



Tracking Food Security in the Arab Region

Executive Summary



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Background

The Arab region is facing rising economic, socio-political and environmental challenges, which are impacting food security for its growing and rapidly increasing population, as was highlighted in the 2017 United Nations Economic and Social Commission for Western Asia (ESCWA) and Food and Agriculture Organization of the United Nations (FAO) publication, “[Arab Horizon 2030: Prospects for Enhancing Food Security in the Arab Region](#).”¹ The region is witnessing a rise in the prevalence of undernutrition, overnutrition and nutrient deficiency, classified as the triple burden of malnutrition. Undernourishment is increasing in conflict-plagued and Least Developed Countries (LDCs)², obesity is a high concern in the Gulf Cooperation Council (GCC),³ the Maghreb⁴ and the Mashreq⁵ countries, while nutrient deficiency is spreading in all countries and is especially rife among Arab women.

Ensuring food security and good nutrition remains a top priority on the agenda of Arab countries, whether rich or poor, or in conflict or not. Food security strategies in the region focus on increasing food production that is complemented by trade and market subsidies to cover the consumption gap. This has impacted food availability and access on the short run. However, current strategies might also contribute to worsening the situation by, among others, increasing natural resource degradation and encouraging over-consumption. Thus, understanding the status and determinants of food security in addition to factors affecting it has become a necessity for Arab countries to design context-based food security strategies and policies.

Food security exists “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” It has four dimensions (availability, access, utilization and stability); it can be evaluated at individual, household, national, regional or global levels; and it can be seasonal, transitory or chronic. Food security is multifaceted and multidimensional with an interactive nature and requires a comprehensive approach to monitoring it, particularly as it is a core element of the 2030 Agenda for Sustainable Development. Sustainable Development Goal 2 (SDG), which calls on ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture, reflects the commitment of governments to tackle food security issues from different dimensions.

Food security-related elements are spread throughout the SDGs including those on reducing poverty (SDG1), promoting good health (SDG3), ensuring gender equality (SDG5), accessing water and sanitation (SDG6), achieving economic growth (SDG8), protecting the environment or ensuring sustainability (SDG7,12,13,14,15) to name a few.

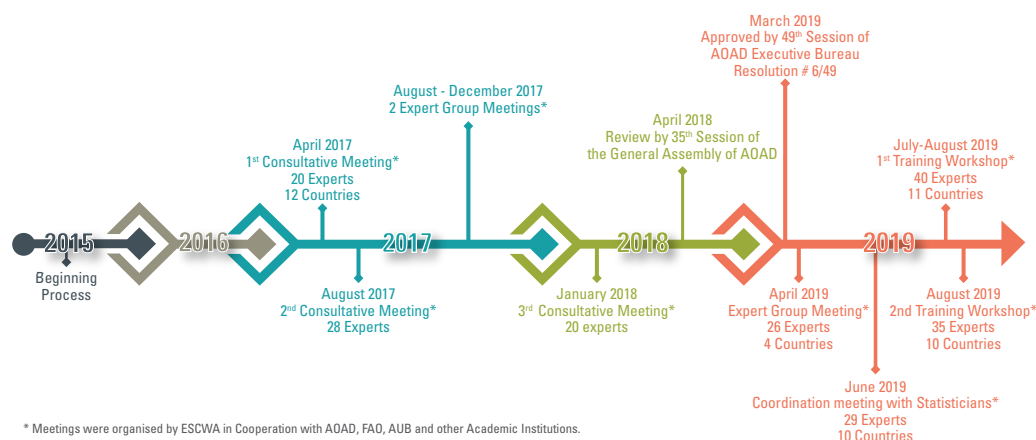
For this reason, there is a need to broaden the regional perspective on food security

in the Arab region beyond the current dimension based on evidence. The Arab region needs a comprehensive and integrated approach for food security monitoring that supports cross-sectoral and informed food security policy-making efforts.

ESCWA in partnership with the Arab Organization for Agricultural Development (AOAD), the Food and Agriculture Organization (FAO), academia and other experts, with support from the Swedish International Development Cooperation Agency (Sida), collaborated with Arab States to develop a regional food security monitoring framework that builds on global knowledge and practices while accounting for regional specificities including nutritional needs and preferences, natural resource limitations and prevailing economic and socio-political realities.

Developing the Arab Food Security Monitoring Framework

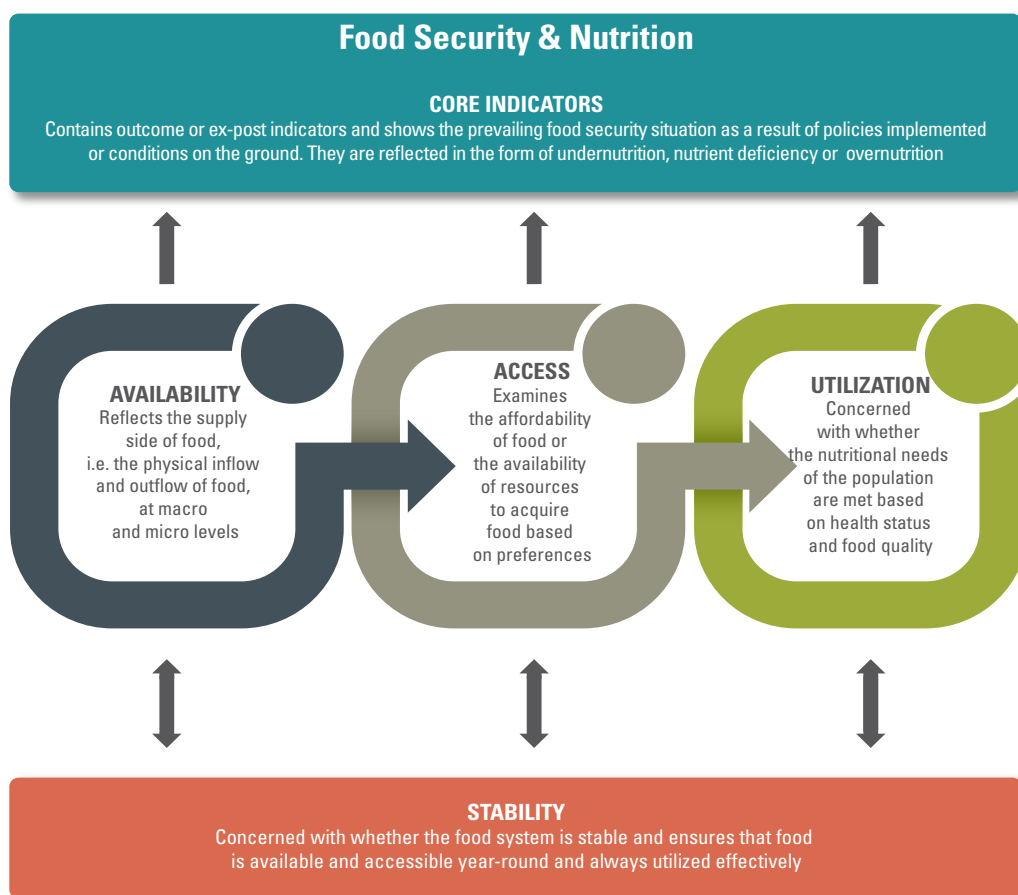
The Arab Food Security Monitoring Framework was developed through extensive consultations over four years that involved up to 200 experts as described in the below graph as well as a comprehensive review of the literature on existing knowledge and assessment frameworks of food security at global, regional and national levels. A wide variety of country-level and region-wide strategies and plans were also closely examined to identify potentially relevant food security determinants. The underlying hypothesis was that food security and nutrition can be expressed as a function of a multitude of determinants or causal factors with a limited few having a higher influence than others for each of the food security dimensions.



