEW

Territorial organization varies from country to country but, despite efforts towards more comprehensive and inclusive strategies in the region, limited attention has been given to such approaches. As in most countries worldwide, there is a policy disconnect between rural and urban areas. While ministries of agriculture concentrate on national food production and export agriculture, urban development focuses on services to the urban population, upgrading of slums, alleviation of urban poverty, integration of migrants and municipal development.

Leading urbanization stakeholders typically do not include institutions operating in rural areas. The same has been true for partnerships on food security in which municipalities and local governments are still not officially represented. As a result, comprehensive urban strategies are limited to urban areas, while food security programmes and policies often overlook the role of cities and urban consumers.

Rural and urban populations nonetheless face common problems. The exponential demand from urban consumers increasingly diverts water sources and fertile land at the expense of rural users, generating conflicts and eventually contributing to the collapse of family agriculture and rural urban migration.

At the same time, there has been an increase in agricultural areas devoted to waterdemanding crops, in particular cereals, in response to a “vision of food security that aims to reduce dependence on imports, particularly for cereals” (OECD and FAO, 2018). Reforms to the agricultural sector and “modernization” efforts in the countryside throughout the 1990s and 2000s have been geared to incorporating local food markets into the global food system. Agribusiness groups have therefore played a prominent role in the waterscape of the NENA region. Backed up by land reform policies, vast areas of rural land have been transformed into large, single farms, forcing smallholders off their plots (see the Toshka project in the New Valley, Egypt, USGS, 2022). These “modernization” policies have largely excluded smallholders, along with social benefits such as subsidies (OECD, 2018). As more agricultural land is owned by fewer people, water supplies are similarly affected, with large, single farms increasingly consuming a larger share of water supplies. Furthermore, these areas have been detached from nearby cities as they seek to satisfy the needs of the international rather than the domestic market.

This points to a complex panorama in which national agriculture policies conflict with water security policies. Water is essential to all aspects of life, such as transport, agriculture, industry and animal husbandry, and contributes to connecting societies and the articulation of food security with water security. Countries have fought over water resources for centuries, as water is essential to achieve food security, and water security is likely to become increasingly problematic due to the shortage of water resources (uncertain freshwater resources with increased groundwater over-exploitation and depletion of fossil resources), population growth, desertification and climate change.

2.2 FOOD SECURITY, NUTRITION AND AGRICULTURE

The region’s food systems are influenced by the shift in urban diets and food habits that are increasingly dependent on food imports, and will be further challenged by the fast pace of urbanization. Urban diets and food practices, often seen as more modern, also influence rural diets and food practices.

Urban areas in some countries, particularly poorer countries, have higher overweight and obesity rates among adults and children as well as higher prevalence of diet-related noncommunicable diseases (NCDs) compared to rural areas. Any transformation towards sustainable food systems inevitably means addressing the complexities of growing urban populations, while striving towards multi-sector food systems outcomes.

2.3 URBAN SPRAWL

The ever-growing urban sprawl, triggered by overpopulation and urbanization, as well as political decisions associated with the dominance of individual transport, challenges rural and urban landscapes, environmental health and lifestyles, and puts pressure on natural resources (such as land, soil, water and biodiversity) in urban, peri-urban, rural and “natural” environments. For many people in cities like Mosul, Iraq, agricultural land has become the only viable option to access housing. Urban expansion overtakes agricultural lands, orchards and ecological areas, and increases the demands on roads and infrastructure, which in turn claims more natural resources and generate pollution. This is particularly acute in arid and semi-arid areas, since human settlements and agriculture both require water and therefore develop in the same (and often limited) geographical area. The urban paradigm embraced in the region as a whole has so far paid limited attention to green infrastructure, and has privileged car-oriented planning that neglects the provision of urban spaces for public use.

2.4 RURAL–URBAN INEQUALITIES AND MIGRATION

Rural–urban migration in the region (and consequently often unsustainable and unplanned urban growth), is due to lack of decent employment and educational opportunities, weak economies, worsening quality of life, soaring living expenses, lack of well-targeted social protection programmes, unequal distribution of public resources, rural–urban disparities in services and opportunities, repression of freedoms, and governance structures that reinforce rather than combat social exclusion and discrimination. In many countries in the Arab region, rural–urban disparities in access to health care are an important problem, especially as rural areas often face a more precarious economic and demographic situation, with more people at risk of poverty and social exclusion. This situation is also due to the loss of habitat from both environmental and human-made factors, stemming from the exploitation of natural resources, land grabs, sales and privatization of public assets, loss of fertile land, food insecurity, government neglect, massive infrastructure projects and gentrification-induced displacement. Despair and loss of hope in one’s country or place of origin have compelled millions of people to leave their homes in search of a decent life elsewhere.

Inequities, however, also impact the urban poor, refugees and deprived and marginalized communities, as the determinants of urban health are systematically unequal. The urban poor frequently experience worse health outcomes than their rural counterparts. Access to, and use of health services are major problems for the health systems of Arab countries. Challenges related to transport, geographical and socio-cultural disparities, and urban–rural inequalities all impede the access to, and use of health services, despite significant changes over the past three decades.

2.5 CLIMATE CHANGE

Climate change is having significant and largely negative impacts on cities in the NENA region by displacing rural populations and escalating urbanization pressures, increasing food imports and raising food prices, exacerbating water poverty, and increasing energy demands for cooling and desalination, ultimately raising the cost of living in cities. Urbanization, in turn, increases greenhouse gas emissions through increased energy demand for electricity and transport.

Closely related to all the challenges facing the region (from the combined impacts of climate change, urbanization, migration, food systems and rural transformation), is the degradation of land and ecosystems, and the ecosystems’ underlying natural resource base of biodiversity (including arable soil and agricultural biodiversity or agrobiodiversity). Apart from the urbanization pressures, areas most vulnerable to flooding and sea level rise (along waterways and coastal areas) are also the most fertile and have the most productive food-producing soils. More than any other region in the world, ecosystem health necessary for ecosystem services (such as water, food and other nature-derived products), is integral to urban sustainability in the NENA region.

2.6 INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Despite decades of increasing internet penetration, the proliferation of smartphones and an expanding internet culture inequalities in the Arab world are pronounced, and by some estimates, have worsened (Alvarado, Assouad and Piketty, 2018). When controlling for potentially confounding variables, the disadvantaged segments of society like women, the elderly, the less educated and lower-income individuals are less likely to use the Internet than their male, younger, higher-educated and higher-income counterparts. Although no data exists on the urban–rural digital divide, the gap between segments of society “with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet” (Raz, 2020) is most likely an element of urban–rural differentiation. As society has grown reliant on technology and the Internet, those lacking digital literacy and access to ICTs face greater challenges and even outright exclusion from integrating into an increasingly digitally dependent economy and society.

2.7 LEGISLATION AND GOVERNANCE FRAMEWORKS

Facing all these interlinked challenges, governance and decentralization mechanisms in the NENA region are weak or absent. The public sector amounts to three quarters of the workforce and civil society, and non-governmental actors are largely excluded from decisionmaking and consultations.

Technical bodies in most NENA states develop urban and other development policies and plans, while local authorities concentrate on the implementation of local plans only. Local authorities rely on funds from central or regional governments to finance their investments and activities, which leads to partial erosion of the benefits of participatory local administration. In Tunisia and Jordan, local government expenditures (as a share of total government expenditures) are 3.1 percent and 5.5 percent respectively (UN-Habitat, 2012). The limited fiscal transfers and human resources at hand and the limited financial and political autonomy severely impede local government capacity to finance, deliver and manage urban services.

The NENA region also faces a deficit of accurate and comparable data to assess, plan, implement and evaluate sustainable development at territorial level. Existing information systems are not disaggregated at territorial level, having been developed on a sectoral basis and are not articulated, so major gaps exist (together with an overall lack of environmental observatories). Analyses to support decision-making processes for integrated territorial development are not available.

This adds to important administrative and legislative challenges, such as poor coordination and overlap between the different levels in development and planning fields, poor monitoring and enforcement of legislation, and planning and construction legislation that lags behind urban development and lacks participatory approaches.

There are gaps and contradictions in legislative and regulatory frameworks. Sustainability is not taken into consideration in legislation. Informal or customary forms of land tenure are rarely recognized, and without a registered deed, title or lease, the owner cannot use the land as collateral to improve property or start a business. For an emerging market, this untitled land is a major impediment to economic development. Planning and construction legislation have not taken these challenges into account and adapted to the changing urban context in the region.

2.8 LAND ADMINISTRATION

Several governments in the NENA region recognise the importance of, and need for, a land administration reform. Reforming the land administration system is crucial to promote social and economic development and ensure the sustainable use of land and other natural resources, now and in the future. The functioning of the land administration has often been hampered by outdated and inadequate legal and institutional frameworks, overlapping mandates, lack of communication and coordination among land-related agencies, limited capacity and lack of comprehensive national strategies that incorporate socio-economic aspects, lack of transparency and limited access to land-related information. Legal and institutional frameworks are

often fragmented and still shaped on the Ottoman and colonial laws, resulting in policy gaps that jeopardize people's tenure security, and particularly that of the most vulnerable such as migrants, displaced people, the poor, women, and minorities.

Securing land tenure of all people is pivotal for fostering, among others, food security, socio-economic development, peace and stability in the region. Further, when people have land tenure security, they are more prone to invest in land, contributing to mitigating land degradation and climate change effects by promoting land resource conservation and adaptation. Secure tenure rights also play a direct role in increasing the biotic storage of atmospheric carbon (Unruh et al., 2019). In addition, people, or group of people, with registered land rights can use land as a collateral to access financing opportunities to upgrade their homes, or start or expand their businesses, while enabling governments to collect property taxes.

