

# First Stakeholder Workshop for the Global Nitrogen Assessment

London  
24-25 July 2012

**Organized by**



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The meeting was organized under the lead of the International Nitrogen Initiative (INI), a joint project of IGBP and SCOPE, in cooperation with the Global Partnership on Nutrient Management (GPNM) with financial support from UNEP/GEF project “Global foundations for reducing nutrient enrichment and oxygen depletion from land based pollution, in support of Global Nutrient Cycle”. The detailed agenda of the meeting and the list of participants are annexed to the report.

## Day 1

*Morning session: **Chaired by Sir Bob Watson***

### **Introduction: Mind setting**

1. After the general introduction, a presentation was given by Mark Sutton, including background information on the Global Nitrogen Assessment (GNA).
2. The discussion addressed:
  - a. Do we need a global nitrogen assessment and why?
  - b. Who are the customers that GNA would support?
  - c. What would be the GNA products?
  - d. What would be the expected consequences of a successful GNA?

The second part of the morning was dedicated to the authorization process for GNA.

3. The discussion recognized that much is already known about nitrogen sources, flows and its intended and unintended consequences. It was highlighted that:
  - GNA should be clearly targeted to support future policy and decision making among all relevant sectors. The analysis must be demand driven.
  - GNA should foster and integrate the work of regional assessments, including the European Nitrogen Assessment and the developing work on the USA, Chinese, Indian, African and South American nitrogen assessments, linking different scales.
  - GNA should be structured in a manner that it stimulates a wider societal dialogue. It should involve natural, social, economic and political scientists, governments, NGOs and communicators.
  - There is no global nitrogen convention, and little current appetite among governments to set up new institutions. The present challenge for N must be to work with and stimulate synergies between existing bodies.
  - The modest level of ambition in existing N relevant agreements points to the need to address the ‘barriers to change’, including those related to technical measures, lack of integration, human consumption patterns and societal aspirations.

4. There was agreement that: the science of nitrogen is out there, but there is a lack of its 'implementation'. This is also the problem with many existing assessments. This implied the need to link the teragrams of N flows to dollars (and science to implementation). The scientific analysis must therefore focus on information collection and integration as a basis to allow the translation to major economic and social messages to stimulate decision making.
5. It was noted that the lack of an existing global agreement on nitrogen could be a barrier limiting the political traction for a nitrogen assessment. Similarly, it should be considered who might oppose such an assessment, or its possible conclusions. Both supporters and opponents should be brought on-board in a fully transparent process to develop necessary consensus, and demonstrate the gains to be made by all parties.
6. While providing a basis to support future decision making, it should be made clear that GNA is not directed toward new treaty commitments (as the fear of these could form barrier against conducting the scientific and technical work). Work in GNA on the full costs/benefits of future decisions should quantify the consequences of N management choices.
7. The analysis must clearly highlight the economic gains to be made by improving nitrogen management. While a cleaner environment (with less adverse impacts on water, air, climate, biodiversity, soils) may be a powerful driver for some – the group, however, acknowledged that this was not the most powerful public and political driver. It must be demonstrated how each of *polluting sectors* (agriculture, industry, transport, waste management), *politicians* and the *public* will gain by improved nitrogen management. Net benefits for *food security*, *public health* and *green economy* must be quantified.
8. The discussion highlighted the need for both *global and regional elements* in GNA:
  - *Global analysis* is necessary to bring together the different nitrogen issues, as these operate from local/regional scales (N water and air pollution) to global scales (climate, food security, air pollution).
  - *Global analysis* is needed because of the global nature of barriers to change. For example, competition associated with world trade in agricultural products often cited as a barrier to improved N management.
  - For many regions, a *global framework* is needed to stimulate necessary regional assessment, while ensuring comparability of the regional efforts.
  - *Regional examples* are needed to share lessons learned, including bad and good management practices, relationship to adverse impacts and the benefits of change.
9. The discussion reflected on the chemical focus of *GNA: nitrogen or nutrient*, noting that:
  - Nitrogen is of especial interest because of its essentially unlimited potential for increase, while contributing to a web of multiple interactions.
  - A nutrient assessment with wider scope (including addressing P and micronutrients) would increase the complexity of conducting GNA, and could alter the 'centre of gravity', away from mutli-sector, multi-effect interactions (water, air, climate, biodiversity, soils) to a predominant focus on agriculture in relation to water pollution.

