

UNEA resolution 4/14 and 5/2: Sustainable Nitrogen Management

Agenda Item 5 (a) Implementation of UNEA resolutions

159th meeting of the Committee of Permanent Representatives to the United Nations Environment Programme

Request for a briefing to the CPR in Resolution 5/2 paragraph 3(c)

Resolution 5/2 on Sustainable Nitrogen Management requested the Executive Director under paragraph 3(c) to:

Present to the Committee of Permanent Representatives, at its 159th meeting, to be held in 2022, a briefing on the implementation of resolution 4/14, including on the status of the assessment requested in subparagraph (c) of the resolution, and a road map for further implementation of the resolution in the period leading up to the sixth session of the Environment Assembly

Air Quality



Climate



Water Quality



Soil Quality



Biodiversity

Resolution 4/14 paragraph (a) and 5/2 paragraph 3(b)

Calls on the Executive Director of the United Nations Environment Programme to:

- (a) *Consider the options for **facilitating improved coordination of policies** across the global nitrogen cycle at the national, regional and global levels, including consideration of the case for establishing an intergovernmental mechanism for coordination of nitrogen policies, based primarily on existing networks and platforms, and consideration of the case for developing an integrated nitrogen policy, which could enhance recognition of the need for common action across multiple policy domains;*
- **UNEP Working Group on Nitrogen** established
 - First meeting held in June 2020
 - *ad hoc* Task Team to examine possible Terms of Reference for the Interconvention Nitrogen Coordination Mechanism (INCOM) was established
 - **Opportunities for improved nitrogen coordination pursued**, most recently through the draft strategy and action plan on reducing nutrient pollution for the seas of East Asia (COBSEA)

Resolution 4/14 paragraph (b)

*(b) Support, in close collaboration with relevant **United Nations** bodies, including the Food and Agriculture Organization of the United Nations and, as appropriate, multilateral environmental agreements, exploration of the **options for better management of the global nitrogen cycle** and how they could help to achieve the Sustainable Development Goals, including the sharing of assessment methodologies, best practice, guidance documents and emerging technologies for recovery and recycling of nitrogen and similar nutrients;*

➤ **Joint FAO/UNEP events:**

- Nitrogen challenged in Agri-food systems: Half nitrogen waste by 2030 (7 December 2020)
 - UN Food Summit: Sustainable nitrogen management for sustainable food systems (28 July 2021)
- Development of the **index for coastal eutrophication potential (ICEP)** with IOC-UNESCO as an indicator for SDG 14.1.1a on eutrophication

Resolution 4/14 paragraph (c)

*(c) Coordinate existing **platforms for assessment** of the multiple environmental, food and health benefits of possible goals for improved nitrogen management, while ensuring coordinated management of relevant data to allow development of an integrated and sustainable nitrogen management approach and identify current information gaps, including in quantifying the net economic benefits for food and energy production; freshwater, coastal and marine environmental quality; air quality; greenhouse gas mitigation; and stratospheric ozone depletion mitigation, all underpinned by the development of reference values;*

- Development of the **International Nitrogen Assessment** under the UNEP/GEF project entitled “Towards the Establishment of an International Nitrogen Management System” (INMS).
- **Economic Valuation** pilot project under the Cartagena Convention

Resolution 4/14 paragraph (d)

*(d) Facilitate, with relevant United Nations bodies, including the Food and Agriculture Organization of the United Nations and, as appropriate, multilateral environmental agreements, the **provision of appropriate training and capacity** for policymakers and practitioners to develop widespread understanding and awareness of nitrogen cycling and opportunities for action;*

- Launch of the United Nations Global Campaign on Sustainable Nitrogen Management in Sri Lanka, October 2019
- #BeatNitrogenPollution Campaign – in the pipeline
- Development of guidelines for sustainable nitrogen management in Romania (ongoing)

Resolution 4/14 paragraph (e)

*(e) Support Member States by, where appropriate, **sharing existing information and knowledge** in the development of an evidence-based and intersectorally coherent approach to domestic decision-making to promote sustainable nitrogen management, where appropriate;*

- Ecosystem health report cards China (Chongming island) and India (Pulicat lagoon)
- Cartagena and Abidjan Regional Seas Conventions - UNEP Foresight Brief focusing on sargassum “From ‘brown tide’ hazard to a ‘golden jewel’ (2021)
- Nutrient recovery from wastewater in India (ongoing)

