Ministry of Health

The Hashemite Kingdom of Jordan

NATIONAL NUTRITION STRATEGY

2023
2030

Acknowledgements

This National Nutrition Strategy 2023-2030 has been developed under the leadership of the Ministry of Health - Nutrition Department, with the support of the World Health Organization and in collaboration with a wide range of key nutrition stakeholders.

Several governmental entities participated in the preparatory workshop for the development of the strategy, which was held on 30 September 2021, including the Ministry of Industry, Trade and Supply, Ministry of Youth, Jordan Standards and Metrology Organization, Jordan Food and Drug Administration, Consumer Protection Organization, Greater Amman Municipality, the Royal Scientific Society, and the Royal Medical Services —the contributions of these organizations are gratefully acknowledged. The participation of academic institutions including the Hashemite University, the Jordan University, the American University of Beirut, Al Balqa Applied University and the American University – Madaba, as well as the national nutrition centre from the private sector — is also appreciated.

Gratitude is also due to UN partner organizations, including UNFPA, UNRWA, UNHCR, UNICEF, the World Bank, and the World Food Programme for their contributions. For the full list of participants involved in the strategy development workshop see Annex I.

The Hashemite
Kingdom of Jordan

National Nutrition Strategy
2023 – 2030

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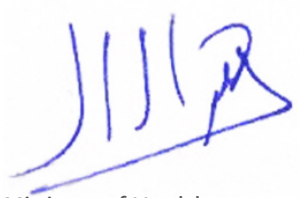
Foreword

Proper nutrition is one of the most important requirements for national development in any country in the world. It is an essential element of human health and a basic right to life. Scientific evidence has proven the direct impact of optimal nutrition on human health, increased productivity, and national economic growth. It also showed the profound effects of malnutrition on health, annual health expenditure and the delay in human development.

Jordan has been witnessing a continuous improvement in the field of nutrition. Nonetheless, various forms of malnutrition still exist. This is due to lifestyle changes, as in other counties in the Eastern Mediterranean region, and the accompanying changes in diets, which have become rich in nutrient-poor and energy-dense foods. This has led to an increase in levels of obesity and diet-related noncommunicable diseases, such as type 2 diabetes, hypertension and cardiovascular diseases, in addition to other problems of micronutrient deficiencies, low levels of breastfeeding and continued undernutrition among some groups in the society.

The National Nutrition Strategy 2023-2030 and its implementation framework constitute a vivid embodiment of the commitment of governmental and non-governmental stakeholders towards achieving better levels of nutrition in fulfillment of His Majesty King Abdullah II's vision to achieve the agreed economic and social development goals. This strategy derives its importance from being a roadmap to guide the efforts of key relevant stakeholders to improve nutrition for whole of society including women of reproductive age, children under five years old, adolescents and the most vulnerable groups such as the elderly and people with disabilities. Furthermore, it focuses on prevention of malnutrition, overweight and obesity, micronutrient deficiencies and diet-related noncommunicable disease. Also, it aims to promote sustainable healthy diets in line with the regional and global nutrition goals.

It is worth emphasizing the importance of coordinating efforts and collaboration among all concerned stakeholders to effectively achieve the vision and objectives of this strategy and to establish robust systems for monitoring and evaluation of the enactment of the implementation framework within the agreed timeframe.



Minister of Health
Professor Feras Ibrahim Hawari

List of abbreviations

BMI	Body Mass Index
FAO	Food and Agriculture Organization of the United Nations
IDD	Iodine Deficiency Disorders
JFDA	Jordan Food and Drug Administration
JPFHS	Jordan Population and Family Health Survey
JSMO	Jordan Standards and Metrology Organization
MoH	Ministry of Health
NCD	Noncommunicable disease
SD	Standard deviation
STEPs	Jordan National STEPwise Survey for Noncommunicable Diseases Risk Factors
UNHCR	United Nations High Commissioner for Refugees
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
WFP	World Food Programme
WHO	World Health Organization

Introduction

The Hashemite Kingdom of Jordan has realized dramatic improvements in nutrition in recent decades. Progress in tackling child undernutrition has seen prevalence of childhood stunting reduced by around two-thirds between 1990 and 2012 and levels of wasting among young children under five years maintained at a low level. In addition, salt iodization and fortification of wheat flour with iron and other nutrients have contributed to drastic reductions in the prevalence of iodine deficiencies and severe anaemia, respectively.

Nonetheless, Jordan continues to suffer from multiple forms of malnutrition. Changing diets and lifestyles mean that, like other countries in the Eastern Mediterranean Region, Jordan has experienced a rapid nutrition transition, with a shift towards diet that are higher in energy-dense and nutrient-poor foods. This has resulted in increasing levels of obesity and diet-related noncommunicable diseases (NCDs), such as type 2 diabetes, hypertension and cardiovascular diseases. These problems now co-exist with ongoing problems of micronutrient deficiencies, low levels of exclusive breastfeeding, levels of low birthweight and persistent pockets of undernutrition. Furthermore, the COVID-19 pandemic has impacted food security and malnutrition in Jordan and the recent global food price increases, exacerbated by the conflict in Ukraine, further threatened food security and nutrition.

There remains a considerable scope, therefore, to improve the health and wellbeing of Jordanians and the millions of refugees hosted in the country by improving nutrition and delivering healthy, sustainable and affordable diets for all. The case for such action is strong — increasing exclusive breastfeeding and improving infant and young child feeding can yield lifelong benefits for health and economic productivity, while delivery of healthy diets and creation of healthier food environments can help prevent the devastating social and economic impact of obesity and diet-related NCDs.

A new strategy and plan of action is now needed to address these multiple forms of malnutrition. This new National Nutrition Strategy 2023–2030 seeks to build on the progress achieved through the implementation of previous action plans for nutrition and to drive progress towards globally agreed goals on nutrition and the Sustainable Development Goals by 2030.

Methodology and approach

This strategy has been prepared under the leadership of the Ministry of Health – Nutrition Department, with the support of WHO, and in collaboration with a wide range of key nutrition stakeholders.

The chapter on the current situation in Jordan is predominantly based on the Jordan National Micronutrients and Nutrition Survey and a review by Al-Awwad and colleagues.[1] This review was based on a thorough literature search conducted between May and October 2021 of national and international databases on nutrition status, infant and young child feeding in Jordan.

The strengths and weaknesses of current food and nutrition policy responses, as well as the objectives and priority policies of this new strategy were discussed at a preparatory workshop in September 2021. Participants in the workshop included representatives of Ministries and other relevant government bodies, academic institutions, private sector and UN agencies. See Annex 1 for a list of the workshop participants.

On the basis of the workshop conclusions, an initial draft was prepared and was then issued for wider consultations among all stakeholders and partner organizations. The process has also drawn on other recent national strategies that are relevant — on food security, school feeding and social protection — as well as the outcomes of the national food systems dialogue and the United Nations policy brief for healthy diets prepared in the run up to the UN Food Systems Summit in September 2021.[2]

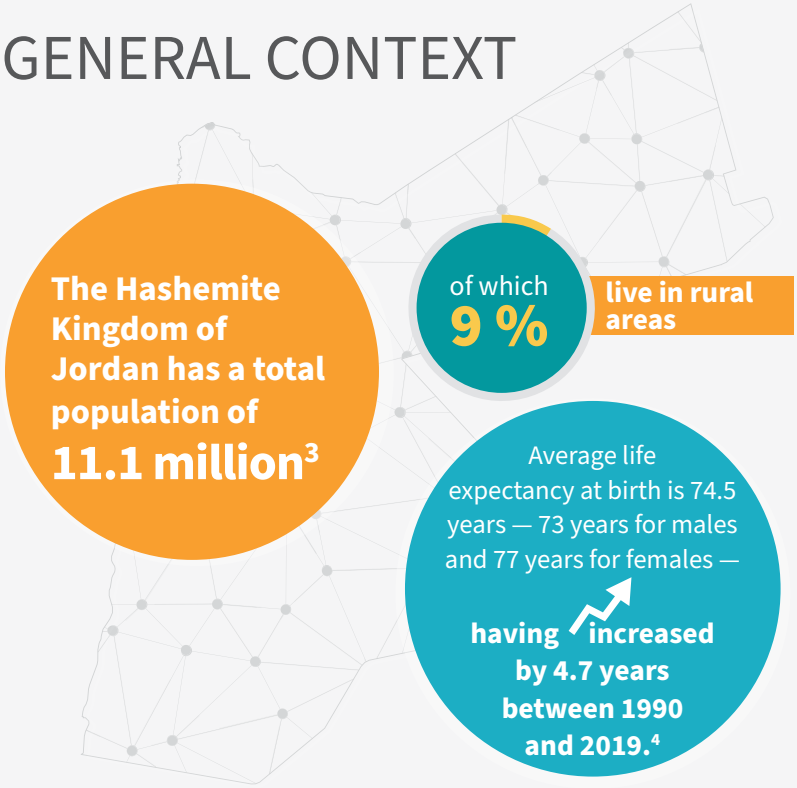
Figure 1. Process of developing the Jordan National Nutrition Strategy 2023-2030

[1] *Al-Awwad NJ, Ayoub J, Barham R, Sarhan W, Al-Holy M, Abughoush M, Al-Hourani H, Olaimat A, Al-Jawaldeh A. Review of the Nutrition Situation in Jordan: Trends and Way Forward. Nutrients 2022, 14, 135. https://doi.org/10.3390/nu14010135*

[2] *UN Jordan. Policy brief: healthy diets for all in Jordan. Sept 2021. https://jordan.un.org/en/145648-policy-brief-healthy-diets-all-jordan*

Current situation in Jordan

GENERAL CONTEXT



Jordan is considered a safe haven for refugees and, with support from the international community, The country hosts nearly **3 million officially registered refugees**, mainly Palestinians and Syrians, and more than **600,000 non-registered Syrians.**[5]

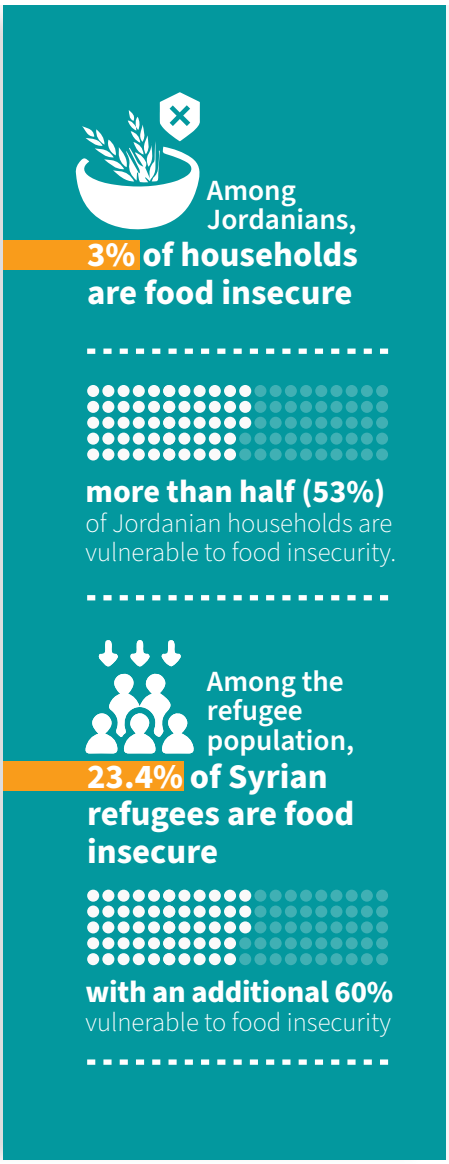
Jordan is classified as upper-middle income country with a high level of human development (ranked 102 out of 189 countries and territories in 2019[4]), but has been affected by an economic downturn in recent years. Gross National Income per capita reached USD 9,858 (purchasing power parity) in 2019.[4] The absolute poverty rate reached 15.7% in 2017 compared to 14.4% in 2010 and 5.6% in 2004-6.[6] In the third quarter of 2021 the unemployment rate for Jordanians was 23.2% (21.2% and 30.8% for men and women respectively), representing a slight decrease from the third quarter of 2020.[3]

Jordan is one of the most water-scarce countries in the world — with less than 100 m^3 annual share per capita.

an energy-poor country, importing more than 95% of its energy.[5]

The food systems in Jordan are fragile and vulnerable. Climate change affects all the components of food systems in Jordan, as shown by increases in water scarcity, frequency of droughts, and land degradation. These pressures are predicted to ultimately decrease production and productivity, especially for small and subsistence farmers.[5]

[3] *http://dosweb.dos.gov.jo/*
[4] *The Next Frontier: Human Development and the Anthropocene. Human Development Report 2020. Jordan. UNDP, 2020 (http://hdr.undp.org/sites/default/files/ Country-Profiles/JOR.pdf)*
[5] *The National Food Security Strategy. The Hashemite Kingdom of Jordan, June 2021.*
[6] *http://jorinfo.dos.gov.jo/Databank/pxweb/en/Poverty/Poverty__Poverty-Indicators/Table1.px/table/tableViewLayout2/*



FOOD SECURITY SITUATION

Food insecurity has been highlighted as an increasing national issue, in light of factors including urbanization, fluctuating prices of food imports, climate change impacts, the influx of Syrian refugees, falling remittances from Jordanians overseas and the COVID-19 pandemic. Among Jordanians, 3% of households are food insecure, but this varies between governorates and is as high as 20% of households in Al-Tafileh governorate. In addition, more than half (53%) of Jordanian households are vulnerable to food insecurity.

Among the refugee population, the World Food Programme's analysis in June 2021 found 23.4% of Syrian refugees are food insecure, with an additional 60% vulnerable to food insecurity.[7] A decline in the momentum of international assistance to help ensure the food security of refugees in Jordan has been reported.[5]

To address these issues, a national food security strategy was finalized in June 2021. For this reason, this National Nutrition Strategy does not specifically address food security, although malnutrition and food insecurity are clearly closely intertwined challenges. Multisectoral efforts are required to implement this National Nutrition Strategy alongside, among others, the National Food Security Strategy.

