Food and Agriculture Organization of the United Nations

World fertilizer trends and outlook to 2018

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS - Rome, 2015

ISBN 978-92-5-108692-6

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Preface

This report presents the world nitrogen, phosphate and potassium fertilizer medium-term supply and demand projections for the period 2014-2018. The FAO/Fertilizer Organizations Working Group met in Nairobi, Kenya, in June 2014 to review the prospects for fertilizer demand and supply, and prepared the forecasts. The African Fertilizer and Agribusiness Partnership (AFAP) and the Fertilizer Association of Southern Africa (FERTASA) provided special regional contributions and presentations.

The Working Group comprised:

	Fertilizers Europe (unable to attend)
FAI	Fertiliser Association of India
IFA	International Fertilizer Industry Association
IFDC	International Center for Soil Fertility and Agricultural Development
K+S	K+S KALI GmbH (participation by teleconference)
TFI	The Fertilizer Institute (unable to attend)
FAO	Food and Agriculture Organization of the United Nations

Annex 1 presents explanatory notes on potential supply, demand and balance. Annexes 2, 3, and 4 present world and regional fertilizer demand forecasts for nitrogen, phosphorus and potassium, respectively. Annexes 5, 6 and 7 present world and regional potential supply, demand and balances for the three primary nutrients. Nameplate capacity, operating rates and demand for fertilizers vary from year to year. Annex 8 provides the regional and subregional country groupings.

All references relating to fertilizers are in terms of three primary nutrients, viz., nitrogen (N), phosphate (P_2O_5) and potash (K_2O). The fertilizer demand and supply data refer to the calendar year.

FAO, in collaboration with experts from the Working Group dealing with fertilizer production, consumption and trade, annually provides five-year forecasts of world and regional fertilizer supply, demand and potential balance. The contributions made by the members of the Working Group and preparation of the FAO baseline data by Simona Mosco and Josef Schmidhuber from the FAO Statistics Division are gratefully acknowledged. The document was prepared by Robert Mayo, and his contribution is sincerely acknowledged. Final editing of the document was undertaken by John Choptiany. The document was prepared under the supervision of Caterina Batello, Senior Officer, FAO and overall direction by Clayton Campanhola, Director, Plant Production and Protection Division, FAO.

Executive summary

The world economy has broadly strengthened over the past three years and is expected to continue this strengthening during 2014-2015. The outlook for global grain supply-demand balance in the 2014/15 marketing season has improved further from what was previously thought earlier in 2014. The world cereal production in 2014 is estimated to reach 2 498 000 000 tonnes, or 2.2 percent below that of the record production in 2013. World food prices have continued to ease in 2014 and are down about 1.7 percent from July 2013. World fertilizer nutrient ($N+P_2O_5+K_2O$) consumption is estimated to reach 186 900 000 tonnes in 2014, up by 2.0 percent over 2013. World demand for total fertilizer nutrients is estimated to grow at 1.8 percent per annum from 2014 to 2018. The demand for nitrogen, phosphate, and potash is forecast to grow annually by 1.4, 2.2, and 2.6 percent, respectively, during the period. Over the next five years, the global capacity of fertilizer products, intermediates and raw materials will increase further.

The global potential nitrogen balance (i.e. the difference between N potentially available for fertilizers and N fertilizer demand) as a percentage of N fertilizer demand is expected to steadily rise during the forecast period, from 3.7 percent in 2014, to 5.4 percent in 2015, and then 6.9 percent in 2016, a further 8.8 percent in 2017 and reach 9.5 percent in 2018. The global potential balance of phosphorous is expected to rise from 2 700 000 tonnes in 2014 to 3 700 000 tonnes in 2018 or from 6.4 percent of total demand to 8.5 percent. The global potential balance of potassium is expected to rise significantly from 8 700 000 tonnes in 2014 to 12 700 000 tonnes in 2018, or from 25 percent of total demand to 33 percent.

The *Africa* region is likely to remain a major exporter of phosphate, followed by nitrogen, but would continue to depend solely on import of potash. *North America* would increase its supply of nitrogen fertilizer but continue to rely on imports. Its phosphate export may reduce slowly and the potash balance of the subregion is

expected to increase. *Latin America and Caribbean* will continue its dependence on imported nitrogen, phosphate and potash during the forecast period. The dependence of *East Asia* on nitrogen imports is expected to continue, with the import of potash increasing during the period. The subregion would, however, continue to be a net exporter of phosphate during the period. *West Asia* has a surplus in all the three nutrients. It is a major contributor to the global nitrogen supply. The subregion has a small surplus of phosphate for exports, which is expected to grow in the forecast period. *South Asia* would continue to remain deficit in all the three nutrients with the deficit balance in all the three nutrients expected to rise during the forecast period. In *Europe*, the major contribution in the nitrogen, phosphate, and potash surplus is from *East Europe and Central Asia*. It has a large potential balance of nitrogen and potash. *West Europe* would continue to remain in surplus in potash and in deficit in nitrogen and phosphate. *Central Europe* would continue to be in deficit in phosphate and potash. The surplus balance of nitrogen in the subregion will marginally decline. *Oceania* region would continue to be in deficit in all the three nutrients.

The world fertilizer **outlook**

BACKGROUND

The global economic growth and financial situation impacts various sectors, including agriculture. The world economy has experienced financial turmoil in 2008 followed by a slump in growth with intermittent recovery and most recently a broader strengthening, which is expected to continue during 2014-2015. The world fertilizer outlook, therefore, needs to be viewed from the perspective of the world economic growth situation. This report begins with a background of the world economic growth, followed by developments in agricultural production, input (fertilizer) output prices, and thereafter presents the details of regional and global supply, demand, and the potential balance of fertilizers in the coming years on a five year basis.

According to the *World Economic Outlook* report of the International Monetary Fund (IMF), the world economy has broadly strengthened and is expected to continue this strengthening during 2014-2015, with a major portion of the impetus for growth coming from advanced economies. The IMF sees that the downside risks have diminished overall, however lower than expected inflation poses risks for advanced economies. The increased financial volatility in emerging market economies, and increases in the cost of capital will likely dampen investment and diminish growth (IMF, July 2014). There remain fluctuations in the growth of emerging market economies.

The *World Economic Outlook* (IMF, July 2014) report indicates that global growth is projected to be 3.4 percent in 2014 with somewhat stronger growth expected in some advanced economies in 2015, a global growth of 4 percent in 2015 is expected. Growth in advanced economies is projected to increase by 1.8 percent in 2014 and 2.4 percent in 2015. Growth in emerging and developing economies may be around 4.6 percent in 2014 before increasing to 5.2 percent in 2015. Growth in the Euro area is expected to be around 1.1 percent, and an expected 1.5 percent in 2015. Growth is projected to remain around 2.8 percent in 2014 in regions connected more closely with the Euro area, particularly, central and eastern Europe. The United States may achieve a growth of 1.7 percent in 2014 and 3 percent in 2015. Growth in the East and North Africa

will be higher in 2014 compared with last year. Similarly, growth in sub-Saharan Africa is expected to remain strong in 2014–15 (5.4 percent and 5.8 percent), supported by the region's relative insulation from external financial shocks. Table 1 shows the world economic outlook projections in 2014 and 2015 compared with 2012 and 2013.

Table 1. World Economic Outlook Projections (Percentage change)

	2012	2013	2014	2015
World Output	**3.2**	**3.0**	**3.6**	**4.0**
Advanced Economies	1.4	1.3	1.8	2.4
United States	2.8	1.9	1.7	3.0
Euro Area[1]	–0.7	–0.4	1.1	1.5
Japan	1.4	1.5	1.6	1.1
United Kingdom	0.3	1.7	3.2	2.7
Canada	1.7	2.0	2.2	2.4
Other Advanced Economies[2]	2.0	2.3	3.0	3.2
Emerging Market and Developing Economies	5.1	4.7	4.6	5.2
Commonwealth of Independent States	3.4	2.2	0.9	2.1
Emerging and Developing Europe	1.4	2.8	2.8	2.9
Emerging and Developing Asia	6.7	6.6	6.4	6.7
China	7.7	7.7	7.4	7.1
India	4.7	5.0	5.4	6.4
ASEAN-5 [3]	6.2	5.2	4.6	5.6
Latin America and the Caribbean	2.9	2.6	2.0	2.6
Brazil	1.0	2.5	1.3	2.0
Mexico	4.0	1.1	2.4	3.5
Middle East & North Africa	4.9	2.5	3.1	4.8
sub-Saharan Africa	5.1	5.4	5.4	5.8
South Africa	2.5	1.9	1.7	2.7

1 = Excludes.

2 = Excludes the G7 and Euro area countries, but includes Latvia.

3 = Indonesia, Malaysia, Philippines, Thailand and Vietnam.

Source: World Economic Outlook, July update, 2014, International Monetary Fund.

According to the IMF, global consumer price inflation is projected to remain subdued in 2014-15 as demand is expected to weaken, with falling commodity prices. In advanced economies, risks to activities associated with very low inflation have become important, especially in the Euro area, where large output gaps have contributed to low inflation. The IMF considers that there is the possibility of higher real interest rates, an increase in private and public debt burdens, and weaker demand and output.

Agricultural outlook

The *World Food Situation*, released by the Food and Agriculture Organization of the United Nations (FAO) in July 2014 forecasts an improved situation for global cereal supplies in the 2014/15 marketing season from what was previously thought. The world cereal production in 2014 is estimated to reach 2 498 000 000 tonnes, up by 18 000 000 tonnes, from the earlier estimate in June, but still 23 000 000 tonnes or 2.2 percent below that of the record production in 2013. The upward revision is mainly due to improved production prospects in coarse grains and wheat crops in the United States, the European Union and India.

Global wheat production is anticipated to reach 707 200 000 tonnes in 2014, a decrease of 9 700 000 tonnes (1.4 percent) compared with 2013, but still the second largest harvest ever. Most of the reduction in wheat production is accounted for in Canada, with smaller harvests expected in Australia, Morocco, the Syrian Arab Republic, the Russian Federation, Ukraine, and the United States. In contrast, a number of other major producing countries: Argentina; Brazil; India; Mexico, and Pakistan are likely to harvest more wheat.

World production of coarse grains (e.g. maize, barley, sorghum, millet, rye and oats) is projected at 1 287 300 000 tonnes in 2014, down 19 000 000 tonnes (or 1.5 percent) from 2013. The anticipated fall is mainly attributed to a smaller production in the United States.

The global rice production is estimated at 503 600 000 tonnes (milled basis) in 2014, up 1.2 percent from the 2013 level. This increase is despite less attractive

prices for rice and a possible recurrence of an El Niño weather anomaly, which is likely to influence the production in Asia. Increases in production are expected in Africa and the Americas.

The global sugar production is estimated to surpass consumption for the fourth consecutive year, but the surplus is expected to be smaller than in previous years. The international price of sugar was on a downward trend for the later part of 2013 and has had a modest recovery in early 2014, mainly influenced by drought conditions in Brazil, the world's second largest producer and exporter. Early indications for the 2014 season are that the world sugar market is likely to be more balanced, or even display a small deficit, as producers adjust to lower international sugar prices by reducing production.

World production of oilseed is expected to have reached an all time high in 2013. The growth rate of production of palm oil, however is expected to have a significant slowdown. With South America's record soybean crop finally entering the market and a likely slowdown in China's import demand, the global supply and demand situation for oilseed and meals should ease substantially in the coming months. The outlook for vegetable oil markets remains mixed. Table 2 presents the world production of major crops in recent years and forecast for 2014/2015.

Table 2. World production of major crops (million tonnes)

	2011/12	2012/13	2013/14 (estimate)	2014/15 (forecast)
Wheat	702.5	660.3	716.9	707.2
Coarse grain	1 165.5	1 155.4	1 306.4	1 287.3
Rice	486.4	490.9	497.8	503.6
Total cereals	2 357.5	2 518.8	2 518.8	2 458.2
Sugar	175.2	182.4	182.0	
Oil crops	455.9	481.9	509.4	

Source: World Food Situation, July 2014, and various issues of *Food Outlook*, FAO, Rome.