- Nitrogen links with multiple biogeochemical cycles, with the primary links differing by issue, e.g. nitrogen-carbon links for climate, nitrogen-sulphur links in air pollution, nitrogen-phosphorus links in water pollution, nitrogen-micronutrients in food security. In principle, all interactions should be addressed.
- Centering GNA on nitrogen has the advantage of tighter focus allowing a higher chance of success and a simpler communication strategy.

10. It was agreed not to take a final decision on the exact positioning and scope at this stage, as this would also depend on further stakeholder discussions. The working position taken at present is to centre GNA on the multiple issues related to nitrogen, while considering the interactions with other biogeochemical cycles relevant for each issue.

11. Further issues mentioned included:

- The need to show how reducing post-harvest waste and avoiding overconsumption of certain food categories can improve nitrogen use efficiency (NUE) and reduce N pollution, including scenario analysis.
- The need to relate the consequences of meeting food consumption targets/optima (minima and maxima) in both overfed and underfed parts of the world, relating the N pollution consequences to other social and health issues.
- The need for GNA to contribute to the development of a 'menu' of options/toolkits, allowing information and development of the messages to pass both ways between policy end-users and the science community.

12. It was agreed that the global N challenge is multi-sector, linking human consumption patterns, scientific and social analysis of impacts and barriers, cost-benefit analysis and future options. Key economic sectors to include are arable and livestock agriculture, electricity generation, transport and chemical industry, together with the product supply chains.

### Authorization Process

13. It was agreed that establishing a clear authorization pathway for GNA was essential to its eventual success, with agreed channels for using the results. The discussion addressed the challenges in the authorization process and options for adoption of GNA into different international processes.

14. Options for authorizers of GNA discussed included:

- Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES).*** This process has the advantage of being multi-issue, in which a nitrogen assessment could fit as a cross-cutting Thematic Assessment (for which provisions are being developed). However, the IPBES process is developing slowly and as a broad body will be subject to many different calls in different directions (e.g. CBD, CITES, Desertification Convention are included). *In short:* potentially a high impact route, but a slow and complex one.
- Intergovernmental Panel on Climate Change (IPCC).*** This process has the potential to establish special reports on key issues, which are again high profile.

The process towards agreement is slow, with complex formal procedures. This route would naturally lead to a GNA that is focused on climate change as the central issue, with other N issues treated to the extent that they interact with climate. *In short*: high visibility, but procedural challenges and scope limiting.