NUTRITION SITUATION

Jordan suffers from multiple forms of malnutrition, including undernutrition, micronutrient deficiencies, overweight, obesity and diet-related NCDs. The country has witnessed a rapid nutrition transition due to changing diets and lifestyles, with a shift from undernutrition — but with persistent problems of micronutrient deficiencies — towards greater prevalence of overweight/obesity and diet-related NCDs. Data from the national micronutrient and nutrition survey, the Nutrition Department of the Ministry of Health and WHO were used for the following sections.[1]

[7] *WFP Jordan country brief, October 2021. (https://reliefweb.int/sites/reliefweb.int/files/resources/2021%2010%20Jordan%20Country%20Brief.pdf)*

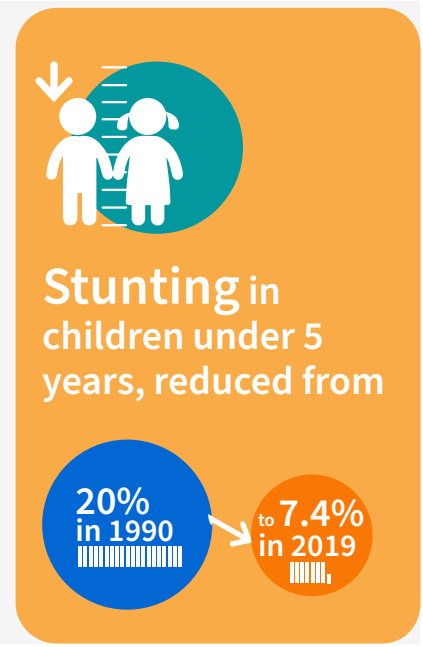
UNDERNUTRITION AMONG CHILDREN UNDER 5 YEARS OF AGE

Jordan has achieved progress in reducing undernutrition among young children in recent decades.

STUNTING

There has been a notable progress in reducing stunting in children under 5 years, down from 20% in 1990 to 7.4% in 2019 (latest available data).[8] The prevalence of stunting was higher among girls than in boys (7.9% and 7.0%, respectively) and among children aged 0-23 months old compared to 24-59 months (9.6% and 6.6%, respectively). The prevalence of stunting is much higher among young children living in refugee camps and among children of families in the lowest income quintile (13.9% and 12.3% respectively in 2019). Among the children in refugee camps, 3.9% were severely stunted.

The prevalence of stunting in this age group reduced between 2010 and 2019.[8] Prevalence is considered low in the settled population, according to WHO cut-off values for public health significance, but it is higher among children living in refugee camps and there remains further scope for improvement.



WASTING

Prevalence of wasting among children under 5 years in the settled population was 0.6% in 2019.[8] Prevalence was also low in young children in the Syrian refugee camps (1.1%). Annual data for wasting cannot be presented as a trend, because wasting is a relatively short-term condition — and an individual child can be affected more than once a year — and is affected by seasonality, meaning that annual trend data cannot capture these fluctuations. The country is currently meeting the global target of maintaining the level of wasting to below 5% by 2025.

UNDERWEIGHT

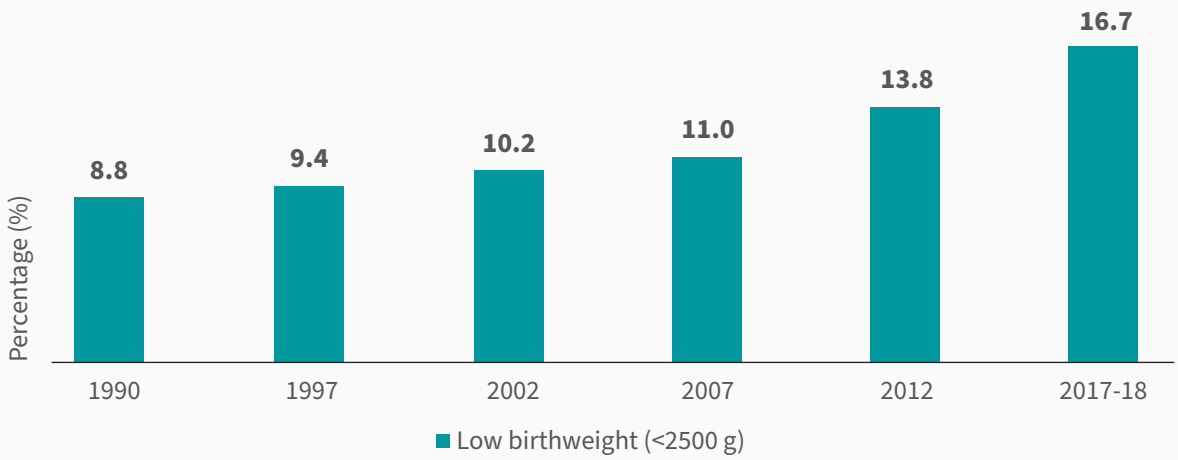
The prevalence of underweight among children under 5 years was 2.7% in 2019 (with 0.6% severely underweight).[9] This is largely unchanged from 2010. The prevalence of underweight was also very low for the preschool population in Syrian refugee camps (3.7% in 2019, with 1.6% being severely underweight) and was also low (1.1%) for school-age children living in the camps.

[8] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022.*
[9] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutrition survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)*

LOW BIRTHWEIGHT

Low birthweight remains an issue of concern in Jordan, with potential consequences for, among others, growth, cognitive development and immune defences. Estimates of low birthweight increased from 8.8% in 1990 to 16.7% in 2017-18 (Figure 2). The most recent data from the Jordan National Micronutrient and Nutrition Survey 2019 estimated a prevalence of 15% (data not shown). The country is not currently on track to meet the global target of a 30% reduction in low birthweight by 2030.

Figure 2. Trends in the prevalence (%) of low birthweight (< 2500 g) in Jordan, national surveys (1990-2017)



Source: DOS, 1992; DOS, 1998; DOS, 2003; DOS, 2008; DOS, 2013; DOS, 2019; Islam et al 2020 [34, 36-41]

MICRONUTRIENT DEFICIENCIES

Deficiencies in vitamins and/or minerals contribute to the overall burden of malnutrition in Jordan. Data from the Jordan National Micronutrient and Nutrition Survey 2019 are available on anaemia and deficiencies of iron, vitamin A and vitamin D. [9] Data on iodine status were obtained in 2010. [10]

[10] *Massa'd H, Barham R. National survey to assess iodine deficiency disorders (IDD) among Jordanian Children 2010. Ministry of Health/WHO.*

ANAEMIA

There has been an impressive progress in reducing anaemia in Jordan.

Young children

Data from 2019 suggest that anaemia among young children is a mild public health problem in the settled population and a moderate public health problem among young children living in Syrian refugee camps. Among young children aged between 6 and 59 months in the settled population, 11.9% were anaemic.[11] No children in this age group had severe anaemia and 2.4% had moderate anaemia. Among young children in Syrian refugee camps, around a quarter (25.2%) were anaemic, and prevalence of iron deficiency was 36.3% (higher than in the settled population) and iron deficiency anemia was 14.3%.

In the same age group, 26% were iron deficient and 5.1% had iron-deficiency anaemia in 2019. Not all the anaemia in Jordan is due to iron deficiency. The overlap between anaemia and iron deficiency decreases as children get older, indicating that other causes of anaemia become more important. Overall, in this age group prevalence of anaemia decreased between 2010 and 2019, but prevalence of iron deficiency increased, and prevalence of iron deficiency anaemia remained largely unchanged.

School-aged children

Among school-aged children (6-12 years) in the settled population, 6% were anaemic in 2019. No children in this age group had severe anaemia and the prevalence of moderate anaemia was below 2%. Prevalence of iron deficiency in this group was 30.6%, but this did not appear to contribute meaningfully to anaemia because prevalence of iron deficiency anaemia was only 1.8%. Among school-aged children in the Syrian refugee camps, 11% were anaemic, with no severe anaemia. Anaemia is, therefore, considered to be a mild public health problem in this age group according to WHO's classification.

Women

The latest (2019) data suggest that, although there has been some progress in reducing anaemia in women of reproductive age, it continues to be a moderate public health problem in this group. Just under a quarter (23.9%) of non-pregnant women, 15-49 years, among the settled population and 35.5% among those living in Syrian refugee camps were anaemic. Almost all of this anaemia can be ascribed to iron deficiency — iron deficiency was prevalent in around two-thirds of settled women and women living in the refugee camps.

[11] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)*

Prevalence of severe anaemia was very low, at 1%. Overall, anaemia prevalence in this age group has decreased since 2010 but iron deficiency has increased. The country is not currently on track to meet the global nutrition target for a 50% reduction in anaemia among women of reproductive age by 2025.

Among pregnant women in the settled population, prevalence of anaemia was 19.1% in 2019, the majority of which were mildly anaemic (17.1%) and there were no cases of severe anaemia. Prevalence of anaemia among pregnant women living in the Syrian refugee camps was 37.3%, considerably higher than in the settled population. Anaemia during pregnancy has been linked to increased incidence of maternal and perinatal mortality, preterm birth, hypertension, low birth weight, small-for-gestational-age (SGA) live birth, and caesarean delivery. Preterm delivery and low birth weight rates are significantly increased in women with haemoglobin levels of less than 7 g/dL.[12]

The observed declines in overall anaemia and severe anaemia may be attributed to some extent to the successful national wheat flour fortification programme. Given the substantial difference in prevalence of anaemia and iron-deficiency anaemia in some groups, further research is needed to investigate the potential causes of anaemia and iron deficiency. The latest Jordan National Micronutrient and Nutrition Survey 2019 has investigated factors associated with anaemia and iron deficiency, and analysis of these data will inform policy responses and intervention.

VITAMIN A DEFICIENCY

Young children

Prevalence of vitamin A deficiency among young children under 5 is classified as a mild public health problem in both the settled and refugee camp populations in Jordan. Data on vitamin A deficiency from 2019 found prevalence was 4.8% among pre-school children, depending on which indicator is used (8.1% based on serum retinol and 4.3% based on retinol-binding protein (RBP).[13] This is an improvement since 2010, which may be due to intensification of the vitamin A supplementation program since 2012.[15,18] Among pre-school children in Syrian refugee camps, prevalence of vitamin A deficiency was 8.9% based on serum retinol and 3.5% based on RBP in 2019. National surveys suggest a decrease in young children's consumption of foods rich in vitamin A in the last decade[9,10,14] and point to the need to promote consumption of vitamin A-rich foods.

School-aged children

Among school-aged children (6-12 years), prevalence of vitamin A deficiency was 7% in both the settled and refugee camp populations in 2019, and therefore remains a mild public health problem according to WHO's classification.[15] Prevalence was higher among younger children in the age group, particularly those between 6 and 8 years old.

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[12] *Smith C, Teng F, Branch E, Chu S, Joseph KS. Maternal and Perinatal Morbidity and Mortality Associated with Anaemia in Pregnancy. Obstet Gynecol. 2019 Dec;134(6):1234-1244. doi: 10.1097/AOG.0000000000003557. PMID: 31764734; PMCID: PMC6882541.*

[13] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)*

[14] *Department of Statistics (DOS) [Jordan] and Macro International Inc. Jordan Population and Family Health Survey 2007. Calverton, Maryland, USA: Department of Statistics and Macro International Inc. 2008 (https://microdata.worldbank.org/index.php/catalog/1410).*

[15] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)*

Women

Prevalence among non-pregnant women of reproductive age was 3.0% among settled women and 2.7% among those living in Syrian refugee camps (RBP values) in 2019. Prevalence is largely unchanged since 2010, and this is considered a mild public health problem.

VITAMIN D DEFICIENCY

Young children

The most recent data (2019) suggest that almost one-third (27.7%) of pre-school children living in the settled population were vitamin D deficient, and another third (33.0%) were vitamin D insufficient.[16] The proportion of girls affected by vitamin D deficiency was higher than among boys (67.8% deficient and insufficient in girls compared to 53.9% in boys). Among preschool children in Syrian refugee camps, the prevalence of deficiency and insufficiency combined was 46.4% (9.7% were vitamin D deficient) in 2019, which was more common in girls than boys.

School-aged children

Almost half of school-aged children in the settled population were vitamin D deficient according to the 2019 national micronutrient survey, and a further 40% had vitamin D insufficiency. The prevalence of deficiency or insufficiency was higher among girls (94.7%) than boys (80.7%). Prevalence of deficiency or insufficiency was lower among school-aged children living in the Syrian refugee camps, but still affected over half (58.7%) of the children and was almost two times higher among girls than boys.

Adults

For adults, estimates of vitamin D status vary widely between surveys, possibly because different cut-offs and assay methods were used to define and assess vitamin D deficiency.[17,18,19,20] According to the latest data of 2019, 63.5% of non-pregnant women, 15-49 years old, among the settled population were considered to be vitamin D deficient and a further 17.8% were considered to have insufficient vitamin D. Among women living in Syrian refugee camps, the vast majority (90.2%) were vitamin D deficient or insufficient in 2019, (56.3% were deficient and 33.9% insufficient).

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[16] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)*

[17] *El-Khateeb M et al., Vitamin D deficiency and associated factors in Jordan. SAGE Open Medicine, 2019. 7: p. 2050312119876151.*

[18] *Batieha A et al., Vitamin D status in Jordan: dress style and gender discrepancies. Annals of Nutrition and Metabolism, 2011. 58(1): p. 10-18.*

[19] *Nichols E et al., Vitamin D status and determinants of deficiency among non-pregnant Jordanian women of reproductive age. European journal of clinical nutrition, 2012. 66(6): p. 751-756.*

[20] *WHO Regional Office for the Eastern Mediterranean. Wheat flour fortification in the Eastern Mediterranean Region. WHO, 2019. (https://apps.who.int/iris/handle/10665/311730)*

ZINC DEFICIENCY

Young children

Zinc deficiency affected 11.5% of pre-school children in 2019. Prevalence was slightly lower in older children, but there were no significant differences between female and male children or between children living in different areas or in households with different wealth. Among preschool children in Syrian refugee camps the prevalence was 12.7%. This is considered to be a mild public health problem.

School-aged children

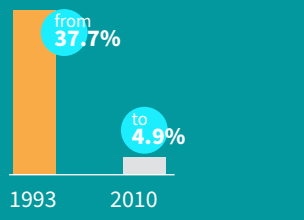
Among school-age children in the settled population, 3.6% were zinc deficient in 2019. Prevalence was much higher in the southern part of the country (16.2%) than in the northern and central areas. Prevalence of zinc deficiency appeared to be higher in the school-aged children living in the Syrian refugee camps, affecting 9% of children, which is considered to be a mild public health problem.

