

SUSTAINABLE INDIA TRUST



ANNUAL REPORT
FOR 2018-19



SIT ANNUAL REPORT 2018-19

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Sustainable India Trust

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Report designed and compiled
by Vikramjit Singh

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Vikramjit Singh

Words from the President

The Nitrogen Challenge

'Anthropogenic activities have altered the global nitrogen (N) cycle in a massive way. With a consumption of 15.5% of the global production of fertilizer-N in the cropping year of 2015–16 and increase in energy and transport due to increasing societal aspirations, India illustrates a dual challenge to food production and environmental protection vis-à-vis release of reactive-N (NR).

While necessity for considering the usefulness of the NR challenge for India is apparently more of economic nature, considering the huge subsidy burden to the country's exchequer for fertilizer-N, additional environmental burden including adverse climate and associated health impacts are of great concern. Thus an in-depth analysis and policy intervention to stem the tide should be a win-win option.'

Prof. Y.P. Abrol, Prof TK Adhya, Indian Nitrogen Assessment



OUR PARTNERS



International
Nitrogen Initiative





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Featured

DR N. RAGHURAM ELECTED AS CHAIRPERSON OF INTERNATIONAL NITROGEN INITIATIVE

It is a matter of great pride for SIT that Prof. N. Raghuram was unanimously elected and took over as the Chair of International Nitrogen Initiative for 3 years (2019-2021). Already President of the Indian Nitrogen Group and a Steering Committee member of the UNEP Global Partnership on Nutrient Management, Prof. Raghuram becomes the first INI Chair from Asia. As per the INI, his appointment reflects the growing importance of nitrogen for Asia, as well as the recent publication of the Indian Nitrogen Assessment, for which he was one of the coordinators.

“INI has come a long way under the leadership of all my predecessors from Jim Galloway to Mark Sutton. Reactive nitrogen is now acknowledged in many international platforms, though it is both an opportunity and a challenge for coordinated action towards sustainable development. I have the benefit of an able Vice-Chair in David Kanter and we look forward to further enhancing the outreach and impact of INI across the world.”



**Prof Raghuram on being
elected as Chair, INI**

OVERVIEW OF ACTIVITIES

SIT strives to create a better environment by promoting the utilization of sustainable means of living. The organisation primarily focuses on the environmental effects of reactive nitrogen species and its activities are essentially divided into the following four heads:

Sustainability research

Agenda development

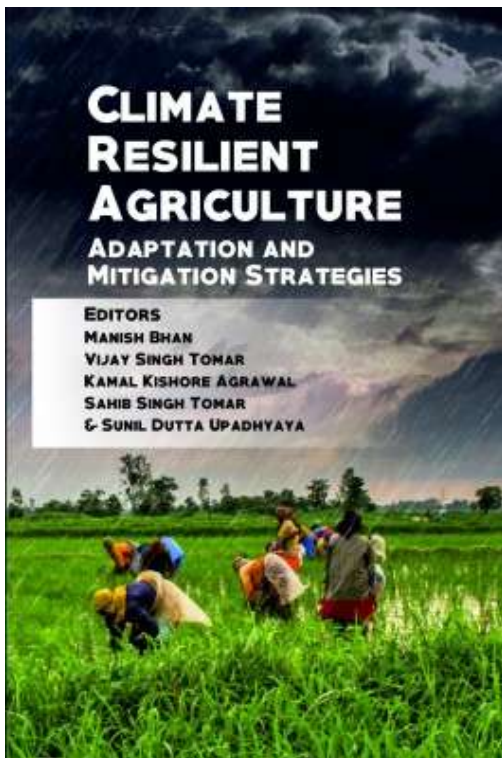
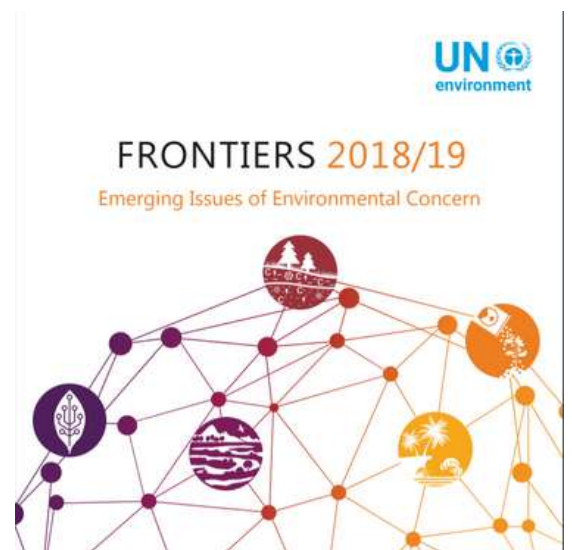
Education & Awareness

**Policy research &
advocacy**



SUSTAINABILITY RESEARCH

1. SIT trustees Tapan Adhya and N. Raghuram coauthored the chapter titled “the nitrogen fix: From Nitrogen pollution to Nitrogen Circular Economy’ for the UNEP Frontiers Report 2018/19 and Prof. Raghuram attended the launch event of the report in March 2019 at UNEP Nairobi.



2. Trustee, Dr Himanshu Pathak authored/co-authored two publications:

- 'Rice and Sustainable Development Goals' in ICAR-NRRI Newsletter 39(4): 22-23; 2018
- Low carbon technologies in Indian agriculture Book chapter in Bhan M et al. (Eds.) Climate Resilient Agriculture: Adaptation and Mitigation Strategies, New India Publishing Agency, New Delhi, pp. 209-218; 2018

AGENDA DEVELOPMENT

1. SIT joined as a collaborating project partner of the Centre for Ecology and Hydrology-UK, in the **UKRI-GCRF project titled “South Asian Nitrogen Hub”** and SIT trustees attended the launch event of the project at **Kathmandu, Nepal during 25-27 February 2019**, in which Prof. Raghuram made a presentation on the Indian civil society approach to nitrogen management.