A long list of food security determinants or indicators was identified. Indicators were thoroughly reviewed and filtered to retain those which are measurable; are part or closely-related to the SDGs or the FAO suite of food security indicators; reflect the Arab context; and have data available for at least fifty percent of the countries or fifty percent of the regional population or both. The letter **R** on the side indicates that the normalization of the concerned data is "reversed", meaning that a high value reflects poor performance, as opposed to the other indicators where a high value indicates a good performance.

Thus, twenty-four food security indicators were retained, which consist of *ex post* or outcome indicators and *ex ante* or observed indicators. The selected indicators are global in nature with some catering to regional concerns such as increasing obesity or the rapidly depleting water resources.

These indicators were then split into a core pillar, containing 3 *ex post* or outcome indicators: and the four food security dimensions as described below:



- **The Core** pillar indicators are outcome indicators that provide a picture of the prevailing food security situation. They allow the assessment of the type of food insecurity being observed which usually translate into one form or risk of malnutrition—undernutrition (low caloric intake), nutrient deficiency (low nutrients intake) or overnutrition (excess caloric intake).

	Code	Indicator Description	Short Name	SDG Target Linkage
Core Indicators (CO)	C01	Prevalence of undernourishment ^R	Undernourishment	2.1.1
	C02	Prevalence of moderate or severe food insecurity measured sing FIES ^R	Food insecurity	2.1.2
	C03	Prevalence of obesity in the adult population (18 years and older) ^R	Obesity	

- **The Availability** dimension indicators explore the supply side of food as they look into its physical inflows and outflows. They are concerned with issues related to food production, food trade and food distribution among others.

	Code	Indicator Description	Short Name	SDG Target Linkage
Food Availability Indicators (AV):	AV1	Primary wheat yield as a percentage of potential achievable yield	Yields	2.3.1
	AV2	Agriculture Orientation index for government expenditures	Agriculture expenditure	2.a.1
	AV3	Food losses (% total food available) ^R	Food loss	
	AV4	Average dietary energy supply adequacy	Dietary energy supply	
	AV5	Cereal import dependency ratio ^R	Import dependency	
	AV6	Share of water resources used in agriculture out of total renewable water resources ^R	Agriculture water	6.4.2

- **The Access** dimension indicators reflect the ability of the population to access food by assessing financial and socio-economic factors. Determinants include income and revenues, food prices, social support or infrastructure.

	Code	Indicator Description	Short Name	SDG Target Linkage
Food Access Indicators (AC):	AC1	Poverty headcount ratio ^R	Poverty	1.1.1/1.2.1/1.2.2
	AC2	Share of food consumption expenditure in total household consumption expenditure ^R	Food consumption	
	AC3	Unemployment rate ^R	Unemployment	8.5.2
	AC4	Logistics performance	Logistics	
	AC5	Inflation, consumer prices ^R	Inflation	

- **The Utilization** dimension indicators examine the nutritional status of the population. They detail the access to basic infrastructure essential for safe food utilization (water and sanitation) as well as the nutritional value of food measured by looking into health parameters for children (stunting and wasting) and women (Anaemia).

	Code	Indicator Description	Short Name	SDG Target Linkage
Food Utilization Indicators (UT):	UT1	Percentage of the population using at least basic drinking water services	Drinking water access	1.4.1/6.1.1
	UT2	Percentage of the population using at least basic sanitation services	Sanitation access	1.4.1/6.2.1
	UT3	Percentage of children under 5 years of age affected by stunting ^R	Child stunting	2.2.1
	UT4	Percentage of children under 5 years of age affected by wasting ^R	Child wasting	2.2.2
	UT5	Percentage of anaemia among women of reproductive age (15-49 years) ^R	Women anaemia	

- **The Stability** dimension indicators look at factors that affect the year-round availability and accessibility of the food as well as its effective utilization. Stability deals with issues related to variability in food production and supplies, price shocks, prevailing socio-political factors (violence and conflict) and vulnerability to extreme weather events.

	Code	Indicator Description	Short Name	SDG Target Linkage
Stability Indicators (ST):	ST1	Climate change vulnerability ^R	Climate change	
	ST2	Food price anomalies ^R	Price anomalies	2.c.1
	ST3	Political stability and absence of violence	Political stability	
	ST4	Per capita food production variability ^R	Production variability	
	ST5	Per capita food supply variability ^R	Supply variability	

The outcome of grouping all indicators is the Arab Food Security Monitoring Framework that helps in tracking food security at different spatial and temporal levels; examines the four food security dimensions at national level; accounts for individual and household food security; and assists in monitoring food security related SDGs as several indicators are direct SDGs targets and others can easily be traced back to them.

The publication provides for each selected indicator a short description together with a justification for inclusion, suggested action areas, linkages to regional and global plans, possible data sources and the process for normalizing the raw data.



By analyzing potential action areas, the Arab Food Security Monitoring Framework facilitates the interpretation of results to translate them into policy recommendations that guide context-based strategies and programmes. For an illustrative purpose, the framework was run at the regional and sub-regional levels using data extracted from verified international sources. Countries are encouraged to collect and insert their own data⁶ for a better reflection of a country-level situation.

◇ Visualizing Food Security through a Dashboard

The framework is presented in the form of a dashboard composed of a doughnut chart and a data table. The doughnut chart contains an inner doughnut showing the three core indicators and an outer doughnut displaying the remaining twenty-one indicators, which are split among the four food security dimensions. The table provides the original or computed values as well as the years over which the monitoring is conducted and the trend in three traffic light-like colors.

Within the doughnut, the data is normalized into scores ranging from 0 to 10, respectively for poor and good performance. The normalization of indicators allows the use of a unique scale for a visual assessment of food security. For a more realistic comparison, the normalization was calculated using world minimum and maximum values rather than a 0-100% scale. As explained earlier, for many indicators, the normalization process is reversed as good performance is achieved with low values,⁷ referred to with an **R**.

The Arab Food Security Monitoring framework is mechanistic as all indicators are set and distributed across a core pillar and four food security dimensions and the interpretation of results follows a structured approach. The evaluation of the food security situation starts with the core three indicators for an overall picture of the prevailing food security and nutrition outcome and, then moves into the assessment of the indicators under the four food security dimensions to highlight contributing factors.

