

Curriculum Vitae

Name: Dr. Swati Nayak

Gender: Female

Nationality: India

Language: English, Odia, Telugu, Bengali, Hindi

Birthdate: 19 July 1984

Total Years of Experience: 15+ years

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1. Educational Background

- Ph.D. in **Competitive Intelligence** for **Agricultural Extension Strategy** (Measuring the efficacy of alternative extension innovations/ on-farm trials for varietal evaluations, dissemination and scaling)
- Masters in **Rural Management** . Institute of Rural Management Anand (IRMA) , India (key optionals- Rural Development, Agribusiness management, Public Policy)
- **Bachelor of Science in Agriculture**. Acharya NG Ranga Agriculture University (ANGRAU), Hyderabad, India

2. Important Awards and Recognitions

- Recipient of World Food Prize Foundation's – Norman E Borlaug Field Award 2023 (Endowed by Rockefeller foundation)
- Recipient of Indian of the Year- Climate Champion Award 2024 by NDTV network as Climate Champion 2024
- Listed among Top 6 Asian Women Scientists (Asian Scientist Magazine 2023)
- Lited among Asian Scientist 100, covering Asia's most Outstanding Researcher list
- Special invitee by Her Excellency President of India's At-Home ceremony for Republic Day 2026 as Eminent Scientist nominated by Department of science and technology, Govt of India
- Felicitated in 2022 by Government of Bangladesh for Significant Contribution in Regional Cooperation and Capacity Sharing (Seeds without border) and Seed System Research
- Featured in "HER STORY" as the 10 Eminent Woman in Science in a Comic Book for young readers launched by CSIR (Centre for Science and Industrial Research), Govt of India
- Acknowledgd by Hon'ble US Ambassodor to India and Chief of Cabinet Upper House for outstanding contribution to Indian agriculture
- TEDx Speaker with Indian Institute of Science Education & Research(IISER), under Ministry of HRD
- Recipient of Indian Express- Devi Award (Given to Women Achievers)
- Felicitated as Outstanding Indian Scientist by Chief Minister, Govt of Odisha, India
- Listed as 23 influnetial changemakers of 2023 (Cover by Outlook Business Magazine, India)
- Felicitated in Indian Nutrition Conclave 5.0

3. Other Key Trainings/ Courses/Specialized Skillsets:

- Cornell University - Seed Industry Programme
 - University of Tufts and University of California, Berkely Course of Rigorous Impact Assessment using Randomised Control Trials
 - Global diversity practices, UK (GDP Ltd) led course of Gender and Diversity
 - IRRI Education- Course of Scientific Writing Skill
 - IRRI-Education - Research Data Management Course
 - Trained and Adept on social and market research tools like SPSS, STATA, R Digital data collection tools like SurveyBe, Kobo Collect, ODK
 - Comprehensively trained in Participatory Rural Appraisal methods and tools
 - Trained in B4R and EBS (Enterprise Breeding Service) data management and repository tools
 - Knowledge and hands on skill on qualitative tools: GSRAT, Social Mapping, Well-being Analysis, Income-Expenditure Analysis, and Institutional Mapping
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4. Full Time Appointments

Scientist and South Asia Lead– Seed System and Product Management & Global Focal for IRRI– CGIAR Inclusive Delivery	Rice Breeding Innovation Department CGIAR International Rice Research Institute (IRRI)	2019 onwards to present
IRRI India Country Manager (Interim and additional Charge)	IRRI	October 2025 onwards
Lead Specialist (Senior Associate Scientist)- Agriculture Research & Development (Seed Systems)	International Rice Research Institute (IRRI)	2017-2019
Specialist -Gender Research	International Rice Research Institute (IRRI) (BMGF-Stress tolerant rice for Africa and Asia)	2015-2017
Specialist- Social Sciences	International Rice Research Institute (IRRI) (BMGF-USAID- Cereal System Initiative for South Asia)	2013-2015

National Mission Lead- Livelihoods	National Rural Livelihood Mission, Ministry of Rural Development, Govt of India	2011-2013
Additional Director – NREGS(Integrated Tribal Development Agency)	Commissionerate of Tribal Welfare, Govt of Andhra Pradesh, India	2010-2011

4. Representations and Leadership Roles

- Served as Cereal Seed System Group Lead at One CGIAR under Global One Rice Breeding and Seed Equal initiative (2022-24)
- One CGIAR- ‘Scaling for Impact’ Portfolio Writing Team Member and contributed to portfolio 2025-30
- Currently serves as Global Nodal Coordinator for Inclusive Delivery (Rice seed system)- An area of research under CGIAR Science Programme “Breeding for Tomorrow”
- Current Global Nodal Coordinator for Seeds Without Border – A Unique and Award Winning Regional Cooperation , South South Capacity Sharing Innovation for seed /germplasm sharing across borders, led by CGIAR-IRRI
- Also serving as Reviewer for National Gender Strategy being prepared by Indian Council of Agriculture Research
- Have acted as reviewers for multiple submissions for Springer Nature, MDPI
- Have been leading Seed Accelerator Network, from conceptualization to steer this network.
- Served as National Organizing Secretary for National Seed Congress 2024, a prestigious national event of importance, under Aegis of Ministry of Agriculture & Farmers’ Welfare, Govt of India

5. Key Research Project Leadership

5.1. Ongoing leadership roles

Funding Agency/Name of Mechanism (Grant #)	Title of Project	Summary of Aims (1-2 Sentence)	Role (PI- Principal Investigator, Co-PI)	Duration
Department of Agriculture and Farmers Empowerment,	Comprehensive Rice Fallow Management in Odisha	To identify suitable targeting of areas, and different rice-	Co-PI	Continued / renewed each year /

