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# Public Summary Medium-Term Fertilizer Outlook 2023 – 2027

**IFA Market Intelligence Service**



This report is a summary of IFA's Medium-Term Outlook, prepared by the Market Intelligence Service to accompany IFA's Medium-Term Outlook Presentation, which is available to IFA members.

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Notes and definitions:

- ✓ All volume data presented in this report is expressed in nutrient metric tonnes unless stated otherwise. Nutrient tonnes reflect the N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O content of nitrogen, phosphate and potash fertilizers respectively, rather than the physical weight of the product being used (product tonnes).
- ✓ The terms nitrogen, phosphate and potash are used to denote groups of nutrient-bearing fertilizers which are produced and traded globally. The terms nitrogen, phosphorous and potassium refer to the nutrients required by plants.
- ✓ Annual periods refer to the calendar year unless stated otherwise, and when FY precedes a year, it refers to the Fertilizer Year. The reference period used to report fertilizer consumption varies depending on the country. Countries report fertilizer consumption statistics in 12-month periods that start either in January or in another month.
- ✓ In this report, "fertilizer year" (FY) refers to all 12-month periods. FY 2022 refers to the year starting in January 2022 for most countries in Latin America, Africa, East and Southeast Asia and EECA. For other regions including North America, WCE and South Asia, FY 2022 started in Q2 or mid-2022 and will end in Q2 or mid-2023. Fertilizer years do not always match crop marketing years used to report statistics on crop area, yield and production.

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## BACKDROP TO THE FERTILIZER OUTLOOK

More than a year has now passed since the onset of the war in Ukraine. In that time, the world faced the prospect of a fertilizer supply shortage, and prices reached record highs in Q2 2022. As a result, an unprecedented focus was placed on the importance of fertilizers and the crucial role they play in feeding the world.

Despite the challenges associated with sanctions, high raw material costs and export restrictions, global fertilizer supply was better in 2022 than the pessimistic case of the three scenarios presented by IFA in [May 2022](#).

A number of factors facilitated this better-than-expected supply situation:

- Governments clarified that the flow of food and fertilizer exports from Russia should not be impacted by sanctions.
- Trade was facilitated by governments, NGOs and industry, who stepped in to support fertilizer supply chains.
- New trade partners emerged, particularly in economies with low exposure to the US dollar.
- Raw material prices declined as energy markets adjusted to reduced reliance on Russian supply.

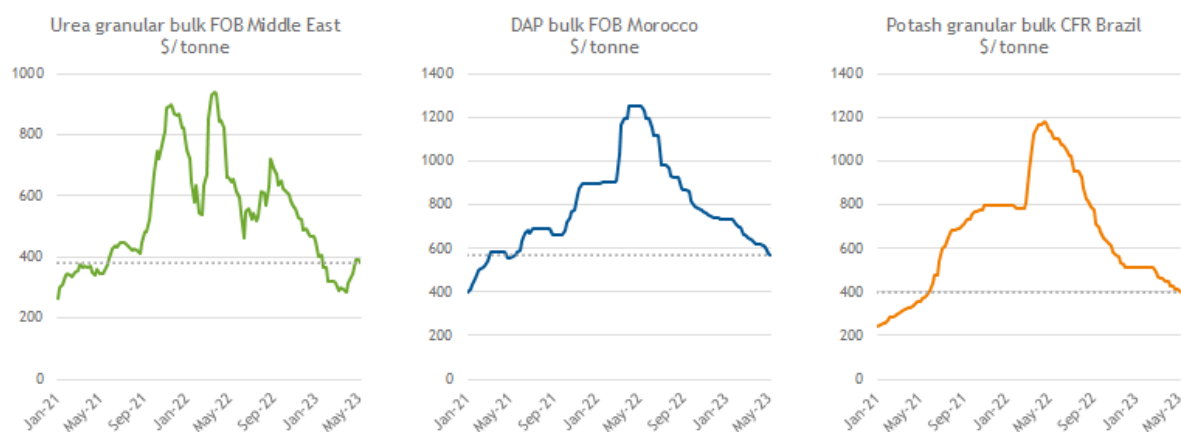
Fertilizer prices have declined from the peaks of Q2 2022, improving affordability for many farmers. However, the impacts of poor affordability were still felt throughout 2022, with many buyers deciding to delay or skip fertilizer applications.

Furthermore, the world has entered a high interest rate environment in efforts to curb inflation, which has placed an additional financial burden on fertilizer buyers. Several emerging economies have seen their currencies depreciate against the US dollar, which in the most extreme cases has more than offset the decline in international fertilizer prices. Smallholder and subsistence farmers remain more exposed to input costs, as they lack the end market and credit facilities that benefit commercial farmers' ability to pay for inputs.