IODINE STATUS

Jordan has achieved a dramatic improvement in iodine status in recent decades and has been making steady progress towards the elimination of iodine deficiency disorders (IDD). Mean urinary iodine concentration increased from 40 µg/l in 1993 to 203 µg/l in 2010, and was accompanied by a sharp decrease in prevalence of goitre among school-aged children (dropping from 37.7% in 1993 to 4.9% in 2010).[13,21,22,23] Mandatory salt iodization was introduced in 1995 and by 2000, 88.3% of the population was consuming iodized salt[20] and this reached 96.4% by 2010.[24] At the national level, Jordan is free from IDD, however variations among regions exist. There is a risk of iodine-induced hyperthyroidism in the central and northern regions (Amman, Balqa, Zarka, Madaba, Irbid and Mafraq governorates), while other governorates (Ajloun, Jarash, Karak, Tafileh, Ma'an and Aqaba) reported optimal iodine intakes.[25]

Jordan has achieved a dramatic improvement in iodine status

accompanied by a sharp decrease in prevalence of goitre among school-aged children



[21] *Massa'd H, Barham R. National survey to assess iodine deficiency disorders (IDD) among Jordanian children—2010. Jordan Ministry of Health Nutrition Department, World Health Organization Non-Communicable Disease Department. Amman, Jordan, 2011.*

[22] *Doggui R, Al-Jawaldeh H, Al-Jawaldeh A. Trend of iodine status in the Eastern Mediterranean region and impact of the universal salt iodization programs: a narrative review. Biological trace element research, 2020. 198(2): p. 390-402.*

[23] *World Health Organization. Vitamin and Mineral Nutrition Information System (VMNIS). WHO Global Database on Iodine Deficiency: The database on iodine deficiency includes data by country on goitre prevalence and/or urinary iodine concentration. 2006 4 September 2021] (https://www.who.int/vmnis/iodine/data/database/countries/per_idd.pdf).*

[24] *Massa'd H, Barham R. National survey to assess iodine deficiency disorders (IDD) among Jordanian children—2010. Jordan Ministry of Health Nutrition Department, World Health Organization Non-Communicable Disease Department. Amman, Jordan, 2011.*

[25] *Massa'd H, Barham R. National survey to assess iodine deficiency disorders (IDD) among Jordanian children—2010. Jordan Ministry of Health Nutrition Department, World Health Organization Non-Communicable Disease Department. Amman, Jordan, 2011.*

OVERWEIGHT, OBESITY AND DIET-RELATED NCDS

Prevalence of overweight and obesity has been increasing across all age groups in Jordan, reflecting the country's nutrition transition towards a diet higher in energy-dense, highly-processed foods and beverages and lower in fruits, vegetables and whole grains, coupled with a more sedentary lifestyle.

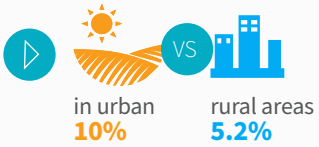
OVERWEIGHT AND OBESITY

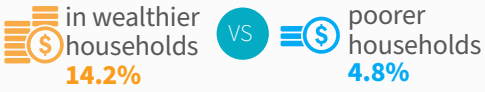
Young children

Prevalence of overweight and obesity among children under 5 years was

9.2% in 2019
of which 2.2% obesity.[26]

Prevalence was higher among boys than girls





Prevalence of overweight or obesity was lower in children in Syrian refugee camps, with 6.0% affected by overweight or obesity (only 1.1% were affected by obesity). **Overall, prevalence in this age group is considered a moderate public health problem that warrants policy attention.**

School-aged children

Among school-aged children (6-12 years),

prevalence of overweight (including obesity) is high

at 27.8% in 2019
Within this, prevalence of **obesity was 11.8%.**

Overweight and obesity are more common among 12-year-olds (39.1% for overweight/obesity) than in the younger age group (21.9% in 6-7-year-olds). There are also geographical variations, with prevalence more common in Amman, Zarqa, Madaba and Tafileh governorates. Among school-aged children living in the Syrian refugee camps, more than one in five (22.2%) were affected by obesity or overweight (6.3% were affected by obesity), and prevalence was higher in girls than in boys. According to modelled trend data, the prevalence of overweight and obesity (BMI > +1 SD) among 5- to 19-year-olds increased from 7.5% in 1975 to 31% in 2016, with higher rates reported among females in earlier years.[27]

[26] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)*

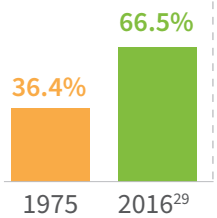
[27] *World Health Organization. The Global Health Observatory: Explore a world of health data. Prevalence of overweight among children and adolescents, BMI > +1 standard deviations above the median (crude estimate) (%). 2021 14 August 2021]; (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-overweight-among-children-and-adolescents-bmi-1-standard-deviations-above-the-median-(crude-estimate)-(-).*

Adults

Among the adult population, data from the 2019 National STEPS survey reported that **more than half of the population (60.8%)** is affected by overweight or obesity (BMI> 25) (53.1% of men and 68.8% of women).[28]

National data from 2019 on non-pregnant women of reproductive age, suggest that 59.6% of women in this group are affected by overweight or obesity (BMI> 25). Prevalence of obesity is 30.2%, and rises with age. It should also be noted that 5.3% of women in this group were underweight (BMI<18.5). More than two-thirds (69.2%) of non-pregnant women, 15-49 years, living in Syrian refugee camps were affected by overweight or obesity, with nearly a third (28.9%) were affected by obesity. As well as the harmful impact on women's health, overweight before and during pregnancy can have negative consequences for the health of their children. Prevalence of overweight/obesity is, therefore, considered a severe public health problem in this population group.

Modelled trend data to 2016 estimated that adult overweight and obesity prevalence increased from:



Prevalence of adult overweight (including obesity) has been predicted to reach

DIET-RELATED NCDS RISK FACTORS

In addition to the high prevalence of overweight and obesity, there has been a surge in prevalence of several NCDs linked to diet — including high blood pressure, raised blood glucose and blood cholesterol[31]— according to the results of the 2019 STEPS survey which was conducted among both the Jordanian and Syrian populations in the country.[32]

Over a **fifth of adults (22.1%) have raised blood pressure** (raised blood pressure or currently on anti-hypertensive medication).[29]

Of these, nearly half (48%) were not covered with medication, and of these over a third (38%) had not previously been diagnosed with raised blood pressure.

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[28] *Jordan National Stepwise Survey (STEPs) for Noncommunicable Diseases Risk Factors 2019. The Ministry of Health, Jordan, WHO. 2020, (https://www.who.int/publications/m/item/2019-steps-country-report-jordan).*

[29] *The Global Health Observatory: Explore a world of health data. Prevalence of anaemia in children aged 6–59 months (%) [website]. WHO, 2021 (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-anaemia-in-children-under-5-years-(-).*

[30] *Hasan MM et al., Double burden of malnutrition among women of reproductive age in 55 low-and middle-income countries: progress achieved and opportunities for meeting the global target. European Journal of Clinical Nutrition, 2021: p. 1-11.*

[31] *See food consumption and dietary patterns for STEPS data on salt consumption and low fruit and vegetable intakes.*

[32] *MOH. Jordan National Stepwise Survey (STEPs) for Noncommunicable Diseases Risk Factors 2019. The Ministry of Health, Jordan, WHO. 2020 (https://www.who.int/publications/m/item/2019-steps-country-report-jordan).*

Among adults, prevalence of raised blood glucose or currently on medication for diabetes was 7.9% in 2019, affecting more than one in five (20.5%) adults in the 45-69 age group.[29] At the same time, more than one in ten (11.3%) adults had raised total cholesterol, with higher prevalence among women (rising to 28.1% of women in the 45-69 age group).[29] Prevalence of very high total cholesterol was 1.7%, and again prevalence was higher in women than men. Taking into account those on medication for raised cholesterol, 17.7% of adults are affected by raised cholesterol (raised total cholesterol or currently on medication for treatment for elevated cholesterol). Almost a quarter of the population (24%) aged between 40 and 69 years had a 10-year cardiovascular disease (CVD) risk of 30% or more or had an existing cardiovascular condition.[29]

INFANT AND YOUNG CHILD FEEDING

Infant and young child feeding indicators in Jordan are suboptimal, and there is considerable scope to improve nutrition through the life-course by driving progress towards optimal infant and young child feeding.

Optimal infant and young child feeding is the cornerstone of good nutrition, and the foundation for healthy child growth and development as well as good health throughout life. WHO and UNICEF recommend exclusive breastfeeding for the first six months of life, followed by continued breastfeeding until 2 years of age and beyond. From 6 months of age, breast milk should be complemented with a variety of adequate, safe and nutrient-dense. Salt and sugars should not be added to complementary foods.

Less than 20 per cent of infants under 6 months of age are exclusively breastfed.[33] The most commonly consumed liquid in those not exclusively breastfed was water, closely followed by infant formula and other non-human milk. Only around a half of babies are still being breastfed at 1 year and less than a quarter at 2 years. The mean duration of breastfeeding among children less than 24 months is 14 months. Levels of exclusive breastfeeding in infants under 6 months in the Syrian refugee camps were also poor (although higher than in the settled population). In terms of trend, the rate of exclusive breastfeeding is higher than 1997, where it was 11%.[34,35,36] Despite the progress realized, the country is not currently on course to meet the global target for exclusive breastfeeding (to at least 50%) by 2025.

There is also scope to improve complementary feeding practices in Jordan. Most infants (over 80%) were introduced to solid, semisolid or soft foods at 6-8 months of age in 2019,[37] down from 92% in 2012.[8] Only 23% of children aged 6-23 months were receiving the minimum acceptable diet in 2019, with 35% having a diet that was sufficiently diverse (minimum diet diversity) and 62% receiving meals often enough for their age (minimum meal frequency). Comparison of data from 2012 and 2017-18 show unfavourable shifts in four indicators of

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[33] Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)

[34] UNICEF. Infant and young child feeding [website]. 2021 7 August 2021]; (https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding/).

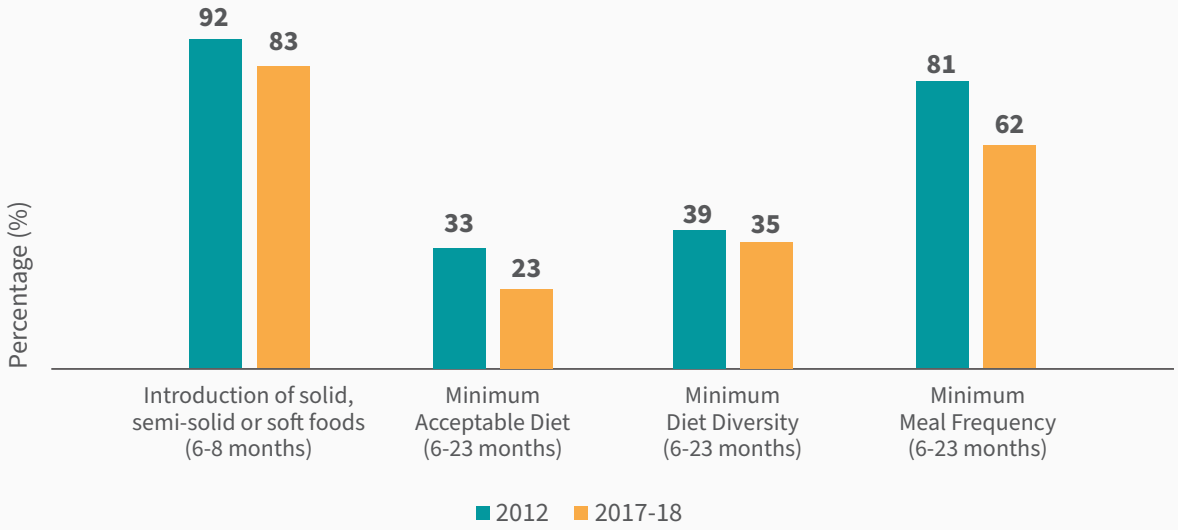
[35] Neves PA et al., Rates and time trends in the consumption of breastmilk, formula, and animal milk by children younger than 2 years from 2000 to 2019: analysis of 113 countries. The Lancet Child & Adolescent Health, 2021.

[36] Neves PA et al., Rates and time trends in the consumption of breastmilk, formula, and animal milk by children younger than 2 years from 2000 to 2019: analysis of 113 countries. The Lancet Child & Adolescent Health, 2021.

[37] Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)

complementary feeding (Figure 3). In 2019, around half of children aged between 6 and 23 months had eaten sugary foods and/or drunk sugary beverages in the past 24 hours and around a third had eaten salty snacks — this was true for young children in both the settled and refugee camp populations.[38]

Figure 3. Trends in the prevalence (%) of complementary feeding indicators in Jordan, national surveys (2012 vs. 2017-18)



Source: UNICEF, 2021 [15]

Among children 6-23 months, data suggest that consumption of fruits and vegetables is declining — the proportion not consuming any fruits or vegetables in the previous day increased from 21.3% in 2007 to 29.5% in 2017-18.[7]

FOOD CONSUMPTION AND DIETARY PATTERNS

Changes in food consumption patterns over the last two decades in Jordan are undermining healthy diets. Recent data on fruit and vegetable consumption and salt intakes are indicative of the consumption of unhealthy diets, but other data on dietary intakes are needed to provide a more comprehensive picture.

Among school-aged children (6-12 years), over half (56.1%) consume five or more food groups daily (meeting the criteria for minimum dietary diversity). Over a third (43.3%) drink coffee or tea several times a day, and during or just after meal, which may inhibit absorption of iron. Less than half (45.2%) of children eat breakfast before going to school and the vast majority (89.2%) get money to buy snacks outside the home. With that money children most

[38] *Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)*

commonly buy chips, chocolate, juice and/or biscuits (only 43.8% use that money to buy a sandwich/school meal). Among the school-aged children living in the Syrian refugee camps, two-thirds eat breakfast before going to school and a large majority receive a free snack at school. In addition, almost two-thirds get some money to buy snacks and most commonly buy chips, biscuits, chocolate or juice.

Consumption of fruits and vegetables is low among different age groups in the country. Less than a fifth of adults in Jordan (16%) consumed the WHO recommended five or more servings of fruit and vegetables per day, although this is an increase from 14% in the previous STEPS survey in 2007.[39,40] On average, people consumed two servings of vegetables and one of fruit. Half of respondents (50%) only consumed 1-2 servings of vegetables or fruit per day, and the proportion consuming no fruit or vegetables on a daily basis was higher among the 18-44 age group (10.8%) than in the 45-69 age group (9.5%). Older data relating to adolescents (13-15 years old) also suggest a fall in daily consumption of fruits and vegetables between 2004 and 2007.[41,42] Household coverage of bread made from fortified flour increased between 2010 and 2019, with 84% of households covered.