Govt of Odisha, India		oilseed, rice-pulse system interventions to convert rice fallows into cultivated areas, increase cropping intensity and lead to diversification		annual outlay
Department of Agriculture and Farmers Empowerment, Govt of Odisha, India	Promotion, scaling, and market positioning of specialty rice in Odisha	The major goal of this project is to develop a sustained system for speciality rice in Odisha for improved farm economics for growers and healthier rice choices for consumers. The focus of this project will largely be on: Bio-fortified rice (Zinc, protein), Low GI. The project is under implementation in four districts of Odisha	PI	16th March, 2024 -15th March, 2027
Department of Agriculture and Farmers Empowerment, Govt of Odisha, India	Evidence-Driven Profiling, Key Product Identification and Positioning Odisha's Indigenous Rice Varieties in Seed System	Identify and profile the selected landraces from three districts for their agronomic characteristics, grain quality and nutrition, and molecular or genetic purity. Seed system development for	PI	24th Jan, 2025 - 23rd Jan, 2028

		identified landraces for scale and impact		
CGIAR Systems Office and Science Programme	CGIAR-Science Programme-Breeding for Tomorrow-Inclusive Delivery (Rice Seed System)	The overall goal of inclusive delivery is to accelerate the delivery of genetic gains to farmers' fields in the Global South. Inclusive delivery ensures that the CGIAR's new generation of climate-resilient, nutritious, and market-preferred varieties reaches smallholder farmers through robust dissemination systems, benefiting both farmers and other food system actors.	PI	Annual outlay each year from 2025 -2030
Department of Agriculture and Farmers Empowerment, Govt of Odisha, India	Dynamics of drought & its impact and mitigation options for smallholder farmers in Odisha: A Pilot Project	To introduce drought-resilient genotypes, non-paddy crops, and water-saving agronomic practices suited for the target villages in three	PI	29th Aug, 2023 - 28th Aug, 2025

		districts of Odisha, followed by gender-inclusive capacity development campaigns and community engagement focusing on ideal cultivation practices, seed production, maintaining of genetic purity, seed storage, market access etc.		
Bangladesh Agricultural Development Corporation, Bangladesh	Technical Assistance from IRRI for Demand-Driven Seed Forecasting Tool Formulation, Adaptation, and Functioning	The project provides technical assistance to design a functional, demand-driven digital application (web/mobile) to streamline seed demand estimation, supply chain management, and distribution, replacing the current manual system.	PI	25th June, 2025 - 24th May, 2027
Government of Uttar Pradesh	Scaling sustainable and climate resilient rice-based cropping systems in Uttar Pradesh (UPAGREES)	Improving productivity, profitability and climate resilience in stress-prone areas through climate-smart varieties and best	Work Package/ Objective Lead	June, 2027-2032

		management practices		
Ministry of Agriculture and Farmers Welfare, GoI	ISARC Phase II	Inclusive and strengthened seed system of market-demanding rice varieties for livelihoods, nutrition, and entrepreneurship.	Work Package/ Objective Lead	2023-2027

B: Completed research project leadership roles (In past five years)

Funding Agency/Name of Mechanism (Grant #)	Title of Proposal	Summary of Aims (1-2 Sentence)	Your Role (PI or Co-PI)	Duration
World Bank- Govt of Assam, India	APART- Assam Agribusiness and Rural Transformation Project	Enhancing the adoption of STRVs in target regions and strengthening the seed supply system in Assam for scaled impact	Work Package Lead	16th March, 2018 - 15th Sept, 2025

<p>Department of Agriculture and Farmers Empowerment, Govt of Odisha, India-World Bank</p>	<p>Climate Smart Rice-based Systems for Prosperity and Resilience in Odisha (ClimatePRO)</p>	<p>Introduction, validation and scaling of shorter duration low-input response, high-yielding, drought-resilient, and nutrient-rich varieties in the tank command area of three districts in Odisha. The interventions aim at improving cropping intensity and farmers' prosperity in the target regions.</p>	<p>Co-PI</p>	<p>29th oct, 2021-30th Sept, 2025</p>
<p>Department of Agriculture and Farmers Empowerment, Govt of Odisha</p>	<p>Strengthening seed system of Stress Tolerant Rice Varieties (STRVs) through innovative demonstrations and extension approaches in Odisha</p>	<p>Development of contextually relevant strategies for a fast-paced delivery of stress-tolerant and high-yielding varieties to farmers through extensive extension networks. Exploring best approaches for improving informal seed dissemination and adoption of stress-tolerant varieties.</p>	<p>Work Package Lead</p>	<p>March, 2016 - March, 2021, extension till June, 2022</p>
<p>Ministry of Agriculture and Farmers' Welfare</p>	<p>ISARC I</p>	<p>Revitalising seed system for rice through IRRI-NARES varieties, KVK networks and partnership with scaling partners (public and private)</p>	<p>Work Package Lead</p>	<p>2018-2022</p>

CGIAR	Seed Equal (Rice based seed system)	The CGIAR Research Initiative Seed Equal aims to support the delivery of seed of improved, climate-resilient, market-preferred and nutritious varieties of priority crops, embodying a high rate of genetic gain to farmers, ensuring equitable access for women and other disadvantaged groups.	PI	2022-2024
BMGF	Accelerated Genetic Gain in Rice	Best evaluated products selection for dissemination as guided by the performance and quality data generated by extensive NARES-IRRI on-farm testing networks.	Work Package Lead	2018-2022