In the short term, uncertainties remain in the fertilizer supply chain, namely the fate of the Black Sea Grain Initiative, potash exports from Belarus, and energy price developments in H2 2023. Affordability continues to rank highly as a driving factor behind fertilizer use although other agricultural fundamentals are expected to reappear as major drivers in the coming years, and will be underpinned by the balance between food security and environmental protection.

This report outlines recent developments in global supply and demand of fertilizers, and presents IFA's five-year outlook.

### Fertilizer prices have fallen from their Q2 2022 peaks



## SUPPLY FORECAST

As described above, fertilizer supply was better than initially expected in 2022, however it was by no means plain sailing. One product in particular, potash, saw significantly lower global production, and for nitrogen several regions saw lower output, which was offset by higher production elsewhere.

Global ammonia production is estimated to have declined by 1% to 182.2 Mt in 2022, while phosphoric acid production is estimated to have increased by 2% to 84.8 Mt after a challenging 2021. Global potassium chloride production is estimated to have declined by 15% to 62.1 Mt compared to 2021. However, 2020 and 2021 were peak years for potash supply, and when comparing to 2019 levels, production in 2022 was 6% lower.

### ***Rerouting of trade: Russia leans to the Baltic***

Contrary to initial concerns, fertilizer export supply from Russia continued throughout 2022. This is in part due to buyers being reassured over any sanctions risk, as well as a rerouting of trade to countries with less concern over US dollar sanctions risks such as Brazil and India. For example, exports of urea and phosphates from Russia to India increased significantly in 2022, as India took advantage of a risk discount on Russian product. Potash exports from Russia were lower in 2022, however this is understood to be driven more by global demand destruction for potash than any logistical barriers.

While Russia has successfully exported larger volumes of dry bulk fertilizers from its Baltic Sea ports, the same cannot be said for ammonia. The transit of ammonia through Ukraine via pipeline was part of the UN Black Sea Grain Initiative, but as of June 2023, it had not been able to restart. Some ammonia is exported via the Baltic Sea, and increased port capacity is being rapidly built at Ust Luga as well as the port of Taman on the Azov Sea which will reduce the reliance on the pipeline once operational.

### ***Rerouting of trade: Belarus exports east***

A significant rerouting of trade has also taken place in the supply of potash from Belarus. A fundamental difference in the status of Russia and Belarus is that sanctions on the Belarusian potash sector are explicit, and the national potash producer is a sanctioned entity. This makes the transit of potash from Belarus via EU territory to the Baltic Sea problematic. Instead, exports of Belarusian potash have pivoted to the east, utilising rail networks to China and Russia. In Q1 2023, record volumes were sent from Belarus to China. While it is unlikely that these two routes will fully replace previous Belarusian export volumes, it is understood that rail capacity through Russia is being expanded with the aim of boosting potential routes for Belarus to export potash to the Baltic Sea in the future.

### ***European nitrogen production hit by gas woes***

Europe is a key region in the global nitrogen market because of its role as the marginal cost producer and the influence it has on international price levels. Natural gas costs in Europe have fallen from their record highs in Q3 2022, as the region successfully built up gas inventories in H1 2023. Despite this, some nitrogen plants in Europe continue to operate below full capacity, as lower nitrogen prices have made production uneconomic once again. Some fertilizer producers in Europe have gone one step further and permanently closed capacity based on the long-term outlook, with a noteworthy example being BASF in Germany.

Uncertainties also remain over the outlook for gas prices in Europe in winter 2023, which will determine the economic viability of local nitrogen producers.

### ***Capacity forecasts: the investment cycle is changing***

IFA's forecasts of capability (the measure of theoretical supply based on typical maximum operating rates) begin with announced capacity increases. The fertilizer capacity investment cycle has changed in two main ways in the last year. The first is that lower fertilizer prices have weakened the investment case to fund new

capacity, and the second is that the industry is becoming more sustainable, underpinned by the energy transition, which raises project costs.

The main drivers of nitrogen capacity growth are centered in low-cost regions, namely Russia where natural gas-based projects are already under construction, and the US where tax incentives have dramatically improved the economics of investing in blue ammonia (when CO<sub>2</sub> emissions are offset using carbon capture and storage).

