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Reimagining our food systems to sustain our future

FOOD LOSS & WASTE IN THE ARAB REGION

White Paper: Tackling Food Loss and Waste as an Effective Climate Action Measure by Countries in the Middle East and North Africa

April 2023

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ABOUT

This report presents why food loss and waste reduction is considered to be a top climate action, and also presents our analysis of the most recent data available on food loss and waste in the Arab Region. It also summarises the official government commitments on tackling food loss and waste as a climate action based on the latest National Determined Contribution (NDC) submissions of 16 Arab League countries.

Citation: Seta Tutundjian, Dima Maroun, 2023. *Food Loss and Waste in the Arab Region: Tackling Food Loss and Waste as an Effective Climate Action Measure by Countries in the Middle East and North Africa.* Thriving Solutions L.L.C.

The report can be downloaded for free at: https://thrivingsolutions.earth/food-loss-waste-in-the-arab-region/

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Seta Tutundjian
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FOREWORD

Food Loss and Waste is an enormous global problem!

According to the latest estimates, 40% of food produced for human consumption is lost between harvest and consumer. The percentage is higher in the Middle East and North Africa (MENA) region, although the region is one of the most water-scarce worldwide, which has led to the heavy dependence on food imports.

How does this relate to the countries' climate action plans and to the Nationally Determined Contributions (NDCs)?

Food loss and waste is responsible for 10% of global greenhouse gas emissions. Moreover, minimizing food loss and waste throughout the food value chains from production to distribution, retail, all the way to consumption has been identified, by Project Drawdown, as the second most effective climate solution with the potential to avoid ***88.50–102.20 gigatons*** of carbon dioxide equivalent emissions by 2050. Preventing loss and waste and minimizing the amount of waste that ends in landfills reduces greenhouse gas emissions, while redistributing surplus food and recovering unavoidable waste in ways that keep it in the food system contributes to expanding the amount of food available thus contributing to food security and climate adaptation.

Stemming from our belief that food loss and waste should be a cornerstone of the climate strategy of MENA countries, we examined the NDCs of 16 Arab League countries to see if, and how, they reflect on food loss and waste specifically and waste management generally. This report presents our analysis.

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FOOD

The definition of food as per the joint Food Standard Program (2016) by the United Nations Food and Agricultural Organization (FAO) and the World Health Organization (WHO) is:

"any substance, whether processed, semi-processed or raw, which is intended for human consumption, and includes drink, chewing gum and any substance which has been used in the manufacture, preparation or treatment of "food" but does not include cosmetics or tobacco or substances used only as drugs."

FOOD SYSTEMS

The High-Level Panel of Experts of the Committee on World Food Security (2017), states that food systems include all activities and elements *(environment, people, inputs, processes, infrastructure, institutions, etc.)* that play a part in growing, transporting, processing, supplying, preparing and eating food.

Activities and elements related to the generated waste and its disposal, as well as the unseen elements such as food preferences and resource investments, are also part of the food systems.

Lastly, the socio-economic and environmental outcomes of all these activities and elements are part of the food system.

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Every human on Earth plays a part in the food system.
As we consume food to survive we generate waste in the process.

FOOD LOSS AND WASTE

'Food loss and waste' refers to food intended for human consumption that exits the food supply chain.

Food can exit the supply chain due to many reasons, including but not limited to:

- deteriorating quality
- visual appearance
- low value
- unwanted surplus
- policy requirements
- consumer preference

This can be driven by inadequate storage, transport and processing infrastructure; poor skills among farmers, laborers, handlers and processors of food products; price fluctuation and variability in demand; poor purchasing decisions; a multitude of inconsistent and confusing labels; mismanagement of available and surplus foods; among others.

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FOOD LOSS VS. FOOD WASTE

The point at which food exits the supply chain determines if it is considered as food loss or food waste.

Food Loss refers to food that exits the food supply chain between harvest, slaughter, catch-up and reaching retail and various consumption points.

Food Waste refers to food that exits the food supply chain at retail and various consumption points.

Consumption points include food service providers such as restaurants, cafeterias, food trucks, catering services, and households.

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In most countries chicken legs are considered inedible and disposed of. That is not the case in China where chicken legs are commonly consumed.

EDIBLE VS. INEDIBLE FOOD

There is no unanimous agreement on whether inedible parts should be counted as food loss or waste.

Food that is edible in one country or culture, maybe considered inedible in another. Additionally, what is considered inedible food, can be of value for other purposes.

The International Food Loss and Waste (FLW) Protocol is the basis for most FLW accounting methodologies and gives the measuring entity the option to decide what it wants to measure.

Regardless of what an entity decides to measure, edible or inedible food, both these parts are considererd as organic waste.