6. Invited Talks, Lectures and Key Representations

- Acted as Key Note Speaker at several Prestigious National and International Platforms
 - Borlaug Memorial Lecture, Minneapolis
 - Swaminthan Memorial Lecture, India
 - Indian Science Congress
 - National Millet Mission and Orphan crop/ Opportunity Crop dialogues
- Speaker for World Food Prize's Dialogues NEXT series and Laureate Lecture Series under International Borlaug Dialogue 2023, 2024, 2025
- Speaker and Panel Moderator at Global DSR (Direct Seeded Rice) Conclave, 2025 , Varanasi , India
- Empanelled Speaker at Sustainable Seed Systems., Government of Odisha and Federation of Indian Chambers of Commerce & Industry (FICCI) Initiative.
- Reviewer for National Gender Strategy, ICAR India, 2025
- Speaker at Bangladesh Seed Congress.
- Speaker: Self Sufficiency in Quality Seeds, organized by Government of Assam's International Agri-Horti Show.
- Speaker and moderator. 4th, 5th and 6th International Rice Congress held at Bangkok, Singapore , Manila respectively

- Key note guest speaker at Bayer Crop Science ‘s ICS Asia Chapter 2025
- Speaker at MSSRF- Royal Norwegian Embassy led National Seminar on Importance of rice landraces at 2025
- Speaker at FAO- Govt of Odisha- MSSRF led National Seed System Consultation 2025
- Speaker at CGIAR release on International Day for Women and Girls in Science 2024, 2025
- Organizing secretary, speaker and moderator at 13th National Seed Congress, India, 2024
- Speaker and Panelist at Pepsico India Award and Revolutionari conference on women in Agriculture
- Speaker and Panelist at SAARC Agriculture Centre Annual Conference on Material Transfer, 2024
- Speaker and Panelist at Outlook India’s Farming and Governance - Agri Tech Summit 2024
- Speaker and Panelist at International Seed Conference, by USAID-CIMMYT Feed The Future initiative at Kathmandu, 2024
- Speaker at World Food Prize -Dialogue Next at Mexico 2024
- Speaker at US Embassy in India led Agribusiness Trade Mission 2024, New Delhi
- Speaker at International Conference on Food and Nutrition Security through Agriculture Ecosystem organized by IRRI- MANAGE, Govt of India
- Key Note Speaker at Corteva Plant Science -Kerala Agriculture University Symposium 2024
- Guest speaker at Indian Institute of Management, Lucknow, India 2024

7 . Publications

A. Primary Research Publications

- Nayak, S., Nath, A., Hossain, S.K.M., Singh, V., Mohapatra, S. (2025). Varietal Interventions and Their Significance in Rice-Based Cropping Systems of Drought-Prone Ecologies in Odisha. In: Dubey, R., Shubha, K., Rakshit, A., Kumar, S., Das, A. (eds) Drought and Heat Stress in Agriculture. Springer, Singapore. https://doi.org/10.1007/978-981-96-5735-3_11
- Nayak, S., Hossain, M., Singh, V., Nath, A., & Mohapatra, S. (2025). Challenges and Opportunities in the Seed Delivery, Scaling, and Extension Strategies for Smallholders in South Asia. *Advances in Agri-Food Systems: Volume II*, 15-38. DOI: https://doi.org/10.1007/978-981-96-0763-1_2
- Dar, M. H., Waza, S. A., Nayak, S., Chakravorty, R., Zaidi, N. W., & Hossain, M. (2020). Gender focused training and knowledge enhances the adoption of climate resilient seeds. *Technology in society*, 63, 101388. DOI: <https://doi.org/10.1016/j.techsoc.2020.101388>
- Dar, M.H., Waza, S.A., Shukla, S., Zaidi, N.W., Nayak, S., Hossain, M., Kumar, A., Ismail, A.M. and Singh, U.S., 2020. Drought tolerant rice for ensuring food security in Eastern India. *Sustainability*, 12(6), p.2214. DOI: <https://doi.org/10.3390/su12062214>