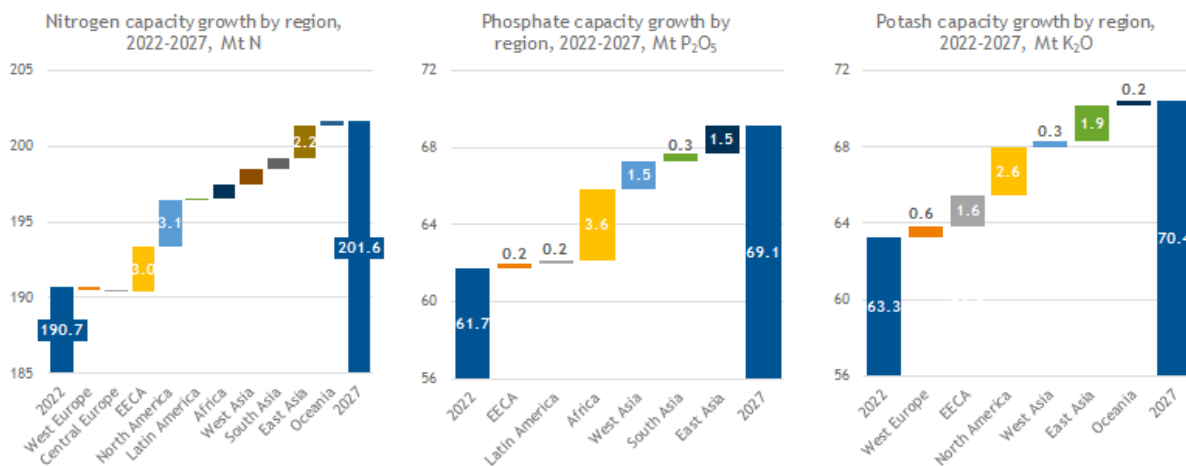
IFA includes 3.5 Mt of green ammonia (produced using carbon-free renewable energy) projects in its five-year forecast, and a much larger volume of prospective green ammonia capacity is under

consideration given its vast potential as a sustainable source of nitrogen as well as adjacent energy market opportunities as a hydrogen carrier.

Phosphate capacity growth is forecast to remain focused in regions with existing production hubs, namely Africa and West Asia. Project activity elsewhere is limited due to a low investment incentive in the current market.

Potash capacity growth is forecast to manifest in long-running projects being developed by new entrants, primarily in Canada and Laos, as well as existing mine development expected to ramp up in Russia in the next five years.

### Fertilizer capacity expansions are centred in low-cost regions



Source: IFA, May 2023

**Capability will be determined by the pace of recovery in Russia and Belarus, and changing economics elsewhere**

Global nitrogen capability is forecast to increase from 156.9 Mt N in 2022, to 170.7 Mt N in 2027, a 9% growth rate. The key contributors to this growth will be Russia, where a rebound in capability is expected as a result of the continued pivot towards the Baltic Sea, including for ammonia, as well as new capacity expansions that are already under construction.

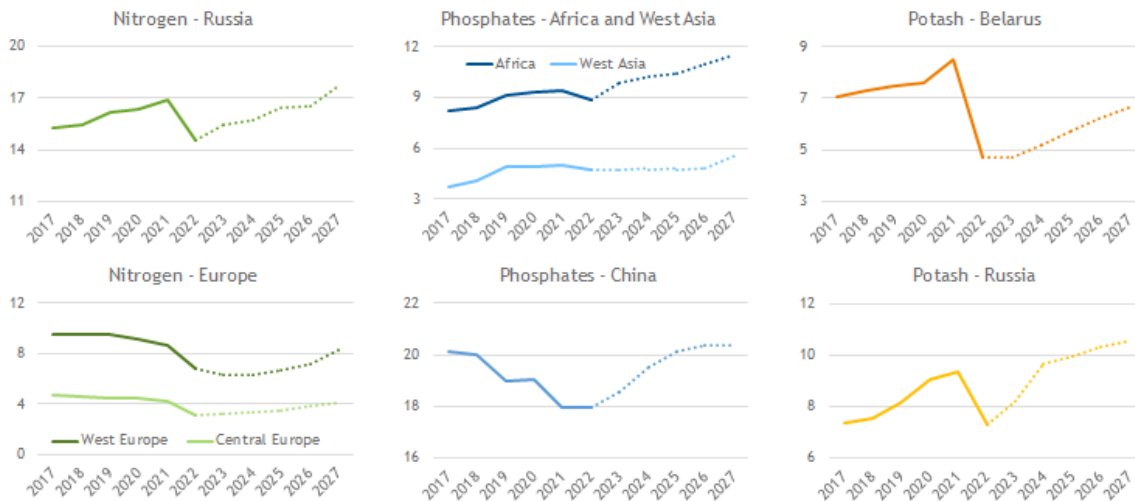
Growth in nitrogen capability will be offset by a lower baseline of output in Europe due to capacity closures on economic grounds.

