

# Abhishek Chaudhary

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## Education

- Ph.D., Environmental Engineering, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland (2012-15)
- Master of Science, Environmental Engineering, University of Cincinnati, Ohio, U.S.A (2007-10)
- Bachelor of Technology, Civil Engineering, Indian Institute of Technology (IIT), Roorkee, India (2003- 07)

## Professional experience

**Assistant Professor**, Dept. of Civil Engineering, Indian Institute of Technology (IIT) Kanpur, India (2018-present)

- Evaluating the impact of human activities on different environmental domains through life cycle assessment
- Generating quantitative information to guide sustainable development and human behaviors

**Postdoctoral Researcher**, Institute of Food, Nutrition and Health, ETH Zurich, Switzerland (2016- 2018)

- Developed nutritional combined environmental impact framework to evaluate the sustainability of global food systems
- Developed methodologies to assess the product biodiversity footprints through different indicators

**Doctoral Candidate**, Institute of Environmental Engineering, ETH Zurich, Switzerland (2012- 2015)

- Developed a new spatially explicit methodology to assess the land use impacts on biodiversity by combining ecological models with vulnerability indicators from IUCN database. It was later recognized by UNEP-SETAC Life Cycle Initiative as [best practice](#) within LCA framework and has been applied in numerous product level case studies globally.
- Compiled air emission inventory for indoor wood products, modeled the fate and inhalation exposure to volatile organic compounds and assessed their impacts on human health. This facilitated a complete LCA of wood products.

**Environmental Engineer**, United States Environmental Protection Agency (U.S. EPA), Cincinnati, U.S.A (2009- 2012)

- Developed a novel Bayesian Monte Carlo and Maximum Likelihood technique for estimating required pollutant load reduction in impaired waters. The approach is faster and simpler to use than previous risk-management approaches.
- Compiled a global database and conducted meta-analysis on the efficiency of vegetative filter strips for sediment and nutrient removal. Results can be used to design buffers that prevent pollution and eutrophication in lakes and rivers.

**Graduate Assistant**, University of Cincinnati, Cincinnati, U.S.A (2007- 2009)

- Analyzed the long-term trends in meteorological parameters like wind speed, mixing depth, temperature extremes, growing season; cause of these changes and their impacts on formation and transport of air pollutants
- Developed mathematical models, computer programs and statistical tools for the estimation of parameter trends

## Peer-reviewed international journal publications

### 2024

65. Moreno, J., [...], **Chaudhary, A.** (in preparation). Projecting future biodiversity savings under different climate mitigation scenarios. **Global Environmental Change**.

64. Berger, I., [...], **Chaudhary, A.** (in preparation). How to achieve dual goals of sustainable agriculture and biodiversity conservation in the semi-arid tropics: a case study for Andhra Pradesh, India. **Nature Food**.

63. Cisneros-Pineda, A., **Chaudhary, A.**, et al. (in review). Mapping trade driven land use change and consequent biodiversity loss due to future global population increase. **Science of the total environment**.

62. Bidoglio, G., [...], **Chaudhary, A.** et al. (in review). Tracing the biodiversity footprints embodied in the global supply chains of agricultural commodities: an example of Germany and China. **Ecological Indicators**.

61. Bonfanti, J., [...], **Chaudhary, A.** et al. (in review). An evidence map of the impact of agricultural management practices on biodiversity. **Global Ecology and Biogeography**. Preprint [here](#).

60. Stoekli, S., Merian, S., [...], **Chaudhary, A.** (in review). Advancing biodiversity footprinting for food-related behavior change. **Nature Human Behaviour**. Preprint [here](#).

59. Hayman, D., [...], **Chaudhary, A.** (2024). The panzootic spread of highly pathogenic avian influenza H5N1 Sublineage 2.3.4.4b: A Critical Appraisal of One Health Preparedness and Prevention. **The Lancet Infectious Diseases**. Full text [here](#).
58. **Chaudhary, A.**, Krishna, V. (2024). A quantitative framework for characterizing the current and obtaining a future sustainable agricultural production mix meeting environmental, nutritional, and economic goals. **Environmental Research Letters**, 19, 074008. Full text [here](#).
57. Bahaveresh, C., [...], **Chaudhary, A.** et al. (2024). An integrated inventory of One Health tools: mapping and analysis of globally available tools to advance One Health. **CABI One Health**, 3, 1. Full text [here](#).
56. Garber, P., [...], **Chaudhary, A.**, et al. (2024). Global wildlife trade and trafficking contribute to the world's nonhuman primate conservation crisis. **Frontiers in Conservation Science**, 5, 1400613. Full text [here](#).
55. **Chaudhary, A.**, Akhtar, A. (2024). A novel approach for environmental assessment of road construction projects in India. **Environmental Impact Assessment Review**, 106, 107477. Full text [here](#).
54. Marques, A., Lancker, K., Willemsen, L., Schulp, J.E.C., **Chaudhary, A.**, et al. (2024). Role of Nature's contributions to people in sustaining international food trade. **People and Nature**, 6, 410–421. Full text [here](#).
53. **Chaudhary, A.**, Hertel, T. (2024). Recent developments and challenges in projecting the impact of crop productivity growth on biodiversity considering market-mediated effects. **Environmental Science & Technology**, 58(6), 2627–2635. Full text [here](#).

