Outline of Japan's National Action Plan on Sustainable Nitrogen Management

September 2024

- In accordance with **the UNEA resolutions on sustainable nitrogen management,** Japan's national action plan on sustainable nitrogen management was formulated based on **the 6th Basic Environmental Plan**.
- As an **integrated approach to conservation and management** of **the water and atmospheric environment** with **decarbonization, resource circulation and symbiosis with nature**, **collaborative projects** among relevant ministries will be developed to **benefit societies and regions** through nitrogen management.
- Japan will contribute **to Asian countries' nitrogen management** by **promoting knowledge and experience sharing**, **capacity building** and **technology transfer**.

1. Achievements of nitrogen management and remaining issues

- Set emission standards for NOx discharged from factories and allowable limits for NOx from mobile sources such as automobile exhaust gas regulating the total amount of NOx emission with the Air Pollution Control Act.
- Established effluent standards for factories or workplaces discharging effluent with the Water Pollution Prevention Act.

→As a result of the efforts, **air and water pollution caused by reactive nitrogen in Japan has been improved dramatically**.

- Not achieving the environmental standards for **nitrate nitrogen and nitrite nitrogen in the groundwater** and **total nitrogen in lakes** in some areas continuously.
- **In some enclosed seas**, there are **deficiencies in nutrients affecting marine resources**.
- Balancing **the expected increasing use of ammonia fuel for carbon neutrality and the** reduction in nitrogen emissions to the atmospheric environment is crucial.
- Expecting consolidation of scientific knowledge, **elaboration on the nitrogen inventory** and further technology developments for establishing nitrogen supply chain.

2. Integrated approaches of environmental management with CN, CE, NP

Establishing the comprehensive material flow of nitrogen, which is across various media such as water and air and considering effective actions.

(1) Carbon Neutral

- **Providing nutrients from wastewater treatment facilities** to realize the "Clean and Rich Sea" while examining **energy efficiency**.
- **Improving water quality** in rivers, lakes and groundwater sourcing drinking water and utilizing **livestock manure for energy** .
- Utilizing **technologies for NOx emission control** to address **the increasing use of ammonia**.

(2) Circular Economy

- Facilitating best practices of fertilizer and livestock manure management, **the use of manure and sewage sludge resources**.
- Effective use of **bottom sediment resources of eutrophicated lakes**.
- Promoting ethical consumption and reducing food loss.
- Considering **nitrogen supply chain.**
  e.g.) recovering ammonia from wastewater treatment facilities.

(3) Nature Positive

- **Realizing "Clean and Rich Sea"** through promoting active operations management for nutrients in wastewater treatment facilities, and **conservation and restoration of seaweed beds and tidal flats**.

3. International Cooperation on Sustainable Nitrogen Management

- Sharing Japan's knowledge and experience and facilitating capacity building for administrative officials with **EANET** (Acid Deposition Monitoring Network in East Asia) and **WEPA** (Water Environment Partnership in Asia).
- Promoting introduction of Japan's technologies through **the Cobenefits projects** of air quality improvement and climate change mitigation and **the Model Project for improvement of Water Environment in Asia**.