Average daily salt intake was 11g, as measured in the 2019 STEPS survey,[29] which is more than twice the WHO recommendation of less than 5g per day. Intakes were higher in men (12.5 g/day) than in women (9.6g/day). Overall, nearly a third (31.7%) of adults reported that they always or often added salt to their food before or as they eat, 79.3% said they always or often added salt when cooking or preparing food at home and one third (33%) reported often eating processed foods high in salt.[29] There was high awareness that too much salt can cause serious health problems, and half of the population (53%) reported limiting their consumption of processed food to control their salt intake.

Recent data on other aspects of the diet are lacking, but increases in consumption of fast food and soft drinks among adolescents had already been recorded between 2004 and 2007. By 2007, more than a third (38.1%) of adolescents were consuming soft drinks two or more times a day and 14.6% had consumed fast food on three or more of the previous seven days.[38,39]

DRIVERS OF MALNUTRITION

There are many underlying drivers and contributing factors that impact nutrition in multiple, and often interrelated, ways.

Underlying factors include the increase in poverty and unemployment over the last two decades. Both poverty and unemployment have, since 2020, been exacerbated by the COVID-19 pandemic, which has increased strain on the social protection systems. Other drivers contributing to the burden of food insecurity and malnutrition include global food and fuel price volatility and the social, economic and environmental impact of hosting a large refugee

[39] *MOH. Jordan National Stepwise Survey (STEPs) for Noncommunicable Diseases Risk Factors 2019. The Ministry of Health, Jordan, WHO. 2020 15 August 2021]; Available from: https://www.who.int/publications/m/item/2019-steps-country-report-jordan.*
[40] *World Health Organization. Jordan STEPS Survey 2007 Fact Sheet. 2007 4 October 2021]; Available from: https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/data-reporting/jordan/steps/2007-fact-sheet-jordan.pdf?sfvrsn=df1a70ea_2&download=true.*
[41] *Al Qaseer BM, Batarseh S, Asaad A. Global School-based Student Health Survey. Amman, Jordan: MoH Jordan, CDC and WHO. 2007 (https://www.who.int/ncds/surveillance/gshs/GSHS_Country_Report_Jordan_2007.pdf).*
[42] *Al Qaseer BM, Batarseh S, Asaad A. Global School-based Student Health Survey. Amman, Jordan: MoH Jordan, CDC and WHO. 2007 (https://www.who.int/ncds/surveillance/gshs/GSHS_Country_Report_Jordan_2007.pdf).*

population. These economic factors can lead to food insecurity and undermine nutrition by hampering access to affordable healthy diets. Social changes such as urbanization and abandonment of agricultural land, coupled with high population growth rates (including the flow of refugees), may also have played a role in increasing food insecurity in the country, contributing to stagnating progress in eliminating undernutrition.

Clearly, Jordan has experienced the nutrition transition that has affected countries throughout the Eastern Mediterranean Region. The shift towards diets that are higher in energy-dense, nutrient-poor foods accompanied by more sedentary lifestyles continues to drive this transition, contributing to the double burden of malnutrition in the country.

Other important factors, among others, maternal health and nutrition, infant and young child feeding practices, food systems and the food environment, gender inequality, prevalence of infectious disease and the provision of education and information on nutrition and healthy diets.

The contribution of these specific factors and related policy interventions is further explored in the six key areas of action in this strategy. There is clearly untapped potential to build on the progress achieved and drive further progress in nutrition by implementing policies and interventions to increase breastfeeding and raise standards of complementary feeding, transforming food systems to improve access to diverse and healthy diets and establish healthier food environments, aligning health systems to protect maternal, infant and young child nutrition and driving behaviour change through provision of education and information.

In the process of developing this National Nutrition Strategy a number of specific challenges were identified that need to be addressed in order to drive progress in improving nutrition. These include:

01 The double burden of malnutrition (overweight/obesity and micronutrient deficiencies)

02 Sedentary lifestyles

03 The nutrition transition (including greater availability of relatively inexpensive unhealthy food products and increasing numbers of fast-food restaurants)

04 The political crisis: large number of refugees

05 Lack of crisis management or emergency planning

06 Shortage of human capacity specifically related to nutrition (including nutritional care providers)

07 Pervasive marketing on unhealthy foods and beverages through mass media

08 Lack of a national nutrition surveillance and information system (which should be integrated within the health system)

09 Shortage of financial resources

10 Poor intersectoral collaboration

11 Lack of current strategies on NCDs and maternal and child health

12 Little focus on prevention rather than treatment of malnutrition

13 Weak monitoring and evaluation of policies to improve nutrition and food security

14 Lack of nutrition counselling in primary health care

15 Poor levels of awareness and knowledge about nutrition

16 High levels of food waste

COVID-19 has also impacted on food security and malnutrition in Jordan as elsewhere. The pandemic has impacted on global food systems and on people's livelihoods across the world. In Jordan, the pandemic has contributed to rising unemployment and increased prices of certain services and commodities. In addition, school closures and suspension of school meal provision have cut off an important source of nutrition for children and worsened the economic burden on families.

Although Jordan's food supply has remained stable, the long-term effects of the pandemic on food systems are unclear. The government launched the Takaful emergency cash assistance programme, in addition to the ongoing National Aid Fund programme.

In addition, in many countries it has been seen that movement restrictions during the pandemic led to an increase in consumption of unhealthy diets and to greater physical inactivity, thus potentially contributing to worsening the double burden of malnutrition in Jordan.

FOOD AND NUTRITION POLICY IMPLEMENTATION

In order to address the challenges outlined above — and the changing burden of malnutrition — Jordan has implemented a series of action plans on nutrition and related issues in the last 25 years.

A National Nutrition Plan of Action in Jordan was developed in 2006.[43] This was then updated in 2010 by the Ministry of Health (MoH) and WHO in coordination with other sectors.

In 2015, in recognition of the growing burden of NCDs in the country, a National Strategy and Plan of Action Against Diabetes, Hypertension, Dyslipidaemia and Obesity in Jordan was published.

To specifically address the growing burden of overweight and obesity, a National Framework of Action on Obesity Prevention in Jordan 2018-2023 was developed in 2018. A multisectoral technical committee on nutrition was also established. This Committee includes the MoH, the Jordan Food and Drug Administration, Jordan Standards and Metrology Organization, Ministry of Education, Greater Amman Municipality, Ministry of Youth, Ministry of Industry and Trade, the Royal Medical Services, Ministry of Planning and the University of Jordan. Early actions of the Committee included eliminating industrial trans fats and non-dairy fats from dairy products, reducing the salt content of bread from 1.5% to 1%, publication of food composition tables for traditional foods, publication of food-based dietary guidelines, publishing nutrition guidelines for the management of NCDs and prohibiting use of trans fats, margarine and saturated fats in food served in hospitals and some other public institutions. In addition, the MoH and Jordan Standards and Metrology Organization have been working on reformulating food regulations to reduce salt, sugar and trans fats in foods.

[43] World Health Organization. Policy - Nutrition in Jordan Update and plan of Action. 2006 22 October 2021]; (https://extranet.who.int/nutrition/gina/en/node/23541).

A number of actions have helped to drive progress in reducing micronutrient deficiencies over the years.

Mandatory universal **salt iodization**, started in 1995

Mandatory **fortification of wheat flour** with multiple micronutrients, which has been implemented since 2002

Those are two examples of successful policy implementation that have helped to tackle malnutrition. In addition, vitamin A supplementation for children and iron supplementation for pregnant women are provided.

Within the last two years three important new strategies that should contribute to improvements in nutrition in Jordan have been developed:

The National Social Protection Strategy 2019 -2025

With a vision that all Jordanians enjoy a dignified living, decent work opportunities and empowering social services, has an important role to play in protecting the nutrition and food security of the most vulnerable.

The National School Feeding Strategy 2021-2025

Offers the potential to leverage the power of school feeding to enhance the healthy growth and physical, mental, psychological and social development of students across all sectors (including refugees and displaced persons). This provides a good example of multiple sectors cooperating to take shared responsibility for children's education, health, nutrition and food security.

The National Food Security Strategy 2021-2030

It was developed in 2021, with the aim of safeguarding Jordan's population, including its refugee population, against food insecurity and ensuring access to safe, stable, affordable and a nutritious supply of food at all times.

This National Nutrition Strategy is complementary to the three strategies described above and the many synergies with these strategies provide an unprecedented opportunity to drive progress in improving nutrition and achievement of the global nutrition targets and the nutrition-related Sustainable Development Goals.

Vision, objectives and targets of the national nutrition strategy

Jordan is committed to work towards the World Health Assembly global nutrition targets by 2025 and the nutrition-related targets of the Sustainable Development Goals by 2030. These are also aligned with the targets of the WHO Strategy on nutrition for the Eastern Mediterranean Region 2020—2030. Taking into account the current context in the country, the overall and specific objectives for this nutrition strategy — as closely as possible aligned with the global goals — are set out below.

VISION AND OVERALL OBJECTIVE:

To achieve food security and end all forms of malnutrition and improve nutrition throughout the life course by 2030.

SPECIFIC OBJECTIVES

Decrease stunting by 20% among children under 5 years old.

Maintain **childhood wasting <3%**.

Reduce the prevalence of overweight and obesity in children under 5 years to not more than 5%.

Reduce the prevalence of overweight and obesity **in adolescents 6-18 years** by 5%.

Increase the rate of exclusive breastfeeding in children under six months to 40%.

Reduce low birth weight by 30%.

Reduce anaemia among woman of reproductive age by 40%.

Halt the rise in diabetes and obesity in adults.

Reduce the mean population intake of salt/ sodium by 20%.

Virtually **eliminate industrially-produced trans fats** from the food supply.

The above objectives were defined to be aligned with the global nutrition and NCD targets and the objectives in the WHO Strategy on nutrition for the Eastern Mediterranean Region 2020-2030, also adjusted to take into account the current situation in the country and/or progress already achieved towards the global/regional targets in order to set realistic targets for Jordan.

In the process of developing this strategy, the following issues were identified as national priorities:

01 Improving nutrition in early childhood and optimizing infant and young child feeding practices

02 Improving the nutrition status of school children and adolescents (5-19)

03 Addressing NCDs and their diet-related risk factors

04 Improving the nutrition status of women of child bearing age, including by investigating the causes of anaemia to inform appropriate policies and interventions

05 Delivering healthy and sustainable diet for all age groups (i.e., infants, children, adolescents, older people and women of reproductive age)

06 Maintaining a focus on the most vulnerable groups. (i.e., women, children, people with disabilities, refugees and displaced persons, people living in deprived areas of Jordan)

07 Implementing an integrated, comprehensive national food system approach and ensuring multisectoral coordination (i.e., health, agriculture, WASH, food safety, trade and industry, social affairs)

08 Ensuring supportive regulatory measures to ensure supply of healthy food

09 Increasing knowledge and changing behavior towards healthier lifestyles (diet and physical activity)

UNDERLYING PRINCIPLES

Building on these national priorities, policies and interventions to achieve the vision and objectives stated above should be underpinned by some important principles:

NUTRITION FOR HEALTH THROUGHOUT THE LIFE-COURSE

There are many different stages throughout the life-course when improving nutrition can bring health, social and economic benefits for people now, for their future and for the next generation. Important critical points include the nutritional status of women before, during and after pregnancy, nutrition in infancy and early childhood, establishment of healthy eating and physical activity patterns during childhood and adolescence and good nutrition for healthy ageing.

INTEGRATED MULTISECTORAL ACTION

The vision set out for this strategy can only be achieved with the committed involvement of many different sectors. It is clear that the health sector alone cannot make the necessary progress. The engagement of sectors including agriculture, environment, social protection, education, transport, infrastructure, military services, public procurement, trade and finance is needed.

INVOLVING WHOLE OF SOCIETY

As well as needing the involvement of many different government sectors, as described above, success will depend on the commitment of a wide range of stakeholders and the adoption of a whole-of-society approach. This means involving individuals, families, communities, intergovernmental organizations and religious institutions, civil society, academia and the voluntary sector. Food industry actors do have an important role to play in transforming food systems and creating healthier environments, but robust safeguards are needed to prevent and manage conflicts of interest in policy development and implementation.

ADDRESSING DETERMINANTS OF HEALTH

There remains a need to address health inequalities between different groups within Jordan and to tackle the many social, economic and environmental determinants of the different forms of malnutrition. It is important that all the policies and interventions introduced in the National Nutrition Strategy pay particular attention to the impact on the most vulnerable — including refugees and those living in more deprived areas of Jordan — and ensure that as nutrition improves no one is left behind.

ANCHORED IN A HUMAN RIGHTS APPROACH

Every child, woman and man has the right to adequate food and nutrition.[44] Jordan has ratified the United Nations Covenant on Economic, Social and Cultural rights, and is committed therefore to progressive realization of the right to food and the right to health. Adequate nutrition is an essential component of both these rights. The National Nutrition Strategy should, therefore, be anchored in a human rights approach, which supports the integration of gender, equity and human rights in national policies and planning.

STRATEGIC APPROACHES, RELEVANT POLICIES AND INTERVENTIONS

In line with the United Nations Decade of Action on Nutrition 2016-2025, and the Strategy on nutrition for the Eastern Mediterranean Region, 2020 – 2030, this strategy highlights six key areas for action:

- Sustainable, resilient food systems for healthy diets
- Aligned health systems providing universal coverage of essential nutrition actions
- Social protection and nutrition education
- Trade and investment for improved nutrition
- Safe and supportive environments for nutrition at all ages
- Strengthened nutrition governance and accountability

[44] The Right to Food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement. The right to adequate food shall therefore not be interpreted in a narrow or restricted sense, which equates it with a minimum package of calories, proteins and other specific nutrients. Committee on Economic, Social and Cultural Rights.

In order to achieve the vision and specific objectives set out for this strategy, the six areas for action outlined above have been developed as strategic approaches, each with relevant priority policies and interventions.

STRATEGIC APPROACH I: CREATING SUSTAINABLE, RESILIENT FOOD SYSTEMS FOR HEALTHY DIETS

Globally, it is recognized that effective transformation of food systems is needed to deliver sustainable, safe and healthy diets that are affordable for all. The national food systems dialogue in Jordan in the run up to the United Nations Food Systems Summit recognized the importance of food systems transformation and included a number of specific recommendations for interventions to lower the cost of nutritious foods, make healthy diets more affordable, while ensuring a fair price for the producer, and deliver healthy diets for all in Jordan.

