A2.3

The Nitrogen Measures Database

The guidance document on “options for integrated nitrogen management”

Activity 2.3 /Component 2
Will Brownlie / Albert Bleeker

INMS-5 Meeting

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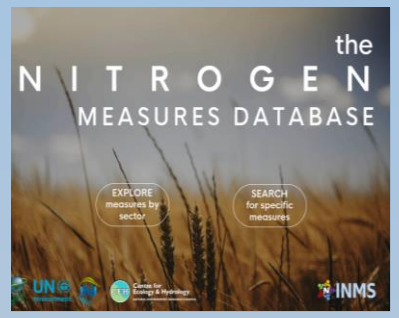
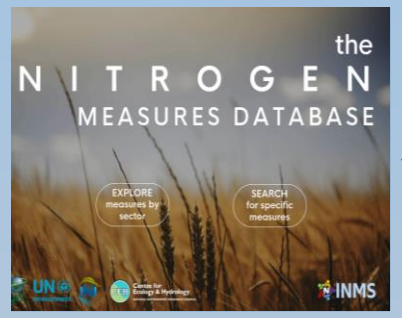
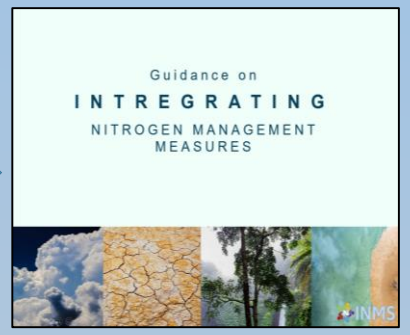


A database: providing extensive information on all measures to reduce N losses and improve N use efficiency across the whole N cycle

Interactive guidance document: on how to integrate measures (i.e. discussing synergies, challenges, regional context) and the importance of delivering a joined up approach across the N cycle





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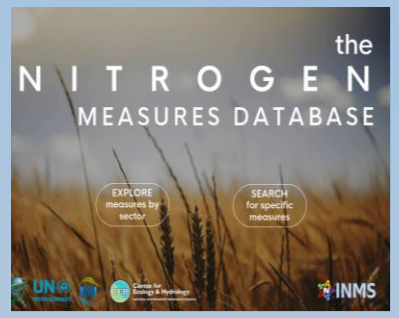

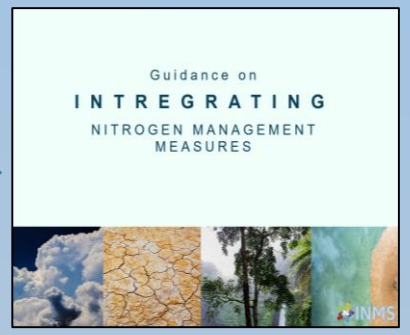

A database: providing extensive information on all measures to reduce N losses and improve N use efficiency across the whole N cycle

Chapter for INA

Conclusions of this work will feed into a single **chapter in the International Nitrogen Assessment**.

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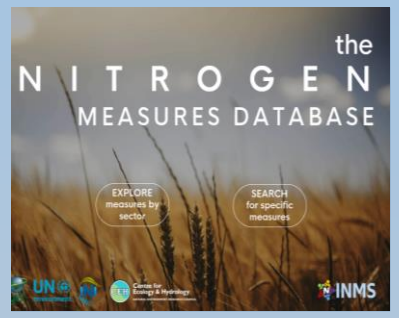
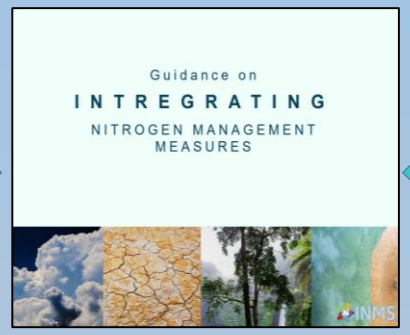