- c. **United Nations Environment Programme (UNEP).** There is potential for direct authorization under the lead of UNEP, with possible partner authorizers (note how IPCC itself is under joint authorization from UNEP and WMO). This approach allows a broad flexibility on scope, and may be easier to implement (e.g. approach of the Ozone and Black Carbon Assessment). It was recommended to engage fully the UNEP Governing Council as a basis for endorsement by the key countries. *In short*: a potentially flexible approach that needs further investigation.
- d. **Convention on Biological Diversity (CBD)** could be a lead authorizer directly, as N is already well established on the CBD agenda, including nitrogen pollution in the Aichi targets (INI being the delivery partner for this indicator). Given the increased application of the 'ecosystem services' approach, CBD authorization would allow a broad focus. Conversely, like IPBES, CBD is a busy of many issues, which may make it hard to achieve maximum visibility of GNA through CBD. *In short*: a relevant convention to some extent already engaged, which needs further investigation. INI/GPNM to offer side event on widening stakeholder involvement in GNA to the CBD COP-11.
- e. **Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA).** This process brings together governments and regional programmes and conventions on the marine environment, having recently conducted its third intergovernmental review meeting (IGR-3) in Manila, Philippines in January 2012. It is much smaller and more focused than CBD and UNFCCC: it has no legally binding protocols, focusing on action plans. The Governments attending the IGR3 asked the GPA secretariat to focus its attention for the next five years on 3 lead themes (nutrient management, waste water, marine litter). GPA has a specific need for nutrient assessment, with emphasis on protecting the marine environment. There is also potential to strengthen GPA to work in partnership toward joined up land-management for improve nutrient use efficiency, counting all benefits for water, air, climate etc. *In short*: a smaller focused programme, but highly relevant. Note that GPNM established under the lead of GPA has been endorsed by the governments through the Manila Declaration adopted during the GPA/IGR3.
- f. **Global Environment Facility (GEF)** is the environmental financing arm of the UN system, working in partnership with UNEP, UNDP, UNESCO, World Bank etc. The Scientific and Technical Advisory Panel (STAP) of through the GEF International Waters Focal Area recently made a report on coastal hypoxia, which identified a nitrogen assessment as a priority. Several recent meetings have been had with the STAP of GEF and Eric Davidson will soon attend the STAP meeting as he is requested to make a presentation of Global Nitrogen Assessment. UNEP has appointed a consultant (Peter Whalley) to work with INI and GPNM partners to

prepare a project concept which in GEF language called Project Identification Form (PIF) for submission to GEF Secretariat for funding under its International Waters Focal Area. At present the dialogue focuses on tuning the scope of GEF scientific interest within feasible procedures – bearing in mind a lead from International Waters branch and the simultaneous requirement for integration with other N related challenges to air, climate, biodiversity etc. Note also that GEF require a practical approach linked to case studies and demonstration of management options. *In short*: a key funding mechanism within the UN system with major catalytic potential.

- g. **Multiple Authorization and Role of Lead Countries.** Several of the above bodies could co-authorize GNA. It was noted, however, that even with organizations like UNEP, CBD, GPA and GEF standing behind GNA, it was vital to have support from leading countries in different world regions. Key active countries/bodies identified included: African Union, Brazil, China, EU, Germany, India, Netherlands, Philippines, UK, USA. This would require national dialogues with countries and regional bodies as a basis to confirm the key supporting countries.

15. **Financing issues related to GEF and other sponsors**

- a. Based on experience from previous assessments, the chair strongly recommended to establish a 'blind trust fund' managed by a GNA steering body to allow effective management of the resources. Peter Whalley is requested to investigate options and views from GEF. If we are talking about GEF resources e.g., project preparation grant then we must select an agency to lead this process, and for that UNEP will be the logical choice in the given circumstance.
- b. Regarding GEF lead, it was noted that procedurally, it is only the International Waters Focal Area that can easily take a lead, as the budgets under other domains are already tightly pre-allocated.
- c. Regarding financing, the approach of GEF is to seek a 1:5 level of co-funding. e.g. if GEF were to provide 5 million USD, then they would be looking for co-funding of the order of 25 million USD. Note that this co-funding can be a combination of a) additional cash contributions and b) contributions-in-kind from contributing organizations to which an estimated financial value is associated.
- d. Information on the co-funding of GEF proposals needs to be provided in two stages: a) Stage 1 for the Project Identification Form (PIF): an outline of willingness to support the project (indicative pledges), b) Stage 2, for the full proposal: agreement on co-funding contributions and contributions-in-kind. Based on the success of the pre-proposal and PIF, GEF may award a project preparation grant (max 200k USD) to develop the full project with necessary co-financing commitment, typically the full project document is submitted 1 year later.
- e. It is anticipated to prepare a Stage 1 proposal for submission in early Spring 2013, and a full proposal in Spring 2014. During the autumn 2012 further information would be sent out to stakeholders informing them of the path and timescales. All stakeholders, including contributors, are requested to consider the possibility to make cash and/or in-kind contributions, and to consider their requirements and priorities for GNA.