Implementation of resolution 5/2 on Sustainable Nitrogen Management

Recalling Environment Assembly resolution 4/14 on sustainable nitrogen management, and reaffirming the importance of the long-term reduction of the multiple pollution threats resulting from anthropogenic reactive nitrogen, with adverse effects on the terrestrial, freshwater and marine environments, and on air pollution and greenhouse gas emissions, while acknowledging the benefits of nitrogen use for food and energy,

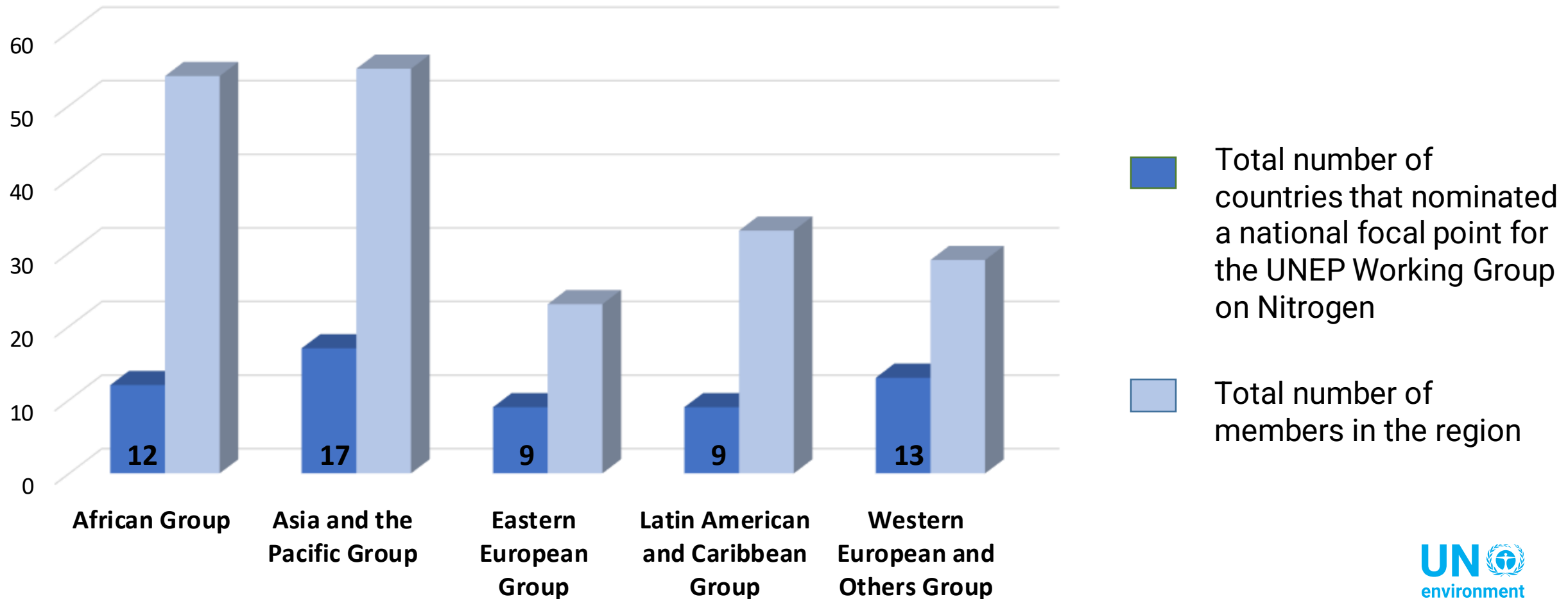
Resolution 5/2 paragraph 3 requests:

(a) Support Member States, at their request, in the development of national action plans for sustainable nitrogen management, subject to the availability of resources;

(d) Invite Member States to nominate focal points to join the United Nations Environment Programme Working Group on Nitrogen

Implementation of resolution 5/2 on Sustainable Nitrogen Management

UNEP Working Group on Nitrogen National Focal Point Nominations (as per 26 September 2022)



Global Partnership on Nutrient Management

Launched in UNSCD, New York in May 2009

Steering Committee: 8 members representing Government, Academia and the Private Sector

GPNM Mandate:

- Platform for Governments, UN agencies, Scientists and the Private Sector to forge a common agenda, mainstreaming best practices and integrated assessments, so that policy making, and investments are effectively “nutrient proofed”.