Top ten measures

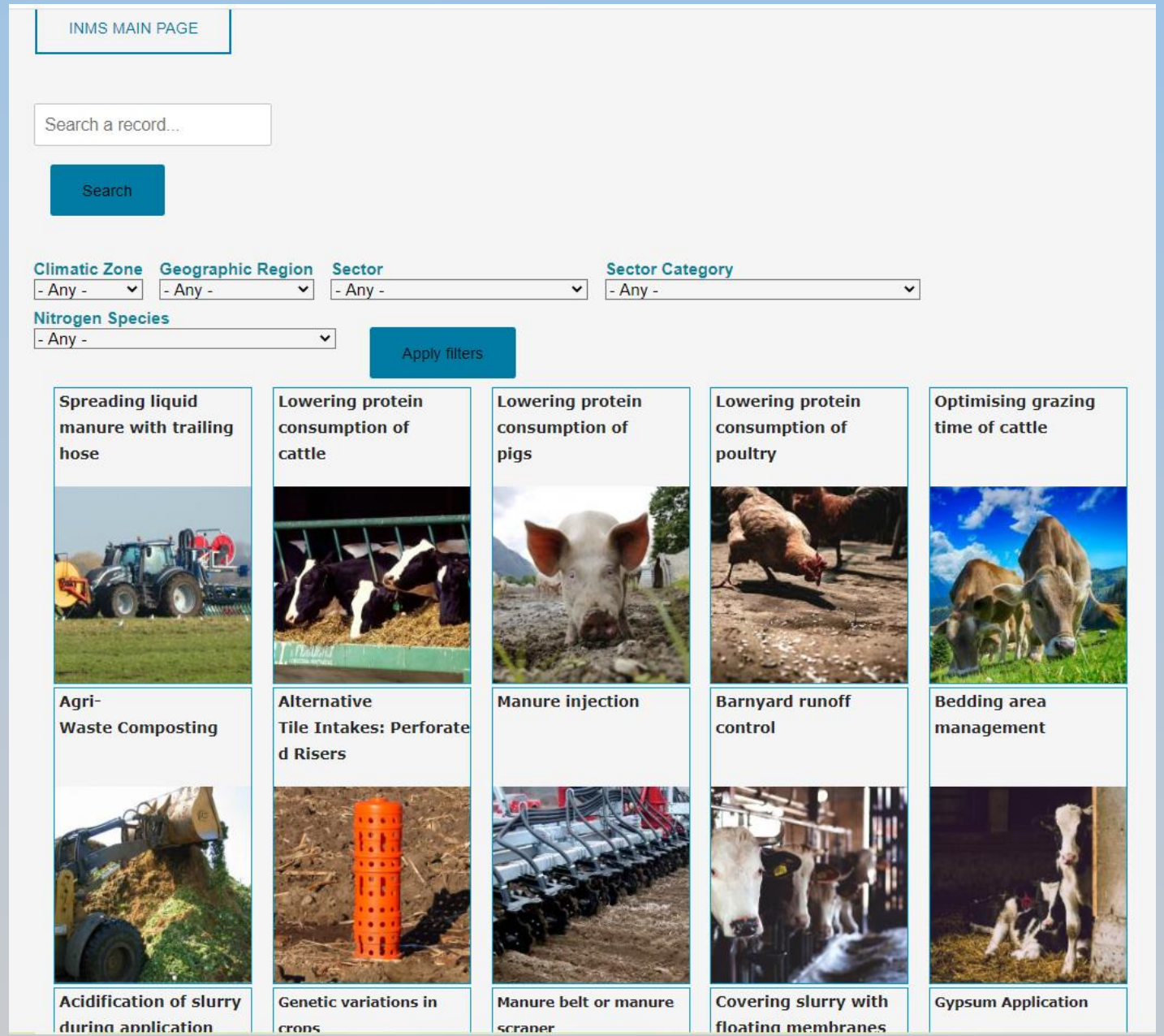
A database: providing extensive information on all measures to reduce N losses and improve N use efficiency across the whole N cycle

Expert survey to establish a "top-ten measures" to reduce N losses and improve N use efficiency across the whole N cycle

Chapter for INA

Conclusions of this work will feed into a single **chapter in the International Nitrogen Assessment**.


the
NITROGEN
MEASURES DATABASE
EXPLORE measures by sector
SEARCH for specific measures
gef
UN environment
INI
CEH
Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL
INMS



Progress

Database:

- Reviewed over 60 documents & >500 papers
- Created a nitrogen measures working group
- Held three workshops (2 x Edinburgh, 1 x Nairobi)
- Presented the database both nationally and internationally

