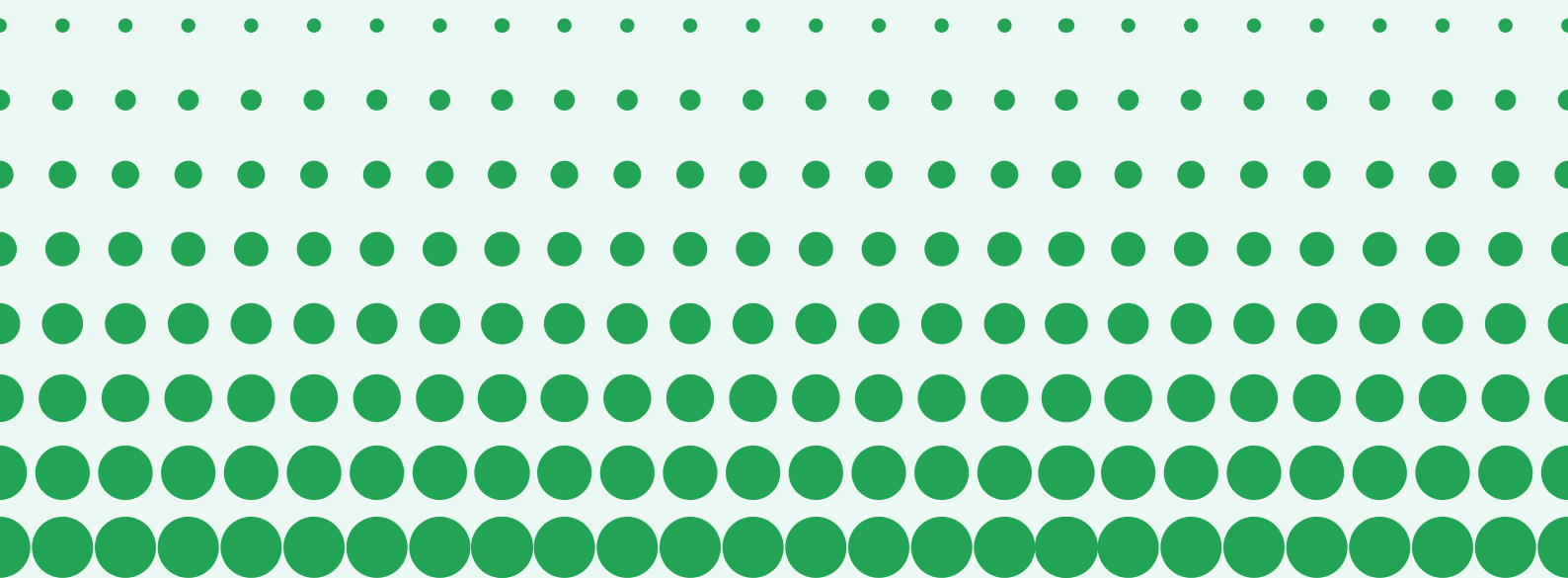


2023-24
annual report



society for conservation of nature

scon-india.org



Team

SCON / Annual Report 2023-24

Prof N. Raghuram
President

Prof TK Adhya
Vice President I

Dr. U Kulshreshtha
Vice President II

Dr. C Sharma
Vice President III

Dr. Arti Bhatia
Secretary

Dr. DK Sharma
Joint Secretary and Treasurer

Report designed by Vikramjit Singh

©SCON 2024

Contact

F4, A Block, NASC Complex
Dev Prasad Shastry Marg, Pusa
New Delhi-110012
India

Ph: +91-11-25843842
email: scon.iari@gmail.com

scon-india.org

Table of Contents

SCON / Annual Report 2023-24

01

Awareness and
engagement
activities with the
national civil society

02

Science-led
environmental
action with Govt of
India

03

Scientific/policy
engagement abroad

04

Publications

Foreword

SCON / Annual Report 2023-24

Nitrogen emissions are increasing across all south Asian countries, and for the region, exceeding in most case global averages, underlining that more still needs to be done. Reducing nitrogen waste is possible and a highly desirable policy goal that can limit adverse environmental effects and health impacts, with co-benefits for food production and the wider economy. Existing experience and best practices could be starting points, if optimized to local conditions and needs. Countries can learn from each other which approaches work best in the region, and how to fill any gaps. The South Asia region can be world-leading in addressing the challenge of sustainable Nr management. Efforts so far lay the foundations for catalysing further regional and international cooperation and actions to improving nitrogen management in South Asia.