Applying the Framework to Track Food Security in the Arab Region

Tracking Food Security at the Arab Regional Level

The framework was applied at the Arab regional level and at the four sub-regions (GCC, Maghreb, Mashreq and Arab LDCs) filled with data from international sources. These include the United Nations Statistics, the World Bank or the Food and Agriculture Organization (FAO) noting that these institutions originate most of their data from countries to which they apply filters. Regarding climate change vulnerability, the chosen data source does not show that the Arab region is much affected as the index builds on number of casualties caused by disasters, decrease in agriculture productivity and impact of seawater intrusion, which do not seem to heavily impact Arab countries.

Data and trends

The core indicators show an increase in the prevalence of undernourishment and obesity, which stood at about 12% (affecting almost 50 million people) and 28% (115 million people) respectively for 2016.

In addition, 45 million people (11% of the Arab population) reported experiencing severe food insecurity. Both the prevalence of undernourishment and food insecurity were higher than global averages, which stood respectively at 11% and 9%. Indicators in the availability dimension show mixed results as half have a poor performance with decreasing trend. The access, utilization and stability indicators show a better performance with only 3 indicators below average. Trends in dietary energy supply adequacy use of water in agriculture and unemployment are also decreasing. However, data availability is an issue for some years and hence to show accurate trend.

Water is a critical issue in the Arab region. It is witnessing rapid aquifer depletion and salinization, seawater intrusion, reduction of rainfall and increased evapotranspiration and reduced water flows in the Mesopotamian and Nile river valleys. These are expected to reduce per capita renewable freshwater water availability to an alarming level reaching merely a tenth of the world average of 6,500 m³/capita/year.

Table 1. Food Security Data and Trends - Arab Region

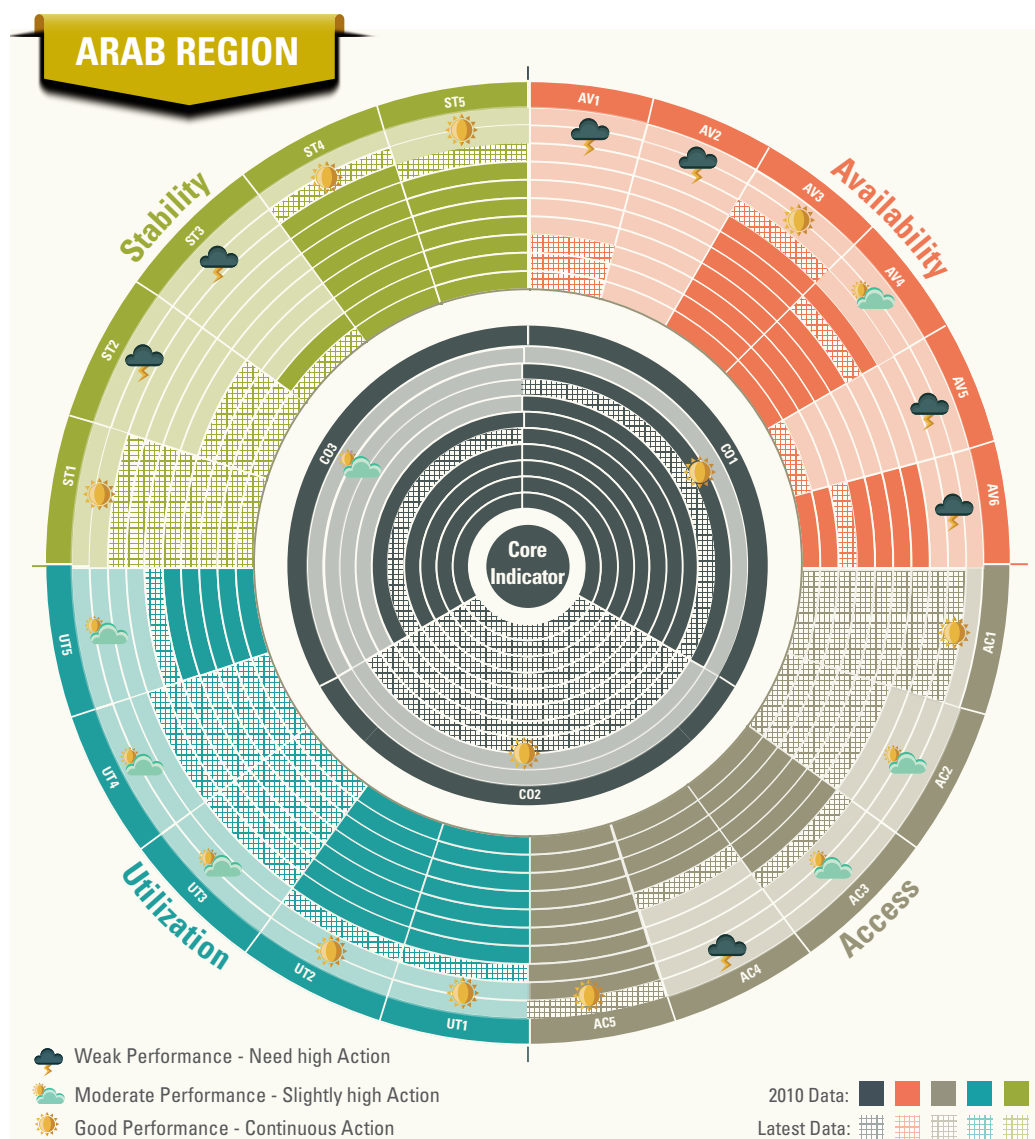
Indicators	World (Latest Data)		Value 2010	Latest Data		Trend
	Value	Year		Value	Year	
Core Indicators (CO):						
CO1: Undernourishment ^R	10.8	2016	9.6	12.03	2016	●
CO2: FIES ^R	9.2	2018		11.3	2016	
CO3: Obesity ^R			24.6	28.4	2016	●
Food Availability Indicators (AV):						
AV1: Cereal yield				63.68	2017	
AV2: AOI			0.19	0.2	2017	●
AV3: Food loss ^R			7.24	6.71	2013	●
AV4: ADESA			131	124.1	2017	●
AV5: Import dependency ^R			77.32	81.22	2012	●
AV6: Agriculture water ^R			31.57	74.35	2017	●
Food Access Indicators (AC):						
AC1: Poverty ^R	26.2	2015		10.5	2016	
AC2: Food consumption ^R				44.02	2018	
AC3: Unemployment ^R	4.95	2018	9.18	9.94	2018	●
AC4: Logistics	2.75	2016	2.5	2.57	2016	●
AC5: Inflation ^R	2.51	2018	3.91	3.07	2018	●
Food Utilization Indicators (UT):						
UT1: Water Access	88.5	2015	84.32	86.95	2015	●
UT2: Sanitation	68.03	2015	78.95	80.84	2015	●
UT3: Stunting ^R	22.2	2017		17.8	2016	
UT4: Wasting ^R	7.5	2017		6.7	2016	
UT5: Anemia ^R	32.8	2016	34.06	35.48	2016	●
Stability Indicators (ST):						
ST1: Climate Change ^R				0.09	2019	
ST2: Price Anomalies ^R				0.41	2017	
ST3: Political stability			20.14	13.94	2017	●
ST4: Production variability ^R			10.27	10.1	2016	●
ST5: Supply variability ^R			32.81	29.82	2013	●

^R : Reversed.
● : Negative Trend; ● : Neutral Trend; ● : Positive Trend.