Phosphate capability is forecast to increase from 51.3 Mt P<sub>2</sub>O<sub>5</sub> in 2022, to 57.7 Mt P<sub>2</sub>O<sub>5</sub> in 2027, a 12% growth rate. This is primarily driven by capacity expansions by existing producers in Africa and West Asia, as well as by a rebound in Chinese capability after several years of operational challenges.

Potash capability is forecast to increase from 46.7 Mt K<sub>2</sub>O in 2022, to 54.6 Mt K<sub>2</sub>O in 2027, a 17% growth rate. This forecast is dependent on the ability of Belarus to increase alternative

routes to market, assuming that barriers to exporting via Lithuania remain in place over the medium-term.

### Key capability forecast assumptions



Source: IFA, May 2023. Capability defined as potential supply based on capacity forecast and typical maximum operating rates

## FERTILIZER CONSUMPTION FORECAST

IFA’s traditional methodology to prepare global fertilizer demand outlooks is based on a survey of ~50 country experts, representing around 90% of global fertilizer use. The results of this survey are complemented with agricultural and trade data, as well as the latest market information.

In May 2022, IFA developed a new forecasting methodology in response to the start of the war in Ukraine, to reflect that short-term fertilizer use was likely to be more heavily dictated by the availability of fertilizers, with less emphasis on underlying crop forecasts and agronomic considerations. Three forecast scenarios were prepared, reflecting the significant uncertainty in how market conditions could evolve.

While the war in Ukraine and its related uncertainty continued as of May 2023, the fertilizer supply situation was more stable than in the first half of 2022, and medium-term fertilizer demand drivers have reverted to

underlying agricultural fundamentals. As a result, the survey-based methodology has been applied to this outlook.

### *Poor affordability drove global fertilizer consumption down between FY 2020 and FY 2022*

In late 2022, surveyed country correspondents ranked fertilizer prices and crop prices as the most important drivers of fertilizer consumption between Fertilizer Year (FY) 2021 and FY 2023, in every region of the world. Other key factors followed, including government support to farmers, weather, energy prices, fertilizer availability, exchange rates, the economic situation of the country, its political situation, and environmental regulations.

Between Q2 2021 and Q2 2022 fertilizer prices rose to levels not experienced since 2008. Crop prices also increased in the same period, but generally not as much as fertilizer prices. As a result, the cost of fertilizers relative to crop prices surged, affecting farmers’ prospective returns.

Fertilizer prices have since declined due to better-than-expected supply for nitrogen (N) and phosphorous (P), demand destruction for P and potash (K) due to delayed or skipped purchases, and declining gas prices. However, as of May 2023 the relative cost of fertilizers compared to crop prices remained higher than in 2020.

Lower fertilizer affordability is the main factor behind the contraction in fertilizer consumption around the world between FY 2020 and FY 2022. Globally, fertilizer use decreased by close to 3% in FY 2021, reaching 194.7 Mt, and by close to 5% in FY 2022, reaching 185.1 Mt. Altogether, global fertilizer use was in FY 2022 15 Mt lower than the record level of 200.2 Mt reached in FY 2020.

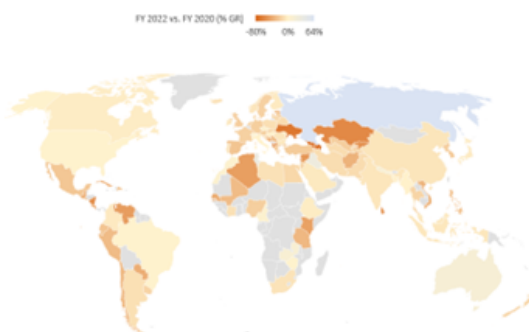
The contraction in fertilizer use in FY 2021 and FY 2022 combined is estimated at 7.6%, close to the 8.4% drop of FY 2008. While the primary factor driving fertilizer use down at that time was poor fertilizer affordability, in FY 2021-FY 2022 a secondary factor related to disruptions in K supply arose. Similar to the 2008 situation, demand destruction was greater for K than for P, and greater for P than for N. K consumption dropped by 12% in FY 2022 vs. FY 2020, compared to 9% for P and 5% for N. These

differentiated declines by nutrient reflect the importance of N for crop yields, as well as the soil capacity to retain P and K. Farmers are more likely to skip P and K applications than N applications, particularly if applications of P and K have been adequate in previous years.

