

Food. Feed. Fibre.

SUSTAINABLE PRODUCTION AND CONSUMPTION



17 JUNE 2020

DESERTIFICATION AND DROUGHT DAY 2020

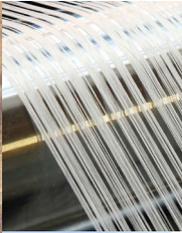
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Shared Prosperity Dignified Life



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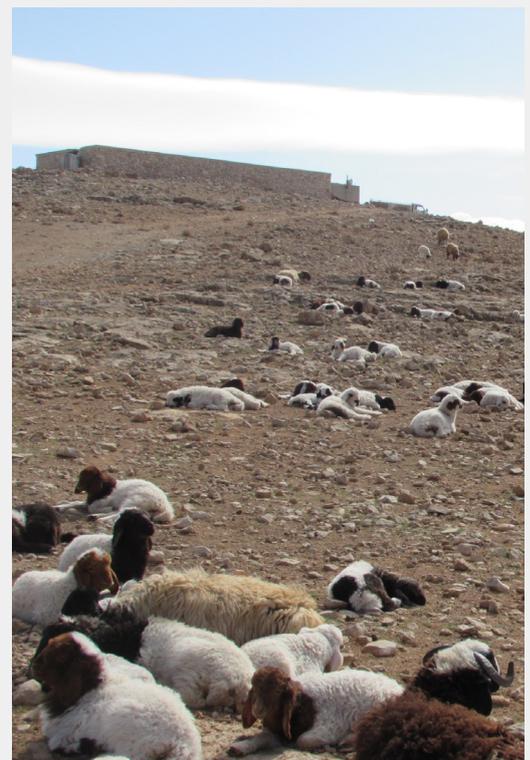


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The quest to meet the growing needs of humans – be it food, clothing or space for settlement – is the leading driver of land degradation and desertification. The United Nations Convention to Combat Desertification (UNCCD) chose “Food. Feed. Fibre. Sustainable production and consumption” as the theme of the 2020 Desertification and Drought Day (formerly World Day to Combat Desertification) to raise awareness on threats to the environment, particularly land loss resulting from our unsustainable production and consumption patterns. The theme links issues related to Sustainable Development Goal (SDG) 12, “responsible production and consumption”, to those of SDG 15, “life on land”, which includes the issues of biodiversity and land degradation, among others.

The UNCCD notes that “as populations become larger, wealthier and more urban, there is far greater demand for land to provide food, animal feed and fibre for clothing”, which is leading to a rapid decline in “the health and productivity of existing arable land”. The decline is expected to accelerate as the impact of climate change sets in and worsens the pressures on the land thereby hastening the damage caused on “production, ecosystems and biodiversity” and, in a vicious cycle, leading to the exploitation of new and more marginal land, soon to be ruined as well.¹



The UNCCD² highlights that more than 2 billion hectares of previously productive land in the world has been degraded so far and that over 70 per cent of natural ecosystems have been disrupted one way or another. It also estimates that by 2030, an additional 300 million hectares of land will need to be exploited for food production while the clothing industry will need an additional 115 million hectares.

The dire situation results from the fact that the production of human food, animal feed, clothing and footwear are mostly plant- or animal-based and thus generated from the land with their quality and yields heavily reliant on the availability of suitable arable land. To maintain and ensure the availability of the land, the way food, feed and fibre are produced and consumed must urgently evolve to become more sustainable.