- Built a web based searchable database – modified three times
- Defined datasheet measures template – modified three times (four?)
- Selected the measures to cover N cascade
- ~50(of 120) draft measures have been submitted for editing

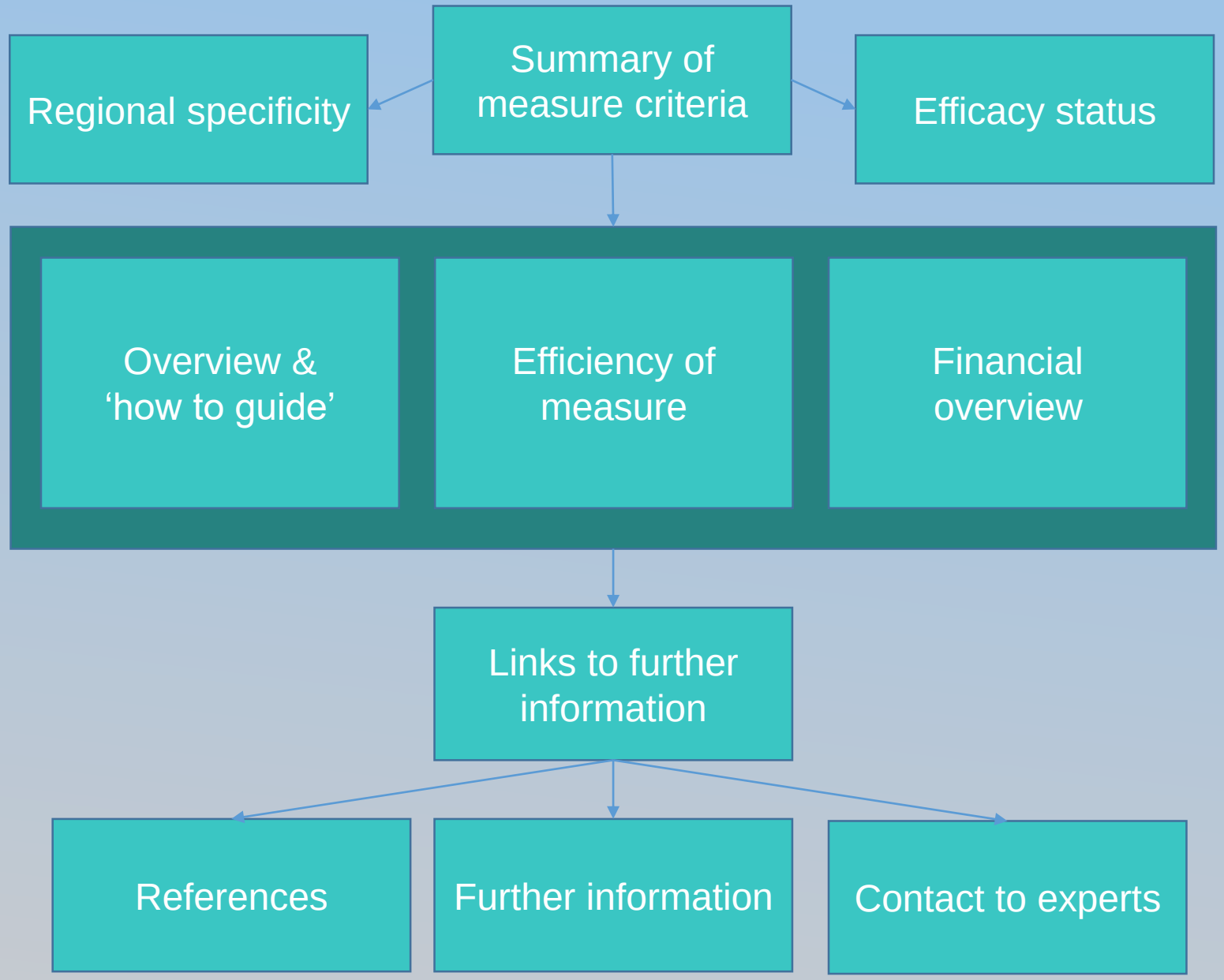
Guidance document & INA chapter

- Draft plan for both

Top ten measures

- Developing selection criteria, and methodology to select top ten measures, which may extend to regional top tens for each UN global region.