In countries where systems for registering land and property are in place, these are often inefficient and outdated, prone to duplications, and require weeks or even months to register a transaction. Further, individual land ownership is often considered as the only secure legitimate right, while a broader spectrum of rights can be found along the continuum of land rights, including customary rights, and should therefore be recognised and registered, at least as a transitional measure while more long-term measures are implemented. As a consequence, the legitimacy of official land and property records are often questioned, resulting in a lack of trust, negatively impacting their use for bank loans, investment opportunities, and land and property markets. Kadaster International estimates that, for example, 90 percent of land transactions in Egypt, Lebanon, Jordan and Palestine are informally undertaken (Second Arab Land Conference, 2021) Although some countries, particularly in the Gulf, have already shifted towards a digitalized land and property registration system, many others are just starting, and they are still far from having a digital, complete, multipurpose land and property registration system that can provide tenure security and support land use planning and natural resource management.

In the NENA region, the land sector is further obstructed by corruption. This can involve the land and natural resource market, foreign investments, and the justice system dealing with land conflict. However, electronic and digital archiving systems have the potential of strengthening land tenure security and also increasing the transparency of land transactions combating corruption and illegal land and property transaction.

2.9 INFORMAL SETTLEMENTS

As mentioned above, lack of trust in land registry institutions, and cumbersome, bureaucratic and lengthy procedures compounded by rigid planning and building codes and standards contribute to pushing large parts of human settlements into informality. In the NENA region, as in can be observed in other parts of the world, informal settlements are often found on the outskirts of major cities, along the main roads in rural areas, and close to bodies of water. The meaning of "informal settlement" is usually associated with the definition of slums (United Nations Human Settlements Programme, 2003), although this can differ from country to country. In the Syrian Arab Republic, for example, "informal settlements" refer to all those settlements that have developed outside of the areas designated for development in master plans or without the required building permits.

The issue of informal settlements, although widespread, is often overlooked and requires to be urgently addressed by governments. Informal settlements are the response to a need for affordable adequate housing, resulting, among others, from rapid urbanisation and migration. The adoption of a fit-for-purpose land administration approach and the incremental registration of land rights will play a pivotal role in regularizing informal settlements, once eligibility criteria are set by the governments. This will include the relaxation and simplification of certain administrative norms and an overall enhancement of the system's functionality. Regularizing informal settlements and preventing the development of new ones will not only contribute to the achievement of a broad range of basic human rights but will also help combat environmental concerns such as land degradation, soil and water pollution, soil erosion. Further, regularizing informal settlements will allow dwellers to be included in adaptation or reconstruction plans, increasing their resilience to current and future climate change effects, disease outbreaks, conflict and other issues.

2.10 LAND FRAGMENTATION AND LAND CONSOLIDATION

Unclear land tenure policies and weak land-use planning can lead to land fragmentation. Land fragmentation refers to disconnected land plots spread over a wide area but belonging to the same owner. At times, the fragmentation of agricultural land into small-sized holdings can be so severe that they can no longer be used for crop production. This presents a great challenge to sustainable land use and to planning for agricultural development. Further, land fragmentation can limit the ability of farmers to intensify production and increase the profitability of their agricultural activities. This, in turn can negatively impact environmental degradation and soil erosion, creating a vicious cycle.

To reduce the exposure to land fragmentation, countries in the NENA region are adopting several strategies and action plans, the description of which is beyond the scope of this paper. Among them, land consolidation has proven to be an effective tool to combat land fragmentation. In Tunisia, for example, four mechanisms of land consolidation were used by the Agricultural Land Agency (Second Arab Land Conference, 2021) to combat land degradation in the country:

1. legal (implementing laws aiming at protecting agricultural land);
2. institutional (through a plurality of institutions working on land consolidation);
3. financial (using public funding and funding from international conventions and institutions); and
4. technical (carrying out specific land consolidation activities).

2.11 COVID-19 PANDEMIC

Despite the challenges they face, local governments have always been on the frontline in responding to emergencies varying from natural to human-made. The sudden imposition of nationwide lockdowns in most countries in the world resulted in hundreds and thousands of migrant workers, most of them daily-wagers, losing their jobs. The crisis brought to public attention the vulnerability of informal sector workers in urban areas. With no means of employment, combined with the high cost of living in cities and cramped accommodation, many of them returned to their areas of origin. While the extent of the phenomenon varied between countries and cities, the loss of jobs in cities has triggered often significant “reverse migration” to rural areas. This can be both a challenge and an opportunity for rural areas and food security. Large influxes of returnees can put pressure on local food availability and natural resources, and the fear that returning migrants will bring the epidemic with them to rural areas. Returning migrants can also bring back knowledge and skills that can be used to modernize agriculture and revitalize rural economies. However, it is not clear how long those returnees will stay, and many may choose to migrate again as soon as the possibility arises.



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3. URBAN–RURAL LINKAGES FOR SUSTAINABLE TERRITORIAL DEVELOPMENT

The planning, policy and governance disconnect between urban and rural areas must be addressed. An integrated territorial approach could help identify mutual win-win opportunities for both urban and rural communities and address present institutional blockages and challenges enumerated previously. A shared understanding of territorial approaches is developing, based on many experiences that also incorporate urban–rural linkages. In many regions such as sub-Saharan Africa, Latin America and Europe, territorial approaches to development that jointly address the urban–rural continuum are proving to be pathways to manage complexities arising from the multiple challenges that also face the NENA region. The differences observed in those examples are due partly to the difficulties of local authorities in collaborating across urban and rural jurisdictions at territorial level, and partly to the insufficient support to territorial development at national and regional level.

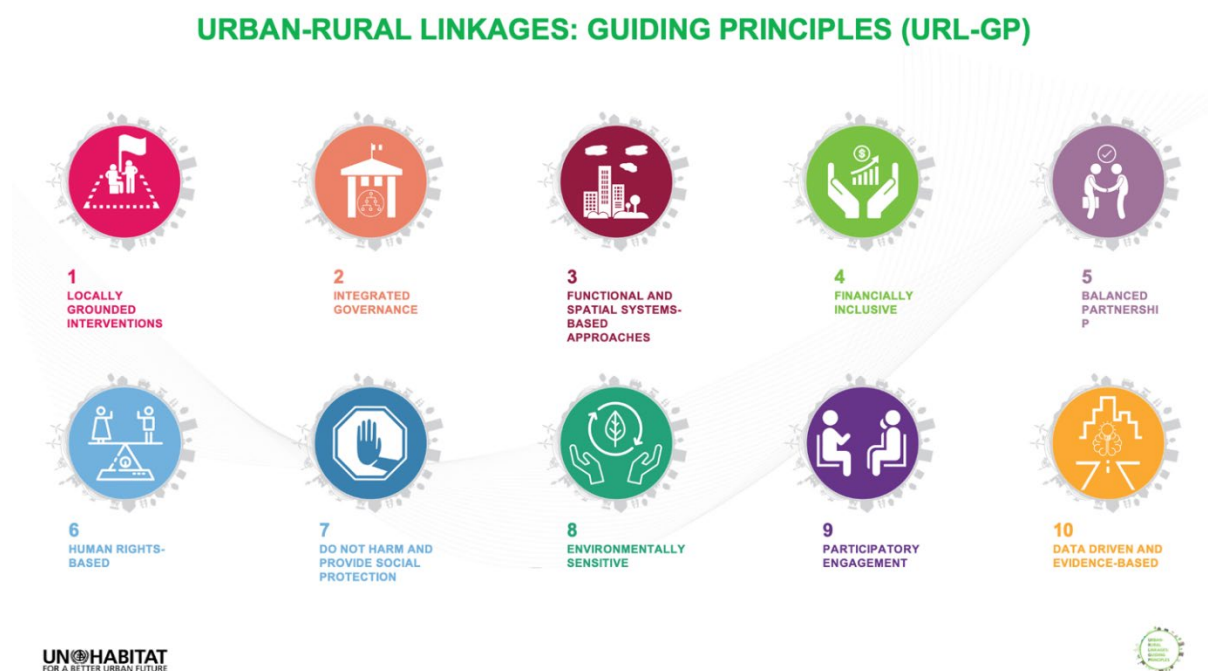
To assist national and subnational governments or local authorities in promoting functional and harmonious urban–rural linkages, UN-Habitat has recently initiated a global process to promote urban–rural linkages for integrated development in collaboration with international partners such as the Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD), the World Health Organization (WHO) and other United Nations agencies, as well as from international development organizations such as the Organisation for Economic Co-operation Development (OECD) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) among others. This process was recognized in several intergovernmental fora such as the 2018 United Nations Convention on Biodiversity Conference of the Parties (COP14) in November 2018 in Sharm-al-Sheikh and the first UN Habitat Assembly in May 2019 in Nairobi.

The urban–rural interface provides a lens through which to consider how cities interact with rural areas for food production, distribution and consumption, and, more specifically, the implications for sustainable use of land and water at a territorial level. Rural and urban populations are connected within a city region food system. Urban–rural linkages represent a socio-spatial arrangement of interdependence with reciprocal and repetitive flows of people, goods, natural resources, finance, information and services between specific rural, peri-urban and urban locations. Urban populations transform rural landscapes through demand-driven interactions to obtain needed water, land, energy, food, leisure, labour or connectivity. From this emerges the possibility of people- and place-based development along the urban–rural continuum, such as the promotion of urban–rural linkages through “functional territories” that help to reduce regional inequalities and increase resource efficiencies. Formulating and implementing policies, and planning interventions that reduce territorial inequality and strengthen urban–rural territories could generate better and more sustainable development results.

3.1 GUIDING PRINCIPLES FOR URBAN–RURAL LINKAGES

The 2030 Agenda on Sustainable Development and the New Urban Agenda call for new and inclusive strategies to better integrate rural and urban communities and spaces (United Nations, 2016). While local contexts are clearly specific in environmental, cultural and economic terms, a series of guiding principles can be operationalized at territorial level. One such set of principles, tied to practicable actions that grew from the global process convened by UN-Habitat is the Urban–Rural Linkages: Guiding Principles (URL:GP) and Framework for Action to Advance Territorial Development.