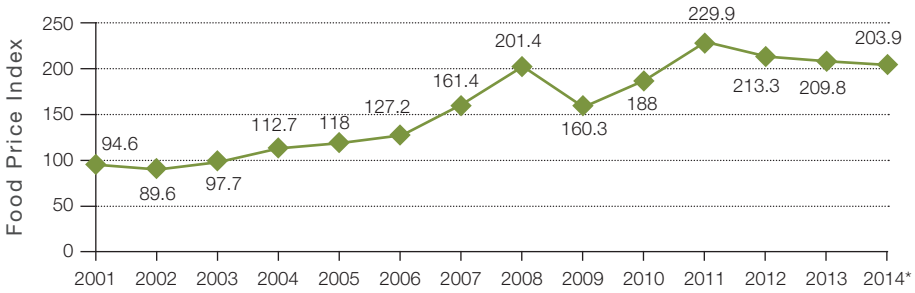
Input and output prices

The Food Price Index of the FAO averaged 203.9 points in July 2014, which is down almost 1.7 percent from July 2013. The index of cereals averaged 185, declining 16.6 percent from the equivalent time in 2013. The index of diary averaged 226, declining 7.2 percent from the equivalent time in 2013. The index of meat averaged 205, increasing 14.2 percent from a year earlier. The index of vegetable oils averaged 181, declining 3 percent from a year earlier. The index of sugar averaged 259 in July 2014, an 8.4 percent increase from July 2013. The food price index started coming down from last quarter of 2011, where it had reached a peak of 229.9. Figure 1 shows the movement in annual food price indices from 2001 to July 2014.

With the easing of food prices, energy prices also eased since 2012. The average Brent crude price was US$111.9 per barrel in June 2014, and has been fluctuating around the US$105 per barrel level over the past three years. This period of moderate volatility follows fluctuations in 2012 where the oil price was at a peak price of US$124.9 per barrel in March 2012 and a low of US$95.6 per barrel in June 2012. High energy prices impact various cost segments, including fertilizer. The importance of natural gas (which accounts for about two-thirds of the production capacity of ammonia) should not be understated in relation to nitrogen fertilizer production. It is expected that almost all new ammonia projects will be based on natural gas in the near future. The rapid increase of shale gas production in the United States and subsequent availability is resulting in lower United States natural gas prices and this is expected to have an impact on the global fertilizer industry.

The World Bank Index of Fertilizer Prices (2010=100) forecasts a decline of almost 15 percent in 2014 and an additional 1.5 percent in 2015. During 2013, there was a 17 percent decline in the fertilizer price index. The specific forecast items of the Fertilizer Price Index in 2014 are: phosphate rock declining 26 percent, potash declining 21 percent, Urea declining 12 percent, TSP declining 6 percent, and DAP expected to remain stable (Source: *Global Economic Prospects, Commodity Market Outlook*, July 2014, World Bank). Table 3 shows further detailed fertilizer prices from 2010 to the first half of 2014.

Figure 1. Annual Food Price Indices (2002-2004 = 100)



* = January/July

Source: FAO Food Price Index

Table 3. Output prices, fertilizer price index, fertilizer and oil prices

	2010	2011	2012	2013	2014 (January-July)
Output price index[1] (2002-2004 =100)					
Cereals	179	241	236	219	185
Dairy	207	230	194	243	226
Meat	158	183	182	184	205
Vegetable Oils	197	255	224	193	181
Sugar	302	369	306	251	259
Food	188	230	213	210	204
Fertilizer price index[2] (2010=100)					
Fertilizer index	100.0	142.6	137.6	113.7	96.2[3]
Fertilizer prices[2] (US$/metric tonne)					
Urea, E. Europe, bulk	288.6	421.0	405.4	340.1	297.9[3]
DAP	500.7	618.9	539.8	444.9	461.5[3]
Phosphate rock	123.0	184.9	185.9	148.1	110.0[3]
Potassium chloride	331.9	435.3	459.0	379.2	287.0[3]
TSP	381.9	538.3	462.0	382.1	371.3[3]
Crude oil price[2] (US$/bbl)					
Brent-crude	79.6	110.9	112.0	108.9	107.0

Source:

1 World Food Situation: Food Prices Index, FAO, Rome. (www.fao.org/worldfoodsituation/FoodPricesIndex/en/)

2 Global Economic Monitor (GEM) Commodities, World Bank.

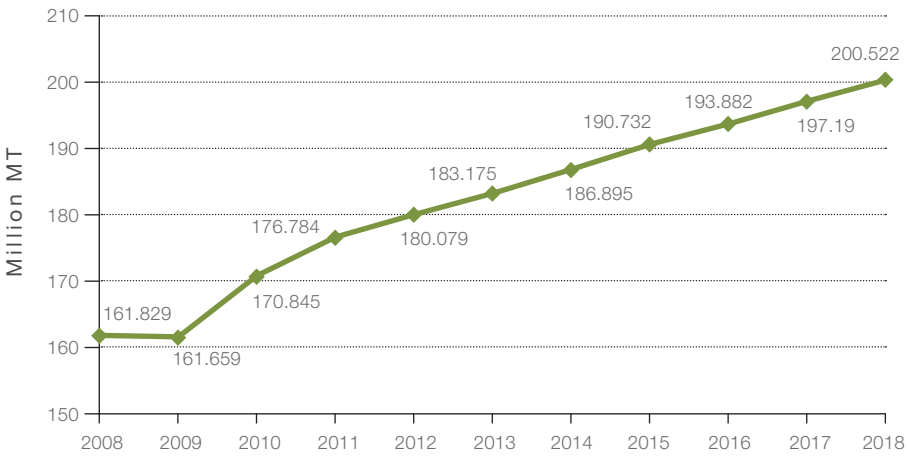
3 January-June 2014.

DEMAND

Demand for fertilizer nutrients

In light of the above background and keeping in view the factors that will influence and likely impact in the future, the demand for fertilizer nutrients have been projected for the coming five years. Total fertilizer nutrient ($N+P_2O_5+K_2O$) consumption is estimated at 183 200 000 tonnes in 2013 and is forecast to reach 186 900 000 tonnes in 2014. With a successive growth of 1.8 percent per year, it is expected to reach 200 500 000 tonnes by the end of 2018. Figure 2 indicates the forecasts of world demand for total fertilizer nutrients from 2014 to 2018, against the actual consumption in the preceding six years.

Figure 2. Global nutrients ($N+P_2O_5+K_2O$) consumption



The forecasts of demand for the three main plant nutrients in specific regions and the world for 2014 to 2018 are presented in Annexes 2, 3 and 4. The global demand for fertilizer nutrients are summarized in Table 4.

Table 4. World demand for fertilizer nutrients, 2014-2018 (thousand tonnes)

Year	2014	2015	2016	2017	2018
Nitrogen (N)	113 147	115 100	116 514	117 953	119 418
Phosphate (P_2O_5)	42 706	43 803	44 740	45 718	46 648
Potash (K_2O)	31 042	31 829	32 628	33 519	34 456
Total (N+ P_2O_5+K_2O)	**186 895**	**190 732**	**193 882**	**197 190**	**200 522**

In 2014, the world demand for nitrogen, phosphate and potash is forecast to grow by 1.6, 2.3 and 3.3 percent, respectively, over the previous year. The world and regional annual growth rate in fertilizer demand between 2014 and 2018 is given in Table 5. The world demand for nitrogen, phosphate and potash is forecast to grow annually by 1.4, 2.2 and 2.6 percent, respectively, between 2014 and 2018.

Table 5. World and regional growth in fertilizer demand, 2014 to 2018

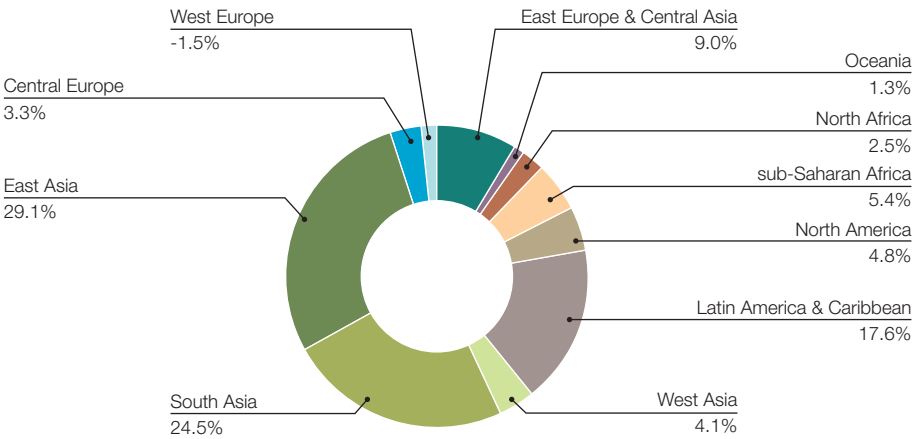
Region	Annual growth rate (compound)			
	N	P_2O_5	K_2O	Total (N+P_2O_5+K_2O)
World	**1.4%**	**2.2%**	**2.6%**	**1.8%**
Africa	3.2%	2.7%	7.8%	3.6%
North Africa	2.0%	3.2%	2.8%	2.3%
sub-Saharan Africa	4.6%	2.3%	9.4%	4.7%
Americas	1.6%	2.4%	2.0%	1.9%
North America	0.5%	0.5%	0.4%	0.5%
Latin America & Caribbean	3.3%	3.6%	3.0%	3.3%
Asia	1.3%	2.2%	3.1%	1.7%
West Asia	2.1%	6.3%	4.0%	3.2%
South Asia	1.7%	3.6%	4.9%	2.4%
East Asia	1.0%	1.2%	2.6%	1.3%
Europe	1.1%	2.3%	2.1%	1.5%
Central Europe	1.7%	3.7%	3.1%	2.3%
West Europe	-0.3%	0.1%	0.8%	0.0%
East Europe & Central Asia	3.3%	4.5%	3.7%	3.6%
Oceania	1.2%	0.4%	0.9%	0.9%

Nitrogen (N)

The world nitrogen fertilizer demand increased from 111 400 000 tonnes in 2013 to 113 100 000 tonnes in 2014, at a growth rate of 1.5 percent. It is expected to be around 119 400 000 tonnes in 2018 at the annual growth of 1.4 percent. Of the overall increase in demand for 6 300 000 tonnes of nitrogen between 2014 and 2018, 58 percent would be in Asia, 22 percent in the Americas, 11 percent in Europe, 8 percent in Africa and 1 percent in Oceania.

Among the Asian countries, the bulk of the increase of world demand for nitrogen is expected to come from China (18 percent) and India (17 percent), followed by Indonesia (6 percent), Pakistan (4 percent), Bangladesh (2 percent), Vietnam (2 percent) and Malaysia and Thailand (1 percent each). In the Americas, the major share of the increase is expected to be in Latin America (18 percent), and will come mainly from Brazil, Argentina, Colombia and Mexico. In North America, the share of increase is expected to be around 5 percent, contributed largely by USA and Canada. In Europe, the major share of increase is expected in East Europe and Central Asia (9 percent), in Ukraine (5 percent) and Russia (3 percent). The share of increase in Central Europe is expected to be around 3 percent. In West Europe, there may be a nominal decline in consumption during the period. The share of increase in North Africa is expected to be around 2.5 percent, mainly in Egypt and Morocco. The share of increase in sub-Saharan Africa is expected to be around 5 percent, mainly in Nigeria, and Ethiopia. Figure 3 shows the regional and subregional share of world increase in nitrogen consumption between 2014 and 2018.

