

RUPAK GOSWAMI, PhD

Faculty Centre for Integrated Rural Development and Management, Ramakrishna Mission Vivekananda Educational and Research Institute, Kolkata 700103, INDIA (since May 2007) and

Visiting Fellow, University of California, Davis, CA, USA (2018-2019)

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ORCID ID: <https://orcid.org/0000-0002-5998-4396>

Birth: December 18, 1978, Kolkata, INDIA

Education:

PhD in Agricultural Extension (April 2007), Bidhan Chandra Krishi Viswavidyalaya (State Agricultural University, West Bengal)

MSc (Ag) in Agricultural Extension (September 2002), Bidhan Chandra Krishi Viswavidyalaya (State Agricultural University, West Bengal)

Teaching (Core and Optional):

Rural Extension [ARD-103], Research Methodology-I [ARD-105], Research Methodology-II [ARD-205], Rural Development Management [ARD-301], Extension Programmes & Organisations [ARD-302], Competency Development for Rural Development Professionals [ARD-359], Seminar-I [ARD-403], Seminar-II [ARD-404], Review of Literature [ARD-501], Advance Research Methodology [ARD-502], Computer Application in Research [ARD-503], Emerging Thoughts and Techniques in Extension [ARD-551], Research and Publication Ethics (CPE-RPE)

Research Focus and Interests:

[Keywords: Sustainability of Agricultural Systems; Social Network Analysis; Mental Model of Farmers; Rural Migration-Agriculture-Women Nexus; Typology Study of Farming Systems; Technology Diffusion; Mixed Method Applications; Participatory Appraisals]

Rupak's group at RKMVERI analyses the sustainability of small farms and studies diverse socio-ecological systems using participatory appraisals, network analysis, and mental modelling. Rupak's works focus on the identification of fundamental structures and processes in socio-ecological systems (mental models, social networks, farm typology, technology

diffusion, migration) and relate them to multiple system outcomes in rural areas (technology adoption, crop productivity, farm sustainability). Rupak's group has collaborated with premier research institutions in India and abroad (spanning four continents) and published in leading journals of agricultural and allied disciplines.

Recognition

Fulbright-Nehru Academic & Professional Excellence Award (2018-19)

Young Scientist Award-2017 from Society of Extension Education (2017)

Software:

SPSS for Windows, SPSS Modeler (limited), UCINET & NetDraw, ATLAS.Ti, Several data visualization software, MentalModeler

Theses/Research Supervision:

PhD: Completed - **4**; Ongoing - **4**

MSc: ~**50**

Membership in Professional Bodies

1. Society of Extension Education
2. Indian Society of Extension Education

Grantsmanship/Collaboration:

Goswami, R. (2022). Research Collaboration "SciTech4Climate Indo-Pacific Climate-Smart Agriculture Initiative: Project B: Ganges coastal zone climate-smart agricultural production" Department of Foreign Affairs and Trade (DFAT) - Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia. [Period: 2022-2023; Share: AUD\$30000]

Goswami, R. (2022). (Co-PI). Using Women Farmers' Social Networks To Improve The Delivery of Agricultural Information Through Information Communication Technology in Selected Rural Areas of West Bengal. Indian Council of Social Science Research. [Period: 2022-2024; Share: INR.700000]

Goswami, R. (2022). (PI). Modelling the Livelihood Impact of Technology Transfer Projects in Natural Resources Management using Fuzzy Logic

