



Narayan Sahoo, Ph.D

**Associate Professor &I/C Central Laboratory
Department of Soil and Water Conservation Engineering**

Education

- Ph.D (Agril.Engg.) in Soil and Water Conservation Engineering, Indian Agricultural Research Institute, New Delhi,(India) – 2003
- M.Engg. in Water Resources Engineering, Asian Institute of Technology, Bangkok, (Thailand) – 1988
- B.Sc. (Ag. Engg. & Tech.), Orissa University of Agriculture and Technology, Bhubaneswar – 1986

Experience

Working in OUAT, Bhubaneswar since 1988 in different capacities in teaching, research and extension and as Associate Professor since December, 1999 in Department of Soil and Water Conservation Engineering and I/C Central Laboratory, since November, 2012.

Externally Funded Projects/ Schemes

- Worked as Co-PI in a project entitled “National Watershed Development Programme for Rainfed Areas” from 1993 to 1998 under OUAT, Bhubaneswar in collaboration with Directorate of Soil Conservation, Government of Orissa, Bhubaneswar
- Associated Scientist, National Agricultural Innovation Project (Indian Council of Agricultural Research) – Sub Project entitled “Sustainable Rural Livelihood and Food Security to Rainfed Farmers of Orissa” (Project Period 2010 – 2014)
- Worked as Co-PI in the ICAR funded Project entitled as “National Initiatives on Climate Resilient Agriculture under AICRPDA, Phulbani from 2011 to 2012.

UG Courses taught

- Fluid Mechanics
- Irrigation and Drainage Engg – I
- Irrigation and Drainage Engg – II
- Workshop Practice – I & II

- Project – I & II
- Soil and Water Conservation Engg – I
- Soil and Water Conservation Engg to B.Sc (Forestry) students
- Surveying to B.Sc. (Ag) students.
- Fundamentals of soil and water conservation Engg to B.Sc. (Ag) students.
- Watershed management
- Small Dams and Reservoirs
- Irrigation Engineering
- Soil Mechanics
- Environmental Control Engineering

PG courses taught

- Advanced Irrigation Engineering –I & II
- Advanced Soil & Water Conservation Engineering-I
- Agricultural Drainage System Design
- Irrigation Management.
- Farm Irrigation System

Other Important Assignments

- Very often appointed as an external examiner to evaluate P.G. and Ph.D. theses and conducted Viva-voce Examination by the Dean, School of Post Graduate Studies, Tamil Nadu Agricultural University Coimbatore- 641003 since 2006.
- Served as Extension specialist in Agricultural Technology. Information Centre, OUAT, Bhubaneswar to meet the queries of the Farmers related to Agricultural Engineering and Agricultural Water Management problems in addition to my normal duties from 2003 - 2010.
- Nominated as Watershed Evaluation Expert by Watershed Development Mission, Govt. of Orissa, Bhubaneswar in 2006 – 2008 and 2014 – 2015
- Served as Test Engineer for different pump sets, sprinkler irrigation systems and drip irrigation systems in the College of Agricultural Engineering and Technology, OUAT, Bhubaneswar

Students guided

- Guided ten students for M.Tech. degree programme

Significant research contributions

- Developed a model micro-watershed and maintained it at Paikrapur, Khurda district from 1993 – 1998
- Developed On-farm water harvesting technology through dug wells and Farm ponds and their profitable utilization in Kalahandi and Dhenkanal districts of Orissa under sub project “Sustainable Rural Livelihood and Food Security to Rainfed Farmers of Orissa” of National Agricultural Innovation Project (ICAR, New Delhi)
- On-dyke horticulture in the Farm Ponds of Kalahandi and Dhenkanal district
- Developed soil & water conservation measures, such as: vegetative barriers, contour bunding , V-ditches etc.
- Introduction of multipurpose farming system model in small and marginal rainfed rice farms of Kalahandi and Dhenkanal Districts of Orissa

Present research interests

- Planning, design and implementation of micro-irrigation systems
- Soil, water and energy conservation and management
- Management of upland, medium land and low land eco-system in a watershed

Honours and Awards

- Best research paper award on “Erosion Resistance of Cohesive soils in Overland flow” in 30th January 1991 from Orissa Engineering Congress, Bhubaneswar.
- Best research paper award in 2004 from the Institution of Engineers (India), Bhubaneswar.
- Best research paper award on “Principal Component Analysis – A Tool for Runoff Computation in Watersheds” in 26th February 2005 from Orissa Engineering Congress, Bhubaneswar.
- Best research paper award on “Geomorphological Parameters Based Watershed Sediment Yield Estimation” in 31st January 2007 from Orissa Engineering Congress, Bhubaneswar.
- K.C.DAS Memorial Award for best research paper on “Evaluation of Sprinkler and Furrow Irrigation Methods for Summer Groundnut” from the Institution of Engineers (India), Orissa State Centre, Bhubaneswar, Odisha.

