



Global Partnership on Nutrient Management (GPNM) Proceedings of the 9th Steering Committee meeting

April 24 – 26, 2017

**Ministry of Infrastructure and Environment, Plesmanweg,
The Hague, The Netherlands**

Overview

The **Global Partnership on Nutrient Management (GPNM)** was launched in 2009 to address the global challenges faced by the mismanagement of nutrients and nutrient over-enrichment. It is a global partnership of governments, scientists, policy makers, private sector, NGOs and international organizations. It responds to the 'nutrient challenge' – how to reduce the amount of excess nutrients in the global environment consistent with global development. The GPNM reflects a need for strategic, global advocacy to trigger governments and stakeholders in moving towards more efficient and effective nitrogen and phosphorous use and lower losses associated with human activities. It provides a platform for governments, UN agencies, scientists and the private sector to forge a common agenda, mainstreaming best practices and integrated assessments, so that policy and investment responses/options are effectively 'nutrient proofed'. The GPNM also provides a space where countries and other stakeholders can forge more co-operative work across the variety of international and regional fora and agencies dealing with nutrients, including the importance of impact assessment work. The work of the GPNM is advanced by a Steering Committee, a sub-set of the Partnership members and is supported by the GPA Unit of the Marine and Coastal Ecosystems Branch of the Division of Environmental Policy Implementation of UNEP, which serves as the Secretariat to the Steering Committee.

Meeting participants:

1. Ramesh Ramachandran	Director of the National Centre for Sustainable Coastal Management in the Ministry of Environment, Forest & Climate Change, India
2. Mark Sutton	NERC Centre for Ecology & Hydrology
3. Arnoud Passenier	Value Chains Sustainable Innovations, Ministry of Environment, Netherlands
4. Patrick Heffer	International Fertilizer Industry Association
5. Terry Roberts	International Plant Nutrition Institute
6. Albert Bleeker	Energy Research Centre of the Netherlands
7. Sasha Koo-Oshima	US Environmental Protection Agency
8. Roland Scholz	Global Traps/University of Zürich
9. N. Raghuram	GGs Indraprastha University
10. Michael Bowers	US Department of Agriculture
11. Clare Howard	NERC Centre for Ecology & Hydrology
12. Yuelai Lu	UK-China Sustainable Agricultural Innovation Network
13. Lex Bouwan	INI & Energy Research Centre of the Netherlands
14. William Brownlie	NERC Centre for Ecology & Hydrology
15. Debra Turner	Food and Agriculture Organization
16. Isabelle Vanderbeck	GEF, UN Environment
17. Habib El-Habr	GPA, UN Environment
18. Christopher Cox	GPNM Secretariat, GPA, UN Environment

DAY 1:

Welcome remarks and agenda review

Ramesh Ramachandran, Director, National Centre for Sustainable Coastal Management, Ministry of Environment, Forest & Climate Change, India and GPNM Chair

Steering Committee members were welcomed with thanks for the support shown as the new GPNM Chair.

The minutes of the 8th Steering Committee were reviewed.

Review of action items arising from the 8th Steering Committee meeting

	Action Items	Lead responsibility	Timeframe
	Policy		
1	Secretariat to schedule a teleconference with policy task team.	Secretariat, Arnoud, Mark, Debra	Pending
	Nutrient Use Efficiency		
2	Determine which members will be attending the INI meeting in Melbourne.	Secretariat	Done
3	Develop agenda for PTT and NUE meeting	Arnoud; Terry	Pending
	Partnerships – proposal for GNC Project closeout conference; update on new partners; Caribbean Platform resource mobilization		
4	Secretariat: to circulate the project document submitted to US State Department and minutes for the Caribbean meeting	Secretariat	Done
	Toolbox – planned training, Manila, Nov 2016; development of the MOOC on nutrient management		
5	Secretariat to circulate the source book for GPNM members	Secretariat	Done
6	Secretariat has emphasized the need to assist with case studies Submit relevant case studies for the MOOC.	GPNM members	Done
7	Submit case study from India	Ramesh	Done
8	Submit case study from USA	Andrew	Done
	Communications – update on website		
9	Secretariat: Draft policy brief	Secretariat	This week
10	Secretariat: circulate procedures for hosting GPNM website	Secretariat, Ramesh	In progress
	Proposal for new position of GPNM Vice-Chair		
11	Prepare and send out a TOR for the vice chair	Secretariat, committee	Done
	GPNM Operational Framework development		
12	GPNM members: to give feedback	GPNM members	ongoing
13	Secretariat to draft GPNM profile that can be used to send to prospective members organisations.	Secretariat	ASAP
	Proposal for publications procedure		
14	Prepare and send out a TOR for procedures for publications and also a version that be sent out to potential partners. With publications (policy and technical papers) with a GPNM	Secretariat	Done

	Action Items	Lead responsibility	Timeframe
	logo there needs to be a certain level of consensus.		
	IGR Preparation		
15	Investigate what actions countries are likely to agree to for assessment of what science is required.	Secretariat	Ongoing
	General Items		
16	Arnoud travelling to Indonesia for a Climate mission in Nov. Looking to engage with government and needs contacts.	Secretariat	
17	Arnoud has reported that a new document on the circular economy will be published soon. Once translated to English, to be distributed to the group.	Arnoud	Pending
18	Commence planning for the SC meeting in Europe around March 2017	Secretariat	Done

GEF-Global Nutrient Cycling Project

Christopher Cox - GPA/GPNM Secretariat, UN Environment

Presentation on the workplan and budget and progress status under each project component, highlighting pending work.

