



First e-briefing for the UNEP Nitrogen Working Group

8-9 June 2020



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In cooperation with



What is the UNEP Nitrogen Working Group?

UN Member States:

- Working to follow up UNEA Resolution 4/14 (March 2019)
- Identify National Focal Points (NFPs) to the Working Group (40 countries so far; 24 Member States registered today)
- Working with
Intergovernmental Conventions and Programmes
to establish the
Interconvention Nitrogen Coordination Mechanism (INCOM)

2019 March Adoption of the Resolution on Sustainable Nitrogen Management at UNEA-4

2019 September Nominations of National Focal Points by Member States to the Nitrogen Working Group

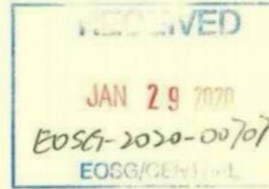
2019 October Launch of the UN Campaign on Sustainable Nitrogen Management (Colombo Declaration)



ACTION DSG
COPY SDU ; UN75
cdc ; OASAP



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இலங்கை சனாதிபதி
President of Sri Lanka



His Excellency Antonio Guterres
Secretary General of the United Nations

Your Excellency,

It gives me immense pleasure to write to you as the first person of my nation. History reminds me that the United Nations was established for world peace, development and human

On the eve of the United Nations Day last year, a group of Member States of the United Nations Environment Programme (UNEP) participated in the ceremonial Launching of the United Nations Global Campaign on Sustainable Nitrogen Management, 'Nitrogen for Life', in Colombo, Sri Lanka. Together, they declared to work ambitiously on reducing nitrogen waste in relation to anthropogenic alteration of the natural nitrogen cycle. The Colombo Declaration, which is attached herewith is the principle outcome document.

Gotabaya Rajapaksa
President of Sri Lanka

21 January, 2020

Original Plan (Edinburgh, March 2020) COVID-19 → **1st e-briefing**
2 full days *2 x 2 hours*

Today (8 June)

INMS Briefing of Member States for the
International Nitrogen Assessment (INA)

Task

**Inform & Invite Member
States advice on INA**

Tomorrow (9 June)

Identifying what is needed from the
Interconvention Nitrogen Coordination
Mechanism (INCOM) with input from
UN Conventions & Programmes

**Invite Member States advice
on needs for INCOM**

**Establish Task Team on
Terms of Reference (ToRs)
for INCOM**



Soil Quality



Climate



Water Quality

**Why
Nitrogen?**
\$200 billion of N
wasted annually



Biodiversity

Everywhere & Invisible across the SDGs



INI commits to support
a global goal to
halve nitrogen waste.
Bali, Oct 2018



Scope & Approach



**Data need
& concepts**

**Improved management practices,
Mitigation, Adaptation**

C1:

Tools and methods
for understanding
the N cycle

C2:

Global & regional
quantification of N use,
flows, impacts & benefits of
improved practices

**Informing
modelling
requirements**

C3:

Regional
demonstration
& verification

**Options & Scenarios,
including
Cost-Benefit-Analysis**

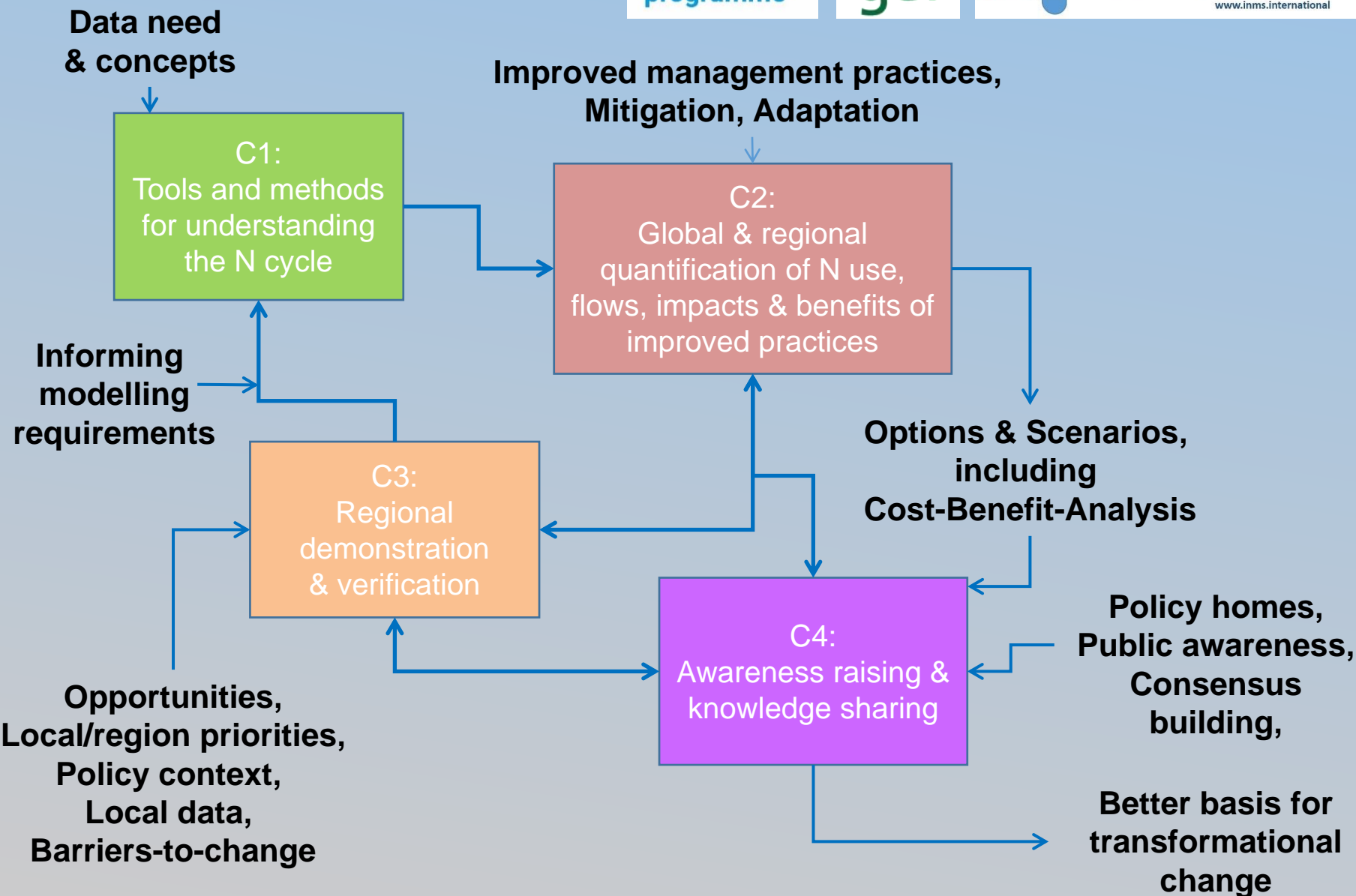
C4:

Awareness raising &
knowledge sharing

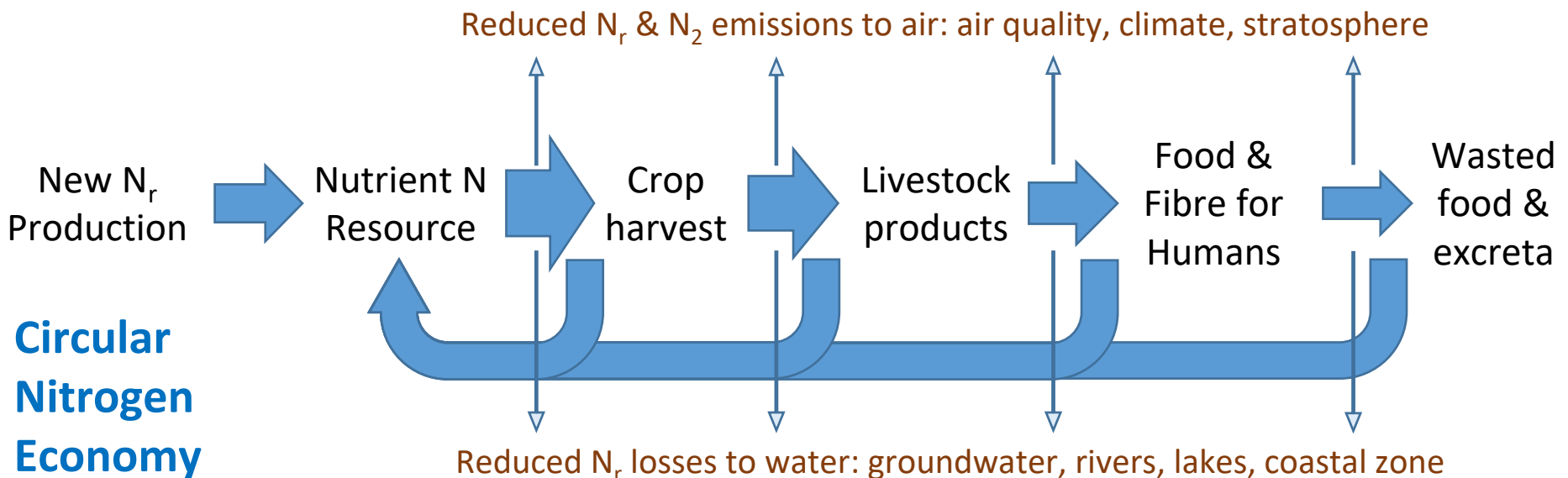
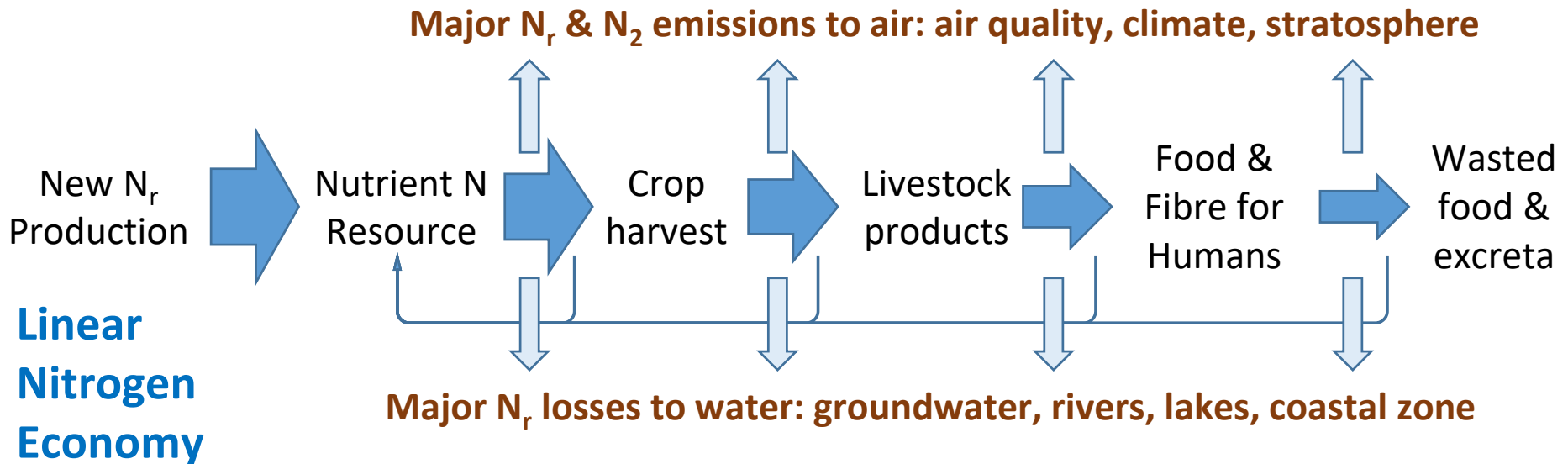
**Policy homes,
Public awareness,
Consensus
building,**

**Opportunities,
Local/region priorities,
Policy context,
Local data,
Barriers-to-change**

**Better basis for
transformational
change**



Towards a Nitrogen Circular Economy



What will INMS deliver?

