



SOCIETY FOR
CONSERVATION OF
NATURE

ANNUAL **REPORT** 2021-22

scon-india.org

SDGs

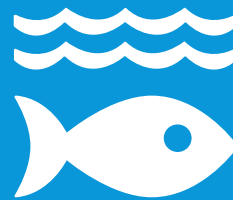
3 GOOD HEALTH
AND WELL-BEING



15 LIFE
ON LAND



14 LIFE BELOW
WATER



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



11 SUSTAINABLE CITIES
AND COMMUNITIES



2 ZERO
HUNGER



13 CLIMATE
ACTION



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Foreword

It gives me immense pleasure to present the Annual Report 2021–22 of the Society for Conservation of Nature (SCON). This report reflects a year of resilience, scientific excellence, and unwavering commitment to sustainable development despite the unprecedented challenges posed by the COVID-19 pandemic.

Throughout the year, SCON continued to advance its mission by promoting science-based solutions for environmental conservation, sustainable agriculture, and responsible nitrogen management. Through close collaboration with national institutions, the Government of India, the United Nations, and international scientific networks, the Society made significant contributions to research, policy development, capacity building, and public awareness. Our active participation in global initiatives, including the South Asian Nitrogen Hub and the International Nitrogen Initiative, highlights SCON's growing leadership in addressing pressing environmental challenges.

The achievements documented in this report are the result of the dedication of our office bearers, members, collaborators, and partner organizations. Their tireless efforts have strengthened the Society's role as a trusted platform for integrating scientific knowledge with policy and community engagement.

As we look ahead, we remain committed to fostering innovation, collaboration, and environmental stewardship. I extend my sincere gratitude to everyone who contributed to our shared vision and continued support in building a more sustainable future for generations to come.

Sincerely,

Prof. N. Raghuram
President, SCON

Index

1. **Awareness and engagement with the national civil society**
2. **Science-led environmental action with Govt of India**
3. **Scientific/policy engagement abroad**
4. **Publications**



Awareness and engagement with the national civil society

1 SCON and SIT office bearers and others had a joint meeting on 5th Jul 2021 to discuss the continuing impact of COVID19 on the society's activities and the announcement of the next SCON & SIT awards etc.

2 To stimulate wider engagement between science and society on contemporary issues through a teach-the-teacher approach, Prof. N. Raghuram delivered an online presentation on Nitrogen in agriculture and climate change at the AIPSN Webinar on Agriculture and Climate Change on 21 Jul, 2021 organized by the All India Peoples' Science Network.

3 SIT and SCON office bearers met on 21 Oct 2021 to discuss their annual awards, including the SIT's Prof YP Abrol Memorial Award.

4 SCON in collaboration with SIT organized the SCON & SIT Award ceremony and Webinar on 23rd December 2021 to honour the people contributing remarkably in research and development, particularly in relation to sustainable agriculture and nature conservation. All the awardees made brief presentations on their salient accomplishments.

Science-led environmental action with Govt of India

1. Profs. N. Raghuram and Tapan K. Adhya attended the first (online) meeting of the high level interministerial National Nitrogen Steering Committee on 22 Sept. 2021. It was set up by the Ministry of Environment, Forests and Climate Change (MoEFCC), Govt of India, to guide the implementation of the India-led first ever UN resolution (UNE4/14) on Sustainable Nitrogen Management. SCON is the only organisation to contribute two members to this distinguished committee to deal with the multidimensional challenge of reactive nitrogen pollution. Prof. N. Raghuram made a presentation to the Committee on Indian nitrogen assessment and its regional and global linkages.

