

RESUME

NAME: DR. SAON BANERJEE

DESIGNATION: PROFESSOR

CONTACTS:

OFFICIAL ADDRESS FOR CORRESPONDENCE:

Dept of Agricultural Meteorology and Physics,
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3. ORCID ID: 0000-0001-8213-1036

4. GOOGLE SCHOLAR PROFILE:

<https://scholar.google.com/citations?user=yt7vEMcAAAAJ&hl=en>

5. RESEARCHGATE PROFILE: <https://www.researchgate.net/profile/Saon-Banerjee>

6. DATE OF BIRTH: 03/12/1971

7. DATE OF JOINING TO THE UNIVERSITY: 24/04/2000

8. ACADEMIC PROFILE:

| LEVEL | NAME OF THE DEGREE WITH DISCIPLINE/ DEPARTMENT | INSTITUTE | YEAR OF PASSING |
|------------|--|---------------|-----------------|
| DOCTORAL | Ph. D. (Agril Physics) | IARI | March, 2000 |
| MASTER'S | M. Sc. (Agril Physics) | IARI | Sept., 1996 |
| BACHELOR'S | B. Sc. (Ag.) Hons | Visva Bharati | August, 1993 |

9. EMPLOYMENT HISTORY: (Starting from present position)

| POSITION | ORGANIZATION | PERIOD | |
|----------------------|--------------|-------------|------------|
| | | From (Date) | To (Date) |
| Professor | BCKV | 14.09.2012 | Continuing |
| Associate Prof. | BCKV | 14.09.2009 | 13.09.2012 |
| Reader | BCKV | 14.09.2006 | 13.09.2009 |
| Lecturer (Sr. Scale) | BCKV | 24.04.2004 | 13.09.2006 |
| Lecturer | BCKV | 24.04.2000 | 23.04.2004 |

10. ADMINISTRATIVE POST(S)/ RESPONSIBILITY(IES) (IF ANY)

| SL. NO. | NAME OF THE POST(S)/ RESPONSIBILITY(IES) | PERIOD | |
|---------|--|-------------|-----------|
| | | From (Date) | To (Date) |
| 1 | Head, Dept of Ag Met and Physics | 30.5.2015 | 31.5.2019 |

11. AREA OF RESEARCH: (Bulleted list)

- Crop weather modelling
- Climate change impact on agriculture
- Micrometeorology
- Hydrometeorology

12. COURSES ASSOCIATED WITH:

| LEVEL | COURSE NO. | COURSE TITLE | CREDIT |
|---------------|------------|--|--------|
| UNDERGRADUATE | AMP-252 | Agrometeorology and Climate Change | 1+1 |
| | EC-311 | Agromet Advisory Service and Crop Modeling | 2+1 |
| POST GRADUATE | AGM-502 | Fundamentals of Agricultural Meteorology | 2+1 |
| | AGM-505 | Crop Micrometeorology | 2+1 |
| | AGM-507 | Crop weather models | 2+1 |
| Ph.D. | AGM-604 | Hydrometeorology | 2+1 |
| | AGM-607 | Environmental Physics for Agricultural Meteorology | 3+0 |

13. NUMBER OF STUDENTS SUPERVISED:

Master's: Twelve (12) Doctoral: Six (6)

14. RESOURCE PERSON FOR OTHER INSTITUTES (involvement in teaching or working as member of academic/ research bodies of other organizations, if any)

- Respondent (Agril. Section) in IPCC (AR 4) dissemination Workshop for South East Asia in 2007.
- Member of Broad Subject Matter Area (BSMA) Committee for Physical Science Group (Specialist in Agrometeorology) constituted by ICAR.
- External Examiners and Thesis evaluator in the field of Agrometeorology for different Universities, like, Uttar Banga Krishi Viswavidyalaya (UBKV), Andhra University, Central Agricultural University (Meghalaya), OUAT (Bhubaneswar), etc.
- Invited talk in different International Conferences like, International Conferences on Advancement in Science and Technology (3-4 Sept., 2018 at Visva Bharati University), International Conference on Livelihood Promotion, Bio-diversity Conservation and Social Security in Indian Sunderbans (7-9 Dec., 2018 at Techno India University), etc.
- Expert in the selection committee for the post of Lecturer/ Technical Officer and Subject Matter Specialist (Agromet) at Dr. Rajendra Prasad Central Agricultural University, Pusa and West Bengal University of Animal and Fisheries Sciences, Kolkata, ICAR-CRIJAF, etc.