- Cognitive Mapping. Indian Council of Social Science Research. [Period: 2022-2024; Share: INR.700000]
- Goswami, R. (2022). (Consultancy Project). Assessing the Natural Farming in Selected Areas of Jharkhand State. Supported by Welthungerhilfe. [Period: 2022; Share: INR.300000]
- Collaborator (2018-2020 & 2021-2022). Cropping systems intensification in the salt-affected coastal zones of Bangladesh and West Bengal, India (CSI4CZ). Australian Centre for International Agricultural Research.
- Goswami, R. (Co-PI) (2021-2023). Assessing the Contribution of Capacity Building Programs of the KVKs to Increase Livestock Production and Farmers' Income in Eastern India. ICAR-Agricultural Technology Application and Research Institute, Kolkata
- Host Faculty of the UC-Davis Global Fellowship in Agricultural Development (GFAD) (2019-2021). Graduate student hosting from the University of California System.
- Goswami, R. (2019). (PI) Farmer's Perception of Sustainability and its Relationship with Farm Resource Utilization. Self-initiated Project at University of California, Davis.
- Goswami, R. (2018). (PI) Identifying the Efficient Resource Integration Strategies in Small Farms of India and USA and Assessment of Their Sustainability. United States India Educational Foundation (USIEF) at University of California, Davis. [Period: 2018-2019; Share: ~USD 29000]
- Goswami, R. (2018). (PI). Impact Assessment of Agricultural Research and Extension Organization: The Case of International Plant Nutrition Institute (IPNI) in India. International Plant Nutrition Institute, South Asia Programme. [Period: 2018-2019; Share: INR 1,10,000]
- Goswami, R. (Collaborating Centre PI) (2018). Establishment of a biotech-KISAN Hub in Sunderban area of South 24 Parganas District of West Bengal. Department of Biotechnology, Govt. of India. [Period: 2018-2020; Share: INR 10,00,000]
- Goswami, R. (Co-PI) (2018). Human surface thermographic profiling as indicator of climate susceptibility and impact mitigation using social networking. Department of Science and Technology, Ministry of Science and Technology, Government of India. [Period: 2018-2021; Share: INR 69,42,000]
- Goswami, R. (2013). (Co-PI). Agronomic, economic, social and environmental benefits of improved nutrient management practices in maize production systems under variable farm size, climate, soil fertility conditions and farmer resource endowment in India. International Plant Nutrition Institute (IPNI) & Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT), Mexico. [Period: 2013-2015; Share: INR 4,00,000]

Goswami, R. (2013). (PI). Improved Quality of Rural Life through Scientific Management of Natural Resources. Department of Science and Technology, Ministry of Science and Technology, Government of India [Period: 2013-2015; Share: INR 22,04,000]

Collaborations (Past and Present): Publications, Projects, Exchange

1. Commonwealth Scientific and Industrial Research Organisation (CSIRO), AUSTRALIA
2. Global HealthShare®, University of California, Davis, CA, USA
3. Global Fellowship in Agricultural Development, University of California Davis, CA, USA
4. African Plant Nutrition Institute, Benguerir, MOROCCO
5. Department of Food and Engineering, Indian Institute of Technology, Kharagpur, INDIA
6. School of Agriculture, University of the Virgin Islands, St. Croix, U.S. Virgin Islands
7. Department of Agronomy, BCKV, INDIA
8. Agricultural Technology Application and Research Institute (ICAR-ATARI), Kolkata, INDIA
9. International Plant Nutrition Institute, South Asia Programme (2014-2018)
10. Department of Biology, Georgia Southern University, GA, USA (2013-2017)
11. Sociological Research Unit, Indian Statistical Institute, Calcutta, INDIA (2013-2018)
12. Department of Agricultural Economics, BCKV, INDIA (2013-2015)

Reviewed for:

Journal of the Royal Society Interface, Agricultural Systems (Elsevier), International Journal of Disaster Risk Reduction (Elsevier), The Social Science Journal (Elsevier), Journal of Agricultural Science and Technology, Annals of Agricultural Science (Elsevier), Cogent Social Sciences (Taylor & Francis), Cogent Food and Agriculture (Taylor & Francis), Agronomy, Journal of Agricultural Science, Space and Culture, India
Topic Editor (2022): "Socio-Economic Evaluation of Cropping Systems for Smallholder Farmers - Challenges and Options", *Frontiers in Sustainable Food Systems*, <https://www.frontiersin.org/research-topics/27216/socio->

economic-evaluation-of-cropping-systems-for-smallholder-farmers---
challenges-and-options

Selected Peer-reviewed Publications & Preprints:

Mukherjee, S., Sain, S., Ali, M., **Goswami, R.**, Chakraborty, A., Ray, K., ... & Chatterjee, G. (2022). Microbiological properties of Beejamrit, an ancient Indian traditional knowledge, uncover a dynamic plant beneficial microbial network. *World Journal of Microbiology and Biotechnology*, 38(7), 1-12. DOI: 10.1007/s11274-022-03296-3

[IF: 4.253]