- Component A: Global Partnership on Nutrient Management
- Component B: Quantitative analysis of relationship between nutrient sources and impacts
- Component C: Scientific, technological and policy options – Nutrient Management Toolbox
- Component D: Application of quantitative source-impact modelling and best practices; ecosystem health card

Questions and comments:

Q: How are the case studies under the GNC project expected to contribute to beneficiaries? **Resp:** the case studies/in-country projects at Chilika Lake, Manila Bay and Laguna de Bay have contributed to efforts aimed at strengthening policy making within local government agencies, namely the Department of Environmental and Natural Resources and Laguna Lake Development Authority in the Philippines) the Chilika Development Authority (India) through the development and roll-out of tools for state of environment assessment with attention on nutrient pollution. The Manila Bay nutrient modelling outputs were presented at a 'Manila Bay Governors Forum' held in March 2017 and were well-received. In addition, the projects enhanced visibility on the issue of pollution among local communities; it is anticipated that this effort will contribute to positive behavior change particularly linked to livelihood benefits.

Q: Research contributions to sustainable nutrient management are not translating into wide-scale policy and application as expected. How we can translate the knowledge generated to concrete actions under protocols such as Regional Seas Programmes, and how might such efforts be made effective? **Resp.** Recognized that there is need to expand cooperation at regional level; not just investing in understanding impacts at global level.

Even where data is being collected, this may not necessarily translate behavior change; this has been the case of OSPAR (regional sea programme for the northeastern Atlantic) where a lot of information on nutrient pollution has been compiled but actions lag behind. There is continued need to concentrate at the regional level in order to meet national objectives. In recent discussions on the Circular Economy, governments are showing interest in the value of fertilizer equivalents. The United States has an interest on LBS protocol for Caribbean and how it can be implemented.

The 'science-to-policy' journey takes time depending on the country. There are limitations on what this small-scale GNC project can achieve at the regional and national levels. New partners to the GPNM should bring on board new networks and expertise.

Q: Who develops the project Exit Strategy, whether it will be evaluated in future and if stakeholders will be involved to develop? **Resp:** the Exit Strategy is developed by the Project Manager in consultation with other project partners; thereafter the Exit Strategy will be evaluated. **Isabelle Vandebeck reminded that Terminal Evaluation report will need to be developed.**

Update on UN Environment/GPNM 'Programme of Work' initiatives

Christopher Cox - GPA/GPNM Secretariat, UN Environment

Overview of the status of implementation of the internal UN Environment Project in support of the GPNM and the activities that are being supported. A total of US\$266,000 has been committed through earmarked contributions through UN Environment and external resource mobilization; Norway: US\$61,100, Sweden (Sida): US\$83,000 and from the US State Department (under UNEP Caribbean Environment Programme): US\$122,500 (another US\$122,500 is for the wastewater portfolio and therefore not counted here; otherwise the total amount raised would be US\$388,500).

Key initiatives that are ongoing includes the conduct an economic valuation study on environmental costs and benefits in the Rondonopolis municipality, upper Pantanal Region in Brazil. The consultancy is to be advertised and the work to run between June to December 2017. The US State Department funded project on best practices on nutrients and wastewater management in the Caribbean is to commence under the UN Environment Caribbean Environment Programme. There is an emerging collaboration with IBM on application big data in determination of fertilizer application efficiency and pollution control. The Steering Committee has been invited to comment on this proposed collaboration. Work is progressing well on the Massive Open Online Course (MOOC) on nutrients and wastewater management. The MOOC sourcebook is completed and the GPNM Steering Committee is encouraged to review it. Work is ongoing on the development of the online course delivery modules.

Questions and comments:

There is some concern over the approach being proposed by the IBM in fertilizer application efficiency from the IPNI. These comments will be communicated in writing to the Secretariat.

There should be deepened cooperation with the private sector in investment in good nutrient management practice to demonstrate profitability. These must be backed up by fiscal measures from government. Explore avenues for the platform to trigger behavioral change among food companies; perhaps involve European Phosphorus platform.

Q: How might best technology options be decided in private sector? **Resp:** It will be up to the enterprises to select the suitable technology based on how national regulations are implemented. It should be recognized that technology options may not be economical especially in the short term.

Demonstration of the Nutrient Management Toolbox

Albert Bleeker – Energy Research Centre of the Netherlands

Demonstrated the application of Nutrient Management Toolbox that was developed under the Global Nutrient Cycle Project. This included the use of the Nutrient Modelling calculator (that assesses nitrogen and phosphorus losses under different management regimes), along with the technical and policy best practices that are part of the toolbox resources and linked to the calculator tool in assessment of nutrient outcomes based on management options.

Questions and comments:

Q: Can the modelling calculator capture small scale farming scenarios – how scalable is it? **Resp:** the tool works at the watershed level, so more national in scope. The work under the project was linked to the work under the GEF-TWAP project where the same tools were applied in the estimation of nutrient loads to Large Marine Ecosystem from watershed basins.

Q: Why was the Index of Coastal Eutrophication (ICEP) selected as the SDG indicator of nutrient pollution in the marine environment and how does it work? **Resp:** the index is mainly based on the Redfield ratio - ratio of nitrogen to phosphorus in the water body which provides important indicator of which nutrient is limiting eutrophication and response in terms of occurrence of harmful algal blooms (HABs).

There is need to establish appropriate benchmark(s) for the indicator and understand how what deviations from the 'desired' benchmark level means in terms of response/intervention. **Resp:** further work is required to validate the research across countries but has proven to be a challenge in validating the data from some of the global modelling, although there has been work in France in Belgium. **Suggestion - need to develop a simple way of communicating the concept to enhance understanding among stakeholders.**

Q: How long have these tools (the toolbox) been available, how many users are accessing and is there any way of tracking this? **Resp:** There is not a system in place for tracking and work needs to be done in improving the uptake by stakeholders – marketing of these tools in a proper manner needs to be done. **Suggestion: when the toolbox is completed a paper be developed and disseminated via journal(s).**

Briefing - Training of trainers' workshop on use of nutrient toolbox

Lex Bouwman - Energy Research Centre of the Netherlands

Presented a summary of the main outcomes of the training-of-trainers workshop that was held in Manila, Philippines in March 2017. This workshop was under Component B of the GEF-Global Nutrient

Cycle Project. A total of 12 participants from research institutes across various geographic regions attended – from Egypt, Kenya, India, Namibia, Sri Lanka, Bangladesh, Senegal, Colombia, Philippines and China. The training aimed to build capacity among specialists on the use of the nutrient management toolbox, specifically on application of the nutrient modelling calculator, and applying the methods used in modelling in Manila Bay watershed through use of datasets from their own geographic locations. The aim is that these trainers (and their institutes) will then be resources for roll-out of training within their own geographic regions.