- Member, Broad Subject Matter Area for Natural Resource Management for restructuring P.G. Courses constituted by ICAR.
- Mentor of DST Women Scientist working on Carbon Sequestration and Ecosystem Monitoring in Forest Ecosystem.
- Member, ICAR-NET syllabus restructuring committee.
- Acted as Resource Person in the 6th in-service Capacity Enhancement Program on “Agrometeorological Applications” at BAU, Ranchi during 16 to 25 Feb., 2019.

15. LIFE MEMBERSHIP OF ACADEMIC SOCIETIES

- Life member, Association of Agrometeorologists
- Life member, Indian Meteorological Society

16. PROJECT ACTIVITIES

| SL. NO. | TITLE OF THE PROJECT | FUNDING AGENCY | ONGOING/ COMPLETED | PI/ Co-PI |
|---------|--|---|--------------------|-----------|
| 1 | Energy Water Balance and crop growth monitoring | ISRO | Completed | PI |
| 2 | Impact, adaptability and vulnerability of Climate Change on Indian Agriculture | ICAR | Completed | PI |
| 3 | AICRPAM-NICRA | ICAR | Ongoing | PI |
| 4 | Strengthening climate change related adaptive capacity for farming community with special reference to arid and semi-arid regions of SE Asia | Practical Action, UK | Completed | PI |
| 5 | Protecting ecosystems and livelihoods of the Sundarbans, a World Heritage Site: Assessing the impact of natural hazards on forest-based ecosystem services | Asia Pacific Network for Global Changes | Completed | PI |
| 6 | Optimisation of Meteorological resources for sustainable production of pigeon-pea based cropping system under upland condition | Govt of West Bengal | Completed | Co-PI |
| 7 | Economic impact of Agromet Advisory Service | NCMRWF, DST | Completed | Co-PI |
| 8 | FASAL | MoES, Govt. of India | Completed | Co-PI |
| 9 | Climate resilient rice cultivation technology for higher water productivity at Eastern Indo-Gangetic Plain | DST, Govt. of West Bengal | Completed | Co-PI |
| 10 | Energy-mass exchange in vegetation system | ISRO | Completed | Co-PI |
| 11 | Revival of Village Pond | DST, Govt. of India | Completed | Co-PI |
| 12 | Opportunities and trade-offs between the SDGs for food, welfare and the environment in deltas | DBT, Govt. of India | Completed | Co-PI |

17. CAPACITY BUILDING/FACULTY DEVELOPMENT PROGRAMME**A. ORGANIZED**

| SL. NO. | NAME OF THE PROGRAMME | DURATION | PLACE | ROLE |
|---------|---|----------------------|-------|-----------------|
| 1 | Training for the Technical Officer on “Crop Simulation Modelling” | 20.10.09 to 23.10.09 | BCKV | Course convenor |
| 2 | Training Program on Basic aspects of Agrometeorology and weather-based Agromet Advisory Service System during | 25.02.13 to 06.03.13 | BCKV | Course convenor |
| 3 | Agromet Research Explicate Program during | 10.2.16 to 19.2.16 | BCKV | Course convenor |

B. ATTENDED

| SL. NO. | NAME OF THE PROGRAMME | DURATION | PLACE | ROLE |
|---------|---|------------------------|------------------|----------------------------------|
| 1 | In-service capacity building on strengthening the capabilities in Agromet data analysis and modelling | 03.2.2015 to 12.2.2015 | CRIDA, Hyderabad | Trainee |
| 2 | Capacity building program on advanced Agrometeorological Tools in agricultural production system | 22.2.2017 to 03.3.2017 | CCSHAU, Hisar | Both trainee and resource person |
| 3 | Capacity enhancement program on Agrometeorological Applications | 16.2.2019 to 25.2.2019 | BAU, Ranchi | Both trainee and resource person |

18. SEMINAR/ SYMPOSIUM/ WORKSHOP etc**A. ORGANIZED**

| SL. NO. | NAME OF THE PROGRAMME | DURATION | PLACE | ROLE |
|---------|--|----------------------|-----------------|--|
| 1 | Xth Biennial Workshop of AICRP on Agrometeorology | 3-5 December, 2008 | BCKV | Organising Secretary |
| 2 | International Conference on “Global Trends in Academic Research” (GTAR-2014) | 2-3 June, 2014 | Bali, Indonesia | Member, Scientific and Review Committee |
| 3 | AsiaFlux Workshop on “Challenges and significance of ecosystem research in Asia to better understand climate change” | 22-29 November, 2015 | IITM, Pune | Convenor, Session F on Flux monitoring, climate change and sustainable agriculture |