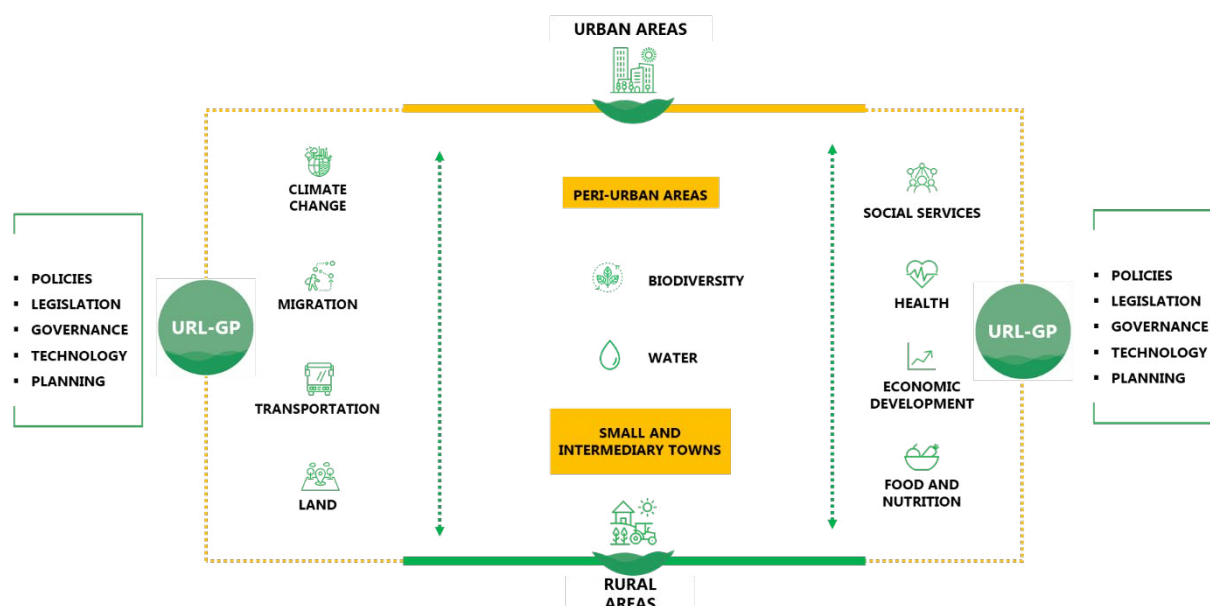
FIGURE 5. URBAN-RURAL LINKAGES GUIDING PRINCIPLES



Source: UN-Habitat, 2019. *Urban-rural linkages: guiding principles and framework for action to advance integrated territorial development.* Nairobi, UN-Habitat <https://unhabitat.org/urban-rural-linkages-guiding-principles>

The ten guiding principles (Figure 5) reflect not only a set of interconnected principles that are both aspirational and reflective of normative policy that most governments have already agreed to, but they also represent different enabling or thematic entry points. It is through this variability of entry points that the Framework for Action, with 11 fields of action, provides even more concrete guidance for different levels of governance from the national to local. These universal principles and possible entry points could respectively be adopted and adapted in the context of the NENA region, offering specific actions that could be taken by relevant actors in the urban-rural nexus. This includes sectoral context adoption related to the ongoing conceptualization of a series of thematic guides by UN-Habitat (see Figure 6), including food systems and nutrition, and biodiversity, among the other sectors mentioned in the NENA context discussions previously mentioned. Figure 7 shows how the overarching framework of the URL:GP is guiding UN-Habitat's normative work for different sectors and contexts in the urban-rural continuum with a series of thematic guides. This includes the actionable tools and methodologies developed by UN-Habitat and partners that are relevant to the respective government or non-government actors. The guiding principles also form the overall framework of UN-Habitat implementing the urban-rural linkages resolution that was adopted by Member States during the earlier mentioned first UN-Habitat Assembly in 2019.

FIGURE 6. CONCEPTUALIZATION OF A SERIES OF THEMATIC GUIDES



Source: UN-Habitat. 2019. *Urban Rural Linkages: Guiding Principles. Framework for Action to Advance Integrated Territorial Development*. Nairobi, UN-Habitat. <https://unhabitat.org/sites/default/files/2020/03/url-gp-1.pdf>

3.2 NATIONAL COMMITMENTS AS ENTRY POINTS FOR TERRITORIAL APPROACHES AND URBAN–RURAL LINKAGES IN NENA REGION

The severity and complexity of the challenges faced by the NENA region has raised a strong political commitment to the 2030 Agenda for Sustainable Development and the Paris Climate Change Agreement. Heads of states and governments participated in the United Nations Summit on Sustainable Development in New York in 2015 and the United Nations Climate Change Conference (COP21). The League of Arab States has adopted a series of strategies, plans and programmes for sustainable consumption and production (in 2009), food security (in 2010 and 2017), water security (in 2012), climate change (in 2012), disaster risk reduction (in 2012 and 2018), health and environment (in 2012), renewable energy (in 2013), housing and sustainable urban development (in 2016 and 2019), and the environmental dimensions of the SDGs (in 2017). Although urban–rural linkages are not explicitly mentioned in these documents, they appear clearly between the lines as an important dimension. These different agreements are also significant contributions to a potential sustainable territorial development strategy, as their recommendations are in line with most of the URL:GP and help to identify possible allies and partner institutions.

The Arab Strategy for Housing and Sustainable Urban Development 2030 (LAS, 2016), adopted in 2013, touches on urban–rural linkages in several of its objectives:

- ➔ Achieving Equity and Social Integration through achieving rural–urban balanced development and managing migration and displacement. This foresees increasing support and raising the efficiency of services in rural areas to reduce migration to cities, providing job opportunities outside the primary cities to reduce immigration, implementing economic and social empowerment policies and relying on civil society organizations, and considering rural areas in the national urban policies.

→ Planning integrated and sustainable human settlements in all states through exploiting uninhabited areas in the development process, balancing the hierarchical structure of human settlements at national level, providing open and safe public spaces and developing inclusive plans for cities to achieve green development requirements and quality of life. This requires formulating national policies for the development of land, cities and regions, stimulating the provision of serviced land to all and linking them to the plans and employment opportunities, developing plans for medium and small cities and villages through participatory approach, linking funding mechanisms to strategic spatial plans, and increasing public and open spaces in existing and new cities.

Several regional and inter-regional dialogues have addressed the need for territorial approaches.

BOX 3. LOCAL CLIMATE ACTION IN THE ARAB REGION: LESSONS LEARNED AND WAY FORWARD

A workshop was co-organized in 2019 by UN-Habitat, the Global Covenant of Mayors for Climate and Energy, Acting for Climate in Southern Mediterranean (CLIMA-MED), Centre for Environment and Development for the Arab Region and Europe (CEDARE), and Regional Centre for Renewable Energy and Energy Efficiency (RCREEE).

It insisted on the need to reconcile the global environment with local development issues and therefore on the importance of multi-level governance (MLG) and synergies between populations, national or local institutions to exchange knowledge and expertise and coordinate their practices.

Adaptation and mitigation measures require flexibility to adapt to rapid changes and the possible negative impacts of measures taken through development policies and projects, and therefore constant monitoring.

Source Mallah, F.E., Abdelrehim, A., El-Magd, I.A., et al. 2019. *Local Climate Action in the Arab Region: Lessons Learned and Way Forward*. Nairobi, UN-Habitat. https://www.isdb.org/sites/default/files/media/documents/2022-02/UN-Habitat_Local_Climate_Action_Final_October19.pdf

In a similar vein, FAO, the International Organization for Migration (IOM) and UN-Habitat organized a joint regional workshop on Strengthening Migration Governance across the Rural–Urban Continuum.

BOX 4. REGIONAL WORKSHOP ON MIGRATION GOVERNANCE ACROSS THE RURAL-URBAN CONTINUUM

The dialogue brought together the ministries of agriculture, local development and migration for the first time, as well as sub-national and municipal level representatives, in addition to stakeholders from civil society, academia and development partners.

Discussions encompassed three main themes all of which have important territorial dimensions:

i) conflict-driven, forced migration across rural areas; ii) migration and rural development; and iii) environmental and climate-induced migration.

The workshop concluded that there is significant room for greater policy coherence around migration issues and integrated territorial development that addresses the adverse drivers of migration while capitalizing on the benefits of human mobility. Partnership and coordination across geographic scales were highlighted as a key precursor for multi-sector, multi-stakeholder and more spatially integrated policies and programmes that address migration, including its rural dimensions.

Source: Khechen, M. 2018. *Migration and inclusive cities: A guide for Arab city leaders*. First edition. Nairobi, Kenya, UN-Habitat.

3.3 INTEGRATED WATER MANAGEMENT ACROSS THE URBAN–RURAL CONTINUUM

Joint management of surface and groundwater is essential to increase their combined potential to store more water while managing flood risk. This can then maintain water supplies for cities and farms, reduce conflict over competing uses for water and improve the environment. There is significant potential to use wastewater for agriculture as well as urban farming, but water testing and appropriate legislation need to be better developed to fully tap into this potential. Management of wastewater can also reduce pollution of open surface water bodies and contribute to water security of both consumers and producers in urban and rural areas, therefore contributing to the improvement of livelihoods and ecosystem services.

Local water users need to bring groundwater use to sustainable levels by 2040. Groundwater banks recharge aquifers during relatively wet years, so that the water is available for use in dry years. Recharge can also be done intentionally to restore groundwater levels and to store water for later use. Recharge sources include surface water imported from other regions, local floodwaters and recycled water from both rural and urban areas.