Questions and comments:

Q: How were participants able to validate the results from the exercise? **Resp:** the participants brought their own data and had a sense of how realistic the outputs were, although validation admittedly will be difficult – this has to be checked against observations. This will be a work in progress.

Q: Was the modeling based on linear or differential relationships? **Resp:** Model assumed simple linear within ranges of conditions. It should be noted that when considering extreme conditions non-linear relationships may not hold. In modelling extreme conditions ‘coefficient approaches’ may be applied where the values are obtained from non-linear relationships. The model used here (in the toolbox) works with the ‘normal’ range of circumstances, hence this assumption has to be clear to users.

Q: What are the next steps in application and development? **Resp:** the model will likely need to be modified to enhance performance based on experience in use in the various regions over time. One lesson learned is that for future training, there is need to engage participants well in advance of the training activity so that they are familiar with the model needs which allows them to collect the needed data for the training.

Q: What have the trainers done with the knowledge and skills gained? **Resp:** This has to be assessed.

Consideration should be given to application in temperate regions; through training in these regions.

The **Toolbox needs to be publicized via technical and scientific journals** and the **GPNM needs to encourage the first cadre of trainers to train others**. There is need to **develop a Toolbox manual as a guideline to the users**, something that is being done under the closing phases of the GEF-GNC Project.

Q: Can the model can be applied to evaluation of climate change influences on freshwater and prediction of harmful algal blooms? Perhaps build in an early warning aspect. **Resp:** Some of this work was already done under Component B of the GEF-GNC Project. **A paper on the experience should be developed for dissemination via the GEF-IWLEARN platform** so that it can be picked up by the other GEF projects that have needs for such a tool.

Suggestion: the GPNM draft a letter to countries/governments announcing the availability of the tool and the need for national contribution and engagement in its continued development and validation.

DAY 2:

Status update GEF-Towards an International Nitrogen Management Systems (INMS) Project

Mark Sutton - Centre for Ecology & Hydrology

Overview presentation on the status of implementation of the GEF-INMS Project under the various components Component 1: Tools for understanding and managing the global nitrogen cycle; Component 2: Global and regional quantification of nitrogen use, flows, impacts and benefits of practices; Component 3: Demonstration and verification of full-nitrogen approach at regional/national/local levels; and Component 4: Awareness raising and knowledge sharing.

Questions and comments:

Q: What is the precise role of the GPNM in the management of the project? **Resp:** the GPNM is part of the Project Management Board and Policy Advisory Group. Given the scope of the project there are other stakeholders groups besides GPNM that are similarly represented; have established appropriate procedures to gain advice from the GPNM.

Need to consider stronger representation from the Asia region in the upper layer of project coordination as it appears to be biased toward specialist agencies from the European region. **Resp:** this representation is largely due to the operational considerations however this will be looked at in further planning of the project. **Q:** Who are the individuals who sit on the project management board? **Resp:** Given that the project was recently signed, the process of nominating individuals from agencies is still underway.

Need to be realistic on coming up with aspirational targets, must be feasible and avoid political statements that may not be entirely backed-up by science principles. **Resp:** The report '*Nitrogen on the table: the influence of food choices on nitrogen emissions and the European environment*' provided some very relevant targets; the role of scientists is to make such information available to policy makers. Countries need to have easy access to this information along with relevant country directives that could be brought to fora such as the United Nations Environment Assembly (UNEA).

The FAO could also be a good policy intermediary in supporting the efforts of UN Environment, the GPA and GPNM. In this regard **integration of the work of FAO in livestock and that of the livestock partnership could be optimized.**

The INMS Project intends on having a special session during the upcoming IGR-4 to contribute to awareness-raising and advance planning work on various project components.

Caribbean GPNM Platform on Nutrients and Wastewater management initiative

Christopher Cox – GPA/GPNM Secretariat, UN Environment

Overview provided on the Caribbean project under the GPNM Caribbean Nutrient Platform funded through a grant from the US State Department. The project focuses on nutrient and wastewater management in Jamaica and Costa Rica, along with support to the GPNM and Global Wastewater Initiative Caribbean platforms at a cost of US\$ 245,000. The project duration is two years under the implementation of the UNEP Caribbean Environment Programme (CEP) and the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA). Activities to commence; funding is being internalized between the State Department and the UNEP Caribbean Regional Coordinating Unit.

Questions and comments:

The International Plant Nutrition Institute (IPNI) has specialists based in Costa Rica that can provide technical support to the project.

The Caribbean project could be linked to project work in Bhitarkanika, a coastal ecosystem in Odisha in eastern India, to the Caribbean and INMS project. The Bhitarkanika project is being funded by the Japan International Cooperation Agency (JICA). There are many potential interlinking elements as this area is close to Chilika Lake and work done under the GEF-GNC Project and it would be useful to see how all this may be applicable and scaled to other regions. The Bhitarkanika project and elements related to nutrient management could be considered as contributory to the GPNM.

Nutrient management and the global policy arena - Advancing the phosphorus management agenda

Arnoud Passenier – Ministry of Environment, Netherlands;
Will Brownlie - NERC Centre for Ecology & Hydrology

Highlights of work done by the phosphorus task team (PTT) to date were outlined. There have been challenges however in terms of follow-up. **The PTT needs to determine those science-policy areas that it may best contribute to, and what approaches and strategies it can employ to achieve this.**

Addressing phosphates in detergents is an area that attention can be paid to. In terms of resource availability, stock of rock phosphate for fertilizer production is available to supply for couple of thousands years, but it is a highly unevenly distributed resource that has implications for food production and economies.