Figure 3. Regional and subregional share of world increase/decrease in nitrogen fertilizer consumption, 2014-2018



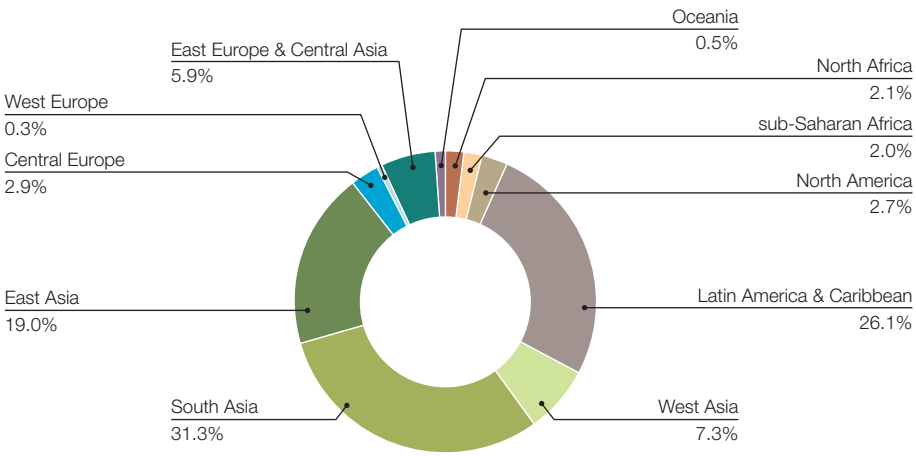
Phosphate (P_2O_5)

Phosphate fertilizer consumption/demand, includes H_3PO_4 (phosphoric acid) based fertilizer demand + non-H_3PO_4 fertilizer demand. The non-H_3PO_4 fertilizer demand includes P_2O_5 in single super phosphate, direct application phosphate rock (DAPR), nitric acid-based phosphate fertilizers, etc. The world phosphate fertilizer demand increased from 41 700 000 tonnes in 2013 to 42 700 000 tonnes in 2014, at a growth rate of 2.4 percent. It is expected to touch 46 600 000 tonnes in 2018 at a growth rate of 2.2 percent per year. Of the overall increase in demand for 3 900 000 tonnes P_2O_5 between 2014 and 2018, 58 percent would be in Asia, 29 percent in America, 9 percent in Europe, 4 percent in Africa and 0.5 percent in Oceania.

Among the Asian countries, about 27 percent of the growth in world demand of phosphate is expected in India, 10 percent in China, 5 percent in Indonesia, 3 percent in Pakistan and 2 percent in Bangladesh. West Asia accounts for 7 percent of the increase in consumption of which Iran has the majority of the share of the increase. Among the major countries in the Americas, 19 percent of

the growth in world demand is projected to be in Brazil, 4 percent in Argentina and 2 percent in the USA. The share of East Europe and Central Asia is expected to be 6 percent, of which Russia accounts for a share of 2 percent and Ukraine approximately 2 percent. West Europe has a flat forecasted consumption level and Central Europe is expected to contribute 3 percent of the world increase in consumption. The share of increase in Oceania is expected to be 0.5 percent. In sub-Saharan Africa, the increase is likely to be 2 percent and in North Africa, it is also expected to be around 2 percent. Figure 4 shows regional and subregional shares of world increase in phosphate consumption between 2014 and 2018.

Figure 4. Regional and subregional share of world increase in phosphate fertilizer consumption, 2014-2018



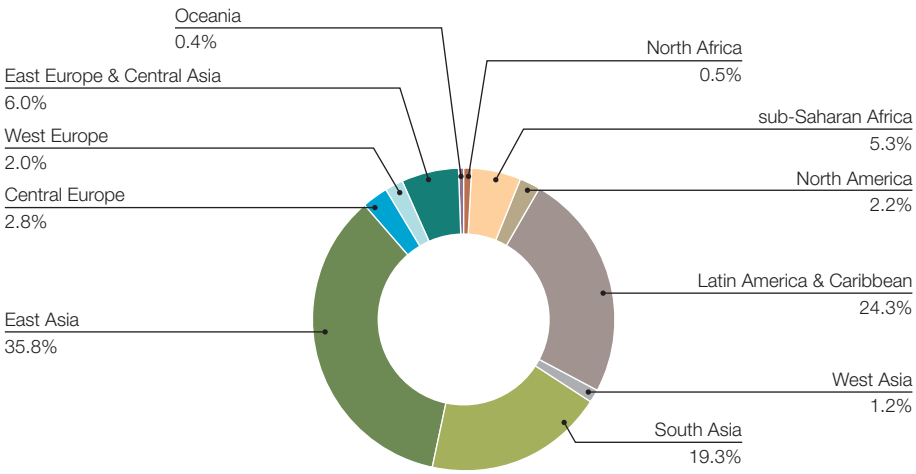
Potash (K_2O)

Potassium fertilizer demand is estimated to increase from 30 060 000 tonnes in 2013 to 31 040 000 tonnes in 2014, indicating an increase of 3.3 percent. The world potash fertilizer demand is expected to be 34 500 000 tonnes in 2018 with

per annum growth of 2.6 percent over 2014. Of the overall increase in demand for 3 400 000 tonnes of potash between 2014 and 2018, 56 percent would be in Asia, 27 percent in the Americas, 11 percent in Europe, 6 percent in Africa and 0.4 percent in Oceania.

Among the Asian countries, about 23 percent of the growth in world demand for potash is expected in China, 17 percent in India, 7 percent in Indonesia, 2 percent in Malaysia and 1 percent for the remainder from the rest of Asia. In the Americas, the largest share of the growth of about 18 percent is projected to be in Brazil. In Europe, about 6 percent of the growth in world demand for potash is expected in East Europe and Central Asia: of which Russia accounts for 3 percent, and 2 percent in Ukraine. This is followed by 3 percent in Central Europe, with West Europe expected to increase by about 2 percent during the reference period. Figure 5 shows regional and subregional shares of world increase in potash consumption during 2014 to 2018.

Figure 5. Regional and subregional share of world increase in potash fertilizer consumption, 2014-2018



Total demand for primary nutrients

The details of demand for primary nutrients for use as fertilizer have been discussed in the previous section. There is also some use of primary nutrients in industry. In addition, nitrogen and phosphate are used as feed for cattle, poultry, and fish. Table 6 shows the global total demand (fertilizer + non-fertilizer) for primary nutrients for 2014 to 2018.

Table 6. World total demand for primary nutrients, 2014-2018 (thousand tonnes)

Year	2014	2015	2016	2017	2018
1. Nitrogen (N)	147 293	151 481	155 040	158 121	161 151
2. Phosphate (P_2O_5)[a]	49 153	50 561	51 585	52 782	53 861
3. Phosphate (P_2O_5)[b]	42 706	43 803	44 740	45 718	46 648
4. Potash (K_2O)	34 870	35 768	36 681	37 688	38 744
5. Total (N+ P_2O_5+K_2O) (1+2+4)	231 316	237 810	243 306	248 590	253 756

a = Total P_2O_5 demand (H_3PO_4 based fertilizer + non-fertilizer, and non-H_3PO_4 fertilizer).
b = Total H_3PO_4 demand (fertilizer + non-fertilizer) expressed as P_2O_5.

Since the major share of phosphate fertilizers is based on phosphoric acid (H_3PO_4), and its supply and demand is of commercial importance, the following sections on supply and supply/demand balance are based on H_3PO_4 (i.e. excluding non-H_3PO_4 sources).

SUPPLY

The global total nutrient capacity[1] (N+P_2O_5+K_2O) was 278 000 000 tonnes in 2013, out of which the total supply[2] was 237 000 000 tonnes. During 2014, the total capacity is expected to increase by 2.3 percent and supply would grow by

1 Capacity refers to nameplate capacity.
2 Supply refers to effective capacity. See Annex 1 for further details.

2.6 percent. Over the next five years, global capacity and production of fertilizers would increase further. Table 7 shows world supply of ammonia (the main source of anthropogenic nitrogen for the manufacturing of N-based fertilizers), phosphoric acid and potassium during 2014 to 2018. Region and subregion wise detail information is given in Annexes 5, 6 and 7.

Table 7. World supply of ammonia, phosphoric acid and potash, 2014-2018 (thousand tonnes)

Year	2014	2015	2016	2017	2018
Ammonia (as N)	152 769	159 591	165 784	172 059	176 489
Phosphoric acid (as P_2O_5)	46 864	48 299	49 487	50 598	52 189
Potash (as K_2O)	43 568	45 175	46 974	49 741	51 439

Nitrogen (N)

The world ammonia capacity was 173 700 000 tonnes (as N) in 2013. With the expected addition in capacity of about 4 700 000 tonnes, the total ammonia capacity is likely to be 178 400 000 tonnes (as N) in 2014. With successive additions in capacity each year, total ammonia capacity is expected to rise to 201 500 000 tonnes (as N) in 2018. The main additions to capacity would occur in East Asia, Africa, West Asia, East Europe and Central Asia, North America and Latin America. Of the total increase of 23 100 000 tonnes from 2014 to 2018, nearly 26 percent is expected to be added in East Asia, 19 percent in Africa, 17 percent in East Europe and Central Asia, 15 percent in North America, 9 percent in West Asia, 8 percent in Latin America and Caribbean, and 4 percent in South Asia.

After taking into account operating rates, world supply of ammonia (as N) is estimated at 149 000 000 tonnes in 2013, which would rise to 152 800 000 tonnes in 2014. From 2014 to 2018, there would be a total addition in supply of 23 700 000 tonnes. The total supply of ammonia (as N) would thereby rise to 176 500 000 tonnes in 2018 (Table 7).

Figure 6. Regional and subregional share of world increase in ammonia (as N) supply, 2014-2018

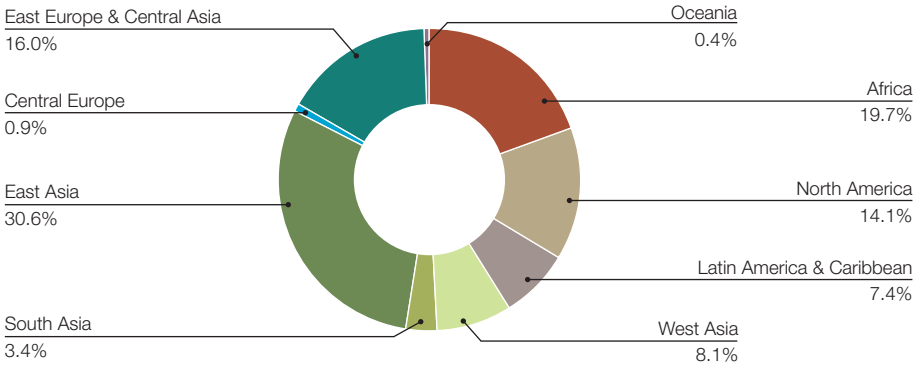


Figure 6 shows the percentage contribution of various regions and subregions to the total increase in ammonia (as N) supply between 2014 and 2018.

According to the International Fertilizer Industry Association (IFA), about 41 000 000 tonnes of urea (product) capacity is expected to be added between 2013-2018. The major increases in capacity are expected in East Asia (15 000 000 tonnes), Africa (9 000 000 tonnes) and North America (5 000 000 tonnes). The expansion in capacity in North America is directly linked to the expansion of the shale gas industry.