- Anumalla, M., Khanna, A., Catolos, M., Ramos, J., Sta. Cruz, M. T., Venkateshwarlu, C., ... & Hussain, W. (2025). Future flooding tolerant rice germplasm: Resilience afforded beyond Sub1A gene. *The Plant Genome*, 18(2), e70040. DOI: <https://doi.org/10.1002/tpg2.70040>
- Bhosale, S., Thathapalli Prakash, P., Kadaru, S.B., Hussain, W., Dixit, S., Ali, J., Platten, J.D., Islam, M.R., Singh, V.K., Murori, R. and Ndayiragije, A., 2025. Onerice breeding framework: An end-to-end system to develop better varieties faster. *Crop Science*, 65(3), p.e70087. <https://doi.org/10.1002/csc2.70087>
- Harold Glenn A Valera, Ronald Jeremy Antonio, Muhammad Ashraful Habib, Ranjitha Puskur, Valerien Pede, Takashi Yamano, High-zinc rice and randomized nutrition training among women farmers: A panel data analysis of long-term adoption in Bangladesh, *Q Open*, 2025;, qoaf001, <https://doi.org/10.1093/qopen/qoaf001>
- Harold Glenn A. Valera, Takashi Yamano, Ranjitha Puskur, Ronald Jeremy Antonio, Muhammad Ashraful Habib, M. D. Khairul Bashar, Valerien O. Pede. The Impact of Micronutrient Training on High-Zinc Rice Demand Among Mothers: A Randomized Control Trial Study in Bangladesh, *Asian Development Review* 0 0:0, 1-24. <https://doi.org/10.1142/S0116110525500088>
- Tahmina Akter, Md. Safiul Islam Afrad, Muhammad Ashraful Habib, Yating Zhang, Md Abdur Rouf Sarkar, Swati Nayak, Xiaodi Qin, Andrew M. McKenzie, Mohammed Zia Uddin Kamal, Farmers' Adoption of Newly Released Climate-Resilient Rice Varieties in the Coastal Ecosystem of Bangladesh: Effectiveness of a Head-To-Head Adaptive Trial, *Food and Energy Security*, 2025; 14:e70075 1 of 19. <https://doi.org/10.1002/fes3.70075>
- Sarkar, M.A.R., Habib, M.A., Sarker, M.R., Rahman, M.M., Alam, S., Manik, M.N.I., Nayak, S., Bhandari, H. Rice farmers' preferences for seed quality, packaging, and source: A study from northern Bangladesh. *Plos. One*. 19(6), e0306059. <https://doi.org/10.1371/journal.pone.0306059> (2024)
- Habib, M.A., Azam, M.G., Haque, M.A., Hassan, L., Khatun, M.S., Nayak, S., Abdullah, H.M., Ullah, R., Ali, E.A., Hossain, N., Ercisli, S., Sarker, U. Climate-smart rice (*Oryza sativa* L.) genotypes identification using stability analysis, multi-trait selection index, and genotype-environment interaction at different irrigation regimes with adaptation to universal warming. *Sci. Rep.* 14(1), 13836 (2024)
- Mann, Stefan, Safiul Islam Afrad, Shibly Sadik, Muhammad Ashraful Habib, Swati Nayak, and Rashid Asef Diplo.2024. "Causes and Impacts of Various Agricultural Extension Service Strategies in Bangladesh." *Asian Journal of Agricultural Extension, Economics & Sociology* 42 (10):50-59. <https://doi.org/10.9734/ajaees/2024/v42i102562>
- Islam, M.A., Hasan, M.M., Hossain, M.A., Haque, M.A., Siddique, M.N.A., Shamsuddoha, M., Habib, M.A., Risha, S.S., Identification and evaluation of high-performing advanced germplasm of rice through morphological and breeding value analysis. *Discov Agric* 2, 126 (2024). <https://doi.org/10.1007/s44279-024-00143-x>
- Tanjina Parven, Md Safiul Islam Afrad, Shaikh Shamim Hasan, Sajia Sharmin, Muhammad Ashraful Habib, Swati Nayak, Saidul Islam, Aliyu Akilu Barau, Amlan Biswas, Md Shibly

- Sadik, Dealer-customer partnership in rice production demonstration: Assessment of private extension system in Bangladesh, *Journal of Agriculture and Food Research*, Volume 14, 2023, 100752, ISSN 2666-1543,
- <https://doi.org/10.1016/j.jafr.2023.100752>
 - Nuruzzaman, Afrad Md Safiul Islam, Md. Enamul Haque, Ashrafun Nahar, Muhammad Ashraful Habib, Swati Nayak, Saidul Islam, Md. Mamunur Rashid & Amlan Biswas (2023) Women-led community-based rice seed entrepreneurship model in Bangladesh: Status, challenges and opportunities, *Cogent Food & Agriculture*, 9:1, DOI: 10.1080/23311932.2023.2242138 <https://doi.org/10.1080/23311932.2023.2242138>
 - Biswas, A., Afrad, M. S. I., Hoque , M. Z., Mamun, M. A. A., Habib, M. A., Nayak , S., Islam , S., Nuruzzaman, & Mann , S. (2023). Rice Variety Preferences in Bangladesh – What is the Role of Public Breeders?. *Asian Journal of Agricultural Extension, Economics & Sociology*, 41(5), 152–164. <https://doi.org/10.9734/AJAEES/2023/v41i51913>
 - Tani, T. T., Afrad, M. S. I., Prodhan, F. A., Khan, M. A. R., Habib, M. A., Nayak, S., Islam, S., Manik, M. N., Rahman, M. M., Biswas, A., Wadud, F., & Mann, S. (2023). Impact of Rice Seed Production, Processing, and Distribution Training on the Stakeholders in Bangladesh. *Asian Journal of Agricultural Extension, Economics & Sociology*, 41(9), 342–352.
 - Habib, M.A.; Islam, S.M.M.;Haque, M.A.; Hassan, L.; Ali, M.Z.;Nayak, S.; Dar, M.H.; Gaihre, Y.K.
 - Effects of Irrigation Regimes and Rice Varieties on Methane Emissions and Yield of Dry Season Rice in Bangladesh. *Soil Syst.* 2023, 7, 41. <https://doi.org/10.3390/soilsystems7020041>
 - Nayak, S.; Habib, M.A.; Das, K.; Islam, S.; Hossain, S.M.;Karmakar, B.; Fritsche Neto, R.; Bhosale, S.; Bhardwaj, H.; Singh, S.; et al. Adoption Trend of Climate-Resilient Rice Varieties in Bangladesh. *Sustainability* 2022, 14, 5156. <https://doi.org/10.3390/su14095156>
 - Kretzschmar, T., Mbanjo, E.G.N., Magalit, G.A., Dwiyanti M.S., Habib M.A., Diaz M.G., Hernandez J., Huelgas Z., Malabayabas M.L., Das S.K., & Yamano T., 2018. DNA fingerprinting at farm level maps rice biodiversity across Bangladesh and reveals regional varietal preferences. *Sci. Rep.* 8, 14920. <https://doi.org/10.1038/s41598-018-33080-z>
 - T. Yamano, M.L. Malabayabas, M.A. Habib, and S.K.Das.,Neighbors Follow Early Adopters under Stress: Panel Data Analysis of Submergence-tolerant Rice in Northern Bangladesh. *Agriculture Economics* (2018) I –II. <https://doi.org/10.1111/agec.12418>
 - **Nayak S**, Habib MA, Iftekharuddaula KM, Kabir MH (Eds) (2022) National level result sharing and planning of head-to-head adaptive trials in Bangladesh. International Rice Research Institute (IRRI) Workshop Report. Los Banos, Philippines. Available online at: <http://books.irri.org/HHAT-Workshop-Report.pdf>