The GPNM and the PTT could contribute to efforts at the global level to pull together the work of the many agencies working on the topic. This may be something aligned to the efforts of Global-TRAPS. It must be recognized however that realistic goals need to be established – focus should be on small but concrete steps.

Will Brownlie provided an update in the status of development of a briefing note on the phosphorus issue. The document has benefitted from several inputs from the GPNM. It is at a point where it can be brought to final production by the Secretariat.

Questions and comments:

There is some divergence on the discussion on losses and phosphorus use efficiency. This could be addressed in a consensus document that could be prepared by the GPNM. It was noted that as much as 30% of phosphorus produced does not show up in supply chain. In the literature there is wide variance on how P use efficiency is estimated/considered. There are large uncertainties on the runoff aspects of the P cycle. **The PTT should convene a special experts workshop to discuss the issue in-depth.** However need to be mindful that concentrating on definitions does not hasten move to decisive action – this needs to be considered by the GPNM. The focus should be on how to make interventions in the value chain that have greatest impact. This could be achieved through demonstration cases.

The IFA is currently doing work in sub-Saharan Africa on supply chain for fertilizers that within which phosphorus task team can collaborate.

The meeting agreed that the PTT should invest in the convening of a 'roundtable' meeting/forum on definitions.

The P policy brief in fact contains strategic directions for attention at the policy and technical levels. The Centre of Ecology and Hydrology/University of Edinburgh has secured a grant from to assist with the development of a consensus document on P management.

The GPNM (PTT) should ultimately aim to secure resources for a global phosphorus project that will allow for meaningful investment in addressing the topic although it needs to be understood that if such an initiative is to be fielded to the GEF it may not be supported given that the GEF is moving away from global research type projects (e.g. INMS). There is more focus on on-ground application and integrated food-water-energy nexus type projects.

At the IGR-3 there was a pronouncement on the need to consider resource-efficient growth opportunities with respect to recycling phosphorus. This involves the need for enhanced scientific evidence around application of different approaches that may be best suited to cropping systems. The Global Wastewater Initiative (GW2I) emphasizes considerations of the economics of wastewater and how to effectively capture nutrients from wastewater for recycling into other uses. UNEP's International Resource Panel could be engaged to support efforts in this regard. UNEP's GEF-Caribbean Regional Fund for Wastewater Management Project is aimed at promoting innovation in wastewater management and recycling; cross-cutting lessons from this project on nutrients and linkages to wastewater reuse could be useful to bring to the IGR-4 and UNEA-3.

The GPA is pursuing innovative financing opportunities through public-private-partnerships to feature at the upcoming IGR-4. There is need to seek out similar opportunities within the nutrient management portfolio. There will be a call for voluntary commitments for investments in sustainable solutions at the IGR-4 and UNEA across the focus areas of the GPA; nutrients, marine litter and wastewater.

Roland Scholz gave a brief presentation on recommendations for further work on the P management agenda highlighting three focus areas: (1) Support to a long-term/permanent institutional node that focuses on phosphorus; (2) Advance efforts to address phosphorus recycling to address losses via water solubility, and (3) Advocate for reduction in P in detergents based on work in the Philippines.

Update - GPA Fourth Intergovernmental Review Meeting (IGR-4) & Third Global Land-Oceans Connection (GLOC-3) Conference

Habib El-Habr – Global Programme of Action for the Protection of the Marine Environment from Land Based Activities, UN Environment

Overview of the Global Programme of Action and its upcoming major meetings to be held in Bali, Indonesia in October 2017; the Forth Inter-Governmental Review (IGR-4) and Third Global Land-Oceans Connection (GLOC-3) Conference.

A key challenge faced by the Programme in its governance has been the long (5-year) intersessional gap between one intergovernmental review and another, during which time there tends to be limited feedback/interaction from the Governments on the work of the Programme. Compounding this are when there are changes of country focal points with loss of intuitional memory and continuity in engagement. Financing of the Programme has been a challenge over the years. In its outlook the GPA is seeking to develop news ideas for sustainable financing including revisiting replenishment of the GPA Trust Fund.

The GPA also wants to develop a portfolio of large projects with financing from the GEF and the Green Climate Fund, including support from relevant private sector with whom the Programme can collaborate with. There is good potential for investments in the wastewater sector financed through instruments such as revolving funds. Ideas are welcome on similar collaborations in nutrient management; perhaps look at the issue of detergents and moving to P-free formulations. The GPA considers its key role acting as a bridge between the governments and stakeholders in addressing marine related pollution.

On the structure of the GLOC (the technical feed-in to the IGR), it will feature 3-hour parallel sessions that will focus on the issues under the three GPA global partnerships. During these sessions, emerging issues will be discussed and presented to the IGR-4 for consideration to be incorporated within the GPA's work plan for the next 5 years. Discussions could consider formulation of draft resolutions that may be carried toward the UNEA through country endorsement. The GLOC will also feature a session on emerging issues. **The GPNM steering committee members are requested to contribute ideas.**

Questions and comments:

Addressing the long intersessional gap period is necessary because it is fundamental in promoting GPA ideas and engaging countries. Countries need to recognize how they will benefit by engaging with the GPA; the Programme and the GPNM needs to be marketed. Governments need information on how to deal with their challenges in a sustainable manner. The Regional Seas Programmes are key mechanisms for implementation of GPA activities within the regions.

Q: Does the GPA have national focal points and is any potential for synergy with the International Maritime Organization in areas of mutual interest? **Resp:** National focal points have been designated to interact with the GPA during the IGR meetings however, the roster of focal points is outdated for several countries. There is need to ensure there are ongoing interactions with the countries to ensure the focal points remain active and engaged in the work of the Programme.

