



# Ammonia Technology Roadmap

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# Dual Responsibility

## Facts & figures:

- Mineral fertilizers (N, P, K) feed about half of the planet, every day
- Almost 3% of the world's CO<sub>2</sub> emissions from NH<sub>3</sub> production + use
- About 2% of the world's energy is needed for the synthesis of NH<sub>3</sub>

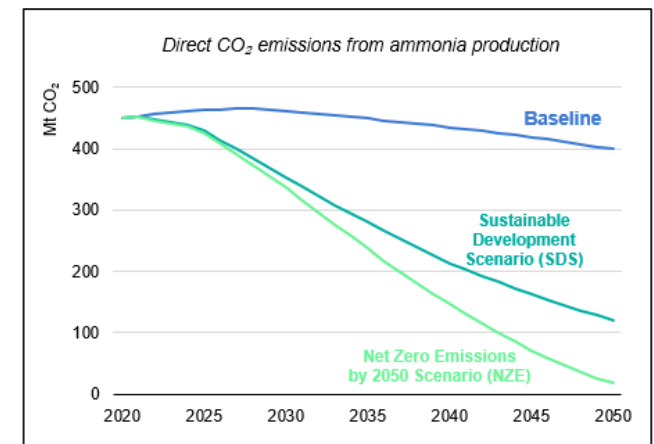
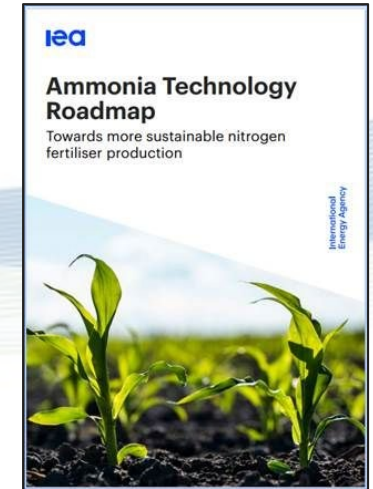




# Ammonia Technology Roadmap

## Global view:

- The publicly available Roadmap provides pathways to reduce 85-90% of CO<sub>2</sub> emissions from NH<sub>3</sub> production for different regions and timelines until 2050.
- It explores three possible futures to decarbonize the nitrogen fertilizer sector, outlines the roles and actions of stakeholders, quantifies the investment and policies needed, and establishes milestones for innovation and deployment.
- The fertilizer industry can't do it on its own: stakeholder collaboration (investors, governments, technology providers ...) and enabling conditions (investments, policy, infrastructure, R&D ...) are needed.
- The Ammonia Technology Roadmap was jointly presented by International Energy Agency (IEA), European Bank for Reconstruction and Development (EBRD), and IFA at UN COP 26.

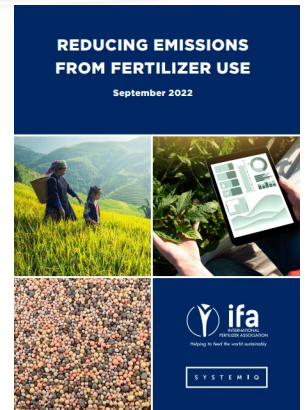


## Local views:

- There is no one ammonia decarbonization path that will fit every country. That's why governments and their fertilizer companies started to publish local Low Carbon Pathways based on the global Roadmap:



- The above Pathways also addressed emissions from ammonia use in agriculture which were analyzed by SystemIQ and jointly presented with IFA at UN COP 27:
- Other local decarbonization assessments that referred to the global Roadmap include:



## Next steps:

- IFA is supporting the Science Based Targets Initiative (SBTI) with the development of a Sectoral Decarbonization Approach (SDA) for seven chemicals, including ammonia.
- IFA and EBRD plan to partner again to develop a global Mining Technology Roadmap (focusing on phosphate and potash), similar to the Ammonia Technology Roadmap.