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FOOD RESCUE

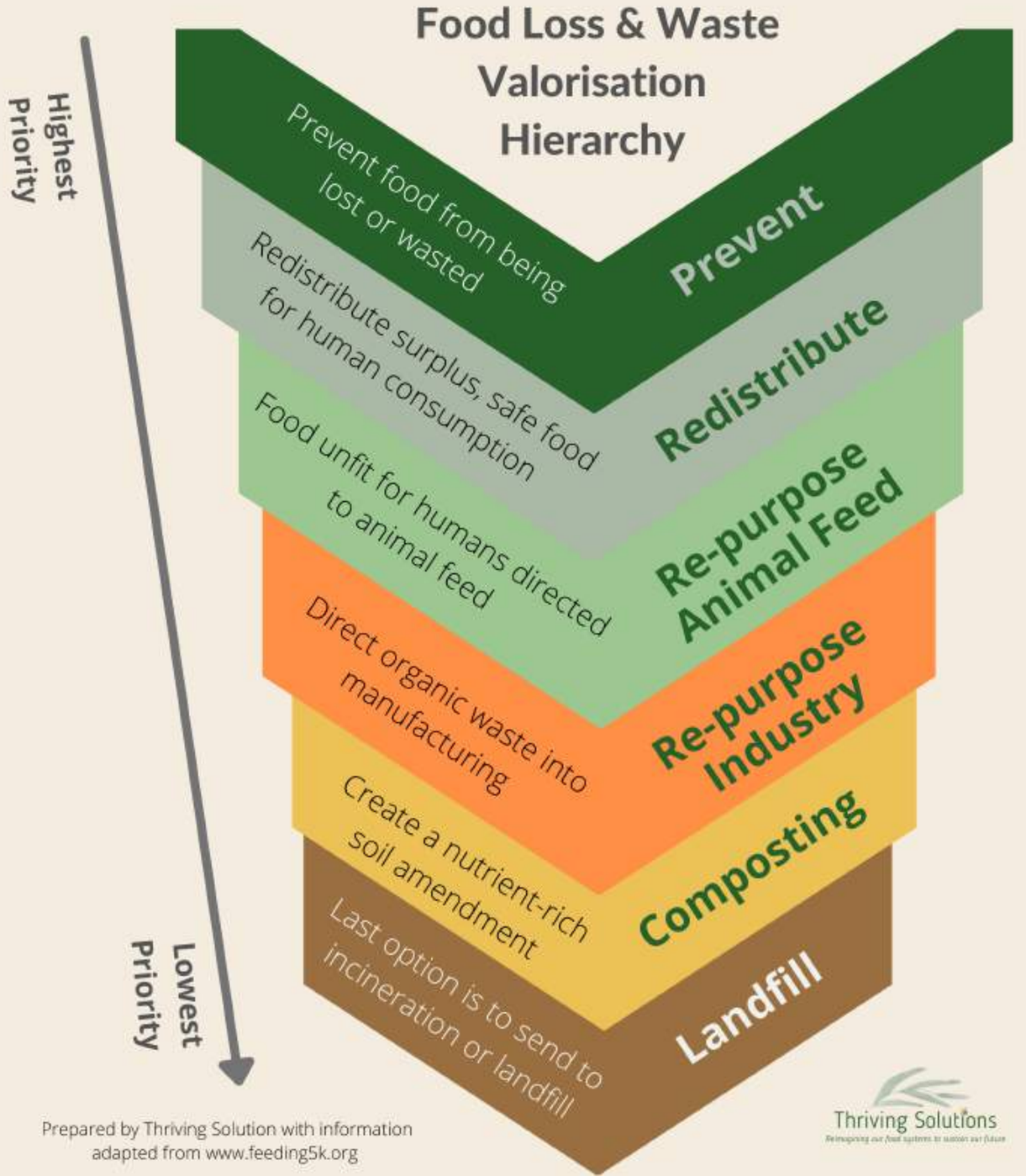
Food rescue refers to the practice of collecting excess, unused, or unmarketable food that is fit for human consumption, and that would otherwise go to waste and distributing it to people in need.

Such food can provide nutritious meals to individuals and families who might not otherwise have access to fresh, healthy food.

Food can be rescued from many places including restaurants, grocery stores, wholesale and distribution outlets, as well as farms.

Rescuing and redistributing food can be done by utilizing food banks, food pantries, low-cost meal programs, as well as different apps that seek to identify and collect excess food while identifying potential users and customers of that food.

Although prevention of food loss and waste at source remains the highest priority, rescuing food reduces food loss and waste.



