



# The Rebirth: Tunisia's potential development pathways to 2040

## Agriculture

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Last updated 12 May 2023 using IFs v7.45

## Agriculture

Agriculture is an important element of the Tunisian economy. Tunisia is one of the world's largest producers and exporters of olive oil and one of the few African countries that is fully self-sufficient in dairy products, vegetables and fruit. The sector contributes about 12% of GDP and employs roughly 16% of Tunisia's labour force. [1]

Roughly two-thirds of the country is suitable for agriculture, and is mostly cultivated by small-scale farmers. [2] Although foreign investors cannot own agricultural land, they can get long-term leases on public land from the Ministry of Agriculture. [3]

However, Tunisia's average crop yields are low, at under 2 tonnes per hectare, compared to the average for OLMICs at 6.3 metric tonnes, indicating challenges in the agricultural sector and the potential for improvement. In fact, yields have hardly changed since independence, although agriculture consumes 80% of the country's natural water resources. [4] By 2040, average crop yields are projected to increase to only 2.4 tonnes per hectare compared to the average for OLMICs at about 7.5 tonnes per hectare.

Since 2008, the government has renewed its efforts and formulated a number of national economic and social strategies to address agricultural production and food security as key pillars of the economy, but the results have been disappointing. [5]

Tunisia also loses more than one-fifth of all of its crops to loss and waste — approximately two percentage points higher than countries in the MENA region and OLMICs. The Institut national de la statistique (INS) estimated that approximately 900 000 units of bread, the staple food in Tunisia and the greater Mediterranean region, are wasted per day, amounting to roughly TND 100 million (€50.8 million) annually.

The INS also estimates that food expenditure related to cereals represents about 13% of food expenses, or TND 149 (€53.20) per person per year. [6]

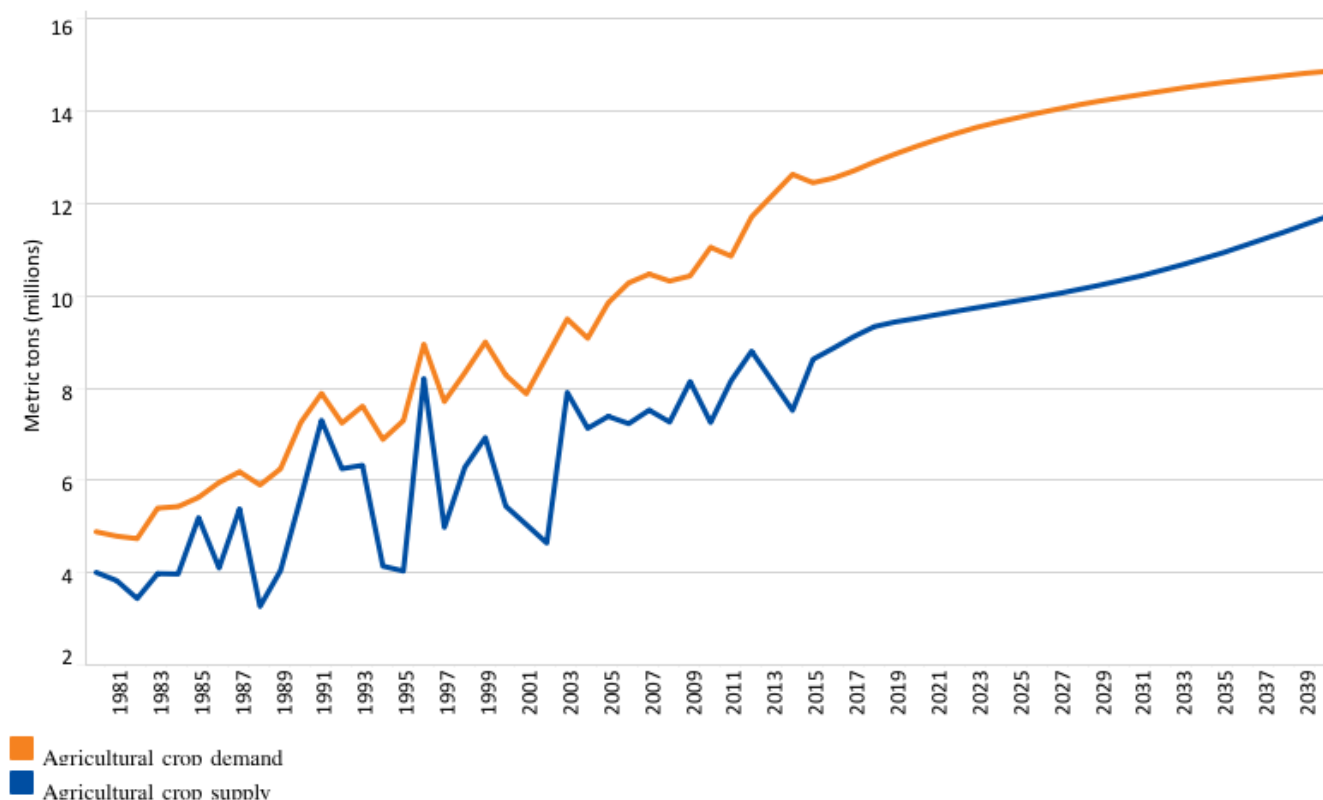
Additionally, agricultural demand has outstripped supply since 1966. Tunisia's *L'Observatoire de la Souveraineté Alimentaire et de l'Environnement* [7] (OSAE) reports that one out of two Tunisians consume imported food, and food dependence exceeded 55% of consumption in 2019. This heavy food dependence, according to the OSAE, could worsen if Tunisia enters into the DCFTA with the EU, since it would remove the remaining barriers protecting the country's agriculture. [8]