Phosphate (P_2O_5)

World phosphoric acid (as P_2O_5) capacity was about 54 300 000 tonnes in 2013. A modest increase of 1 300 000 tonnes is expected in 2014 with the total rising to 55 600 000 tonnes. By 2018, it is expected to rise to 61 500 000 tonnes. Of the total 5 900 000 tonnes addition in world capacity between 2014 and 2018, 63 percent addition would take place in Asia, mainly in East Asia and West Asia. About 24 percent capacity would be added in Africa, 16 percent in Latin America

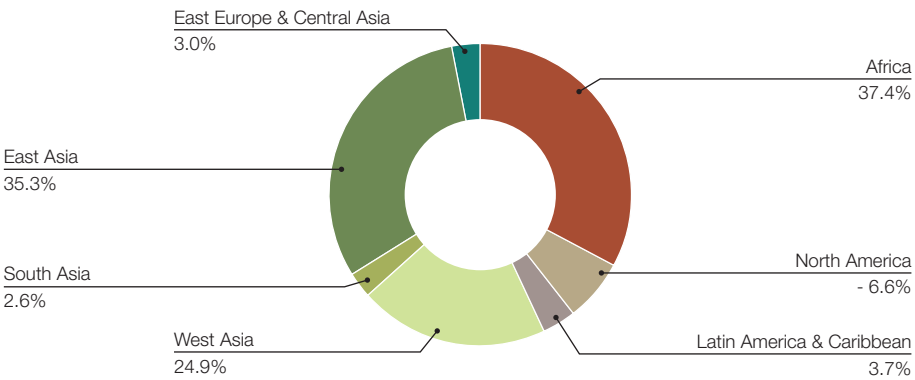
and Caribbean, 3 percent in East Europe and Central Asia and. No addition in capacity is expected in Central Europe, West Europe and in North America and Oceania. There is expected to be a reduction of just under 7 percent capacity in North America between 2013 and 2015.

According to IFA, between 2013 and 2018, around 7 300 000 tonnes of new capacity for phosphoric acid units are planned for completion, of which 1 800 000 tonnes of new capacity would be located in Morocco, 1 500 000 tonnes of new capacity in Saudi Arabia and around 1 700 000 tonnes of new capacity in China.

After taking into account operating rates, world supply of phosphoric acid (as P_2O_5) is estimated at 45 400 000 tonnes in 2013, which is estimated to rise to 46 900 000 tonnes in 2014. A steady increase is expected annually, and by 2018, the total supply should be 52 200 000 tonnes (see Table 7). Figure 7 shows the percentage contribution of various regions and subregions to the total increase in phosphoric acid (as P_2O_5) supply between 2014 and 2018.

According to IFA about 20 new potash units are planned to come on stream in between 2013 and 2018. The major new potash capacity developments are planned in Belarus, Canada, China and Russia.

Figure 7. Regional and subregional share of world increase/decrease in phosphoric acid (as P_2O_5) supply, 2014-2018

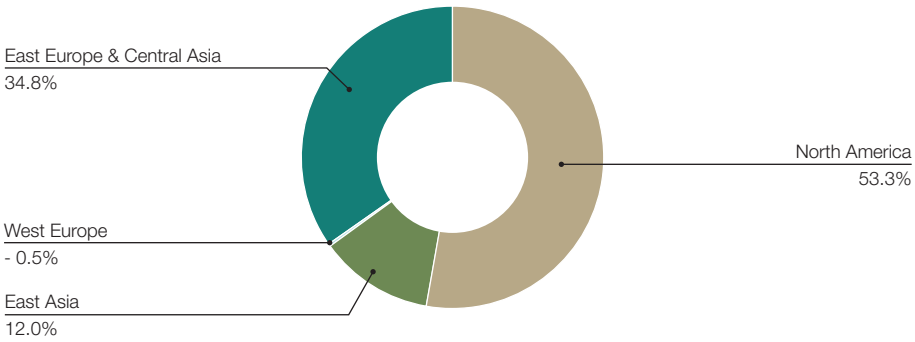


Potash (K_2O)

World potash capacity was estimated at 49 700 000 tonnes (as K_2O) in 2013. An increase of 790 000 tonnes is expected in 2014 with the total rising to 50 500 000 tonnes. By 2018, the total capacity is likely to be 60 700 000 tonnes. Of the total increase in capacity of 10 200 000 tonnes potash between 2014 and 2018, 49 percent would be in North America, 39 percent in East Europe and Central Asia and about 13 percent in East Asia.

After considering operating rates, world supply of potash (as K_2O) is estimated at 42 600 000 tonnes in 2013, which would rise to 43 600 000 tonnes in 2014. A steady increase is expected annually from 2014, with the total supply possibly reaching 51 400 000 tonnes by 2018 (see Table 7). Figure 8 shows the percentage contribution of various regions and subregions to the total increase in potash supply between 2014 and 2018.

Figure 8. Regional and subregional share of world increase/decrease in potash (as K_2O) supply, 2014-2018



SUPPLY/DEMAND BALANCE

The world potential balance of nitrogen, phosphate (H_3PO_4 based P_2O_5), and potash (K_2O) for the years 2014 to 2018 is presented in Table 8. The potential balance is derived from maximum availability (supply) over the projected total demand as follows;

- (i) Potential balance = supply–non-fertilizer demand–fertilizer demand;
- (ii) Supply of each nutrient is referred as under:
- N = N through ammonia,
- P_2O_5 = P_2O_5 through phosphoric acid, and
- K_2O = K_2O through potash.

Unforeseen factors, such as, feedstock/raw material limitations, logistic problems, unscheduled shut down due to technical reasons, natural calamities (earth quake, mine flooding, etc.) are not considered in the balance. Consumption/demand projections are based on agronomic considerations (e.g. cropped area and application rate of fertilizer), market feedback, estimates by industry associations, growth models; econometric models, expert advice, etc.

Table 8. World potential balance of nitrogen, phosphate and potash, 2014-2018 (thousand tonnes)

Year	2014	2015	2016	2017	2018
Nitrogen (N)	5 476 (3.7)	8 110 (5.4)	10 745 (6.9)	13 938 (8.8)	15 338 (9.5)
Phosphate as P_2O_5 (H_3PO_4 based)	2 732 (6.4)	2 898 (6.8)	3 114 (7.2)	3 489 (8.0)	3 720 (8.5)
Potash (K_2O)	8 698 (24.9)	9 407 (26.3)	10 293 (28.1)	12 053 (32.0)	12 695 (32.8)

( ) = Potential balance as % of projected total demand (fertilizer + non-fertilizer).

Nitrogen (N)

The world nitrogen supply is expected to increase by 3.7 percent annually between 2014 and 2018, whereas demand is projected to increase by 1.4 percent in the same period. The potential balance of nitrogen is expected to be 5 500 000 tonnes

in 2014 as compared with 5 300 000 tonnes in the previous year. There would be an addition in the potential balance by about 2 600 000 tonnes in 2015 with an additional increase of 2 600 000 tonnes in 2016. An increase of over 3 000 000 tonnes is expected in 2017, followed by an increase of 1 400 000 tonnes 2018. The total potential balance would be around 15 300 000 tonnes by the end of 2018. The potential nitrogen balance as a percentage of global total demand is expected to increase from 3.7 percent in 2014 to 5.4 percent in 2015, 6.9 percent in 2016. By 2017, it is expected to be around 8.8 percent and rise to 9.5 percent by 2018 (see Table 8). Any shortfall in supply due to slippage in commissioning in some of the projects or surge in demand could well be absorbed from the potential balance.

Phosphate (P_2O_5)

The world phosphate (H_3PO_4 based P_2O_5) supply is expected to increase by 2.7 percent per annum between 2014 and 2018, whereas demand is projected to increase by 2.3 percent in the same period. The potential balance of phosphate is expected to rise from 2 700 000 tonnes in 2014 to 3 700 000 tonnes in 2018. The ratio of potential phosphate balance (H_3PO_4 based) to global phosphate demand (H_3PO_4 based P_2O_5) is likely to grow from about 6.4 percent in 2014 to 8.5 percent during the remaining period of the forecast period (see Table 8).

Potash (K_2O)

The world potash balance was 8 850 000 tonnes in 2013, which decreased to 8 700 000 tonnes in 2014. The demand for potash is projected to increase by 2.6 percent between 2014 and 2018. The world potash supply is expected to increase by 4.2 percent during the same period. The potential balance is expected to rise significantly from 8 700 000 tonnes in 2014 to 12 700 000 tonnes in 2018. The potential potash (K_2O) balance as a percentage of global total demand is expected to rise from 25 percent in 2014 to a high level of 33 percent in 2018 (see Table 8).

THE REGIONAL FERTILIZER SITUATION

Africa

Africa accounted for 3 percent of world fertilizer consumption in 2013. Its share in world consumption of nitrogen is 3.1 percent, phosphate 3.3 percent and potash 1.9 percent. The growth rate in demand for nitrogen, phosphate, and potash for fertilizer is expected to be 3.2, 2.7, and 7.8 percent, respectively, between 2014 and 2018. The fertilizer nutrient supply/demand balance indicates that the region would remain a major exporter of phosphate, followed by nitrogen. For potash, the region would continue to depend solely on import. Table 9 indicates fertilizer forecast for Africa for 2014 to 2018.

Table 9. Africa fertilizer forecast, 2014-2018 (thousand tonnes)

		2014	2015	2016	2017	2018
N	Supply	6 285	7 736	8 713	10 289	10 754
	Total demand	4 328	4 464	4 597	4 732	4 876
	Fertilizer demand	3 652	3 764	3 886	4 012	4 148
	Potential balance	1 957	3 272	4 115	5 557	5 878
P_2O_5 based on H_3PO_4	Supply	7 423	8 100	8 703	9 213	9 415
	Total demand	1 825	1 870	1 918	1 956	1 994
	Fertilizer demand	1 288	1 321	1 358	1 396	1 433
	Potential balance	5 598	6 230	6 785	7 257	7 421
K_2O	Supply	0	0	0	0	0
	Total demand	656	706	758	820	867
	Fertilizer demand	573	620	669	728	772
	Potential balance	-656	-706	-758	-820	-867

North Africa

The share of North Africa in world consumption of nitrogen is 1.7 percent, phosphate 1.4 percent and potash 0.5 percent. The growth rate in demand

for nitrogen, phosphate and potash for fertilizer is expected to be 2.0, 3.2 and 2.8 percent, respectively, between 2014 and 2018. Egypt and Morocco have the major share of nitrogen consumption in North Africa.

sub-Saharan Africa

The share of sub-Saharan Africa in world consumption of nitrogen is 1.5 percent, phosphate 1.9 percent and potash 1.4 percent. The growth rate in demand for nitrogen, phosphate and potash for fertilizer is expected to be 4.6, 2.3 and 9.4 percent, respectively, between 2014 and 2018. South Africa, Nigeria, Kenya and Ethiopia are the major users of fertilizers in sub-Saharan Africa.

Americas

Total fertilizer nutrient consumption in the Americas is 24.2 percent, of which North America constitutes 12.9 percent and Latin America and Caribbean 11.3 percent. The share of the Americas in world consumption of nitrogen is 19.7 percent, phosphate 27.3 percent and potash 36.6 percent. The region would continue to remain in potash surplus, but deficit in nitrogen and phosphate during the forecast period. Table 10 presents fertilizer forecast for the America region for 2014 to 2018.

North America

The share of North America in world consumption of nitrogen is 12.8 percent, phosphate 11.6 percent and potash 15.5 percent. The growth rate in demand for nitrogen and phosphate is expected to be 0.5 percent and 0.4 percent for potash between 2014 and 2018. The United States and Canada are major users of fertilizer in the region. The fertilizer nutrient supply/demand balance indicates that while supply will increase in the subregion, there will continue to be a reliance on nitrogen fertilizer imports. The potash balance of the region is expected to increase due to addition of potash capacity mainly in Canada.

Table 10. The Americas fertilizer forecast, 2014-2018 (thousand tonnes)

		2014	2015	2016	2017	2018
N	Supply	22 496	23 603	26 188	27 320	27 581
	Total demand	28 569	29 203	29 672	30 259	30 814
	Fertilizer demand	22 134	22 501	22 773	23 135	23 538
	Potential balance	-6 074	-5 600	-3 483	-2 939	-3 233
P_2O_5 based on H_3PO_4	Supply	10 769	10 471	10 471	10 471	10 615
	Total demand	12 665	12 895	13 142	13 374	13 598
	Fertilizer demand	10 798	10 980	11 213	11 432	11 652
	Potential balance	-1 896	-2 424	-2 671	-2 903	-2 983
K_2O	Supply	17 574	18 565	19 719	21 161	21 768
	Total demand	12 588	12 813	13 041	13 307	13 651
	Fertilizer demand	11 274	11 463	11 652	11 879	12 181
	Potential balance	4 986	5 751	6 678	7 853	8 117

Latin America & Caribbean

The share of Latin America and Caribbean in world consumption of nitrogen is 7 percent, phosphate 15.7 percent, and potash 21 percent. The per annum growth in demand for nitrogen, phosphate and potash is expected to be at 3.3, 3.6 and 3.0 percent, respectively between 2014 and 2018. Brazil, Argentina, Mexico and Colombia constitute the major users of fertilizer in the region. The fertilizer nutrient supply/demand balance indicates that the region's dependence on import of nitrogen, phosphate and potash will continue during the forecast period.