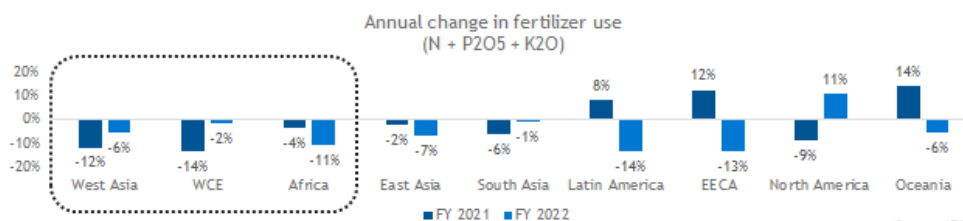
In absolute terms, East Asia and South Asia led the global decrease in the two-year period, accounting for almost 60% of the reduction. In South Asia, fertilizer use in India declined significantly in FY 2021, while it dropped in FY 2022 in Pakistan due to severe flooding. In East Asia, declines in fertilizer use took place not only in China but also in oil palm and rice producing countries.

In relative terms, three regions reduced their fertilizer use by at least 10% over the two years: West Asia (-17%), West and Central Europe (-15%) and Africa (-14%). Turkey led the consumption fall in West Asia as a severe weakening of the Lira aggravated the fertilizer inflation. In WCE, fertilizer use suffered from both the higher prices and the 2022 drought. In Africa, where farmers are very sensitive to higher fertilizer prices, K consumption dropped by almost half (44%), significantly more than in other regions.

### Many countries decreased their fertilizer use between FY 2020 and FY 2022



- In absolute terms, East Asia and South Asia were the largest contributors to the global decline
- In relative terms, 3 regions declined by at least 10% over two years: West Asia, WCE and Africa



***Global fertilizer use is expected to recover partially in FY 2023***

In FY 2023, consumption of fertilizers worldwide is expected to recover by 4% to 192.5 Mt, right above the FY 2019 level of 191.8 Mt. N use is expected to recover by 3% to 109 Mt; and P and K by 5% each to 46 and 37 Mt respectively. Consumption of all three nutrients is forecast to return to or exceed their FY 2019 levels but remain below the record FY 2020 levels.

With cereals accounting for over half of global fertilizer use, the smaller demand for mineral nutrients in FY 2021 and FY 2022 partly reflected a contraction of cereal area. Global cereal area contracted by 1.5% in crop marketing year 2022/23, driven by maize (-3.4%). Some of this maize area was switched to other crops such as soybeans, which require lower amounts of nutrients. In crop marketing year 2023/24, global cereal area is expected to recover slightly, led by a rebound in maize.

At the regional level, South Asia and Latin America are forecast to lead the recovery in global fertilizer use in FY 2023, accounting for almost 60% of the total gain. In South Asia, N consumption is expected to rise by 5% to a record level of 27 Mt; P consumption is forecast to recover partially to 10.7 Mt (+9%); and K to grow from 2.2 Mt, the lowest level in 19 years, to 2.5 Mt (+12%), still the second lowest level in 20 years. Pakistan's use is forecast to recover by 10% following the 2022 floodings.

In Latin America, fertilizer consumption is expected to increase by 7% after a 14% fall, to reach 27.6 Mt, close to the FY 2020 level of 27.7 Mt. In particular, fertilizer use in Argentina could recover from a severe drought caused by La Niña.

In relative terms, West Asia is expected to experience the largest recovery in fertilizer use in FY 2023 (+13%) after suffering the largest drop between FY 2020 and FY 2022 (-17%). WCE and Africa, which also saw significantly lower fertilizer use in FY 2020-FY 2022, are not expected to recover as quickly. Fertilizer use is forecast to rebound by 5% in WCE, and 3% in Africa. In EECA, a partial recovery in Ukraine

fertilizer use could be offset by a reduction in Russia after a record year: winter wheat area contracted due to heavy rains at planting time and winter losses.

Early 2023 is coinciding with the end of three successive La Niña events. La Niña brought rains to Australia, southern Africa, and Southeast Asia, but severe droughts to the southern part of Latin America (particularly Argentina). An El Niño event is likely to start in the second part of 2023. The transition from La Niña to El Niño could bring dryness to large fertilizer consuming regions such as the northern part of Latin America, the southern part of Africa, Southeast Asia and Australia. El Niño could also bring rains to Argentina and other countries that endured La Niña-related droughts in recent years.

***After being the top concern for three years, affordability will be one of many drivers of fertilizer consumption in the medium-term***

A survey of IFA's country correspondents was conducted in Q2 2023, asking them to rate various factors depending on their expected influence on fertilizer use between FY 2024 and FY 2027. The results of the survey indicate that, according to IFA correspondents, fertilizer affordability remains the top driving factor over the medium-term. But other factors have gained in importance compared to the short-term view: climate change and/or water availability, the international geopolitical situation, government regulations, government support to farmers and/or national food security, the national economic situation, new fertilizer products and/or new technologies on the farm and/or changes in farming practices, and fertilizer availability.