## 2023

52. Mettenleiter, T., [...], **Chaudhary, A.**, et al. (2023). The One Health High-Level Expert Panel (OHHLEP). **One Health Outlook**, 5, 18. Full text [here](#).
51. Markotter, W., [...], **Chaudhary, A.**, et al. (2023). Prevention of Zoonotic Spillover: From relying on response to reducing the risk at source. **PLOS Pathogens**, 19(10), e1011504. Full text [here](#).
50. Hayman, D.T.S., Koopmans, M.P.G., [...], **Chaudhary, A.**, et al. (2023). Developing One Health surveillance systems. **One Health**, 17, 100617. Full text [here](#).
49. Gumbs, R., Faith, D., Pellens, R., [...], **Chaudhary, A.**, et al. (2023). The post-2020 global biodiversity framework must safeguard the Tree of Life. **Conservation Biology**, e14138. Full text [here](#).
48. Anastasiou, K., **Chaudhary, A.**, et al. (2023). Conceptualizing the drivers of ultra-processed production and consumption and their environmental impacts: a group model-building exercise. **Global Food Security**, 37, 100688. Full text [here](#).
47. Cisneros-Pineda, A., **Chaudhary, A.**, et al. (2023). The missing markets link in global-to-local-to-global analyses of biodiversity and ecosystem services. **Environmental Research Letters**, 18, 041003. Full text [here](#).
46. **Chaudhary, A.** (2023). Sustainable food systems: the way forward in the Indian context. **Indian Pediatrics**. Full text [here](#).
45. Markotter, W., [...], **Chaudhary, A.**, et al. (2023). One Health action for health security and equity. **The Lancet**. 401(10376), 530-533. Full text [here](#).

## 2022

44. **Chaudhary, A.**, Akhtar, A. (2022). A template for evaluating cradle to site environmental life cycle impacts of buildings in India. **ACS Environmental Au**, 3, 94-104. Full text [here](#).
43. Perez-Escamila, R., [...], **Chaudhary, A.** (2022). Healthy and sustainable diets. **Med (Cell Press)** 3, 723-726. Full text [here](#).
42. Estrada, A., Garber, P., Garnett, S., [...], **Chaudhary, A.** et al. (2022). Global importance of Indigenous Peoples, their lands, and knowledge systems for saving the world's primates from extinction. **Science Advances**, 8, eabn2927. Full text [here](#).
41. **Chaudhary, A.**, Maier, L., Strassburg, B., et al. (2022). Sub-national assessment of threats to Indian biodiversity and habitat restoration opportunities. **Environmental Research Letters**. 17(5), 054022. Full text [here](#).
40. Chen, C., **Chaudhary, A.**, Mathys, A. (2022). Dietary change and global sustainable development goals. **Frontiers in Sustainable Food Systems** 6, 771041. Full text [here](#).
39. Adisasmito, W.B., Almuhairi, S., [...], **Chaudhary, A.**, et al. (2022). One health: a new definition for a sustainable and healthy future. **PLOS Pathogens**. 18(6), e1010537. Full text [here](#).

## 2021

38. Chen, C., **Chaudhary, A.**, et al. (2021). Nutritional adequacy of global food production. **Frontiers in Nutrition** 8, 739755.

37. Kimani-Murage, E., [...], **Chaudhary, A.**, et al. (2021). An optimal diet for planet and people. **One Earth**, 4(9), 1189-1192. Full text [here](#).
36. Kastner, T., **Chaudhary, A.**, Gingrich, S., et al. (2021). Global agricultural trade and land system sustainability: implications for ecosystem carbon storage, biodiversity and human nutrition. **One Earth**. 4(10), 1425-1443. Full text [here](#).
35. **Chaudhary, A.**, & Krishna, V. (2021). Region-specific nutritious, environmentally friendly, and affordable diets in India. **One Earth**, 4, 531-544. Full text [here](#).
34. Mair, L., Bennun, L.A., Brooks, T.M., [...], **Chaudhary, A.**, et al. (2021). A metric for spatially-explicit contributions to science-based species targets. **Nature Ecology & Evolution**. 1-8. Full text [here](#).
33. Metson, G.S., **Chaudhary, A.**, et al. (2021). Nitrogen and the food system. **One Earth**, 4(1), 3-7. Full text [here](#).

## 2020

32. Ramesh, R., Kalin, L., Hantush, M., **Chaudhary, A.** (2020). A Secondary Assessment of Sediment Trapping Effectiveness by Vegetated Buffers. **Ecological Engineering**, 159, 106094. Full text [here](#).
31. Leclere, D., Obersteiner, M., Barrett, M., Butchart, S.H., **Chaudhary, A.** et al. (2020). Bending the curve of terrestrial biodiversity needs an integrated strategy. **Nature**, 585(7826), 551-556. Full text [here](#).
30. Estrada, A., Garber, P., **Chaudhary, A.** (2020). Reconciling Current and future trends in socio-economic, demographic and governance factors affecting global primate conservation. **PeerJ**, 8, e9816. Full text [here](#).
29. **Chaudhary, A.**, & Tremorin, D. (2020). Nutritional and environmental sustainability of lentil reformulated beef burger. **Sustainability**, 12, 6712. Full text [here](#).
28. Green, A., Nemecek, T., **Chaudhary, A.**, Mathys, A. (2020). Assessing nutritional, health, and environmental sustainability dimensions of agri-food production systems. **Global Food Security**, 26, 100406. Full text [here](#).
27. Chen, C., **Chaudhary, A.**, Mathys, A. (2020). Nutritional and environmental losses embedded in global food waste. **Resources, Conservation & Recycling**, 160, 104912. Full text [here](#).
26. Veronesi, F., Hellweg, S., Anton, A., Azevedo, L.B., **Chaudhary, A.** et al. (2020). LC-IMPACT: a regionalized life cycle damage assessment method. **Journal of Industrial Ecology**, 24(6), 1201-1219. Full text [here](#).
25. Rust, N., Ridding, L., .....**Chaudhary, A.**, et al. (2020). How to transition to reduced-meat diets that benefit people and the planet. **Science of the total environment**, 718, 137208. Full text [here](#).