- f. It was agreed that key conferences could be used to hear the views of stakeholders and develop further buy-in. In addition to CBD COP11, the UNEP Governing Council meeting (2013) and the International Nitrogen Conference (Kampala, October 2013) are key milestones.
16. Conclusions on authorization process. It was agreed:
- a. to prioritize working with UNEP-GC and GEF in establishing the outline of GNA.
  - b. to engage further with CBD, including a side event at CBD COP-11, with a view to widening the stakeholder authorization and considering the possibility of CBD being a lead authorizer of GNA.
  - c. to engage further with GPA as a possible lead authorizer of GNA, especially considering its need for input in support of its nutrient management objectives.
  - d. to put the possible association with IPBES on the back burner, as this process is moving slowly. As GNA and IPBES develop the possibility for co-authorization could be revisited later.
  - e. to develop further contacts with a view to possible co-authorization with other bodies, such as OECD, World Health Organization, Food and Agriculture Organization, and regional contributions, such as the United Nations Economic Commission for Europe (UNECE Air and Water Conventions).

*Afternoon session: **Chaired by Prof Mark Sutton***

### **Relationship with the Global Environment Facility**

17. The discussion continued in further detail to describe the GEF proposal process. Evaluation of the first stage proposal (submitted early spring 2013) would be known in April 2013. It was recognized that the main challenge is to prepare the way with possible funding partners, both for actual funding contributions and contributions in-kind. It was emphasized that for GEF a GNA project must incorporate examination and demonstration of the policy options including case studies and pilot projects.

18. It was agreed that a central body would need to be responsible for managing the funding contributions with full transparency.

### **Discussions with different stakeholder groups**

19. The following comments summarize the discussions associated with key stakeholder groups, avoiding attribution by individuals.

### **Convention on Biological Diversity (CBD)**

20. With CBD being a convention, it is mainly a platform for discussion/network. CBD is not a funding party; normally the finances are run through GEF. At the moment there is no specific call for a nitrogen related assessment under CBD. CBD Secretariat can commit its

staff time as co-financing for the GNA if the scope of GNA appeals to them. This could be explored during the PIF development phase or full project development phase.

21. CBD has already established the link with nitrogen/nutrients, with the most obvious link with the Aichi targets - Target 8 (pollution). In the context of these targets, national parties have to have developed national assessments with respect to nitrogen loads by 2014. Assisting national parties to get this job done would be a very helpful 'deliverable' of a GNA and would fit well within the current CBD frame and its work on targets. Providing national parties with tools and information about required data for assessing the nitrogen loads for individual countries, is considered to be a helpful outcome. This could also help in identifying demonstration, pilot case studies are expected deliverables under GEF

22. Capacity building is recognized as being important for both CBD and GEF. There is scope for integrating: capacity building for national governments and information collection. Improving of monitoring systems is seen as an important part of the capacity building. See above

### **Organization for Economic Cooperation and Development (OECD)**

23. The interest of OECD in nitrogen links to a recent publication with an outlook to 2050, which had highlighted nitrogen as a key future challenge. This has placed N on the OECD agenda for the period 2013-14. Within this work there is a focus on nitrogen indicators, like the one that is proposed by the UNECE Task Force on Reactive Nitrogen.

24. Furthermore there is a focus on toolkits for policy development. The timing of the current GNA process is therefore very good. OECD normally provides the economic dimension to different processes and could be able to deliver input in that respect. Another item is 'Policy Dialogues', which OECD could contribute to when needed for the GNA.

25. The discussion supported that example countries be included, especially countries that are interested in going into policy changes within their territories.