For South Asian governments a key challenge is how to meet increasing food and transport demands to support larger, wealthier populations while in parallel stabilizing and/or reducing nitrogen pollution. Nevertheless, opportunities for policy development exist for each of the main source sectors that create nitrogen pollution (agriculture, combustion, water/sewage, transport, tourism, urban development, food, industry and energy). As South Asian economies develop further, the importance of controlling pollution from industrial and energy generation sources that support this development will grow in relative importance. Some clean technology is already cost-comparable to older iterations that serve the same purpose. South Asia could potentially leap-frog 'traditional' development pathways and demonstrate global leadership in creating green economies and societies.

Excerpt from SACEP & SANH (2022) South Asian Regional Cooperation on Sustainable Nitrogen Management, Nitrogen Pollution in South Asia: Scientific Evidence, Current Initiatives and Policy Landscape, SANH Policy Paper PP1.



Priority SDGs

SCON / Annual Report 2023-24

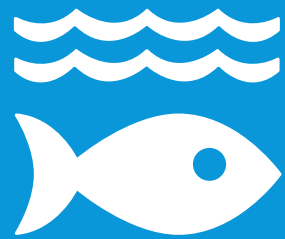
3 GOOD HEALTH
AND WELL-BEING



15 LIFE
ON LAND



14 LIFE BELOW
WATER



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



11 SUSTAINABLE CITIES
AND COMMUNITIES



2 ZERO
HUNGER



13 CLIMATE
ACTION



Awareness and engagement activities with the national civil society

SCON activities

SCON / Annual Report 2023-24

1. Prof. Raghuram delivered a Keynote lecture titled 'Towards Nitrogen Use Efficiency (NUE) Improvement for Sustainable Nitrogen Management in Rice' and also chaired a session at the XXI International Conference on Biodiversity, Food Security, Sustainability and Climate Change, 24-28 Apr., 2023, held at Assam Agricultural University, Jorhat, Assam.
2. Prof. Raghuram delivered a virtual presentation on 23 Jun 2023 at a webinar on 'The Nitrogen Questions: What, Why & How of Sustainable Nitrogen Management' organized by the Centre for Sustainable Agriculture, Hyderabad, and Krishna Sudha Academy of Agroecology. He emphasized the role of civil society in bringing the fruits of scientific research to inform policies, governance and stakeholder practices to help the society in its transition towards agroecology for sustainable development. He also gave similar presentations and scientific inputs to S&T advocacy groups and farmers's organisations concerned with climate change and agroecology on different occasions during the year.
3. Prof. Raghuram was consulted several times in the year for his expertise by the SANH partners at The Energy and Resources Institute and later Xavier Institute of Management, New Delhi, as a part of their stakeholder analysis on various aspects of sustainable nitrogen management in South Asia, especially from the main sectors outside agriculture, such as energy/power and transport sectors.
4. Prof. Raghuram attended a high-level brainstorming session on 17 May 2023 at the Indian Council for Research on International Economic Relations, New Delhi and made a presentation on Nitrogen Pollution and its impact on Environment. This meeting was also attended by presenters from IFFCO and Coromandel fertilizers, who presented their work on nano-fertilizers.
5. Dr. Arti Bhatia organized training for farmers in Farmers' field of Mumtajpur village cluster, Pautaudi block On agronomic interventions for reducing reactive N losses on 15th June 2023.

Awareness and engagement activities with the national civil society

SCON activities

SCON / Annual Report 2023-24

6. Prof. Adhya organized a stakeholder workshop in KIIT, Bhubaneswar during 25-26 Aug 2023 involving farmers, civil society organisations, scientists, social scientists, Management professionals, research scholars, school and university students, among others. The Summary version of the Indian National Nitrogen Policy Report approved by the Interministerial National Nitrogen Steering Committee was released in the inaugural function, in which Prof. Raghuram made a presentation, on South Asia 'Spearheading Global Sustainable Nitrogen Management'. It was also attended by Dr. Abha Misra (UNDP), Dr. Asutosh Sharma (President, INSA), while UK partners of SANH joined online. The stakeholder workshop produced insights into the levels of interest and influence on various aspects of sustainable nitrogen management among various stakeholders. On the 2nd day (26 Aug 2023), Prof. Raghuram made a presentation on the 'Environmental impacts of Reactive N in South Asia'.
7. Dr. Arti Bhatia organised field training for farmers in the Farmers' field of Mumtajpur village cluster, Pautaudi block on the use of Pusa biodecomposer for crop residue management on 23rd October 2023
8. For wider engagement with civil society organisations dealing with issues of sustainable agriculture and livelihoods, Prof. Raghuram attended a National Consultative Meeting on Agroecology, during 26-27 Oct, 2023 at the USO house, New Delhi. He also gave a presentation on Nutrient Management for Sustainable Food System in India, where he emphasized the importance of legume-based crop rotations for sustainable nitrogen management as well as nutritional security.
9. SCON continues to be represented by Prof. N. Raghuram in several meetings of the Steering Committee of the International Nitrogen Initiative as its Chair Emeritus.
10. Prof. Raghuram organised the 8th International Nitrogen Conference as the Conference Chair during 6-8 Feb 2024, in association with the International Nitrogen Initiative, SIT, Guru Gobind Singh Indraprastha University and others. This triennial event attracted about 250 participants from 31 countries over 4 days and included 35 sessions spanning scientific and policy sessions. Prof. Raghuram, Dr. Arti Bhatia, Prof. Tapan Adhya and Dr. Himanshu Pathak actively participated and presented their work in the conference. Apart from the scientific sessions, the conference adopted a Delhi Declaration on balancing global change and sustainability with nitrogen management for the benefit of governments, scientists and civil society.