## 2019

24. Harwatt, H., Ripple, W.J., **Chaudhary, A.**, Betts, M.G. and Hayek, M.N. (2019). Scientists call for renewed Paris pledges to transform agriculture. **The Lancet Planetary Health**, 4(1), e9-e10. Full text [here](#).
23. **Chaudhary, A.** (2019). Sustainability assessment of Indian diets: A modeling study. **The Lancet Planetary Health**, 3, S9.
22. **Chaudhary, A.**, Krishna, V. (2019). Country-specific sustainable diets using optimization algorithm. **Environmental Science & Technology** 53, 7694-7703. Full text [here](#).
21. Estrada, A., Garber, P.A., **Chaudhary, A.** (2019). Expanding global commodities trade and consumption place the world's primates at risk of extinction. **PeerJ**, 7, e7068. Full text [here](#).
20. Chen, C., **Chaudhary, A.**, Mathys, A. (2019). Dietary Change Scenarios and Implications for Environmental, Nutrition, Human Health and Economic Dimensions of Food Sustainability. **Nutrients**, 11(4), 856. Full text [here](#).
19. Willett, W., Rockstrom, J., Loken, B., Springmann, M., ....., **Chaudhary, A.** et al. (2019) Our food in the Anthropocene: The EAT-Lancet commission on healthy diets from sustainable food systems. **The Lancet**, 393, 447-492. Full text [here](#).

## 2018

18. **Chaudhary, A.** & Mooers, A. (2018). Terrestrial vertebrate biodiversity loss under future global land use change scenarios. **Sustainability**, 10(8), 2764. Full text [here](#).
17. **Chaudhary, A.** et al. (2018). Nutritional Combined Greenhouse Gas Life Cycle Analysis for Incorporating Canadian Yellow Pea into Cereal-Based Food Products. **Nutrients**, 10(4), 490. Full text [here](#).
16. **Chaudhary, A.** & Brooks, T.M. (2018). Land use intensity-specific global characterization factors to assess product biodiversity footprints. **Environmental Science & Technology**, 52(9), 5094–5104. Full text [here](#).
15. **Chaudhary, A.**, Gustafson, D., & Mathys, A. (2018). Multi-indicator sustainability assessment of global food systems. **Nature Communications**, 9(1), 848. Full text [here](#).

14. Steel, M., Pourfaraj, V., **Chaudhary, A.**, Mooers, A.O. (2018). Evolutionary isolation and phylogenetic diversity loss under random extinction events. **Journal of Theoretical Biology**, 438, 151-155. Full text [here](#).
13. **Chaudhary, A.**, Pourfaraj, V. & A.O. Mooers. (2018). Projecting global land-use-driven evolutionary history loss. **Diversity and Distributions**, 24, 158-167. Full text [here](#).

### **2017 and earlier**

12. **Chaudhary, A.** & Brooks, T.M. (2017). National Consumption and Global Trade Impacts on Biodiversity. **World Development**, 121, 178-187.
11. **Chaudhary, A.**, Carrasco, L.R., Kastner, T. (2017). Linking National Wood Consumption with Global Biodiversity and Ecosystem Service Losses. **Science of the Total Environment**, 586, 985-994.
10. **Chaudhary, A.** & Hantush, M.M. (2017). Bayesian Monte Carlo and Maximum Likelihood Approach for Uncertainty Assessment and Risk Management: Application to Lake Oxygen Recovery Model. **Water Research**, 108, 301-311.
9. **Chaudhary, A.**, Pfister, S. et al. (2016). Spatially Explicit Analysis of Biodiversity Loss Due to Global Agriculture, Pasture and Forest Land Use from a Producer and Consumer Perspective. **Environmental Science & Technology**, 50, 3928–3936.
8. **Chaudhary, A.**, Burivalova, Z., Koh, L.P., Hellweg, S. (2016). Impact of Forest Management on Species Richness: Global Meta- Analysis and Economic Trade-Offs. **Scientific Reports**, 6, 23954.
7. **Chaudhary, A.**, & Kastner, T. (2016). Land Use Biodiversity Impacts Embodied in International Food Trade. **Global Environmental Change**, 38, 195-204.
6. **Chaudhary, A.**, et al. (2015). Quantifying Land Use Impacts on Biodiversity: Combining Species–Area Models and Vulnerability Indicators. **Environmental Science & Technology**, 49(16), 9987–9995
5. Verones, F., Huijbregts, M. A., **Chaudhary, A.**, et al. (2015). Harmonizing the Assessment of Biodiversity Effects from Land and Water Use within LCA. **Environmental Science & Technology**, 49(6), 3584–3592
4. Steubing, B., Suter, F., Heeren, N., **Chaudhary, A.**, et al. (2015). What are the most ecologically sustainable uses of wood? [in German]. **Swiss Journal of Forestry**, 166(5), 335-338.
3. **Chaudhary, A.**, & Hellweg, S. (2014). Including Indoor Offgassed Emissions in the Life Cycle Inventories of Wood Products. **Environmental Science & Technology**, 48(24), 14607-14614.
2. Hantush, M. M., & **Chaudhary, A.** (2013). Bayesian Framework for Water Quality Model Uncertainty Estimation and Risk Management. **Journal of Hydrologic Engineering**, 19(9), 04014015.
1. **Abhishek, A.**, Lee, J. Y., Keener, T. C., Yang, Y. J. (2010). Long-term wind speed variations for three Midwestern US cities. **Journal of the Air & Waste Management Association**, 60(9), 1057-1064.