Food Security Snapshot

The inner doughnut shows clearly the gap in addressing obesity (CO3). Obesity is a hotspot area at the Arab regional level with other hotspots including low yields, low government expenditure in agriculture, high food import dependency, poor logistics, high food price volatility and low political stability.

Figure 1. Food Security Performance





Key policy areas include:

- Addressing obesity should be a priority area;
- Sustainably enhancing yields in countries with adequate natural resources;
- Increasing government expenditure in agriculture; and
- Addressing the various conflicts affecting the region.

It is a challenge to draw definitive recommendations given the existing large disparity among countries of the Arab region. A sub-regional aggregation can provide a clearer picture of food security gaps for policy purposes. A country-level assessment remains the optimum level for directing detailed policy options.

Tracking Food Security in the GCC

Data and trends

The core indicators show low levels of undernourishment (CO1) and of prevalence of severe food insecurity (CO2) in GCC countries while obesity affects about 34% (18 million) of the population with an increasing trend.

The prevalence of obesity in the GCC is higher than the Arab average of 28%. Regarding indicators under the food security dimensions, the GCC is performing well among the most consequential such as unemployment levels and for most related to the utilization dimension aside from the prevalence of anemia among women which affected about 38% of women. The GCC region witnessed worsening trends for the critical issues of obesity, food import dependency and food supply variability. A number of indicators are also lacking data for adequate monitoring.

The region witnessed an increase in the food import dependency ratio. While this is an unfavorable trend, given the limited natural resources endowment, and the high income status, food availability is relatively secured. In fact, GCC countries are using a combination of strategies to ensure food security, including enhancing physical food storage capacities and promoting locally-owned entities to produce, trade and purchase food internationally (example investing in or leasing farmland in other countries).

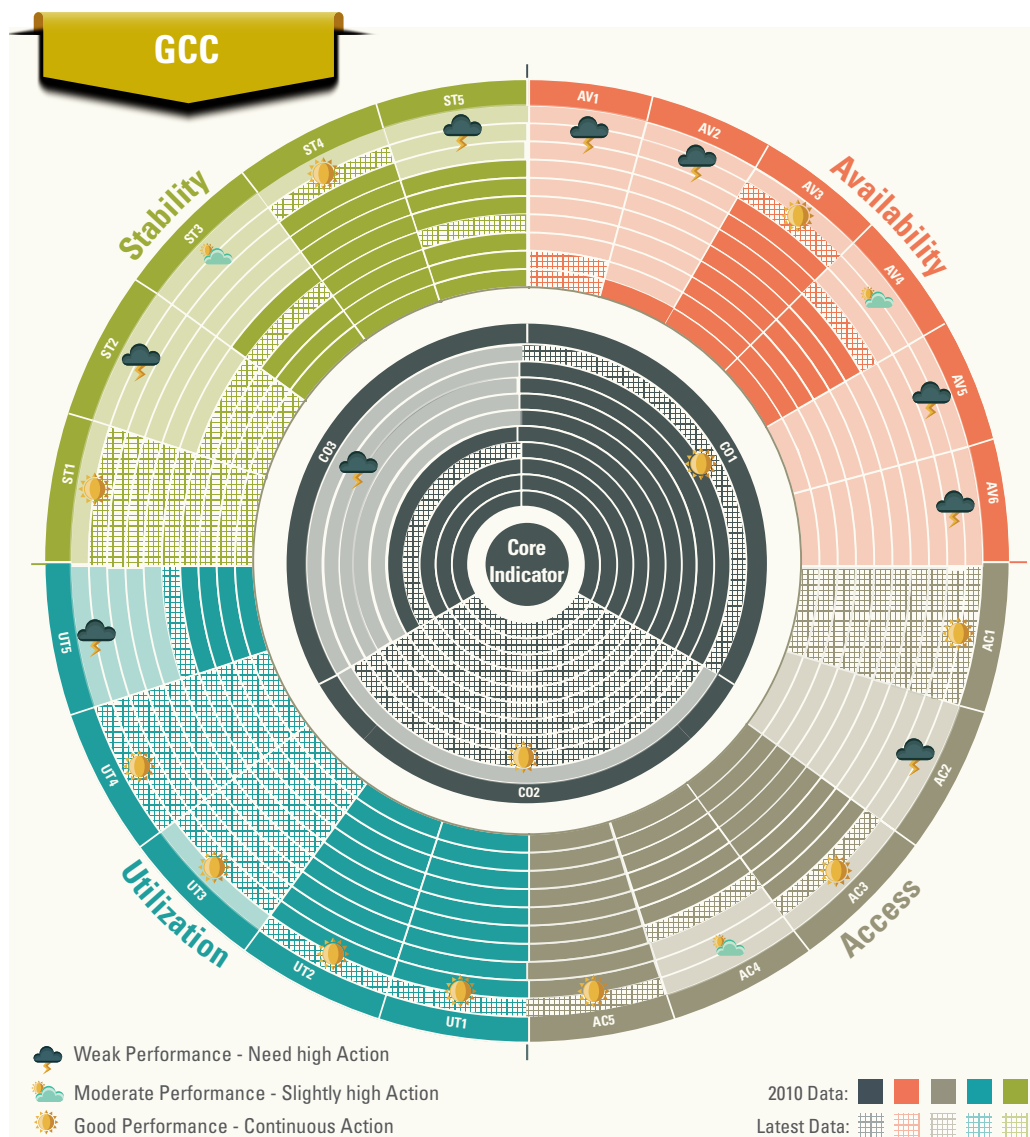
Table 2. Food Security Data and Trends - GCC

Indicators	Arab Region (Latest)		Value 2010	Latest Data		Trend
	Value	Year		Value	Year	
Core Indicators (CO):						
CO1: Undernourishment ^R	12.03	2016	6.36	4.69	2016	●
CO2: FIES ^R	11.3	2016		7.33	2016	
CO3: Obesity ^R	28.4	2016	30.28	34.11	2016	●
Food Availability Indicators (AV):						
AV1: Cereal yield	63.68	2017		53.19	2017	
AV2: AOI	0.2	2017	0.54	0.26	2017	●
AV3: Food loss ^R	6.71	2013	5.08	4.13	2013	●
AV4: ADESA	124.1	2017	127.85	132.53	2017	●
AV5: Import dependency ^R	81.22	2012	89.94	97.38	2012	●
AV6: Agriculture water ^R	74.35	2017		472.36	2017	
Food Access Indicators (AC):						
AC1: Poverty ^R	10.5	2016				
AC2: Food consumption ^R	44.02	2018				
AC3: Unemployment ^R	9.94	2018	4.38	4.42	2018	●
AC4: Logistics	2.57	2016	3.3	3.32	2016	●
AC5: Inflation ^R	3.07	2018	3.92	2.32	2018	●
Food Utilization Indicators (UT):						
UT1: Water Access	86.95	2015	98.48	99.21	2015	●
UT2: Sanitation	80.84	2015	99.74	99.94	2015	●
UT3: Stunting ^R	17.8	2016		9.5	2016	
UT4: Wasting ^R	6.7	2016		0.8	2016	
UT5: Anemia ^R	35.48	2016	36.17	37.74	2016	●
Stability Indicators (ST):						
ST1: Climate Change ^R	0.09	2019		0.04	2019	
ST2: Price Anomalies ^R	0.41	2017		0.6	2017	
ST3: Political stability	13.94	2017	49.5	38.5	2017	●
ST4: Production variability ^R	10.1	2016	5.42	7.9	2016	●
ST5: Supply variability ^R	29.82	2013	34.6	69.5	2013	●
^R : Reversed. ● : Negative Trend; ● : Neutral Trend; ● : Positive Trend.						

