

## **RUPAK GOSWAMI, PhD**

*Associate Professor, Faculty Centre for Integrated Rural Development and Management, Ramakrishna Mission Vivekananda Educational and Research Institute, Kolkata 700103, INDIA (Joined in 2007)*

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

*The Japan Foundation Indo-Pacific Partnership Fellow (2025-2026)*

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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], Agricultural Systems Analysis [ARD-506], Emerging Thoughts and Techniques in Extension [ARD-551], Research and Publication Ethics (CPE-RPE)

### **Research Focus and Interests:**

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

Our research lab explores novel tools and techniques to evaluate and analyse the sustainability of smallholder farms and agri-food systems. Through interdisciplinary research, we examine diverse socio-ecological systems using conventional surveys, participatory appraisals, mixed-methods research, network analysis, and mental modelling to answer the complex behaviour of smallholder farming systems. We identify key structures and processes within farming and food systems, human cognitive maps and decision-making, social networks, technology diffusion, and the nexus of climate, migration, and gender. By relating these elements to various system outcomes in rural areas, such as

technology adoption, crop productivity, farm sustainability, and human nutrition, we aim to design sustainable farming and food systems and generate policy-relevant knowledge and insights.

### **Recognition and Academic Stints**

The Japan Foundation Indo-Pacific Partnership Fellow (2025-26)

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

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

Exchange Visit to the University of California, Davis, USA (2013)

Invited Visit to Georgia Southern University, USA (2013)

### **Upcoming**

Visiting Professor, University of California, Davis (2025)

Visiting Scientist, Commonwealth Scientific and Industrial Research Organisation (CSIRO) (2025-26)

Visiting Researcher, The Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries (PRIMAFF), Japan (2026)

### **Theses/Research Supervision:**

PhD: Completed – 4; Ongoing – 6

MSc: ~60

### **Membership in Professional Bodies**

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

### **Grantsmanship:**

Goswami, R. (2025). Supporting Impact Assessment and Conducting Longitudinal Studies to Facilitate the Implementation of Climate-Smart, Gender-Responsive STIBs in the Learning Labs for Enhancing Women's Empowerment and Resilience. International Rice Research Institute (IRRI) [Period: July 2025 – March 2026; Share: INR.10,78,000]

Goswami, R. (2025). Examining stakeholders' cognitive maps and policy networks to achieve inclusive policy coordination for climate-smart agriculture in the Indo-Pacific. The Japan Foundation [Share: ~ JPY. 80,00,000; Period: August 2025 – July 2026]

Goswami, R. (2024). Using multi stakeholder fuzzy cognitive mapping (FCM) to inform the implementation HER+ West Bengal Livestock Learning Lab. International Rice Research Institute (IRRI) [Period: November 2023 – October 2024; Share: INR.4,02,000]

- Goswami, R. (2024). Nurturing Rural Women Leaders for Upscaling Climate-Resilient Farming Strategies: Analysing the Social Networks in Selected Villages of West Bengal and Odisha. International Rice Research Institute (IRRI) [Period: November 2023 – October 2024; Share: INR.11,45,400]
- Goswami, R. (2023) (CCPI). Building resilience model for the vulnerable hotspots to climate change in smallholder dairy production system of Indo-Gangetic Plain Region of India using GIS and fuzzy cognitive mapping approach. NASF-Indian Council of Agricultural Research [Period: 2023-2026; Share: INR.26,45,927]
- Goswami, R. (2022). Team Leader. “Mitigating risk and scaling-out profitable cropping system intensification practices in the salt-affected coastal zones of the Ganges Delta” Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia. [Period: 2022-2023; Share: AUD.31700]
- Goswami, R. (2022). Team Leader. “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.52000]
- 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). (Lead, Consultancy Project). Assessing the Natural Farming in Selected Areas of Jharkhand State. Supported by Welthungerhilfe. [Period: 2022-23; Share: INR.300000]
- 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
- Goswami, R. (2019). (PI) Farmer’s Perception of Sustainability and its Relationship with Farm Resource Utilization. Self-initiated Project at the 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 the 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. (CCPI) (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. National Dairy Research Institute (NDRI), Karnal, INDIA
4. African Plant Nutrition Institute, Benguerir, MOROCCO
5. Department of Food and Engineering, Indian Institute of Technology, Kharagpur, INDIA
6. Department of Agronomy, BCKV, INDIA
7. Agricultural Technology Application and Research Institute (ICAR-ATARI), Kolkata, INDIA
8. Global Fellowship in Agricultural Development, University of California Davis, CA, USA (2019-2021)
9. International Plant Nutrition Institute, South Asia Programme (2014-2018)
10. Department of Biology, Georgia Southern University, GA, USA (2013-2017)
11. School of Agriculture, University of the Virgin Islands, St. Croix, U.S. Virgin Islands (2020-21)
12. Sociological Research Unit, Indian Statistical Institute, Calcutta, INDIA (2013-2018)
13. Department of Agricultural Economics, BCKV, INDIA (2013-2015)