***Government regulations on fertilizer use***

Nitrogen is the typical targeted nutrient in government regulations, due to concerns about the impact of N losses to the environment. Only a few countries have implemented regulations so far, but for these countries, the effects on N consumption are visible. Three such cases are described below: China, the European Union and New Zealand.



In 2015 the Chinese government launched the Action Plan for the Zero Increase of Fertilizer Use, which targeted the achievement of zero growth in fertilizer and pesticide use by 2020. This objective was achieved quicker than expected, and even exceeded: fertilizer use in China fell by 15% between FY 2015 and FY 2020 (N by 19%), with an annual average decline of 3% (N by 4%). In September 2021, the 14th Five-Year National Agriculture Green Development Plan 2021-25 raised the objective to a reduction in the use of fertilizers as well as an increase in application efficiency. In addition, the 14th five-year plan (2021-25) on Advancing Agriculture and Rural Modernization states that the utilization of animal manure must reach at least 80% in 2025. Between FY 2020 and FY 2022, fertilizer (including N) use decreased by another 7%.

In the European Union (EU), the German Fertilizer Ordinance was revised in both 2017 and 2020, bringing stricter rules for N application in Germany. Germany's N use decreased by 12% between FY 2016 and FY 2019, accounting for almost half of the decline in EU N consumption. Since February 2020, German farmers have not been permitted to apply urea without combining it with urease inhibitor or incorporating it into the soil within four hours. N use fell by a further 8% in Germany in FY 2020. In the Netherlands, a significant reduction in N pollution is targeted by the government by 2030, which should bring N mineral use down.

For the EU as a whole, the Farm to Fork strategy (part of the Green Deal) aims by 2030 to decrease fertilizer use by at least 20% and to reduce nutrient losses by at least 50%. Discussions are ongoing. In any case, the latest EU 10-year agricultural outlook, published in December 2022, forecasts for the period 2022-2032 a slowing of crop yield growth and stagnation in agricultural production, for several reasons including climate change and weather-related events, lower use of plant protection products and synthetic fertilizers, limited access to gene-editing and slowdown of genetic improvements.

Nitrogen cap rules were implemented starting in July 2021 in New Zealand. These cap rules impose a maximum of 190 kg of synthetic N per ha and per year. As a result, N use decreased by 6% in FY 2020, then declined further in FY 2021 and FY 2022 but the most recent declines are caused by the increased fertilizer prices. N consumption in New Zealand is expected to stabilize starting in FY 2023.

Many countries have declared in their Nationally Determined Contributions (NDC) their intention to decrease fertilizer use and increase nutrient use efficiency (NUE), but without implementing measures yet. No new measures were assumed to be implemented before the end of the medium-term outlook period.

#### *Government support to farmers*

A significant portion of global fertilizer use takes place in countries where the government supports fertilizer purchases by farmers. The largest consuming country where such support exists is India, which accounts for 15% of global fertilizer use and 80% of fertilizer use in South Asia.

In India, the main fertilizer support measure targets urea, the most used product. The Maximum Retail Price (MRP) for urea is fixed at Rs. 242 per 45 kg bag and Rs. 268 per 50 kg bag. The MRP for urea was kept stable for many years and was not raised in 2022 despite the surge in international prices. As a result, in mid-2022 the urea MRP was about ten times lower than international urea prices. Phosphorous and potash do not have a MRP but benefit from Nutrient Based Subsidies (NBS) that are adjusted every year by the government. NBS rates for P were revised upwards in FY 2021 and FY 2022, and NBS rates for K were revised upwards in FY 2022 but this did not prevent a price increase at the farm gate. In addition, the NBS for P were raised significantly more than for K. As a result, K consumption in India contracted significantly more than consumption of P and N between FY 2020 and FY 2022 and is not expected to recover completely by the end of the outlook period.

### *War in Ukraine*

Trends in Russia and Ukraine, the top two markets in EECA, are expected to be contrasted over the medium-term.

Russia consumed a record volume of 5.8 Mt of fertilizers in FY 2022, owing to a record wheat harvest. However, fertilizer use is expected to grow more slowly over the medium-term. Russian farmers are facing reduced returns due to accumulated inventories, shortage of storage and logistics, and difficulties to export due to economic sanctions. In addition, Russian farmers fear shortages of imported seeds and machinery over the medium-term. These factors could limit growth in agricultural production in Russia over the next few years.