B. Review Articles, Commentaries, Editorials and other Impact articles

- Bhosale, S., Prakash, P. T., Kadaru, S. B., Hussain, W., Dixit, S., Ali, J., Platten, J. D., Islam, M. R., Singh, V. K., Murori, R., Ndayiragije, A., Panchbhai, A., Nayak, S., Cruz, P. D., Demont, M., Bartholome, J., Covarrubias-Pazarán, G., Cobb, J. N., & Bhardwaj, H. (2025). Onerice breeding framework: An end-to-end system to develop better varieties faster. *Crop Science*, 65(3). <https://doi.org/10.1002/csc2.70087>
- Not just crop Cafeterias! An Evidence-Based Varietal Evaluation and Selection Process to Create Seed Demand and Market, <https://www.aesanetwork.org/blog-99-not-just-crop-cafeterias-an-evidence-based-varietal-evaluation-and-selection-process-to-create-seed-demand-and-market/>
- women rice farmer: agents of change in eastern India” <https://ricetoday.irri.org/women-rice-farmers-agents-of-change-in-eastern-india/>
- Stress-tolerant rice aids Uttar Pradesh farmers, <https://www.villagesquare.in/stress-tolerant-rice-aids-uttar-pradesh-farmers/>
- Capacitating seed dealers and producers of Bangladesh in improved seed production and marketing, <https://www.seedtoday.com/article/259036/capacitating-seed-dealers-and-producers-of-bangladesh-in-improved-seed-production-and-marketing>
- Farmers’ participation is key to faster rice varietal replacement in Odisha. Rice Today, 29 June. <http://ricetoday.irri.org/farmers-participation-is-key-to-faster-rice-varietal-replacement-in-odisha/>
- Developing a new model for quality rice seed production for Odisha’s farmers. Rice Today, 8 January. <http://ricetoday.irri.org/developing-a-new-model-for-quality-rice-seed-production-for-odishas-farmers/>
- Rice varietal cafeterias: An effective extension tool for promoting climate-resilient rice. Rice Today, 8 July. <http://ricetoday.irri.org/rice-varietal-cafeterias-an-effective-extension-tool-for-promoting-climate-resilient-rice/>
- A new variety delivery program designed to win farmers’ hearts and minds. Rice Today 29 Jan. <http://ricetoday.irri.org/a-new-varietal-delivery-program-designed-to-win-farmers-hearts-and-minds/>
- Making farmers climate-smart through a farmer-driven approach. Rice Today 20 May. <http://ricetoday.irri.org/making-climate-smart-farmers-using-a-farmer-driven-approach/>
- Women Farmers’ Crop Cafeteria Serves Practical Rice Science. Rice Today, 29 July. <http://ricetoday.irri.org/women-farmers-crop-cafeteria-serves-practical-rice-science/>
- A woman overcomes the challenge of climate change with stress-tolerant rice. Rice Today, 10 December. <http://ricetoday.irri.org/a-woman-overcomes-the-challenge-of-climate-change-with-stress-tolerant-rice/>
- Mitigating climatic risk of rice farming through stress tolerant rice varieties: An empirical study in Odisha, India. The 4th international conference on climate change during 27th-28th

Feb, 2020 at Kuala Lumpur, Malaysia. <https://climatechangeconferences.com/home-2021/>
(Book of abstract)

8. Core Competencies:

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- Research and Practice around Strategic and Institutional Partnership, Scaling Pathway Design , Capacity Sharing, Technology Delivery Strategy, Innovation Models,
 - Agriculture Extension and Technology Transfer
 - Regional Cooperation , South -South Capacity Sharing, Cross border learning and material transfer efforts (Eg. Current Nodal for Seeds Without Border – Award winning innovation catalyzed by IRRI)
 - Conceptualisation and Steering the Designing of Micromodules for Seed System Innovations , gender friendly modules for knowledge and capacity building efforts.
 - Leading Strategic and Extensive Scaling Partnership (Institutional Engagements)
 - Major Donor Liaisoning (Global, National, Sub-national)
 - Developing Capacity Sharing Frameworks and designs for institutions
 - Large Team and People Management experience (The largest team handled have been 90+ members in the role of National livelihood lead for NRLM-MKSP , Additional Director, , Commissionerate of Tribal Welfare, and current research direct team size at IRRI: 20 (Direct partners and extended stakeholders :150+)
 - Intensive Proposal Development & Fund Raising
In last 3 years alone, the stand-alone fund raising and successful pipelines (with success rate of more than 80%) for pitched and pre-negotiated proposals under IRRI South Asia Seed System unit stands at approximately 10 million through bilaterals alone (barring core fundings pre-allocated and other future pipelines. The range of donors include USAID, CGIAR special innovation calls, Govt of India, Govt of Bangladesh, Govt of Odisha and the pipeline includes BMGF, Govt of Odisha, USAID , World Bank, Govt of UP and more.
 - Leading Public-Private Partnership (Current Co-PI and Coordinator to IRRI's one of the biggest global PPP on direct seeded rice systems IRRI-Bayer-USAID partnership)
 - Leading various Participatory and Experimental Research including capacity , gap assessment, feasibility assessment and impact assessment experiments
 - Strategic Documentation and Stronger Science Communication (with significant footprint and online sharing and social media presence for sharing research blogs, popular articles and more)
 - Speaking and Moderation for Global Events including forums like World Food Prize, Various Science Congress and Conferences at Global, Regional and National level
 - Significant experience around livelihood and community empowerment and alternative institution partnership and scaling innovations