### **Editorial and Review Responsibilities:**

#### ***Editorial Board/Advisory:***

- *Agricultural Systems*
- *PLoS Sustainability and Transformation*

#### ***Review***

Journal of the Royal Society Interface, Agricultural Systems (Elsevier), International Journal of Disaster Risk Reduction (Elsevier), The Social Science Journal (Elsevier), Frontiers in Sustainable Food Systems, International Journal of Agricultural Sustainability (Taylor & Francis), PLoS ONE, PLoS Sustainability and Transformation, 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

## Selected Peer-reviewed Publications:

- Chakraborty, A., Saroja, M. K., Garai, S., Sarkar, S., Bhattacharjee, A., Roy, K., Misra, S., Goswami, R., Tripathi, S., Ravisankar, S., & Chatterjee, G. (2025). Deciphering the microbiome potential and metabolic profiling of animal waste co-composting reveals the co-occurrence network of non-microbial and microbial biostimulants to strengthen conservative practices in sustainable agriculture. *Chemical and Biological Technologies in Agriculture*, 12(1), 49.
- Sarkar, S., Dey, S., Dhar, A., Chaki, A. K., Goswami, R., Gaydon, D. S., ... & Mainuddin, M. (2025). Mapping the landscape of APSIM-driven agricultural research: a bibliometric analysis and future perspectives. *International Journal of Biometeorology*, 1-17.
- Dey, S., Sarkar, S., Dhar, A., Brahmachari, K., Ghosh, A., Goswami, R., & Mainuddin, M. (2025). Potato Cultivation Under Zero Tillage and Straw Mulching: Option for Land and Cropping System Intensification for Indian Sundarbans. *Land*, 14(3), 563.
- Haldar, A., Maiti, S., Goswami, R., Mandal, S.A., Shee, A., Goswami, B., ...Dey, P. (2024). Driving factors for developing integrated farming: Multi-criteria decision-making analysis. *The Indian Journal of Agricultural Sciences*, 94(3-S1), 49-55. DOI: 10.56093/ijas.v94i3.148603
- Mondal, M., Nanda, M. K., Peña-Arancibia, J. L., Sarkar, D., Ghosh, A., Goswami, R., ... & Mainuddin, M. (2024). Assessment of inundation extent due to super cyclones Amphan and Yaas using Sentinel-1 SAR imagery in Google Earth Engine. *Theoretical and Applied Climatology*, 1-17. DOI: 10.1007/s00704-024-04948-0
- Mondal, T., Sen, J., Goswami, R., & Nag, P. K. (2024). Community adaptation to heat stress— Social network analysis. *Climate Risk Management*, 100606. DOI: 10.1016/j.crm.2024.100606
- Goswami, R., Roy, R., Gangopadhyay, D., Sen, P., Roy, K., Sarkar, S., ... & Mainuddin, M. (2024). Understanding Resource Recycling and Land Management to Upscale Zero-Tillage Potato Cultivation in the Coastal Indian Sundarbans. *Land*, 13(1), 108. DOI: 10.3390/land13010108
- Sarkar, R., Mukherjee, S., Pradhan, B., Chatterjee, G., Goswami, R., Ali, M. N., & Ray, S. S. (2023). Molecular characterization of vermicompost-derived IAA-releasing bacterial isolates and assessment of their impact on the root improvement of banana during primary hardening. *World Journal of Microbiology and Biotechnology*, 39(12), 351. DOI: 10.1007/s11274-023-03809-8
- Mandal, S., Sendhil, R., & Goswami, R. (2023). Socio-economic evaluation of cropping systems for smallholder farmers—challenges and options. *Frontiers in Sustainable Food Systems*, 7, 1310448. DOI: 10.3389/fsufs.2023.1310448
- Goswami, R., Brodt, S., Patra, S., Dasgupta, P., Mukherjee, B., & Nandi, S. (2023) Resource interaction in smallholder farms is linked to farm sustainability: evidence from Indian Sundarbans. *Front. Sustain. Food Syst.* 7:1081127. DOI: 10.3389/fsufs.2023.1081127
- Mahato, M., Ghorui, S., Goswami, R., & Ghosh, S. (2023). Prevalence of fluoride toxicity in goats from Purulia district of West Bengal, India. *Indian Journal of Small Ruminants (The)*, 29(2), 333-335. DOI: 10.5958/0973-9718.2023.00038.7
- Ray, K., Mondal, S., Kabir, M. J., Sarkar, S., Roy, K., Brahmachari, K., Ghosh, A., Nanda, M. K., Misra, S., Ghorui, S., Goswami, R., & Mainuddin, M. (2023). Assessment of Economic Sustainability of Cropping Systems in the Salt-Affected Coastal Zone of West Bengal, India. *Sustainability*, 15(11), 8691. DOI: 10.3390/su15118691
- Mukherjee, S., Basak, A., Chakraborty, A., Goswami, R., Ray, K., Ali, M.A., Santra, S., Hazra, A.K., Tripathi, S., Banerjee, H., Layek, J., Panwar, A.S., Ravisankar, N., Ansari, M.A., Chatterjee, G.