Scientific/policy engagement abroad

1. Prof. N. Raghuram virtually attended the Executive Group meeting of the UKRI-GCRF-South Asia Nitrogen Hub (SANH) on 8th Apr 2021.
2. Prof. N. Raghuram and Prof. Tapan Kumar Adhya virtually attended the SANH Partner meetings daily during 12-14 April 2021.
3. Prof. N. Raghuram and Prof. Tapan Kumar Adhya also attended the coordinating lead authors' meeting on South Asian Nitrogen Assessment Chapter as a part of the International Nitrogen Assessment on 14 April 2021 under the GEF-UNEP-INMS in online mode. They also attended the editorial meetings on Regional Demonstration Chapters under part 3 of the International Nitrogen Assessment on 19 April 2021 under the INMS in online mode.
4. Prof. N. Raghuram and Prof. Tapan Kumar Adhya virtually attended the international event on Nitrogen for Climate and Green Recovery on 29 Apr 2021 in Colombo. It was jointly hosted by the British High Commission and the Government of Sri Lanka with the support of the South Asia Cooperative Environment Programme (SACEP), UKRI GCRF South Asian Nitrogen Hub Project and the GEF/UNEP International Nitrogen Management System (INMS) Project.
5. SCON office bearers virtually attended a meeting on Zero Budget Natural Farming organized by Prof. Lindsay Jaacks, University of Edinburgh under the SANH.
6. Prof. N. Raghuram virtually attended the Editors' meeting on the International Nitrogen Assessment on 12 May 2021 under the INMS.
7. Prof. N. Raghuram and Prof. Tapan Adhya attended the Steering Committee meeting (online) of the International Nitrogen Initiative on 26th May 2021 in their capacities as the INI global Chair and South Asia Regional Director.
8. Prof. N. Raghuram attended the coordination meeting on 27 May 2021 online for a nitrogen event during the World Environment Day celebrations with UNEP and others and also participated as a Speaker
9. SCON office bearers and some members attended the 8th Global Nitrogen Conference N2021 held virtually during 31 May-03 Jun. from Berlin, Germany, jointly organized by the INI and the Govt. of Germany. As the INI Chair, Prof. N. Raghuram chaired some

Scientific/policy engagement abroad

sessions, presented a keynote lecture on 'Improving plant nitrogen use efficiency: From Phenotype to Genotype' and led the deliberations on the Berlin Declaration on Sustainable Nitrogen Management for the SDGs which was adopted unanimously.

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15. SIT members attended the special online event on 03 Jun 2021 held to present the first YP Abrol Memorial Award jointly to Dr. Anjan Datta and Mr. Mahesh Pradhan (both from UNEP), as a part of the 8th Global Nitrogen Conference (N2021) held virtually from Berlin, Germany. The Award event was widely reported in the Indian and international media, especially in South Asia.
16. Prof. N. Raghuram and Prof. Tapan Adhya attended the FAO online event to release its Report on Global Soil Pollution on 4th Jun 2021. The same day, they also attended the UNEP-UAF World Environment Day Webinar on Sustainable Nitrogen Management for Ecosystem Restoration, in which Prof. Raghuram presented a Keynote lecture on 'South Asia: A hotspot for nitrogen pollution'.

Scientific/policy engagement abroad

17. Prof. N. Raghuram and Prof. Tapan Adhya attended the online SANH partners' meeting on 18 Jun 2021 in their capacity as the leaders of various research and policy work packages.
18. Prof. Raghuram attended the online editorial meetings on the International Nitrogen Assessment book on 18, 22 and 23 June and 02 July 2021, under the INMS, in which the office bearers from SCON and SIT are major partners from South Asia.
19. Prof. N. Raghuram organized and chaired an online ASPB Workshop on Plant Biology for Crop Nitrogen Use Efficiency and Sustainable Nitrogen Management on 18 Jul, 2021, as a part of the American Society for Plant Biology annual meeting and PB21 Worldwide summit. The event attracted several speakers and attendees from several countries, in which he presented his own research on NUE in rice: From phenotype to genotype.
20. Prof. Raghuram, in association with the International Nitrogen Initiative (INI) and UNEP Global Partnership on Nutrients Management (GPNM), organized an affiliated virtual session on Sustainable Nitrogen Management for Sustainable Food Systems on 28th July 2021 during the Pre-Summit ahead of the main UN Food Systems Summit (Sept. 2021). It set the stage and agenda for the main summit by bringing together diverse actors from around the world to leverage the power of food systems to deliver progress on all 17 Sustainable Development Goals (SDGs).
21. Prof. N. Raghuram attended several SANH online meetings on stakeholder analysis from 14 Sept 2021, to help the SANH partners map the views of various stakeholders on various aspects of reactive nitrogen pollution and its management.
22. Prof. N. Raghuram and Prof. Tapan Kumar Adhya attended an online introductory meeting on 15 Sept 2021 to welcome the new DG of the South Asia Cooperative Environment Programme (SACEP), Dr. Masumur Rahman from Bangladesh. They highlighted the strong South Asian cooperation on reactive nitrogen and the role of SACEP in the emerging South Asian leadership of global intergovernmental cooperation on sustainable nitrogen management.
23. On the same day, Prof. Raghuram also had an online meeting with the UNEP Global Waste Water Initiative (GWVI) to discuss the estimation of nutrient recovery potential from waste water in collaboration with the UNEP Global Partnership on Nutrient Management (GPNM), an idea that Prof. Raghuram has mooted in the joint meeting of both the partnerships in Nairobi in 2019.