A global assessment of the threats and benefits of human alteration of the nitrogen cycle and the opportunities for improvement (under development)

Outline:

Part A - The global nitrogen challenge: problem definition

Part B - Foundations for Assessing the Nitrogen Cycle

Part C - Global integrated assessment across the nitrogen cycle

Part D - Nitrogen challenges and opportunities for key world regions

Part E - Grasping the future challenge

Part A: The global nitrogen challenge: problem definition

1. Introduction: From pollution problems to nitrogen opportunity
2. Nitrogen, environment and sustainable development
3. Nitrogen and food security
4. Nitrogen in current national and international policies
5. Towards a holistic response to the global nitrogen challenge

Part B: Foundations for Assessing the Nitrogen Cycle

6. Approaches and challenges to assess nitrogen impacts
7. Performance indicators for the global nitrogen cycle
8. Approaches and challenges to assess N pressures & distribution
9. Approaches and challenges to value nitrogen benefits and threats

Part C: Global integrated assessment across the nitrogen cycle

10. Assessment of global and continental scale total nitrogen budgets
11. Flows on impacts of nitrogen on freshwater, coastal & marine systems
12. Emissions and air quality impacts of nitrogen on human health & crops
13. Impacts of anthropogenic nitrogen use on global warming potential and radiative balance, and role of nitrogen for stratospheric ozone depletion
14. Inputs of nitrogen to terrestrial and aquatic ecosystems and the impacts on biodiversity.
15. SOILS: Inputs, outputs and impacts of nitrogen for agricultural land and relationships with non-agricultural land
16. Costs and benefits of nitrogen at global and regional scales

WATER
AIR
CLIMATE
BIODIVERSITY
SOILS

Part D: Nitrogen challenges and opportunities for key world regions

17. Approach, Synthesis and Lessons and from the Regional Nitrogen Assessments

Assessment of flows, impacts and solutions for:

18. East Asia (focus on East China Sea in continental context)

19. South Asia (all 8 countries of South Asia)

20. Africa (focus on Lake Victoria Basin)

21. Latin America (focus on La Plata Basin)

22. West Europe (focus on coastal seaboard, in EU context)

23. East Europe (focus on Dniester and Lower Danube in EECCA context)

24. North America (focus on transboundary Nooksak in NA context)

Part E: Grasping the future challenge

- 25. Key actions for better nitrogen management
- 26. Addressing the barriers to better nitrogen management
- 27. Synthesis of possible futures for the global nitrogen cycle
- 28. Goals and Pathways: How to Halve Nitrogen Waste by 2030?
- 29. Evaluation of policy options and instruments for better nitrogen management

- A process of linking communities across nitrogen-related issues leading to harmonization of indicators, metrics and approaches to enable more effective integration of benefits.
- Examining the relationship to sustainable development and food goals, and quantification of possible future scenarios.
- Developing a financial case for why action on nitrogen is needed. Global modelling supported by cost-benefit analysis.
- Refinement of overall nitrogen flows and their impacts on multiple environmental issues, highlighting the need for a joined-up approach across the nitrogen cycle.
- Estimation that the world is losing over an estimated 100 billion USD per year in wasted nitrogen resources (to be updated)
- An examination of solutions and how these vary across example world regions through regional chapters
- The need to move to a nitrogen circular economy. Examination of barriers, policy options and opportunities

A global assessment and outlook – Timeline

- All International Nitrogen Assessment chapters ready by January 2023
- Submission to Cambridge University Press in March 2023 for internal review and finalization
- Launch prior to the sixth session of the UN Environment Assembly in February 2024



- International Nitrogen Assessment to be accompanied by a Summary for Policy makers
- In addition, as 30 pages Synthesis report will be prepared targeting Member States

Next steps in the implementation of Resolution 4/14 and 5/2

- Appointment of the Co-Chairs for the UNEP Working Group on Nitrogen: nominations received from India, Romania, Rwanda and Sri Lanka
- Plan UNEP Working Group on Nitrogen meetings in consultation with the Co-Chairs
- Invite Member States to share information on national action plans
- Roll-out of the #BeatNitrogenPollution Campaign
- Support to Member States, at their request and subject to availability of resources, in the development of national action plans for sustainable nitrogen management
- Take stock of Member States' actions to significantly reduce nitrogen waste
- Launch of the International Nitrogen Assessment
- Report to the United Nations Environment Assembly at its sixth session on the progress achieved in the implementation of Resolution 4/14 and Resolution 5/2

Thank you



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