- (2023). Revisiting the oldest organic manure of India, Kunapajala: Assessment of its animal waste recycling potential as a source of plant biostimulant. *Frontiers in Sustainable Food Systems*, DOI: 10.3389/fsufs.2022.1073010
- Goswami, R., Dutta, S., Misra, S., Dasgupta, S., Chakraborty, S., Mallick, K., Sinha, A., Singh, V.K., Oberthür, T., Cook, S., Majumdar, K. (2023). Whither Digital Agriculture in India? *Crop & Pasture Science*. DOI: 10.1071/CP21624
- 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
- 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
- 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
- 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
- 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.agsy.2021.103051
- 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
- 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
- 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
- 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
- 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
- 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

- 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.ijdrr.2017.02.017
- 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.soscij.2016.11.004
- 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.
- 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
- 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.
- 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
- 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
- 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
- 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.
- 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
- 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.
- Ghosh, S., Majumder, D., & Goswami, R. (2012). Broiler performance at different stocking density. *Indian Journal of Animal Research*, 46(4), 381-384.
- 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>
- 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.
- 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.
- 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.

### **Selected book, book chapters, policy brief:**

- Goswami, R., Chadha, D., Singh, K., Mukhopadhyay, P., Puskur, R., & Gartaula, H. N. (2024). Can stakeholder cognitive maps inform a project's Theory of Change? Evidence from IRRI's STIB Learning Labs in India. New Delhi: CGIAR Initiative on Gender Equality, Ramakrishna Mission Vivekananda Educational and Research Institute (RKMVERI), and International Rice Research Institute.
- Goswami, R., Biswas, S., Chatterjee, G., Ray, K., Sarkar, S., Das, T. (2023). Natural Farming in Jharkhand: A Few Issues, Concerns, and Recommendations. Policy Brief, Welthungerhilfe, New Delhi, India. [Policy Brief]
- 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 Maity et al. (Eds.) *Psychometric Scale Construction Techniques: Basics to Advances*, (pp.95-104). Dairy Extension Division, National Dairy Research Institute, Karnal.
- 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
- 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.
- Dasgupta, D, Mallick, AK, Das, PK, Dutta, A., Goswami, R., Ali, N. (Eds.) (2010) *Integrated Rural Development and Management: Issue, Strategies and Policy Options*. Agrobios: Jodhpur. ISBN: 978-8177544831

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.