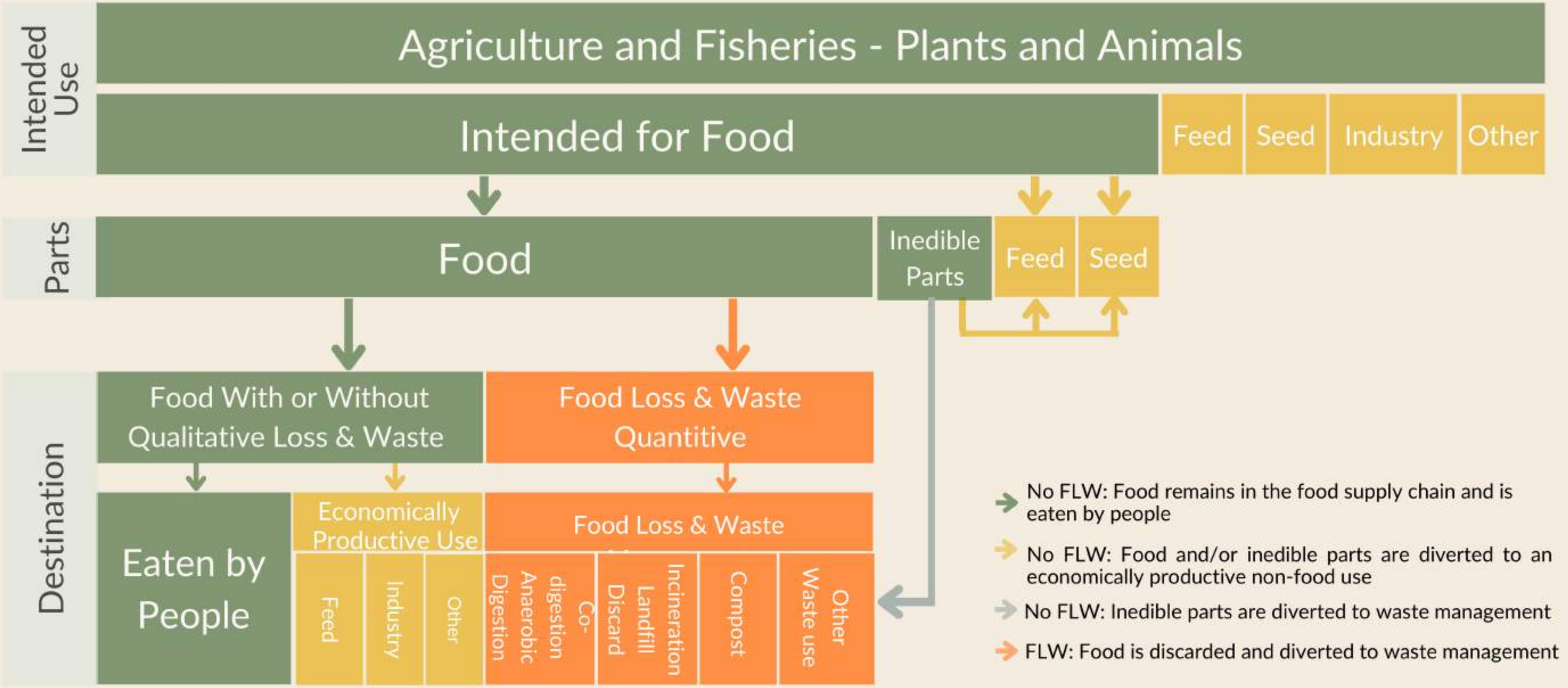
ACCOUNTING FOR FOOD LOSS AND WASTE

Food that is rescued and recovered by redistributing for human consumption, or processing into a new food product, or diverting to other uses that keep it in the food system (e.g. animal or insect feed) is not accounted as food loss and waste although it frequently constitutes an economic loss to the entity measuring that food. This also relates to inedible parts if included in the measurement.

Disposed food that is rescued and recovered by diverting it to other uses be it industrial uses outside the food industry or for composting is considered as food loss or waste although it may yield economic benefits to the entity processing that waste and to society.

Prevention, redistribution and repurposed food are the most desirable processes of food waste. However, waste-to-energy through Controlled Combustion, is a feasible option when disposal and electricity costs are high and investment capital is readily available. Although this process has environmental implications and has a comparable position as landfills in the Food Loss and Waste Standard, it is still considered as food waste valorisation if the amount of energy produced can be quantified.

A CONCEPTUAL FRAMEWORK FOR FOOD LOSS AND WASTE (FLW)



Framework prepared by Thriving Solution as per FAO 2019, The State of Food and Agriculture

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Implications of Food Loss and Waste

40% of total global food is lost or wasted annually

25% of fresh water used by agriculture was used to produce lost or wasted food

10% of global greenhouse gas emissions are from lost and wasted food

28% of cultivated land is used to produce food that is lost or wasted. This equates to a land the size of China

Eutrophication and acidification of water bodies

Economic and environmental losses. The economic cost of FLW exceeds US$ 1 trillion per year, while the environmental costs reach US$ 700 billion per year

Loss of livelihoods. The social cost of FLW is estimated to be around US$ 900 billion per year

Compromised food security. The amount of food that is lost and wasted can feed all the people suffering from hunger

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DECOMPOSING

Decomposition is a biological process that occurs naturally. When organic matter decomposes, there is a biochemical and physical breakdown from complex organic matter to simpler inorganic and organic matter. The process releases energy, as well as water and nutrients back into the soil. Carbon dioxide (CO2) and methane (CH4) are released if the process is anaerobic.

When organic waste decomposes it emits greenhouse gases. Specifically, methane gas (CH4) which according to the International Panel for Climate Change (IPCC AR6, 2021) has 28 times the heat-trapping capacity of carbon dioxide (CO2).

Furthermore, organic waste releases liquids that can mix with surrounding hazardous materials forming a toxic slime. This is particularly relevant to countries that do not segregate their waste (including medical waste and batteries disposed by households) that all end up in the same landfill.

SCALE OF PROBLEM GLOBALLY

The dilemma of food loss and waste rose to global attention in 2013 when FAO published its estimate that one-third of produced food is lost or wasted.

Since then, several studies have been carried out to determine the approximate amount of food that is lost or wasted, the latest being the WWF (2022) study which raised the estimated total amount of food lost or wasted to **40%**.

15% of food produced globally is lost on-farm, at harvest or immediately after harvest (WWF, 2022).

14% of food produced globally is lost between post-harvest and retail points (FAO, 2021).

61% of food produced globally is wasted in households (UNEP, 2021).

5% of food produced globally is wasted in food service (UNEP, 2021).

13% of food produced globally is wasted in retail. (UNEP, 2021).

SCALE OF THE PROBLEM IN MENA

The MENA region is one of the most water-scarce regions in the world with renewable water supplies in most countries falling below the absolute water scarcity level of 500 cubic meters per capita, per year. With 70% of its land being dry, climate change effects are accelerating aridity and decreasing the productive capacity of the limited agricultural land by an average of 10%. Today, the region imports most of its food with an annual bill exceeding US$33 billion, and the limited local agricultural produce consumes the largest chunk of the region's water supplies.

Despite this high economic, social and environmental cost of food, the limited data from the region indicates the region's food loss and waste to be around 44% (this doesn't include on-farm losses). Served food wasted alone stands at 34% and the highest waste is generated at household level.