Each datasheet for each measures provides the current information that is available in the literature under the following categories



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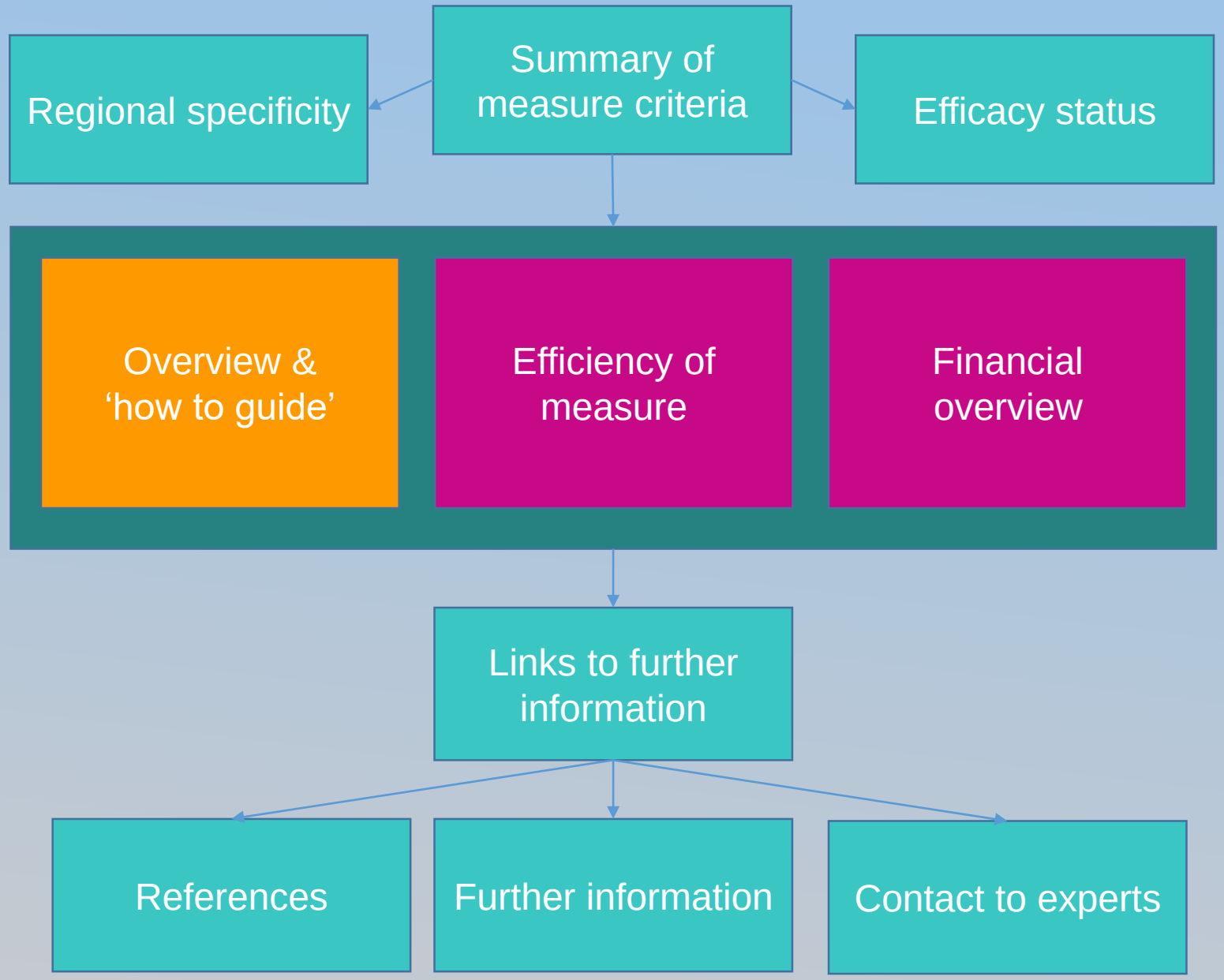
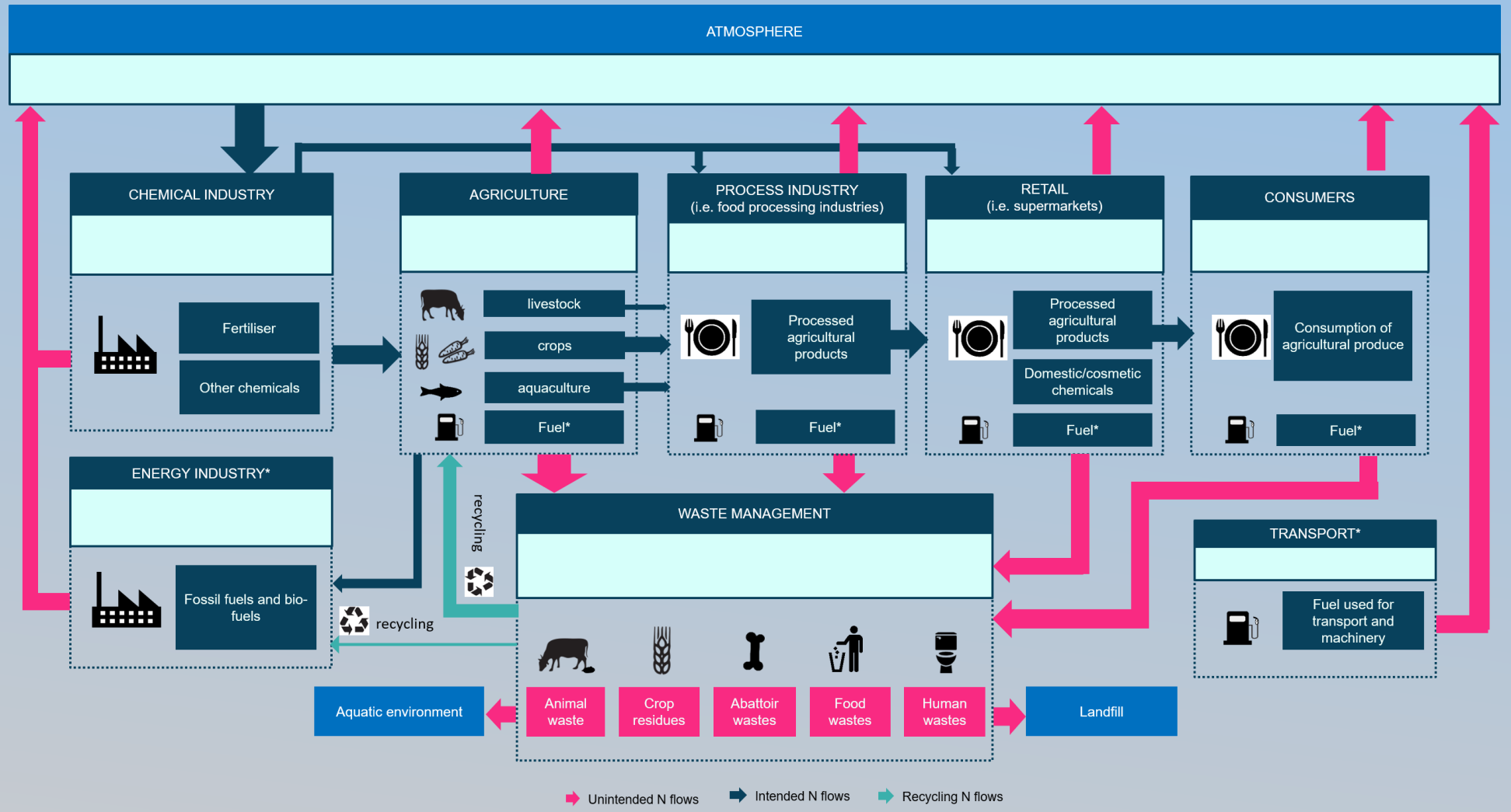


