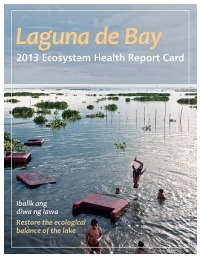
April 2016

The GPNM Update

Chairman's review of the work of the Global Partnership on Nutrient Management

Highlights

Ecosystem Health Report Card launched for Laguna de Bay, Philippines



On 5 February 2016, the first Ecosystem Health Report Card for Laguna de Bay in the Philippines was launched. The 2013 Ecosystem Health Report Card (EHC), developed under the GEF Global Nutrient Cycling Project was designed to convey information in an easily-understood format to decision makers and stakeholders on the health of Laguna Lake, a critical ecological and socio-economic asset for the country. The EHC was modelled after a similar report card developed for Chilika Lake in Odisha State in India. The report card score system is based on a multi-critera integration of water quality and fisheries indices.

On analysis of the rating of the indices, Laguna de Bay scored an overall C- (corresponding to a 76%) in water quality under the influence of influxes of pollutants from the dense surrounding settlement and industrial areas. The lake scored an overall F (48%), influenced by relatively low native fish species composition, zooplankton ratio and catch per unit effort.

GEF-GNC Project Steering Committee and LLDA General Manager at the Laguna de Bay Ecosystem Health Card launch

This Ecosystem Health Report Card is a replicable methodology, the results of which call for action for improved practices and policies by government, private sector, and civil society toward the restoration and protection of the ecological integrity of the lake.

The United Nations Environment Assembly - 2

UNEA-2 will be held from the 23 to 27 May 2016 at UNEP's headquarters in Nairobi, Kenya. The Assembly, which represents the world's highest-level decision-making body on the environment, will culminate in resolutions and a global call to action to address the critical environmental challenges facing the world today. Within the event, the Global Universities Partnership on Environment for Sustainability (GUPES), one of the flagship programmes of UNEP's Environmental Education and Training Unit will co-host, along with the Global Partnership on Nutrient Management (GPNM) and the Global Partnership on Wastewater (GW^2I), a 'Green Room Event' on 26 May 2016 to launch a Massive Open Online Course (MOOC) on nutrient and wastewater management. Concordia University is the lead development partner for the MOOC under the guide of a joint advisory body from the GPNM and GW^2I partnerships.

Second regional planning meeting of the Caribbean Platform for Nutrient Management

Participants at the second meeting of the Caribbean Regional Nutrient Management

The second planning meeting of the Caribbean Regional Platform for Nutrient Management was held on the 24 and 25 February 2016 in Port of Spain, Trinidad & Tobago. This was a follow-up meeting to the first which was convened in 2013. The Institute of Marine Affairs of Trinidad & Tobago co-hosted the meeting. Country representatives from Antigua & Barbuda, Columbia, Costa Rica, the Dominican Republic, Haiti, Trinidad & Tobago and the United States were in attendance. Also participating were representatives from international and regional support agencies including the Caribbean Large Marine Ecosystem Project, the Caribbean Public Health Agency, the Food and Agricultural Organization, Global Water Partnership-Caribbean, the Inter-American Institute for Co-Operation on Agriculture, the Pan-American Health Organization, UNEP's Caribbean Regional Coordinating Unit and UNEP's new Sub-regional Office for the Caribbean. Discussions focused on priority issues related to nutrient management in the region, achieving formal endorsement of the Regional Platform by governments, approaches to strengthen linkages with existing initiatives under the framework of the Land-Based Sources of Marine Pollution Protocol of the Cartagena Convention, and establishment of an administrative node for the platform.

GEF-GNC Project Steering Committee Meeting

GEF-GNC Project Steering Committee

The 4th Project Steering Committee (PSC) meeting of the GEF-Global Nutrient Cycling Project was held from the 3 to 5 February 2016 in Manila, Philippines. The meeting was co-hosted with the Partnerships in the Environmental Management for the Seas of East Asia (PEMSEA) and the Laguna Lake Development Authority (LLDA), two of project technical partners based in the Philippines. The GPNM Steering Committee, which also serves as the PSC, reviewed progress under the four project components, assessed the remaining tasks toward completion, considered the project work plan and budget for the duration of the final phase of the project. The PSC also discussed the lessons learnt, an exit strategy for the project and how to better promote global adoption of the nutrient management toolbox developed under the project.

The Global Partnership on Nutrient Management (GPNM) is a multi-stakeholder partnership comprising of governments, the private sector, the scientific community, civil society organizations and UN agencies committed to promoting effective nutrient management (with a focus on nitrogen and phosphorus) to achieve the twin goals of food security through increased productivity and conservation of natural resources and the environment. The United Nations Environment Programme (UNEP), through the Coordination Office of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), provides the Secretariat of GPNM. Read more at www.nutrientchallenge.org.