B. ATTENDED

| SL. NO. | NAME OF THE PROGRAMME | DURATION | PLACE | ROLE |
|---------|---|-------------------------|-----------------------------------|---------|
| 1 | Dynamic crop simulation model based DSS and its use in Agromet Advisory Service of NCMRWF | 7.11.2005 to 18.11.2005 | NCMRWF, Noida | Trainee |
| 2 | Land evaluation for watershed towards microlevel planning using RS and GIS | 24.8.2006 to 13.9.2006 | NBSSLUP, Regional Centre, Kolkata | Trainee |
| 3 | Agroclimatic analysis, Crop simulation modeling and Web-page management | 29.6.2009 to 05.7.2009 | CRIDA, Hyderabad | Trainee |

19. PATENTS/ HONOURS/ AWARDS/ RECOGNITION (Bulleted list):

- **Awarded GOLD MEDAL for academic performance in M.Sc. Degree Programme at IARI.**
- Received “Metos Award” for best presentation on Agromet Advisory Services in 2004.
- Best Centre Award (for information dissemination) of AICRP on Agrometeorology during 2008.
- **INSA Bilateral Exchange Programme Award for visiting University of Edinburgh in 2012.**
- ELLA (Evidences and Learning from Latin America) Learning into Practice Award (in the form of a project amounting US\$ 5000.00) in 2013.
- CNPq-TWAS Post-Doc award in 2014 (not attended due to personal reason).
- Foreign Fellow, Bangladesh Science Foundation in 2015.
- **Fellow, Association of Agrometeorologists**
- Best Paper/ Poster/ Presentation Award in the different Conferences: Ten in numbers

20. INTERNATIONAL COLLABORATIONS/ INVOLVEMENT, IF ANY:

- Collaboration with University of Sunshine Coast, Australia through APN Project for Global Changes.
- Collaboration with Western Sydney University and CARDI (Cambodia) through APN Project for Global Changes.

Country visited for academic and research purposes:

| Name of country | Year | Purpose |
|-------------------------------|------|--|
| Bangladesh | 2004 | To attend Int. Seminar on Bengal Basin |
| Cambodia | 2009 | To attend the Workshop organized by APN on Global Changes on climate risk |
| Australia | 2010 | To attend the APN-Workshop on climate change impact on disease |
| Thailand | 2011 | To attend the APN-Workshop on climate change impact on disease |
| UK | 2012 | Visiting Scientist in University of Edinburgh through INSA Bilateral Exchange Programme |
| Thailand, Malaysia, Sri Lanka | 2013 | Project work of “Strengthening climate change related adaptive capacity SE Asia” |
| Vietnam | 2014 | To attend Flux Monitoring Training organized by Asia Flux |
| Spain | 2016 | To chair one session in the International Conference on Science, Ecology and Technology (14-16 Oct., 2016 at Barcelona) |
| Indonesia | 2018 | To deliver the invited lecture on Climate Resilient Agriculture at University of Padjadjaran |
| Australia, Philippines | 2023 | To attend APN Meeting and Workshop on Hyperspectral Remote Sensing at University of Sunshine Coast and to attend APAC Congress |

21. PUBLICATIONS

A. BOOKS/ TECHNICAL BOOKS

Chandrasekharan, H., **Banerjee, S.**, Yadav, B.R. and Singh, A.K. 2001. Assessment of Soil Moisture, Soil Salinity and Groundwater: Geophysical and GIS Approach. Tech. Report No. WTC/WRDI/2001, Water Technology Centre, IARI, New Delhi, 74 Pages.

Khan, S. A., Saha, A., **Banerjee, S.**, Saha, G., Chakraborty, P. K. and Nanda, M. K. 2008. Analysis of weekly rainfall for planning in West Bengal under rainfed condition. Tech. Book: AICRP on Agrometeorology, Mohanpur Centre, India, 115 Pages.

S. Banerjee; A. Mukherjee, S.A. Khan, P.K.Chakraborty, V.U.M. Rao; G.G.S.N. Rao and B. Venkateswarlu. 2010. Glimpses of Research on Agrometeorology in west Bengal. Tech. Book: AICRP on Agrometeorology, Mohanpur Centre, India, 60 Pages.

Mukherjee A., **S. Banerjee**, K. Roy, V.U.M. Rao, G.G.S.N. Rao and B. Venkateswarlu. 2010. Weather based decision for growing Kharif rice in West Bengal. AICRPAM (Mohanpur) Tech. Bul. No. 1/2010. BCKV, Mohanpur, West Bengal. 24 Pages.