International trainings/visits

Nil

Peer recognition

- Expert member in Orissa Public Service Commission, Orissa Lift irrigation Corporation and Orissa Watershed Development Mission
- Watershed and irrigation Consultant and resource person to different Govt. and Non-Government organizations
- Referee of many national and international journals

Publications

- Three book chapters (All are National Publication), 35 research papers, 20 popular articles and 6 Technical bulletins

Selected Publications on and after 2006

- Ghosal M K; Nayak S; Tiwari G N and Sahoo N 2008. Modeling and experimental study for winter performance of an earth to Air Heat exchanger: an alternative energy source for green house, EE07012, Vol.X, Jan. Agricultural Engineering International : The CIGR - Ejournal
- Sahoo N; Pradhan PL; Anumala N K and Ghosal MK 2008. Uniform water distribution from low pressure rotating sprinklers, LW 08014, Vol.X, September, Agricultural Engineering International : The CIGR - Ejournal
- Sahoo N and Sahu AP Optimisation of land and water in Puri canal commands, 2006.Vol.24 (1&2), pp 64 – 69, Journal of Research, OUAT, Bhubaneswar
- Sahoo N; Mahapatra M; Panigrahi D Effect of hydraulic parameters on cohesive sediment transport of clay soil. 2008 Vol.7 (1), pp 10 – 15, Indian journal of Soil and Water Conservation, New Delhi
- Sahoo N; Rajput TBS and Rao AR 2008. Geomorphological parameters based watershed sediment yield estimation. Vol. 45(1), pp 47 – 56, Indian journal of Agricultural Engineering, ISAE, New Delhi
- Ghosal MK; Das DK; Pradhan SC and Sahoo N 2008. Performance Study of Diesel Engine by using Mahua Methyl Ester (biodiesel) and its Blends with Diesel Fuel, Manuscript EE 08014. Vol.X. October Agricultural Engineering International : The CIGR - Ejournal
- Sahoo N and Pradhan P.L. 2008. Improvement of minor for reliable water distribution in command area, Vol 26(2), pp 102-109, Journal of research, OUAT, Bhubaneswar
- Sahoo N and Pradhan P.L 2008 Comparative evaluation of drip and traditional method in orchard crops, Vol. 26(1), pp 95-104, Journal of research, OUAT, Bhubaneswar

- Ghosal M.K. and Sahoo N. 2010 Performance study of diesel engine by using karanja methyl ester (biodiesel) and its blends with diesel fuel, Vol.3 (1), pp40 – 44, International journal of Agricultural Engineering
- Sahoo, N.; Behera, B. P. and Panigrahi, B. 2010 Study of irrigation and economic returns of drip and furrow irrigated tomato in north-eastern ghat agroclimatic zone of Orissa, Vol-9, No-1, pp 57-64, Journal of soil and water conservation, New Delhi
- N.sahoo, A.P.Sahu and T.S.Rao 2014 Hydraulics of in-line sub surface and surface drip irrigation system Journal of Research, OUAT, Bhubaneswar
- A.P. Sahu, N.Sahoo, S.C. Senapati and B.Mohanty 2014. Modelling evaporation for crop planning at Bhubaneswar Journal of Research, OUAT, Bhubaneswar
- A.P. Sahu, N.Sahoo, M. Srinivasulu and S.C. Senapati 2014. Comparison of water front advance of micro tube emitter embedded in perforated tube placed in soil and sand tube Journal of Research, OUAT, Bhubaneswar
- Mishra A., Rath B.S., Mohanty S.K., Behera B. and Sahoo N. 2013. Farm profitability through varietal substitution and crop diversification in rainfed uplands of Kandhamal district in Odisha, Book Chapter on Indigenous Technical Knowhow in Orissa, Department of Agronomy, CA, OUAT, Bhubaneswar
- A Mishra, B Behera, AK Pal, SK Mohanty BS Rath, CR Subudhi, SC Nayak and N Sahoo 2012. Performance of rice and blackgram with different nutrient management practices in rainfed upland Oryza, an International Journal on rice, Vol.49 No.4, pp 273 – 279, *CRRJ, Cuttack*
- Sahoo N., Sahu A.P. and Senapati S.C. 2013. Mid-term Evaluation of ACA Watersheds in Nuapada District Journal of Extension Education, Vol.XVIII, No.2, pp 141 – 148, Orissa Society of Extension Education, Bhubaneswar – 751003
- Sahu A.P., Sahoo, N. and Senapati S.C. 2014. Impact Assessment of ACA Watersheds through Mid-Term Evaluation in Kalahandi District of Odisha, India. International Journal of Engineering Research & Technology, Vol.3, Issue No.09
- Behera B., Sahoo H.K., Dash S.N., Sahoo N. and Mohanty S. 2014. Sustainable Rural Livelihood Security in Rainfed Rice Farms through On-Farm Water Harvesting Structures, Chapter-26, pp267-273, Managing Natural Resources in the Drylands- Constraints & Opportunities , Satish Serial Publishing House, Delhi

Contact details:

Department of Soil and Water Conservation Engineering

College of Agricultural Engineering and Technology

Orissa University of Agriculture and Technology

Bhubaneswar – 751003, Orissa State, India

Email: narayan_swce@yahoo.co.in

Ph. +91-9437191308 (M)