Food Security Snapshot

The inner doughnut shows a good performance in the prevalence of both undernourishment and prevalence of severe food insecurity while the prevalence of obesity is at a critical level with one third of the population being affected. Other hotspot areas that need policy action, in addition to obesity, include high food import dependency, high prevalence of anemia among women and high price volatility.

Figure 2. Food Security Performance



Key policy areas

- Programmes and strategies to address the rising prevalence of obesity including extensive awareness campaigns on healthier diets, and revision of food subsidies leading to excess consumption of refined cereals, added sugar, selected cooking oils and high energy nutrient poor foods;
- Address the high occurrence of anemia among women;
- As the region will continue to depend on food import due to natural resources' limitations, it should explore alternative and less costly options for acquiring the needed food such as the use of virtual storage through selected market instruments including options and future contracts to reduce the costs of maintaining physical stocks.

Tracking Food Security in the Maghreb Sub-Region

Data and trends

The core indicators show a favorable trend in the prevalence of undernourishment and a good performance in the prevalence of severe food insecurity. However, the sub region experienced worsening trends for obesity, which affects over 32 million people (27% of the population) with increasing trend. The prevalence of obesity is on par with that of the Arab region. The availability and access dimensions indicators show mixed results as about 6 indicators are performing poorly. The utilization and stability dimension indicators have generally above average scores and favorable trends except for the prevalence of anemia among women, which affected around 3 out of 10 women (third of women), and political stability. The sub-region is also experiencing worsening trends for expenditure in agriculture, water use in agriculture, unemployment, inflation, political stability and food production variability.

Though the chosen climate change indicator does not show a challenge for the Maghreb subregion, selected climate change scenarios project decreases in yields of up to 50% in some areas while the sub-region is already plagued by low yields and is increasingly dependent on food import for staple foods including wheat.

Table 3. Food Security Data and Trends - Maghreb

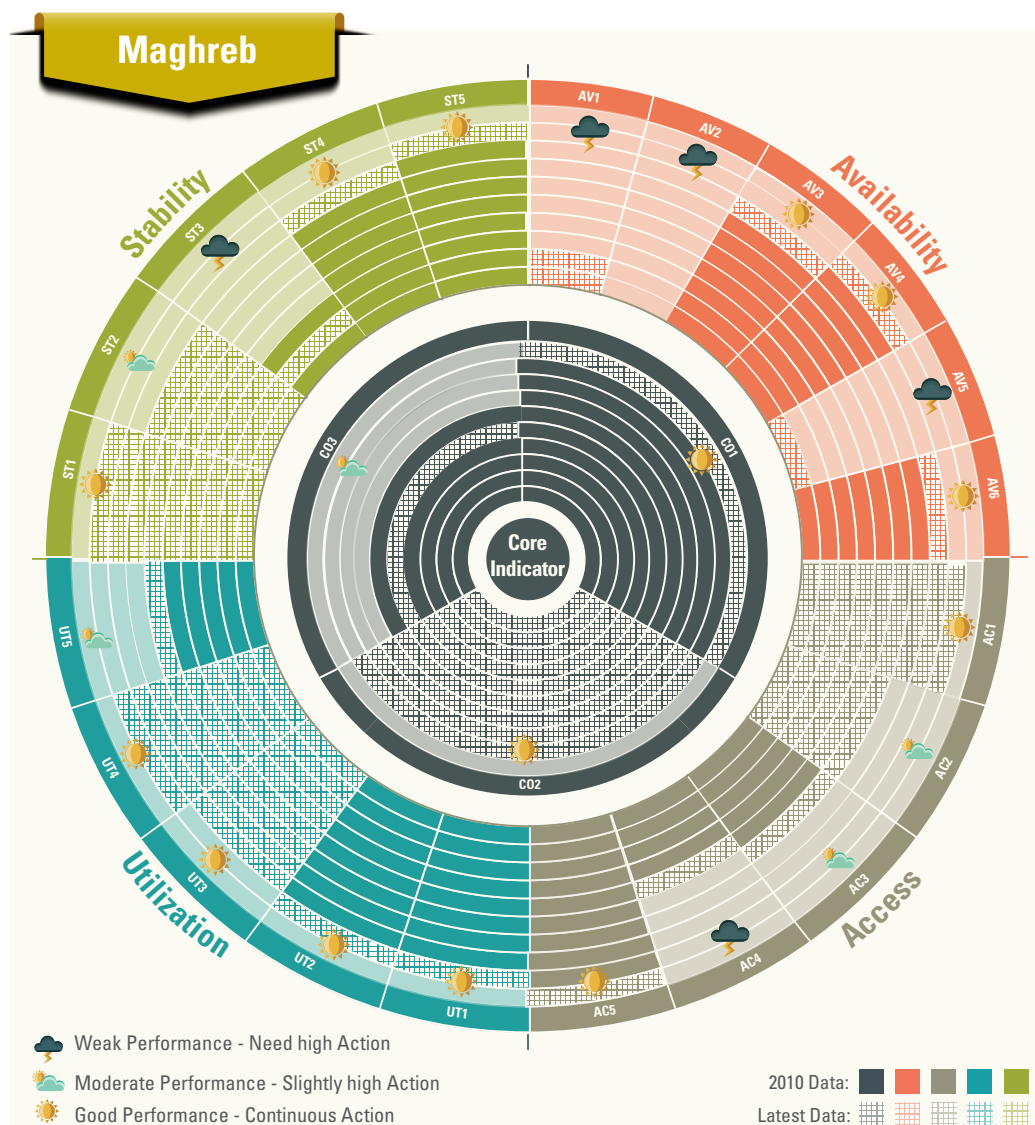
Indicators	Arab Region (Latest)		Value 2010	Latest Data		Trend
	Value	Year		Value	Year	
Core Indicators (CO):						
CO1: Undernourishment ^R	12.03	2016	5.69	4.4	2016	●
CO2: FIES ^R	11.3	2016		7.33	2016	
CO3: Obesity ^R	28.4	2016	23.25	27.19	2016	●
Food Availability Indicators (AV):						
AV1: Cereal yield	63.68	2017		48.65	2017	
AV2: AOI	0.2	2017	0.25	0.18	2017	●
AV3: Food loss ^R	6.71	2013	7.14	7.02	2013	●
AV4: ADESA	124.1	2017	137.65	145.41	2017	●
AV5: Import dependency ^R	81.22	2012	58.9	60.27	2012	●
AV6: Agriculture water ^R	74.35	2017	19.91	22.12	2017	●
Food Access Indicators (AC):						
AC1: Poverty ^R	10.5	2016		4.99	2016	
AC2: Food consumption ^R	44.02	2018		43.95	2018	
AC3: Unemployment ^R	9.94	2018	10.59	11.74	2018	●
AC4: Logistics	2.57	2016	2.5	2.66	2016	●
AC5: Inflation ^R	3.07	2018	-1.6	3.64	2018	●
Food Utilization Indicators (UT):						
UT1: Water Access	86.95	2015	86.86	89.84	2015	●
UT2: Sanitation	80.84	2015	84.99	87.49	2015	●
UT3: Stunting ^R	17.8	2016		11.9	2016	
UT4: Wasting ^R	6.7	2016		2.98	2016	
UT5: Anemia ^R	35.48	2016	32.46	35.39	2016	●
Stability Indicators (ST):						
ST1: Climate Change ^R	0.09	2019		0.06	2019	
ST2: Price Anomalies ^R	0.41	2017		-0.7	2017	
ST3: Political stability	13.94	2017	26.3	20	2017	●
ST4: Production variability ^R	10.1	2016	15.3	16.5	2016	●
ST5: Supply variability ^R	29.82	2013	23	13	2013	●