Asia

The Asia region is the largest consumer of fertilizer in the world. Total fertilizer nutrient consumption in Asia is 58.5 percent of the world total, the bulk of which is in East Asia and South Asia. The share of Asia in world consumption of nitrogen is 62.1 percent, phosphate 57.6 percent and potash 46.4 percent. The region's dependence on imports of nitrogen and phosphate may reduce towards

the end of the forecast period, but the region will still remain dependent on imports. The region would continue to remain in deficit with potash during the forecast period. Table 11 presents the fertilizer forecast for the Asia region for 2014 to 2018.

Table 11. Asia fertilizer forecast, 2014-2018 (thousand tonnes)

		2014	2015	2016	2017	2018
N	Supply	86 832	89 385	91 388	93 956	96 811
	Total demand	88 874	91 762	94 254	96 282	98 323
	Fertilizer demand	70 675	71 933	72 743	73 534	74 294
	Potential balance	-2 043	-2 377	-2 866	-2 326	-1 512
P_2O_5 based on H_3PO_4	Supply	23 608	24 633	25 181	26 142	26 954
	Total demand	24 697	25 556	26 158	26 913	27 582
	Fertilizer demand	21 590	22 282	22 824	23 375	23 902
	Potential balance	-1 089	-922	-977	-771	-628
K_2O	Supply	8 495	8 918	9 125	9 309	9 438
	Total demand	16 403	16 900	17 427	17 981	18 547
	Fertilizer demand	14 595	15 038	15 510	16 009	16 519
	Potential balance	-7 908	-7 982	-8 302	-8 673	-9 109

West Asia

The share of West Asia in world consumption of nitrogen is 2.8 percent, phosphate 2.5 percent and potash 0.8 percent. Total fertilizer consumption in West Asia is forecast to grow by 3.2 percent per year from 2014 to 2018, reflecting a progressive rebound of demand in countries facing geopolitical instability. The demand for nitrogen, phosphate and potash is expected to grow by 2.1, 6.3 and 4.0 percent, respectively, during the period. The subregion is in surplus in all the three nutrients. It is a major contributor to the global nitrogen supply and a growing supplier of phosphate products.

South Asia

Fertilizer consumption in South Asia has been increasing at a fast pace. It is the second largest fertilizer consuming region in the world. Its share in world consumption of nitrogen, phosphate and potash is 19.8, 18.4 and 9.1 percent, respectively. Nitrogen, phosphate, potash consumption is expected to grow at 1.7, 3.6 and 4.9 percent, respectively, per annum during 2014 to 2018. This outlook may be strongly influenced by the evolution of the fertilizer subsidy regimes in India. The deficit for the three nutrients will increase during the forecast period for the subregion.

East Asia

The East Asia subregion is the largest fertilizer producing and consuming region in the world. Any development in East Asia and South Asia in regard to fertilizer application affects the global demand/supply situation significantly. The share of East Asia in global consumption of total fertilizer nutrients is 38.4 percent. The share of the subregion in nitrogen consumption is 39.5 percent, phosphate 36.7 percent and potash 36.6 percent. Nitrogen, phosphate and potash consumption is expected to grow at 1.0, 1.2 and 2.6 percent, respectively, per annum during 2014 to 2018. There is expected to be growth in nitrogen capacity in the subregion, however increases in demand will keep the subregion dependent on imports. The potash supply in the region continues to be far lower than the demand. With the increasing demand for potash, import demand would grow significantly during the period. The subregion would, however, continue to be a net exporter of phosphate during the period.

Europe

The fertilizer forecasts for the Europe region as a whole are provided in Table 12. Europe's share in global consumption of total fertilizer nutrients is about 12.5 percent. The share of the region in nitrogen fertilizer consumption is 13.5 percent, phosphate 9.0 percent and potash 14.0 percent. Nitrogen consumption is expected to increase by 1.1 percent, while phosphate and potash consumption are expected to grow in the region at 2.3 and 2.1 percent, respectively, per annum during 2014 to 2018.

The region has sufficient exportable surplus of nitrogen and potash while the potential balance of phosphate is very small. The potential balance of nitrogen is expected to increase from 12 500 000 tonnes in 2014 to 15 300 000 tonnes in 2018. The potential balance of phosphate may reduce from 452 000 tonnes in 2014 to 256 000 tonnes in 2018. The potential balance of potash is expected to rise consistently from 12 600 000 tonnes in 2014 to 14 900 000 tonnes in 2018.

Table 12. Europe fertilizer forecast, 2014-2018 (thousand tonnes)

		2014	2015	2016	2017	2018
N	Supply	35 388	37 098	37 727	38 726	39 484
	Total demand	22 883	23 315	23 658	23 939	24 189
	Fertilizer demand	15 092	15 292	15 481	15 618	15 765
	Potential balance	12 505	13 783	14 069	14 787	15 295
P_2O_5 based on H_3PO_4	Supply	4 584	4 615	4 652	4 652	4 724
	Total demand	4 132	4 281	4 346	4 407	4 468
	Fertilizer demand	3 213	3 276	3 339	3 399	3 459
	Potential balance	452	334	306	246	256
K_2O	Supply	17 499	17 692	18 130	19 272	20 233
	Total demand	4 859	4 983	5 086	5 206	5 301
	Fertilizer demand	4 243	4 350	4 435	4 537	4 614
	Potential balance	12 640	12 710	13 044	14 065	14 931

Central Europe

The share of Central Europe in nitrogen consumption is 2.5 percent, phosphate 1.7 percent and potash 2.3 percent. Nitrogen, phosphate and potash consumption is expected to grow in the subregion at 1.7, 3.7 and 3.1 percent, respectively, per annum during 2014 to 2018. The subregion will continue to have an exportable surplus of nitrogen of about 1 800 000 to 1 900 000 tonnes during the forecast period. However, it will continue to depend on imports of phosphate and potash.

West Europe

The share of West Europe in nitrogen consumption is 7.3 percent, phosphate 4.5 percent and potash 7.2 percent. The consumption of nitrogen in the subregion is expected to decline marginally by 0.3 percent per annum during 2014 to 2018. The consumption of phosphate and potash is expected to grow in the subregion at 0.1 and 0.8 percent, respectively, per annum during 2014 to 2018. The subregion has an exportable surplus of potash of about 1 400 000 tonnes in 2014, which is expected to decline marginally by the end of the forecast period. However, it will continue to depend on imports of nitrogen and phosphate.

East Europe and Central Asia

The share of East Europe and Central Asia in nitrogen consumption is 3.7 percent, phosphate 2.9 percent and potash 4.5 percent. The consumption of nitrogen, phosphate and potash is expected to grow in the subregion at 3.3, 4.5 and 3.7 percent, respectively, per annum during 2014 to 2018. The subregion will continue to remain in surplus in all the three nutrients during the forecast period. The surplus of nitrogen may increase from about 13 900 000 tonnes in 2014 to 17 000 000 tonnes in 2018. Similarly, the surplus of potash is anticipated to rise from 12 000 000 tonnes in 2014 to 14 500 000 tonnes in 2018. The phosphate surplus in the subregion would remain at around 2 500 000 tonnes during the forecast period.

Oceania

The share of Oceania in world consumption of total fertilizer nutrients is only 1.7 percent. The share of the subregion in nitrogen consumption is 1.5 percent, phosphate 2.7 percent and potash 1.1 percent. Nitrogen consumption is likely to increase in the region by 1.2 percent, while consumption of phosphate and potash is likely to increase by 0.4 and 0.9 percent respectively, per year during 2014 to 2018. The region would continue to be in deficit of nitrogen, phosphate and potash during the forecast period (see Table 13).

Table 13. Oceania fertilizer forecast, 2014-2018 (thousand tonnes)

		2014	2015	2016	2017	2018
N	Supply	1 768	1 768	1 768	1 768	1 858
	Total demand	2 638	2 737	2 859	2 909	2 949
	Fertilizer demand	1 594	1 609	1 632	1 654	1 673
	Potential balance	-870	-968	-1 090	-1 140	-1 091
P_2O_5 based on H_3PO_4	Supply	480	480	480	480	480
	Total demand	813	800	810	819	826
	Fertilizer demand	797	784	794	803	810
	Potential balance	-333	-320	-330	-339	-346
K_2O	Supply	0	0	0	0	0
	Total demand	364	366	369	373	377
	Fertilizer demand	357	359	362	366	370
	Potential balance	-364	-366	-369	-373	-377

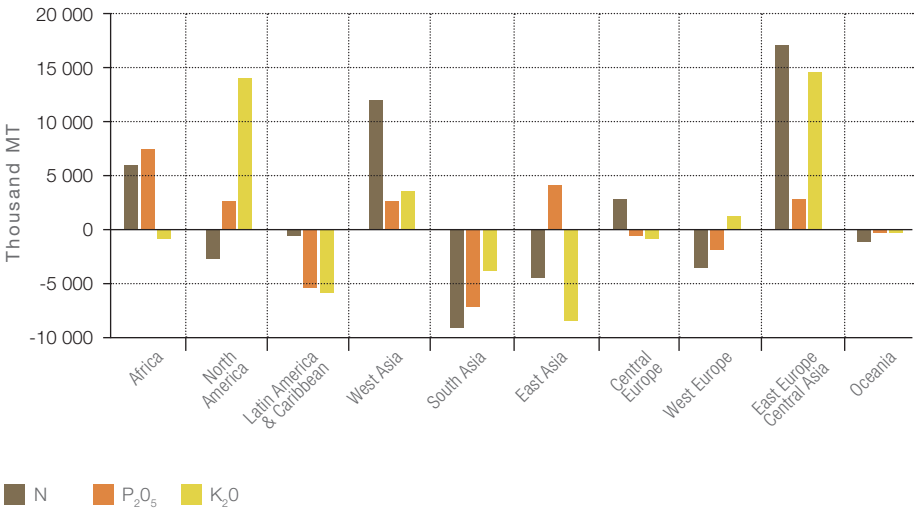
Table 14 presents the summary of regional potential balance of nitrogen, phosphate (H_3PO_4 based) and potash during 2014 to 2018.

