Curriculum Vitae

Personal information

Name	**PARESH BHASKAR SHIRSATH**
Address(es)	**Correspondence** – 29/5 Ground Floor, Old Rajinder Nagar, New Delhi – 110 060, India
	Permanent – Balaji Road, Rahuri, Distt. Ahmednagar, Maharashtra – 413 705, India
Telephone	Mobile: **+91 8527389057**
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Work experience

Duration	**Nov 2017 – till date**
Position held	Associate Scientist, CCAFS, Borlaug Institute for South Asia (BISA), CIMMYT
Main activities and responsibilities	Adaptation propitiation, crop growth modeling, climate risk management, crop insurance and spatial analysis. He contributed in developing several tools and methodologies, which includes improved trigger design methodology for weather index insurance, Climate-Smart Agricultural Prioritization toolkit (CSAP) and Crop-loss Assessment Monitor (CAM).
Duration	**Nov 2015 – Oct 2017**
Position held	Post-Doctoral Fellow, CCAFS, Borlaug Institute for South Asia (BISA), CIMMYT
Main activities and responsibilities	Climate Risk Management and Agricultural Insurance, crop yield modeling, climate change, early warning systems
Duration	**July 2014 – Oct 2015**
Position held	Post-Doctoral Fellow, International Water Management Institute (IWMI)
Main activities and responsibilities	Design of triggers for weather index insurance, crop modeling, food stock planning
Duration	**Sep 2012 – Jun 2014**
Position held	Spatial Modeling-Specialist, International Water Management Institute (IWMI)
Main activities and responsibilities	Development of CSAP toolkit, exploratory land-use analysis, crop modeling, spatial modeling and generation of datasets
Duration	**Oct 2010 – Aug 2012**
Position held	Research Scientist
Main activities and responsibilities	Hydrological modeling activities and thematic support to Water Resources Project sub-information system of India-WRIS WebGIS
Projects Worked on	→Hydrological modeling activities of India-WRIS WebGIS →Development of spatial database and WebGIS framework for Water Resources Projects sub-information system of India-WRIS →Worked on River Basin Atlas of India
Name and address of employer	Indian Space Research Organization (ISRO), India

Education

Title of qualification awarded	**Ph.D. in Water Science and Technology (2012)**
Principal subjects covered	Irrigation Engineering, Hydrology, Water Resources Management, Statistics. Dissertation carried out – Modeling of Nitrogen Dynamics under Surface Fertigation
Department/University	Water Technology Centre, Indian Agricultural Research Institute (IARI), New Delhi, India
Title of qualification awarded	**M.Sc. in Water Science and Technology (2006)**
Principal subjects covered	Irrigation Engineering, Hydrology, Water Resources Management Thesis – Evaluation of Border-check Method of Irrigation at Different Growth Stages of Wheat
Department/University	Water Technology Centre, Indian Agricultural Research Institute (IARI), New Delhi, India
Title of qualification awarded	**B.Tech. in Agricultural Engineering (2004)**
Principal subjects covered	Soil and Water Conservation Engineering, Irrigation and Drainage Engineering, Farm Power and Machinery, Agricultural Process Engineering
Department/University	Dr.A.S.College of Agricultural Engineering, MPKV, Maharashtra, India

Publications

Research articles:

- Andrew J McDonald, ML Jat, Peter Craufurd, Jonathan Hellin, NV Hung, Alwin Keil, Avinash Kishore, Virender Kumar, Jessica L McCarty, Pam Pearson, Arindam Samaddar, **Paresh Shirsath**, Priya Shyamsundar, HS Sidhu, AK Singh, Sudhanshu Singh, Amit Srivastava, Emily Urban, RK Malik, Bruno Gerard. (2020). AgriXiv. Preprint DOI 10.31220/osf.io/qhwau
- **Paresh B Shirsath**, Vinay K Sehgal, Pramod Aggarwal. (2020). Downscaling Regional Crop Yields to Local Scale Using Remote Sensing. Agriculture 2020, 10, 58; doi:10.3390/agriculture10030058
- PK Gangopadhyay, A Khatri-Chhetri, **Paresh B Shirsath**, PK Aggarwal. (2019). Spatial targeting of ICT-based weather and agro-advisory services for climate risk management in agriculture. Climatic change 154 (1-2), 241-256
- Kindie Tesfaye, A Khatri-Chhetri, PK Aggarwal, F Mequanint, **Paresh B Shirsath**, CM Stirling, ML Jat, DB Rahut, O Erenstein. (2019). Assessing climate adaptation options for cereal-based systems in the eastern Indo-Gangetic Plains, South Asia. The Journal of Agricultural Science 157 (3), 189-210
- Tek B Sapkota, Sylvia H Vetter, ML Jat, Smita Sirohi, **Paresh B Shirsath**, Rajbir Singh, Hanuman S Jat, Pete Smith, Jon Hillier, Clare M Stirling. (2019). Cost-effective opportunities for climate change mitigation in Indian agriculture. Science of the Total Environment 655, 1342-1354
- **Paresh B Shirsath**, S Vyas, P Aggarwal, K N Rao. (2019). Designing weather index insurance of crops for the increased satisfaction of farmers, industry and the government. Climate Risk Management 25, 100189
- A Dunnett, **Paresh B Shirsath**, PK Aggarwal, P Thornton, PK Joshi, BD Pal, A Khatri-Chhetri, J Ghosh. (2018). Multi-objective land use allocation modelling for prioritizing climate-smart agricultural interventions. Ecological Modelling 381, 23-35
- Dhanush Dinesh, Robert Zougmore, Joost Vervoort, Edmond Totin, Philip Thornton, Dawit Solomon, **Paresh B Shirsath**, Valerien Pede, Isabel Lopez Noriega, Peter Läderach, Jana Körner, Dries Hegger, Evan Girvetz, Anette Friis, Peter Driessen, Bruce Campbell. (2018). Facilitating change for climate-smart agriculture through science-policy engagement. Sustainability 10 (8), 2616
- Dhiraj Raj Gyawali, **Paresh B Shirsath**, Damodar Kanel, Kurt Burja, KC Arun, Pramod K Aggarwal, James W Hansen, Alison Rose. (2018). Inseason crop yield forecasting for early warning planning of food security using CCAFS Regional Agricultural Forecasting Toolbox (CRAFT) in Nepal. CCAFS Working Paper No. 227. Wageningen, Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
- Tek B Sapkota, Jeetendra P Aryal, Arun Khatri-Chhetri, **Paresh B Shirsath**, Ponraj Arumugam, Clare M Stirling. (2018). Identifying high-yield low-emission pathways for the cereal production in South Asia. Mitigation and adaptation strategies for global change 23 (4), 621-641