A World Bank study suggests that Tunisia does not have an agricultural policy but rather a food security policy that in fact hinders the development of its agricultural sector. State intervention has pushed production away from Mediterranean products — in which Tunisia has a natural comparative advantage — towards less competitive continental products, keeping agricultural productivity at suboptimal levels and preventing the sector from achieving its full potential. [9]

As a result, reliance on food imports has increased over the years, particularly wheat. [10] According to the Observatory of Economic Complexity (OEC), Tunisia imported food-related goods to the tune of more than €2.1 billion in 2017. [11] The FAO forecasted that in 2018/19 cereal imports would average about 3.5 million tonnes.

According to IFs, import dependence on crops as a per cent of net demand is expected to decline from 30% in 2019 to about 22% in 2040, as shown in Chart 8. From a food security perspective, Tunisia is vulnerable to shocks such as fluctuating international prices, which could negatively impact food security, especially in light of declining foreign exchange reserves.

Chart 8: Tunisia's agricultural crop demand and supply in million metric tonnes



Source: IFs version 7.45, historical data from the Food and Agriculture Organization

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To reduce food dependence, Tunisia needs agrarian reform. The OSAE reports that 3% of agricultural producers in Tunisia have more than 100 hectares each, making up 30% of the total arable land. Most of their produce is exported. The remaining 97% largely produce for the local market. With better support and help from the government this 97% could reduce the country's food dependence problem.

Climate change also threatens agriculture in Tunisia. USAID projects that Tunisia's economy will suffer a reduced output of €2–2.7 billion between 2000 and 2030 owing to the combined effects of increasing global food prices and stagnant agricultural yields. [12]

From an agricultural perspective, climate risks to the sector include the decrease in crop yields, a shift in growing seasons, the degradation of soil quality, increased salinisation of aquifers, the decreased availability of water for irrigation and higher food prices.

### Chart 9: Climate change

Tunisia, like the rest of the region, is highly exposed to the impacts of climate change, which extend beyond agriculture. With 84% of its population located along its 1 150 km coastline, sea-level rise, floods, coastal erosion, warmer fishing waters and droughts are among the more urgent threats that the country faces. Aside from economic disruption, this will displace exposed and vulnerable populations unless better disaster risk management systems are put in place. [13]

The annual maximum temperature is likely to increase by 1.5–2.5 °C by 2030 and 1.9–3.8 °C by 2050, while the annual minimum temperature is likely to rise by 0.9–1.5 °C by 2030 and 1.2–2.3 °C by 2050. The number

of hot days is also projected to increase by roughly 1.3 days per year between 2020 and 2039, while the duration of heatwaves will increase by four to nine days by 2030 and by six to 18 days by 2050. The sea level is expected to rise by 3–61 cm this century. [14]

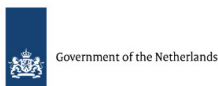
Higher sea levels threaten the low-lying islands off Tunisia's coast. The effects of climate change will damage infrastructure such as roads, and water and sanitation facilities, worsening existing water security challenges [15] and weakening coastal structures. The resulting loss in tourism revenue will also negatively impact the economy. [16] Together with political instability and other drivers, this will in turn increase vulnerability to climate change.

Climate change will also directly impact health in Tunisia. Climate-related risks in the future will include higher mortality rates from extreme heat, increased malnutrition from crop failure, potential increased spread of diseases, and lack of access to clean water. [17]

## Endnotes

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### Cite this research

Jakkie Cilliers and Stellah Kwasi (2025) The Rebirth: Tunisia's potential development pathways to 2040. Published online at [futures.issafrica.org](https://futures.issafrica.org). Retrieved from <https://futures.issafrica.org/special-reports/country/tunisia/> [Online Resource] Updated 12 May 2023.

## About the authors

Dr Jakkie Cilliers is the ISS's founder and former executive director. He currently serves as chair of the ISS Board of Trustees, head of the African Futures and Innovation (AFI) programme at the Pretoria office of the Institute, and is an extraordinary professor at the University of Pretoria. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

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