Ghosh, A., Dana, S. S., Sharma, A., Sahu, P. K., Basu, D., & **Goswami, R.** (2022). Perception of fishers about livelihood developmental interventions by various GOs and NGOs in Indian Sundarbans: A comparative study. *Indian Journal of Fisheries*, 69(1). DOI: 10.21077/ijf.2022.69.1.91566-16

[IF: 0.594]

Banerjee, H., Sarkar, S., Dutta, S. K., Garai, S., Ray, K., Zingore, S., **Goswami, R.**, & Majumdar, K. (2022). Nitrogen management trade-offs in hybrid rice for agronomy, carbon, and energy efficiency. *Nutrient Cycling in Agroecosystems*, 123, 5-18. DOI: 10.1007/s10705-022-10199-0

[IF: 3.866]

Dasgupta, P., **Goswami, R.***, Chakraborty, S., & Saha, S. (2021). Sustainability analysis of integrated farms in coastal India. *Current Research in Environmental Sustainability*, 3, 100089. DOI: 10.1016/j.crsust.2021.100089

[Cite

Score: 2.3]

Goswami, R., Roy, K., Dutta, S., Ray, K., Sarkar, S., Brahmachari, K., Nanda, M.K., Mainuddin, M., Banerjee, H., Timsina, J., & Majumdar, K. (2021). Multi-faceted impact and outcome of COVID-19 on smallholder agricultural systems: Integrating qualitative research and fuzzy cognitive mapping to explore resilient strategies. *Agricultural Systems*, 189, 103051, DOI: 10.1016/j.agry.2021.103051

[IF: 6.765]

Ray, K., Sen, P., **Goswami, R.**, Sarkar, S., Brahmachari, K., Ghosh, A., Nanda, M.K., & Mainuddin, M. (2020). Profitability, energetics and GHGs emission estimation from rice-based cropping systems in the coastal saline zone of West Bengal, India. *PLoS ONE*, 15(5): e0233303. DOI: 10.1371/journal.pone.0233303

[IF: 3.752]

Saha, S., & **Goswami, R.*** (2020). Destinations of Male Outmigration and their Drivers in Indian Sundarbans. *Space and Culture, India*, 8(1), 111-142. DOI: 10.20896/saci.v8i1.601

[SJR: 0.156]

Dutta, S., Chakraborty, S., **Goswami, R.**, Banerjee, H., Majumdar, K., Li, B., & Jat, M. L. (2020). Maize yield in smallholder agriculture system—An approach integrating socio-economic and crop management factors. *PLoS ONE*, 15(2): e0229100. DOI: 10.1371/journal.pone.0229100

[IF: 3.752]

Ray, K., Hasan, S. S., & **Goswami, R.** (2018). Techno-economic and environmental assessment of different rice-based cropping systems in an inceptisol of West Bengal, India. *Journal of Cleaner Production*, 205, 350-363. DOI: 10.1016/j.jclepro.2018.09.037

[IF: 11.072]

Saha, S., **Goswami, R.***, & Paul, S. K. (2018). Recursive male out-migration and the consequences at source: A systematic review with special reference to the left-behind women. *Space and Culture, India*, 5(3), 30-53. DOI:10.20896/saci.v5i3.289

[SJR: 0.156]

Goswami, R., Saha, S., & Dasgupta, P. (2017). Sustainability assessment of smallholder farms in developing countries. *Agroecology and Sustainable Food Systems*, 41(5): 446-469. DOI: 10.1080/21683565.2017.1290730

[IF: 2.615]

Misra, S., **Goswami, R.***, Mondal, T., & Jana, R. (2017). Social networks in the context of community response to disaster: Study of a cyclone-affected community in coastal West Bengal. *International Journal of Disaster Risk Reduction*, 22, 281-296. DOI: 10.1016/j.ijdr.2017.02.017

[IF: 4.842]

Goswami, R.*, & Majumder, S. (2017). Construction of gender-sensitive poverty line based on local perception: Evidence from Habra-II Block of West Bengal state in India. *The Social Science Journal*, 54(1), 76-92. DOI: 10.1016/j.sosci.2016.11.004

[IF: 2.494]

Ghosh, S., Manna, S., Dutta, A., & **Goswami, R.** (2017). Social, Economic, and Production Characteristics of Freshwater Prawn, *Macrobrachium rosenbergii* (De Man, 1879) Culture in West Bengal, India. *Aquaculture International*, 25(5), 1935-1957. DOI: 10.1007/s10499-017-0165-7.