Average per capita food loss and waste in the region amounting to 210 kilograms per year.

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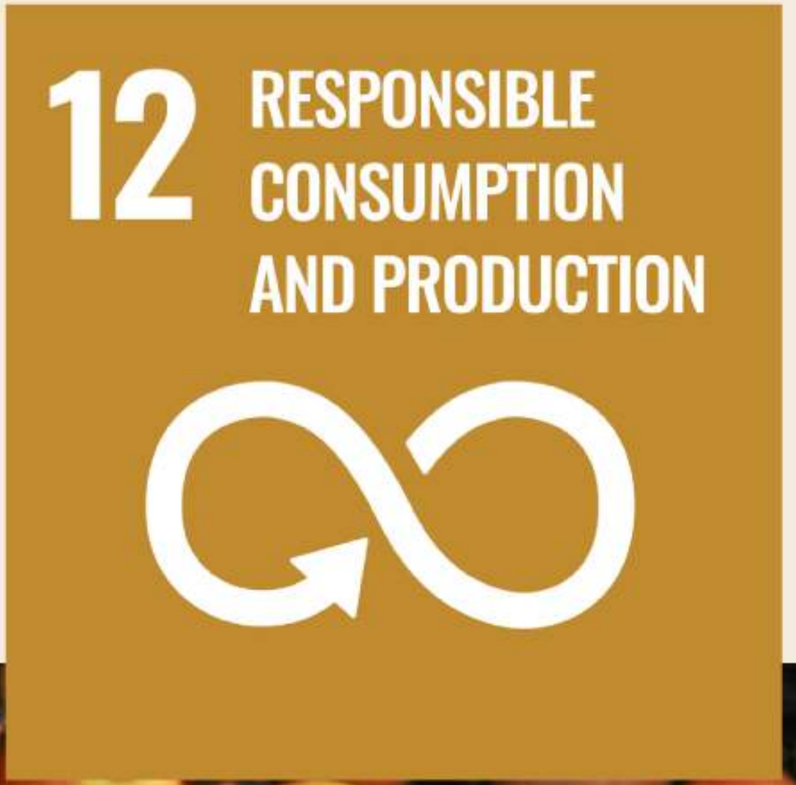
INDICATOR 12.3

The scale of the food loss and waste problem has led to it having a dedicated indicator under the Sustainable Development Agenda 2030 Goals.

Indicator 12.3, under Sustainable Development Goal 12 "Responsible Consumption and Production", calls for the global community to:

HALVE per capita global food waste at the retail and consumer levels & REDUCE food losses along production and supply chains (including post-harvest losses) by 2030.

To facilitate and track this indicator two monitoring sub-indicators were established: the Food Loss Index (FLI), and the Food Waste Index (FWI).



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FOOD LOSS INDEX

Under SDG Indicator 12.3, Indicator 12.3.1.a is the Food Loss Index (FLI) which measures the agricultural commodity losses from production to when the commodities reach the retail point. It does that by measuring the changes in percentage losses for a basket of 10 main commodities.

The 10 main commodities are identified according to economic value with two commodities selected under each of the following main agricultural categories: 1. cereals and pulses, 2. fruits and vegetables, 3. roots and tubers and oil-bearing crops, 4. animal products, 5. fish and fish products.

The FLI is intended as a global monitoring tool of which FAO is the custodian. It reflects the global aggregated annual losses calculated from the measurements produced at the country level. Countries that measure the agricultural commodity losses are required to follow the methodology recommended by FAO.

A major challenge is the limited and scarce data produced regularly by countries. Lack of measurement is a major obstacle to identifying the most effective interventions.

FOOD WASTE INDEX

Under SDG Indicator 12.3, Indicator 12.3.1.b is the Food Waste Index (FWI) which measures the food waste that occurs at the consumption points including retail, food service and households. It also measures food loss generated in manufacturing processes, which would not be captured under key commodity losses by the FLI.

The FWI measures total waste not only waste associated with specific commodities. Similar to the FLI, countries are responsible for measuring and reporting their food waste.

The United Nations Environment Programme (UNEP) is the custodian of the FWI and it issues the methodology for countries to follow as they implement measurement initiatives. The methodology recommends a three-level approach starting with modeling and extrapolation to estimate approximate food waste, moving to direct measurement which is a sufficiently accurate approach for tracking food waste, and lastly measuring additional information and desegregation. The last level is the most resource-intensive but provides information that supports developing food waste prevention measures.

NATIONALLY DETERMINED CONTRIBUTIONS

The Paris Agreement signed in 2015, and ratified by 196 Parties including 21 Arab League countries, seeks to limit global average temperature increases to below 2°C (or preferably 1.5°C) pre-industrial levels. (UNFCCC, n.d.).

To communicate countries' commitment to implementing the Paris Agreement, signatories were requested to prepare, submit and maintain Nationally Determined Contributions (NDCs) which communicate each country's planned measures to reduce its greenhouse gas (GHG) emissions.

With the exception of Libya and Yemen, all Arab League countries have an active NDC submission in the NDC Registry (United Nations Climate Change, 2022).

PANDEMIC AND FOOD SECURITY

In 2020, during the pandemic when nations shut down their borders and ports to slow the spread of the virus, supply chains were disrupted as food systems were not designed to function with risk. In some parts of the world, production was an issue, in others, it was distribution and logistics. Nations around the world recognised the vulnerability of their agri-food value chains and the need to better integrate Food Security into their agendas. The ongoing conflict between Russia and Ukraine is further disrupting the food system due to disruption in the supply of staple commodities produced by both countries, as well as disruption to the fertilizer market by export restrictions on Russia.