In Ukraine, fertilizer use collapsed in FY 2022, falling by 70%. A partial recuperation is expected in FY 2023. Recovery is expected to continue over the medium-term outlook period, but this assumption carries significant uncertainty as the war is still going on. The assumption of progressive recovery in fertilizer use in Ukraine drives fertilizer use in EECA between FY 2024 and FY 2027.

### *Climate change*

Many correspondents ranked climate change or increasing dryness as top factors expected to influence fertilizer use over the medium-term.

Dry conditions affect agricultural production and therefore fertilizer use, but their impact is mostly visible during severe droughts. For example, in WCE the 2022 drought, combined with higher fertilizer prices, had a strong impact on fertilizer use: it fell by 16% in FY 2021. The frequency of droughts has tended to increase in Europe, particularly in the southern regions, over the last decades. Unfortunately, drought conditions are not abating: as of May 2023, Spain, Portugal, and the south of France were already in drought conditions.

In the Southern Hemisphere, agricultural production and fertilizer use are significantly influenced by the El Niño and La Niña events. A rare “triple-dip” La Niña, from late 2020 to

early 2023, brought good rains to Australia and boosted agricultural production and fertilizer use in FY 2020, FY 2021 and FY 2022, lifting Oceania’s fertilizer use over this period. However, the upcoming El Niño event is expected to drive FY 2024 fertilizer consumption down in Australia, and therefore Oceania.

Climate change also brings more frequent floods in some places. For instance, Pakistan experienced severe flood in 2022, which negatively affected agricultural production and fertilizer use, down by 12% in FY 2021.

Progressively drier conditions and the upcoming El Niño event have been considered by country correspondents in their contributions to this medium-term outlook. However, it is impossible to forecast severe droughts or floods.

### *Efficiency in the use of fertilizers will continue to improve*

As some regions are getting drier, the use of irrigation is growing, as is the use of Water-Soluble Fertilizers (WSF). This trend is visible in IFA’s recent assessment of consumption of Special Products. The use of other types of Special Products, such as Controlled Released Fertilizers and Stabilized Nitrogen Fertilizers, is also growing, driven by various factors including environmental regulations.

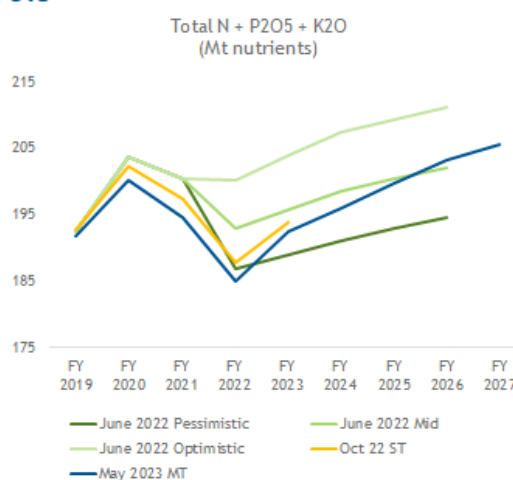
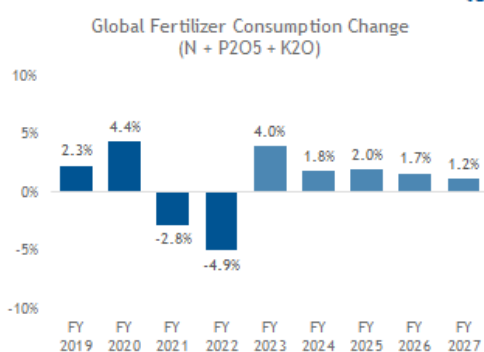
Global Nutrient Use Efficiency (NUE) has improved significantly since the 1990s, as indicated in a new dataset released in November 2022 and prepared by a working group gathering experts in FAO, IFA and several universities. The NUE for N is calculated as the ratio of N outputs over N inputs, taking into account in the N inputs not only mineral fertilizers but also manure applied to soils, biological fixation, and atmospheric deposition. This trend of increasing NUE is expected to continue over the next years, and maybe even accelerate as new products and new technologies become available. Improved efficiency of fertilizers and other nutrient inputs could affect the rate of growth in global fertilizer use.

**Between FY 2024 and FY 2027, degressive annual global growth is expected**

Globally, growth in fertilizer use is expected to slow over the medium-term, from 4% in FY 2023 (partial recovery) to 1.2% in FY 2027. Moreover,

slowing growth is expected not only for N but also for P and K. By FY 2027, N consumption is expected to reach 115 Mt, 9.4 Mt or 9% more than in FY 2022; P consumption 50.2 Mt, 6 Mt or 14% more than in FY 2022; and K consumption 40.6 Mt, 5.1 Mt or 14% more than in FY 2022.