### **Selected conference and workshop presentations**

44. Behravesh, C., [...], **Chaudhary, A.** et al. An Integrated Inventory of One Health Tools: Mapping and Analysis of Globally Available Tools to Advance One Health Implementation. *8<sup>th</sup> World One Health Congress (WOHC)*. **Cape Town**; 09/2024.
43. **Chaudhary, A.** Projecting the impact of future global population and crop productivity growth on biodiversity by combining economic and ecological models. *The interface between sustainable agriculture and biodiversity conservation in the Eastern Ghats and beyond: a knowledge exchange workshop*. **Hyderabad**; 05/2024
42. **Chaudhary, A.** Projecting the impact of future global population and crop productivity growth on biodiversity by combining economic and ecological models. *International Congress for Conservation Biology*. **Kigali, Rwanda**; 07/2023.
41. **Chaudhary, A.** Leveraging data analytics and life cycle assessment tool for informing sustainable agricultural production. *ACS Spring*. **Indianapolis, USA**; 03/2023.
40. **Chaudhary, A.** Identifying future global hotspots of deforestation and biodiversity loss to inform One Health risk. *7<sup>th</sup> World One Health Congress (WOHC)*. **Singapore**; 11/2022.
39. **Chaudhary, A.** The impact of global food consumption on different domains of the environment. *Keynote lecture for Food4Climate Pavilion at COP27 of UNFCCC in Egypt*. **Online**; 11/2022.
38. **Chaudhary, A.** Food trade and species diversity. *Keynote lecture at webinar organized by Japan Wildlife Conservation Society (JWCS)*. **Online**; 10/2022.
37. **Chaudhary, A.** Ecosystem services, biodiversity and anthropogenic capital embedded in internationally traded goods. *Workshop organized by German Centre for Integrative Biodiversity Research*. **Leipzig, Germany**; 09/2022.

