

Dhrubjyoti Ghosh (1947–2018)

Dr Dhrubajyoti Ghosh noted stalwart and wetlands warrior of East Kolkata Wetlands (EKWs), as well as Regional Chair South Asia for International Union for Conservation of Nature (IUCN) Commission on Ecosystems Management (CEM), passed away on 16 February 2018. Indeed, it is a great loss for many working in conserving urban green and blue spaces and using nature-based solutions to address various environmental challenges and emerging threats. Ghosh, a UN Global 500 laureate and the first Indian recipient of the prestigious Luc Hoffmann Award during World Conservation Congress at Hawaii in 2016, was an ardent follower of nature-based solutions and ecosystem-based approaches. He was one of the last crusaders of his generation who devoted his entire life in conserving the EKWs between Kolkata and Sunderbans. Kolkata is the only city in India without a sewage treatment plant (STP) and EKWs effectively clean the sewage of the entire city. Ghosh started his career as a sanitation engineer in the early eighties joining the State Government of West Bengal after attaining a degree in engineering. Later on he became an ecologist turning into an expert anthropologist. He was the first civil engineer to do a Ph.D in ecology from Calcutta University. His guide was the famous ecologist Richard Meier from University of California, Berkeley, USA. Meier asked Ghosh to give five years of his efforts to conserve EKWs, but eventually he gave his entire life in protecting and conserving them. Ghosh showed the entire world that wetlands could help remove sewage loads; they are a fertile aquatic garden and, most importantly, a flood defence. Presently, scientists are advocating the role of constructed wetlands as an energy efficient option of sewage treatment using nature-based solutions. Ghosh was way ahead with his concepts and understanding. While working with IUCN he could understand more about such solutions, an important nature-based contribution for the benefit of humanity and to improve the quality of life in urban areas. He always acknowledged nature-based solu-

tions in solving urban problems and had discussed this approach in his write-ups and books¹⁻³. Being with IUCN as South Asia Chair and also in the management board of RAMSAR, Ghosh made sure that EKWs are protected as Ramsar sites/wetlands; this finally happened in 2002 and wetlands were protected as



Ramsar site⁴. He wrote an interesting book *The Trash Diggers*, coming from his ground experiences and directly related to nature-based solutions. EKWs are the world's only fully functional organic sewage management system. Ghosh observed that sewage flowing in canals before reaching the ponds of EKWs was actually getting purified in 20 days by UV radiation from the Sun. More than 50,000 people directly depend on EKWs for their livelihood. Also, about 10,500 tonnes of fish arriving in the markets of Kolkata are from EKWs. Fresh vegetables grown on Dhapa land-fill on the banks of EKWs are reasonably priced in nearby markets. Ecosystem benefits from EKWs are immense and they are the reason why Kolkata is still a cheap city to live in. However, EKWs are presently under threat from developers and Ghosh is not present to lead the struggle against them.

In 2017 Ghosh had said that the movement to save the wetlands must carry on if Kolkata does not want to become another Chennai (which was flooded due to loss of its wetlands be-

cause of unplanned infrastructure development). Our governments are spending billions of dollars in contractor-heavy programmes to clean our rivers. Ghosh's life and work showed that the solutions are cheaper than we imagine and throughout his life he supported the power of nature. Solutions that lie with ordinary people, solutions that bring them livelihood and solutions that bring change to the society and country. All that is needed at present is for politicians and officials to go out for a walk in their surroundings, observe nature and people. All climate adaptation and disaster risk reduction approaches are available with community and nature. With an open mind, warm heart and the commitment of sound scholarship, these can be achieved. Ghosh has left with us a rich legacy through relevant articles, books in English as well as local language written by him. This legacy precious not only for the entire global conservationist fraternity, but also to all those 50,000 people who are benefited by ecosystem goods and services of EKWs. It will be tough to fill in the vacuum that Ghosh has left, but we have to follow his footsteps to keep the EKWs alive and protected.

1. Ghosh, D., In Proceedings of the International Conference on Ecological Engineering for Wastewater Treatment, Sweden, 1991.
2. Ghosh, D., In International Workshop on Integrated Water Resources Management in Urban and Surrounding Areas, International Hydrological Programme of UNESCO, Essen, Germany, 1994.
3. Ghosh, D., In *Banabithi – Environment Special Issue*, Department of Environment and Forests, Government of West Bengal, June 1997.
4. <https://www.ramsar.org/news/workshop-on-the-future-management-and-wise-use-of-the-east-kolkata-wetlands-ramsar-site> (accessed on 28 March 2018).

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