^R : Reversed.
● : Negative Trend; ● : Neutral Trend; ● : Positive Trend.

Food Security Snapshot

The inner doughnut shows a low prevalence of undernourishment and prevalence of severe food insecurity but a high prevalence of obesity (CO3). In addition to obesity, other hotspot areas include low yields, high food import dependency, high share of food consumption, expenditure high unemployment, high prevalence of anemia among women and socio-political instability. The combined impact due to the underperformance in the above hotspot areas might contribute to increasing socio-political instability affecting Maghreb countries.

Figure 3. Food Security Performance



Key policy areas:

A comprehensive strategy is needed to enhance the agricultural sector's resilience to climate change. Areas of potential intervention might include:

- Enhancing reliance on sustainable irrigation;
- Building retention dams to capture runoff water;
- Treating and reusing agriculture wastewater;
- Adopting integrated water resource management techniques, improving efficiency in water-use and delivery;
- Considering the use of water tariffs;
- Re-adapting the agriculture calendar based on changing weather patterns;
- Adopting efficient irrigation techniques;
- Supporting investments and financing in rural and the agricultural sector;
- Building capacity of the sector's stakeholders, notably among farmers and technical staff.

Other areas that need urgent intervention include:

- Addressing obesity through extensive awareness campaigns and revision of subsidies of oil, sugar and wheat;
- Addressing the prevalence of anemia among women;
- Reducing unemployment and poverty;
- Enhancing government expenditure in agriculture;
- Addressing the prevailing socio-political instability and the protracted conflict in Libya.

Tracking Food Security in the Mashreq Sub-Region

Data and trends

The core indicators show relatively high levels for the prevalence of undernourishment, prevalence of severe food intensity and obesity with increasing trend for undernourishment and obesity. Obesity affects about 47 million persons in the Mashreq subregion (more than 31% of the population). The obesity rate is higher than the Arab region's (28%). The availability dimension indicators show a poor performance for 4 indicators while the access, utilization and stability dimensions' indicators have above average data and rising trends for most indicators. Trends are worsening for undernourishment, obesity, expenditure in agriculture, import dependency, unemployment, inflation and political stability.

Table 4. Food Security Data and Trends - Mashreq

Indicators	Arab Region (Latest)		Value 2010	Latest Data		Trend
	Value	Year		Value	Year	
Core Indicators (CO):						
CO1: Undernourishment ^R	12.03	2016	10.26	11.3	2016	●
CO2: FIES ^R	11.3	2016		13.43	2016	
CO3: Obesity ^R	28.4	2016	27.38	31.36	2016	●
Food Availability Indicators (AV):						
AV1: Cereal yield	63.68	2017		78.57	2017	
AV2: AOI	0.2	2017	0.14	0.13	2017	●
AV3: Food loss ^R	6.71	2013	8.88	8.72	2013	●
AV4: ADESA	124.1	2017	137	137.54	2017	●
AV5: Import dependency ^R	81.22	2012	55.84	64.55	2012	●
AV6: Agriculture water ^R	74.35	2017		57.71	2017	
Food Access Indicators (AC):						
AC1: Poverty ^R	10.5	2016		12.8	2016	
AC2: Food consumption ^R	44.02	2018				
AC3: Unemployment ^R	9.94	2018	8.81	10.34	2018	●
AC4: Logistics	2.57	2016	2.6	2.74	2016	●
AC5: Inflation ^R	3.07	2018	7.91	21.61	2018	●
Food Utilization Indicators (UT):						
UT1: Water Access	86.95	2015	94.34	95.07	2015	●
UT2: Sanitation	80.84	2015	91.1	91.88	2015	●
UT3: Stunting ^R	17.8	2016		17.9	2016	
UT4: Wasting ^R	6.7	2016		7.01	2016	
UT5: Anemia ^R	35.48	2016	30.29	29.66	2016	●
Stability Indicators (ST):						
ST1: Climate Change ^R	0.09	2019		0.08	2019	
ST2: Price Anomalies ^R	0.41	2017				
ST3: Political stability	13.94	2017	16.65	7.7	2017	●
ST4: Production variability ^R	10.1	2016	10.4	9.2	2016	●
ST5: Supply variability ^R	29.82	2013	38.5	31	2013	●

^R : Reversed.
● : Negative Trend; ● : Neutral Trend; ● : Positive Trend.