Scientific/policy engagement abroad

24. As a part of the wider outreach programme on sustainable nitrogen management, Prof. Raghuram gave a presentation to a distinguished international network of JNU alumni on 'Climate change beyond carbon and net zero talk' on 04 Sept., 2021 from New Delhi. It was attended by an interdisciplinary group of intellectuals from India, USA and elsewhere abroad.
25. SCON office bearers virtually participated in the MoES UKRI event on nitrogen on 29th September 2021, ahead of the UNFCCC COP26, which was held at Glasgow between 31 Oct to 13 Nov 2021. It was organized by the Ministry of Earth Sciences, Government of India and UK Research and Innovation to explore the gaps, feasibility and opportunities for adaptation and resilience research for climate change.
26. SCON office bearers and some members participated in the online plenary event of the partners of UKRI-GCRF-SANH on 06 Oct 2021, in which the impacts of COVID on the funding and activities of the project were discussed. SCON once again highlighted how it is doing its best to fulfil all the commitments under the project, despite the fact that it could not receive any project funds due to the changed forex norms and the pending FCRA registration.
27. As a part of the wider outreach programme on nitrogen, Prof. N. Raghuram made a presentation at the KK Biotech International Webinar on 23 Oct., New Delhi on the topic 'Haber-Bosch Process of nitrogen fixation, Borlaug's green revolution and the current challenge of sustainable nitrogen management', which was attended by scientists across several disciplines from several countries, including EU and USA.
28. SCON office bearers participated in the special hybrid event 'Rediscovering Nitrogen' as a part of the events associated with UNFCCC COP26, which was held at Glasgow between 31 Oct to 13 Nov 2021. They also participated online in the SACEP COP26 Blue Zone event on 03 Nov 2021.
29. Prof. Raghuram attended the crucial Executive Group meeting of the UKRI-GCRF-SANH project on 14 Dec 2021, which discussed the budgetary and programmatic readjustments in view of the COVID-19-induced fund cuts and operational difficulties in some components of the project. He highlighted how SCON and other Indian partners on the project were working hard to ensure minimal impact of such developments on their own contributions to the project.

Scientific/policy engagement abroad

30. SCON office bearers attended important online meetings on the Sri Lankan initiative to pilot a follow-up resolution on nitrogen management to the UNEA 5.2, including those held on 12, 13, 17 and 18 Jan 2022.
31. Prof. N. Raghuram, and Prof. Tapan Kumar Adhya actively participated in all South Asian Nitrogen Hub (SANH) policy paper virtual meetings for carrying out the necessary research and for the development of the manuscript titled “Policies to combat nitrogen pollution in South Asia: Gaps and opportunities” which was eventually published in the British Journal, Environmental Research Letters.
32. Prof. Raghuram attended the online Editors’ meeting on the International Nitrogen Assessment book on 27 Jan 2022 and 15 Feb 2022.
33. Prof. Raghuram attended the online meetings of NGOs and the Committee of Permanent Representatives ahead of UNEA5.2, as a SC member of UNEP-GPNM and also as President of SIT, a UNEP-accredited NGO.
34. SCON office bearers and others attended various monthly meetings of the SANH from April 2021 to 9th March 2022 and substantially contributed in stakeholder analysis and towards the development of National Nitrogen Policy Report of India; SACEP-SANH report on “South Asian Regional Cooperation on Sustainable Nitrogen Management”; different policy briefs/papers etc.
35. Prof. N. Raghuram from SIT gave a talk on “Improving rice nitrogen use efficiency for sustainable nitrogen management: From phenotype to genotype and beyond” on 17th February in DiSTAP Seminar Series organized by MIT, Singapore.
36. SCON office bearers built on their experience on Indian Nitrogen Assessment to lead the South Asian partners in the development of a preliminary South Asian nitrogen assessment for the forthcoming book on International Nitrogen Assessment as a part of the GEF-UNEP-INMS project. The chapter titled “Assessment of Nitrogen Fluxes, Impacts and Solutions in South Asia” being finalized is a result of several scientific exchanges and virtual meetings throughout 2021-22.

