

Side Event (ID: 2776) at the CBD-COP11, Hyderabad on 18 Oct 2012
on
The challenge to produce more food & energy with less pollution:
Towards a Global Nitrogen Assessment

Organized by



With financial support from



The side event was organized by the South Asian Nitrogen Centre of the International Nitrogen Initiative, in association with the Global Partnership on Nutrient Management (GPNM) and the Indian Nitrogen Group (ING) of the Society for Conservation of Nature, New Delhi, with financial support from GPA through the UNEP/GEF project “Global foundations for reducing nutrient enrichment and oxygen depletion from land based pollution, in support of Global Nutrient Cycle”

The 90 minute event was scheduled between 18.15-19.45 PM on the penultimate day of the COP11, which clashed with the extended intergovernmental negotiations in the main hall, other high level meetings and cultural activities, apart from other side events. Nevertheless, the INI side event went beyond 100 minutes, due to the active participation of over 20 attendees, including key players from the CBD Secretariat, National Biodiversity Authority of India, UNEP, fertilizer industry, leading Indian NGOs, scientists, IT faculty and others.

Dr. David Coates from the CBD Secretariat, Montreal, chaired the event. In his introductory remarks, he lamented that nutrient issues in general and nitrogen in particular have not received adequate attention in this entire conference, despite the fact these are at the heart of all three Rio Conventions. From this perspective, he felt that the INI side event is of enormous significance to CBD and to all those concerned with biodiversity, environment and climate change. He added that more intensive efforts are needed to bridge the awareness gaps.

Dr. N. Raghuram from the South Asian Nitrogen Centre of the International Nitrogen Initiative (and Vice-President of SCON as well as a member of the GPNM Steering Committee) made the main presentation of the Side Event. He comprehensively discussed the natural N cycle and its anthropogenic distortions especially over the last century, the emerging scientific consensus and the need for global action to address it. He highlighted the efforts of INI at the global level and ING at the Indian level to quantitatively assess the anthropogenic perturbations to the N cycle and the role of UNEP as a catalyst in the global processes of engagement, especially through the establishment of the GPNM. He summarized the main findings that emerged out of the various documents produced by INI, UNEP, GPNM and ING and other recent scientific literature, regarding the scale of the nitrogen problem and its impacts on air, soil, water quality, health, biodiversity, ecosystem services and climate change. He mentioned that while excess accumulation of reactive N is the main problem in most countries, improving access to nitrogen fertilizer is at the heart of restoring soil fertility and the new green revolution in Africa. It is to highlight this aspect of N that INI is holding the 6th International nitrogen conference in Kampala, Uganda, next year, he said. He also highlighted the mining for phosphate fertilizer, peak phosphorus scenario and its loss as a pollutant, elevating the discussion from nitrogen management to nutrient

management. Then he introduced the recent document produced by INI and GPNM titled “Our nutrient World”, summary of a global overview of nutrient management that was released at Rio+20 Summit earlier this year. Copies of this document were distributed to all those who attended the side event. He also highlighted the serious economic and environmental consequences of a business-as-usual scenario and demonstrated that targets and timelines for reduction of nutrient loading to our environment are possible and achievable, provided there exists a strong will, locally as well as globally. On that basis, he called for a consensus and build partnership to undertake a global assessment of nitrogen followed by policy development/reforms to support actions.

The presentation was followed by a panel discussion, in which all participants agreed that the current situation is unsustainable and required urgent action at multiple levels, and expressed concerns from their own area of work and/or level of intervention.

Dr. Tom Hammond from the UNEP (Secretary of Scientific and Technical Advisory Panel of Global Environment Facility, hosted by UNEP), endorsed the main issues highlighted in the INI presentation and said that they not only span all the Rio Conventions, but also have a major cross-cutting effect on many other sustainability issues. He supported the need for concerted global assessment and action to address the issue of nitrogen and other nutrients. He said that GEF is looking into this issue closely and urged the national governments, academia, industry and civil society to do their bit.

Dr. Prakash Nellyat from the National Biodiversity Authority of India also agreed with the main findings and recommendations presented. He felt that the main challenge lies in mainstreaming them and translating them into action on the ground and assured the commitment of NBA to address the issues within its mandate and reach.

Dr. Shyamalamani from the Centre for Environment Education, New Delhi, elaborated on how their organization has been educating and demonstrating on the benefits of recycling sewage, excreta and bio-waste to local communities. She also answered the doubt raised by a participating research scholar from USA about the commitments of the industry for reduction/rationalization of chemical fertilizers, saying the industry may eventually adapt from chemical to organic or bio-fertilizer to stay in business.