Q: Is there an opportunity for a discussion within the scope of the GPA that is broader than land-ocean pollution? **Resp:** There could be arguments for consideration of other types of pollution, notably air pollution as it also has a nutrient management dimension that contributes to land-ocean pollution. However, countries have the mandate to direct the Programme in terms of the types of pollution that are to be addressed in the context of resource availability.

The GPA should keep abreast of the GEF strategic directions in capitalizing on its next replenishment cycle to start from July 2018, that has seen a reformulation toward a series of 'impact programmes' of high relevance to the GPA. This new GEF funding orientation is broadening the circular economy approach to include nutrients. The impact programme related to Healthy Oceans is one which the outcomes of IGR-4 may influence in its shaping. The GCF as a funding mechanism needs to be considered with its focus on mitigation and adaptation. The GEF replenishment stands at US\$4.4 billion while that of the GCF is at US\$400 billion.

Work of the GPA work has contributed to freshwater assessment which has been reflected in SDG 6 elements on protection of freshwaters. The GPA should consider establishing linkages to the work of the International Center for Environmental Management of Enclosed Coastal Seas (headquartered in Japan). Opportunities for collaboration in work on ocean acidification should be explored.

Q: What is the relationship between the work of the GPA (and the IGR), the UN Ocean Conference on SDG 14 and the Our Oceans Conference, and how might these efforts be harmonized? **Resp:** with the IGR the focus is on joint implementation of SDG 14 and SDG 6 where they overlap on pollution of freshwaters to the marine environment.

It was suggested that the GPA consider rebranding its name to help it resonate more easily with external audiences and stakeholders. Resp: This has been under internal discussion for some time and this is being given favorable consideration. This should go along with more intensive marketing of the GPA and its partnerships.

Update - 3rd Session of the United Nations Environment Assembly (UNEA-3)

Habib El-Habr – Global Programme of Action for the Protection of the Marine Environment from Land Based Activities, UN Environment

The third session of the United Nations Environment Assembly will be held over 4 to 6 December 2017 in Nairobi, Kenya. The Assembly aims to deliver a number of tangible commitments to end the pollution of our air, land, waterways, and oceans, and to safely manage our chemicals and waste. The IGR-4 outcome will be presented at the Assembly for adoption by the member states.

Questions and comments:

With respect to pronouncement of new UNEA resolutions, caution should be noted, given the capacity of UN Environment to implement these resolutions.

The INMS Project would like to contribute inputs to the formulation of UNEA resolutions where relevant to the nitrogen pollution issue. Related and possibly a feeder event to contribute any UNEA resolutions

on air pollution is an upcoming Convention on Long-range Transboundary Air Pollution (CLRTAP) meeting in Geneva. This will be of relevance to the GPA/GPNM.

It should be noted that countries will need to make resolution submissions in advance as these need to be decided in good time ahead of the UNEA. Advancing a resolution related to air pollution with the linkage to nutrient pollution will be welcome; Canada has interest in leading this effort, however there has to be close cooperation with other supporting countries.

In this UNEA, UN Environment will restructure the event so that there are fewer side events, as in the past UNEAs the many side events competed with each other and presented challenges for small country delegations to attend.

DAY 3:

Review of the draft GPNM Charter (operational procedures)

Christopher Cox – GPA/GPNM Secretariat, UN Environment

The key highlights of the draft GPNM Charter was presented. The Charter is a compilation of the rules of procedure for the partnership. The document will enable the GPNM better communicate its mandate, expectations associated with membership, serve as a tool for soliciting new membership and enhancing transparency in the governance of the partnership.

Questions and comments:

Q: How will the GPNM approach expanding engagement of the private sector engagement and what is expected of these new partners? How can the GPNM adequately respond to these stakeholder needs?

Resp: The GPNM can play a role as a broker for stakeholders; bringing partner together and fostering closer collaboration. A key area of support will be to bring solutions that work in countries to others; apply down to the community level.

There has to be understanding of what will motivate countries to participate in the partnership. It should be appreciated that the topic of nutrient management tends not to capture high-level attention; is not attractive compared to the topic of climate change. The main issues in the climate change arena are around carbon emissions and methane; nitrous oxide emissions are on the periphery of the discussion. The issue of nutrient management is indeed featured in considerations related to climate change, but tends to be embedded in agriculture.

Brokering collaboration should not be viewed as the main function of the GPNM; there has to be efforts applied in bringing solutions and supporting implementation. Industry has to be involved. The GPNM as embedded in the GPA has more of an oceans focus but there is a clear need to look at nutrient use through the supply chain. **Q:** Is the GPNM creating a demand for the role it claims to serve among stakeholders? If the GPNM has access to solutions then how does it match to demands? Need to 'spin' the nutrient management agenda more with food security (widen from marine pollution) and health considerations where immediate and tangible results can be shown. This is what governments need to show to their electorate and will result in buy-in.

There are already relevant frameworks that GPNM can patch on to and engage wider stakeholders. **Efforts should be made to involve potential partners such as World Farmers Organization (WFO) among others.** The upcoming IGR presents an opportunity to do so. The Secretariat however should be aware of the structural limits and areas of competent influence of partner agencies so as to define how partners can most effectively contribute. In India the N management agenda lies across very many agencies which has proven to be challenging in implementing policy and technical solutions. The same will obtain at the global level. **It is suggested that a SWOT analysis be conducted to assess the comparative advantage of GPNM in delivery on aspects of its mandate and identify its competitive advantage.**

The GPNM may consider development of a demonstration initiative looking at nutrient efficiencies across a supply chain. 'Agriculture growth corridors' are concepts that look at this aspect and the IFA is involved in these initiatives which are business-driven partnerships. The GPNM could connect to these in expanding partnerships. The GLOC could be used as an opportunity to facilitate this type of partnership brokerage.

Arnoud Passenier volunteered to look at the GPNM mandate statements and make them sharper and relevant to target stakeholders; he will prepare a summary paragraph to be inserted at the start of the GPNM Charter document.