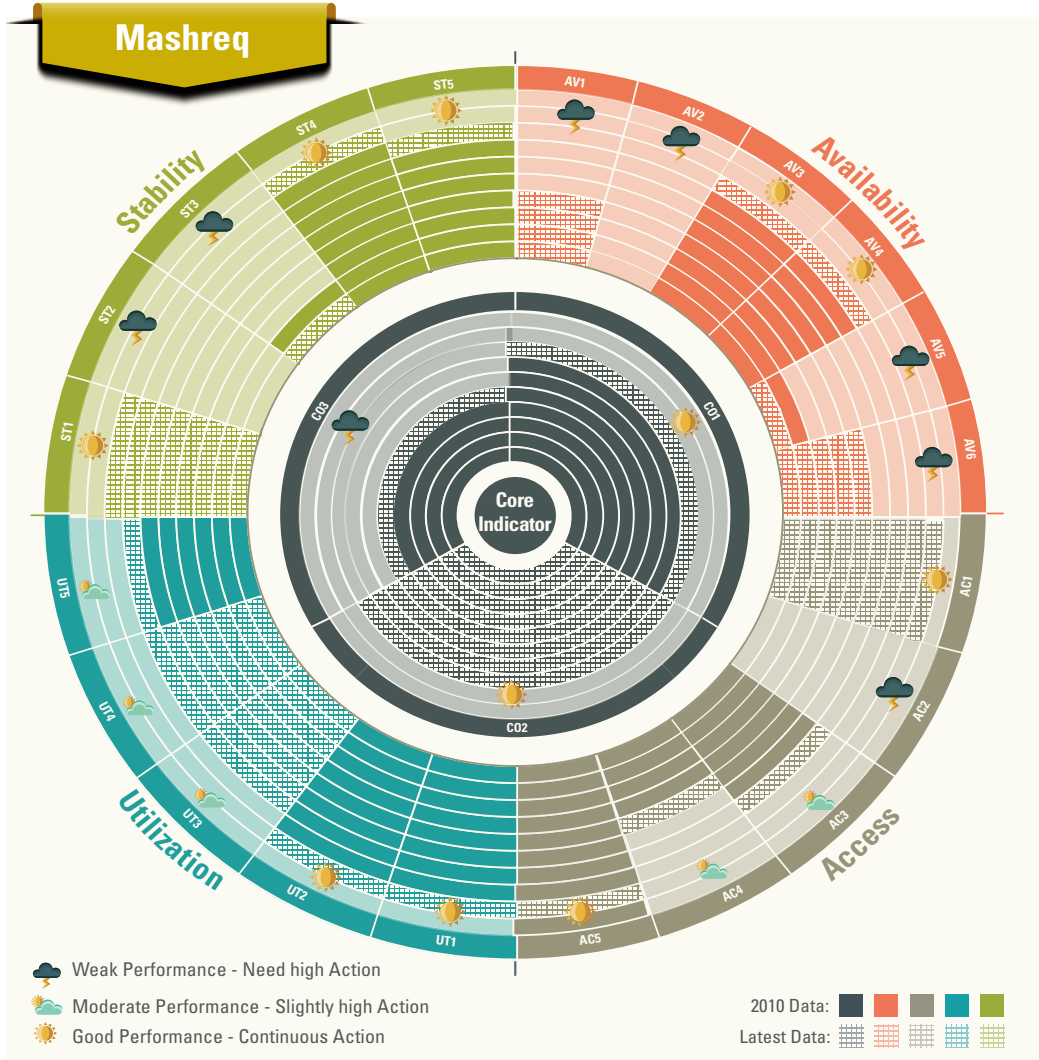


The conflicts in Iraq and Syria had decimated agricultural trade in the Mashreq sub-region, which not only affected the movement of agricultural produces for Iraq, Jordan, Lebanon and Syria but also those from and towards the GCC, Turkey and Iran. It has led to reduced income for farmers, tax revenues for governments, profits for supply chain participants and agricultural production for farmers. Longer and more costly trade routes are leading to inefficiencies. As the conflicts winds down there is a high expectation that agricultural trade might thrive again, and stakeholders are positioning themselves to take advantage of this improvement. However, governments need to commit to continue promoting a stable and conducive economic and socio-political environment.

Food Security Snapshot

The inner doughnut shows good performance in terms of the prevalence of undernourishment and prevalence of severe food intensity levels while the prevalence of obesity is a cause of concern. In addition to obesity, other hotspot areas include low yields, low expenditure towards agriculture, high food import dependency, high water use in agriculture, high share of food consumption, poor logistics, high price volatility and political instability as highlighted above. Another hotspot area of concern is the low level of expenditure by governments of the sub-region towards agriculture and rural development while many countries have a substantial and active agricultural sector, which is a source of livelihood for many particularly in rural areas.

Figure 4. Food Security Performance



Key policy areas include:

Promoting and facilitating investments in rural areas including strengthening rural infrastructure, enhancing the functioning of rural markets and improving the logistics, developing the rural financial sector and building capacity and research and development as well as protecting the environment;

- Improving yields for staple foods;
- Enhancing water-use efficiency including adopting more efficient irrigation techniques;
- Addressing the conflicts affecting the sub-region.

Tracking Food Security in the Arab LDCs

Data and trends

The core indicators show high levels for the prevalence of undernourishment, which is affecting about 24 million people (28% of the population). Severe food intensity is affecting over 23% (20 million) and obesity about 14% (12 million) of the population. Undernourishment and prevalence of severe food intensity are both more than double the Arab average and show increasing trends. The obesity rate is below half of the Arab region's rate. However, more recent data might show dire conditions as in Yemen alone it is being reported that about 60% of the population is experiencing chronic food insecurity tending towards famine. All the food security dimension indicators show poor or mixed results as well including the prevalence of anemia among women which is affecting about half of them.

Most Arab LDCs are affected by poor political stability and socio-cultural and environmental weaknesses, which in turn exacerbate conflicts and the continued prospect of famine in Yemen, for example.

Food Security Snapshot

The inner doughnut shows low prevalence of obesity but poor performance with regards to the prevalence of undernourishment (CO1). In addition to undernourishment, most other indicators are also hotspot areas.

Key policy areas

Eventhough there are a few bright spot areas, the Arab LDCs need comprehensive sustainable development programmes, which are most indicated to address the prevailing food insecurity largely caused by poverty and underdevelopment. Areas of immediate action include:

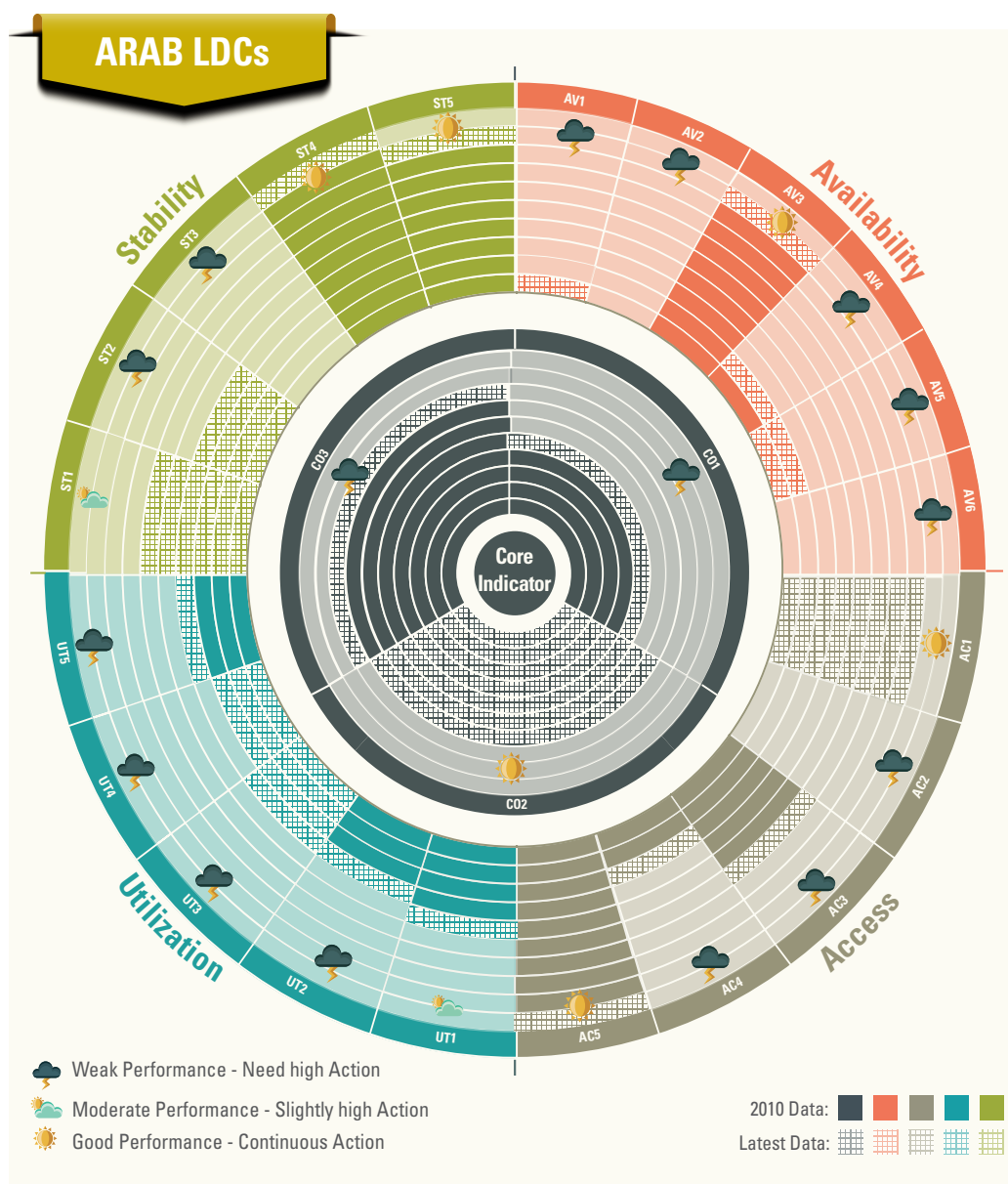
- Focused nutrition programmes to address the challenges of malnutrition, anemia among women and child stunting: better nutrition and diet diversification, enhancing food fortification, distributing vitamins and supplements, strengthening public health and disease control and supporting reproductive health programmes;
- Improve people's access to food requires working on poverty, unemployment, logistics and infrastructure.

Table 5. Food Security Data and Trends - Arab LDCs

Indicator	Arab Region (Latest)		Values 2010	Latest Data		Trend
	Value	Year		Value	Year	
Core Indicators (CO):						
CO1: Undernourishment ^R	12.03	2016	24.76	27.81	2016	●
CO2: FIES ^R	11.3	2016		23.35	2016	
CO3: Obesity ^R	28.4	2016	10.96	13.86	2016	●
Food Availability Indicators (AV):						
AV1: Cereal yield	63.68	2017		38.17	2017	
AV2: AOI	0.2	2017				
AV3: Food loss ^R	6.71	2013	4.23	2.09	2013	●
AV4: ADESA	124.1	2017	97.96	95.84	2017	●
AV5: Import dependency ^R	81.22	2012	86.94	32.84	2012	●
AV6: Agriculture water ^R	74.35	2017				
Food Access Indicators (AC):						
AC1: Poverty ^R	10.5	2016		17.2	2016	
AC2: Food consumption ^R	44.02	2018				
AC3: Unemployment ^R	9.94	2018	13.18	12.85	2018	●
AC4: Logistics	2.57	2016	2.2	2.26	2016	●
AC5: Inflation ^R	3.07	2018	11.84	12.33	2018	●
Food Utilization Indicators (UT):						
UT1: Water Access	86.95	2015	52.8	60.39	2015	●
UT2: Sanitation	80.84	2015	35.22	40.17	2015	●
UT3: Stunting ^R	17.8	2016		32.6	2016	
UT4: Wasting ^R	6.7	2016		16.2	2016	
UT5: Anemia ^R	35.48	2016	42.96	45.53	2016	●
Stability Indicators (ST):						
ST1: Climate Change ^R	0.09	2019		0.18	2019	
ST2: Price Anomalies ^R	0.41	2017		0.34	2017	
ST3: Political stability	13.94	2017	2.53	4.24	2017	●
ST4: Production variability ^R	10.1	2016	4.63	3.2	2016	●
ST5: Supply variability ^R	29.82	2013	31.2	18.1	2013	●
^R : Reversed.						
● : Negative Trend; ● : Neutral Trend; ● : Positive Trend.						

- Enhanced management of natural resources to mitigate the impact of climate change;
- Good governance to reduce conflicts and management of public resources are also essential to enhance equity and equality in these countries.

Figure 5. Food Security Performance



Ensuring a Food Secure Future to the Arab Region

Ensuring food security for the growing and increasingly affluent Arab population is a constant challenge. Arab policy-makers continue to strive to ensure that enough food is available, accessible and utilized by all and that the food system is stable enough to overcome any physical, financial, socio-political and natural shocks. This is not an easy task given the complexity and multidimensionality of food security.

For far too long, Arab countries have addressed food security through policies targeting one or selected dimensions to the detriment of others, which often led to imbalances that further threatened food security. This proposed food security monitoring framework allows to capture the complex and interactive nature of food security for identifying and targeting hotspot areas.

The monitoring framework shows that Arab high- and middle-income countries are increasingly afflicted by obesity that sometimes reach up to a third of the population. Addressing it should be high on the agenda of these countries given its potentially costly impact on health systems and productivity loss. Arab LDCs, on the other hand, have high levels of undernourishments and prevalence of severe food insecurity both of which might get worse due to the protracted socio-political crises affecting these countries and the impact of climate change, which is a leading cause of the natural disasters, i.e. drought and flooding, being observed.

As whole, the Arab region has hotspot areas which need immediate action including low yields, high food import dependency, prevalence of anemia among women and high political instability.

The framework highlights as well the need to step up efforts to collect and disseminate or share relevant data so more focused analyses on food insecurity and its drivers could be conducted. Disaggregating the data along known divides, such as gender, youths, disabilities, refugees/displaced people or rural/urban would help target vulnerable populations and as such should be supported at national and regional levels.

Arab countries are encouraged to adopt and utilize this framework widely given its ease of use while allowing a global understanding on the drivers affecting food security for more focused policy interventions. As such, it is an important tool for economic development and food security programme planning.



Endnotes

1. <https://www.unescwa.org/publications/arab-horizon-2030-prospects-enhancing-food-security-arab-region>
2. Arab LDCs includes Djibouti, Comoros, Mauritania, Somalia, Sudan and Yemen.
3. GCC includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates.
4. Maghreb comprises Algeria, Libya, Morocco and Tunisia.
5. Mashreq comprises Egypt, Iraq, Jordan, Lebanon, Palestine and Syria.
6. The publication has an associated Excel file that can be provided by ESCWA and/or partners.
7. Also refer to the “Manual for monitoring food security in the Arab region” available at: <https://www.unescwa.org/publications/manual-monitoring-food-security-arab-region>