Jha Chakraborty A., **S. Banerjee**, A.Mukherjee and S. Das. 2013. Awareness and perception of farmers on climate change: West Bengal Perspective, AICRPAM-NICRA, Directorate of Research, BCKV, Kalyani, Nadia, West Bengal, India. 42 Pages.

S. Banerjee; A. Mukherjee, B. Basu, S. Mukhopadhyay and G. Sarkar. 2013. Contingency crop planning for different Agro-climatic zones of West Bengal. AICRP on

S. Banerjee, M.D. Bairagya, A. Mukherjee, B. Saikia, P. Dutta and C. Halder. 2013. Solar Radiation and Crop Growth, AICRPAM- NICRA, Directorate of Research, B.C.K.V., Kalyani, Nadia, West Bengal, India. P. 168.

M. D. Bairagya, **S. Banerjee** and A. Mukherjee. 2014. Crop Weather Calendar of *Kharif* Rice, Mustard and Potato. Directorate of Research, B.C.K.V., Kalyani, Nadia, West Bengal, India.

Mukherjee A., **S. Banerjee**, S. Mukherjee, S. Samanta and A. Jha Chakraborty. 2014. Agrometeorology requirements and management practices of rapeseed- mustard in Gangetic West Bengal, AICRP on Agrometeorology (Mohanpur Centre), Directorate of Research, B.C.K.V., Kalyani, Nadia, West Bengal, India. P. 32.

Mukherjee, A., **Banerjee, S.**, Samanta, S., Das-Bairagya, M., Chkraborty, P. and Mahata, D. 2015. Agroclimatic Atlas of West Bengal. Lahor Publication House. P. 249. (ISBN: 978-81-929475-6-3).

B. BOOK CHAPTERS (Best 10)

1. Chandrasekharan, H., **Banerjee, S.**, Trivedy, S. M. and Yadav, B.R. 2001. Geophysical techniques for assessment of soil moisture and soil salinity. In: “*Physical Methods of Soil Characterisation*” (Ed., J. Behari), Narosa Publ. House, New Delhi, 101-106.
2. **Banerjee, S.** 2003. Remote Sensing in Agriculture: Scenario in West Bengal (in Bengali), pp. 193 – 200. In: “*30 Years Progress of Agriculture in West Bengal*” (Eds., Raj, S. K., Pan, S. K. and Dasgupta, M. K.), pp. 200.
3. Sattar, A., **Banerjee, S.** and Khan S. A. 2006. Weather forecast in Agriculture (in Bengali), pp. 25 – 26. In: ‘*Samiksha: Ajker Krishi-vabna*’, pp. 143.
4. **Banerjee, S.**, Khan M. R. and Jha, S. 2007. Impact of weather on pest-disease infestation and forewarning system (in Bengali), pp. 233 – 238. In: “*Ajker Krishi-vabna*” (Ed., Mukherjee, N.), National Book Agency Pvt. Ltd., pp. 334.
5. **Banerjee, S.** and Khan, S. A. 2008. Impact of climate change on agriculture over West Bengal. In: Climate change and agriculture over India. (Eds., Rao, G. S. L. H. V., Rao, G. G. S. N., Rao, V. U. M. and Ramakrishna, Y. S.), PHI Learning Pvt. Ltd., New Delhi, 203 – 215.
6. **Banerjee, S.**, Mukherjee, A., Thakur, S., Saikia, B., Samanta, S., Dutta, P. and Patra, P. K. 2016. Solar energy and its partitioning over different crop surfaces: A case study. In: Green energy and sustainable development. (Eds. S. Chaudhury, A. K. Hazra and S. Balachandran). Jayasree Press. pp. 16-27. (ISBN: 978-81-922916-6-6).
7. Patra P. K., Samanta, S., **Banerjee, S.** and Mukherjee, A. 2017. Solar radiation and crop growth. In: Agriculture crops and food security. (Eds. P. Kumar and A. Chauhan), Discovery Publishing House Pvt. Ltd. Pp. 23-40. (ISBN: 978-93-5056-881-1).


8. Saha, S., **Banerjee, S.**, Mukherjee, A., Biswas, S. 2021. Application of Nanotechnology Towards Self Reliance of Farming Community in India. In., K. C. Swain, D. Bhattacharya, B.K. Saren & Mandal, S. (Eds.), Modern Agricultural Technology: A Step Towards Rural Self-reliance (1st ed., Vol. 0, p. 77). M/s AGROBIOS (INDIA).
9. **Banerjee S.** and Mondal, S. 2022. Overview of Crop Growth Models as Support System to Conservation. In book: Conservation Agriculture and Climate Change Impacts and Adaptations, DOI: [10.1201/9781003364665-19](https://doi.org/10.1201/9781003364665-19)
10. Bal S. K., **Banerjee, S.**, Saha, S., Chakraborty, D. M.A Sarath Chandran. 2023. Agrometeorological Research in India Towards Food and Environment Security. In, P. K. Ghosh (Editor), Anup Das (Editor), Raka Saxena (Editor), Kaushik Banerjee (Editor), Gouranga Kar (Editor), D. Vijay (Editor), Trajectory of 75 years of Indian Agriculture after Independence. Springer.