In addition, the new National Food Security Strategy launched in 2021 is centred on food systems transformation. The strategy seeks to achieve food security by 2030 by addressing, holistically, all aspects of food security and adopting appropriate and resilient food systems. In addition to objectives relating to social protection, care and nutrition services and governance, the food security strategy includes two strategic objectives specifically related to food systems:

• Ensure availability of food at the national, household and individual levels, with the following sub-objectives:

- Achievement of the maximum potential of local food production
- Provision of sufficient and stable supply of imported items
- Improvement of regional collaboration and integration in the different aspects of food security
- Reduction of food loss and waste and enhance food safety.

• Optimize the utilization and stability of food, with the following sub-objectives:

- Improvement of Food Quality for all People in Jordan

The above objectives are, therefore, integrated into the objectives and interventions of this National Nutrition Strategy. The proposed priority policies in this strategic area of the National Nutrition Strategy are:

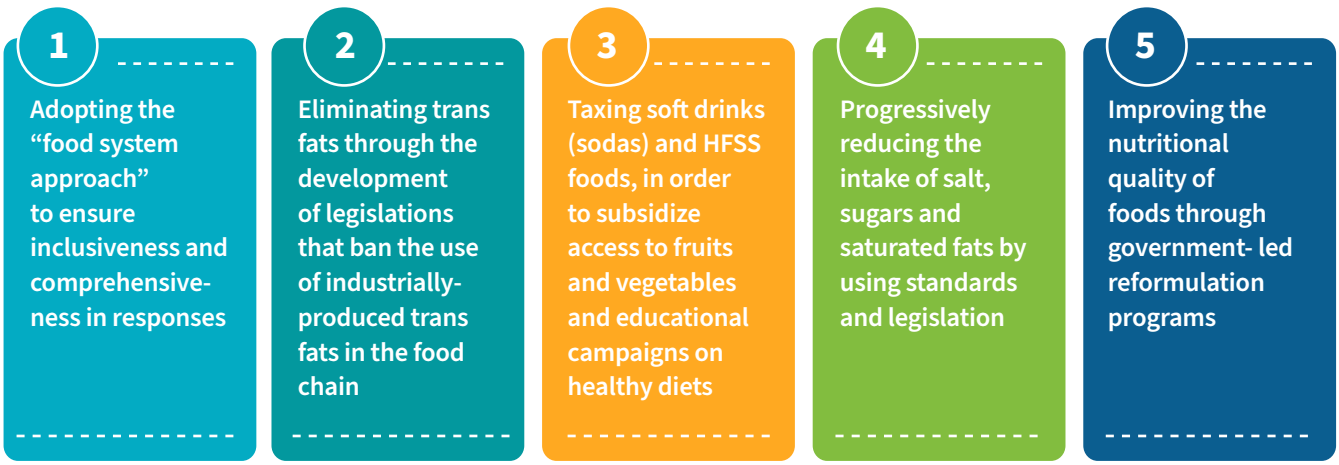


Table 1. Strategic approach I: Creating sustainable, resilient food systems for healthy diets

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Adopt the "food system approach" to ensure inclusiveness and comprehensiveness in responses	Ensuring availability of food and optimizing the utilization and stability of food have already been recognized as priorities and are included as strategic objectives in the National Food Security Strategy launched in 2021.	• Implement the National Food Security Strategy, and ensure that a nutrition-sensitive approach is maintained throughout. • Increase the diversity of food production. • Review and support nutritional and food related programs such as local production of agricultural commodities (quality, pre and post harvesting). • Support small-scale farmers with the provision of public goods (e.g., storage facilities, extension services, means of communication, access to credit, land, seeds, natural resources, technology insurance and agricultural research). • Reduce food loss and food waste.	Requires action right along the food chain and commitment of many different sectors.	Government lead: Ministry of Agriculture/National Food Security Committee Other government sectors: Ministry of Health; Ministry of Environment; Ministry of Industry and Trade; Ministry of Education Other stakeholders: WHO, UNICEF, WFP, FAO, civil society
Eliminate trans fat through the development of legislation to ban the use of industrially-produced trans fats in the food chain	The MoH and JSMO have been working on reformulating food regulations to reduce salt, sugar and trans fats guided by WHO recommendations. The National Framework of Action on Obesity Prevention in Jordan 2018-2023 (the National Obesity Framework) sets out a number of strategic interventions relating to trans fats. Primary achievements include eliminating the addition of industrial trans fats and non-dairy fats in dairy products, publishing food composition tables for Jordanian traditional foods and banning the use of trans fats, margarine and saturated fats in food served in hospitals, Royal military hospitals, and some other public institutions. There is scope now to take further steps and eliminate industrially-produced trans fats from the Jordanian food supply.	• Propose a study for the assessment of the sources and intake of trans fats (and also saturated fats, salt and sugar) in cooperation with the University of Jordan. • Engage with the food industry, civil society and the media to increase awareness of the importance of eliminating industrial trans fats for population health. • Provide JSMO with the UN General Assembly Resolution signed by Ministers of Health to eliminate use of trans fats in food products • Introduce mandatory legislation in line with WHO recommended best practice to eliminate industrial trans fats. • Use healthy public procurement policies to prohibit use of trans fatty acids in food served in public institutions (beyond hospitals and institutions already covered by recent measures). • Develop laboratory capacity for analysis of trans fatty acid levels in foods, with support from WHO Regional Office. • Ensure capacity for monitoring and enforcement, including through training of enforcement officers if required.	Industry, particularly small and medium enterprises, may need support to help replace trans fats with healthier fats. Laboratory capacity is needed for analysis of trans fatty acids. Enforcement capacity to monitor and enforce legislation, along with meaningful sanctions for violations, are vital.	Lead stakeholder: MoH and JSMO Other government sectors: JFDA, Ministry of Industry and Trade Other stakeholders: WHO; Food industry; Industry Chamber of Jordan; Civil society

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Tax soft drinks (sodas) and HFSS foods, in order to subsidize access to fruits and vegetables and educational campaigns on healthy diets	The national food systems dialogue highlighted the potential of fiscal policies (taxes and subsidies) to promote healthy diets in Jordan and recommended this action. WHO recommends introduction of a tax on sugar-sweetened beverages as a best buy for tackling NCDs. An increasing number of countries in the Eastern Mediterranean Region have implemented sugar-sweetened beverage taxes (at levels of up to 50%, and 100% for energy drinks) and are already starting to see an impact on soft drink purchases and sugar intake from drinks.[45] Increasingly, countries worldwide are also starting to use taxes on other foods high in fat, sugar or salt to shift consumption patterns.	• Introduce a tax on sugar-sweetened beverages at a rate of 50% • Collaborate with academic institutions and WHO to conduct modelling studies to assess the potential impact of other potential taxes on foods high in fats, sugars or salt.	New or expanded taxes can meet industry opposition and some resistance from the public, but experience shows that populations can be supportive of such measures when the rationale and the strong evidence base are explained, and if the tax revenue is allocated for health purposes.	Government lead: Ministry of Finance Other government sectors: Ministry of Health; National Consumer Protection Society Other stakeholders: Civil society
Progressively reduce the intake of salt, sugars and saturated fats by using standards and legislation.	The MoH and JSMO have been working on reformulating food regulations to reduce salt, sugar and trans fats guided by WHO recommendations. The National Obesity Framework includes the recommendation to develop mandatory technical specifications and regulations to reduce sugar, salt and trans fat in processed foods. Since then, the salt content of Arabic bread has been reduced from 1.5% to 1% and efforts to further reduce salt in other types of bread (such as Haman and buns) are ongoing. Standards have been amended to prohibit use of plant oils in some dairy products (see also trans fats above).	• Develop mandatory technical specifications and regulations to reduce sugar, salt and trans fatty acids in processed foods. • Amendment of soft drinks standards to reduce sugars levels. • Assign to the JFDA, JSMO and the Ministry of Industry and Trade to clarify the legal and administrative procedures necessary to withdraw and modify the use of palm oil and saturated oils from the Jordanian oil specification. • Propose a study for the assessment of the sources and intake of trans fats, saturated, salt and sugar in cooperation with the University of Jordan (see also in trans fats above). • Use healthy public procurement policies to reduce levels of saturated fats, sugars and salt in food served in public institutions.	There may be some industry opposition to introduction of new standards. Legislative processes can be lengthy.	Government leads: MoH; JSMO; JFDA Other government sectors: Ministry of Industry and Trade

[45] *Al-Jawaldeh et al. Implementation of WHO recommended policies and interventions on healthy diet in the countries of the Eastern Mediterranean Region: From policy to action. Nutrients 2020, 12, 3800;doi.10.3390/nu12123700.*

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Improve the nutritional quality of foods through government-led reformulation programs	Scaling up of food reformulation to progressively reduce salt, sugar and saturated fats in a wider range of foods was proposed as a recommendation from the national food systems dialogue in the run up to the UN Food Systems Summit.	• Cooperate with food companies to implement a transparent national reformulation program to progressively reduce sugar, salt and saturated fats in manufactured foods. • Use the WHO global sodium benchmarks[46] to inform reformulation to reduce salt levels in a wide range of food categories.	Government-led reformulation programs require intense engagement with the food industry and this requires time and resources. Access to data for monitoring progress can be challenging.	Government lead: MoH; JSMO; JFDA Other government sectors: Ministry of Industry and Trade Other stakeholders: Food industry; Civil society

STRATEGIC APPROACH II: ALIGNED HEALTH SYSTEMS PROVIDING UNIVERSAL COVERAGE OF ESSENTIAL NUTRITION ACTIONS

Strong and resilient health systems, accessible to all, are needed to prevent and treat malnutrition in all its forms. This includes reducing stunting and wasting in certain areas and among refugees, reducing micronutrient deficiencies and treating overweight, obesity and diet-related NCDs.

Health systems need to deliver services and practices that prevent and treat child malnutrition through primary health care. For this to happen, systems need to: provide essential services to prevent and treat malnutrition; have health workforce capacity to deliver essential nutrition services; ensure access to supplies for essential nutrition services; have information systems for maternal and child nutrition; and mobilize financial resources for maternal and child nutrition in the health system.[47] Delivery of WHO's essential nutrition actions and the WHO guideline for antenatal care is important for preventing and tackling all forms of malnutrition.[48]

Beyond provision of direct nutrition actions, health services can contribute to improved nutrition through other health actions, including ensuring safe pregnancy and delivery for all women and encouraging birth spacing, which are important for the prevention of low birth weight. In order to improve delivery of nutrition actions, there is a need to build capacity by increasing the number of qualified dietitians and providing further training for health professionals.

Another important area of health service provision relates to treatment and prevention for infectious diseases, which can exacerbate — and be exacerbated by — malnutrition. Reducing prevalence of diarrhoeal disease among children under 5 and women of reproductive age in Jordan, for example, could help reduce prevalence of anaemia in these population groups.

[46] *WHO global sodium benchmarks for different food categories. Geneva: WHO; 2021 (https://www.who.int/publications/i/item/9789240025097).*
[47] *Nutrition, for every child. UNICEF NUTRITION STRATEGY 2020–2030. New York: UNICEF, 2020 (https://www.unicef.org/media/92031/file/UNICEF%20Nutrition%20Strategy%202020-2030.pdf).*
[48] *WHO recommendations on antenatal care for a positive pregnancy (2016) and guideline updates 2020-2022 (https://www.who.int/publications/i/item/9789241549912).*

Jordan has a modernized health care system, spends over 7% of GDP on healthcare and was an early achiever of the SDG related to healthcare access.[50] Although more than 90% of Jordanians live within 4 kilometres of a primary health care centre, an overemphasis in the system on secondary and tertiary care at the expense of primary care and shortages of staff, equipment and medicines in parts of the country have been recognized.[45] Although most poor Jordanians are covered by health insurance, more than a quarter remained uncovered in 2019.[45] Resources are further strained in light of the large numbers of refugees hosted by the country (670,000 Syrian refugees and around 88,000 other refugees).[45] The lack of nutrition counselling in the primary healthcare system is an area of weakness and for potential improvement.

The National Social Protection Strategy includes objectives of reaching comprehensive and equitable health insurance, improving primary healthcare services and reducing over-use of secondary and tertiary care services.[45]

The National Food Security Strategy 2021 already sets out some interventions relating to health systems, including:

- Assessing current nutrition and health interventions (including mother and child health interventions and services).
- Family care programme – Provide food and nutrition care to mothers and children; Reduce the spread of malnutrition, contagious and infectious disease.

The proposed priority policies in this strategic area of the National Nutrition Strategy are:

- Strengthen health system and implement policies and strategies to achieve universal health coverage of nutrition actions.
- Build nutrition capacity within the health sector, integrate direct and indirect nutrition actions and ensure universal access to these actions.
- Integrate pandemic and emergency preparedness into relevant policies and programs.
- Implement appropriate micronutrient supplementation programs.

[49] Dator W, Abunab H, Rao-ayen N. Health challenges and access to health care among Syrian refugees in Jordan: a review (http://www.emro.who.int/pdf/emhj-volume-24-2018/volume-24-issue-7/health-challenges-and-access-to-health-care-among-syrian-refugees-in-jordan-a-review.pdf?ua=1).
[50] Jordan National Social Protection Strategy 2019-2025. Hashemite Kingdom of Jordan, 2019.

Table 2. Strategic approach II: Aligned health systems providing universal coverage of essential nutrition actions

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Strengthen health system and implement policies and strategies to achieve universal health coverage of nutrition actions Integrate direct and indirect nutrition actions and ensure universal access to these actions[51]	Poor integration of nutrition into the health system has been identified as one of the weaknesses for improving nutrition in the current context in Jordan. Lack of nutrition counselling in the primary healthcare system, lack of nutritionists and lack of nutrition professional capacity have also been identified as weaknesses.	• Improve coverage of primary care services and healthcare through implementation of the National Social Protection Strategy 2019-2025. • Strengthen nutrition services in primary healthcare and maternal and child health services. • Ensure universal access to direct and indirect nutrition actions as set out in WHO action plans on maternal, infant and young children health and NCDs and in the regional frameworks on obesity prevention, NCDs, preconception care into health system • Build nutrition capacity by increasing training of dietitians and reinforce capacity of all health professionals to effectively implement these actions, including through integration of nutrition into the academic medical curricula.	Resources will be required for the strengthening of health systems and delivery of nutrition actions. Capacity of different health professions in relation to nutrition requires reinforcement.	Government lead: Ministry of Health Other government sectors: Ministry of Social Development; Ministry of Finance; Ministry of Planning and International Cooperation Other stakeholders: WHO, UNICEF, civil society
Improve nutrition indicators in refugee camps through implementing evidence-based interventions and integrate into national health care system	Among Syrian refugee children in refugee camps in Jordan in 2019-2020, 1% were wasted, 14% were stunted, 3.7% were underweight, 11% were anaemic and 35% had iron deficiency.[52]	• Adopt policies and mobilize resources in cooperation with NGOs to ensure nutrition interventions for prevention of malnutrition (particularly underweight, stunting and micronutrient deficiencies) among the refugee populations in camps	Resources will need to be mobilized, through the international donor community, to expand coverage of treatment.	Government lead: Ministry of Health/ Ministry of Planning and International Cooperation Other stakeholders: WHO, UNHCR; UNICEF, WFP, NGOs and civil society

[51] WHO has set out essential nutrition actions in detail. These include actions — depending on the context — relating to healthy diet, fortification of condiments and staple foods with micronutrients, optimal timing of umbilical cord clamping, protecting, promoting and supporting breastfeeding, care of low birth-weight infants, assessment and management of wasting, vitamin A supplementation of infants and young children, appropriate complementary feeding of young children, growth monitoring and assessment, micronutrient supplementation (iron-containing supplements, iodine), zinc supplementation for management of diarrhoea in infants and children, nutritional care of women during pregnancy and postpartum, nutritional care for at-risk older persons, persons living with HIV, tuberculosis or other infectious diseases, deworming and infant and young child feeding in emergencies. (https://www.who.int/publications/i/item/9789241515856).