The implications on food prices and in turn food security has been notable with the Food Price Index (FPI) peaking in March 2022. Since then the FPI has gone down by about 17 percent, but the risks remain high.

Another impact of the pandemic related to early disruptions in the supply chain and closure of food service providers is that many farmers and producers were not able to sell their food resulting in an increase in food loss. However, given the lack of data and high-confidence studies on food loss and waste it is difficult to determine the overall effect of the pandemic on food loss and waste.

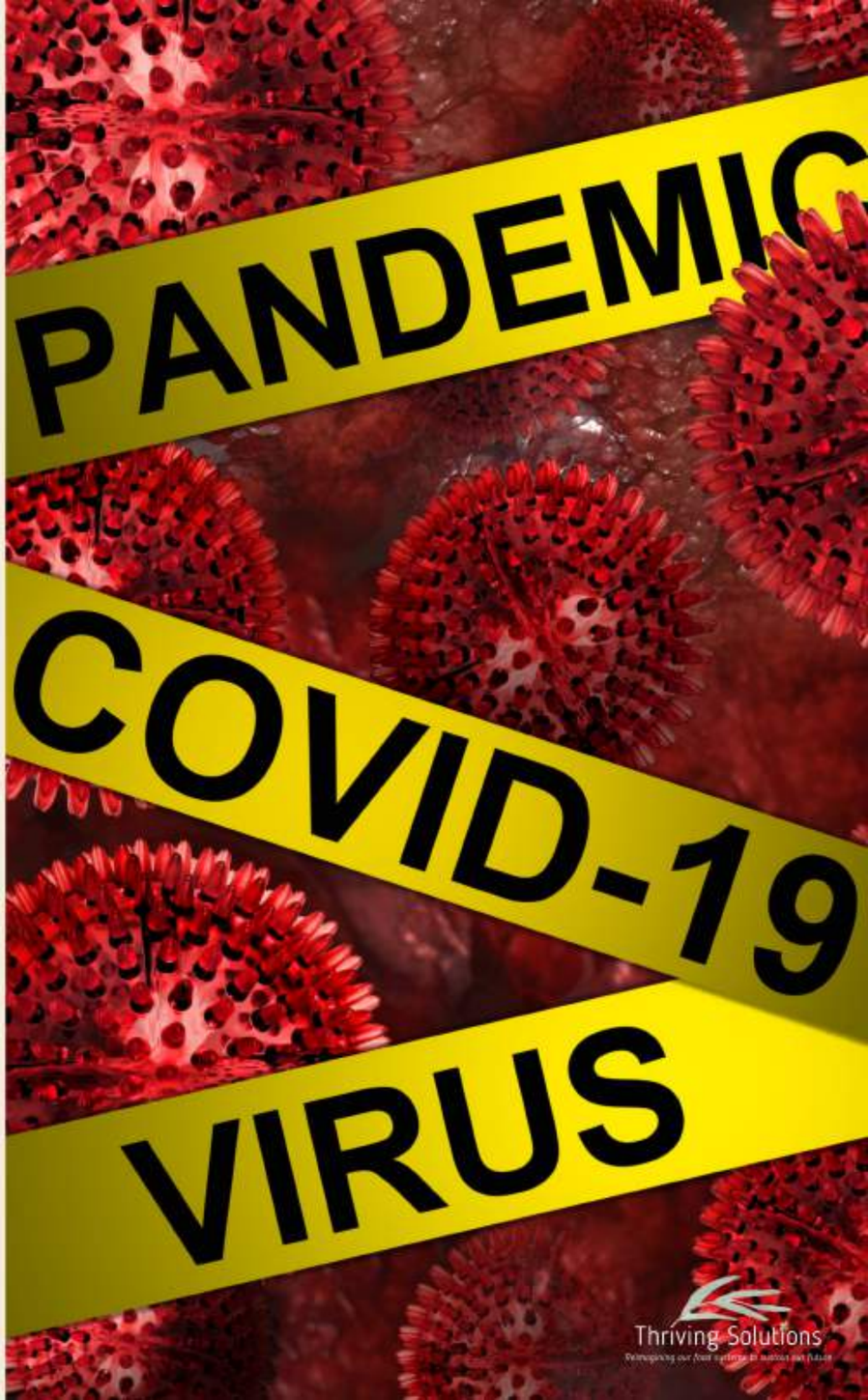

Image by Theresa Lieb/GreenBiz.

COP27 AND FOOD

The Arab region, heavily dependent on importing the majority of its food, is very vulnerable to disruptions in food supply chains. The Food Vulnerability Index by Nmoura, which ranks 110 countries' vulnerability to large food-price swings ranked the majority of the MENA countries within the most vulnerable category. The five countries Libya, Syria Algeria, Jordan and Lebanon make the top 10 most vulnerable countries. Noteworthy, is that Yemen and the Kingdom of Saudi Arabia were not among the evaluated countries.

Not surprisingly, COP27, held in Sharm El Sheik - Egypt, in 2022, put food center stage. For the first time there was a dedicated Food Systems Pavilion, and an Agricultural Day hosted by the COP President.

Moreover, countries throughout the region are increasingly emphasizing the need to develop robust food security strategies.

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SUMMARY OF COUNTRY NDC ASSESSMENT

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FOOD LOSS AND WASTE IN MENA COUNTRIES' NDCs

The following section presents our analysis of the most recent NDC submissions of the following 16 MENA countries (listed alphabetically) in terms of their plans to address food loss and waste as a climate change mitigation measure, as well as their waste management strategy.