26. There is a question about the timing, since short projects make it hard to fully explore the success of different measures. Reducing pollution mostly combines with reducing rates: however, this is very site specific and depends heavily on where you are on the 'growth curve'. Therefore, for examining the full consequences, a longer period might be needed.

27. The GNA has to come up with win-win solutions, such as improving farm productivity while reducing environmental impacts. Reference was made to a new report 'Sustainable intensification in agriculture': [www.fcni.org.uk/sites/default/files/SI\\_report\\_final\\_0.pdf](http://www.fcni.org.uk/sites/default/files/SI_report_final_0.pdf)

### **International Plant Nutrition Institute (IPNI)**

28. The International Plant Nutrition Institute is a non-profit organization that is supported by the fertilizer companies. At the moment there is much attention for 'green stewardship' environmental aspects, and it is recognized that more research is needed to get into these aspects in more detail, in which IPNI is involved.



29. The discussion highlighted that it would be important to as wide a range of industry involvement as possible. For example, this should include not only fertilizer producers, but also fertilizer retailers. In the same way, it was agreed that GNA should ensure that cost-benefit analyses demonstrate the relationships between net benefits at the farm gate and full cost-benefit analysis evaluating the wider societal/environmental costs and benefits.

### **Sustain**

30. Sustain, the alliance for better food and farming, is a UK charity which advocates food and agriculture policies and practices that enhance the health and welfare of people and animals, improve the working and living environment, promote equity and enrich society and culture. As such Sustain has a high interest in GNA so long as it goes beyond scientific analysis and addresses policy options that could be used in practice.

31. During the discussion, the point was raised by some that GNA should not try to address consumers directly, since nitrogen could be considered as too complicated an issue. Instead, it was suggested to address primarily the stakeholders that actually sell the articles to those consumers. They have a far more direct connection to the actual consumers. Note: A workshop N in the food chain is scheduled in Edinburgh at Centre for Ecology and Hydrology (CEH) on 8 November.

### **Food Climate Research Network (FCRN)**

32. The FCRN's aim is to increase understanding of how the food system contributes to greenhouse gas emissions and what we can do to reduce them. Its focus is broad, encompassing technological options, behaviour change and the policy dimension. FCRN welcomes involvement in the GNA process, and can offer information about the connection in the food systems. In general it was agreed that there is a real need for looking into differences between countries with deficits and excess nitrogen.

33. The discussion highlighted the need to bring key supermarket chains and the livestock sector into the preparation for GNA. The recommendation was made specifically to invite ILRI – the International Livestock Research Institute).

### **Department for Food, Environment and Rural Affairs (DEFRA), UK**

34. The Department for Environment, Food and Rural Affairs of the UK holds responsibility for policies on agriculture, fisheries, forestry and the environment, including mitigation of climate change. As such it has a high interest in the benefits and consequences of nitrogen use, including the development of management strategies. The UK, for example, is joint lead country of the Task Force on Reactive Nitrogen under the UNECE Convention on Long-range Transboundary Air Pollution.

35. The discussion noted key points about nitrogen relevant to many countries: we know what the problem is, and we have a good science base, but we do not currently have socially acceptable options to optimize the nitrogen losses. It was agreed that this concerns more than only agriculture; also the industry/traffic sources must be included in the discussion.

36. The discussion helped focus the question on what would a country gain from joining such a global undertaking as GNA. Why should an individual country co-fund this process? It was answered that having a global perspective on this subject may bring answers to the current barriers of change, expressed above. In this regard, it was reiterated that nitrogen is a global commodity, that includes global trade and global environmental impacts.

#### **China – UK Sustainable Agricultural Innovation Network (SAIN)**

37. It was noted that nitrogen issue is mainly driven by food security in China. Since the last 10 years, nitrogen use efficiency in China has been coming down. China has now started to recognize the nitrogen problem (water quality, greenhouse gas). Similarly, China recently started a study on 5 low carbon zones (low carbon economy). From the political level there seems to be some sort of support possible for a global assessment, although it might be difficult since there is a very clear focus on the internal Chinese 'market'.