[52] Ministry of Health, UNICEF, WFP, Jordan Health Aid Society International, Department of Statistics, Biolab, GroundWork. Jordan national micronutrient and nutritional survey, 2019. Amman, Jordan; 2022. (https://static1.squarespace.com/static/5f31f4f358f8065dad84a9d9/t/62431c657df1ad3d8497eabd/1648565360946/JNMNS19_report_220207_printable.pdf)

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Integrate pandemic and emergency preparedness into relevant policies and programs	Jordan has not included nutrition in emergencies/ humanitarian settings included in a nutrition policy, strategy or plan.[53] Integration of disaster and emergency preparedness into relevant policies and programs is a recommended priority action in the regional nutrition strategy and COVID-19 has highlighted the importance of also integrating pandemic preparedness. The updated national disaster risk reduction strategy considers pandemics and health related emergencies as one of the main disaster risks.	• Review relevant nutrition policies, programs and direct interventions and integrate pandemic and emergency preparedness and nutrition in emergencies • Develop specific protocols or guidelines on infant feeding in emergencies/humanitarian crises		Government lead: Ministry of Health/ Ministry of Planning and International Cooperation Other government sectors: National Aid Fund/Ministry of Finance Other stakeholders: WHO, UNICEF, WFP, NGOs and civil society
Implement appropriate micronutrient supplementation programs (See also food fortification programs in Strategic approach V)	Since 2012 a national vitamin A supplementation program has been intensified to routinely provide vitamin A supplementation for young children of 18 months attending vaccination clinics. As screening for anaemia was introduced as a quality indicator for health center performance in 2007, routine screening for anaemia among children attending public clinics for measles immunization (at about 10 months of age) has increased to approximately 47%. All pregnant women who are diagnosed with anaemia and enrolled with maternal and child health services in the country are eligible to receive iron and folic acid supplements, and around 84% of pregnant women in the country receive iron supplementation according to the last data available (2012).[54]	• Conduct a situation analysis in relation to the current supplementation programs to assess coverage of the target population and identify necessary improvements, in line with recommended WHO Essential Nutrition Actions. • Continue to assess actual dietary micronutrient intakes of children and women of reproductive age through national surveys. • Develop education workshops based on evidence-based corrective action for the underlying causes of anaemia. • Roll out of the revised supplementation programs.	Resources will be required for implementation of supplementation, and programs are largely dependent on the health system for delivery	Government lead: Ministry of Health Other government sectors: Ministry of Finance Other stakeholders: WHO; UNICEF; NGOs

[53] *Second Global Nutrition Policy Review dataset.*
[54] *Second Global Nutrition Policy Review dataset.*

STRATEGIC APPROACH III: SOCIAL PROTECTION AND NUTRITION EDUCATION

Nutrition-sensitive social protection programmes are recommended to protect vulnerable populations who may have difficulty accessing an affordable healthy diet or who have additional needs.[55]

Jordan has a long history of programs to help citizens meet their basic needs. Support has been delivered through a variety of mechanisms including commodity subsidies, in-kind provision of food and housing and cash transfers, with a recent shift from publicly subsidized commodities to poverty targeted programs. In 2019, the country's largest poverty-targeted social assistance program reached 240,000 individuals with cash transfers. It has been recognized, however, that the arrangements were fragmented, with some duplication and overlap, and that improvements to quality and equity of social programs are needed to ensure that those living on limited resources are able to maintain a basic level of consumption.[56] The national food system dialogue recommended that Jordan allocate sufficient resources to put in place comprehensive and universal social protection programs, including for women.

As noted previously, Jordan hosts over 3 million refugees, mainly Palestinians and Syrians. Support to the refugee population (of whom around 18% live in refugee camps) is provided by a variety of organizations — including, among others, the United Nations High Commissioner for Refugees (UNHCR), the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), the World Food Programme (WFP) and World Health Organization — in addition to the support provided by Jordan, as the host government.

To address these issues a National Social Protection Strategy 2019-2025 was introduced in 2019. This Strategy has three pillars – opportunity, dignity (social assistance) and Tamkeen (social services). The strategy aims to improve social assistance programs to ensure effective performance and efficient spending and to develop a plan to improve poverty targeting.

Improving social protection and safety net schemes is also a key element of the recent National Food Security Strategy. One of the strategy's sub-objectives is to achieve a reduction in food insecure households by:

- supporting the social protection networks program (provide cash and in-kind assistance to needy/food-insecure families; improve coordination among social protection institutions; promote social responsibility and solidarity activities and schemes);
- a programme on Sustaining Decent Living to Refugees to provide nutritious and safe food for refugees and provide refugees, mainly women and children, with health, maternity and childcare;
- school feeding programme to provide nutritious and healthy meals to school students, especially in less privileged areas and neighbourhoods; promote domestic production of certain commodities such as dairy products, eggs and fruits and use them as part of the school feeding scheme; reduce diseases caused by malnutrition among school children.

[55] The WHO Strategy for Nutrition in the Eastern Mediterranean 2020-2030, recommends implementation of school feeding programmes and nutrition sensitive social protection (e.g., cash and food transfers) to safeguard vulnerable populations. The UNICEF Nutrition Strategy 2020–2030 supports working with social protection systems to protect, promote and support diets, services and practices that prevent malnutrition among vulnerable children.
[56] Hashemite Kingdom of Jordan. National Social Protection Strategy 2019-2025 (https://www.unicef.org/jordan/media/2676/file/NSPS.pdf).

As indicated above, school feeding is an important element of social protection. The Government of Jordan has placed particular emphasis on the role of school feeding in improving health and nutrition with the launch of the National School Feeding Strategy 2021-2025. The strategy seeks to reinforce and enable the existing school feeding efforts and enhance its targeting and inclusion to maximize its impact on the educational, nutritional and socio-economic outcomes.

There are three pillars to the strategy:

- Reviewing and enhancing the current national school feeding programme.
- Developing institutional capacities related to the national school feeding strategy.
- Promoting synergy with complementary child health and nutrition programmes.

As well as being recognized as an important component of the national food security strategy, school feeding is recognized as an important component of the National Education Strategy 2018-2022 and will contribute to the National Human Resources Development Strategy 2016-2025, the National School Health Strategy 2018-2022, the National Social Protection Strategy 2019-2025 and the Education During Emergency Plan 2020-2023.

This major overhaul of the school feeding program, along with implementation of the national food security strategy — applying a nutrition-sensitive approach to both — will feed into Strategic approach III and support achievement of the National Nutrition Strategy objectives. The school feeding programme is a powerful tool to support the National Nutrition Strategy, as it provides children with a healthy meal during school hours (which helps to ease household budget constraints) and can also help to encourage healthy eating behaviour and establish lifelong healthy habits. The programme includes: providing students with daily healthy school meals that include fruit and vegetables; Increasing awareness of healthy food among students and their parents through class activities, in-school curriculum and home activities; Educating students about the production and preparation of healthy and nutritious meals; Promoting children's nutritional dietary diversity; encourage the consumption of it; highlight the added value of their participation in improving their own diet and supporting the nutritional school environment).[57]

The national food systems dialogue also recommended that such programs go hand-in-hand with awareness raising and educational campaigns on healthy diets and physical activity. Access to education and information are crucial for obtain knowledge on nutrition and take informed decisions, and the enjoyment of the right to education is an enabling right for healthy diets. Nutrition education can encompass a wide range of actions, including education in schools and creating healthy school food environments. In addition, it can encompass education or training for teachers, health professionals and those working in sectors such as agriculture and social protection as well as mass campaigns targeting the general public. In addition, it is important to disseminate clear dietary guidelines to enable the population to choose healthy diets. Such guidelines need to be accompanied by policies to require clear and transparent nutrition information on food labels. Currently, nutrient declarations are required on food labels — while such declarations are useful and necessary, it is recognized that many consumers find them difficult to understand and interpret. Simplified front-of-pack labelling — such as traffic light labels, Nutri-Score or warning labels — can help consumers to make healthier food choices and can drive food product reformulation to reduce levels of harmful fats, sugars and salt.

[57] *The National School Feeding Strategy – Jordan 2021-2025.*

The proposed priority policies in this strategic area of the National Nutrition Strategy are:

- Enhance national social protection interventions in relation to nutrition and health (with a focus on groups vulnerable to nutrient deficiencies such as pregnant women, children under five and older people).
- Improve nutrition education and information to achieve behavioural change.
- Enforcement of nutritional labelling and educate people about label information.
- Take advantage of national dietary guidelines and support their dissemination.

Table 3. Strategic approach III: Social protection and nutrition education

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Enhance national social protection interventions in relation to nutrition and health (with a focus on groups vulnerable to nutrient deficiencies such as pregnant women, children under five and older people)	Jordan has a number of different social assistance programs in place, with reforms currently underway to ensure effective performance and efficient spending under the National Social Protection Strategy 2019-2025. School feeding efforts began in Jordan in 1975 and over the decades different programs have been implemented. A major overhaul is underway as part of the National School Feeding Strategy 2021-2025. The national obesity framework includes a commitment to support nutrition-friendly schools and healthy canteens.	• Review and support nutritional and food related programs[58] such as school feeding and poverty reduction programs to enhance access to nutritious food, as part of implementation of the National Food Security Strategy, the National School Feeding Strategy and the National Social Protection Strategy. • Use the Fill the Nutrient Gap tool to understand the nutrient gaps facing different vulnerable groups, to inform the development of appropriate social protection measures. • Engage with implementation of the food security, school feeding and social protection strategies, and ensure that a nutrition-sensitive approach is applied which enables access to healthy diets and creates healthy school food environments.	Requires committed involvement of multiple stakeholders. Resources are required for social protection programmes and school feeding. The estimated shortfall in funding for the school feeding program is over 9 million JOD, and the Ministry of Education has established a School Feeding Fund.	Government lead: Council of Ministers/ Ministry of Social Development/Ministry of Education Other government sectors: Ministry of Planning and International Cooperation/National Aid Fund/Ministry of Awqaf and Islamic Affairs and Holy Sites/ Ministry of Health/ / Ministry of Finance Other stakeholders: NGOs and donors including private sector; WFP; Social Security Corporation

[58] *See also measures in Strategic approach I: Creating sustainable resilient food systems for healthy diets and Strategic approach V: Safe and supportive environments for nutrition at all ages.*

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Maintain sufficient levels of humanitarian assistance to refugee groups and integrate refugees into the national systems.	More than 2.3 million registered Palestinian refugees live in Jordan, of which around 18% live in 10 recognized refugee camps through the country, with some support services provided by UNRWA. As of October 2021, in partnership with WFP, humanitarian assistance is provided to around 480,000 refugees (mostly Syrians) living in camps and communities in the form of cash-based transfers (including the additional 40,000 refugees integrated in response to the COVID-19 pandemic). WFP's mobile vulnerability analysis and mapping in June 2021 showed that 23.4% of refugees are food insecure.	• Work with international partners to strengthen the capacities of national institutions, strategies and programs and maintain humanitarian assistance to refugee groups. • Improve national co-ordination, under the leadership of the Ministry of Health, of nutrition-related support to refugee populations	Requires resource mobilization and international support. All stakeholders need to commit to a coordinated approach.	Government lead: National Centre for Security and Crises Management/ Ministry of Planning and International Cooperation Other government sectors: Ministry of Health Other stakeholders: WFP, UNRWA, UNHCR and other UN agencies, NGOs and donors
Improve nutrition education and information to achieve behavioral change	The Ministry of Education works together with several governmental and non-governmental expert organizations to help develop capacities and participate in health and nutrition education at the school level. This includes class activities, in-school curriculum and home activities to educate students and their parents on healthy diets and preparation of healthy meals. These are complemented by efforts to create healthy school food environments (e.g., enforcement of the school canteens regulation). The national obesity framework includes commitments to promote healthy food through social media and provide educational material for health care providers.	• Design nutrition awareness campaigns and education programs targeting all caregivers on infant and young child feeding (addressing common myths and misconceptions • Provide nutrition education in school curricula and training and education for teachers, including in high-risk areas including refugee camp schools.	Requires high degree of commitment from multiple sectors	Government lead: Ministry of Education Other government Ministry of Health Other stakeholders: WHO; WFP;UNICEF; civil society and NGOs

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Enforce nutritional labeling and educate people about label information.	Current regulations require nutrient declarations on food labels (back or side of pack). Options for the introduction of simplified front-of-pack nutrition labelling are under discussion.	• Implement mandatory standards for food labelling, e.g., ingredient listing, back-of-pack nutrient declarations and simplified front-of-pack labelling for all pre-packaged foods. • In partnership with the WHO Regional Office and academic institutions, evaluate front-of-pack labelling options by assessing their performance with a database of typical foods from the Jordan food composition database and conducting consumer research to assess consumer preference and understanding of labels. • Provide information and technical support to the food industry to facilitate implementation of front-of-pack labelling.	Introduction of front-of-pack labelling is supported by the evidence, but may encounter opposition from some food industry actors. Provision of technical support and setting out a reasonable timetable for implementation and compliance can help to address some concerns.	Government lead: Ministry of Health Other government sectors: JSMO; JFDA Other stakeholders: Academic partners; WHO Regional Office; Food industry
Take advantage of national dietary guidelines and support their dissemination.	In 2020, the Ministry of Health developed and disseminated food based dietary guidelines which raise awareness on healthy diets, reduced salt and sugar consumption and promote physical activity for the general public, as well as a diet management guide for people living with NCDs.	• Disseminate the food based dietary guidelines to all nutrition care providers in all primary health care facilities and in hospitals and those delivering nutrition education in schools. • Deliver training courses for health care providers on how to use the national dietary guidelines.	Resources required for dissemination and for delivering training courses.	Government lead: Ministry of Health Other government sectors: Ministry of Education Other stakeholders: health professionals, teachers, educational institutions

STRATEGIC APPROACH IV: TRADE AND INVESTMENT FOR IMPROVED NUTRITION

There is a very clear economic case for investing in improving nutrition, which returns short-term and long-term health, social and economic benefits far in excess of expenditure. Implementation of the key priority actions outlined in this strategy will be dependent on mobilizing resources. This implies allocation of specific lines in the government budget to nutrition improvements (and not only food security) and the need to develop a sustainable funding strategy. Additional potential funding sources include foreign assistance, domestic and foreign investments and, providing there are robust safeguards against conflicts of interest, public/private partnership projects.