**Fertilizer affordability is forecast to remain driven by affordability throughout the medium-term, and other factors will begin to play a larger role**



Source: IFA, May 2023

South Asia and Latin America are forecast to contribute 40% to the growth in global fertilizer use between FY 2024 and FY 2027. Other large contributing regions include EECA, Africa and East Asia. However, the top contributing regions are not expected to be the fastest growing markets: Africa is expected to grow by 17% between FY 2024 and FY 2027, followed by EECA (13%) and West Asia (10%).

Between FY 2024 and FY 2027, regional fertilizer markets can be classified in five types:

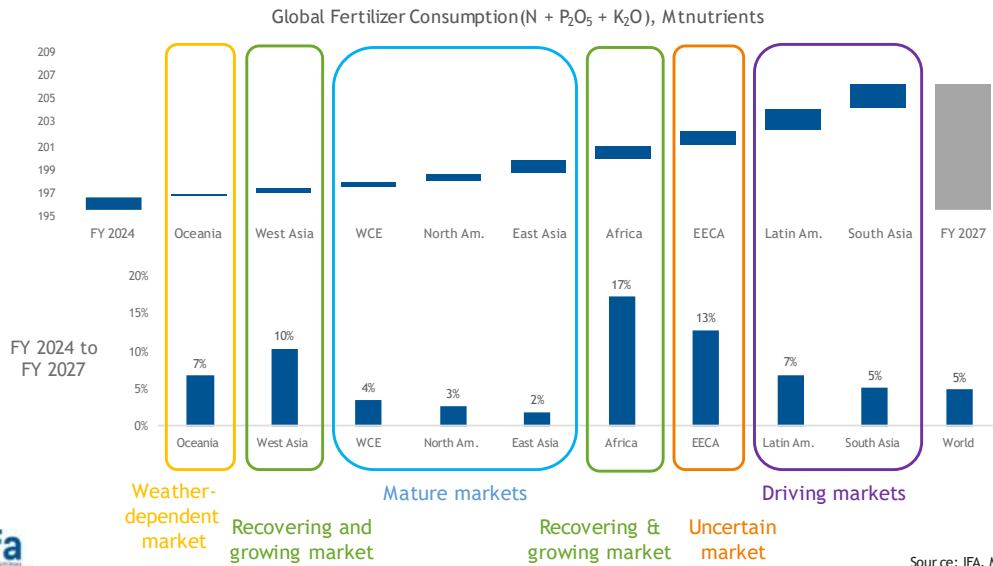
1. Driving markets: South Asia and Latin America, with top contributions and comfortable growth rates (5% to 7% between FY 2024 and FY 2027).
2. Mature markets: East Asia, North America and WCE, with average contributions to global growth and low growth rates (2% to 4%). Fertilizer consumption in East Asia is expected to

be driven by countries other than China in this period.

3. Weather-dependent market: Oceania, which would grow by 7% over the three years, from an El Niño -affected basis in FY 2024.
4. Recovering and growing markets: Africa (+17%) and West Asia (+10%)
5. Uncertain market: EECA, which would grow by 13% based on an assumed gradual recovery in agricultural production and fertilizer use.

The mix of largest contributing regions depends on the nutrient. EECA, Latin America, South Asia and Africa account for 67% of the growth in world N use between FY 2024 and FY 2027. South Asia, Latin America and Africa account for 65% of growth in global P<sub>2</sub>O<sub>5</sub> use growth. Latin America, South Asia and East Asia account for 68% of growth in world K<sub>2</sub>O use.

## South Asia and Latin America remain the main drivers of global fertilizer use over the medium-term



### Demand on track to recover but more complex drivers emerge in the medium-term

After a two-year contraction, driven by reduced fertilizer affordability, global fertilizer use is expected to partially recover in FY 2023. Slowing annual global growth is expected after FY 2023. Affordability will remain the top driver in the medium-term, but other factors are expected to rise in importance.

South Asia and Latin America are the largest drivers of global fertilizer use both in the short-

and medium-term forecast. After a muted recovery in 2023, Africa is expected to be the fastest growing market over the medium-term.

Next to the usual uncertainties surrounding such outlook, the evolving situation in Ukraine represents the highest downward risk: the outlook assumes a progressive recovery in fertilizer use over the medium-term, but any deviation from this trend would affect not only the fertilizer consumption outlook in Ukraine, but also in EECA and in the world.



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