9. Detailed Professional Experience Summary

**Current Profile and Key Areas of Deliverables and Technical Expertise
(South Asia Lead- Seed Systems, IRRI)**

A) Delivering genetic gain and evidence in farmer field

- Tailored, strengthened and streamlined on-farm trialing systems for Rice for robust data or evidence generation. The statistically validated and popular TRICOT models followed widely in maize was rigorously customized, positioned and streamlined for Rice.
- Established and strengthened farmer led varietal validation / adaptive trial systems to estimate genetic gain under farmer led management and resources, differentiating it from breeding / research station trials done in optimal conditions and not being realistic often.
- Worked intensively in Asia and closely with ESA (Eastern and Southern Africa) stakeholders on custom development of seed scaling and varietal dissemination strategies and South-South Collaboration of innovating policy dialogues on seed scaling and germplasm exchange, devising product management strategies, NARES Capacity building and collaboration.
- Worked closely with breeding biometrics to apply ecospatial modelling (data driven tool) to make the area targeting and varietal scaling, statistically and scientifically reliable.
- Coordinated across large scale breeding network partners from all leading NARES (National Agriculture Research and Extension System) to establish transparent and unbiased systems of nominations and selection of new candidate variety, breeding pipelines, benchmark selection, area selection and also farmer selection using extension/ delivery network.
- Devised standard operating procedures (SOPs) for on farm trialing procedures, guidelines, trainings, lay outs for a wide scale of partner network that involved, public agencies, NGOs, Privates, and community based institutions.
- Designed and organized several training programmes for partner network.
- Estimated genetic gain for new varieties and created intensive repository of data, evidence and farmer feedback (panel data) for making the varietal scaling and positioning decisions driven by data, farmer led demands and actual varietal performances

B) Participatory experimental models and Technology Transfer efforts for scaling

- Popularized, streamlined the SOP and scaled effective knowledge cum demand creation platforms like client oriented varietal cafeterias. The concept which was primarily limited to farmer participation was remodeled as diverse client oriented platforms , also engaging market/ value chain actors and more.
- Streamlined large scale participation from women farmers and community groups and small enterprises, key influencers in agriculture value chain like dealers, millers, seed producing agencies or growers as well as policy makers.
- Designed technology evaluation / assessment criteria which categorized and focused on gendered approaches of capturing both men and women's' preferences and choices

- Took such participatory models beyond experimental outcomes on assessment of technology performance or client preferences by creating multi-faceted value chain linkages and networks emerging through concentrated efforts.

C) Regional Cooperation, South- South Capacity Sharing

- Recognised for catalysing South-South innovations like Seeds without border in catalyzing seed , knowledge and capacity sharing efforts in the Borlaug Field Award as well as Indian of the Year -Climate Champion winning descriptions.
- Current Global Nodal coordinator for Seeds without border initiatives
- Conceptualised , developed and scaled across borders , the digital innovation SeedCast as part of regional knowledge and best practice exchange
- A key invited speaker and contributor at SAARC meetings fostering regional cooperation in agriculture sector

D) Community led , gender inclusive seed scaling models

- Gender responsive models of community led production, post-production and value chain activities as well as knowledge dissemination were devised and executed across countries.
- Technical modules, communication strategies as well extensive training modules were conceptualized and widely scaled with partner network to create mass sensitization and technology adoption among end users targeted
- Have designed one of the most popular and currently widely used Gender friendly tools on Quality seed production
- International, national, sub-national strategies and modules were designed based on target audiences for providing trainings and skill around quality seed production to scale the access and supply of seeds of new varieties
- Women led community institutions and their robust social network were mainstreamed as effective scaling pathway
- Community institutions like farmer producer organizations, small-medium companies(SMEs), cooperatives, and federated structures were tapped as effective scaling partners for new technology including validated new varieties.

E) Public Private Partnerships

- Devised, assessed and scaled various public private partnership in seed system for wide scale research around technology awareness, demand creation, linkage for provisioning of upstream supply of early generation seeds for further out-scaling , wide scale multiplication, dissemination of commercial and quality labelled , certified seeds through critical actors and institutions from public, private and community institutions
- Partnership developed with private seed firms, public seed corporations, farmer producer companies , dealership network, miller network and the breeding institutions

- Devised specific partnership models that involved early generation / upstream supply chain models to ensure seed / varietal outreach
- Also operationalized downstream supply chain models that involved extensive partnership for certified, commercial or truthfully labelled seeds engaging small, medium seed entrepreneurs and enterprise.

F) Scaling , Advocating Policy Innovations

- Accelerated the impact of policy innovation, “Seed Without Border”. Led and moderated germplasm and seed exchange between countries / Ministries that allowed promising germplasms to be introduced in new countries and get re-released, nationally notified. Ensured early generation seed linkage is established across the borders and researchers from multiple countries.
- Supported farmers and seed multipliers by bridging the gap of better research products now reaching across the border.
- Ensured strategic positioning, scaling and diversified breeder seed production of imported germplasms through wide scale partnership to ensure adoption and persistent supply of quality seeds locally

G) Enterprise development and institution building

- Piloted several research around enterprise innovation that involved training (including production. Post production and business development), handholding and providing supply and demand size linkages for stakeholders
- Both individual entrepreneurship and institutional enterprise development were modelled across South Asia that involved community groups, growers, dealers
- Facilitated linkages for technology support, infrastructure development in terms of improved seed production and processing, demand estimation and credit or investment linkages as well

H) Capacity Building among national agriculture research and extension system (NARES)

Conceptualized and executed several capacity building initiatives focused around NARES institutions and researchers, scholars working with them.