Although Jordan exports certain agricultural/food commodities, mainly fresh fruits and vegetables, to Gulf countries, Iraq and European countries, it is a net food importer. The country depends heavily on imports to meet its needs of major food commodities, such as wheat, barley, corn, rice, pulses, oil, sugar and red meat. In 2018, the import value of food and live animals amounted to USD 3.418 billion, while the value of exported food and live animals was USD 917 million. The food balance deficit in 2018 was USD 2.501 billion, and this makes Jordan vulnerable to global market changes.

International trade has to potential to improve nutrition, but can also undermine nutrition if it increases access to inexpensive foods that are low in nutrients and/or high in unhealthy fats, free sugars and salt. In order to explore these issues, the WHO regional nutrition strategy recommends that governments conduct a situation analysis of the national food supply and determine the key sources of trans and saturated fats, sugars and salt in the diet and explore the options for using standards, legal instruments and trade policy to improve the food supply.

The proposed priority policies in this strategic area of the National Nutrition Strategy are:

- Ensure adequate financial and other resources for implementation of the Strategy.
- Implement policies to enhance the benefits and minimize the risks for nutrition of international trade.

Table 4. Strategic approach IV: Trade and investment for improved nutrition

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Ensure adequate financial and other resources for implementation of the Strategy	Detailed costings for implementation of this Strategy will be determined as a next step as part of development of a detailed implementation plan.	• Define detailed costings of the actions and interventions presented in this Strategy. • Develop a sustainable financing strategy to fund implementation of the National Nutrition Strategy	Resources will need to be mobilized and clearly allocated for nutrition actions.	Government lead: Ministry of Finance/ Council of Ministers Other government sectors: All concerned

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Implement policies to enhance the benefits and minimize the risks for nutrition of international trade	As a net food importing country, international trade is an important element of the food security and nutrition context in Jordan. Trade has the possibility to enhance nutrition but can also undermine healthy diets. Understanding the sources, whether domestic or imported, of unhealthy fats, sugars and salt in the Jordanian diet is important to be able to develop effective regulatory and trade policies.	• Conduct a situation analysis of the national food supply and determine the key sources of trans and saturated fats, sugars and salt in the diet and explore the options for using standards, legal instruments and trade policy to improve the food supply		Government lead: Ministry of Health/ Ministry of Industry and Trade

STRATEGIC APPROACH V: SAFE AND SUPPORTIVE SYSTEMS AND ENVIRONMENTS FOR NUTRITION AT ALL AGES

In addition to transforming food systems to ensure people have access to healthy foods and essential nutrition services, providing education and information that enable people to make healthier choices and ensuring that the food and nutrition needs of the most vulnerable are met, it is very important to create supportive environments for better nutrition. This includes creating healthy food environments as well as other actions to build healthier environments that support nutrition.

Improving breastfeeding rates is a key priority for Jordan and the importance of establishing environments that protect, promote and support breastfeeding and optimal infant and young child feeding cannot be overstated. Exclusive breastfeeding for the first six months and continued breastfeeding up to two years of age and beyond promotes optimal infant growth and develop, protects against stunting, wasting and infection, while reducing the risk of overweight, obesity and diet-related NCDs in later life. Investment in promoting, protecting and supporting breastfeeding is one of the most cost-effective and sustainable public health measures available to governments. Available tools include the International Code of Marketing of Breast-milk Substitutes, the Baby-Friendly Hospital Initiative (BFHI) and maternity protection legislation.

Within the package of interventions that WHO advocates for creation of food systems for health, several relate to healthier food environments.[59] These include healthy public food procurement policies, protecting children from harmful food marketing (including of breastmilk substitutes) and food fortification. Jordan is already implementing policy in some of these areas — such as food fortification — and commitments to take action in

[59] *These include fiscal policies (taxes and subsidies), healthy public food procurement policies, protecting children from harmful food marketing, reformulation to improve the nutritional quality of processed foods, front-of-pack food labelling, food safety and food fortification. Some of these interventions are addressed under Strategic approaches I and III. For more information see https://www.who.int/initiatives/food-systems-for-health .*

some other areas are already included in the National Framework of Action on Obesity Prevention in Jordan 2018-2023. The framework has commitments relating to prohibition of marketing of foods and non-alcoholic beverages to children, provision of healthy meals in schools, hospitals and universities, increasing coverage of the BFHI and maternity leave provision and enforcing legislation on breastmilk substitute marketing. There have been some advances since the launch of the obesity framework, such as the introduction of standards and rules on food served in public hospitals and military medical facilities.

Along with improving access to nutritious foods and increasing dietary diversity, food fortification is an important element of the response needed to tackle anaemia and other micronutrient deficiencies in the country. Long-standing wheat flour fortification and salt iodization programmes have yielded impressive results, but now need to be evaluated, reformed and reinvigorated to further reduce micronutrient deficiencies in Jordan. Further investigation of the causes of anaemia, in addition to iron deficiency, is needed to inform appropriate policy responses.

Access to sanitation and safe drinking water is important for the prevention of communicable diseases which can, in turn, exacerbate or be exacerbated by malnutrition. Despite being the world's second most water-scarce country, Jordan has made progress towards achievement of the SDGs relating to water and sanitation, but there is still room for improvement.[60] Efforts to improve access to safe water and sanitation are underway, guided by the National Water Strategy 2016-2025.

The proposed priority policies in this strategic area of the National Nutrition Strategy are:

- Protect, promote and support breastfeeding and optimal infant and young child feeding.
- Protect children from exposure to marketing of unhealthy foods.
- Strengthen the food fortification programs for micronutrient delivery including strengthening the arrangements for monitoring and enforcement.
- Ensure that food sold or served in public institutions contributes to healthy diets.
- Upgrade sanitation and water safety measures and practices.

[60] *https://www.unicef.org/jordan/water-sanitation-and-hygiene and Jordan's WASH Top Facts, UNICEF.*

Table 5. Strategic approach IV: Safe and supportive environments for nutrition at all ages

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Protect, promote and support breastfeeding and optimal infant and young child feeding	Jordan has legislation implementing some provisions of the International Code of Breastmilk Substitutes, but the measures are not comprehensive and monitoring and enforcement is weak.[61] Coverage of the Baby-Friendly Hospital Initiative (BFHI) is low, with only 3% of births taking place in hospitals and maternity units designated as baby friendly in 2016, having fallen from 49% in 2004.[62,63] The need to strengthen the national regulatory systems to effectively monitor and enforce the Code legislation and the BFHI has been recognized, along with the need to reinforce the skills of health professionals to implement these policies and promote breastfeeding and appropriate complementary feeding.	• Strengthen the Code-implementing legislation relating to breastmilk substitutes, and ensure that it extends to cover foods for infants and young children and prohibits breastmilk substitute companies from sponsoring conferences or promoting products within maternity and child care centres. • Increase coverage of the BFHI to include public and private hospitals • Strengthen enforcement of guidelines and establish monitoring system for breastmilk substitute legislation, the Baby-Friendly Hospital Initiative and reproductive, maternal, newborn, child and adolescent health guidelines. • Introduce legislation requiring (a) 4-6 months of maternity leave and (b) provision of nurseries in public and private workplaces; guarantee proper implementation of the legislation. • Develop community initiatives to help support breastfeeding mothers after their discharge from hospital and beyond. • Promote breastfeeding and disseminate the benefits for mothers and babies through behaviour change communication. • Improve education on breastfeeding and infant and young child feeding in training of health and medical professionals and reinforce the availability of qualified staff to promote breastfeeding. • Deliver educational sessions for caregivers (including fathers, grandparents and mothers) to enhance complementary feeding and address common myths and misconceptions.	Despite the clear mandate and very strong evidence, efforts to strengthen legislation on the marketing of breast-milk substitutes may face opposition from vested interests. Resources are required to scale up monitoring and enforcement.	Government lead: Ministry of Health Other government sectors: Other stakeholders: WHO; UNICEF; Academic institutions; Civil society

[61] *Marketing of breast-milk substitutes: National implementation of the International Code. Status report 2020. Geneva: WHO, 2020 (https://www.who.int/publications/i/item/9789240006010).*

[62] *National implementation of the Baby-Friendly Hospital Initiative 2017. Geneva: WHO, 2020. (https://apps.who.int/nutrition/publications/infantfeeding/bfhi-national-implementation2017/en/index.html).*

[63] *Al-Jawaldeh A, Abul-Fadl A. Assessment of the Baby-Friendly Hospital Initiative Implementation in the Eastern Mediterranean Region. Children. 2018,5,41:doi:10.3390.*

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Protect children from exposure to marketing for unhealthy foods	The World Health Assembly adopted a set of recommendations on marketing of foods and non-alcoholic beverages to children in 2010, and implementation of these recommendations is a key priority action in the WHO regional nutrition strategy. The evidence base for restricting children's exposure to marketing of foods high in saturated fats, trans fats, salt and sugar (HFSS) has since strengthened considerably.	• Adopt statutory regulation of the marketing of food products as an effective way to reduce marketing of HFSS foods to children, and restrict marketing of these foods to other groups.	Countries have adopted the WHO recommendations through the World Health Assembly, and the evidence base for restricting children's exposure to HFSS marketing has since strengthened considerably, but introduction of mandatory restrictions is likely to face opposition from the food and media industry sectors. Technical support from WHO/ UNICEF may be required to draft effective legislation and establish monitoring arrangements.	Government lead: Ministry of Health/ Ministry of Industry and Trade Other government sectors: JFDA Other stakeholders: WHO; UNICEF; Academic institutions; Civil society
Strengthen the food fortification programs for micronutrient delivery	A program to fortify wheat flour with iron and other micronutrients, developed with support from WHO and UNICEF, has been in place since 2002 and appears to have contributed to a reduction in prevalence of severe anaemia. Universal salt iodization efforts began in 1995, with mandatory iodization. Substantial improvements in iodine status have been recorded and by 2010 88% of the population used iodized salt.[64] Although iodine intake was classified as adequate in 2010, average iodine status was at the lower limit of the threshold, highlighting a need to evaluate the iodine content of salt. Enhancing the food fortification programs is highlighted as an important intervention in the National Food Security Strategy in addition to the vitamin A supplementation programs for children under 5 years.	• Evaluate the current wheat fortification program (compared to WHO guidance) and consider expansion to achieve further progress and maintain the improvements that have been achieved. • Evaluate implementation of the salt iodization program (and iodine content of salt) against WHO recommendations and ensure that universal salt iodization is maintained. • Strengthen monitoring and enforcement arrangements for the fortification programs (including by capacity building for monitoring and enforcement personnel). • Strengthen the reporting system to facilitate monitoring.	Lack of awareness among millers and the salt industry of the importance of fortification, as well as lack of technical know-how, can constrain progress. Resources are required for fortification programs for training and technical support and monitoring and enforcement. Need to build capacity for monitoring and evaluation	Government lead: Ministry of Health Other government sectors: JFDA; JSMO Other stakeholders: WHO; WFP; UNICEF; food industry actors; Academic institutions; Civil society.

[64] *Doggui R, Al-Jawaldeh H, Al-Jawaldeh A. Trend of iodine status in the Eastern Mediterranean Region and impact of the Universal Salt Iodization programs: A narrative review. Biological Trace Element Research 198, 390-402 (2020).*

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Ensure that food sold or served in public institutions contributes to healthy diets by implementing a healthy public food procurement and service policy	Efforts to improve the nutritional quality of food served or sold in schools are already underway. Jordan is unusual in that it has introduced standards and rules for food sold through governmental institutional settings including public hospitals and the facilities of the Military Royal Medical Services. There remains scope to bring about further improvements and ensure that the places where people work, study and play, or where they receive care, support healthy diets.	• Scale up setting standards for public procurement and provision of healthy foods in public institutions (e.g., schools, military, prison and other government institutions) • Provide balanced school meals and healthy options and prohibit the sale of foods high in fats, sugars or salt in schools and support implementation of the school feeding program (see Strategic approach III).	Insufficient resources to monitor compliance with the regulations.	Government lead: Ministry of Health/Ministry of Education Other government sectors: Military Royal Medical Services Other stakeholders: WHO; WFP; UNICEF; Private sector providers
Upgrade sanitation and water safety measures and practices	Although there has been progress towards the SDGs and more than 98% of the population has access to an improved water source, there remains room for improvement: 94.3% access a safely-managed source and only 84% of existing sanitation systems are safely managed.[1] A National Water Strategy 2016-2025 is being implemented to ensure a sustainable future for the water sector and access to safe, affordable and adequate water supply and sanitation for all Jordanians.	• Implement the National Water Strategy 2016-2025		Government lead: Ministry of Water and Irrigation Other stakeholders: UNICEF

STRATEGIC APPROACH VI: STRENGTHENED NUTRITION GOVERNANCE AND ACCOUNTABILITY

Successful implementation of this National Nutrition Strategy is dependent on a high degree of political commitment, an enabling policy environment and effective government mechanisms.

The Ministry of Health will not be able to implement this strategy alone, and the committed involvement of multiple other government sectors and non-governmental stakeholders is essential. This also implies a need for a cross-government coordination mechanism, and insufficient coordination between relevant stakeholders has been recognized as a particular challenge.