A platform for better cooperation across science and policy helping to overcome the barriers.

Guidance on joining up mitigation and adaptation options and strategies, linked to circular and green economy thinking.

A global assessment of the threats and benefits of human alteration of the nitrogen cycle and the opportunities for improvement.

A forward look of what may happen if the problem is ignored.

Other Products Guidance Documents, Special Reports, Databases, Event engagement & mobilization etc.

TODAY

Outline of the International Nitrogen Assessment



- State-of-the-Science and Policy in major published volume (Cambridge University Press for 2022, 600 pp)
- Builds on experience from regional nitrogen assessments (Europe, India, US, California etc)
- Summary for Policy Makers, Technical Summary Docs
- Title

**The International Nitrogen Assessment:
From multiple challenges to joined-up solutions**

**The International Nitrogen Assessment:
Evidence and actions for sustainable development**

Views of Member States and MEAs?

Contents of the International Nitrogen Assessment



Foreword Executive Director UN Environment to be invited

Summary for Policy Makers (c. 1 page bullet points, plus c. 15 pages inc. figures)

Technical Summary (c. 15-20 pages inc figures)

(+ Potentially other summaries: for business; resources for schools)

1. Introduction: From pollution problems to nitrogen opportunity

(sets the scene also in relation to the 4th Nitrogen Revolution)

Contents of the International Nitrogen Assessment



Part A: The global nitrogen challenge: problem definition

2. Nitrogen, environment and sustainable development

(Overview of current status of environmental challenges and relationships across the SDGs)

3. Nitrogen and food security

(Reflection on how nitrogen to feed the world, relation to the four nitrogen revolutions, key regional differences)

4. Nitrogen in current national and international policies

(Current status of national policies and examination of the potential for lessons between different regions and countries)

5. Towards a holistic response to the global nitrogen challenge

(Working across policies and regions, options and rationale, building on ideas from UNEA resolution 4/14, Colombo Declaration, INCOM etc., inc. scenarios definition).

Contents of the International Nitrogen Assessment



Part B: Foundations for Assessing the Nitrogen Cycle

6. Approaches and challenges to assess nitrogen impacts

(Concepts, nitrogen cascade, DPSIR approach (Driver, Pressure, State, Impact, Response); Impacts matrix & relations; Regional differentiation)

7. Performance indicators for the global nitrogen cycle

(Nitrogen budgets approaches, nitrogen use efficiency definitions, scales and examples to illustrate)

8. Approaches and challenges to assess N pressures & distribution

(Quantifying key pressures and states, across systems, measurement, monitoring, inventories and relationship to global models)

9. Approaches and challenges to value nitrogen benefits and threats

(Methodology for Cost-Benefit Valuation for nitrogen)

Contents of the International Nitrogen Assessment



Part C: Global integrated assessment across the nitrogen cycle

10. Assessment of global and continental scale total nitrogen budgets
11. **WATER:** Flows on impacts of nitrogen on freshwater, coastal & marine systems
12. **AIR:** Emissions and air quality impacts of nitrogen on human health & crops
13. **GREENHOUSE:** Impacts of anthropogenic nitrogen use on global warming potential and radiative balance, and role of nitrogen for stratospheric ozone depletion
14. **ECOSYSTEMS:** 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

Contents of the International Nitrogen Assessment



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)

Contents of the International Nitrogen Assessment



Part E: Grasping the future challenge

25. Key actions for better nitrogen management

(Measures, 'packages of measures' & Nitrogen Top 10)

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

30. Nitrogen and public communication



International Nitrogen Assessment Launch 2022

Nitrogen taint alert

Warning over nitrogen footprint

INA Authorship

500 experts,
50 countries &
100 organizations

Scientifically independent
Global scientific consensus
for the nitrogen world

Pollution à l'azote : une lourde facture

Vervuiling met
stikstof kost
miljarden

Farming
Union defends use of nitrogen in
high-octane climate change debate

The International Nitrogen Assessment

From multiple challenges
to joined-up solutions