The meeting agreed that the Policy Task Team needs to be revived; **the task team members, Arnoud Passenier, Debra Tuner, Sasha Koo-Oshima, Mark Sutton and Patrick Heffer were tasked to produce a vision statement for the GPNM and review of approach of the partnership to contribute effectively to the IGR-4.**

Appointment of a GPNM Vice-chair

Yuelai Lu – UK-China Sustainable Agricultural Innovation Network; Nomination Committee

Overview on the nomination process of the candidate to fill the position of the GPNM Vice-Chair (as tasked to the Nomination Committee). This was in keeping with the newly established protocol for identification and nomination of a Vice-Chair. On review of alternates, the committee presented for consideration by the Steering Committee Professor Mark Sutton to serve in the position.

The Steering Committee accepted the nomination of Mark Sutton as the GPNM Vice-Chair.

Approval of new GPNM Partners

The following partners have expressed interest in joining the GPNM. They are:

- Department of land management, Zhejiang University, China. Primary contact: Baojing Gu
- Department of Land management, Institute of Soil Science, Chinese Academy of Sciences, China. Primary contact: Xiaoyuan Yan
- Cranfield Soil and Agrifood Institute, Cranfield University, UK. Primary contact: Ruben Sakrabani
- Plymouth Marine Laboratories, UK. Primary contact: Andrew Rees

The Steering Committee approved the membership requests.

There was interest in reaching out to Unilever in the context of addressing phosphates in detergents and encouraging them to join the GPNM; **Mark Sutton and Arnoud Passenier have contacts to be passed on to the Secretariat for further action.** **Debra Turner will assist in reaching out to the World Farmers Organization.**

Update on GPNM Regional platform

Christopher Cox – GPA/GPNM Secretariat, UN Environment

To date the GPNM has launched two Regional Platforms; for Asia and the Caribbean. Alignment between the platforms and the Regional Seas Programmes is being sought. There has been organization for a launch of a platform for the Africa region later in 2017. A draft agenda has been prepared and will be finalized closer to the proposed meeting date.

Questions and comments:

Q: How dynamic are the Regional Seas Programmes in supporting and delivering on the anticipated role of the GPNM nutrient platforms – how innovative are they in advancing solutions? **Resp:** the Regional Seas Programmes are relevant as they have associated land-based pollution protocols that countries have formally ratified under legal convention, which carries obligation to implement. Hence this makes GPNM alignment with the Regional Seas Programmes a feasible mechanism in the Regions.

It was noted that the GEF-INMS project linkage to the South Asia Co-operative Environment Programme (SACEP), the Regional Seas Programme for South Asia is a good example of a cooperation framework on the nutrient management agenda.

There is need to be opportunistic and work closely with the Regional Seas and their Land-Based Sources and Activities (LBSA) Protocols that in many cases are implementing large-scale projects on marine pollution from land-based activities. The GPA and by extension the GPNM through its platforms can deliver assistance to the countries on addressing nutrient (and other) pollution.

Caution needs to be exercised in how much additional bureaucracy is imposed in setting up these regional platforms where they may be dominated by government; where this is then reflected at the Steering Committee level could prove challenging in getting things done. Must be efficient in the structures established.

Taking the model from GEF-IWLEARN, what is required is to get practitioners to dominate these communities of practice mechanisms, like the GPNM Platforms. **Consideration should be given to nominating ‘champions’ and practitioners in the regions who can help create awareness among the public and stakeholders.**

N. Raghuram gave a presentation on the work currently being done in the South Asia region under the International Nitrogen Initiative and specifically the Indian Nitrogen Assessment. Greenhouse gas emissions, particularly N₂O are of significant concern and are drawing national attention. There are opportunities for linkages under the GPNM regional platform for that region.

Review of communications strategy

Christopher Cox - GPA/GPNM Secretariat, UN Environment

Presentation on the main elements of the revised GPNM communications strategy.

Questions and comments:

Suggestion: To complement outreach, key **statistics that appear in the GPNM publication 'Our Nutrient World' could be updated and presented in simple easily understood formats.**

The GPNM membership could take opportunity to participate in webinars hosted by FAO.

The GPNM could seek out prominent persons as champions who could advance messaging and utilize high level fora for presentation. The report '*Nitrogen on the Table*' was presented at the European Parliament with significant visibility. **Alliance could be made with the Climate and Clean Air Coalition for widened outreach.**

Review of the Nutrient Challenge GPNM Website

Albert Bleeker – PBL Netherlands Environmental Assessment Agency

Demonstration of the revised GPNM website highlighting the updated/new functionalities. Recommended for long-term management to **appoint at least 3 web administrators**, with one as the lead. The majority of information has been already migrated from the old website; new material is still being uploaded. It was reminded that **bio/profile information on some of the steering committee members is still missing and that this information should be provided as soon as possible.**

An important consideration is that the best management practice database of the toolbox continues to reside on WRI's servers and this may be a risk should WRI makes changes to hosting arrangements. The website will need continuous enhancements over time notably in adding new information to the BMP databases and enhancing the knowledge sharing platform in general, so that it can be engaging to users.

The meeting agreed that the current website is significantly improved over the previous version and that **arrangements should be pursued to look into transitioning the website to another host with the wind-down of the ECN contract** under which the website was developed. The intention is to host the website on the servers of the National Centre for Sustainable Coastal Management of India. The Centre (through R. Ramesh) has agreed to take over the responsibility. A formal agreement is to be drafted.

Update – Development of Massive Open Online Course (MOOC) on nutrient and wastewater management

Christopher Cox - GPA/GPNM Secretariat, UN Environment

The Sourcebook that forms the basis for the MOOC has been completed. **The GPNM Steering Committee is encouraged to review the document and provide comments.** Work is ongoing on the

online course delivery modules. The collaborators are Concordia University and Knowledge One from Montreal, Canada.

Questions and comments:

In consideration of the TORs, it is not quite apparent how the linked/integrated approach to nutrient management is being captured. Something that could be considered for inclusion is scenario trade-offs between nutrient capture by constructed wetlands and the potential for addressing atmospheric emissions using conventional methods.