Table 14. Regional and subregional potential balance of nitrogen, phosphate (P_2O_5 based on H_3PO_4) and potash (K_2O), 2014-2018 (thousand tonnes)

Region	Nutrient	2014	2015	2016	2017	2018
Africa	N	1 957	3 272	4 115	5 557	5 878
	P_2O_5	5 598	6 230	6 785	7 257	7 421
	K_2O	-656	-706	-758	-820	-867
North America	N	-5 203	-5 032	-3 115	-2 633	-2 720
	P_2O_5	2 936	2 600	2 581	2 510	2 462
	K_2O	9 963	10 933	12 064	13 441	13 950
Latin America & Caribbean	N	-870	-568	-368	-306	-513
	P_2O_5	-4 832	-5 024	-5 252	-5 413	-5 446
	K_2O	-4 977	-5 182	-5 386	-5 587	-5 833
West Asia	N	10 255	10 131	10 088	11 272	11 888
	P_2O_5	1 666	1 784	1 898	2 107	2 595
	K_2O	3 378	3 362	3 351	3 339	3 325
South Asia	N	-8 287	-8 162	-8 373	-8 773	-9 139
	P_2O_5	-5 911	-6 300	-6 582	-6 863	-7 192
	K_2O	-3 227	-3 382	-3 559	-3 736	-3 914
East Asia	N	-4 010	-4 347	-4 580	-4 826	-4 261
	P_2O_5	3 157	3 594	3 707	3 985	3 970
	K_2O	-8 059	-7 963	-8 094	-8 276	-8 520
Central Europe	N	1 864	1 846	1 900	1 859	1 799
	P_2O_5	-341	-365	-389	-414	-437
	K_2O	-774	-797	-825	-854	-876
West Europe	N	-3 301	-3 436	-3 512	-3 577	-3 610
	P_2O_5	-1 741	-1 833	-1 839	-1 840	-1 837
	K_2O	1 381	1 228	1 178	1 232	1 253
East Europe & Central Asia	N	13 942	15 373	15 681	16 504	17 107
	P_2O_5	2 534	2 532	2 534	2 499	2 530
	K_2O	12 034	12 278	12 691	13 688	14 555
Oceania	N	-870	-968	-1 090	-1 140	-1 091
	P_2O_5	-333	-320	-330	-339	-346
	K_2O	-364	-366	-369	-373	-377

Figure 9 indicates the regional potential N, P_2O_5 and K_2O balance situation in 2018: the terminal year of the forecast period.

Figure 9. Regional and subregional nutrient balances in 2018



Annexes

Annex 1
Explanatory notes on supply, demand and balance

In October 2006, the FAO/Fertilizer Organizations Working Group adopted a new protocol for the preparation of nutrient supply/demand balances based on the work of IFA's Production and International Trade Committee in 2005/2006. The main objectives of the revised protocol were to take into account the resilient surplus between production and consumption and to update the parameters used for the computation of supply and losses.

1. All fertilizer references are in terms of plant nutrients: nitrogen (N), phosphate (P_2O_5) and potash (K_2O). Even if for convenience P and K are stated, they actually refer to P_2O_5 and K_2O, respectively.
2. Fertilizer demand and supply data refer to the calendar year.
3. Definitions of the terms used and their relative criteria are listed below:

Capacity: nameplate capacity.

Supply: effective capacity, representing the maximum achievable production. Supply is computed from the "nameplate capacity" (theoretical capacity), multiplied by the highest operating rate achieved in the previous 5 years. For new plants, a ramp-up of the operating rates was established for the first 3 years of operation, ranging from 85 to 100 percent.

Demand:

Fertilizer demand is the ability or the willingness of farmers to buy fertilizer at a given point in time. It is calculated on the basis of the probable consumption in one calendar year, taking into account the allocation between two agricultural years.

Non-fertilizer demand: consumption for non-fertilizer use, referred to as industrial use. It includes feed uses. Net non-fertilizer demand excludes the use of products that are recovered as by-products from industrial processes and then used as fertilizers.

Total demand: Fertilizer demand + non-fertilizer demand.

Losses: The unavoidable losses during the life cycle of a product, from production to final consumption. The extent of loss is estimated as a percentage (between 1 and 3 percent) of total fertilizer and non-fertilizer demand.
Unspecified usage: Unspecified usage account for the historical residual tonnage from the production/consumption balances. The tonnage could be used either in fertilizer or in non-fertilizer products.

Potential balance: is the difference between potential supply and total projected demand (fertilizer demand + non-fertilizer demand). Regional balance is a medium-term indicator of potential changes in fertilizer nutrient demand and supply in the region. Changes in installed supply capacity, operating rates and demand vary annually.

Annex 2
World and regional nitrogen fertilizer demand forecasts (thousand tonnes N)

	2013[1]	2014	2015	2016	2017	2018	CAGR (%)
WORLD	**111 390**	**113 147**	**115 100**	**116 514**	**117 953**	**119 418**	**1.36**
AFRICA	**3 506**	**3 652**	**3 764**	**3 886**	**4 012**	**4 148**	**3.24**
North Africa	1 861	1 924	1 966	2 005	2 042	2 080	1.97
sub-Saharan Africa	1 645	1 728	1 799	1 881	1 970	2 068	4.60
AMERICAS	**21 974**	**22 134**	**22 501**	**22 773**	**23 135**	**23 538**	**1.55**
North America	14 204	14 107	14 199	14 196	14 281	14 407	0.53
Latin America & Caribbean	7 770	8 027	8 303	8 576	8 854	9 131	3.27
ASIA	**69 207**	**70 675**	**71 933**	**72 743**	**73 534**	**74 294**	**1.26**
West Asia	3 121	3 007	3 153	3 193	3 228	3 263	2.06
South Asia	22 068	22 680	23 111	23 500	23 875	24 218	1.65
East Asia	44 018	44 988	45 669	46 050	46 431	46 813	1.00
EUROPE	**14 996**	**15 092**	**15 292**	**15 481**	**15 618**	**15 765**	**1.10**
Central Europe	2 831	2 893	2 944	2 994	3 046	3 098	1.73
West Europe	8 098	8 137	8 119	8 093	8 066	8 042	-0.29
East Europe & Central Asia	4 067	4 062	4 229	4 394	4 506	4 625	3.30
OCEANIA	1 706	1 594	1 609	1 632	1 654	1 673	1.22

1 = Estimated consumption; CAGR = Compound annual growth rate 2014 to 2018.

Annex 3
World and regional phosphate fertilizer demand forecasts (thousand tonnes P_2O_5)

	2013[1]	2014	2015	2016	2017	2018	CAGR (%)
WORLD	**41 727**	**42 706**	**43 803**	**44 740**	**45 718**	**46 648**	**2.23**
AFRICA	**1 384**	**1 431**	**1 468**	**1 509**	**1 551**	**1 593**	**2.72**
North Africa	596	614	634	655	676	697	3.21
sub-Saharan Africa	788	817	833	854	875	896	2.34
AMERICAS	**11 400**	**11 617**	**11 844**	**12 123**	**12 450**	**12 752**	**2.36**
North America	4 830	4 795	4 765	4 784	4 853	4 900	0.54
Latin America & Caribbean	6 570	6 822	7 079	7 339	7 597	7 851	3.58
ASIA	**24 022**	**24 584**	**25 346**	**25 847**	**26 358**	**26 851**	**2.23**
West Asia	1 043	1 033	1 155	1 210	1 276	1 320	6.32
South Asia	7 658	8 058	8 511	8 770	9 028	9 290	3.62
East Asia	15 321	15 493	15 680	15 867	16 054	16 242	1.19
EUROPE	**3 776**	**3 849**	**3 940**	**4 039**	**4 124**	**4 207**	**2.25**
Central Europe	697	729	757	786	815	842	3.67
West Europe	1 876	1 898	1 905	1 911	1 912	1 909	0.14
East Europe & Central Asia	1 203	1 222	1 278	1 342	1 397	1 456	4.47
OCEANIA	**1 146**	**1 226**	**1 206**	**1 222**	**1 235**	**1 246**	**0.41**

1 = Estimated consumption; CAGR = Compound annual growth rate 2014 to 2018.

Annex 4
World and regional potash fertilizer demand forecasts (thousand tonnes K_2O)

	2013[1]	2014	2015	2016	2017	2018	CAGR (%)
WORLD	**30 058**	**31 042**	**31 829**	**32 628**	**33 519**	**34 456**	**2.64**
AFRICA	**559**	**573**	**620**	**669**	**728**	**772**	**7.77**
North Africa	148	150	152	158	161	167	2.82
sub-Saharan Africa	411	423	468	511	567	605	9.36
AMERICAS	**10 998**	**11 274**	**11 463**	**11 652**	**11 879**	**12 181**	**1.95**
North America	4 673	4 699	4 689	4 680	4 712	4 775	0.40
Latin America & Caribbean	6 326	6 576	6 774	6 972	7 167	7 407	3.0
ASIA	**13 951**	**14 595**	**15 038**	**15 510**	**16 009**	**16 519**	**3.14**
West Asia	234	245	258	266	275	286	4.00
South Asia	2 721	3 118	3 266	3 436	3 607	3 778	4.92
East Asia	10 996	11 233	11 514	11 808	12 127	12 455	2.62
EUROPE	**4 206**	**4 243**	**4 350**	**4 435**	**4 537**	**4 614**	**2.12**
Central Europe	704	725	746	772	800	820	3.14
West Europe	2 159	2 191	2 216	2 227	2 244	2 260	0.78
East Europe & Central Asia	1 344	1 328	1 389	1 436	1 494	1 534	3.67
OCEANIA	**344**	**357**	**359**	**362**	**366**	**370**	**0.90**

1 = Estimated consumption; CAGR = Compound annual growth rate 2014 to 2018.

Annex 5
World and regional nitrogen supply demand and balance (thousand tonnes N)

	2013	2014	2015	2016	2017	2018
WORLD						
NH_3 Capacity (as N)	173 669	178 371	187 019	193 777	199 732	201 470
NH_3 Supply Capability (as N)	149 000	152 769	159 591	165 784	172 059	176 489
N Other Uses	32 301	34 146	36 381	38 526	40 168	41 733
N Available for Ferts.	116 700	118 623	123 209	127 259	131 891	134 756
N Fert. Consumption	111 390	113 147	115 100	116 514	117 953	119 418
Potential N Balance	5 310	5 476	8 110	10 745	13 938	15 338
AFRICA						
NH_3 Capacity (as N)	7 187	8 281	9 479	10 428	12 705	12 705
NH_3 Supply Capability (as N)	5 878	6 285	7 736	8 713	10 289	10 754
N Other Uses	648	676	699	711	719	727
N Available for Ferts.	5 231	5 609	7 037	8 001	9 569	10 027
N Fert. Consumption	3 506	3 652	3 764	3 886	4 012	4 148
Potential N Balance	1 725	1 957	3 272	4 115	5 557	5 878
AMERICAS						
NH_3 Capacity (as N)	23 687	24 314	25 402	28 528	29 593	29 609
NH_3 Supply Capability (as N)	22 191	22 496	23 603	26 188	27 320	27 581
N Other Uses	6 199	6 435	6 702	6 899	7 124	7 276
N Available for Ferts.	15 993	16 061	16 901	19 289	20 196	20 305
N Fert. Consumption	21 974	22 134	22 501	22 773	23 135	23 538
Potential N Balance	-5 982	-6 074	-5 600	-3 483	-2 939	-3 233
North America						
NH_3 Capacity (as N)	14 214	14 348	14 828	17 128	17 785	17 785
NH_3 Supply Capability (as N)	13 579	13 711	14 159	16 223	16 946	17 054

	2013	2014	2015	2016	2017	2018
N Other Uses	4 666	4 807	4 992	5 142	5 298	5 367
N Available for Ferts.	8 913	8 904	9 167	11 081	11 648	11 687
N Fert. Consumption	14 204	14 107	14 199	14 196	14 281	14 407
Potential N Balance	-5 291	-5 203	-5 032	-3 115	-2 633	-2 720
Latin America &Caribbean						
NH_3 Capacity (as N)	9 473	9 966	10 574	11 400	11 807	11 823
NH_3 Supply Capability (as N)	8 612	8 785	9 444	9 966	10 374	10 527
N Other Uses	1 532	1 628	1 710	1 758	1 826	1 909
N Available for Ferts.	7 080	7 157	7 734	8 208	8 548	8 618
N Fert. Consumption	7 770	8 027	8 303	8 576	8 854	9 131
Potential N Balance	-690	-870	-568	-368	-306	-513
ASIA						
NH_3 Capacity (as N)	102 576	105 007	109 591	111 757	113 211	113 894
NH_3 Supply Capability (as N)	84 082	86 832	89 385	91 388	93 956	96 811
N Other Uses	16 937	18 199	19 829	21 511	22 748	24 030
N Available for Ferts.	67 145	68 632	69 556	69 877	71 208	72 782
N Fert. Consumption	69 207	70 675	71 933	72 743	73 534	74 294
Potential N Balance	-2 062	-2 043	-2 377	-2 866	-2 326	-1 512
West Asia						
NH_3 Capacity (as N)	14 459	14 459	14 459	14 459	15 914	16 511
NH_3 Supply Capability (as N)	13 600	13 958	13 985	13 985	15 214	15 868
N Other Uses	686	696	701	704	714	716
N Available for Ferts.	12 914	13 262	13 284	13 281	14 500	15 151
N Fert. Consumption	3 121	3 007	3 153	3 193	3 228	3 263
Potential N Balance	9 793	10 255	10 131	10 088	11 272	11 888
South Asia						
NH_3 Capacity (as N)	17 463	17 463	18 280	18 361	18 361	18 361
NH_3 Supply Capability (as N)	15 571	15 571	16 158	16 365	16 371	16 377
N Other Uses	1 134	1 178	1 209	1 238	1 269	1 298
N Available for Ferts.	14 437	14 393	14 949	15 127	15 102	15 078
N Fert. Consumption	22 068	22 680	23 111	23 500	23 875	24 218
Potential N Balance	-7 631	-8 287	-8 162	-8 373	-8 773	-9 139