36. Chaudhary, A. Environmental Impact and Nutritional Value Embodied in Food Waste and Diets of Countries. *1st International Conference on Food Waste to Food Sustainability*. **Online**; 08/2022.
35. Chaudhary, A. Impact of climate change and environment on zoonotic disease emergence. *12<sup>th</sup> National conference on One Health Initiative*. **Online**; 07/2022.
34. Chaudhary, A. Use of countryside species-area relationship in assessing impacts of land-based products on biodiversity. *Science Based Target Network (SBTN) Land Hub workshop*. **Online**; 06/2022.
33. Chaudhary, A. Sustainability Data Analytics: Transforming data into knowledge for a more sustainable world. *Mapping and matching interest workshop by Shastri Indo-Canadian Institute*. **Online**; 05/2022.
32. Chaudhary, A. Modeling past and future land-use change driven biodiversity loss globally. *Managing the global Commons conference organized by Purdue University*. **West Lafayette, Indiana, USA**; 04/2022.
31. Chaudhary, A. Sub-National Assessment of Threats to Indian Biodiversity. *30<sup>th</sup> International Congress for Conservation Biology*. **Online**; 12/2021.
30. Chaudhary, A. Keynote lecture on Food and Sustainable Development. *World Food Day event organized by IIT Guwahati*. **Online**; 10/2021.
29. Chaudhary, A. Understanding species threats in a globalised world: Supply Chain assessments in conservation. *IUCN World Conservation Congress*. **Marseille, France**; 09/2021.
28. Chaudhary, A. Land-use change driven biodiversity loss under future global socio-economic and climate scenarios. *31<sup>st</sup> International Conference of Agricultural Economists*. **Online**; 08/2021
27. Chaudhary, A. Sustainable food consumption for health and planet. *Invited talk at virtual event on ecosystems restoration in light of World Environment Day organized by Barclays Real Estate Environmental Management team*. **Online**; 06/2021.
26. Chen, C., Chaudhary, A. & Mathys, A. How much can food waste reduction in each country contribute towards global nutritional and environmental sustainability? *Planetary Health Annual Meeting (virtual)*, **São Paulo, Brazil**; 04/2021
25. Chen, C., Chaudhary, A. & Mathys, A. Multi-dimension evaluation of dietary sustainability with a case study for Switzerland. *12<sup>th</sup> International Congress on LCA Food*, **Berlin, Germany**; 10/2020
24. Mathys, A., & Chaudhary, A. Challenges, needs and tools for holistic sustainability assessment of global food systems. *13<sup>th</sup> International Congress on Engineering and Food (ICEF13)*, **Melbourne, Australia**; 09/2019
23. Chaudhary, A. Identifying Hotspots and Drivers of Biodiversity Loss under Future Global Climate and Socio-economic Scenarios. *29<sup>th</sup> International Congress for Conservation Biology*, **Kuala Lumpur, Malaysia**; 07/2019.
22. Chaudhary, A. Phylogenetic diversity loss associated with global food production, consumption and trade. *4th Global Land Programme Open Science Meeting (GLP OSM)*, **Bern, Switzerland**; 04/2019.
21. Chen, C., Chaudhary, A. & Mathys, A. Nutrition combined Environmental Assessment of Global Diets. *Planetary Health Alliance Annual meeting*. **Stanford, USA**; 09/2019.
20. Chaudhary, A. & Mathys, A. Nutritional combined Environmental Life Cycle Assessment of National Diets. *The 13th Biennial International Conference on EcoBalance*. **Tokyo, Japan**; 10/2018.
19. Chaudhary, A. & Mathys, A. Integrated sustainability assessment of national food systems through nutritional, environmental and social indicators. *19<sup>th</sup> IUFOST World Food Science and Technology Congress*. **Mumbai, India**; 10/2018.
18. Chaudhary, A. Food system sustainability performance metrics. *Workshop on quantitative indicators of food systems resilience, jointly organized by Oxford University and Tsinghua University*. **Beijing, China**; 09/2018.
17. Chaudhary, A. Sustainability performance metrics for fruits and vegetable crops. *Workshop on Innovating global fruit and vegetable food systems to help bring sustainable nutrition security, organized by Aspen Global Change Institute*. **Keystone, Colorado, USA**; 08/2018.
16. Chaudhary, A. Biodiversity Threats Embodied in Global Trade: Moving beyond species richness. *5<sup>th</sup> European Congress for Conservation Biology*. **Jyväskylä, Finland**; 06/2018.
15. Chaudhary, A. et al. Incorporating Canadian Yellow Pea into Cereal-based Food Products as an Ecological Approach to Managing Diabetes. *36<sup>th</sup> International Symposium on Diabetes and Nutrition organized by the Diabetes and Nutrition Study Group*. **Opatija, Croatia**; 06/2018.
14. Chaudhary, A. & Mathys, A. Nutrition combined Environmental Assessment of Global Diets. *Planetary Health Alliance Annual meeting*. **Edinburgh, United Kingdom**; 05/2018.

13. Chaudhary, A. The global trade impact on multiple indicators of biodiversity. *Invited lecture at Senckenberg Biodiversity and Climate Research Institute. Frankfurt, Germany*; 04/2018.
12. Chaudhary, A. Product Biodiversity Footprinting. *2<sup>nd</sup> meeting of the Technical Advisory Group on biodiversity assessment of livestock supply chains, hosted by ILRI and FAO of United Nations. Nairobi, Kenya*; 01/2018.
11. Chaudhary, A. Biodiversity footprinting methodology using countryside species-area relationship. Invited lecture at the meeting of TAG on biodiversity and ecosystem services, LEAP partnership. *Food and Agriculture Organization of the United Nations. Rome, Italy*; 09/2017.
10. Chaudhary, A. & Mathys, A. Targeting Human Consumption and Dietary Changes for Global Biodiversity Conservation. *28<sup>th</sup> International Congress for Conservation Biology. Cartagena, Colombia*; 07/2017.
9. Hantush, M.M., & Chaudhary, A. Application of Bayesian Monte Carlo methods to a lake oxygen recovery model. *World Environment and Water Resources Congress, West Palm Beach, USA*; 05/2016
8. Chaudhary, A. The global impact of wood consumption on biodiversity. *60<sup>th</sup> LCA Discussion Forum - Environmental Use of Wood Resources, Zurich, Switzerland*; 12/2015.
7. Chaudhary, A. & Hellweg, S. Combining Species-Area Relationships and IUCN Vulnerability Indicators for Assessing Land Use Impacts on Biodiversity. *25<sup>th</sup> Meeting of SETAC Europe, Barcelona, Spain*; 05/2015.
6. Chaudhary, A., Pfister, S., Hellweg, S. Spatially Explicit Global Analysis of Biodiversity Loss from Agricultural Land Use. *20<sup>th</sup> SETAC Europe LCA Case Study Symposium, Novi Sad, Serbia*; 11/2014.
5. Chaudhary, A. & Hellweg, S. Indoor exposure to emissions from wood products: Complementary views from life cycle assessment and risk assessment. *24<sup>th</sup> Meeting SETAC Europe, Basel, Switzerland*; 05/2014.
4. Hantush, M.M., Chaudhary, A., Kalin, L., Isik, S. Analytical Modeling of Diffusive Processes at Media Interfaces. *International Conference on Simulation and Modeling of Diffusive Processes and Applications (ICMSDPA12), Banaras Hindu University, Banaras, India*; 10/2012.
3. Chaudhary, A., Lee, J. Y., Keener, T. C., & Yang, Y. J. Impact of Climate Change on Air Quality for Three Midwestern USA Cities. *102<sup>nd</sup> AWMA Annual Conference and Exhibition, Detroit, USA*; 06/2009.
2. Chaudhary, A., Lee, J. Y., Keener, T. C., & Yang, Y. J. Climate Change and Energy Policy Analysis. *University Clean Energy Alliance of Ohio; 3<sup>rd</sup> Annual Meeting and Workshop, Columbus, USA*; 04/2009.
1. Chaudhary, A., Lee, J. Y., Keener, T. C., & Yang, Y. J. Long term wind speed trends in Midwest USA. *101<sup>st</sup> AWMA Annual Conference and Exhibition, Portland, U.S.A*; 06/2008.

