

## Division of Land and Water Management

### Personal Details



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### Research Interest

Farm machinery

### Research Highlights

Ergonomics, manual tool/equipment design and modification, energy in agriculture

### Memberships / Fellowships

- ❖ Indian Society of Agricultural Engineering (ISAE): LM-10833.
- ❖ Society for Upliftment of Rural Economy (SURE): LM027/2014.

### Technology Developed

Ergonomically improved hand tools and implements; Portable FRP carp hatchery; Mechanized fish harvest system; Mobile fish vending unit; Development of transportation tank for live fishes; Demand fish feeder.

### Publication Details

#### Research Paper

- 1) **Bikash Sarkar** and G.N. Tiwari, 2006. Energy use pattern analysis for production of fish in open and greenhouse pond- an experimental study. *The International Journal of Ambient Energy*, 27(2): 78-84.
- 2) **Bikash Sarkar** and G.N. Tiwari, 2006. Study of thermal aspects in open and greenhouse pond. *International Journal of Energy Research*, 30(14): 1228-1241.
- 3) **Bikash Sarkar** and G.N.Tiwari, 2006. Thermal modeling and parametric studies of a greenhouse fishpond in the Central Himalayan Region. *Energy Conversion and Management*, 47(18-19): 3174-3184.
- 4) G.N. Tiwari, Vimal Dimri, Usha Singh, Arvind Chel and **Bikash Sarkar**, 2007. Comparative thermal performance evaluation of an active solar distillation system. *International Journal of Energy Research*, **31(15)**: 1465-1482.
- 5) Vimal Dimri, **Bikash Sarkar**, Usha Singh, and G.N. Tiwari, 2008. Effects of condensing cover material on yield of an active solar still: an experimental validation. *Desalination*, **227**:178-189.
- 6) Sharma K.K., **Bikash Sarkar**, S. Chand, and S. K. Nayak, 2009. A Mechanized harvest system for freshwater fish pond. *Aquacultural Engineering*, 41:147-151.
- 7) B.P. Bhatt, S.S. Rathore, Moanaro and **Bikash Sarkar**, 2016. Fuel wood energy pattern and biomass resources in Eastern Himalaya. *Renewable Energy*, 94:410-417.

- 8) K.K. Rao, Sarkar, B and Bhatt, B.P., 2020. Energy performance of cookstoves and emission factors in rural areas of Eastern Indo Gangetic Plains (EIGP). *Carbon Management (TCMT)*:11 (5):473-481.
- 9) Amitava Dey, Bikash Sarkar and B.P. Bhatt, 2019. Comparative energetic and economic efficiency of indigenous and improved breed of buffalo and cattle for milk production in eastern Gangetic plains. *Buffalo Bulletin*, 38:531-543.
- 10) Rakesh Kumar, **Bikash Sarkar**, B.P. Bhatt, S. S. Mali, J.S. Mishra, R.K.Jat, Ram Swaroop Meena, Surajit Mondal, A.P. Anurag, R.K. Raman, 2021. Comparative assessment of energy flow, carbon auditing and eco-efficiency of the diverse tillage systems for cleaner and sustainable crop production in eastern India. *Journal of cleaner production*. 293: 126162- xxx. DOI: [10.1016/j.jclepro.2021.126162](https://doi.org/10.1016/j.jclepro.2021.126162).

### **Books**

- Tiwari, G.N. and **Bikash Sarkar**, 2007. Fundamentals of Aquaculture Greenhouse (Book). Pp.1-225. Anamaya Publishers, New Delhi.
- A.K.Singh, S.S. Mali, B. Das, P. Bhavna, P.R. Kumar, **B. Sarkar** and B.P. Bhatt. Approaches to improve Agricultural Water productivity, Published by Satish Serial Publishing House, Delhi, pp.1-297.
- B.C.Mohapatra, **Bikash Sarkar**, N.K.Barik and P.Jayasankar, 2011. Application of Plastics in Aquaculture (Edited), pp.1-112 published by Director, CIFA, Bhubaneswar.