



# OVERVIEW AND DEVELOPMENT STRATEGY OF THE FERTILIZER SECTOR

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# I. Sectoral overview

## A. Types of fertilizer and production facility

There are more than 800 fertilizer production facilities in Vietnam. Domestic consumption is around **10.5 mil. tonnes/year**, in which **7.6 mil. tonnes** are chemical fertilizers.

### Nitrogenous (N)

- Phu My nitrogenous fertilizer
- Ca Mau fertilizer
- Ha Bac nitrogenous fertilizer and chemical
- Ninh Binh nitrogenous fertilizer

### Phosphorus( P)

- Lam Thao Fertilizers and Chemicals
- Van Dien FMP
- Lao Cai FMP

### Potassium( K)

- **Imported**

### NPK, other fertilizers...

- Southern Fertilizer
- Binh Dien Fertilizer
- ...

# I. Sectoral overview

## B. Production and export

### Production

	2017	2018	2019	2020	2021
Chemical fertilizer (mil. ton)	3.677	4.042	3.952	4.153	4.261
NPK fertilizer (mil. ton)	3.242	3.324	3.405	3.498	3.655
Tổng (mil. ton)	6.919	7.366	7.357	7.650	7.916

Source: General Statistic Office

### Export

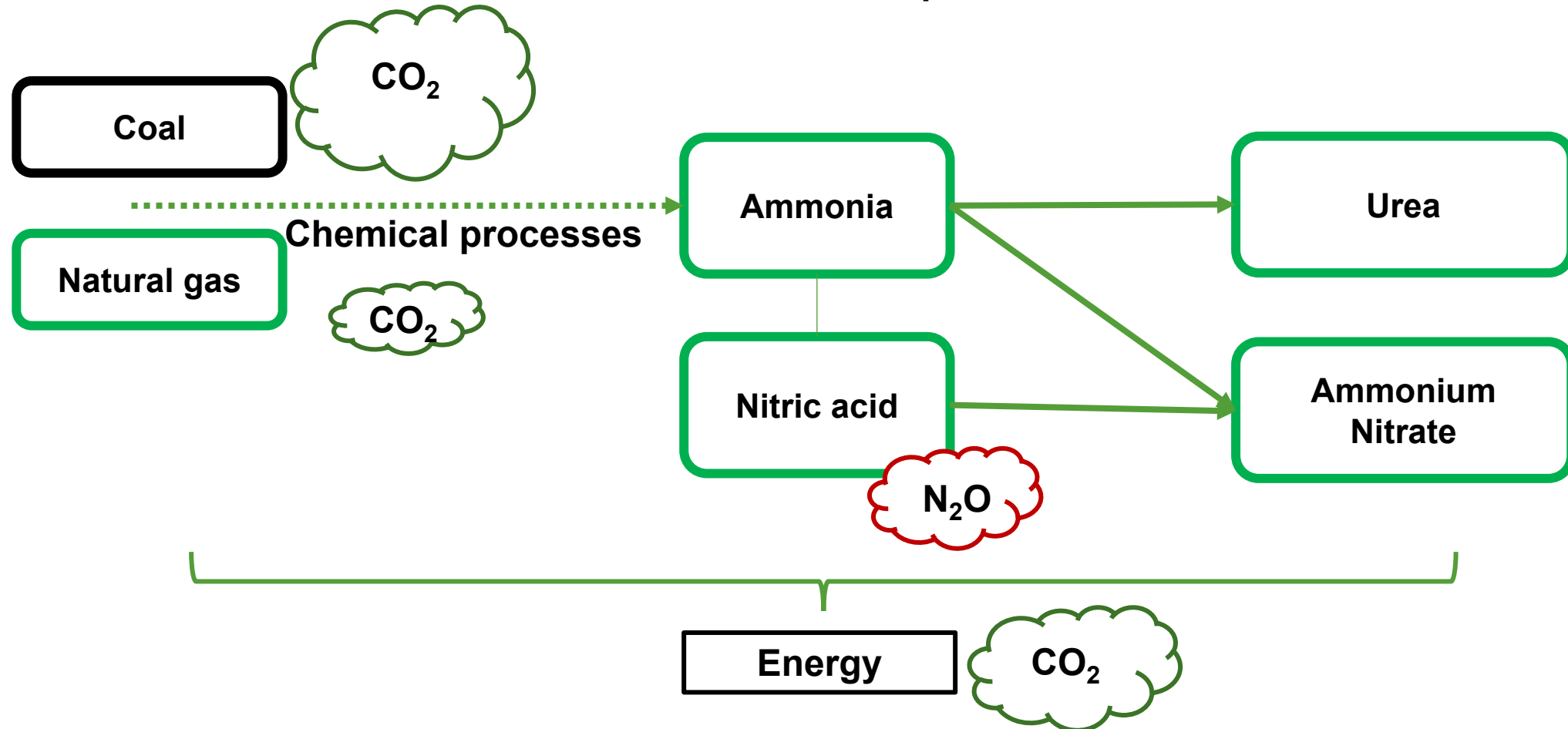
	2020	2021
Production (mil. ton)	1.16	1.35
Value (mil. USD)	341	559