Currently, there is a National Higher Committee for Nutrition, which was established in 2005 and is chaired by His Excellency the Minister of Health, and the Ministry of Health leads a multisectoral committee (government, nongovernment, academia, and private sector) that regularly convenes to agree and coordinate interventions at all ages in fulfilment of the National Framework of Action for Obesity Prevention 2018-23. Institutions involved include the Jordan Food and Drug Administration, Jordan Standards and Metrology Organization, Ministry of Health, Ministry of Education, Amman Municipality, Ministry of Youth, Ministry of Industry and Trade, Royal Medical Services and Jordanian Universities.

Another vitally important element for successful implementation of this Strategy is monitoring and surveillance. Access to reliable data and information is fundamental to inform and drive policy design and implementation and assess progress. Jordan has conducted important national studies, including the Jordan Population and Family Health Survey 2017-18, the WHO STEPwise Approach to NCD Risk Factor Surveillance (STEPS), National Micronutrient Deficiency Surveys in 2002, 2010 and 2019, Iodine Deficiency Disorders surveys in 1995, 2000 and 2010, university studies and monthly reports from the monitoring and evaluation system. There is, however, a lack of up-to-date data on the food supply and food consumption patterns. Collaboration and technical support from international partners, such as WHO, UNICEF and WFP, is greatly appreciated and is an important element for improving monitoring and surveillance.

As part of nutrition monitoring and surveillance, it is vital to establish monitoring and evaluation arrangements for the implementation of this Strategy. To ensure that the Strategy is translated from policy into concrete action on the ground, such arrangements need to be in place from the beginning. This involves definition of indicators and regular reporting and review of data on these indicators in order to be able to boost implementation where needed and/or adapt the Strategy itself, according to the policy cycle (Figure 4).

Figure 4. The policy cycle for the Jordan National Nutrition Strategy 2023–2030

The proposed priority policies in this strategic area of the National Nutrition Strategy are:

- improve governance through enhancing institutional capacities, systems, human resources and coordination;
- strengthen food and nutrition monitoring and surveillance; and
- implement arrangements to monitor and evaluation implementation of the National Nutrition Strategy 2023-2030.

Table 6. Strategic approach IV: Safe and supportive environments for nutrition at all ages

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Improve governance through enhancing institutional capacities, systems and human resources	A multisectoral technical committee regularly convenes to coordinate implementation of the National Framework of Action for Obesity Prevention 2018-23. There is a need to continue and reinforce multisectoral coordination to implement the broad range of policies and interventions, spanning very many different sectors, incorporated in this National Nutrition Strategy.	• Strengthen cross-government and multisectoral coordination mechanisms for nutrition by establishing a technical committee to translate the priorities of this strategy into actions and to monitor implementation, with allocated funds/resources. • Develop a detailed step-by-step and costed action plan, with allocated responsibility for each intervention, for the implementation of this National Nutrition Strategy. • Ensure that implementation of this Strategy is closely aligned and coordinated with implementation of the national strategies in food security, school feeding and social protection.	Even when there is clear political commitment to multisectoral collaboration, in practice it is challenging and regular communication at a high level across sectors is essential.	Government lead: Minister of Health Other government sectors: Ministry of Health, JFDA, JSMO, Ministry of Education, Amman Municipality, Ministry of Youth, Ministry of Industry and Trade, Royal Medical Services, Ministry of Planning and International Cooperation, Ministry of Finance, Ministry of Social Development, National Centre for Security and Crises Management, National Aid Fund, Ministry of Awqaf and Islamic Affairs and Holy Sites and others. Other stakeholders: WHO, WFP, UNICEF, FAO, civil society, Jordanian Universities.

Priority policies	Rationale and current status	Proposed actions and interventions	Potential barriers and challenges	Lead stakeholder and other stakeholders
Strengthen food and nutrition monitoring and surveillance	The country is already committed to measure and report on indicators relating to the global nutrition targets as defined in the Global Nutrition Monitoring Framework and the global NCD targets, as defined in the global NCD monitoring framework. Relevant and high-quality national studies are available, but there is a lack of up-to-date data on nutrition status, the food supply and food consumption patterns. JFDA is currently preparing studies on food consumption patterns. Better data on policy implementation and evaluation of impact are needed. The national obesity framework and the national food security strategy both include commitments to strengthen monitoring and data collection.	• Strengthen the nutrition monitoring and surveillance system, allowing for future adjustment of policies. • Encourage and support the many academic institutions in Jordan to conduct research to help monitor the nutrition situation and policy implementation and to further inform policy development. • Strengthen collaboration with international partners (WHO, WFP, UNICEF) and academic institutions to provide technical support and resources for surveillance.	Resources and technical expertise are needed for data collection and for the creation and operation of a nutrition monitoring and evaluation unit. Partnerships with academic institutions and with international partners are important to provide support.	Government lead: Ministry of Health Other government sectors: JFDA, JSMO Other stakeholders: WHO, WFP, UNICEF, FAO, civil society, Jordanian Universities.
Implement arrangements to monitor and evaluate implementation of the National Nutrition Strategy 2023 - 2030	Specific targets have been set for the specific objectives in the Strategy (covered by nutrition monitoring and surveillance). Additionally, policy and process indicators to monitor the implementation of the recommended policy priorities are needed, including those defined in the Global Nutrition Monitoring Framework and the Regional monitoring and evaluation framework.	• Draw up a set of validated indicators to measure progress towards the targets set out in the specific objectives of this strategy and process indicators to evaluate implementation of the Strategy. • Define baseline levels for these indicators. • Produce regular reports on the defined indicators and progress towards the established targets. • Periodic review, by the Technical Committee, of the indicator data in order to adjust the strategy and/or implementation efforts as necessary to drive progress.	Commitment from all stakeholders involved in implementation will be needed to measure and report on progress.	Government lead: Multisectoral technical committee All government and other stakeholders.

ANNEX I:
PARTICIPANTS TO THE PREPARATORY WORKSHOP FOR THE DEVELOPMENT OF THE NATIONAL NUTRITION STRATEGY

The main contributors to the development and drafting of the strategy were: Eng. Rawhieh Barham, Head of Nutrition Department, Ministry of Health; Dr. Anas Mouhtasb, Director of NCDs Directorate, Ministry of Health; Dr. Ayoub Al Jawaldeh, WHO Regional Office for the Eastern Mediterranean Region; Dr. Dana Darwish, World Health Organization, Jordan Country Office, and Ms. Karen McColl, WHO consultant.

The following are the individuals and organizations who participated in the preparatory workshops for the development of the strategy.

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ANNEX II:
IMPLEMENTATION FRAMEWORK FOR THE NATIONAL NUTRITION STRATEGY 2023-2030

Implementation Framework	2023				2024				2025		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Improve governance through enhancing institutional capacities, systems and human resources											
Establish a high-level multisectoral technical committee to advocate for and guide implementation of this strategy											
Define detailed costings of the actions presented in this Strategy and allocate responsibility and budget lines for each intervention											
Develop a sustainable financing strategy to fund implementation of the National Nutrition Strategy											
Establish communication and maintain collaboration with those responsible for implementation of national strategies on food security, school feeding, social protection and water (and ensure a nutrition-sensitive approach which enables access to healthy diets and creates healthy food environments is applied)											
Improve national coordination, under the leadership of the Ministry of Health, of nutrition-related support to refugee populations											
Strengthen food and nutrition monitoring and surveillance											
Conduct a review of current nutrition monitoring and surveillance arrangements											
Engage with academic institutions and interrnational organizations to strengthen collaboration and mobilize resources for monitoring and surveillance											
Draw up a set of validated indicators to measure progress towards the targets set out in the strategy and process indicators to evaluate implementation .											
Define baseline levels for these indicators											
Produce regular reports on the defined indicators and progress towards the established targets											
Periodic review, by the Technical Committee, of the indicator data in order to adjust the strategy and/or implementation efforts as necessary to drive progress											
Create sustainable, resilient food systems for healthy diets											
Support implementation of the national food security strategy, and ensure a nutrition-sensitive approach is applied											
Propose a study for the assessment of the sources (including whether from domestic or imported foods, foods eaten out-of-the-home or at home, and processed or home-prepared foods) and intake of trans fats, saturated fats, salt/sodium and sugars in cooperation with the University of Jordan.											

	2026				2027				2028				2029				2030			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Implementation Framework	2023				2024				2025		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Draft new regulatory measures in line with WHO best practice to eliminate industrial fats and, as appropriate, amend standards for levels of sugars, salt/sodium and saturated fat, including reducing salt levels in other types of bread (non-arabic) and reducing sugars levels in soft drinks standards											
Approve and adopt the new regulatory measures											
Develop laboratory capacity for analysis of trans fatty acid levels in foods, with support from WHO Regional Office											
JFDA, JSMO and the Ministry of Industry and Trade to clarify the legal and administrative procedures necessary to withdraw and modify the use of palm oil and saturated oils from the Jordanian oil specification											
Provide training to enforcement officers on enforcement of the new regulatory measures											
Draft a new measure to introduce a tax on sugar-sweetened beverages											
Engage academic institutions (with technical support from WHO) to conduct modelling studies to assess the estimated impact of other potential taxes on foods high in fats, sugars or salt.											
Initiate and maintain engagement with food companies to establish a transparent national food reformulation programme											
Set national benchmarks for levels of salt/sodium (in line with WHO global benchmarks) in a broad range of food categories											
Set national benchmarks for levels of sugars in categories of processed foods											
Aligned health systems providing universal coverage of essential nutrition actions											
Collaborate on the implementation of the National Social Protection Strategy 2019-2025 and ensure nutrition interventions are incorporated.											
Review current integration of essential nutrition actions (as defined by WHO) in primary care services and current micronutrient supplementation programs and identify opportunities to improve provision and access of these services											
Conduct an assessment of actual dietary micronutrient intakes of children and women of reproductive age											
Identify necessary revisions of the programs delivering essential nutrition actions (including supplementation) and resources required for delivery											
Mobilize resources (national budget/international donors) to implement the revised programs											
Roll-out implementation of the revised programs to deliver essential nutrition actions											

	2026				2027				2028				2029				2030			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Implementation Framework	2023				2024				2025		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Develop education workshops based on evidence-based corrective action for the underlying causes of anaemia											
Establish dialogue with medical education establishments to integrate nutrition into academic curricula											
Deliver training courses for health care providers on how to use the national dietary guidelines and on infant and young child feeding											
Improve coverage of treatment of stunting in refugee camps and maintain levels of humanitarian assistance. Also, integrate pandemic and emergency preparedness into relevant policies and programs											
Collaborate with international organizations and humanitarian actors to assess current coverage of treatment for stunting and wasting prevention											
Adopt amended policies to ensure/expand coverage and integrate pandemic and emergency preparedness and infant feeding in emergencies/humanitarian crises											
Negotiate with international donor community to mobilize resources to maintain levels of humanitarian assistance and to ensure/expand coverage of wasting treatment and stunting prevention											
Improve nutrition education and information to achieve behavioral change											
Engage with higher education sector to advocate for inclusion of nutrition education in teacher training											
Engage with education sector to advocate for inclusion of nutrition in school currricula											
Disseminate the national food based dietary guidelines to all professionals delivering nutrition education in schools											
Develop appropriate education materials for inclusion in school curricula											
Commission the design of nutrition awareness campaigns on infant and young child feeding, targeting parents and caregivers of infants and young children											
Conduct healthy eating campaings to promote healthy diet and encourage reducing intakes of unhealthy fats, salt and sugars.											
Enforcement of nutritional labeling and educate people about label information											
Review of current food labellling standards (ingredient listing, nutrient declarations)											
In partnership with the WHO Regional Office and academic institutions, evaluate front-of-pack labelling options by assessing their performance with a database of typical foods from the Jordan food composition database and conducting consumer research to assess consumer preference and understanding of labels											

	2026				2027				2028				2029				2030			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Implementation Framework	2023				2024				2025		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Draft new regulatory measure to introduce comprehensive labelling requirements and introduce front-of-pack labelling.											
Issue consultation on draft proposals											
Legislative process to adopt new regulatory measure											
Provide technical information and support to the food industry to facilitate implementation											
Protect, promote and support breastfeeding and optimal infant and young child feeding											
Review current Code-implementing legislation to ensure that it extends to cover foods for infants and young children and prohibits sponsorship of conferences or promotion within maternity and child care centres											
Draft revisions to the Code-implementing legislation											
Issue consultation on draft revisions											
Legislative process to adopt and implement the revised legislation/regulatory measure											
Provide training to enforcement officers on the enforcement of the revised measure											
Review current implementation of the baby-friendly hospital initiative and identify opportunities to improve coverage of public and private hospitals and in community facilities											
Review current legislation on maternity leave provision and provision of childcare in private and public workplaces											
Draft new regulatory measure to ensure provision of 4-6 months of maternity leave and provision of childcare / breastfeeding facilities in workplaces											
Issue consultation on draft regulatory measure											
Legislative process to adopt and implement the revised legislation/regulatory measure											
Develop complementary feeding guidelines for all healthcare providers in maternal and child health services											
Build capacity of health care providers in maternal and child health services to provide appropriate advice on complementary feeding by conducting training sessions on the complementary feeding guidelines											
Protect children from exposure to marketing for unhealthy foods											
Draft statutory regulation to reduce marketing of foods high in fats, sugars or salt to children											
Issue consultation on draft regulatory measure											
Legislative process to adopt and implement the revised legislation/regulatory measure											

	2026				2027				2028				2029				2030			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Implementation Framework	2023				2024				2025		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Strengthen the food fortification programs for micronutrient delivery											
Evaluate the current fortification programs (wheat and salt) (compared to WHO guidance) and identify any opportunities for further improvements											
Facilitate provision of capacity building training for monitoring and enforcement of fortification programs											
Strengthen the reporting system to facilitate monitoring of fortification programs											
Conduct a study to assess prevalence of IDD and the impact of reductions in iodine levels added to salt simultanenously with implementation of salt reduction efforts and reformulation to reduce the salt levels in some staple foods											
Ensure that food sold or served in public institutions contributes to healthy diets by developing healthy food procurement and service policies											
Initiate dialogue with multiple sectors and providers about implementing healthy public food procurement and service policies and scaling up/expanding coverage of the current rules setting standards for the nutritional quality of food in institutional settings											
Prepare a draft policy on healthy public food procurement and service covering food served or sold in a wide range of public institutions											
Issue consultation on draft policy and regulatory measure											
Legislative process to adopt and implement the revised legislation/regulatory measure											
Provide training to food procurement officers (responsible for tenders and contracts) and for catering staff responsible for implementation of the policy in practice.											

	2026				2027				2028				2029				2030			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

World Health Organization

Jordan