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Progress in the Implementation of the Workplan 2012-2013

Contribution of the Task Force on Reactive Nitrogen to global nitrogen analysis

Under the lead of the co-chair of the UNECE Task Force on Reactive Nitrogen (TFRN), the Global Partnership on Nutrient Management (GPNM) has collaborated with the International Nitrogen Initiative to prepare a new report "Our Nutrient World: The challenge to produce more food and energy with less pollution". The report was commissioned by the United Nations Environment Programme (UNEP) and launched during the 27th UNEP Governing Council and Global Ministerial Environmental Forum, during February 2013 in Nairobi. The report highlights the need to develop a global approach to nutrient management, emphasizing the key role of nitrogen and the multiple environmental, security and economic benefits to be gained by better nitrogen management. Specifically the report proposes a global aspirational goal: 20:20 for 2020, where a 20% improvement in nutrient use efficiency by the year 2020 would save 20 million tonnes of nitrogen annually.

The **key points** of the report “**Our Nutrient World**” are as follows:

Nutrient Benefits and Threats

- The sustainability of our world depends fundamentally on nutrients. In order to feed 7 billion people, humans have more than doubled global land-based cycling of nitrogen (N) and phosphorus (P).
- The world’s N and P cycles are now out of balance, causing major environmental, health and economic problems that have received far too little attention.
- Insufficient access to nutrients still limits food production and contributes to land degradation in some parts of the world, while finite P reserves represent a potential risk for future global food security, pointing to the need for their prudent use.
- Unless action is taken, increases in population and per capita consumption of energy and animal products will exacerbate nutrient losses, pollution levels and land degradation, further threatening the quality of our water, air and soils, affecting climate and biodiversity.

The Nutrient Challenge

- *A new global effort is needed to address ‘The Nutrient Nexus’, where reduced nutrient losses and improved nutrient use efficiency across all sectors simultaneously provide the foundation for a Greener Economy to produce more food and energy while reducing environmental pollution.*

- The new effort must cross the boundaries between economic sectors and environmental media, be under-pinned by scientific and other evidence from a robust global assessment process, share best practices, and address the substantial cultural and economic barriers that currently limit adoption.

Actions and Outcomes

- *The global community of all relevant stakeholders now needs to agree which existing inter-governmental process is best suited to take the lead in improving nutrient management for the 21st century, or whether a new policy process is needed.*
- One option is to strengthen the mandate of the ‘Global Programme of Action for the Protection of the Marine Environment from Land-based Activities’ (GPA) to address the inter-linkages between land, air and water, in relation to the global supply of all nutrient sources and Nutrient Use Efficiency (NUE) across the full chain, considering their regional variation.
- Nutrient Use Efficiency represents a key indicator to assess progress towards better nutrient management. An aspirational goal for a 20% relative improvement in full-chain NUE by 2020 would lead to an annual saving of around 20 million tonnes of nitrogen (‘20:20 by 2020’), and equate to an initial estimate of improvement in human health, climate and biodiversity worth around \$170 billion per year.

Developing the Mandate

- A central objective of the new inter-governmental effort must be to show how improved management of N and P at different scales over the whole cycle would simultaneously make quantified contributions toward meeting existing commitments for water, air, soil, climate and biodiversity, while underpinning improved food and energy security – with net social and economic benefits.
- *International consensus and authorization of the global nutrient focus is now essential, emphasizing the need for a mandate to assess the scientific evidence, share best practices, and work towards inter-governmental agreements that make quantifiable steps toward the sustainable development of Our Nutrient World.*