Key subject areas

- Understanding product management concepts and strategies for technology scaling
- Understanding of product profiling for varietal advancement and scaling
- Protocols and processes around scientific approach for on farm trialing

- Data collection and management tools and soft wares
- Digital innovations / tools usage
- Strengthening quality seed production and practices
- Diverse kinds of enterprise building around seed business and best practices
- Innovative demand creation methods
- Private partnership models

I) Strengthening delivery systems

Devised multi stakeholder delivery mechanism and working models for seed and varietal scaling. That involved various network led pathways which involved public, private and social/ community managed systems.

- Dealership networks
- Miller network
- Private extension agents
- Public sector extension agents
- Women self-help groups/ collectives
- Community agents
- Seed entrepreneurs

The above delivery network were involved in an end to end engagement through interconnected interventions around demand creation, supply system strengthening and production, marketing processes

J) Digital Innovation as effective mode of technology scaling and adoption

- Conceptualized, developed and operationalized an innovative digital tool, one of its kind innovation available globally, “seed Cast”
- Successfully piloted for rice this tool is an demand estimation, market information cum decision support tool which helps seed sellers and buyers to decide what to sell, buy or procure and where to target what and how much
- This tool extensively support business and production centric decisions
- This connects reliable and registered sources of seed to farmers demanding those
- This also helps in providing varietal information for farmers and help them choose their best –fit variety
- I have also worked closely with ESA (Eastern and Southern Africa) stakeholders on custom development of SeedCast to support varietal scaling
- The tool is also set for scaling for multi-crop regime

10. Other key positions and major roles accomplished

10.1 Specialist –Social Science and Gender Research, IRRI (2014-2017)

Roles and Responsibility:

- Designing rural technology delivery and extension models specifically focusing on women and small holders , piloting and evaluating these models around sustainable and climate smart technology, practices and products in agriculture
- Working with farming system approaches, diversification programmes around CSA Practices (Climate Smart Agriculture)- climate resilient varieties, seed systems, water saving practices/technology, mechanization, cropping system diversification, integrative livelihood programmes, Varietal-IPM superimposed models, Varietal- INM/SSNM Superimposed models, innovating digital tools around optimal resource use and demand estimations etc.
- Developing and executing extension models, innovation models around climate resilient varietal delivery and adoption programmes in drought, flood, or stress prone ecosystems in India
- Seed system strengthening in formal and informal sector and working extensively with agro value chain actors and institutions.
- Innovating and executing various technology transfer/ extension and research for development models on ground (Head to Head Trials, Integrative Cluster Demos, Client oriented crop cafeterias, Community Crop Cafeterias , Participatory Varietal Selection, Mini Kit, On farm Adaptive Trials)
- Executing multiple enterprise and intuitional models around production, market linkage and awareness generation engaging community, women and grass root institutions.
- Conceptualizing, designing and executing randomized experiments (RCT driven), detailed household surveys and action research as part of baseline, technology/ programme evaluation , impact assessment
- Extensive networking and partnership with National partners, Civil society organizations, NARES, State departments of agriculture and various traditional extension arms like KVKs and District agriculture functionaries , CGIAR and other knowledge agencies.
- Promoting and coordinating for IRRI-ICAR strategic collaboration for strengthening extension research and delivery system in India
- Networking and promoting IRRI-NARES collaboration for designing and executing knowledge and capacity building programmes targeting various stakeholders and partners.
- Integrating gender focused strategies and interventions in cross cutting extension programmes within the institute and projects or multiple teams.
- Working with and promoting community based livelihood centric sustainable agriculture technology interventions engaging large number of community based organizations, mutual self-help groups.
- Extensive research questionnaire design, data management and data analysis using survey tools like Survey Be, ODK and statistical tools like SPSS and STATA
- Documentation of research concept note, research findings, scientific papers, case studies, synthesis report, news reports, articles and blogs
- Developing concept notes and proposals for fund raising , collaboration and convergence
- Conceptualizing, organizing and managing state level and national level convergence meets , forums for innovation and strategic collaboration

- Designed framework, models and initiated different intervention pilots with women SHG groups, federations, producer groups and different types of community institutions in targeted region for creating sensitization, knowledge, skill, entrepreneurship and business models
- Designing various capacity building and knowledge tools in form of communication and training materials in local context- factsheets, training modules, manuals, posters, calendars, and operational manuals etc.
- Promotion of gender friendly methods, technology, mechanization and facilities for reduction of physical drudgery and health hazards to rural women workers
- Building and Engaging youth and women as community resource persons, mobilizers and motivators through proper education, and knowledge building
- Extensive and practical experience in conceptualizing, designing, grounding and assessing several community centric extension models and interventions around agriculture technology, resource conserving livelihood, entrepreneurship and skill development models for direct impact on income generation, local self employment, along with enhanced farm productivity/food security,
- Designing ICT based innovative knowledge platform for market intelligence around rice seed value chain

10.2. National Mission Executive (2011-2013) for Livelihood vertical, in National Mission Management Unit (NMMU), New Delhi under NRLM (National Rural Livelihood Project/Mission), a World Bank- Govt. of India (MoRD) Project.

Being the national level coordinator, the primary role was Policy design, advocacy, programme designing and management. Acted as Anchor Person at National level for Mahila Kisan Sashaktikaran Pariyojana (MKSP), a specific agricultural and allied livelihood promotion designed only for women producers (tribal, poorest of poor, small and marginal sections) and their institutions, for promoting sustainable and conservation practices in farm (agriculture) and non-farm sector livelihood (Non Timber Forest Produce, Weaving) and strengthening the respective value chain.