- Arab Republic of Egypt (Egypt)
- Hashemite Kingdom of Jordan (Jordan)
- Kingdom of Bahrain (Bahrain)
- Kingdom of Morocco (Morocco)
- Kingdom of Saudi Arabia (Saudi Arabia)
- People's Democratic Republic of Algeria (Algeria)
- Republic of Lebanon (Lebanon)
- Republic of Iraq (Iraq)
- Republic of the Sudan (Sudan)
- Republic of Tunisia (Tunisia)
- State of Kuwait (Kuwait)
- State of Palestine (Palestine)
- State of Qatar (Qatar)
- Sultanate of Oman (Oman)
- Syrian Arab Republic (Syria)
- United Arab Emirates (UAE)

The available English or Arabic version of the NDCs were reviewed. For Morocco, no English version was available, and so we reviewed an unofficial internal English translation of the French submission.

NDC KEY WORDS AND PHRASES

GHG EMISSION REDUCTION TARGETS COMPARED TO BUSINESS AS USUAL (BAU)- The greenhouse gas emissions reduction targets that countries have pledged to achieve in comparison to resuming BAU (i.e. not making any changes in their operations).

CONDITIONAL- The targets that will be reached on the condition on certain factors, mainly that the country will receive international financial and/or support.

UNCONDITIONAL- The targets that will be reached by the country, using its own resource.

ADAPTATION MEASURES- In the context of NDCs, it refers to measures taken to cope with existing and future climate change impacts.

MITIGATION MEASURES- In the context of the NDCs, it refers to measures taken by the country on how to reach its GHG emission reduction targets.

FINDINGS

For the purpose of this report, our team has conducted a review and reported on the adaptation and mitigation measures that are associated with Food Loss and Waste of the 16 countries in the Arab Region. The following section provides a summary score sheet of the countries that have mentioned details related to nationwide programs, initiatives, policies, pledges, organic waste treatment... etc., related to this topic. Countries that have not mentioned any details pertaining to these programs in their updated NDC reports have not been included in this chapter.

Countries that mentioned Food Loss and Waste or topics associated to it in the NDC:

11 countries: Algeria, Egypt, Iraq, Jordan, Lebanon, Morocco, Qatar, Sudan, Syria, Tunisia and the United Arab Emirates

Countries that have only mentioned waste management:

5 countries: Egypt, Iraq, Lebanon, Palestine and Syria

Countries that have mentioned waste management and organic waste:

4 countries: Algeria, Morocco, Sudan and Tunisia

Countries that have mentioned waste management and food loss and waste:

3 countries: Jordan, Qatar and the United Arab Emirates

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ALGERIA

GHG Emission Reduction Targets Compared to BAU:

Total 29% GHG emission reductions by 2030

Unconditional

Conditional

Waste Management Targets:

Not specified

Food Loss and Waste Target:

Not specified

Algeria submitted its first and only NDC in October 2016. The submission is very brief and doesn't provide much detail. The NDC clearly refers to the high dependence of the national economy on petroleum exports which makes the country vulnerable to not only the climate change risks, but also to the global mitigation efforts.

The NDC refers to a national mitigation plan to be implemented between 2021-2030. Within this plan waste management was addressed with a priority given to household solid waste with the objective of increasing waste valorization, composting of organic and green waste, and energy recovery and capturing methane from landfill sites. However, the NDC does not refer to any specific targets for waste management or valorization, food loss or waste or composting.

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EGYPT

GHG Emission Reduction Targets Compared to BAU:

GHG emission reduction by 2030 from electricity generation transmission and distribution

GHG emission reduction by 2030 from oil and gas activities

GHG emission reduction by 2030 from transport sector

Waste Management Targets:

waste collection efficiency by year 2025

of the collected waste utilized

of collected waste utilized for waste-to-energy

Food Loss and Waste Target:

Not specified

Egypt submitted its first NDC in June 2017 and updated its submission in July 2022. The re-submission is extensive providing an overview of actions taken in line with initial submission, as well a description of mitigation and adaptation interventions till 2030. These interventions and targets are conditional on financing of USD 196 billion for mitigation and USD 50 billion for adaptation.

In the NDC mitigation section, there is a mention of waste categorization, increasing energy recovery and decreasing waste directed towards landfills. According to the latest submission, all governorates are required to upgrade their solid waste management infrastructure to increase recovery and energy recovery rates. There is also a push for waste-to-biofuel as an alternative source of energy for the cement sector. Waste was only mentioned in the mitigation section and not the adaptation.

There was no mention of food waste reduction, or organic waste mitigation or adaptation measure in the NDC.

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IRAQ

GHG Emission Reduction Targets Compared to BAU:

16% - 17% total commitment GHG emission reductions

Unconditional by 2030

Conditional by 2035

Waste Management Targets:

Not specified

Food Loss and Waste Target:

Not specified

Iraq submitted its first and only NDC submission in October 2021. The targets are conditional on peace and stability, economic and financial resources in the range of USD 100 billion, technical capacity and technology available.

The mitigation sectors include wastewater and waste, under which it is mentioned that the country will pursue management and recycling of its solid waste, focusing on waste-to-energy. This is further enforced under the adaptation section where waste management and recycling is emphasised in the context of covering energy needs for cement factories by pursuing waste-to-energy projects.

The focus on waste-to-energy is reinforced in the adaptation section which also mentions the waste sector as one of the main adaptation sectors.