BOX 5. JEDDAH MUNICIPALITY WATER MANAGEMENT

Figure 7. An aerial view of Quwaiza in the aftermath of floods in Jeddah, 25 November 2009



© Ghazi Al-Mahdi. <https://www.arabnews.com/node/1016971/saudi-arabia>

The city of Jeddah has consistently faced water challenges and disasters. In 2008, private entities won a seven-year water and sanitation services management contract, with a view to upgrade and modernize the water and sanitation services and improve the quality of the service delivered to users. The 2009 flooding caused 150 casualties, as intense rain dumped 90 mm of rain in four hours over an area that normally receives 45 mm per year.

In 2012, Jeddah Municipality launched several permanent flood and rainwater drainage projects, including new dams, drainage channels and a new floodwater drainage system at the airport. In 2019, the Saudi Government completed a comprehensive rainwater drainage project in Jeddah, and the Minister of Environment, Water and Agriculture signed agreements to build the Jeddah 2 Independent Sewage Treatment Plant. This is part of a national plan targeting water production and sewage treatment projects being offered to investors in various regions of the kingdom. The case of Jeddah Municipality showcases participation of the private sector in economic development through public-private partnership in sustainable water management.

Source: Al-Shutayri & Al-Juaidi, A.E. 2019. Assessment of future urban water resources supply and demand for Jeddah City based on the WEAP model. *Arabian Journal of Geosciences* 12(14). DOI: 10.1007/s12517-019-4594-7

Replenishing water storage and aquifers will require capturing more water from large or frequent storms, and therefore offers a simple, rapid way to enable water users to capture water individually and collectively from short or intense showers in the short time spans in which it is available. Water storage can be used for groundwater recharge or environmental flows and therefore provide environmental services. Innovative solutions exist for urban settings to increase infiltration and storage of rainfall instead of only managing drainage. This requires an increase of natural infrastructures within and around cities.

More intense droughts or extended dry spells increase pressures to draw down surface and groundwater reserves. Groundwater aquifers have a much larger storage capacity than surface reservoirs and are an important security for droughts. Groundwater access and storage is therefore a priority, particularly for cities. In coastal areas, the active recharge of coastal aquifers under intensive use can also limit the risks of saltwater intrusion. In order to achieve this, actors in both urban and rural areas need to engage in joint planning. Negotiated agreements can get broad buy-in and tap local knowledge, experience and resources. It is important to plan for different hydrologic conditions and decide how surface water and groundwater should be managed in both wet and dry years.

Such watershed-level plans for managing water for ecosystems before, during and after droughts are essential to drought preparedness in at-risk territories. Appropriate management of wastewater also exemplifies how different economic sectors, such as urban industries and fisheries, in both urban and rural areas are inextricably connected. Therefore, multi-sectoral and multistakeholder approaches across the urban–rural continuum are needed.

Both water managers and growers need guidelines for on-farm recharge practices that protect water quality and there is significant potential to increase active recharge if local agencies adopt better incentive systems and water accounting. Leveraging local management tools — including increased use of groundwater on farms during droughts — can lead to augmented river flows which can be traded to downstream agricultural and urban communities who face shortages during dry years. During dry years, local farmers switch from surface water to groundwater, enabling higher river flows downstream. This water is subsequently sold to downstream users, generating local revenues for water infrastructure and mitigating shortages. A surface and groundwater water market can thus help manage supplies by allowing buyers and sellers to trade water through short- and long-term leases. Short-term transfers lessen the economic impact of shortages during droughts by shifting water to activities and places where the lack of water will be more costly. Longterm and permanent transfers accommodate geographic shifts in water demand as the economy changes and the population grows.

This can only be done if information is shared about water availability and there is monitoring of how much water that can be safely traded without harming the environment or other legal water users. Trading adds flexibility to the state's water allocation process. Moreover, the revenue generated by water trades can help fund flood protection upgrades in high flood risk areas. Enabling storage and conveyance facilities to work better together will require greater operational flexibility and more advanced weather forecasting. These measures would not only allow more water to be captured for recharge but would also help the state's water grid to better manage the higher winter and spring runoff that climate change is expected to bring.

Watershed planning may need to be complemented with bi-national partnerships and reframed within a broader river basin perspective to increase flexibility, and metropolises have a key role to play in such negotiations. Cities that share infrastructure across river basins can partner with farmers to pilot water trades to alleviate system-wide shortages by increasing the amount of water stored in reservoirs. Water exchanges can be tied to efficiency investments. But to scale up partnership opportunities, interested parties will need to address a range of legal, financial, environmental and operational complexities. The state can help by assessing regional needs, making trading rules more flexible and facilitating funding arrangements.

Increasing climate volatility is heightening concerns about future droughts. In this context, shifts in water landscapes can generate new opportunities for collaboration between urban and agricultural interests. For urban areas, threats of future droughts are shifting priorities to resilience and sustainability.

The COVID-19 crisis has further drawn attention to the importance of recognizing and properly managing the linkages between water quality and food safety and the application of sound principles of adequate waste (wastewater and manure) management, environmental sanitation, hygiene in markets and food handling; personal hygiene and established food safety practices will reduce the likelihood that harmful pathogens will threaten the safety of the food supply.

3.4 REVISITING TRADITIONAL DIETS FOR MORE SUSTAINABLE FOOD SYSTEMS

Traditional diets are usually the result of food practices which have evolved over centuries, aimed at subsistence and resilience and based on existing biodiversity and low-input practices.

BOX 6. TOWARDS SUSTAINABLE MEDITERRANEAN FOOD SYSTEMS

The Second World Conference on the Revitalization of the Mediterranean Diet was organized by the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), FAO and the Union for the Mediterranean (UfM) in May 2019 in Palermo, Italy, and included participants from Algeria, Egypt, Lebanon, Morocco and Tunisia. It recognized the Mediterranean diet as a sustainable healthy diet, which is acknowledged worldwide not only as a model for healthy diets but also as an expression of the culture, lifestyle and farming systems of the Mediterranean people. Revitalizing the Mediterranean diet can therefore reorient territorial food systems through increased demand, linking food consumption and production for more sustainable food systems in the Mediterranean bioregion. The conference recommended setting up a collaborative multistakeholder sustainable food systems platform in the Mediterranean.

Source: CIHEAM Bari. 2019. Strategies Towards More Sustainable Food Systems in the Mediterranean Region: the Mediterranean Diet as a Lever for Bridging Consumption and Production. Second World Conference on the revitalization of the Mediterranean Diet, 15–17 May 2019. Palermo, Italy, CIHEAM Bari. https://www.iamb.it/uploads/attachments/1164/Conference_REPORT.pdf

Municipalities and local governments are best placed to promote sustainable diets through public procurement and short food chains, particularly organic foods. These can create more and better jobs in both rural and urban areas, including in the informal sector, and especially for small-scale food processing and street foods, addressing climate change and resource scarcity as well as improving nutrition, health, and ensuring food security. For example, cities can play a leading role in the circular economy, as they produce waste that needs to be managed (dumped, treated and transformed), and could be recycled into agriculture production. Ecosystem services in rural areas can contribute to environmental health (providing cleaner air and water, as well as helping deal with heat islands) and help protect cities from floods.

3.5 CLIMATE ACTION

Climate change was identified as one of the six priorities of the Arab Strategy for Housing and Sustainable Urban Development 2030 (LAS, 2016). As with most complex issues, climate action is usually easier to plan and implement at subnational regional and local levels. At local levels, projects can be easily formulated, tested and readjusted to achieve the best outcomes and then scaled-up, replicated and adapted when their feasibility has been proven. Local actions are also easily customized to local needs, ensuring citizen participation and successful implementation, while being aligned with national policies, particularly where central government funding or support is needed.

Adaptation and mitigation measures are not limited to ecosystem services. They are part of the larger issue of sustainable local development that assumes that local people should have diversified livelihoods over the long term, particularly to prevent ecosystem degradation, and address and bring together some of the key challenges outlined at the beginning of this document.

Specific urban–rural related actions include the promotion of sustainable transport (including freight railway networks); renewable energy technologies (including recycling of waste, solar, wind, biomass); climate-smart agriculture that supports climate change mitigation; the rehabilitation of forest nurseries; the protection and promotion of biodiversity; the expansion of indigenous and multiuse species; improved use of water resources (improved irrigation, water storage, rainwater harvesting, upgrading of water distribution networks, wastewater treatment and reuse, deep groundwater reservoirs and increasing water availability, dams, installation of water tanks, pond construction, improved irrigation scheduling, reduced water leakage, water conservation and

desalination); integrated coastal zone management and land-use changes; identification and awareness-raising of health risks and adaptation of the health system to climate change; combatting water-borne disease; and setting up early warning systems.

3.6 GOVERNANCE FOR URBAN–RURAL LINKAGES

Interlinked and complementary governance at the national, regional and local levels (which are needed for city-level financing, decision-making and infrastructural development), is weak in the region. Enhancing urban–rural linkages would require local authorities to have greater capacity to coordinate planning and implementation of territorial strategies. The shortage of institutional and legislative structures in several NENA countries is one of the reasons for the increase of unplanned urbanization effects, given the limited coordination between the different ministries and institutions relevant to urban development at the central and local levels. There is a wealth of promising practices in the region which can generate experience-based evidence and inform appropriate strategies and policies at all levels. However, legislative and regulatory frameworks will need to be harmonized at territorial levels for more efficient urban–rural linkages.

The specific character and challenges of intermediary cities have, until recently, received limited attention. Their pivotal role in the achievement of more balanced approaches, with the reduction of territorial inequalities, makes it imperative that small and intermediary cities become more prominent within the localization processes of all global agendas. Governments throughout the NENA region have developed policies to channel investments into secondary cities to improve rural–urban economic linkages and foster more equitable development.

Reflective of this trend was the adoption of the Chefchaouen Declaration-Charter of Intermediary Cities of the World at the United Cities and Local Governments (UCLG) Forum on Intermediary Cities in Morocco (UCLG Forum on Intermediary Cities, 2018).