May be useful to **pull out constructed wetlands in a two-page format and highlight the state-of-art in nutrient capture and recycling**; focus on farm applications and present the benefits but pitfalls in application.

Steering committee members are encouraged to continue make inputs to content and review during the development of the MOOC.

Resource mobilization for future work

Isabelle Vanderbeck – GEF Task Manager, UN Environment

Under the 7th GEF replenishment cycle the GEF Secretariat has reformulated how funding is to be allocated with a view to enhancing synergies across various thematic areas so that resources are not deployed in a 'siloed approach'. The GEF Sec has defined 15 'Impact Programs' valued to the tune of approximately US\$ 200 million, of which 5 are relevant to the work of oceans. These are:

- Healthy oceans
- National capital
- Environmental security
- Circular economy
- Green infrastructure

These will be complemented by the existing focal area funding streams, namely Climate Change, International Waters, Land Degradation and Biodiversity.

Questions and comments:

With the wind-down on the GEF-GNC Project, the GEF-INMS will be the major initiative under UN Environment that is looking at the nutrient management agenda. The project will seek to build synergies with other initiatives to lever additional resources. The GPA/GPNM needs to also continue to seek out funding support and importantly draw on countries to make needed contributions.

Meeting summary and closing remarks

Ramesh Ramachandran - GPNM Chair

Good that the GEF-INMS Project has started off and is hoped to continue the work that was started under the GEF-GNC Project that will be wrapping up. Although there are recognized challenges in raising funds, there have been some successes. Out of the commitments made in this meeting it is urged that the tasks teams continue with their work, notably the Policy task team to contribute a strategic outlook that can be discussed in the GPA Intergovernmental Review, the Communication task team to seek out new volunteers to help finalize the communication strategy and the Phosphorus task team to work on the recommendations emerging from the meeting.

Thanks were extended to the GPNM Secretariat for organizing the meeting, the GPA Coordinator Habib El-Habr, and the GEF Task Manager Isabelle Vanderbeck for joining the meeting. Thanks were extended to the attending Steering Committee members and in particular to Arnoud Passenier and his team on behalf of the Government of the Netherlands for hosting the meeting.



Photos from the meeting are on the GPNM Flickr photo site at
<https://www.flickr.com/photos/140082532@N06/albums/72157691223835411>

Action items arising from the 9th Steering Committee meeting

	Action Items	Lead responsibility	Timeframe
	GEF-GNC Project		
1	Terminal Evaluation report will need to be developed – need to commence planning	GEF task manager & Secretariat	
	Nutrient Management Toolbox use and uptake		
2	Develop a simple way of communicating the concept to enhance understanding among stakeholders	Secretariat – through WRI engagement	
3	Develop a paper on function and use for dissemination via journal(s).	Secretariat – through WRI engagement	
4	Encourage the first cadre of trainers (from Manila) to train others	Secretariat	
5	Prepare paper on the experience for dissemination via the GEF-IWLEARN platform	Secretariat – through WRI engagement	
6	Draft letter to countries/governments announcing availability of the tool and the need for national contribution and engagement in its continued development and validation	Secretariat	
	Policy		
7	PTT to determine science-policy areas that it may best contribute to, and what approaches and strategies it can employ to achieve this	A Passenier	
8	Develop consensus document on losses and phosphorus use efficiency and definitions – via a special experts workshop and/or roundtable	A Passenier	
9	Consider development of a demonstration initiative looking at nutrient efficiencies across a supply chain	Secretariat (planned initiative in Brazil)	
	GPNM Operational Framework development		
10	Consider GPNM mandate statements and make them sharper and relevant to target stakeholders; prepare a summary paragraph to be inserted at the start of the GPNM Charter document	A Passenier	
11	Produce a vision statement for the GPNM and review of approach of the partnership to contribute effectively to the IGR-4	A Passenier, D Tuner, S Koo-Oshima, M Sutton, P Heffer	
	Partnerships		
12	Involve potential partners such as World Farmers Organization (WFO) among others	D Turner	
13	Identify ‘champions’ and practitioners in the regions who can help create awareness among the public and stakeholders	Secretariat	
	Communications		
14	Convert statistics (updated) that appear in the GPNM publication ‘Our Nutrient World’ to simple easily understood formats - infographics	Secretariat	
15	Appoint at least 3 web administrators for the website	Secretariat	

	Action Items	Lead responsibility	Timeframe
16	Bio/profile information on some of the steering committee members still missing - provide as soon as possible	Secretariat – supported by A Bleeker	
17	Finalize arrangements to transition the website to alternative host	Secretariat	
	Other		
18	Develop a two-page synthesis on constructed wetlands to highlight the state-of-art in nutrient capture and recycling	Secretariat	



Agenda

Global Partnership on Nutrient Management (GPNM) 9th Steering Committee meeting

Date: 24-26 April 2017

Venue: 24th: International Water House, Bezuidenhoutseweg 2, The Hague

25th & 26th: Room F 00.37, Ministry of Infrastructure and Environment, Plesmanweg, The Hague

Time	Agenda item	Discussant – lead facilitator
DAY 1		
Opening segment		
14:00 – 14:10	Welcome remarks and agenda review	GPNM Chair
14:10 – 14:30	Review of the Minutes of the 8 th Steering Committee meeting	Secretariat, UN Environment
(1) Project initiatives		
14:30 – 16:00	GEF-Global Nutrient Cycling Project	Project Management Unit
	Overview of workplan and budget	(Secretariat)
	Component execution status	
	<ul style="list-style-type: none"> • Component A: Global Partnership on Nutrient Management • Component B: Quantitative analysis of relationship between nutrient sources and impacts • Component C: Scientific, technological and policy options -nutrient management toolbox (link below) • Component D: Application of quantitative source-impact modeling and best practices; ecosystem health card 	
	Mid-term review toward the terminal evaluation	Isabelle Vanderbeck, UN
	Update on progress to address deficiencies	Environment & Project
		Management Unit (Secretariat)
	Questions & general discussion	
16:00 – 16:15	BREAK	
16:15 – 17:30	UN Environment - GPNM (Programme of Work) Project	Project Management Unit
	Overview of workplan and budget	(Secretariat)
	<ul style="list-style-type: none"> • Component A: Knowledge generation • Component B: Piloting solutions and best management practice replication • Component C: Awareness-raising and advocacy • Component D: Partnership and network development 	
	Questions & general discussion	
17:30 – 18:30	Advancements in sustainable nutrient management – Netherlands and Europe	Herman Walthaus & Wouter de Buck, Dutch Nutrient Platform