	2013	2014	2015	2016	2017	2018
East Asia						
NH3 Capacity (as N)	70 654	73 084	76 851	78 936	78 936	79 022
NH3 Supply Capability (as N)	54 911	57 303	59 242	61 038	62 370	64 567
N Other Uses	15 117	16 326	17 920	19 568	20 765	22 015
N Available for Ferts.	39 794	40 978	41 322	41 470	41 605	42 552
N Fert. Consumption	44 018	44 988	45 669	46 050	46 431	46 813
Potential N Balance	-4 224	-4 010	-4 347	-4 580	-4 826	-4 261
EUROPE						
NH_3 Capacity (as N)	38 400	38 935	40 714	41 230	42 390	43 175
NH_3 Supply Capability (as N)	35 094	35 388	37 098	37 727	38 726	39 484
N Other Uses	7 566	7 791	8 023	8 177	8 321	8 424
N Available for Ferts.	27 529	27 597	29 075	29 549	30 404	31 061
N Fert. Consumption	14 996	15 092	15 292	15 481	15 618	15 765
Potential N Balance	12 532	12 505	13 783	14 069	14 787	15 295
Central Europe						
NH_3 Capacity (as N)	6 416	6 464	6 545	6 684	6 717	6 718
NH_3 Supply Capability (as N)	5 524	5 564	5 620	5 744	5 773	5 777
N Other Uses	772	807	830	851	868	880
N Available for Ferts.	4 753	4 757	4 790	4 894	4 905	4 897
N Fert. Consumption	2 831	2 893	2 944	2 994	3 046	3 098
Potential N Balance	1 922	1 864	1 846	1 900	1 859	1 799
West Europe						
NH_3 Capacity (as N)	9 917	9 917	9 917	9 917	9 917	9 917
NH_3 Supply Capability (as N)	9 721	9 721	9 721	9 721	9 722	9 723
N Other Uses	4 750	4 885	5 038	5 140	5 232	5 291
N Available for Ferts.	4 970	4 836	4 683	4 581	4 489	4 432
N Fert. Consumption	8 098	8 137	8 119	8 093	8 066	8 042
Potential N Balance	-3 128	-3 301	-3 436	-3 512	-3 577	-3 610
East Europe and Central Asia						
NH_3 Capacity (as N)	22 067	22 555	24 252	24 630	25 756	26 540
NH_3 Supply Capability (as N)	19 849	20 103	21 757	22 262	23 231	23 985
N Other Uses	2 043	2 099	2 155	2 187	2 221	2 253

	2013	2014	2015	2016	2017	2018
N Available for Ferts.	17 806	18 004	19 602	20 075	21 010	21 732
N Fert. Consumption	4 067	4 062	4 229	4 394	4 506	4 625
Potential N Balance	13 738	13 942	15 373	15 681	16 504	17 107
OCEANIA						
NH_3 Capacity (as N)	1 818	1 833	1 833	1 833	1 818	2 088
NH_3 Supply Capability (as N)	1 754	1 768	1 768	1 768	1 768	1 858
N Other Uses	952	1 044	1 128	1 227	1 255	1 276
N Available for Ferts.	802	724	641	542	514	582
N Fert. Consumption	1 706	1 594	1 609	1 632	1 654	1 673
Potential N Balance	-904	-870	-968	-1 090	-1 140	-1 091

Annex 6
World and regional phosphate supply demand and balance (thousand tonnes P_2O_5)

	2013	2014	2015	2016	2017	2018
WORLD						
H_3PO_4 capacity	54 345	55 605	57 670	58 620	60 410	61 510
H_3PO_4 supply capability	45 420	46 864	48 299	49 487	50 958	52 189
H_3PO_4 industrial demand	6 306	6 446	6 758	6 846	7 064	7 212
H_3PO_4 available for fertilizer	39 113	40 418	41 541	42 642	43 894	44 976
P Fert. consumption/ demand	41 727	42 706	43 803	44 740	45 718	46 648
H_3PO_4 Fert. demand	36 541	37 686	38 643	39 528	40 405	41 256
Non-H_3PO_4 Fert. demand	5 186	5 021	5 160	5 212	5 313	5 392
Potential H_3PO_4 balance	2 573	2 732	2 898	3 114	3 489	3 720
AFRICA						
H_3PO_4 capacity	8 448	8 858	9 818	10 268	10 268	10 268
H_3PO_4 supply capability	7 090	7 423	8 100	8 703	9 213	9 415
H3PO4 industrial demand	479	538	549	560	560	561
H_3PO_4 available for fertilizer	6 611	6 886	7 551	8 143	8 653	8 854
P Fert. consumption/ demand	1 384	1 431	1 468	1 509	1 551	1 593
H_3PO_4 Fert. demand	1 245	1 288	1 321	1 358	1 396	1 433
Non-H_3PO_4 Fert. demand	138	143	147	151	155	159
Potential H_3PO_4 balance	5 365	5 598	6 230	6 785	7 257	7 421
AMERICAS						
H_3PO_4 capacity	12 446	12 446	12 056	12 056	12 056	13 016
H_3PO_4 supply capability	10 769	10 769	10 471	10 471	10 471	10 615
H_3PO_4 industrial demand	1 865	1 867	1 916	1 929	1 942	1 946
H_3PO_4 available for fertilizer	8 904	8 902	8 556	8 542	8 529	8 669

	2013	2014	2015	2016	2017	2018
P Fert. consumption/ demand	11 400	11 617	11 844	12 123	12 450	12 752
H_3PO_4 Fert. demand	10 611	10 798	10 980	11 213	11 432	11 652
Non-H_3PO_4 Fert. demand	789	819	864	910	1 018	1 099
Potential H_3PO_4 balance	-1 707	-1 896	-2 424	-2 671	-2 903	-2 983
North America						
H_3PO_4 capacity	9 641	9 641	9 251	9 251	9 251	9 251
H_3PO_4 supply capability	8 694	8 694	8 343	8 343	8 343	8 343
H_3PO_4 industrial demand	964	963	978	978	980	981
H_3PO_4 available for fertilizer	7 730	7 731	7 365	7 365	7 363	7 362
P Fert. consumption/ demand	4 830	4 795	4 765	4 784	4 853	4 900
H_3PO_4 Fert. demand	4 829	4 795	4 765	4 784	4 853	4 900
Non-H_3PO_4 Fert. demand	1	0	0	0	0	0
Potential H_3PO_4 balance	2 901	2 936	2 600	2 581	2 510	2 462
Latin America &Caribbean						
H_3PO_4 capacity	2 805	2 805	2 805	2 805	2 805	3 765
H_3PO_4 supply capability	2 075	2 075	2 128	2 128	2 128	2 272
H_3PO_4 industrial demand	901	904	937	951	962	965
H_3PO_4 available for fertilizer	1 173	1 171	1 190	1 177	1 166	1 307
P Fert. consumption/ demand	6 570	6 822	7 079	7 339	7 597	7 851
H_3PO_4 Fert. demand	5 782	6 003	6 215	6 429	6 579	6 752
Non-H_3PO_4 Fert. demand	788	819	864	910	1 018	1 099
Potential H_3PO_4 balance	-4 608	-4 832	-5 024	-5 252	-5 413	-5 446
ASIA						
H_3PO_4 capacity	26 433	27 283	28 673	29 173	30 963	31 013
H_3PO_4 supply capability	22 497	23 608	24 633	25 181	26 142	26 954
H_3PO_4 industrial demand	3 016	3 107	3 273	3 334	3 538	3 680
H_3PO_4 available for fertilizer	19 481	20 501	21 360	21 847	22 604	23 274
P Fert. consumption/ demand	24 022	24 584	25 346	25 847	26 358	26 851
H_3PO_4 Fert. demand	20 785	21 590	22 282	22 824	23 375	23 902
Non-H_3PO_4 Fert. demand	3 236	2 994	3 063	3 023	2 983	2 949
Potential H_3PO_4 balance	-1 305	-1 089	-922	-977	-771	-628

	2013	2014	2015	2016	2017	2018
West Asia						
H_3PO_4 capacity	3 727	4 257	4 272	4 272	5 812	5 812
H_3PO_4 supply capability	2 842	3 013	3 248	3 415	3 727	4 339
H_3PO_4 industrial demand	376	376	378	379	421	503
H_3PO_4 available for fertilizer	2 466	2 637	2 870	3 036	3 306	2 836
P Fert. consumption/ demand	1 043	1 033	1 155	1 210	1 276	1 320
H_3PO_4 Fert. demand	980	971	1 086	1 137	1 199	1 241
Non-H_3PO_4 Fert. demand	63	62	69	73	77	79
Potential H_3PO_4 balance	1 486	1 666	1 784	1 898	2 107	2 595
South Asia						
H_3PO_4 capacity	2 170	2 170	2 345	2 345	2 345	2 345
H_3PO_4 supply capability	1 696	1 696	1 731	1 783	1 836	1 836
H_3PO_4 industrial demand	244	244	253	259	266	272
H_3PO_4 available for Fert.	1 451	1 452	1 478	1 524	1 570	1 564
P. fertilizer consumption/ demand	7 658	8 058	8 511	8 770	9 028	9 290
H_3PO_4 Fert. demand	7 045	7 363	7 779	8 106	8 433	8 756
Non-H_3PO_4 Fert. demand	613	695	732	664	595	534
Potential H_3PO_4 balance	-5 594	-5 911	-6 300	-6 582	-6 863	-7 192
East Asia						
H_3PO_4 capacity	20 536	20 856	22 056	22 556	22 806	22 856
H_3PO_4 supply capability	17 960	18 900	19 655	19 983	20 580	20 780
H_3PO_4 industrial demand	2 396	2 487	2 642	2 696	2 851	2 905
H_3PO_4 available for fertilizer	15 563	16 413	17 012	17 287	17 728	17 875
P. fertilizer consumption/ demand	15 321	15 493	15 680	15 867	16 054	16 242
H_3PO_4 Fert. demand	12 760	13 256	13 418	13 580	13 743	13 905
Non-H_3PO_4 Fert. demand	2 561	2 237	2 262	2 287	2 312	2 337
Potential H_3PO_4 balance	2 803	3 157	3 594	3 707	3 985	3 970
EUROPE						
H_3PO_4 capacity	6 418	6 418	6 523	6 523	6 523	6 613
H_3PO_4 supply capability	4 584	4 584	4 615	4 652	4 652	4 724
H_3PO_4 industrial demand	931	919	1 005	1 007	1 008	1 009