BOX 7. SMALL AND INTERMEDIARY CITIES FOR SUSTAINABLE TERRITORIAL DEVELOPMENT

At the first UCLG Forum on Intermediary Cities 2018, 250 participants from 40 different countries adopted the Chefchaouen Declaration-Charter of the Intermediary Cities of the World.

They noted that intermediary cities represent at least half of the world's urban population and that it was important to bring their common voice to the local, national and international levels to ensure global sustainability and territorial justice.

They insisted on their role in the structuring and territorial organization of the economy, as a space of mediation between the rural and urban and on the importance of rooting global development agendas in the human values, knowledge and experiences of intermediary cities, and committed to work as a network.

They emphasized the need for participatory strategies, with particular emphasis on the participation of women. They acknowledged the needs of the citizenship as the basis of the implementation of the SDGs and other global agendas, as well as the defence of local democracy and social inclusion to ensure that no one is left behind. They recommended the creation of mechanisms to enable the development of basic services and infrastructure at the local level, making citizens the engine of economic growth at the local level, and the promotion of integrated models of governance involving national governments, metropolitan governments and rural areas.

They consider the territory as an eco-responsible system which requires green land-use planning and a balance between urban and rural, and called for the urgent implementation of strategies for ecological transition as well as the rights-based integration of migrants from rural areas.

Source: UCLG Forum on Intermediary Cities. 2018. 1st World Forum Intermediary Cities. 5–7 July 2018, Chefchaouen, Morocco. <https://intermediarycities.uclg.org/en/resources>

3.7 PROMOTING AN INCLUSIVE PUBLIC CULTURE

Among possible contributions to integrated territorial development strategies and more functional urban–rural linkages, are programmes of civic engagement, or civic participation, which have brought the general public, individuals or specific communities, groups and organizations together and involved them in decisions or activities that improve their collective wellbeing. In areas with high number of migrants, refugees or internally displaced persons (IDPs), participatory initiatives can potentially promote social cohesion, building solidarity and mutual trust between host and migrant communities while enhancing their knowledge of one another. Civic engagement initiatives can be proposed and carried out by municipal authorities, local civil society organizations, activist groups and urban communities themselves or by any other entity concerned with human rights and the promotion of social cohesion and harmony. Regardless of who leads these initiatives, the role of local government is crucial in their success. In principle, each act of public character or utility within municipal jurisdiction boundaries is the prerogative of municipal councils or local governments. Proactive municipalities can significantly contribute to the promotion of an inclusive public culture.

3.8 STRENGTHENING DIGITALIZATION

Digitalization is not spread evenly across the countries of the NENA region. The success of the smart cities initiatives underway in Kuwait, Saudi Arabia, Qatar and the United Arab Emirates rely mainly on the capacity of these countries to establish an accessible open database for all data generated by smart activities and achieve a balance between data dissemination and privacy. The Internet can potentially expand opportunities across all segments of society, accelerate upward social mobility and lend voice and platforms to marginalized groups.

BOX 8. SPATIAL DEVELOPMENT FRAMEWORK FOR JERUSALEM, RAMALLAH AND AL BIREH, AND HEBRON GOVERNORATES, WEST BANK

Seventy-seven percent of Palestinians are living in urban settings and the rest live in refugee camps and rural hinterlands. The rural areas are primarily designated as Area C, representing 60 percent of the land in the West Bank. After more than 12 months of extensive participatory processes with key stakeholders, the city-region plans for Jerusalem, Ramallah and Al Bireh, and Hebron governorates, developed by UN-Habitat in partnership with the Palestinian Ministry of Local Government (MoLG), seek to achieve a set of developmental goals, such as achieving social justice, ensuring optimal use of natural resources and achieving higher economic growth rates.

The city-region plans (the Spatial Development Strategic Frameworks for the Jerusalem, Ramallah and Al Bireh, and Hebron governorates for 2019 to 2030), aim to direct the development in the governorate towards the strategic vision developed by representatives from the public sector, the private sector and civil society. The spatial development framework deals with the hierarchy and level of spatial intervention of social services in the localities in Hebron governorate, as well as the spatial dimension of the development programmes and projects that have been proposed to address the priority development issues.

The strategic framework plan for spatial development is primarily based on information that describes the geographical and geopolitical conditions of the governorate (location of localities, road networks, political division of the different areas and impact of occupation due to settlements and the separation wall), in addition to the information obtained from the national Protection Plan for Natural Resources and Archaeological Sites (agricultural land classification, biodiversity areas, historical and archaeological sites, and others) and the available areas for future urban development in the governorate.

The proposed programmes and projects and their spatial distribution aim to create a balanced development within the governorate, with emphasis on communities within Area C, deprived from the basic needs for social and economic development by the Israeli authorities' policies. The plan's aim to foster urban and rural development linkages from a spatial perspective while accommodating for population growth and examining fit-for-purpose arrangements for social services. The proposed programmes and projects offer a platform through which the private sector, international organizations, and the different levels of government can combine efforts and pool funding for the realization of the development interventions prioritized.

Source: UN-Habitat. 2020a. *Spatial Development Strategic Framework: Hebron Governorate (2030)*. Nairobi, UN-Habitat. https://unhabitat.org/sites/default/files/2020/05/hebron_eng_1.pdf

LESSONS LEARNT FROM FIELD PRACTICE

Given their severity and complexity, the major challenges in the NENA region must be addressed. They offer important entry points (water management, conflict mitigation and recovery, and climate action) for urban–rural linkages and integrated territorial development and have generated a wealth of concrete experiences to build on and materials to harness.

3.9.1 Spatial planning

The region has experienced and continues to experience protracted crises that have been plagued by intractable political and governance challenges at all levels (global, regional, national and local) that make progress on sustainable development very difficult. At the territorial level there are, however, examples and opportunities for progress. Participatory city-region planning for future spatial development has proven particularly useful.

BOX 9. TRANSITIONING FROM RELIEF TO DEVELOPMENT: THE REGIONAL SPATIAL PLANNING STRATEGY OF DARFUR

The Regional Spatial Planning Strategy of Darfur (RSPSD) is a functional methodology designed to facilitate a smooth transition from humanitarian relief to early recovery, reconstruction and economic development. The RSPSD aims to maximise the benefits of infrastructural investment, identifying priorities against a background of scarce resources and capacities, to bring about a more balanced spatial development, ultimately contributing to peace, stabilization and economic growth.

The strategy advocates for the establishment of a network of urban settlements that can efficiently integrate a broad range of socioeconomic, basic services and infrastructure dimensions. This will benefit the population of Darfur as a whole, while at the same time laying the foundations of its future development. Spatial State Action Plans (SSAPs) are being developed and more detailed spatial and cross-sector plans will be developed at a later stage at the locality level with a number of activities and investments and related budgeting. Institutionally, the Sudan National Council for Physical Development will monitor the implementation of the RSPSD with coordination by the Darfur Regional Authority (DRA) at the next sub-level of government, with implementation on the ground left to the individual state governments of Darfur. For this purpose, a proper dissemination of the RSPSD at the regional, state and locality levels is vital.

Source: Naudin, T., Rochell, K. & Boerboom, L.G.J. 2015. *Regional Spatial Planning Strategy of Darfur: Peace Building, Recovery and Development of Darfur: The Urban Factor*. Nairobi, UN-HABITAT.

3.9.2 Fostering tenure security

Fostering security of tenure is critical to support poor and marginalized people, in particular, women and youth.

BOX 10. MAPPING OF LAND RIGHTS TO FOSTER TENURE SECURITY

Within the project “Achieving Planning and Land Rights in Area C, West Bank, Palestine, 2019 -2023” managed by UN-Habitat in partnership with the Land and Water Settlement Commission, the piloting of the Social Tenure Domain Model (STDM) is underway in 11 communities in the West Bank. STDM is a data tool developed by the Global Land Tool Network to support the poor, vulnerable and marginalized by documenting their right to land and resources using the continuum of land rights, with a focus on user and customary rights in addition to formal and legal rights in support of tenure security, especially in rural communities and agricultural land. Figure 9 shows the Community awareness session on land settlement at the placemaking playground developed by UN-Habitat at Tuwani Village, Hebron, Palestine, 2021. STDM also maps women’s rights, land use, available resources and an assessment of existing buildings, important for policy level decisions on gender equality, disaster risk reduction and climate change.

Figure 8. Community awareness session on land settlement at the placemaking playground developed by UN-Habitat at Tuwani Village, Hebron, Palestine, 2021



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Source: Unruh, J.D., Akhobadze, S., Ibrahim, H.O. *et al.* 2019. Land tenure in support of land degradation neutrality. In Land Tenure Journal No. 2–19, Rome, FAO.

3.9.3 Enhancing food security and empowerment through urban agriculture

Food insecurity in Arab countries is closely tied to rising world food prices, as indicated earlier, due to more than half of the food consumed in these countries being imported. This number is expected to grow by more than 60 percent by 2036 (Al-Fawwaz and Gazan, 2016). Researchers have argued that supporting local urban agriculture could contribute to address this challenge.

BOX 11. PROMOTING URBAN AGRICULTURE NETWORKS

From 2005, the Resource Centre for Urban Agriculture and Forestry (RUAF) (now the Global Partnership on Sustainable Urban Agriculture and Food Systems) supported some cities in the establishment of the Arab Network of Cities for Urban Agriculture (ANCUA) after training sessions on the subject. Pilot activities were launched in 2006 in five cities: Baalbeck (Lebanon), Ariana (Tunisia), Amman (Jordan), Gaza (Palestine) and Jericho (Palestine). These cities received funding to implement their urban-agriculture projects which varied by city. Baalbeck and Amman showed interest in introducing innovative organic production of medicinal and aromatic plants on a home level, Ariana developed a model of rainwater harvesting unit in a school for planting the school garden, Jericho funded a campaign to raise awareness on urban agriculture and established a centre for urban agriculture, and Gaza strengthened its urban agriculture committee by establishing a dedicated centre to support related activities and succeeded in mobilizing external funds for projects in the field.