### Books and monographs

1. FAO (2021). *Integration of environment and nutrition in the life cycle assessment of food items: opportunities and challenges*. Rome, Italy. ISBN: 978-92-5-135532-9. Available [here](#).
2. FAO (2020). *Biodiversity and the livestock sector- Guidelines for quantitative assessment – Ver 1*. Rome, Italy. ISBN: 978-92-5-132745-6. Available [here](#).

### Independently acquired research grants and managed projects

7. Initiation grant, IIT Kanpur (2020-22)
6. National research project grant, Swiss National Science Foundation, Switzerland (2017-20)
5. Research grant, The Netherlands Environmental Protection Agency (PBL), The Netherlands (2017)
4. Research grant, Pulse Canada (2017)
3. Research grant, The Nature Conservancy, USA (2016)
2. Research grant, United States Environmental Protection Agency, USA (2010-12)
1. Student contractor research grant, United States Environmental Protection Agency, USA (2009-10)

### Fellowships and Scholarships

20. Conference grant, ACS Spring 2023, USA (2023)
19. Conference grant, World One Health Congress, Singapore (2022)
18. Conference grant, Uppsala Health Summit, Sweden (2022)
17. Conference grant, World Biodiversity Forum, Switzerland (2022)

16. Conference grant, Deutsches Zentrum für integrative Biodiversitätsforschung, Germany (2022)
15. Visiting professorship, University of Zurich, Switzerland (2022)
14. Conference grant, Purdue University, USA (2022)
13. Conference grant, International Conference of Agricultural Economists (2021)
12. Travel grant, International congress for conservation biology, Malaysia (2019)
11. Travel grant, International Workshop on Bending the Biodiversity Curve, The Netherlands (2019)
10. Travel grant, Open Science Meeting of the Global Land Programme, Switzerland (2019)
9. Travel grant, International Meeting on Science-based Targets for Species, U.K (2019)
8. Travel grant, Workshop on Innovating global fruit and vegetable food systems, Keystone, CO, USA (2018)
7. Travel grant, Workshop on quantitative indicators of food systems resilience, Beijing, China (2018)
6. Postdoctoral fellowship, ETH Zurich, Switzerland (2016)
5. PhD scholarship, ETH Zurich, Switzerland (2012-2015)
4. Erasmus Mundus Doctoral Scholarship (2012) (declined)
3. Graduate scholarship, University of Cincinnati, USA (2007-09)
2. Erasmus Mundus Masters Scholarship (2007) (declined)
1. Masters scholarship, Singapore NTU-Stanford Environmental Engineering Partnership (2007-09) (declined)

### Student thesis supervised

15. Akhtar, A. (2023). *Monetary evaluation of environmental impacts of projects in India*. MTech thesis, IIT Kanpur.
14. Chen, C. (2021). *Nutritional combined environmental impact assessment of global food systems*. **PhD thesis**, ETH Zurich.
13. Tangri, S. (2021). *Environmental sustainability in defense sector of India*. MTech thesis, IIT Kanpur
12. Patidar, P. (2021). *Land use change and ecosystem service loss in India*. MTech thesis, IIT Kanpur
11. Singh, A. (2021). *Sustainability Assessment of Dairy, Meat and Fisheries Sector in India*. MTech thesis, IIT Kanpur
10. Navin, N. (2020). *LCA of a building at IITK campus*. MTech thesis, IIT Kanpur (co-supervision)
9. Sachan, N. (2020). *Assessment of biodiversity threats in India*. MTech thesis, IIT Kanpur
8. Yadav, S.S. (2019). *Environmental impact of construction materials in India*. BTech summer project, IIT Kanpur
7. Chen, C. (2018). *Swiss Food Sustainability Analysis*. MSc thesis, ETH Zurich
6. Pezzati, L. (2015). *Using GLMs to Assess Biodiversity Recovery in Global Wetlands*. MSc thesis, ETH Zurich
5. Cateau, B. (2015). *Quantifying human toxicity impacts of common indoor products*. BSc thesis, ETH Zurich
4. Messmer, A. (2015). *Life cycle assessment of adhesives used in wood constructions*. MSc thesis, ETH Zurich
3. Luck, M. (2015). *Quantifying the impact of Swiss food imports on biodiversity*. BSc thesis, ETH Zurich
2. Hirschberg, J. (2014). *Characterizing regionalized land use and land use change flows for forestry products and quantifying their impact on biodiversity*. BSc thesis, ETH Zurich
1. Deshpande, P. (2013). *Assessment of Pollutant Emissions and Occupational Exposure in the Informal E-Waste Recycling and Disposal Facilities*. MSc project thesis, ETH Zurich