Dr. Nagendra Rao from Nagarjuna Fertilizers, Hyderabad, congratulated the INI initiative to hold this Side Event and said that the industry is increasingly keen to be on the right side of sustainability. He said that industries like his own are at the forefront of innovations to take advantage of the nutrient-based subsidy policy introduced by the Indian government a few years ago, to incentivize the development of more efficient fertilizers. He supported strong partnerships between various stakeholders and the need to work at multiple levels – from global to national to local.

Dr. P. Krishna Reddy from the International Institute of Information Technology, Hyderabad, mentioned about the successful use of ICT and ITES by his group to provide

expert agro-advisory services to farmers in many districts of Andhra Pradesh, which won many awards and accolades nationally and internationally. He said that such services could have a transformational effect if new information of the kind being developed by INI can be integrated into it, as well as into the mainstream agricultural extension systems, especially in the government. There is a strong need for innovative extension systems, he said.

Dr. Vijayalakshmi from Development Alternatives, New Delhi, commented that global assessment should proceed hand in hand with local assessment and action, so that there is synergistic two-way learning for any such initiatives to be effective on the ground. She said that this two-way process has a mutually enriching effect that can be catalyzed by intensive awareness campaigns. Just as reactive N species could have 300 times more global warming effect than their carbon counterparts, she said that we should make 300 times more noise to highlight this issue and bring it to the center- stage.

Mr. Jacob Nellithanam from the Centre for Indigenous Farming Systems said that before the advent of chemical fertilizers and green revolution half a century ago, Indian agriculture did not face many of the problems that we are facing today. He felt that the traditional knowledge in farmers' communities emphasized harmony with nature and that we cannot afford to ignore this aspect.

Concluding the discussion, Dr. David Coates said that while all the panelists raised very valid points from the point of view of their level of action, it is extremely important to remember that there are other levels of engagement and action, some local/national and some global. Appreciating the high quality of committed discussion from the participants, he added that considering that the CBD-COP11 is the main context for this side event, it is most important to seek global recognition of the nitrogen problem, as well as global commitment for its resolution. Most of all, he said that nitrogen and nutrient management merit a lot more funding globally and locally, than they are receiving at present. He advocated strong political, social and financial commitments from national governments, international agencies as well as other stakeholders from science, technology, industry and civil society for concerted action.

The event ended with a vote of thanks from Dr. Raghuram and a 4-minute popular video on reactive nitrogen produced by the European Nitrogen Assessment. Several participants appreciated the video and collected copies of it.

A Press Release on the event was sent to a large number of newspapers, magazines, news agencies and online media and was carried in a couple of English dailies. Though the report in the Hindu Businessline was brief, it has significant impact as one of the most respected economic dailies in India. The other report with photograph was carried in Hans India, a fast growing news daily based in Hyderabad. Both of them have their online editions. A few more reports are likely to follow in magazines or online media.

List of Participants at the INI Side event during CBD-COP11 at Hyderabad

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15. Jacob Nellithanam, Indigenous Farming Systems farmersrights@gmail.com
16. T.V. Padma, SciDev.net Padma@scidev.net
17. Dr. Renu Pandey, ING, SCON, IARI
18. Dr. David Coates, CBD Secretariat
19. Dr. N. Raghuram, SANC-INI, ING-SCON, GPNM raghuram98@hotmail.com
20. Research Scholar (biofuels), USA

THE HANS INDIA

Hyderabad, Sunday, 21 October, 2012

HYDERABAD HANS

THE HEARTBEAT OF TWIN CITIES



Dr David Coates from the Secretariat of the Convention on Biological Diversity speaking at a session organised by the South Asian Nitrogen Centre of the International Nitrogen Initiative

Don't allow nutrients to pollute, say experts

OUR BUREAU

“Sustainable management of nutrients such as nitrogen and phosphorus has not received sufficient attention in CoP-11, despite the fact these are at the heart of all three Rio Conventions”, said Dr David Coates from the Secretariat of the CBD.

He was chairing a side event organised by the South Asian Nitrogen Centre of the International Nitrogen Initiative (INI), in association with the UNEP Global Partnership for Nutrient Management (GPNM) and the Indian Nitrogen Group (ING) of the Society for Conservation of Nature, New

Delhi. Coates suggested that it should have been a mainstream issue, rather than a side event on the penultimate day of the conference.