Source: Fertilizer Association of Vietnam

**Currently, Vietnam has not exported chemical fertilizer products to the EU**

## II. GHG emissions and emission reduction measures

### A. Sources of emission in fertilizer production





## II. GHG emissions and emission reduction measures

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### B. Emission reduction measures

#### 1. Technology switch

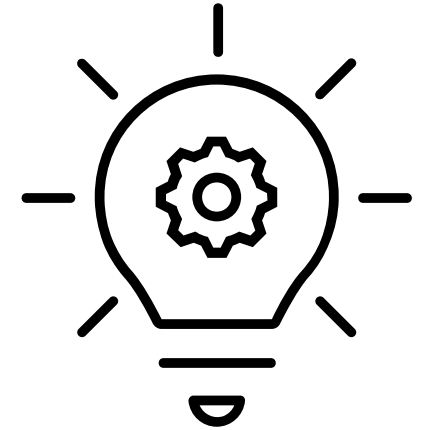
- Switch feedstock in urea production (coal -> natural gas)
- Produce ammonium nitrate with advanced technology (N<sub>2</sub>O decomposition at high temperature)

#### 2. Improve energy efficiency

- Improve the efficiency of electrical equipment (motors, lighting, etc.)

#### 3. Carbon capture and storage (CCS)

- CO<sub>2</sub> capture in ammonium production for other processes or storage.



### III. Sectoral development strategy

Vietnam's chemical industry development strategy by 2030, with a vision towards 2040.

*(Decision 726/QD-TTg dated 16/06/2022)*

	2021-2030	2031-2040
Production growth rate	3-5%	4-6%
Export growth rate for chemical	9-11%	7.5-9%
Develop fertilizer factories with advanced technology, gradually eliminating small production facilities, using outdated technology with poor product quality. Research and propose incentive mechanisms for technology transformation projects.		
Formulate and revise national technical regulations on inorganic fertilizers, and classification of superphosphate fertilizers and NPK fertilizers.		



# III. Sectoral development strategy

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## Emission reduction targets

### Nationally Determined Contributions (NDC)

- By 2030, 100% of enterprises will apply N<sub>2</sub>O decomposition technology in the production of chemicals and fertilizers. Emission reduction potential of 5.6 million tons of CO<sub>2</sub>eq in the 2021-2030 period.

### National Strategy for Climate Change until 2050 (NCCS)

- From 2045, apply **carbon capture technologies** in the chemical industry for about 50% of production, which equates to an annual reduction of about 4 million tons of carbon.

## IV. Conclusion

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- Vietnam has produced and exported fertilizers **but has not exported CBAM covered products** (inorganic fertilizers) to Europe;
- There are 16 establishments in the sector on the list of enterprises that must carry out a mandatory GHG inventory and reduce GHG emissions according to Decision 01/2022/QD-TTG.
- In the long term, the initial consultation process reveals that Vietnam's fertilizer industry is oriented toward prioritize production to serve domestic demand instead of export. Therefore, GHG emission reduction activities in the industry will be geared towards **domestic GHG emission reduction targets rather than to reducing the impact of CBAM.**

## IV. Conclusion

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- Therefore, it is necessary to integrate/specify the GHG emission reduction targets and measures in the NDC and NCCS into the current policy documents of the chemical/fertilizer industry.
- Increasing production and reducing dependence on imported fertilizers will help Vietnam has better control GHG emissions throughout the value chain.
- Develop/update national standards on industrial emissions of inorganic fertilizers. QCVN 21:2009/BTNMT has not yet regulated CO<sub>2</sub> and N<sub>2</sub>O emission.

A large, stylized circular graphic composed of multiple concentric, overlapping bands. The colors transition from a light green on the left to a light blue on the right, with a white center. The bands have a soft, blurred appearance, creating a sense of depth and movement.

**Thank you!**