	2013	2014	2015	2016	2017	2018
H_3PO_4 available for fertilizer	3 653	3 665	3 610	3 645	3 644	3 715
P Fert. consumption/ demand	3 776	3 849	3 940	4 039	4 124	4 207
H_3PO_4 Fert. demand	3 154	3 213	3 276	3 339	3 399	3 459
Non-H_3PO_4 Fert. demand	621	636	664	700	725	748
Potential H_3PO_4 balance	499	452	334	306	246	256
Central Europe						
H_3PO_4 capacity	922	922	922	922	922	922
H_3PO_4 supply capability	365	365	365	365	365	365
H_3PO_4 industrial demand	92	93	94	94	94	95
H_3PO_4 available for fertilizer	272	272	271	271	270	270
P Fert. consumption/ demand	697	729	757	786	815	842
H_3PO_4 Fert. demand	585	612	636	660	685	707
Non-H_3PO_4 Fert. demand	112	117	121	126	130	135
Potential H_3PO_4 balance	-313	-341	-365	-389	-414	-437
West Europe						
H_3PO_4 capacity	565	565	565	565	565	565
H_3PO_4 supply capability	482	482	482	482	482	482
H_3PO_4 industrial demand	531	515	601	601	601	601
H_3PO_4 available for fertilizer	-49	-33	-119	-119	-119	-119
P Fert.consumption/ demand	1 876	1 898	1 905	1 911	1 912	1 909
H_3PO_4 Fert. demand	1 688	1 708	1 715	1 720	1 721	1 718
Non-H_3PO_4 Fert. demand	188	190	191	191	191	191
Potential H_3PO_4 balance	-1 738	-1 741	-1 833	-1 839	-1 840	-1 837
East Europe & Central Asia						
H_3PO_4 capacity	4 931	4 931	5 036	5 036	5 036	5 126
H_3PO_4 supply capability	3 737	3 737	3 769	3 805	3 805	3 877
H_3PO_4 industrial demand	307	311	311	312	313	313
H_3PO_4 available for fertilizer	3 430	3 427	3 457	3 493	3 493	3 564
P Fert.consumption/ demand	1 203	1 222	1 278	1 342	1 397	1 456
H_3PO_4 Fert. demand	881	893	925	959	993	1 034
Non-H_3PO_4 Fert. demand	322	330	352	383	404	422
Potential H_3PO_4 balance	2 549	2 534	2 532	2 534	2 499	2 530

	2013	2014	2015	2016	2017	2018
OCEANIA						
H_3PO_4 capacity	600	600	600	600	600	600
H_3PO_4 supply capability	480	480	480	480	480	480
H_3PO_4 industrial demand	15	16	16	16	16	16
H_3PO_4 available for fertilizer	465	464	464	464	464	464
P Fert.consumption/ demand	1 146	1 226	1 206	1 222	1 235	1 246
H3PO4 Fert. demand	745	797	784	794	803	810
Non-H_3PO_4 Fert. demand	401	429	422	428	432	436
Potential H_3PO_4 balance	-280	-333	-320	-330	-339	-346

Annex 7
World and regional potash supply demand and balance (thousand tonnes K_2O)

	2013	2014	2015	2016	2017	2018
WORLD						
Potash Capacity	49 740	50 531	54 690	56 703	60 263	60 716
Potash Supply Capability	42 616	43 568	45 175	46 974	49 741	51 439
Industrial and other demand	3 709	3 828	3 939	4 053	4 169	4 288
Available for Fertilizer	38 907	39 740	41 235	42 921	45 572	47 151
Consumption/demand	30 058	31 042	31 829	32 628	33 519	34 456
Potential K_2O Balance	8 848	8 698	9 407	10 293	12 053	12 695
AFRICA						
Potash Capacity	0	0	0	0	0	0
Potash Supply Capability	0	0	0	0	0	0
Industrial and other demand	81	84	86	89	92	95
Available for Fertilizer	-81	-84	-86	-89	-92	-95
Consumption/demand	559	573	620	669	728	772
Potential K_2O Balance	-640	-656	-706	-758	-820	-867
AMERICAS						
Potash Capacity	20 091	20 511	23 661	25 136	25 456	25 491
Potash Supply Capability	17 158	17 574	18 565	19 719	21 161	21 768
Industrial and other demand	1 276	1 314	1 351	1 389	1 429	1 470
Available for Fertilizer	15 882	16 260	17 214	18 330	19 732	20 298
Consumption/demand	10 998	11 274	11 463	11 652	11 879	12 181
Potential K_2O Balance	4 884	4 986	5 751	6 678	7 853	8 117
North America						
Potash Capacity	18 148	18 568	21 718	23 193	23 513	23 548
Potash Supply Capability	15 371	15 787	16 778	17 932	19 374	19 981
Industrial and other demand	1 095	1 125	1 156	1 188	1 221	1 256
Available for Fertilizer	14 276	14 662	15 622	16 744	18 153	18 725
Consumption/demand	4 673	4 699	4 689	4 680	4 712	4 775
Potential K_2O Balance	9 604	9 963	10 933	12 064	13 441	13 950

	2013	2014	2015	2016	2017	2018
Latin America & Caribbean						
Potash Capacity	1 943	1 943	1 943	1 943	1 943	1 943
Potash Supply Capability	1 787	1 787	1 787	1 787	1 787	1 787
Industrial and other demand	182	188	195	201	207	214
Available for Fertilizer	1 605	1 599	1 592	1 586	1 580	1 573
Consumption/demand	6 326	6 576	6 774	6 972	7 167	7 407
Potential K_2O Balance	-4 720	-4 977	-5 182	-5 386	-5 587	-5 833
ASIA						
Potash Capacity	9 527	9 585	10 365	10 665	10 665	10 863
Potash Supply Capability	8 579	8 495	8 918	9 125	9 309	9 438
Industrial and other demand	1 744	1 808	1 862	1 917	1 972	2 029
Available for Fertilizer	6 835	6 687	7 056	7 208	7 336	7 410
Consumption/demand	13 951	14 595	15 038	15 510	16 009	16 519
Potential K_2O Balance	-7 115	-7 908	-7 982	-8 302	-8 673	-9 109
West Asia						
Potash capacity	3 960	3 960	3 960	3 960	3 960	3 960
Potash supply	3 717	3 717	3 717	3 717	3 717	3 717
Industrial and other demand	91	94	97	100	103	106
Available for fertilizer	3 626	3 623	3 620	3 617	3 614	3 611
K fert. consumption/demand	234	245	258	266	275	286
Potential K_2O balance	3 392	3 378	3 362	3 351	3 339	3 325
South Asia						
Potash capacity	0	0	0	0	0	0
Potash supply	0	0	0	0	0	0
Industrial and other demand	93	109	115	122	129	136
Available for fertilizer	-93	-109	-115	-122	-129	-136
K fert. consumption/demand	2 720	3 118	3 266	3 436	3 607	3 778
Potential K_2O balance	-2 814	-3 227	-3 382	-3 559	-3 736	-3 914
East Asia						
Potash capacity	5 567	5 625	6 405	6 705	6 705	6 903
Potash supply	4 862	4 778	5 201	5 408	5 592	5 721
Industrial and other demand	1 559	1 605	1 650	1 694	1 740	1 786
Available for fertilizer	3 303	3 174	3 551	3 714	3 852	3 935
K fert. consumption/demand	10 996	11 233	11 514	11 808	12 127	12 455
Potential K_2O balance	-7 693	-8 059	-7 963	-8 094	-8 276	-8 520

	2013	2014	2015	2016	2017	2018
EUROPE						
Potash capacity	20 122	20 435	20 664	20 902	24 142	24 362
Potash supply	16 879	17 499	17 692	18 130	19 272	20 233
Industrial and other demand	601	616	633	651	669	688
Available for fertilizer	16 278	16 883	17 059	17 479	18 603	19 545
K fert. consumption/demand	4 206	4 243	4 350	4 435	4 537	4 614
Potential K_2O balance	12 071	12 640	12 710	13 044	14 065	14 931
Central Europe						
Potash capacity	0	0	0	0	0	0
Potash supply	0	0	0	0	0	0
Industrial and other demand	48	50	51	53	54	56
Available for fertilizer	-48	-50	-51	-53	-54	-56
K fert. consumption/demand	704	725	746	772	800	820
Potential K_2O balance	-752	-774	-797	-825	-854	-876
West Europe						
Potash capacity	5 590	5 590	5 455	5 425	5 525	5 585
Potash supply	4 054	4 054	3 939	3 914	3 999	4 050
Industrial and other demand	469	482	496	509	523	537
Available for fertilizer	3 585	3 572	3 443	3 404	3 476	3 513
K fert. consumption/demand	2 159	2 191	2 216	2 227	2 244	2 260
Potential K_2O balance	1 426	1 381	1 228	1 178	1 232	1 253
East Europe and Central Asia						
Potash capacity	14 532	14 845	15 209	15 477	18 617	18 777
Potash supply	12 825	13 445	13 753	14 216	15 273	16 183
Industrial and other demand	84	83	86	89	92	95
Available for fertilizer	12 741	13 362	13 667	14 128	15 181	16 088
K fert. consumption/demand	1 344	1 328	1 389	1 436	1 494	1 534
Potential K_2O balance	11 397	12 034	12 278	12 691	13 688	14 555
OCEANIA						
Potash capacity	0	0	0	0	0	0
Potash supply	0	0	0	0	0	0
Industrial and other demand	7	7	7	7	7	7
Available for fertilizer	-7	-7	-7	-7	-7	-7
K fert. consumption/demand	344	357	359	362	366	370
Potential K_2O balance	-351	-364	-366	-369	-373	-377

Annex 8
Regional classification of countries and territories

AFRICA	
North Africa	Algeria Egypt Libya Morocco Sudan Tunisia
sub-Saharan Africa	Angola Benin Botswana Burkina Faso Burundi Cameroon Capo Verde Central African Republic Comoros Congo Dem. Rep. Congo Rep. of Côte d'Ivoire Djibouti Equatorial Guinea Eritrea Ethiopia Gabon Gambia Ghana Guinea Guinea-Bissau Kenya Lesotho Liberia Madagascar Malawi Mali Mauritania Mauritius Mozambique

	Namibia Niger Nigeria Rwanda Senegal Seychelles Sierra Leone Somalia South Africa South Sudan Swaziland Togo Uganda United Rep of Tanzania Zambia Zimbabwe
AMERICAS	
Latin America & Caribbean	Antigua and Barbuda Argentina Bahamas Barbados Belize Bolivia Brazil Chile Colombia Costa Rica Cuba Dominica Dominican Republic Ecuador El Salvador Grenada Guatemala Guyana Haiti Honduras Jamaica Mexico Nicaragua Panama Paraguay

	Peru Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Suriname Trinidad & Tobago Uruguay Venezuela
North America	Canada United States of America
ASIA	
East Asia	Brunei Darussalam Cambodia China China, Hong Kong SAR China, Macao SAR China, Taiwan Province of Indonesia Japan Korea Rep Lao People's Democratic Republic Malaysia Mongolia Myanmar Philippines Singapore Thailand Timor-Leste Viet Nam
South Asia	Bangladesh Bhutan India Maldives Nepal Pakistan Sri Lanka
West Asia	Afghanistan Bahrain Cyprus Iran Islamic Rep of

	Iraq Israel Jordan Kuwait Lebanon Oman Qatar Saudi Arabia Syria Arab Rep. Turkey United Arab Emirates Yemen
EUROPE	
Central Europe	Albania Bosnia and Herzegovina Bulgaria Croatia Czech Republic Hungary Macedonia Montenegro Poland Romania Serbia Slovakia Slovenia
Eastern Europe and Central Asia	Armenia Azerbaijan Belarus Estonia Georgia Kazakhstan Kyrgyzstan Latvia Lithuania Moldova Russian Fed Tajikistan Ukraine Uzbekistan

Western Europe	Andorra Austria Belgium Denmark Finland France Germany Greece Iceland Ireland Italy Luxembourg Malta Monaco Netherlands Norway Portugal San Marino Spain Sweden Switzerland United Kingdom
OCEANIA	
	Australia Cook Islands Fiji French Polynesia Kiribati Marshall Islands Micronesia (Federated States of) Nauru Niue New Caledonia New Zealand Palau Papua New Guinea Samoa Tonga Tuvalu Vanuatu

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ISBN 978-92-5-108692-6

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I4324E/1/01.15