2. Prof. N. Raghuram participated in the deliberations on collaborative research at the **Long Look and Review Meeting of Indo-UK Virtual N Centres. ICRISAT, 30-31 Aug., 2018, Hyderabad.**





Jan. 2019: Presenting Indian nitrogen research to **Sir Mark Walport, Chief executive, UKRI**, during his visit to GGSIPU, SIT partner in SANH

EDUCATION & AWARENESS

1. SIT organized an Environment Awareness Programme on 7th September 2018 at Neev, a learning centre for the underserved, Sector 62, Golf Course Ext. Road, Gurgaon. The half day programme included a session about Plastic waste management by Dr. Girija Bharat, Founder-Director, Mu Gamma Consultants Pvt Ltd, Gurgaon. The students were taught about various chemical ingredients in plastics, their health impacts and ways to recycle and segregate plastic waste. A quiz contest was also held and winners were awarded.



2. Prof. N. Raghuram addressed fertilizer industry CEOs as an invited panelist on Sustainable use of Reactive Nitrogen at the IFA Strategic Forum, 13-14 Nov. 2018 at Beijing, China.

3. Prof. N. Raghuram delivered a Keynote Lecture on 'Nutrient conservation, reactive nitrogen and sustainability' at the National Conference on Urban Environmental Sustainability, which was organized on 7th and 8th February 2019 at MGICCC and Kalindi College, New Delhi.



4. Prof. N. Raghuram N. represented SIT as a keynote speaker and panelist at the International Conference on Climate change, Biodiversity and Sustainable Development, 13-16 Dec. 2018, Assam Agri. Univ., Jorhat.

5. Prof. N. Raghuram gave a public awareness lecture on the topic 'Is nitrogen the new carbon & why should we care?' at Dwarka baat-cheet on 23 Dec. 2018 at Dwarka, New Delhi.

IS NITROGEN THE NEW **CARBON?**



6. Prof. N. Raghuram gave a lecture on 'N air pollution due to stubble burning and nitrous oxide (GHG) from unused fertilizers' at a workshop on Confronting air pollution at source – Crop rotation and crop residue burning, on 14 March 2019 at the American Centre, New Delhi

7. SIT Trustee, Prof N. Raghuram delivered an invited presentation on 'Reactive N, vehicular emissions and impacts' at a workshop on Confronting air pollution at source – Vehicular movement, on 18th March 2019 at the American Centre, New Delhi.



8. Prof N. Raghuram presented on the Indian nitrogen assessment & beyond, at the N position virtual symposium and meeting, which was held on 28th and 29th March 2019 at Noble Research Institute, Ardmore, Oklahoma, USA



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POLICY RESEARCH & ADVOCACY



SIT and Indian nitrogen community was represented by Prof. N. Raghuram at the **Global Symposium on Soil Pollution, 2-4 May 2018 at FAO, Rome, Italy**, where he gave an oral presentation on 'Indian Nitrogen Assessment and its Implications for Sustainable Development'

SIT, Indian government and UNEP-India organized a **World Environment Day Dialogue Session on Reactive Nitrogen: Joining up for a Cleaner Environment**, on 4 June 2018, at Vigyan Bhawan, New Delhi. The findings of Indian nitrogen assessment were highlighted and the potential for India's global leadership for sustainable nitrogen management was discussed.



SIT MEETS THE GOVT. OF INDIA

Aug 2018. Prof Raghuram briefing Prof. K. Vijjay Raghavan, Principal Scientific Adviser to Govt. of India on India's international initiatives on nitrogen.



Sept. 2018: A delegation of SIT, SACEP and INI requesting the Indian govt. to pilot a resolution at the 4th UN Environment Assembly

SIT AT THE UN



SIT was represented by Prof. N. Raghuram at the **UN Biodiversity Conference and CBD COP14, 25 Nov. 2018, Sharm El Sheikh, Egypt**, where he made a presentation on Nutrient pollution, agriculture and biodiversity at the Rio Pavilion.'



SIT AT THE UN



SIT FACILITATES THE PASSAGE OF THE FIRST EVER UN RESOLUTION ON SUSTAINABLE NITROGEN MANAGEMENT

Prof. N. Raghuram assisted the Indian diplomats and facilitated the passage of the **first ever UN resolution on 'Sustainable Nitrogen Management' led by India** in the meeting of the **committee of permanent UN representatives (OE-CPR)** in **Nairobi** ahead of the 4th UN environment assembly in March 2019. He also attended the civil society sessions and gave a WRI-GPNM webinar on 'Addressing the nutrient challenge' from UNEP, Nairobi.

Illustrations in the Annual report: Endemic species of India

Illustration on page 4

Bengal Tiger (*Panthera tigris*)
Indian Snow leopard (*Panthera uncia*)
Peepal tree (*Ficus religiosa*)
Indian Red Panda (*Ailurus fulgens*)
The South Asian river Dolphin (*Platanista gangetica*)
Mango tree (*Mangifera indica*)

Illustration on Page 12

All of the following fall in the Endangered/Critically Endangered category:

Malabar gliding frog (*Rhacophorus malabaricus*)
Lion-tailed macaque (*Macaca silenus*)
The gangetic Gharial (*Gavialis gangeticus*)
Indian Red Headed Vulture (*Sarcogyps calvus*)
Indian Black buck (*Antelope cervicapra*)
Great Indian Bustard (*Ardeotis nigriceps*)
Peacock tarantula (*Poecilotheria metallica*)

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