Critical regional desertification and drought status

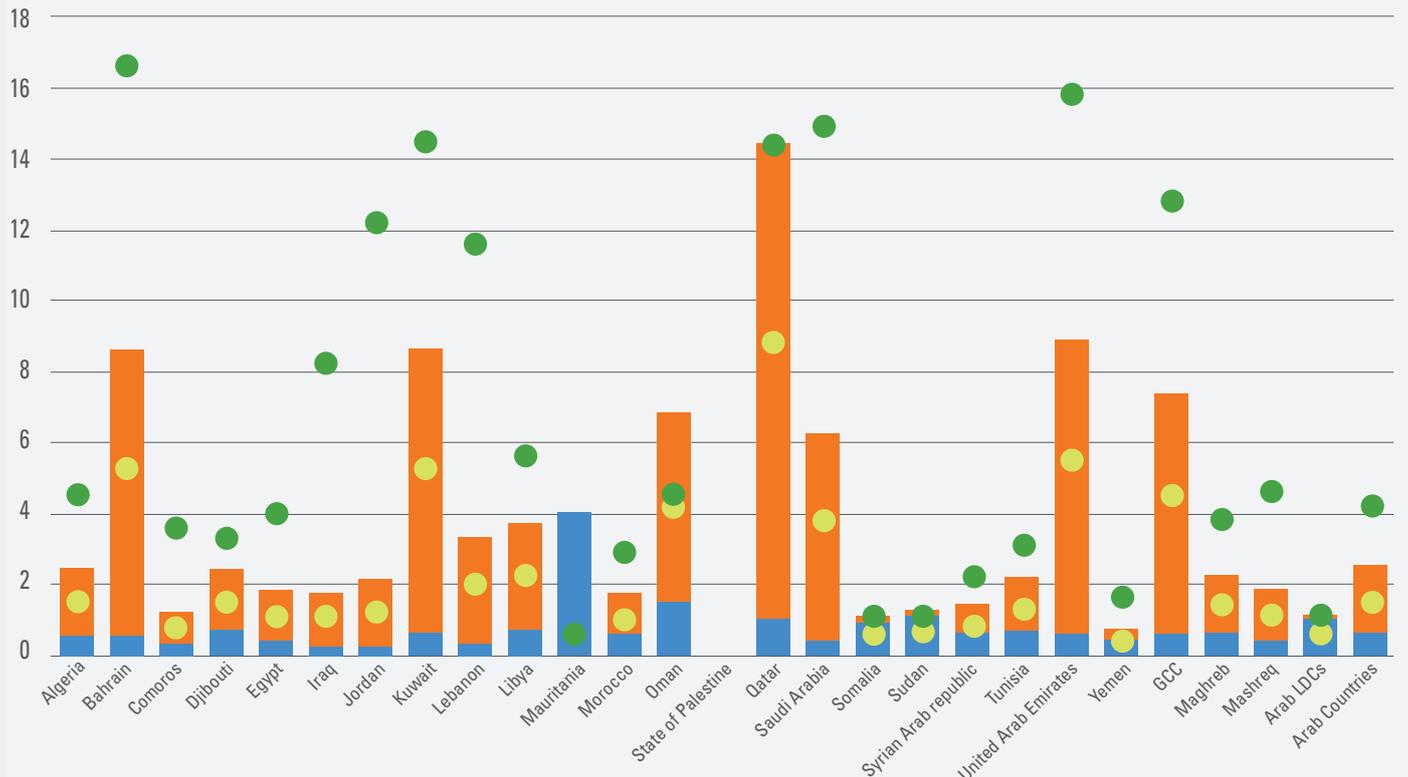
According to the latest data from the Global Footprint Network (2016), the world is in an ecological deficit – the amount by which humanity’s demand has exceeded nature’s budget – with the current pace of world consumption requiring the resources of about 1.7 Earths. The situation is also worrisome for the Arab region as if the entire world was to consume at the current Arab consumption level, it would require the resources of about 1.5 Earths or, in other words, the resources of 4.2 Arab regions (figure 1). The consumption of Gulf Cooperation Council (GCC) countries requires the resources of 4.5 Earths (yellow dot) or 12.8 times the GCC countries’ resources. The remaining subregions, the Arab least developed countries (LDCs), the Mashreq and Maghreb, respectively consume resources equivalent to 0.7, 1.1 and 1.4 Earths. In 2006, the Arab region generated 0.71 kg/person/day of solid waste, ranging from 1.36 kg in the GCC countries to 0.40 kg in the Maghreb.³