Time	Agenda item	Discussant – lead facilitator
DAY 2		
09:00 – 10:00	Live demonstration of nutrient management toolbox <ul style="list-style-type: none"> • Technical and policy best practices • Nutrient modelling calculator • Overview of application of toolbox; reflections on Manila training of trainers workshop 	Albert Bleeker, PBL Netherlands; Lex Bouwman, PBL Netherlands
10:00 – 11:00	GEF-Towards an International Nitrogen Management Systems Project Overview of workplan and budget Component execution status <ul style="list-style-type: none"> • Component 1: Tools for understanding & managing the global N cycle • Component 2: Global & regional quantification of N use, flows, impacts & benefits of practices • Component 3: Demonstration and verification of full-nitrogen approach at regional/national/local levels (building on existing / planned interventions) • Component 4: Awareness raising and knowledge sharing 	Mark Sutton, Clare Howard, CEH
11:00 -11:15	BREAK	
11:15 – 12:00	GEF-Towards an International Nitrogen Management Systems Project (cont'd) Questions & general discussion	Mark Sutton, Clare Howard, CEH
12:00 – 12:30	Caribbean GPNM Platform nutrient/wastewater management initiative (US State Department) Overview and status <ul style="list-style-type: none"> • Work plan elements 	Secretariat/Project Management Unit
	Coastal Ecosystem Management initiative <ul style="list-style-type: none"> • Work plan elements Questions & general discussion	Ramesh Ramachandran, Min of Environment, India
12:30 – 13:30	LUNCH	
(2) Nutrient management and the global policy arena		
13:30 – 15:00	Advancing the phosphorus management agenda <ul style="list-style-type: none"> • Status of work of the task team • Related initiatives • Next steps – open discussion 	Arnoud Passenier, Ministry of Environment, Netherlands (P Task team leader)
15:30 – 16:00	UN Oceans Conference (nutrient management - Oceans SDG 14 agenda) & Costa Rica World Oceans Day event (June 2017) <ul style="list-style-type: none"> • Work planning for indicators monitoring support • GPNM representation at conference • Key messages and policy positions – open discussion 	Secretariat
16:00 – 16:15	BREAK	
16:15 – 17:00	GPA 4th Inter-Governmental Review (IGR 4) and Global Land-Oceans Connection (GLOC) meeting (October 2017) <u>Interactive discussion</u> <ul style="list-style-type: none"> • Contributory work of relevant initiatives • Key messages and directives for GPA's work programme based on emerging issues • Structure for nutrient side session 	Secretariat; Sasha Koo-Oshima, US-EPA; Mark Sutton, CEH
17:00 – 17:30	3rd Session of the United Nations Environment Assembly (UNEA-3) Alignment with the IGR4 (December 2017) <u>Interactive discussion</u> <ul style="list-style-type: none"> • Key messages, possible resolutions - potential key issues and core text • Country engagement - advance commitments/leadership • Side event – showcase impactful lessons, strategic investments; engagements; links to SDGs 	Secretariat; Sasha Koo-Oshima, US-EPA; Mark Sutton, CEH

Time	Agenda item	Discussant – lead facilitator
DAY 3		
(3) Governance		
09:00 – 11:00	GPNM Charter – Operational procedures <ul style="list-style-type: none"> • Charter overview • Feedback and open discussion • Adoption 	GPNM Chair; Secretariat
11:00 – 11:15	BREAK	
11:15 – 11:45	Instatement of a GPNM Vice Chair <ul style="list-style-type: none"> • Overview • Proposal by Nominations Committee • Decision by Steering Committee 	Yuelai Lu, Nominations Committee
11:45 – 12:00	New GPNM partners <ul style="list-style-type: none"> • Review of applications and endorsement 	Secretariat
12:00 – 12:30	Update on GPNM Regional platforms <ul style="list-style-type: none"> • Asia • Caribbean • Africa 	Secretariat
12:30 – 13:30	LUNCH	
(4) Communications and outreach		
13:30 – 14:00	Communications strategy <ul style="list-style-type: none"> • Overview • Discussion and feedback • Adoption 	Secretariat
14:00 – 14:30	The Nutrient Challenge GPNM Website <ul style="list-style-type: none"> • Overview • Demonstration of functionality • Hosting arrangements • Review and comments 	Albert Bleeker, PBL Netherlands; GPNM Chair
14:30 – 14:45	Distance learning - Massive Open Online Course on nutrient and wastewater management <ul style="list-style-type: none"> • Overview • Status of development • Partnerships for delivery; linkages to other platforms, initiatives (e.g. INMS Project) • Sustainability recommendations 	Secretariat
14:45 – 15:00	BREAK	
(5) Resource mobilization		
15:00 – 15:30	Resource mobilization <ul style="list-style-type: none"> • Possibilities for replication of GEF-GNC Project outputs • Adaptation of the Caribbean GPNM platform proposal to other geographic regions • Strategy for donor and private sector engagement – open discussion 	GPNM Chair; Isabelle Vanderbeck, UN Environment
Closing segment		
15:30 – 15:45	Meeting summary <ul style="list-style-type: none"> • Key action points and responsibilities 	GPNM Chair
15:45 – 16:00	Closing remarks	GPNM Chair