38. The discussion noted that there are also activities underway in parallel developing the authorization for a Chinese / South East Asian regional nitrogen assessment process, which would nest within GNA.

#### **World Wide Fund for Nature (WWF)**

39. The World Wide Fund for Nature indicated how it is very interested in the overall undertaking of GNA. It was emphasized that WWF look at such issues holistically, including all sources of reactive nitrogen (transport, food, livestock, energy etc), and they would encourage a strong emphasis should be on consumption issues. The question was raised of the need to related N production and losses to "planetary boundaries". While doing that, we should move forward and address the causes, even though we perhaps don't know the answers with 100% certainty. The offer was made from WWF of its experience in bringing different groups together.

#### **Oxfam**

40. Oxfam is very interested in issues related to e.g. consumer choices, climate change. For the different environmental issues a more holistic approach is envisaged. Recognizing where the real levers for change are. In that context it must be stated that industry involvement is critical, also in terms of consumer behavior change.

41. Oxfam is exploring a regional-specific approach for the planetary boundaries, at the moment collecting data on inequity of 9 points for change (the 'doughnut' approach linking 'the environmental ceiling with the social floor'). They are interested to see who this could link with positive stories about the nitrogen issues in the different regions.

42. A future remark with respect to the GNA topics: there is a need for looking into the poverty alleviation aspect and difference between chemical/organic fertilizers.

#### **Day 2**

## **Discussions with stakeholder groups continued**

### **Brazil**

43. It was noted that agriculture is very important for Brazil. At the moment there is a tendency to look at agriculture as being an ecosystem service. Furthermore, in relation to nitrogen, sanitation is a problem, as well as air pollution (mainly through biomass burning). At the moment there is a good link between scientists and environmental policy in Brazil.

44. In general there is a problem related to gathering information with respect to atmospheric nitrogen compounds (measurements/modeling is not yet fully operational). However, more efforts are being put in there in the near future. It was also mentioned that there is currently a new proposal addressing nitrogen dynamics at different levels.

### **Planetary Boundary Initiative**

45. The work of the Planetary Boundary Initiative focuses on developing long-term planetary governance – working toward the possibility of an international declaration on Planetary Boundaries. The initiative is looking into developing the legal framework for Planetary Boundaries, in which nitrogen fits as one of the boundaries that is most exceeded. The Initiative offers to bring in the results of this search into the work for the GNA.

46. The Planetary Boundary Initiative expressed the interest to gather evidence of how successful global and regional agreements related to nitrogen have been so far. In particular, there was interest to learn from existing tools and market mechanisms used in other domains and see how the most successful approaches could be applied to nitrogen.

47. It was suggested in discussion that many large international agreements had been considered ineffective. In some areas positive movement is possible/available (e.g. the Convention on Long-range Transboundary Air Pollution). However, it was noted that the successes of such agreements are not easily transferable from region to globe or between continents.

### **International Geosphere Biosphere Programme (IGBP) and Future Earth**

48. The International Geosphere Biosphere Programme (IGBP) is one of the four large global research organization (next to e.g. diversitas, International Human Dimensions Programme, IHDP etc.) conducted under the auspices of the International Council of Scientific Unions (ICSU). It is mainly involved in bottom-up science work (with a total of 10,000 researchers).

IGBP has already a long track record when it comes to supporting nitrogen. IGBP is one of the early funding parties of INI. IGBP supports the work of INI toward establishing GNA, providing a mechanism to bring together science communities.

49. ICSU is currently in the process of developing the structure of its future programme, where existing and new activities from IGBP, Diversitas, IHDP are being reformed into a newly launched global initiative, “Future Earth”.