Responsibilities:

- Involved in complete programme management of the livelihood vertical and specific livelihood promotion programme under the umbrella of NRLM focused on sustainable agriculture and allied livelihood.
- Supervised the farm livelihood / sustainable agriculture programmes for the country under Livelihood vertical.
- Developed implementation and partnership guidelines for Govt. of India and technical protocols as of World Bank standard, under 2 themes of livelihood, namely farm and non-farm livelihood with focus on women producers under MKSP (Mahila Kisan Sashaktikaran Pariyojana/ Women farmers' empowerment programme). The programme exclusively focused on climate resilient, sustainable agriculture, resource conservation and organic farming approaches.
- Developed and standardized technical protocols/ for specific livelihood thematic, systems and processes (guideline for project formulation, appraisals, MIS, budget framework, financial and physical allocation framework, M&E framework) under the livelihood vertical. Developed standard operating procedures for timely implementing of MKSP projects and ON

livelihood programme at three level- national (ministry), state (departments), and project implementing partner (PIA) level.

- Developed extensive partnership with NGO, Corporate-CSR and government subsidiary as direct project implementing agency), network building, strategic coordinating with various resource agencies, implementing agencies and knowledge agencies from government, private and almost all known /acknowledged civil society organizations in country working in the domain of Natural resource management (water and soil), environment and biodiversity conservation, agriculture, forest and allied livelihood promotion as well as entrepreneurship development.
- Developed, aligned and structured more than 50 innovative proposals around livelihood enhancement, agriculture, water and soil conservation, forest produce and value chain with a targeted outcome of income gain, food security and climate resilience. These proposals concerned to nearly all region of country from different social and geographical context.
- Direct experience of Designing and developing templates and frameworks for proposal writing and submission, separate templates for budget formulation and structuring, designed both quantitative and qualitative appraisal formats and scoring sheets for proposals submitted inwards. (The templates /frameworks designed for proposal development is now an approved and official project and DPR submission template for Government of India, Ministry of RD, available at www.mksp.org)

The thematic area where I have worked extensively in terms of developing protocols, documents, knowledge materials, resource raising, programme designing, partnership and assisting PIAs in conceptualizing , designing , grounding as well as monitoring different interventions are below;

- Sustainable and resource conserving farming models,
 - Environment conservation and climate resilience projects
 - Community institution, local governance and management models for livelihood, natural resource management, food production and value chain
 - Entrepreneurship, skill and capacity building
- Documented, consolidated and disseminated various best practices, SOPs (Standard Operating Procedures), designing TORs, TSAs protocols, guidelines, concept notes etc. Organized many intensive capacity building programmes for the field implementing agencies.
 - Provide technical assistance and advisory for state departments acting as coordinating and monitoring agency for state specific projects and numerous project implementing agencies across different states.
 - Organized and represented in several rounds of national project screening and project approval committees constituting members from different ministry, civil society etc.
 - Co-partnered and organized 5 regional and 1 national level PPP meets for conceptualization and strategy formulation for nationwide implementation, with UN agencies.
 - Fostered PPPP model (Public-Private-Panchayat partnership) for incorporation of local governance, and community resources and management in public and private funded technology, knowledge.
 - Involved in joint development of training modules, protocols for programme delivery in association with UN Women, UNDP etc.

- Managed and organized national level /regional level PPP meets, consultations, workshops, training programmes, partner mapping exercise, value chain studies, evaluations, appraisals, training need assessment studies etc. in close association with international resource agencies like UNDP, World Bank, UN Women, Digital Green and few others.
- Led development, monitoring and evaluation frameworks for desk evaluation/appraisal, field evaluation, project review (Physical & Financial), budget templates for timely and structured monitoring of various project implementing agencies (PIAs) and the progress of projects sanctioned.

10.3. Addl. Project Director, ITDA Seethampeta, Commissioner of Tribal Welfare, Government of Andhra Pradesh, India

Headed one of the 8 PMUs, established for implementation and monitoring of government programmes focusing on employment, agriculture and social development. and other theme based activities in the tribal /agency areas in the Government of Andhra Pradesh, India (2010-2011)

Responsibilities:

Worked across different tribal/ ethnic community groups including several PVTGs (Primitive vulnerable tribal groups) in ITDA regions of AP, the key domain of work involved,

- Established , initiated and led one of 8 project monitoring units (PMU) initiated across Andhra Pradesh for integrated tribal development through convergence of multiple centrally and state sponsored programmes for tribal welfare
- Supervised administration of PMU, its staff and DCC (Divisional computer center), handling of operational aspects of MIS and RAGAS software feeding to Govt. of India's Monitoring software for flagship employment programmes like National Employment Generation Schemes,
- Executed project mode planning and implementation of rural connectivity projects to remote habitations, horticulture plantation to create durable assets, building of rural infrastructures and others like irrigation structures to support agricultural activities,
- Worked as special officer and involved in monitoring of various developmental schemes like SHG activities, establishment of health & nutrition centers in the tribal and remote villages, organizing school health camps, skill development training for rural youth, and promoting tribal art and culture as entrepreneurship
- Coordinated extensive livelihood promotion efforts and schemes focusing on sustainable agriculture, Non Timber forest produce, alternate opportunity crops of tribal community.
- Led training and capacity building of field staff and ToT like assistant programme officers, technical assistants etc.,
- Steered the planning and devising strategy to link various programmes for employment, introducing new projects, doing feasibility analysis,
- Conducted physical and financial review of the work for all the implementing staff of various projects under the ITDA and PMU, coordinating with various govt. officials and line departments as well as local NGOs,

- Carried out intensive documentation, coordination for social audit and transparency maintenance,
 - Monitored the fund flow, managing budget and estimates of various projects
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