Waste management targets are not included in mitigation or adaptation sections. Moreover, there is no mention of food loss or waste in the submission.

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JORDAN

GHG Emission Reduction Targets Compared to BAU:

31% total commitment for GHG emission reductions by 2030

Unconditional by 2030

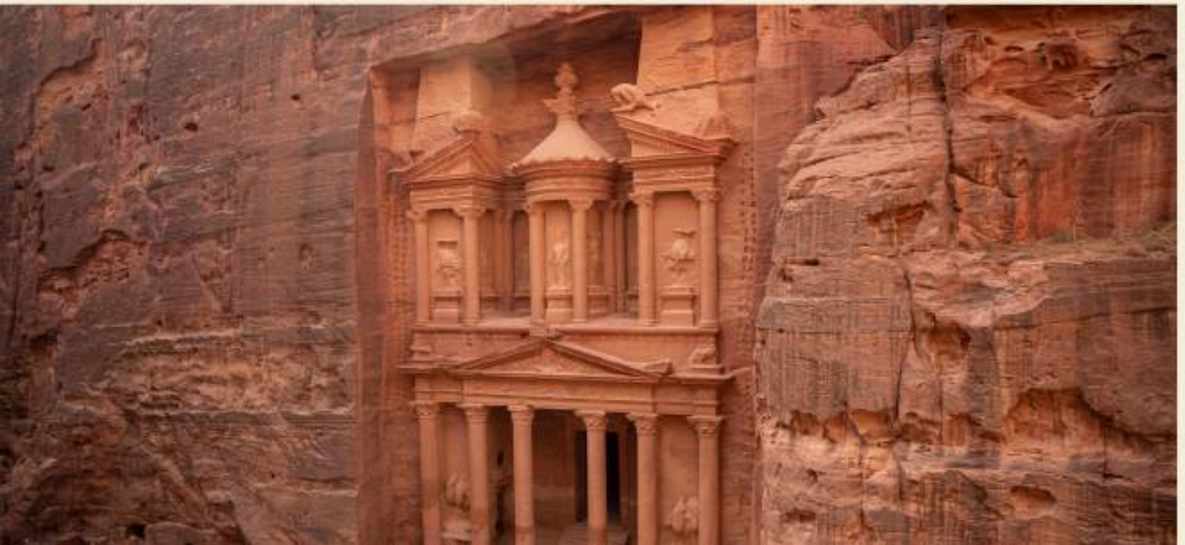
Conditional by 2030

Waste Management Targets:

Not specified

Food Loss and Waste Target:

Not specified



Jordan submitted its first NDC in November 2016 and updated its submission in October 2021. The updated submission is extensive and takes into account the new policies and programs adopted by the country in its drive towards a lower carbon and more climate-resilient pathway.

According to the NDC, the government has implemented Jordan's National Food Security Strategy to transform agri-food systems for better and more resilient production and national food security. The action plan for this strategy is still under development and the intention is that it will address food loss and waste. The NDC also mentions that part of the agriculture adaptation plan will pursue improving sustainable productivity of food chains including reducing post-harvest losses and food waste.

The NDC waste section refers to Jordan's National Solid Waste Management Strategy (2015-2034) and its action plan built on the "Three-Rs" approach (Reduce-Reuse-Recycle) which among its targets is reducing the quantities of bio-waste disposed in landfills by using it for alternative energy production and composting.

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LEBANON

GHG Emission Reduction Targets Compared to BAU:

Total commitment for GHG emission reductions by 2030

Unconditional

Conditional

Waste Management Targets:

Not specified

Food Loss and Waste Target:

Not specified

Lebanon submitted its first NDC in February 2020 and updated its submission in March 2021. The updated submission is brief. The notable updates of the NDC are that it communicates an increased mitigation ambition and provides additional clarity for the adaptation measures. It focuses on transparency, enhanced synchronization between stakeholders and improved inclusiveness of vulnerable groups.

The NDC listed priory targets within its adaptation plans. The report indicates that within the agriculture sector, there will be initiatives to enhance efficiency within its agri-food chains including fisheries, and increase resilience of food security within households.

The NDC generally refers to a waste management strategy but no details are mentioned in regards to food loss and waste or organic waste management.

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MOROCCO

GHG Emission Reduction Targets Compared to BAU:

45.5% Total Commitment for GHG emissions reductions by 2030

18.3% Unconditional

27.2% Conditional

Waste Management Targets:

20% recovery of organic waste by 2030

20% recovery of household waste by 2030

Food Loss and Waste Target:

Not specified

Morocco submitted its first NDC in September 2016 and updated its submission in June 2021. The updated submission is detailed in the mitigation section and includes two subsectors within the industrial sector.

The NDC mentions that Morocco has a National Waste Reduction and Recovery Strategy. Within this Strategy, there are targets for organic waste recovery, household waste recycling, and waste-to-energy initiatives and measures for other types of waste.

Furthermore, the NDC mentions that funds will be allocated to enhance the enabling environment to treat household waste by biological mechanisms or incineration.

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QATAR

GHG Emission Reduction Targets Compared to BAU:

Total GHG emission reduction by 2030

Unconditional by 2030

Waste Management Targets:

Not specified

Food Loss and Waste Target:

Not specified

Qatar submitted its first NDC in June 2017 and updated its submission in August 2021. The updated submission is brief and refers to the country's heavy reliance on oil and gas exports.

In the introduction of the NDC, the report states that the government plans to implement food waste programs and food standards governance initiatives. These programs are not mentioned again in the subsequent text.