Scientific/policy engagement abroad

37. SCON office bearers actively participated in online Focus Group Discussion on Stakeholder analysis for policies related to agriculture sector, organized by TERI School of Advanced Studies on the behalf of the UKRI-GCRF South Asian Nitrogen Hub on 18th February 2022.
38. Prof. Raghuram cochaired the meetings of the SANH Ethics Advisory Committee with Prof. Roger Jeffery from the University of Edinburgh. The last meeting of 2021-22 was held on 4th March 2022.
39. SCON office bearers also took part in the virtual meet on “Synthetic N and crop production policy brief” organized by SANH on 21st March 2022. The aim of this meet was to develop a policy brief that will cover regional and national level summary on the statistics of N-use in crop production, including fertilizer production, import, export and consumption in South Asia. SCON office bearers also participated in the online meetings of SANH partners on 23-24 Mar 2022.

Publications

1. Yang A.L, Raghuram, N., Porter, S., Adhya, T.K., Bansal, S., Panda, A. Nissanka, S. Shazly, A., Hassan R., Watto, M.A., Anik, A.R., Joshi, R., Jayaweera, A., Pokhrel, A., Kaushik, H., Kanter, D., Chowdhury, S., Sharmin, S., Das, S., & Jeffery R. (2022). Policies to combat nitrogen pollution in South Asia: Gaps and opportunities. Environ. Res. Lett. 17: 025007 doi: <https://doi.org/10.1088/1748-9326/ac48b2>
2. Madan, B., Malik, A. and Raghuram, N. (2022). Crop nitrogen use efficiency for sustainable food security and climate change mitigation. In Plant Nutrition and Food Security in the Era of Climate Change, Kumar, V., Srivastava, A., Penna, S. (Eds), Elsevier, Academic Press. ISBN 978-0-12-822916-3. Pp. 47-72.
3. Udvardi, M., Below, F.E., Castellano, M., Eagle, A., Giller, K.E., 2 Ladha, J.K., Liu, X., Maaz, T.M., Nova-Franco, B., Raghuram, N., Robertson, G.P., Saha, M., Roy, S., Schmidt, S., Tegeder, M., York, L.M., and Peters, J. (2021). A research road map for responsible use of agricultural nitrogen. Front. Sustain. Food Syst. 5: 660155. doi: 10.3389/fsufs.2021.660155.
4. Raghuram, N. and Beig, G. (2021). Climate Change Is Not Just About Carbon, There Is Nitrogen Too! Outlook 12 Aug. <https://www.outlookindia.com/website/story/india-news-climate-change-is-not-just-about-carbon-there-is-nitrogen-too/391230>
5. Raghuram, N. (2021). Two South Asians from UNEP shared the first YP Abrol Memorial Award. Current Science 120 (12), 1810
6. SANH nitrogen-relevant policy database (2021): Yang, A.L.; Adhya, T.K.; Anik, A.R.; Bansal, S.; Das, S.; Hassan, R.; Jayaweera, A.; Jeffery, R.; Joshi, R.; Kanter, D.; Kaushik, H.; Nissanka, S.P.; Panda, A.N.; Pokharel, A.; Porter, S.D.; Raghuram, N.; Sharna, S.C.; Shazly, A.; Shifa, S.; Watto, M.A. , 2021. Nitrogen-relevant policies from South Asia collected by the South Asian Nitrogen Hub (SANH) 2020-2021. NERC EDS Environmental Information Data Centre. <https://doi.org/10.5285/e2f248d5-79a1-4af9-bdd4-f739fb12ce9a>



"Plans to protect air and water, wilderness and wildlife are in fact plans to protect man."

— Stewart Udall