[IF: 2.953]

Goswami, R., Dasgupta, P., Saha, S., Venkatapuram, P., & Nandi, S. (2016). Resource integration in smallholder farms for sustainable livelihoods in developing countries. *Cogent Food & Agriculture*, 2:1 (1272151). DOI: 10.1080/23311932.2016.1272151 **[IF: 2.161]**

Chatterjee, S., **Goswami, R.***, & Bandyopadhyay, P. (2015). Methodology of identification and characterization of farming systems in irrigated agriculture: Study in West Bengal state of India. *Journal of Agricultural Science and Technology*, 17(5), 1127-1140. **[IF: 1.279]**

Goswami, R.*, Chatterjee, S., & Prasad, B. (2014). Farm types and their economic characterization in complex agro-ecosystems for informed extension intervention: study from coastal West Bengal. *Agricultural and Food Economics*, 2(1). DOI: 10.1186/s40100-014-0005-2

[IF: 2.87]

Banerjee, H., **Goswami, R.**, Chakraborty, S., Dutta, S., Majumdar, K., Satyanarayana, T., Jat, M. L., & Zingore, S. (2014). Understanding biophysical and socio-economic determinants of maize (*Zea mays* L.) yield variability in eastern India. *NJAS: Wageningen Journal of Life Sciences*, 70-71:79-93. DOI: 10.1016/j.njas.2014.08.001

[IF: 8.69]

Ali, N., Yeasmin, L., Gantait, S., **Goswami, R.**, & Chakraborty, S. (2014). Screening of rice landraces for salinity tolerance at seedling stage through morphological and molecular markers. *Physiology and Molecular Biology of Plants*, 20(4): 411-423. DOI: 10.1007/s12298-014-0250-6 [Role: Data Analysis]

[IF: 3.023]

Biswas, S., Ali, N., **Goswami, R.***, & Chakraborty, S. (2014). Soil health sustainability and organic farming: A review. *Journal of Food, Agriculture & Environment*, 12(3&4):132-138. **[SJR: 0.152]**

Misra, S., **Goswami, R.***, Basu, D., & Jana, R. (2014). Application of social network analysis in livelihoods system study. *Space and Culture, India*. 2(3), 24-46. DOI: 10.20896/saci.v2i3.36

[SJR: 0.156]

Goswami, R.*, Biswas, M.S., & Basu, D. (2012). Validation of participatory farming situation identification: A case of rainfed rice cultivation in selected area of West Bengal, India. *Indian Journal of Traditional Knowledge*, 11(3), 471-479. **[IF: 1.091]**

Ghosh, S., Majumder, D., & **Goswami, R.** (2012). Broiler performance at different stocking density. *Indian Journal of Animal Research*, 46(4), 381-384. [Role: Data Analysis] **[IF: 0.427]**

Goswami, R.*, & Ali, N. (2011). Use of participatory exercise for modelling the adoption of organic agriculture. *The Journal of Extension*, 49(3).

<http://www.joe.org/joe/2011june/iw4.php>

[SJR: 0.237]

Basu, D., Basu, G., Biswas, S., & **Goswami, R.** (2011). Stakeholders' perceived attributes of fresh vegetables: an important input in breeding program. *Acta Horticulturae* (ISHS), 895:51-57.

[SJR: 0.163]

Goswami, R.*, Ghosh Ray, J., & Ghose, J. (2010). Telesupport Experiment for Agricultural Information Management in West Bengal, India. *The Journal of Community Informatics*, 6(2). <http://www.ci-journal.net/index.php/ciej/article/view/518/588>

Basu, D., Banerjee, S., & **Goswami, R.** (2009). Vegetable cultivation on ail (bund): a successful farmer-led technology transfer. *Acta Horticulturae* (ISHS), 809:155-160.

[SJR: 0.163]

Basu, D., Banerjee, S., & **Goswami, R.** (2009). Farmers' knowledge management in banana cultivation in a village of West Bengal, India: a reflection of farmer managed technology adaptation and transfer in horticulture. *Acta Horticulturae* (ISHS), 832:49-56.