### Teaching

1. Instructor, [Environmental Quality and Processes Practical](#) (4 credits PG course), IIT Kanpur, Fall 2024 (166 students)
2. Instructor, [Practical Ethics](#) (3 credits UG course), IIT Kanpur, Fall 2024 (25 students)
3. Instructor, [Humans, Environment and Sustainable Development](#) (9 credits PG course), IIT Kanpur, Spring 2021 (90 students)
4. Instructor, [Sustainable Built Environment](#) (9 credits UG course) at IIT Kanpur, Fall 2020, 2021 (157 students)
5. Instructor, [Industrial Waste Management](#) (5 credits PG course) at IIT Kanpur, Spring 2020 (26 students)

- Instructor, [Introduction to Environmental Science](#) (9 credits UG course) at IIT Kanpur, Fall 2019 (146 students)
- Instructor, [Principles of Environmental Management](#) (5 credits PG course) at IIT Kanpur, Spring 2019 (65 students)
- Instructor, [Sustainable Food Processing](#) (3 credits PG course) at ETH Zurich, Spring 2018 (35 students)
- Instructor, [Environment and Computer Lab](#) (3 credits PG course) at ETH Zurich, Fall 2015 (30 students)

### Technical reports

- Leibniz Research Network Biodiversity. (2024). *10 Must Knows from Biodiversity Science 2024*. Potsdam Institute for Climate Impact Research. Available [here](#).
- Owen, N., Chaudhary, A., et al. (2021). *Conservation of evolutionary heritage supports the transformative change required for the CBD post2020 Framework: proposed phylogenetic diversity indicators as a contribution from non-state actors*. Submission from the IUCN SSC Phylogenetic Diversity Task Force. 2020, Available [here](#).
- Chaudhary A. et al. (2020). *Environmental, nutritional, and cost impacts of beef-lentil blended burgers*. Available [here](#).
- Chaudhary, A. et al. (2018). *Sustainable and Equitable Increases in Fruit and Vegetable Productivity and Consumption are Needed to Achieve Global Nutrition Security*. Position paper from workshop organized by Aspen Global Change Institute at Keystone, Colorado, USA. Available [here](#).
- Abell, R., et al. (2017). *Beyond the Source: The Environmental, Economic and Community Benefits of Source Water Protection*. The Nature Conservancy, Arlington, VA, USA. Available [here](#).
- Chaudhary, A., et al. (2016). *Potential species loss from land use. LC-Impact methodology for LCA*. Available [here](#).
- Chaudhary, A. (2015). *Towards Improved Assessment of Environmental Impacts Embodied in Agricultural and Forestry Products*. PhD. Dissertation, ETH Zurich, Switzerland. Available [here](#).
- Abhishek (2010). *The Impact of Climate Change on Air Quality for Midwest USA*. MS thesis, University of Cincinnati, USA. Available [here](#).

### Awards & Certificates

- Received an Honorable Mention at the 2023 James J. Morgan Early Career Award by the American Chemical Society. See full announcement [here](#).
- Among the six global scientists recognized as '2022 Rising Stars in Environmental Research' by the American Chemical Society's open-access journal ACS Environmental Au. See full announcement [here](#).
- Received letter of appreciation from the Director, IIT Kanpur for outstanding performance in teaching the course CE213A (Introduction to Environmental Science) based on getting > 3.5 out of 4 in student course evaluation survey (January 2020)
- Received letter of appreciation from the Director, IIT Kanpur for outstanding performance in teaching the course CE667A (Principles of Environmental Management) based on getting > 3.5 out of 4 in student course evaluation survey (August 2019)
- Engineer in Training (E.I.T) certificate, State of Ohio, USA, 2011
- Certificate of achievement, German as a foreign language, level A2.1 (2014)

### Media

- Excerpts of interview published in **The Economist** magazine [article](#) on Indian foods and diets (2024)
- Excerpts of interview published in an article in the Everyday Health News platform. The article is titled 'What Is a Climatarian Diet? A Complete Guide to Adopting a Sustainable Eating Approach.' Read full article [here](#) (2022)
- Invited lecture on the impact of climate change and environment on zoonotic disease emergence at the 12<sup>th</sup> National conference on One Health Initiative (2022)
- Excerpts of interview published in the **Outlook Business magazine** [article](#) titled 'One Health' cure for multiple ills' (2022)
- Excerpts of interview in **Nature** news [article](#) 'What humanity should eat to stay healthy and save the planet' (2021).
- Interview on live telethon hosted by national news channel **NDTV** on October 3, 2021. The topic was Swasth Bharat, Sampann Bharat (Healthy India, Prosperous India) with Amitabh Bachchan (2021)
- Op-ed [article](#) on the urgent need for changes in the Indian dietary habits in order to achieve SDGs by 2030 published in the national newspaper **The Indian Express** (2021)
- Excerpts of interview on impact of Brazilian soybean exports on biodiversity appeared in **Mongabay** [article](#) (2019)



9. Excerpts of interview on healthy diets that can save the planet published in **The Times of India** newspaper [article](#) (2019)
10. Research on impact of livestock sector on climate change appeared in **The Guardian** [newspaper](#) and **CNN** [news](#) (2019)
11. Presentation at Swiss National Science Foundation meeting (2018).