In addition, the Arab region has at least six conflict or post-conflict countries (Iraq, Libya, Somalia, the Sudan, Syrian Arab Republic and Yemen) with two additional countries (Jordan and Lebanon) heavily impacted by population displacements. The total number of forcibly displaced people, both refugees and internally displaced people (IDPs), reached 18 million in 2018. This substantial population displacement has dramatically affected the communities from which they departed and those that received them, as the land was either not cared for or overexploited and settled on, thereby removing it from productive activities.⁴

In the Arab region, cropland, which is a combination of arable and permanent crop land, accounts for only 5 per cent of the total land. The cropland decreased by about 40 per cent on a per capita basis, from 0.31 to 0.17 hectares per person between 1985 and 2015. Although over the same period, in absolute terms it increased by about 22 per cent, equivalent to about 12 million hectares or slightly less than the land area of Tunisia. During the same period, the available freshwater resources per capita decreased from about 1,500 to 430 m³/capita/year firmly putting the region in the category of severe water scarcity (based on FAOSTAT and AQUASTAT data from 2020). As a matter of fact, more than 90 per cent of the land is classified as arid or hyper-arid with the remaining being drylands in which land degradation is synonymous to desertification. Thus, both land and water resources are the main limiting factors for enhanced agriculture production.

Despite these constraints, most countries in the Arab region are still producing crops and animal products that are very demanding on the area’s land and water resources, including lamb, beef, dairy, nuts and grains, among others. Figure 2 shows global figures of land use per 100 grams of protein with lamb, beef and mutton having the largest share of land use. Current diets have as much impact on the land as the quantity of food being produced, which is expected to keep rising with population increases and higher levels of affluence.⁵

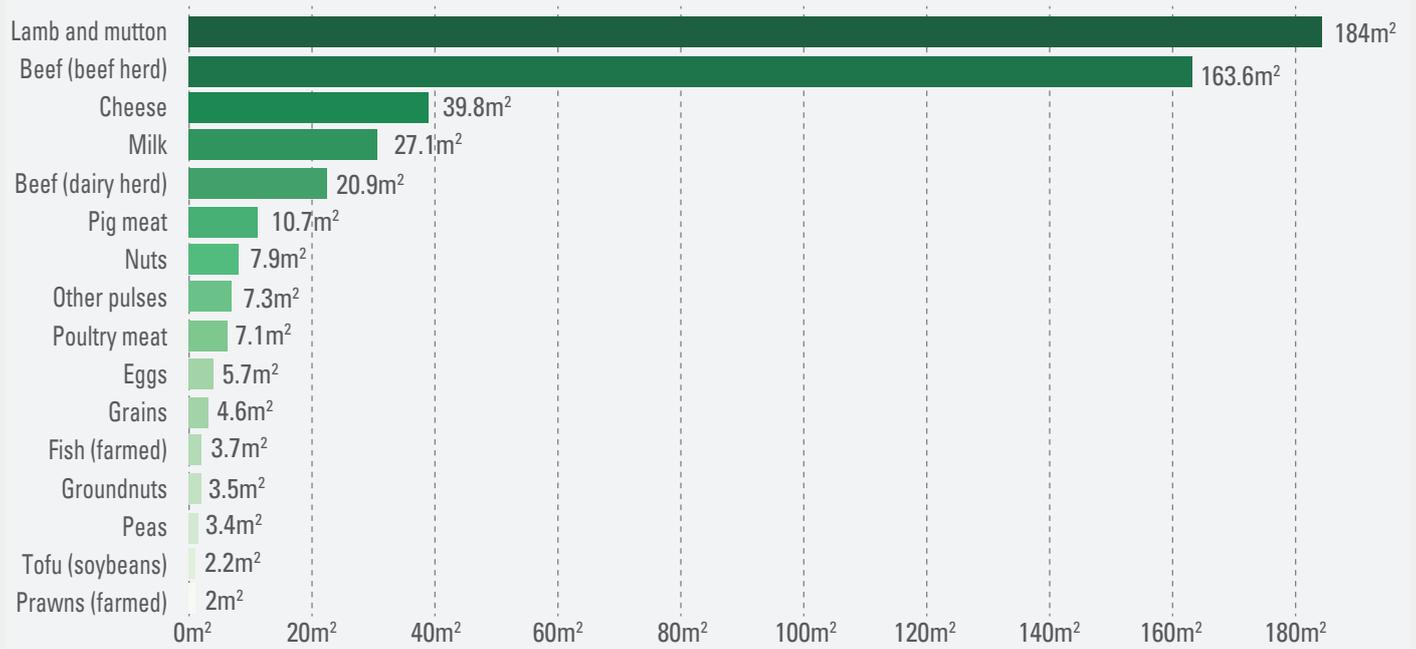
Figure 1. Ecological footprint (orange bar), biocapacity (blue bar), number of Earths (yellow dot) and number of countries (green dot) required