Example pages you will find on the database for each measure

1: measure overview (incl: challenges & co-benefits)
2: NUE of measure (if available)
3: Financial information
4: references – links to further info

That database covers measures for all N flows throughout the N cycle, and promotes circular economy approach



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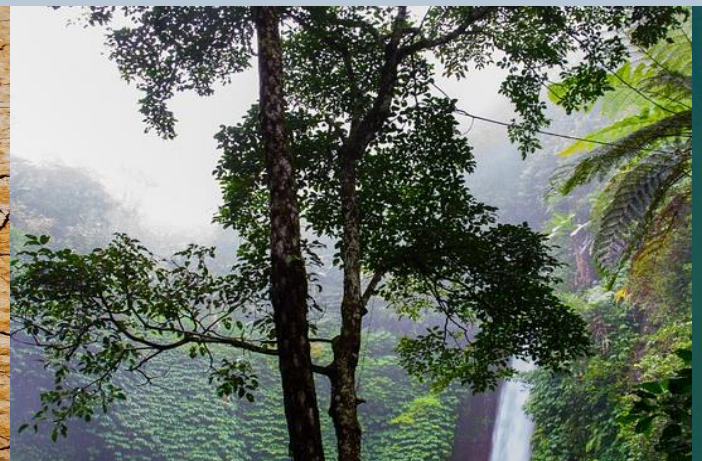
Guidance on

INTREGRATING

NITROGEN MANAGEMENT MEASURES






GUIDANCE DOCUMENT “Opportunities for nitrogen mitigation”

To include a top 10 measures (globally, by region?)

AUDIENCE: **Policy makers**, environment agencies and extension services

- PURPOSE: Outline why we should, and how we can integrate nitrogen measures.

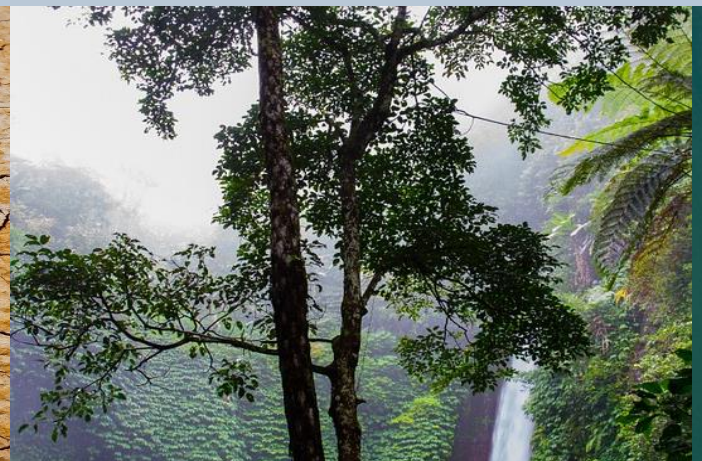
- WHAT IT WILL LOOK LIKE:
- Concise, highly visual, easily accessible/readable.
- 50-100 pages
- Printed
- Web-based (interactive PDF) versions.

To include top 10 measures (globally, by region?)

1. Bayesian decision tree: high resources / high accuracy
2. Multi-criteria analysis: medium resources / medium accuracy
3. Expert opinion: Low resources / medium accuracy?

Combination of 2 & 3?



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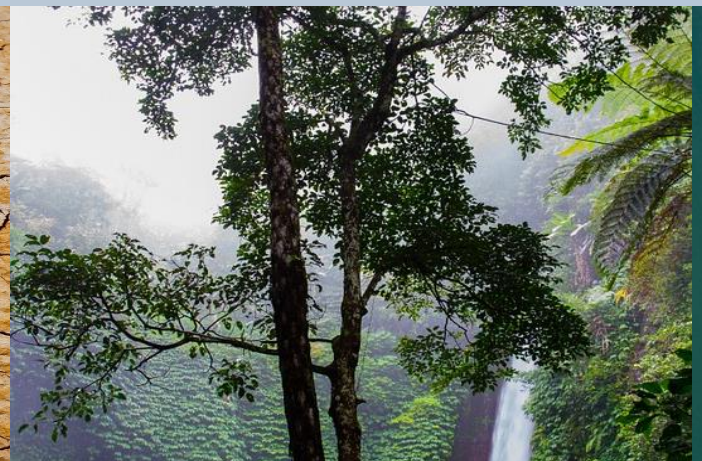
Multi Criteria Analysis

Selection criteria for top ten measures to reduce nitrogen emissions would be based on