Source: The RUAF Global Partnership on Sustainable Urban Agriculture and Food Systems. 2008. Mainstreaming Urban Agriculture in the Middle East and North Africa. *Urban Agriculture Magazine* (1): 32.

BOX 12. URBAN AGRICULTURE IN GREATER AMMAN

Since 2007, the Greater Amman Municipality has been supporting different urban agriculture and food security programmes using urban land, including rooftops, schools and home gardens and vacant lots between buildings with a view to alleviating water scarcity and ensuring food security, avoiding land fragmentation and preventing construction in flood plains, addressing poverty issues and promoting social inclusion.

Through its Urban Agriculture Office and Multi-stakeholder Forum, Amman has partnered with different international organizations to facilitate sustainable urban food production.

More than 300 rooftop and 4 000 school and home gardens have been established. Land banks have been set up to connect landowners with existing and potential producers, while new land-use guidelines require that 15 percent of each plot is set aside for greening or agriculture. Sustainable urban farmers have been provided with training and technical assistance on access to markets, organic and healthy products have been promoted among local consumers and a special label has been produced to help distinguish and market local urban agriculture products.

Source: Dubbeling, M. 2013. *Cityfood: Linking Cities on Urban Agriculture and Urban Food Systems*. Oakland, USA, ICLEI Local Governments for Sustainability and Den Haag, Netherlands, RUAF Foundation. <https://ruaf.org/assets/2019/12/CITYFOOD-Linking-Cities-on-Urban-Agriculture-and-Urban-Food-Systems.pdf>

BOX 13. COVID-19: SUPPORTING WOMEN AGRI-ENTREPRENEURS IN THE GAZA STRIP

The COVID-19 pandemic and related precautionary measures have had a severe negative impact on the already precarious economy in the Gaza strip, resulting in a more than 80 percent decrease in the revenue of small businesses. Women-run, small-scale agricultural enterprises were particularly affected through increased family responsibilities (education and childcare), increased genderbased violence, restricted access to production inputs, and financial and marketing obstacles.

The Gaza Urban and Peri-Urban Agriculture Platform (GUPAP) and the Urban Women Agripreneurs Forum (UWAF) are committed to enhancing resilience in the face of crises and developing sovereignty and food sovereignty in Palestine through local food systems and urban agroecology practices. In the context of the National Cross-Sectorial Strategy for the Promotion of Gender Equality (2017–2022), they are promoting women's equal access to economic resources, including land and productive resources, inheritance, financial services and funding based on national laws. This includes a combination of activities: learning from the experiences of women agroentrepreneurs and developing adaptation strategies risk mitigation and crisis response preparedness plans; developing a supportive national strategy in the context of the COVID-19 pandemic; strengthening linkages between local suppliers and agro-entrepreneurs; reviewing Palestinian policies and procedures in collaboration with all relevant authorities with a view to supporting and promoting women agro-enterprises; inviting government, civil and international organizations and social solidarity initiatives to include goods from local agro-enterprises, especially women-led ones, in food parcel vouchers distributed to marginalized groups; raising funding for women agro-enterprises, and requesting extended loan repayment deadlines as well as exemptions and services for those most in need; strengthening government safety nets through tax exemption laws, and exemptions for registrations and fees imposed by government ministries and municipalities on women-led agro-enterprises; encouraging the Ministry of National Economy to promote and enable agro-enterprises to compete and increase their market share; inviting companies in the private sector to provide community donations and funding for women-owned agro-enterprises; promoting consumer trust and a culture of purchasing from agro-enterprises by NGOs interested in the recovery, support and empowerment of small enterprises; facilitating women agripreneurship through access to support and government measures approved by the Palestinian Authority to fortify small projects affected by the repercussions of the COVID-19 pandemic.

Source: Gaza Urban Agriculture Platform (GUPAP) and Urban Women Agripreneurs Forum (UWAF). 2021. *Urban Women Agripreneurship in the Gaza Strip, challenges and facts*. Gaza, Palestine, GUPAP.

<https://gupap.org/wp-content/uploads/2021/02/Fact-Sheet-GUPAP-UWAF-Feb.-2021-English-version.pdf>

While urban agriculture is getting increased recognition worldwide, it still receives little recognition from planners, agricultural scientists, policymakers and researchers. Limited information is available on the present status of urban agriculture in the region. These initiatives are now proving essential to address the impacts of the COVID-19 pandemic on vulnerable and poor households.

BOX 14. ALLEVIATING QUARANTINE EFFECTS AMONGST THE ELDERLY IN BETHLEHEM GOVERNORATE, PALESTINE, THROUGH HOME-GARDEN INTERVENTIONS

Seventy-seven percent of the Palestinian population live in dense urban cities and towns, which have been severely affected by the COVID-19 pandemic. Prolonged quarantine and movement restrictions had lingering psychological and physical effects on the population, mainly among the elderly. Reports and anecdotal evidence highlighted growing public health concerns associated with the impact of COVID-19 on older people, including mental and physical effects.

From January to April 2021, the UN-Habitat Palestine Office, in partnership with the municipalities of Bethlehem, Beit Sahour and Beit Jala, along with the Applied Research Institute – Jerusalem (ARIJ), implemented a project to improve the environmental and social context of households in dense areas of the targeted cities (Bethlehem, Beit Jala, and Beit Sahour) as a response to the COVID-19 crisis in those areas. Five percent of the population in Palestine are aged 60 years and above, with a ratio of 92 males per 100 females. The project aimed to enhance their coping capacity through the provision of plants and equipment to initiate home farming spots, using front and backyards, balconies and roofs, for example. Specifically, the project succeeded in implementing the planned activities by supporting the resilience of 60 families (36.6 percent of whom are femaleheaded households) through the introduction of new home-based agro-technologies that can cover part of the household's daily food needs and support the mental and physical health of elderly people during the COVID-19 pandemic.

The home-gardens are currently maintained by the targeted elderly people with the support of their families. Based on post-distribution evaluation, this has promoted social engagement and physical activity for the elderly, enhancing both their physical and mental health, including coping with stress related to the pandemic. It also enhanced the experience of the built environment during and post the lockdown, and the livelihoods and food security of the targeted beneficiaries, where the homegardens create a source of self-sufficient food production (vegetables and greens), which are useful both during the COVID-19 crisis and its occurring lockdowns, as well as post-crisis as the elderly are often very vulnerable to food insecurity due to the lack of mobility and inability to join the labour market. UN-Habitat and its implementing partners also raised community awareness on the importance of urban farming as a means to cope and stay at home during the COVID-19 pandemic. The mental and physical health benefits of urban farming were also highlighted.

Ms. Suzan Nafaa (68 years old from Beit Jala), showing the team her home-grown broccoli, lettuce, and other crops, emphasizes how much the initiative has helped her during the COVID-19 crisis. Being unable to attend social gatherings with family and friends, the home-garden has provided her with something to do throughout the day and it has been a successful practice at her home. Ms. Nafaa lives only with one other elderly member, and they have maintained the garden together as a daily activity. From a psychological point of view, she noted that gardening at home felt great as a daily activity to keep her busy, emphasizing as well that “it felt good to wake up to the green views in my home, and I look forward to this everyday” (8 April, 2021).

According to an interview with one of the beneficiaries of the project, the home-garden activity has kept her busy and safe during the pandemic.

Source: World Food Programme (WFP). 2020. *VAM Food Security Analysis. SUMMARY OF A REGIONAL STUDY ON VULNERABILITY AND INTER-RELATED FACTORS*. Rome. <https://docs.wfp.org/api/documents/WFP-0000130949/download/>



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4. THE WAY FORWARD: PATHWAYS TO STRENGTHEN URBAN–RURAL LINKAGES

“We call for the development and implementation of holistic ecosystems-based approaches for city-region food systems that ensure food security, contribute to urban poverty eradication, protect and enhance local level biodiversity and that are integrated in development plans that strengthen urban resilience and adaptation”

- Bonn Declaration of Mayors, June 2013

While urbanization is a major challenge in the NENA region, it can also be seen as a potential comparative advantage in terms of sustainable territorial development. The design of the urban components of the Sustainable Development Goals (SDGs) and the New Urban Agenda, and specifically SDG 11, is such that local and city governments are key to achieving those targets. Empowered cities are at the heart of localizing and implementing the SDGs.

There is an urgent need to address the combination of challenges faced by the NENA region through engaging with cities and local authorities. There is a diversity of types of local authorities (such as municipalities, governorates and communes), depending on the political economy and history of each country. This will require adjustments to the institutional and regulatory framework, capacity building, intersectoral collaboration, multi-level governance and engagement at all levels of society, from communities, regions and governments to numerous other stakeholders across the public and private sectors. Vertical and horizontal coordination are imperative to promote regional experience-sharing and knowledge consolidation. Indicators to monitor and assess country level decentralization reforms and the achievement of SDGs at the local levels must also be included.

The challenge for NENA cities is to reshape social and urban policies towards sustainable economic growth and adequate living conditions for rapidly expanding numbers of young and poor urbanites. These actions should be implemented through effective partnerships between the public and private sectors and civil society to provide a better quality of life to the population, leaving no one behind. Creating employment opportunities for youth and women (including migrants and refugees, and according to the needs and resources of each city), can contribute to local and regional economic development. For example, urban agriculture, solid waste collection and recycling, and renewable technologies programmes can potentially act as tools to enhance city liveability, bolster livelihoods, promote social inclusion and adapt to climate change. The urgency of ensuring digitalization in both rural and urban areas has been confirmed by the COVID-19 crisis.

Building from an understanding of the pressing challenges in the region and the possible entry points for strengthening urban–rural linkages to meet environmental, social and economic challenges, there are several interlinked focus areas for improved governance in addressing regional challenges through territorial approaches. These are to:

- build on existing multi-level and multi-sectoral governance initiatives;
- re-localize food systems and fight malnutrition;
- support integrated urban and territorial planning and information technology;
- institute land (including land registry and cadastre) and water management strategies across the urban–rural continuum;
- reinforce the circular and solidarity economy and ecosystem restoration; and
- ensure disaster preparedness and response.