50. The discussion highlighted the potential also to engage with the **Belmont Forum** (the Council of principles to the International Group of Funding Agencies for Global Change Research, IGFA). There is an annual frequency of adopting new topics. Funding topics for 2012 focused on Freshwater and Coastal zones.

### **Additional Partners / Potential Funders**

51. As part of the PIF to be prepared for GEF, an indicative list of potential funders was identified. All participants are requested to investigate contact persons and additional parties with information sent to INI (Albert Bleeker).

### **Outlining objectives and key issues for GNA**

52. Two parallel break-out groups discussed the objectives and possible content of GNA. As a starter for the discussion, the objective of the recent European Nitrogen Assessment (ENA) was recalled:

- To review current scientific understanding of nitrogen sources, impacts and interactions across Europe,
- taking account of current policies and the economic costs and benefits,
- as a basis to inform the development of future policies at local to global scales

### **Report of Group 1**

53. The group discussed the GNA objectives, key topics, major sections and additional products.

54. The group proposed the following **objectives of GNA**:

- To assess the current status of nitrogen sources, impacts and interactions at global, regional and local scales,
- In order to inform the development of future decisions and policies that reduce pollution and its adverse effects in the context of meeting food, water and energy security objectives.

55. The following **key items** for a GNA were listed:

- Survey the state of scientific understanding
- Take account of current policies and the economic costs and benefits
- Consider the interactions and impacts through: air, land and water
- Assess the social impacts
- Identify the range of possible solutions, assessing advantages and limitations, compiling good practices.
- Address the potential and barriers to improving managed systems
- Contribute to capacity building toward the implementation of options
- Contribute toward achievement of targets x, y, z for climate, biodiversity, air quality, water quality, examining their N linkages and potential synergies.

56. The following **major sections** of the GNA were mentioned:
- Introduction
  - Context and Key Threats
  - Status
    - Scaling up and past trends
    - Indicators, drivers, condition, response
    - Global picture
    - Regional perspectives and case studies
  - Solutions and Options
  - Exploration of Options
  - Evaluation
  - Cost benefit, Social, Barriers to change, etc.
57. Furthermore, it was proposed that the GNA process should include additional products:
- Guidance document on preparing regional information and assessments
  - Guidance on the development of indicators
  - The regional N assessments
  - Global report, plus synthesis reports for different audiences
  - Multilingual translation of the key documents

## Report of Group 2

58. The discussion focused on three main aspects for GNA: objectives, clients and key items to be addressed.
59. A short discussion about the possible '**clients**' of the GNA identified the following:
- Governments (for national/international actions) including finance, environmental, agricultural, trade ministries.
  - International organizations, including existing international treaties
  - Industry and NGOs including charitable and philanthropic organizations
  - Groups involved in human behaviour and consumption patterns
  - National and international research centres on environment, health, economy etc.
60. With respect to the **key issues**, the following items were mentioned:
- Assessment of too little nitrogen vs. too much nitrogen
  - Well-being / poverty reduction
  - Climate smart agriculture linked to nutrient management
  - Pitfalls of overuse of nutrients
  - Need for a global approach with Regional supplements
  - Case studies for policies/instruments
  - Explaining the contrast between extremes
  - Global economics of nitrogen (trade)
  - General awareness / education
  - Balanced information on positive sides of nitrogen use

- Wastage and Recycling
- Psychology/culture in policies
- Regulatory/Voluntary approaches

61. Group 2 identified the following anticipated written **GNA products**

- book
- summaries for users
- regional assessments
- education/outreach products
- guidance documents
  - On making assessments
  - On indicators
- communication tools for different audiences

62. It was agreed that the messages from the two groups would be used to inform the development of a more detailed outline of the GNA, as a basis for further discussion with the GNA stakeholders.