Science-led environmental action with Govt of India

SCON activities

SCON / Annual Report 2023-24

1. Prof. Raghuram supervised a study on the management of nutrients and microplastics from wastewater to prevent eutrophication and plastic pollution in Delhi, India. It involved a number of sewage treatment plants and areas/water bodies of Delhi for the benefit of the Delhi Jal Board and the civil society. It studied nutrients and microplastics in wastewater apart from sludge analysis over two seasons to provide more robust conclusions on the extent of nutrient and plastic pollution in the wastewaters of Delhi and their potential for removal and recycling the usable nutrients.
2. Prof. Raghuram interacted with the Hyderabad Municipal Water Supply and Sewerage Board, Indian Institute of Rice Research and Prof. Jayashankar Telangana State Agriculture University, Hyderabad, on 6th June 2023, on the sustainable management of waste water for nutrient recycling and prevention of eutrophication in the water bodies of Hyderabad Metropolitan area. He attended a function in the presence of the Telangana Minister for Municipalities and IT, Shri K.T. Rama Rao and the MD of HMWSSB, Shri Dana Kishore, held at the Academic Staff College, Hyderabad. Media reported the event.
3. Prof. Adhya and Prof. Raghuram attended the 3rd and 4th meetings of the interministerial National Nitrogen Steering Committee set up by the Indian govt to advise on the implementation of the India-led UN resolution (UNEA 4/14) on sustainable nitrogen management. Due to their efforts, India continues to co-chair the UNEP Working Group on nitrogen for the global implementation of the UN resolutions on nitrogen.

Scientific/policy engagement abroad

SCON / Annual Report 2023-24

SCON activities

1 Profs. N. Raghuram and Tapan Adhya participated in online meetings with SANH-SACEP partners on the South Asian Roadmap for Sustainable Nitrogen Management on 03 Apr., and 10 May 2023. These meetings were held to develop a document to promote regional scientific and intergovernmental cooperation for a coordinated South Asian approach towards nitrogen management.

2 Prof. Raghuram attended virtual meetings of the UNEP GPNM Steering Committee as its member. Among other things, these meetings sought to improve the coordination between UNEP Working Group on Nitrogen and the GPNM/GWWI, in which India is playing increasingly important roles, especially through joint projects of both these partnerships on nutrient recovery/recycling from wastewater in Delhi.

3 Prof. Raghuram, Dr. Arti Bhatia and Prof. Tapan Adhya attended the last annual meeting of the South Asian Nitrogen Hub held in the University of Perediniya, Kandy, Sri Lanka (2-6 Oct 2023), in which the final version of the Indian Nitrogen Policy Report was released. They have also shared the results of their various studies and contributed to discussions on various aspects of the project, apart from leading some of the sessions.

4 SCON was represented by Prof. Raghuram in several online discussions among UNEP-accredited major S&T civil society groups from India and abroad under the open-ended working group on the development of a Science-Policy Panel on chemicals, waste and pollution prevention. He was initially a member of the Adhoc-panel and continues to be on Science Alliance Contact Group.

5 Prof. Raghuram attended multiple editorial meetings online with INMS partners throughout the year as one of the editors of the forthcoming book on International Nitrogen Assessment. and as a champion of regional assessments since 2012 that led to their inclusion under the global nitrogen assessment. This book to be published by the Cambridge University Press contains an entire section on regional demonstrations of assessing nitrogen, including a comprehensive chapter on South Asian Nitrogen Assessment, coauthored by Prof. Adhya, Prof. Raghuram among other partners from India, South Asia and elsewhere.

6 During 06-09 November, Prof. Raghuram attended the Fifth International Symposium on the Nitrogen Nutrition of Plants, Univ. of Sydney, Sydney, Australia, where he delivered a lead lecture on 'Convergence in divergence: Functional genomic identification and shortlisting of genes for NUE in rice', highlighting the latest research findings from the UKRI-GCRF-SANH project, in which SCON has also been an important partner.