1. environmental,
2. technical,
3. economic,
4. political, and
5. social aspects



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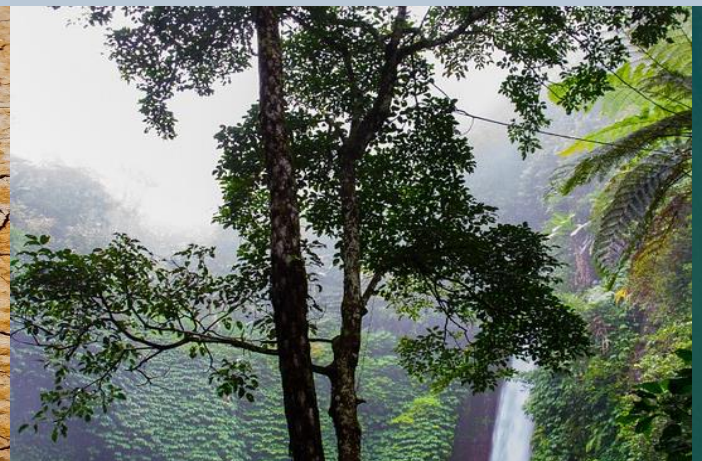
	Environmental			Technical					Economic		Political		Social				E	T	E	P	S	Index
	Crit 1	Crit 2	Crit 3	Crit 1	Crit 2	Crit 3	Crit 4	Crit 5	Crit 1	Crit 2	Crit 1	Crit 2	Crit 1	Crit 2	Crit 3	Crit 4						
Measure 1																						
Measure 2																						
...																						






Expert Opinion

Expert Survey with weighting preference for selected 10 measures

40+ experts given list of measures
100 chips, distributed between 10 measures selected
Agree a statement on what we want the measures to achieve – environmental improvement?
Provide instructions to avoid participant bias

Key (current) challenges:

- Developing a network of contributors to provide content and review each measure (perhaps >150 measures).
- Addressing regional differences in the suitability of measures, (review by demo regions, or major UN regions? i.e.

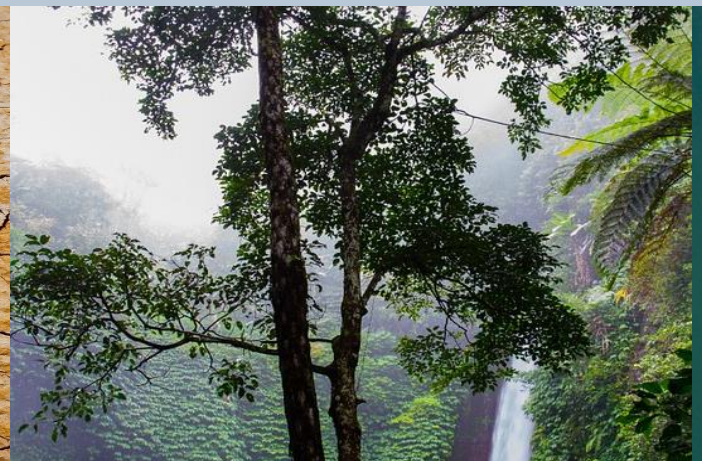
  Africa (UN-ECA)
  Asia and the Pacific (UN-ESCAP)
  Europe (UN-ECE)
  Latin America and the Caribbean (ECLAC)
  Western Asia (EN-ESCWA)

- Ensuring database and content are useful for the audience

We need

- Measures content providers
- Reviewers
- Regional leaders to help select top ten measures






WORLD RESOURCES INSTITUTE

Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL

ACTIVITY 2.5

Collation & synthesis of knowledge, experience & measures adopted by GEF and others on excess & insufficient reactive nitrogen

INMS

INMS4

SARA WALKER + CLARE HOWARD

objectives

- Collate and share case studies of successful interventions in the N cycle through GEF and other programs

- Identify and communicate knowledge gaps and key factors which increase the chance of success of an intervention

Key questions that we will answer

- Is nitrogen management changing as a result of GEF (or other) interventions?
- Based on learnings from past projects, how can stronger nitrogen approaches be developed in the future?

outputs

- Database and summary document on:
  - GEF nitrogen measures
  - nitrogen measures adopted by others

- Synthesis compendium supported by database on:
  - common themes
  - barriers to change
  - factors for success
  - etc.