C. RESEARCH PAPERS (Best 10, only as first/ corresponding author)

1. **Banerjee, S.**, Mukherjee, A., Das, S. and Saikia, B. 2014. Adaptation strategies to combat climate change effect on rice and mustard in Eastern India. *Mitigation and Adaptation Strategies for Global Change*, 21: 249-261. DOI: 10.1007/s11027-014-9595-y. (NAAS Score 10.00)
2. **Banerjee, S.**, Chatterjee, S., Sarkar, S. and Jena, S. 2016. Projecting future crop evapotranspiration and irrigation requirement of potato in Lower Gangetic Plains of India using the CROPWAT 8.0 model. *Potato Research*, 59 (4): 313-327. DOI: 10.1007/s11540-016-9327-7. (NAAS Score 8.90)
3. Samanta, S., Patra, P. K., **Banerjee, S.**, Narsimhaiah, L., Sarath Chandran, M. A., Vijaya Kumar, P. and Bandyopadhyay, S. 2018. Generation of common coefficients to estimate global solar radiation over different locations of India. *Theoretical and Applied Climatology*, DOI: 10.1007/s00704-018-2531-4. (NAAS Score 9.40)
4. Samanta, S., **Banerjee, S.**, Mukherjee, A., Patra, P.K., Chakraborty, P.K. 2020. Determining the radiation use efficiency of potato grown in Eastern India from sunshine hour data: a simple approach. *Spanish Journal of Agricultural Research*, 18 (2), e0801. <https://doi.org/10.5424/sjar/2020182-15561> (NAAS Score 6.90)
5. Sarath Chandran, M. A., **Banerjee, S.**, Mukherjee, A., Nanda, M. K., Mondal, S. and V. Visha Kumari. 2021. Evaluating the impact of projected climate on rice-wheat-groundnut cropping sequence in lower Gangetic plains of India: a study using multiple GCMs, DSSAT model, and long-term sequence analysis, *Theoretical and Applied Climatology*, <https://doi.org/10.1007/s00704-021-03700-2> (NAAS Score 9.40)
6. Sarath Chandran M A, **Banerjee, S.**, Mukherjee, A., Nanda, M. K. and Visha Kumari, V. 2021. Evaluating the long-term impact of projected climate on rice-lentil-groundnut cropping system in Lower Gangetic Plan of India using crop simulation modelling. *International Journal of Biometeorology*, <https://doi.org/10.1007/s00484-021-02189-8> (NAAS Score 9.20)
7. Samanta, S., **Banerjee, S.**, Patra Pulak Kumar, Sehgal, V. K, Chowdhury, A., Kumar, B., and Mukherjee, A. 2021. Projection of future daily global horizontal irradiance under four RCP scenarios: An assessment through newly developed temperature and

8. **Banerjee, S.**, Sarmah, K., Mukherjee, A., Sattar, A. and Bandopadhyay, P. 2022. Effect of projected climate scenarios on the yields of potato crop and agronomic adaptation options as evaluated by crop growth model. *Mausam*, 73, 1: 71-78. DOI: [10.54302/mausam.v73i1.5081](https://doi.org/10.54302/mausam.v73i1.5081) (NAAS Score 6.60)
9. **Banerjee, S.**, Biswas, R., Mukherjee, A., Sattar, A. 2022. Simulating the impact of elevated thermal condition on wet-season rice grown in Eastern India by different crop growth models. *Italian Journal of Agrometeorology* (2): 63-71. doi: 10.36253/ijam-758. (Scopus indexed, IF: 0.933)
10. **Banerjee S.**, Singal, G., Saha, S., Mittal, H., Srivastava, M., Mukherjee, A., Mahato, S., Saikia, B., Thakur, S., Samanta, S., Kushwaha, R., Garg, D. 2022. Machine Learning approach to predict net radiation over crop surfaces from global solar radiation and canopy temperature data. *International Journal of Biometeorology*. DOI: [10.1007/s00484-022-02364-5](https://doi.org/10.1007/s00484-022-02364-5) (NAAS Score 9.20)

Date: 30.5.24



(Signature)