### **International Committees and Memberships**

1. Member, One Health High Level Expert Panel ([OHHLEP](#)) led by the Tripartite (WHO, OIE and UN FAO) plus UNEP. The mandate of the panel is to provide policy relevant scientific assessment on the emergence of health crisis or pandemics arising from the human-animal-ecosystem interface and guide these organizations on One Health related matters. One of the 26 global scientists and the only one from India on this panel. (2021-2024)
2. Member, Early Career Editorial Board for the American Chemical Society's (ACS) journal *Environmental Science & Technology* (ES&T). One of the 19 global scientists and the only one from India on this board. Profile [here](#). (2021-present)
3. Member, Sigma Xi, The Scientific Research Honor Society (2024-present)
4. Member, International Union for Conservation of Nature (IUCN's) Species Threat Abatement and Restoration ([STAR](#)) Metric Interim Committee. (2021-present).
5. Member, International research [group](#) led by the United Nations' Food and Agriculture Organization (FAO) that provided the best-practice guidance on how to conduct nutritional combined environmental life cycle assessment (LCA) of food products. One of the 30 global scientists and the only one from India on this panel. (2021)
6. Member, Advisory board for the United Kingdom's Trade, Development, and the Environment [Hub](#) (2021-present)
7. Member, Advisory board for the French Agri-TE [project](#) on evidence-based synthesis of the impacts of agro-ecological transition at the global scale (2021-present)
8. Member, Food Sustainability Advisory Team (Food-SAT) for the New Zealand's [INFORMAS](#) project that will help guide the development of indicators to monitor sustainability of national food environments worldwide. (2021-present)
9. Member, International Union for Conservation of Nature (IUCN)-Species survival commission (SSC), Phylogenetic diversity task [force](#) (2019-present)
10. Judge for evaluating the student presentations at the 1st Satellite Meeting of American Chemical Society (ACS) Fall 2021.
11. Member, EAT-Lancet [commission](#) on healthy diets from sustainable food systems (2018-19)
12. Member, Society for Conservation of Biology (2017-2020)
13. Selected as a member of technical advisory group (TAG) on biodiversity and ecosystem services, Livestock Environmental Assessment and Performance partnership (LEAP), Food and Agriculture Organization of the United Nations, 2017-18
14. Member, UNEP-SETAC working group for assessing land use impacts on biodiversity in LCA, 2014-16.
15. Member, Society of Environmental Toxicology and Chemistry (SETAC) (2013-2015)
16. Member, Air and waste management association (AWMA), USA, Cincinnati chapter, 2008-2010.

### **Journal editorial board positions**

1. Member, Early Career Editorial Board for the American Chemical Society's (ACS) journal *Environmental Science & Technology* (ES&T). One of the 19 global scientists. Profile [here](#). (2021-present)
2. Review Editor on the Editorial Board for the journal [Frontiers in Nutrition](#) (2022-present)
3. Review Editor on the Editorial Board for the journal [Frontiers in Sustainable Food Systems](#) (2022-present)
4. Member, Editorial Board for the Elsevier journal [iScience](#) (declined)

### **National and institute level activities**

1. Convener, Department Admission Committee (DAC), Civil Engineering, IIT Kanpur (2024-25)
2. Member, Department Post Graduate Committee, IIT Kanpur (2020-21)
3. Member, faculty search committee, IIT Kanpur (2019-221)
4. Member, committee to review the performance of Infrastructure, Engineering and Management program of the department of civil engineering at IIT Kanpur (April 2020)
5. Member, committee to collect faculty data for review of the performance of civil department, IITK (February 2020)

6. Member, national audit committee to review the performance of Uttarakhand Environmental Protection Agency (June 2019)
7. Member, committee to select student counselling supervisors at IIT Kanpur (February 2019)

### Reviewer activities

1. Funding proposal reviewer for Slovak Research and Development Agency (SRDA) (2024)
2. Funding proposal reviewer for Dutch Research Council (NWO) Talent Programme Veni (2023)
3. Funding proposal reviewer for European Commission’s Horizon projects (2021)
4. Funding proposal reviewer for United States National Science Foundation (2020)
5. Funding proposal reviewer for Netherlands Organization for Scientific Research (2019)
6. Funding proposal reviewer for Biodiversa (2018)
7. Frequent peer-reviewer for articles in the following international journals – Nature; Nature Communications; Nature Ecology and Evolution; Nature Food; Nature Sustainability; Proceedings of the National Academy of Sciences (PNAS); The Lancet Planetary Health; Global Change Biology; Global Environmental Change; PLoS Biology; Environmental Science & Technology; Global Food Security; One Earth; International Journal of Life Cycle Assessment; Earth’s Future; Journal of Cleaner Production; Science of the Total Environment; Resources, Conservation & Recycling; Sustainability; Ecological Economics; Food Research International; Public Health Nutrition; Environment, Sustainability and Development.

### Research profile and downloads

- Lab website: <https://chaudhary-lab.weebly.com/>
- ResearchGate profile: [https://www.researchgate.net/profile/Abhishek\\_Chaudhary7](https://www.researchgate.net/profile/Abhishek_Chaudhary7)
- Google Scholar profile: <https://scholar.google.ch/citations?user=kOOiIKQAAAAJ&hl=en&oi=sra>
- Department homepage: <http://www.iitk.ac.in/new/abhishek-chaudhary>

Citation indices	All (as of August 12, 2024)	Since 2019
Total citations	14901	14364
h-index	32	30
i10-index	51	50