[SJR: 0.163]

[* Corresponding author]

Selected book, book chapters and preprints:

Goswami, R., Ray, K., Ghosh, S., Dutta, S., Mandal, S., Nayak, J., Chakraborty, S. & Banerjee, H. (2022). Multiple pathways of legume-based systems towards environmental, social, and economic sustainability in smallholder systems. In Meena, R. S. & Kumar, S. (Eds.) *Advances in Legumes for Sustainable Intensification* (pp. 657-678). Academic Press, Elsevier Inc.

Roy, K., **Goswami, R.**, Dutta, S., Ray, K., Sarkar, S., Brahmachari, K., ... & Majumdar, K. (2022). Researching From a Distance: Mapping COVID-19 and Cyclonic Storm Affected Agri-Food Systems by Integrating Qualitative Research and Fuzzy Cognitive Mapping. *SAGE Research Methods Cases*, SAGE Research Methods: Doing Research Online, SAGE Publications, Ltd, London. Online ISBN: 9781529604092, DOI: 10.4135/9781529604092

Misra, S., & **Goswami, R.** (2022). Social Network Analysis to Understand adaptive mechanisms followed by the farming community. *Analytical Approaches for Vulnerability and Adaptation to Climate Change in Agriculture*, In Maiti et al. (Eds). *Analytical approaches for vulnerability and Adaptation to Climate Change in Agriculture* (pp.128-145), Dairy Extension Division, National Dairy Research Institute, Karnal.

Goswami, R. & Roy, K. (2021). Mental modelling for the researchers of extension science: A primer. In Maiti et al. (Eds.) *Psychometric Scale Construction Techniques: Basics to Advances*, (pp.95-104). Dairy Extension Division, National Dairy Research Institute, Karnal.

- Goswami, R.**, Brodt, S., Patra, S., Dasgupta, P., Mukherjee, B., & Nandi, S. (2020). Resource Interaction in Smallholder Farms is Linked to Farm Sustainability: Evidence from Indian Sundarbans. **Preprints** 2020, 2020120311, DOI: 10.20944/preprints202012.0311.v1
- Goswami, R.**, Misra, S., Mondal, T., & Jana, R. (2018). Social network analysis in the context of community response to disaster. *SAGE Research Methods Cases*, Part 2, SAGE Publications, Ltd, London. Online ISBN: 9781526444622, DOI:10.4135/9781526444622
- Dasgupta, D, Mallick, AK, Das, PK, Dutta, A., **Goswami, R.**, Ali, N. (Eds.) Integrated Rural Development and Management: Issue, Strategies and Policy Options. Agrobios: Jodhpur. ISBN: 978-8177544831
- Basu, D. & **Goswami, R.** (2011). Scientific and traditional knowledge: the agenda for 'mutual validation'. In R.M. Sarkar (Ed.). *Indigenous Knowledge in Traditional Folk Panorama: Genesis, Development & Applications*, (pp.88-111). Serials Pub, New Delhi.
- Basu, D., Biswas, D., & **Goswami, R.** (2004). Upward and downward mobility in well-being. In Mukherjee, N. & Dasgupta, R. (Eds.). *Learning to share: Experiences and reflections on participatory approaches*, (pp.118-134). Concept Pub., New Delhi.

Selected popular publications:

- Bose, S., Saha, S., & **Goswami, R.** (2017). Male Out-Migration and Empowerment of Women Left Behind in Indian Sunderbans. <https://www.refugeewatchonline.wordpress.com/2017/04/09/male-out-migration-and-empowerment-of-women-left-behind-in-indian-sunderbans/>
- Banerjee, H., **Goswami, R.**, Dutta, S., Chakraborty, S., & Majumdar, K. (2015). Farm typology-based phosphorus management for maize in West Bengal. *Better Crops-South Asia*, 9(1), 8-11.
- Banerjee, H., **Goswami, R.**, Chakraborty, S., Dutta, S., Majumdar, K., Satyanarayana, T., ... & Ray, K. (2014). Integrating biophysical and socio-economic determinants into field-specific fertilizer recommendations. *Better Crops-South Asia*, 8, 18-20.
- Dasgupta, P., **Goswami, R.**, Ali, M. N., Biswas, S., & Saha, S. (2014). Bio-diverse integrated farms. *LEISA India*, 16(2), 20-23.