Scientific/policy engagement abroad

SCON / Annual Report 2023-24

SCON activities

7. As a part of the international efforts to highlight the emerging technologies for nutrient recovery from wastewater, Prof. Raghuram (2023) presented its scientific background remotely at the Swedish Pavilion side event during Climate COP28, organized by Par Larshans on 9th December 2023 at Dubai. The presentation was on Reactive nitrogen management for sustainable development.

8. Similarly, he also made an invited lead presentation remotely at the International Symposium on Plateau Ecological Environment Protection and High-quality Development of the Yellow River Basin, 13 Dec., 2023, held at the Northwest A&F University, Yangling, Shaanxi, China, on the topic 'Resource utilisation for farm nitrogen use efficiency and sustainable nutrient management is critical for agroecological transition'.

9. Profs. Raghuram and Tapan Adhya virtually attended some of the UNEP events such as the OECPR and UNEA6 and GPNM webinars in order to keep abreast with the international developments and contributed to their deliberations.

Publications

SCON / Annual Report 2023-24

SCON activities

1. Bhatia, A*, Mandal, N, Maity, PP, 2024. Impact of Climate Change on Ecosystem Services, Journal of Agricultural Physics, 2nd Special issue, 24, S226-S238.
2. Jaiswal D. and Raghuram, N. (2024). Molecular Interventions for Improving Crop Nitrogen Use Efficiency: Trends, Opportunities and Challenges in Rice. In Improving nitrogen use efficiency in crop production, Ladha J.K. (Ed), Burleigh Dodds Science Publishing, Cambridge, UK, ISBN:13: 9781801464703. Pp: 57-112
3. Yang, A., Carnell, E., Begho, T., Jain, N., Nayak, D., Panda, A. N., Bansal, S., Sandiliya, D., Pearson, C., Anik, A. R., Adhya, T. K., Raghuram, N., Skiba, U., Jeffery, R., Sutton, M. A., & Dragosits, U. (2024). Synthetic Nitrogen Fertiliser in South Asia: Production, Import, Export, and Use for Crops, South Asia Nitrogen Hub (SANH) Policy Brief.
<https://sanh.inms.international/policy/FertiliserPolicySupplement>
4. Gawdiya, S., Kumar, D., Shivay, Y.S., Bhatia, A., Mehrotra, S., Chandra, M.S., Kumawat, A., Kumar, R., Price, A., Raghuram, N., Pathak, H. and Sutton, M.A. (2023). Field-Based Evaluation of Rice Genotypes for Enhanced Growth, Yield Attributes, Yield and Grain Yield Efficiency Index in Irrigated Lowlands of the Indo-Gangetic Plains. Sustainability 15 (11), 8793;
<https://doi.org/10.3390/su15118793>.
5. Adhya, T.K., Panda, A.N., Kaushik, H., Bansal, S., Raghuram, N., Ramachandran, R., Das, S., Tyagi, N., Yang, A. and Jeffery, R. (2023). India National Nitrogen Policy Report: Scientific Evidence, Current Initiatives and Policy Landscape. UKRI-GCRF South Asia Nitrogen Hub (SANH) Policy Paper 2, pp100. https://sanh.inms.international/sites/default/files/2023-11/nitrogen_policy_report.pdf
6. SACEP & SANH (2022) South Asian Regional Cooperation on Sustainable Nitrogen Management, Nitrogen Pollution in South Asia: Scientific Evidence, Current Initiatives and Policy Landscape, SANH Policy Paper PP1. https://sanh.inms.international/sites/default/files/2022-12/sacep_sanh_south_asia_regional_nitrogen_pollution_and_policy_report_2022.pdf
7. Yang A.L, Adhya, T.K., Anik, A.R., Bansal, S., Carnell, E., Chowdhury, S., Das, S., Hassan R., Jayaweera, A., Jeffery R., Joshi, R., Kaushik, H., Khaleel, Z., Nayak, D., Nissanka, S., Panda, A., Pokhrel, A., Porter, S., Raghuram, N., Safi, Z., Sharmin, S., Sharna, S.C., Shazly, A., Sutton, M.A., Tomlinson, S., Tshering, D., & Watto, M.A. (2022). Nitrogen Pollution and Policy Responses In South Asia, SANH policy briefing. https://sanh.inms.international/sites/default/files/2022-06/sacep_sanh_policy_briefing_june_2022_0.pdf

100%

Commitment

We owe the future generations a cleaner and greener nature than what we inherited from our forefathers.
Let's conserve nature

SCON

Annual report 2023-24



scon-india.org