- SK Srivastavaa, J Singha, **Paresh B Shirsath**. (2018). Sustainability of groundwater resources at the subnational level in the context of sustainable development goals. Agricultural Economics Research Review 31 (347-2018-5150), 79-88
- Mangi L Jat, Clare M Stirling, Hanuman S Jat, Jagdish P Tetarwal, Raj K Jat, Rajbir Singh, Santiago Lopez-Ridaura, **Paresh B Shirsath**. (2018). Soil processes and wheat cropping under emerging climate change scenarios in South Asia. Advances in Agronomy 148, 111-171
- Kindie Tesfaye, Pramod K Aggarwal, Fasil Mequanint, **Paresh B Shirsath**, Clare M Stirling, Arun Khatri-Chhetri, Dil Bahadur Rahut. (2017). Climate variability and change in Bihar, India: challenges and opportunities for sustainable crop production. Sustainability 9 (11), 1998
- **Paresh B Shirsath**, Pramod K Aggarwal, Philip K Thornton, Alex Dunnett. (2017). Prioritizing climate-smart agricultural land use options at a regional scale. Agricultural Systems 151, 174-183
- Aggarwal, P.K., Chand, R., Bhutani, A., Kumar, V., Goel, S.K., Rao, K.N., Poddar, M.K., Sud, U.C., Krishna Murthy, Y.V.N., Ray, S.S., others. (2016). Report of the Task Force on Enhancing technology use in agriculture insurance.
- Islam, A., **Paresh B. Shirsath**, S. N. Kumar, N. Subhash, A. K. Sikka, and P. K. Aggarwal. 2015. Use of Models in Water Management and Food Security under Climate Change Scenarios in India. In: L.R. Ahuja, L. Ma, and R.J. Lascano, editors, Practical applications of agricultural system models to optimize the use of limited water. Adv. Agric. Systems Model. 5. p. 000-000. ASA-SSSA-CSSA, Madison, WI.
- India-WRIS. (2012) River Basin Atlas of India, RRSC-West, NRSC, ISRO, Jodhpur, India.
- **Paresh B Shirsath** and Singh, A. K. (2010) A Comparative Study of Daily Pan Evaporation Estimation Using ANN, Regression and Climate Based Models. Water Resources Management Vol.24(4):1571-1581 [DOI 10.1007/s11269-009-9514-2]
- Nikam, S.S., Mishra, A.K., Sarangi, A., **Paresh B Shirsath,** Singh, D.K. and Ramasubramanian V. (2010) Artificial Neural Network Models for Prediction of Wheat Crop Evapotranspiration at New Delhi, India. Journal of Agricultural Engineering Vol. 47, No. 2, 20-25.
- **Paresh B Shirsath**, Sharma, R. K., Nathan, K. K., Singh, S. and Singh, D. K. (2009) Hydraulic Evaluation of Border-check Method of Irrigation. Journal of Soil and Water Conservation 8(2): 25-29
- **Paresh B Shirsath**, Satpute, S.T., Singh, A. K., Khanna M. and Man Singh (2009) EEIS: An Information System for Estimation of Evaporation and Reference Evapotranspiration. Journal of Water Management, vol. 17(2), 92-97.

Software developed

- ***CSAP*** *Toolkit, Crop-loss Assessment Monitor (****CAM****), SPIS tool*
- ***EEIS***: An Information System for Estimation of Evaporation and Reference Evapotranspiration *(Developed in MATLAB environment)*

Personal skills and competences

Mother tongue	Marathi
Other language(s)	English (Fluent) and Hindi (Fluent)
Computer skills	**Irrigation and Hydrological Modeling:** SWAT, MIKE-11, WinSRFR 4.13, CROPWAT, SIRMOD **Remote Sensing & GIS:** ArcGIS, R, GEE **Programming:** MATLAB, R, VBA **Statistics:** R, SPSS, MS Excel **Crop Models:** DSSAT, InfoCrop, MarkSim, ClimGen