Source: Computed from Global Footprint Network (2019). National Footprint and Biocapacity Accounts, 2019 Edition.
Note: Gulf Cooperation Council (GCC) countries subregion: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates.
 Maghreb subregion: Algeria, Libya, Morocco, Tunisia.
 Mashreq subregion: Egypt, Iraq, Jordan, Lebanon, State of Palestine, Syrian Arab Republic.
 Arab Least Developed Countries (LDCs): Comoros, Djibouti, Mauritania, Somalia, the Sudan, Yemen.

Figure 2. Land use per 100 grams of protein

Land use is measured in meters squared (m²) per 100 grams of protein across various food products



Source: Poore, J., and Nemecek, T. (2018). Additional calculations by Our World in Data.
Note: Data represents the global average land use of food products based on a large meta-analysis of food production covering 38,700 commercially viable farms in 119 countries.
 OurWorldInData.org/environmental-impacts-of-food • CC BY

Regional pressures

- The region suffers from excessive abstraction of water from deep aquifers which has substantially sunk water tables leading to increased scarcity and further environmental damage;
- The Arab region's rapid population growth is resulting in urban sprawl and most urban expansions were not planned with sustainability in mind. This is leading to further environmental damage as cities encroach on nearby farmlands. The expansive urban areas generate excessive waste, which leads to the contamination of nearby land and water resources;⁶
- Conflict, wars and occupation have forced millions to become refugees or internally displaced, assembling in makeshift camps usually on farming lands in the affected countries and thereby leading to lost production;⁷
- A nutritional transition away from traditional diets is ongoing in affluent countries and urban areas and is characterized by a higher consumption of animal products. The new dietary pattern is more demanding in terms of land and water resources;
- Food loss and waste (FLW) is a concern in the Arab region, with food loss more prevalent in low-income countries and food waste in high-income countries and urban centres. At a per capita of 210 kg per year with some countries reaching up to 427 kg per year, total food loss and waste is estimated at approximately \$60 billion per year in value and about one third of the region's food;^{8,9}
- The COVID-19 pandemic has highlighted how prevailing production and consumption patterns generate food loss and waste with insufficient processing and storage capabilities at the post-harvest level and overstocking and buying at the consumer level.

The above pressures, alone or in combination, are proving detrimental to the region's environment and the sustainability of the fragile and scarce natural resources, particularly land and water. To preserve these resources with the aim of improving livelihoods and the quality of life, there will be a need to revisit how land-degrading and water-depleting production systems, including cotton, grains, foraging, khat or animal husbandry, are conducted.