The main presenter of this event was Dr N Raghuram, a biotechnologist and South Asia director of the International Nitrogen Initiative. “Nitrogen is at the heart of all our talk about development and environment,” he said.

He said that global food security depended on nitrogen, phosphorus and potassium, but leakages of the nutrients from farm and non-farm sources caused pollution of the soil, water and air pollution, threatening health, biodiversity and causing climate change. “Reactive nitrogen

compounds emitted from farms as well as industrial and automobile exhausts, have 300 fold higher global warming potential than carbon”, said Raghuram. “By just managing our nutrients better, we not only preserve our ecosystem and biodiversity, but help also improve our own food, security, health security and energy security,” he added.

This approach was echoed by other panelists such as Dr Prakash Nelliyyat of the National Biodiversity Authority of India and Dr Thomas Hammond from the UNEP and a member of the Science and Technology Advisory Panel of the Global Environment Facility (GEF).



Reactive nitrogen, let loose, can be more evil than carbon



T. V. Padma

South Asia regional coordinator, SciDev.Net

Given the inter-links between climate change, biodiversity and desertification (and wetlands too), some people are addressing cross-cutting issues. One such issue discussed today at a side-event at COP-11 this (18 Oct) evening is the need for global, regional and national assessments of nitrogen.

Since 1960s, human use of nitrogen fertilisers has increased nine-fold globally, while use of phosphorus has tripled, according to estimates. One's first thought would be that an element that makes up 78% of the earth's atmosphere could not be that bad. But this nitrogen is in unusable form and can support plant growth only when converted into a reactive form.

The reactive form of nitrogen, when let loose, is estimated to have 300 times more warming potential than carbon, says Nandula Raghuram, from the Indian nitrogen group. It is mainly released from fertilisers, but also vehicles, thermal power plants, wastewater treatment plants; and run-off from lawns. Besides causing air, water and land pollution and degradation; and affects biodiversity and ecosystem services.

The international nitrogen initiative (INI), UNEP and some national initiatives such as the Indian nitrogen initiative are making assessments of nitrogen and stress the importance of improved management of nitrogen and phosphorus cycles; reduce nutrient losses; and improve overall efficiency of nitrogen use. Excessive and inefficient fertiliser use could lead to nitrogen burden in air, water and land.

A 2011 European nitrogen assessment, for example, shows that a 20% improvement in nitrogen efficiency could save 20 million tons of nitrogen, which equates to improvement in human health, climate and biodiversity of the order of US 100 billion each year.

The nitrogen issue seems to have caught the attention of the Global Environment Facility (GEF) and CBD secretariat too, though the CBD meeting itself did not address it. There was also broad agreement at the side event on the need for detailed scientific reviews of nitrogen use and cycling; an inter-governmental process to improve nitrogen use; and the need to take the nitrogen issue "out of the scientific realm into the policy realm," as one participant put it. Raghuram believes that "the next war will be the nitrogen war, after the present carbon war". And the Indian scientific community and industry should be better prepared with their nitrogen data and policy than they have been on the carbon front.

<http://scidevnet.wordpress.com/2012/10/18/reactive-nitrogen-let-loose-can-be-more-evil-than-carbon/>

This blog post is part of our coverage on COP 11 Convention on Biological Diversity — which takes place 8–19 October 2012.

Biodiversity meet fails to discuss management of nutrients

Our Bureau

Hyderabad, Oct. 19

Management of nutrients like nitrogen and phosphorous did not get the required attention at the CBD-CoP-11 conference which concluded here today, unlike the earlier meets.

David Coates, from the Secretariat of the Convention on Biological Diversity (CBD), who chaired the side event, said sustainable management of nutrients was at the heart of all three Rio conventions. The challenge

was to produce more food and energy with less pollution.

Global food security depends on nitrogen (N) phosphorus (P) and potassium (K) in fertilizers/manures, but leakages of these nutrients from farm and non-farm sources causes pollution of the soil, water and air pollution, threatening our health, bio-diversity and causes climate change.

“Reactive nitrogen compounds emitted from farms as well as industrial and automo-

bile exhausts, have 300-fold higher global warming potential than carbon,” said N. Raghuram, a biotechnologist and South Asia Director of the International Nitrogen Initiative (INI).

The event was organised by the INI, in association with the United Nations Environment Programme (UNEP), Global Partnership for Nutrient Management (GPNM), and the Indian Nitrogen Group (ING) of the Society for Conservation of Nature, New Delhi.