April 2016

The GPNM Update

Chairman's review of the work of the Global Partnership on Nutrient Management

News & Emerging Issues

Bangalore Lake Foaming - Nutrient Pollution

Source: Indian Institute of Science, Wetlands: Treasure of Bangalore

Photo : Debasish Gosh

Urbanization and high-tech industrial growth have led to challenges for wastewater management in Bangalore. The local sewage plant has a current treatment capacity of 400 million litres per day (MLD) whereas the estimated sewage collected is 1,400 (MLD). As a result, large quantities of untreated sewage is released to Bangalore Lake resulting in huge volumes of snow-like froth caused by the pollutant chemical interactions, which also produces foul odors and causes irritation on contact with skin. In May 2015, Bangalore Lake caught fire twice, in one instance injuring a 56 year-old man who was standing on a bridge. The fires are believed to be fueled by industrial waste in the water, including detergents containing phosphorus, oil and grease. For more information, click here.

Turning problems into opportunities- the case of balanced fertilization

By: Dr. Prem Bindraban, Virtual Fertilizer Research Center

The use of mineral fertilizers supplementing nutrients from (recycled) organic matter within a context of Integrated Soil Fertility Management is undeniably one of the strongest drivers for agricultural productivity increase, but also comes with undesired environmental and societal side effects. Abundant amounts of food can be produced with traditional fertilizers that contain NPK: nitrogen (N), phosphorus (P), and potassium (K). Adding micronutrients to NPK fertilizers will enable plants to better take up NPK, e.g. because of better rooting, reducing losses to the environment and with farmers seeing greater return on their investment. For more information, click here.

Photo: cincynorthhealingrooms

- 8th GEF International Waters Conference (IWC) 9-13 May 2016, Negombo, **Sri Lanka.**
- 2nd United Nations Environmental Assembly (UNEA-2) 23-27 May 2016, Nairobi, **Kenya**.
- 5th Sustainable Phosphorus Summit (SPS 2016), 16 -20 August, 2016, Kunming, **China**.
- Africa GPNM Platform meeting, October 2016. **Venue TBD**,
- 7th International Nitrogen Initiative Conference in December 4-8 December 2016, **Australia**.

Phosphorus release from mains water treatment

Source: European Sustainable Phosphorus Platform: SCOPE Newsletter, Feb 2016

It is estimated that some 1,200 tonnes of phosphorus per year is lost to the environment from water supply pipelines in England and Wales. This estimate was based on quantities of P used in water treatment and on data for water supply leakage. Water is dosed with phosphorus as it serves to reduce pipe corrosion, limit lead (plumbosolvency) and copper concentrations and reduce iron and manganese precipitates which can deteriorate the aesthetic quality of drinking water. It is estimated that 70% of phosphorus losses reach surface water bodies. For more information click here.

Pig manure: Quick wash P-recovery

Source: European Sustainable Phosphorus Platform: SCOPE Newsletter, Feb 2016

Quick Wash phosphorus recovery is a process of eliminating phosphorus from pig manure. The P to N ratio (about 1:2) in pig manure is around twice as high as plant needs, hence excess P limits efficient land application and crop utilization. Quick wash P-recovery selectively extracts phosphorus from pig manure in 3 steps: (i), by solubilisation which separate solids from acid liquid; (ii), through precipitation and (iii) by dosing of anionic polymer. Three products are generated as an outcome; (1) separated manure solids suitable for crop application; (2) recovered calcium phosphate which can be used as fertilizer product; and (3) a stabilized liquid fraction which can be used as on-farm as a liquid fertilizer. For more information click here.

Fertilizer Management Tools - NutrientStar

Source: http://nutrientstar.org/

The Environmental Defense Fund (EDF) launched its new fertilizer management tool 'NutrientStar'. NutrientStar is an independent, science-based program which conducts assessments on fertilizer management and decision support tools. The tool may be applied to conduct field trials, determine how applied fertilizer works on croplands, in different regions and on different soil types. NutrientStar is an independent, third-party program that determines just how effective nutrient management tools are at helping farmers optimize their fertilizer use – and potentially save on input costs. For more information, click here.

GPNM Partners Corner

Prof. (Dr.) T.K. Adhya has taken over from Dr. N. Raghuram as the new Director of the **International Nitrogen Initiative (INI)** South Asia Regional Centre , New Delhi, India from January, 2016. Prof. Adhya has published more than 140 original research papers. (see https://scholar.google.co.in/citations?er=aW0plMsAAAAJ&hl=en).

Email the Secretariat

GPNM

UNEP GPA Global Programme of Action for the Protection of the Marine Environment from Land-based Activities