We all need to act... response options¹⁰

- Organizing awareness campaigns to change consumer and corporate behaviours on acquiring products that minimally impact the land before and after consumption (small changes, such as choosing paper over plastic, could prove beneficial to the land);
- Promoting agricultural practices that strengthen the land regenerative capacity (for example, agroforestry, no-till agriculture, organic fertilizer, etc.) or generate positive externalities (such as improved water percolation, reduced erosion, etc.);
- Adopting innovative ways to reduce post-harvest food loss and waste by promoting e-marketing/direct sale from farmer to consumer, which would also reduce wrapping products and enhance both efficiency and sustainability;
- Encouraging consumers to buy locally; to reduce, reuse and recycle products; and to adopt healthier and environmentally friendlier diets, as it could free up or save the land and lower carbon emissions;
- Planning for urban expansion and cities to ensure that they become more sustainable: socially (justice), economically (equity), politico-culturally (responsibility) and environmentally (viability) sustainable;
- Supporting the adoption of green technologies in production processes including at the farm level and throughout the supply chain with an emphasis on using clean energy.
- Supporting the civil society to raise awareness and build capacity at the local level for the implementation and adoption of environmental initiatives that promote sustainable production and consumption;
- Shifting towards balanced diets such as the Mediterranean diet, which emphasizes plant-based foods, for example, grains, legumes, fruits and vegetables and nuts and seeds, and usually available locally and seasonally;



- Choosing locally grown produce, preferably sustainably produced, to support local producers and reduce the carbon footprint;
- Reducing food waste by buying only what is needed, planning meals and donating excess to food banks;
- Planting fruit trees in schoolyards, along rural roads and in communal parks to provide healthy snacks when needed;
- Improving waste management at national and local levels through an integrated solution that includes reduction of waste, better disposal options, restoring contaminated sites and better tracking of waste and enforcing rules;
- Growing own vegetables in gardens, terraces/balconies or rooftops, if feasible;
- Making home compost for use on self-grown plants or gardens to decrease the use of chemical pesticides and fertilizers;
- Repairing, donating, swapping clothes and avoiding seasonal fashions, as it could also help free the land for other uses, save water and prevent pollution;
- Whenever technologically possible, developing green roofs to help cool homes and reduce the carbon footprint.

Endnotes

1. See <https://www.un.org/en/observances/desertification-day>.
2. See Desertification and Drought Day information note, available at https://www.unccd.int/sites/default/files/relevant-links/2020-02/DDD_Background%20paper.pdf.
3. Economic and Social Commission for Western Asia (ESCWA) and United Nations Environmental Programme (UNEP), *Arab Sustainable Development Report, 2015 First Edition* (E/ESCWA/SDPD/2015/3), Beirut.
4. Forthcoming ESCWA report with the International Organization for Migration (IOM) and the League of Arab States (LAS).
5. Hannah Ritchie, "How much of the world's land would we need in order to feed the global population with the average diet of a given country?" *Our World in Data*, 3 October 2017. Available at <https://ourworldindata.org/agricultural-land-by-global-diets>.
6. Antar Abou-Korin, "Impacts of rapid urbanization in the Arab world: the case of Dammam metropolitan area", Saudi Arabia, Fifth International Conference and Workshop on Built Environment in Developing Countries (ICBEDC 2011), Malaysia, December 2011. Available at https://www.researchgate.net/publication/263847805_Impacts_of_Rapid_Urbanisation_in_the_Arab_World_the_Case_of_Dammam_Metropolitan_Area_Saudi_Arabia.
7. See Desertification and Drought Day information note.
8. ESCWA, "Mitigating the impact of COVID-19: Poverty and food insecurity in the Arab region", (E/ESCWA/CL3.SEP/2020/Policy Brief.2), Beirut.
9. ESCWA, "Arab horizon 2030: Prospects for enhancing food security in the Arab region", (E/ESCWA/SDPD/2017/1), Beirut.
10. This part builds on UNCCD proposed options with a regional perspective.