In the report adaptation and mitigation sections, there are several references to waste management practices, but these mentions are brief and there is no elaboration.

Moreover, the adaptation and mitigation sections do not mention food loss and waste or organic waste specifically.

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SUDAN

GHG Emission Reduction Targets Compared to BAU:

Not specified

Waste Management Targets:

Waste Sector – reduction of 6.4 million tCO2eq by 2030

Food Loss and Waste Target:

Not specified

Sudan submitted its first NDC in Augusts 2017, second NDC in May 2021 and updated its submission in September 2022. The NDC is brief and aims to transform the NDC from a communication document to an action plan.

The NDC mentions the mitigation measures that are in line with the national development plans and objectives, for the waste sector. This includes composting 60% of organic waste and implementing an integrated solid waste management system.

There are no mentions of food loss and waste or waste management in the adaptation section of the NDC.

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SYRIA

GHG Emission Reduction Targets Compared to BAU:

Not specified

Waste Management Targets:

Not specified

Food Loss and Waste Target:

Not specified

Syria submitted its first and only NDC in November 2018. It is brief and points to the climate change effects the country is experiencing coupled with the local conditions related to the destruction from conflicts. It also indicates the ability to implement their voluntary efforts is conditional upon support from developed countries.

The NDC indicates that 5% of the country's GHG emissions are generated by the waste sector and waste management is one of the identified mitigation activities with a plan to develop a waste management strategy for the country. The aim is to have waste segregation at source and encouraging the development of a recycling industry. Moreover, the agricultural sector mitigation initiatives include managing and valorizing agricultural waste, especially using waste-to-energy,

The NDC doesn't include any specific targets for waste, and there is no specific mention of food loss and waste throughout the document.

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TUNISIA

GHG Emission Reduction Targets Compared to BAU:

45% Total GHG emission reduction by 2030

28% Unconditional

17% Conditional

Waste Management Targets:

Quantify household waste produced per capita/day.

Food Loss and Waste Target:

Not specified

Tunisia submitted its first NDC in February 2017 and updated its submission in October 2021. The NDC update is detailed and aligned with the country's long-term climate vision that was set out in the National Low-carbon Development Strategy.

According to the NDC, the mitigation plan for the waste sector includes a program to reduce upstream waste generation, including household waste and organic waste recovery. The NDC goes on to mention that a co-benefit for both mitigation and adaptation is the optimized use of national resources through the valorization of waste. To monitor the implementation of the updated NDC in the waste sector, there is a target to quantify household waste produced per capita per day.

Food loss and waste is not mentioned in the NDC neither under the mitigation nor the adaptation plans.

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UNITED ARAB EMIRATES

GHG Emission Reduction Targets Compared to BAU:

Total GHG emissions reduction by 2030

Unconditional commitment

NET ZERO by 2050

Waste Management Targets:

Reduction of waste emissions by 2030

Food Loss and Waste Target:

Reduction in food waste by 2030

United Arab Emirates submitted its first NDC in September 2016, followed by an update in December 2020, and another update in September 2022. The latest NDC is comprehensive and ambitious raising the country's emission reduction target to 31% with the aim to achieve net-zero by 2050. The targets are supported by several strategies such as the National Energy Strategy, the UAE Green Agenda 2015-2030, and the UAE Net Zero by 2050 Strategy.

According to the NDC, in January 2021 the UAE launched a Circular Economy Policy to design out waste. Regulations and incentive programs have been put in place to minimise waste, promote waste segregation, recovery, treatment and disposal. As one of the Adaption Actions with Mitigation Co-Benefits, the NDC mentions the implementation of the National Food Security Strategy 2051 which addresses food resilience and food waste reduction amongst other targets. The NDC also mentioned the National Food Loss and Waste Initiative (Ne'ma) committed to reducing food loss and waste by 50% by 2030. In line with this initiative, the nationwide Food Waste Pledge, launched in 2018 encourages UAEs hospitality sector to adopt food (measurement and reduction) management practices.

CONCLUSIONS

WHAT NOW?

The majority of the NDCs reviewed mentioned waste management, although waste management may seem like a small sector in comparison to other sectors its impact is great. Food Loss and Waste contributes to 10% of greenhouse gases globally, a reduction in FLW is a reduction in GHG emissions.

Waste management plans and strategies alone will not be enough to curb GHG emissions, they have to be developed with the waste hierarchy in mind. Waste prevention should be the first step in reducing GHG emissions in this sector. When looking at prevention the importance of proper waste measurement and management come into play. In order to know where and how waste is occurring we need to understand the reason it is happening. Waste needs to be measured and categorized according to internationally recognized protocols, only then can effective reduction measures be identified and launched resulting in diverting waste from the landfill to the most suitable valorization activities.

With a waste management plan based on evidence in place, countries will be able to contribute high-level confidence data towards the UN Food Waste Index, the UN Food Loss Index, and other emerging global initiatives to tackle waste.

YOU CANNOT MANAGE WHAT YOU DO NOT KNOW!

Today, global estimates of food loss and waste rely mostly on estimates and extrapolation of data which makes it difficult to determine the true scale of the problem, its impacts, and the most effective interventions.

According to the latest Food Index Report (2021), from the 22 Arab League countries only the Kingdom of Saudi Arabia has High Confidence data on their food waste for households and retail. No Arab country has high-confidence data for food waste in the food services sector. Bahrain, Iraq and Lebanon have carried out a number of household food waste studies. As for North Africa, no identified usable food waste estimates exist, therefore the food waste estimates for the countries in this region are of very low confidence.

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