4.1 BUILD ON EXISTING MULTI-LEVEL AND MULTI-SECTORAL GOVERNANCE INITIATIVES

There is an increased awareness worldwide that strengthening the capacity of local authorities is essential to accelerate progress towards SDGs and ensure territorial resilience. Joint support from, and co-funding of all development sectors (and where applicable humanitarian projects and programmes) are a priority in the region. Several countries have already started strengthening national and local collaboration on planning and development, creating sub-national and governorate-level planning agencies and empowering local administrations to draft and implement their own plans. Vertical and horizontal coordination is imperative to promote regional experience sharing and knowledge consolidation. An important dimension is that of horizontal exchange of information and collaboration with other cities through relevant networks at national, regional or global levels.

Given the territorial challenges related to climate change, environmental degradation (in particular erosion of biodiversity) and desertification in NENA countries, ministries of environment and municipal and local governments will have a key role to play. They have already engaged in a series of processes to be built upon or linked into, but should also join relevant networks and initiatives, such as:

- the “Global Covenant of Mayors for Climate and Energy”, a global alliance for city climate leadership, building on the commitment of over 10 000 cities and local governments² as well as sustainable energy and climate action plans;
- the Clima-Med project (and Covenant of Mayors Mediterranean)³ which attempts (through the identification and implementation of strategies for coordinating and mainstreaming climate actions at the national level), to translate these synergies into concrete, bankable, low-carbon projects at the local level, and to demonstrate that these challenges are worth overcoming for the integration of a climate approach into policies and strategies that benefit the global environment while contributing to local development;
- the Milan Urban Food Policy Pact which promotes sustainable urban food systems but brings together mayors across the international level (signatories in the NENA region include Tunis, Bethlehem and Hebron).⁴
- Cleaner Energy Saving Mediterranean Cities (CES-MED)⁵

The establishment of a regional territorial body and related governance observatories – with indicators to monitor and assess country level decentralization reforms and the achievement of SDGs at the local levels – could help bring together these different processes.

Local authorities, research institutions and civil society should engage in joint action-learning and systematic knowledge management, identifying and reviewing promising local practices which can generate experience-based evidence, providing feedback for subnational, national and regional policies and contribute to in-service and formal training.

2 <https://www.globalcovenantofmayors.org/region/middle-east-and-north-africa/>

3 <https://www.climamed.eu/>

4 <https://www.milanurbanfoodpolicycompact.org>

5 <https://www.ceps.eu/ceps-projects/cleaner-energy-saving-mediterranean-cities-ces-med/>

4.2 RE-LOCALIZE FOOD SYSTEMS AND ADDRESS ALL FORMS OF MALNUTRITION

FIGURE 9. FOOD SYSTEM DEFINITION

What is a food system?

*“A food system consists of all the **elements** (environment, people, inputs, processes, infrastructures, institutions, etc.) and **activities** that relate to the **production, processing, distribution and marketing, preparation and consumption of food, and the outcomes of these activities, namely nutrition and health status, socio-economic growth, equity and environmental sustainability**”.*

HLPE/CFS, 2014

Source: HLPE. 2014. *Food losses and waste in the context of sustainable food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security*, Rome. <https://www.fao.org/3/i3901e/i3901e.pdf>

The organization of the 2021 United Nations Food Systems Summit confirms the urgency of reorienting food systems (see Figure 9) worldwide. A variety of concrete interventions and programmes have proven their efficiency in reorienting food systems in different geographical contexts for increased territorial resilience and integrated development. Municipalities and local governments are best placed to promote sustainable diets through public procurement and short food chains (in particular, organic foods), creating more and better jobs in both rural and urban areas. This includes the informal sector, and small-scale food processing and street foods in particular, ensuring social protection and human rights, addressing climate change and resource scarcity as well as improving nutrition, health, and ensuring food security. For example, cities can play a leading role in the circular economy, as they produce waste that needs to be managed – dumped, treated and transformed – and which could be recycled into agriculture production. Ecosystem services in rural areas can also contribute to environmental health (cleaner air and water, as well as dealing with heat islands) and help to protect cities from floods.

Municipalities and local governments can partner with international organizations, local universities, civil society, micro-credit institutions and other concerned actors to establish dedicated programmes to support vulnerable people (in particular unemployed women and youth, refugees and IDPs), particularly in engaging in activities such as retrieving traditional foods and food practices for sustainable diets, organic agricultural production for local markets, small-scale processing (such as cleaning, packaging and processing vegetables), urban and peri-urban agriculture and roof gardening, waste water and solid waste management and reuse, local marketing and catering. Providing support to short food chains combines training, funding and improved connectivity and facilitating access to consumers.

Urban agriculture programmes should include managing the rezoning and change of use of agricultural land generated by urban sprawl, the integration of urban agriculture into urban policies, and capacity building of local stakeholders on the benefits and implementation of locally relevant urban agriculture.

Public procurement, such as for school canteens, hospitals and jails is also an important means to reorient food systems, rehabilitate traditional foods, encourage dietary diversification and sustainability of food production, provide local jobs and contribute to consumer behaviour change.

Informal activities which provide employment and contribute to sustainable development should be included and sustained through urban planning and locally appropriate regulatory mechanisms. Local authorities need to negotiate with street vendors and; a) understand their concerns and the way they operate; b) develop inclusive solutions that meet the needs of such vulnerable groups in terms of visibility, security and necessary basic urban services in order to support them in earning a decent living; c) review laws pertaining to vendors in ways that legitimize their activities and facilitate the access of registered vendors to micro loans that allow them to grow their businesses; support the formation of street vendors' associations; and d) allocate dedicated and legally sanctioned spaces where informal vending activities are permitted, and can collaborate with concerned partners (such as civil society organizations or universities) and formal businesses to design and construct attractive kiosks that can be rented to informal vendors or their unions and informal associations.

FAO's Regional Conference for the Near East and North Africa in 2020 encouraged countries to reposition nutrition as central to their development agenda, to design programmes and investments to eliminate hunger, respond to the growing food and nutritional needs of urban populations, and adapt food systems to ensure healthy diets through the linking of urban and rural areas, encouraging the adoption of sustainable environmental and natural resource management practices, and thus transforming agriculture.

The promotion of sustainable food systems for healthy diets requires multi-actor strategies, including: adequate policies in agriculture and fisheries, food processing, marketing and distribution; safety nets and social protection programmes, including strengthening livelihoods (through cash transfers, market interventions or government pricing policies) of food-insecure households and people with special needs (including older people, people with disabilities and mental health problems, widows and orphans); poverty alleviation programmes (including school feeding and income-generating activities); scaling up production and processing of local foods; and improving the bioavailability of nutrients and promoting foods rich in micronutrients.

Cities and local governments are in the frontline to design and implement such policies at territorial level in collaboration with academia, civil society and the private sector.

Priority should be given to territories in the region where deep and persistent pockets of poverty and hunger persist, in particular conflict- or disaster-affected areas. Governments should support and build up capacity of relevant cities and local governments to develop integrated territorial resilience programmes based on practice-based evidence, and the region should support cross-border planning where relevant. Such programmes would combine the promotion of sustainable food systems, poverty alleviation and functional urban-rural linkages, in close collaboration with relevant national policy frameworks focused on, for example, urban development, natural resources management, social protection, nutrition, climate action and health.

4.3 SUPPORT INTEGRATED URBAN AND TERRITORIAL PLANNING AND INFORMATION TECHNOLOGY

To implement urban planning successfully and manage increasingly large and complex territorial systems, NENA countries need to develop decentralized and more inclusive decision-making processes to better articulate the roles of central and local governments, to increase the participation of the private sector and civil society in urban development and to promote and enact legislation for sustainable territorial planning. As part of decentralization strategies, it is important that comprehensive needs assessments identify vulnerable areas. Local and regional authorities need to expand the reach of local institutions in their communities and identify synergies with other local development projects across the country. Once there are plans in place (developed in a participatory manner) to ensure that different land uses are regulated and do not encroach on each other (for example, informal urban development on agricultural land), it is important that violations are controlled by rule of law or monitoring, and that functional land administration tools, such as the cadastre and land and property registry supports the implementation.

A variety of tools and approaches can be harnessed and adapted to complement existing initiatives in the NENA region with a view to addressing urban transition and promoting sustainable territorial development through functional urban-rural linkages. Following the launch of the 2030 Agenda with the goal of sustainable urbanization (SDG11) and the subsequent launch of the New Urban Agenda, UN-Habitat has developed guidelines and tools to help governments at national and subnational levels, including cities, to develop

and refine urban and territorial policy and planning. Among these tools are the International Guidelines for Integrated Urban and Territorial Planning (IGUTP), the previously mentioned Urban–Rural Linkages Guiding Principles (URL–GP) and Framework for Action to Advance Integrated Territorial Development, as well as guides and manuals to develop national urban policies and a wide range of other tools. Many of these tools are designed to help national and subnational agencies overcome the challenges, including capacity gaps and policy coherence between levels of governance.

Other tools include the City Region Food System (CRFS) toolkit⁶, which provides guidance on how to assess and build sustainable city region food systems and includes support material on how to: define and map city regions; collect data on city region food systems; gather and analyse information on different CRFS components and sustainability dimensions through both rapid and in-depth assessments; and how to use a multistakeholder process to engage policymakers and other stakeholders in the design of more sustainable and resilient city region food systems. These tools can help address some of the institutional challenges identified in this paper (such as institutional capacity, lack of integration, and weak data systems).

Knowledge management and information systems are essential to effective territorial planning. The COVID-19 crisis has confirmed the importance of digitalization to support a local economy, fight marginalization, ensure basic needs and alleviate poverty. The Internet can potentially expand opportunities across all segments of society, accelerate upward social mobility, and lend a voice and platforms to marginalized groups.