### **Next Steps**

63. The following next steps were agreed:

- A short document will be prepared as a basis to inform other partners / funders / stakeholders of the GNA development and the of the preparation of a proposal to the Global Environment Facility
- The list of possible partners/funders is to be extended
- A first draft of the PIF to GEF will be constructed
- Stakeholders that could not join the meeting will be informed with this report
- A side event on Nitrogen and GNA will be proposed for the CBD COP-11 Hyderabad

## **Annex A: List of Participants**

### **Attendance**

1. Bob Watson, Chief Scientific Adviser, DEFRA, UK
2. Anthony Cox, Head of Economy & Environ. Integration Division, OECD
3. Cliff Snyder, International Plant Nutrition Institute
4. Duncan Williamson, WWF, UK
5. Eric Davidson, President, Woods Hole Research Institute, USA / INI
6. Jan Willem Erisman, Director, Louis Bolt Institute, NL
7. Jean Ometto, INPE, Brazil
8. Kate Raworth, Senior Researcher, Oxfam, UK
9. Kath Dalmeny, Policy Director, Sustain, UK
10. Keith Bull, Former LRTAP Convention Secretariat, UK
11. Lisa Dittmar, Oxfam, UK
12. Peter Coleman, Air and Local Environment Division, Defra, UK
13. Peter Whalley, Consultant to UNEP/GEF
14. Tara Garnett, Food Climate Research Network, UK
15. Vicki Hird, Friends of the Earth
16. Wilfried Winiwarter, IIASA, Laxenburg, Austria.
17. Yuelai Lu, China-UK Sustainable Agriculture Innovation Network (SAIN)
18. Mark Sutton, CEH UK, Chair INI / Co-chair TFRN
19. Albert Bleeker, ECN The Netherlands/INI, Rapporteur

### **Apologies**

1. Alexander Romanov, EECCA Coordination Group of the Convention on Long-range Transboundary Air Pollution (CLRTAP), Russia
2. A.K. Singh, Deputy Director General, Indian Agricultural Research Institute Name of Indian India
3. Fusuo Zhang, Chinese Agricultural University, Beijing
4. Walt Reid and Kai Lee, Packard Foundation, USA
5. Anjan Datta, UNEP, Nairobi
6. Vincent Sweeney, UNEP, Nairobi
7. Mercedes Bustamante, Ministry of Environment, Brazil.

**Annex B: Agenda of the workshop**

**First stakeholder workshop for the Global Nitrogen Assessment**  
*London, 24-25 July 2012*

**Tuesday, July 24:** 0830-0900: Arrive at 1 Victoria Street, tea/coffee.

*Morning session (9.00 – 12.30): **Chaired by Sir Bob Watson***

1. Welcome, introductions and scope of the workshop  
Participants to introduce and express their interests.
2. Mind setting:
  - a) Why do we need a global nitrogen assessment?
  - b) Who are the customers that GNA would support?
  - c) What would be the GNA products?
  - d) What would be the expected consequences of a successful GNA?
3. Authorization Process:
  - a) Authorization options: which international treaties and other bodies
  - b) Provision by GNA support delivery of information in support of treaties etc.
  - c) Practical aspects of authorization: the stages needed, multi-authorization
  - d) Important of volunteers, lead countries and resources
4. Conclusions on the future strategy – outlining the Road Map

*Lunch break (12.30 – 13.30)*

*Afternoon session (13.30 – 17.00): **Chaired by Prof Mark Sutton***

5. Establishing criteria of possible funders, and relationship with the Global Environment Facility support.
6. Creative discussion on the subjects and content from stakeholders perspective (see supporting document from GNA Science Workshop, Paris 2009).

*Evening session (19.00 - ): Joint dinner : restaurant to be confirmed.*

**Wednesday, July 25:** *Morning session (9.00 – 12.30): **Chaired by Prof Mark Sutton***

6. Completion of the creative discussion.
7. Summarizing key conclusions and agreement of future actions.
  - Basis of the meeting report.
  - Funding and co-funding activities in relation to GEF and other sponsors
  - Development of further contacts
8. Any other Business.
9. Closing of the meeting