Identifying inequalities in internet access and determining which populations should benefit from targeted interventions are necessary but not sufficient steps toward comprehensive digital inclusion. It is also important to ensure that vulnerable populations have equal opportunities to reap the benefits of the Internet without bearing the brunt of its failures and injustices.

The success of the smart cities initiatives underway in Kuwait, Saudi Arabia, Qatar and the United Arab Emirates rely mainly on the capacity of these countries to establish an accessible open database for all data generated by smart activities and achieve a balance between data dissemination and privacy.

4.4 INSTITUTE LAND (INCLUDING LAND REGISTRY AND CADASTRE) AND WATER MANAGEMENT STRATEGIES ACROSS THE URBAN–RURAL CONTINUUM

Technical and political cooperation on water security is critical for future urban–rural development in several NENA countries but may be complicated by the disconnect between political and administrative regional borders and that of watersheds. This is, for example, the case for Jordan and all countries bordering the Jordan Valley (Palestine, Israel, Lebanon and the Syrian Arab Republic), or for Egypt, Ethiopia and the Sudan in relation to the dams on the Nile.

Rainfed agriculture is facing increasing precipitation variability driven by climate change and these trends will exacerbate disputes among water users and inequality in access to water. An urban–rural linkages perspective could enable farmers and cities in the NENA region deal with the daunting water challenges they face, enhance food security and resilience to climate change. Irrigated agriculture is by far the largest user of freshwater, but scarcity of freshwater is a growing problem, owing to increasing demand and competition for freshwater resources.

Urgent action is needed to make water use in agriculture more sustainable and equitable. Reorienting agriculture towards sustainable production of food for human settlements (starting with small and intermediary cities) in their territory could also contribute to dietary diversification and crisis resilience. Some water supplies should be jointly developed and managed. Investment support in urban conservation and alternative water supplies, such as water recycling and stormwater capture would allow cities to import less water. Public–private co-investments in underground storage and conveyance infrastructure could allow more water to be captured during wet years, increasing overall water availability.

In the perspective of sustainable territorial development, systematic linkages with land and other natural

⁶ <http://www.fao.org/in-action/food-for-cities-programme/toolkit/introduction/en/>

resources management should be a priority. Cadastre and land and property registries must be unified at territorial level; technically simplified, digitalized and multipurpose to allow cost-effective updating and maintenance, and easily accessible to relevant institutions in urban and rural areas.

Further, in line with the fit-for-purpose strategy, implemented, among others, by UN-Habitat and the Global Land Tool Network, land and property registration systems should be made upgradeable, inclusive of all types of land and HLP rights, including agricultural land and informal and customary tenure rights, and made flexible and capable of representing the reality on the ground. They should allow the inclusion of information supplied by individuals through crowd sourcing and participatory mapping, and they should be decentralized to allow people living in rural areas, far from the main cities centres where registries are usually kept, to easily access and update land and property data. Transparency and public availability of information (within the respect of privacy) should be ensured at all times, to avoid corruption and forgery.

This is pivotal to foster tenure security and protect the housing, land and property (HLP) rights of all people; be a catalyst for poverty eradication, food security and nutrition; combat the creation and expansion of informal settlements; prevent disputes over land and other natural resources; and prevent the encroachment of land, particularly of agricultural land. A functioning land registration and land information system would be able to inform decisionmaking for sustainable urban–rural development and, if linked to the records of financial departments, could increase the collection of property taxes and other land-based revenues to finance capital investments.

It is important for cities that land and natural resources for farming and environmental services are protected, whether in urban and peri-urban areas or neighbouring rural areas. Peri-urban farmland is under constant pressure from urbanization. Farmland preservation can be the means to very different ends (food production, economic development, environmental and landscape preservation, and management of urban sprawl). Participatory processes are key to explicit values and reframe objectives in a way that makes sense to all local actors.

Land planning teams should have agricultural competence, include farmers from the start and understand the social context and interests of local actors. There are a great variety of policy instruments, including regulation (zoning), incentives and voluntary agreements, and marketbased instruments, the merits of which greatly depend on the context in which they operate. Regardless of the instrument used, it is crucial that local actors believe in their stability. A predictable regulatory environment is essential to allow long-term investment. As we have seen from existing practices, concerned authorities need to identify and demarcate hazardous areas, environmentally sensitive zones, natural reserves and public lands allocated for recreational spaces and facilities of a public nature for the benefit of all city dwellers. They consequently need to set and implement measures that prevent the encroachment of informal construction on these areas.

4.5 REINFORCE THE CIRCULAR AND SOLIDARITY ECONOMY AND ECOSYSTEM RESTORATION

The flows of people, services, goods, information and finance across the urban–rural continuum, defining urban–rural linkages, is a daily interchange between rural and urban areas. This interchange and the many social, cultural and economic transactions that constitute these linkages are circular. The harvest of water, food and fibre produced in rural areas is processed and distributed in urban settlements and the food and non-food waste is cycled back. People reside, work, educate, entertain and travel back and forth between urban and rural areas. Most of these interactions are informal and rooted in familial, communal and cultural solidarity or caring economies. Underlying all the interactions are living ecosystems of soil, water, flora and fauna, the health of which, in turn, through caring stewardship, supports the health of both rural and urban populations. It is this dynamic interaction of rural and urban worlds that is threatened by the challenges of urbanization and climate change.

The rehabilitation, restoration and conservation of ecosystems across the NENA region are the building blocks for sustainability and resilience. To be successful, ecosystem restoration must be firstly a local commitment, with intelligent support from governments at all levels.

Reforestation and regenerative agricultural development across the urban–rural continuum are just two entry points where different agencies and ministries will need to collaborate on to create and preserve the “blue and green mosaics” of waterways and green corridors that re-integrate nature and cities for health, food provisions, biodiversity and resilience to climate change while providing jobs for youth, women and indigenous caretakers of ecosystems.

Reforestation is a priority in both urban and rural areas. In urban areas, it is important to prevent erosion, mitigate heat islands and contribute to more healthy public spaces. Afforestation of barren forest areas in the rain belt areas can contribute to water resources management, agro-silvo-pastoral systems, preservation of biodiversity and provision of environmental services.

These different dimensions come together in the three Rio Conventions for Climate Change, the United Nations Framework Convention on Climate Change (UNFCCC), Biological Diversity (CBD) and United Nations Convention to Combat Desertification (UNCCD).

From Forster et al. (2021), four dimensions of policy coherence are called for:

1. Adapting and adopting operating principles from existing frameworks such as the Urban–Rural Linkages Guiding Principles, the restorative continuum from the Society for Ecological Restoration and the Milan Pact, among others;
2. Using participatory assessment methods for the assessment of challenges that include actors across the urban–rural interface;
3. Instituting multi-actor planning and co-management for different dimensions of organizational, operational and political processes to bring an urban–rural approach to ecosystem management; and
4. Advancing urban–rural ecosystem governance systems in institutional, policy and legal frameworks, awareness, capacity building and training, cross-sectoral collaboration, financial or material support, appropriate stakeholder participation at all levels of the decision-making process.

4.6 ENSURE DISASTER PREPAREDNESS AND RESPONSE

Disaster preparedness and response can be ensured by identifying vulnerable groups and tailoring protective measures to support them during the response and recovery phases. Specific attention must be given to flows of population at a territorial level to accompany migrants (including returnees) and adapt territorial planning accordingly.

Climate change and conflict contribute to a cycle of vulnerability. Humanitarian relief, development programmes and peacebuilding are not serial processes, as they are all needed at the same time. The humanitarian–development–peace nexus (HDPN) focuses on the work needed to coherently address people’s vulnerability before, during and after crises (Oxfam, 2019)

Addressing HDPN is particularly important in the NENA region. It is important that transition, recovery and peacebuilding programming are instrumental in contributing to conditions that are more suitable for development efforts, explicitly designed to initiate transformational change in humanitarian contexts (IOM UN Migration, 2019). In summary, to prevent conflict and mitigate the impact of climate change, it is important to pay specific attention to the territorial approach.

5. CONCLUSION: TOWARDS SUSTAINABLE DEVELOPMENT FOR BOTH RURAL AND URBAN COMMUNITIES

Sustainable development in the region cannot be achieved without addressing the humanitarian–development–peace nexus and enhancing territorial resilience. Priority should therefore go to hotspots and at-risk areas. Crisis-preparedness policies and procedures need to go beyond reducing current risks, to preventing new risks, including compounded crises (such as climate, health and conflict).

In addition to a commitment to peace and political stability, sound environmental, social and economic policies are needed to address these and a variety of other population-related challenges, such as labour scarcity, migration and environmental degradation. Different policies, ranging from labour and trade laws, standards, rules and regulations to environment management need to be systematically revisited for coherence and territorial relevance while addressing gender issues, leaving no one behind and contributing to sustainability.

The COVID-19 pandemic has evidenced the weaknesses of development policies worldwide and has constrained countries in the region to heighten preparedness, integrate multi-sectoral responses and plan for rapid recovery. This requires – and provides a unique opportunity – to rethink development in the region. As in most countries in the world, planning for the “new normal” obliges stakeholders to break silos and rethink sustainability. But the urgent response to the crisis has also shown that cities – being the most affected by the pandemic and being obliged to provide immediate responses to the population – are in the frontline to address the emergency together with local actors.

The biggest challenge is to address the governance issue. Food and agriculture actors and urban actors need to come together and plan sustainable territorial development, building on good practices and information exchange across NENA countries. United Nations institutions and development partners are best placed to jointly assist member states coordinate effective multi-level governance in the last decade of Agenda 2030.

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**URBAN–RURAL LINKAGES
FOR SUSTAINABLE
TERRITORIAL DEVELOPMENT:
ADDRESSING URBAN TRANSITION
IN THE NENA REGION**

SOLAW **thematic paper**