Govindasamy Agoramoorthy, J Earth Sci Clim Change 2017, 8:8 (Suppl)
DOI: 10.4172/2157-7617-C1-030

Small dams mitigate climate change in drylands

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India is one among the many water-starved nations of the world and it increasingly faces declining surface and groundwater resources while the usage continues to escalate aggressively in recent decades. Although the annual monsoons bring enough rain, most of the rainwater cannot be harvested and stored due to inadequate water storage facilities. The world water use has tripled since the 1950s, so politicians have met this increasing water demand by building more big dams that alarmed environmentalist due to various negative side effects that range from loss of farmlands to repatriation of millions of displaced people. So, the question is, can big dams resolve all the looming water shortages and climate change consequences? What about building more eco-friendly small dams across all rivers? Can they mitigate climate change? A small non-profit agency in India has assisted over 1,000 villages in the semi-arid regions of Gujarat, Rajasthan and Madhya Pradesh States to build cost-effective check dams in rivers to harvest rain water for three decades. Water saved through the check dams not only transformed the infertile dry lands into productive agricultural lands but also increased ground water recharge ultimately benefiting the environment. This model has remarkable potential to be replicated in developing countries to reduce irrigation water stress and river water conflicts.

Biography

Govindasamy Agoramoorthy is a Distinguished Research Professor at Tajen University in Taiwan. His research ranges from environment to sustainable development. He has carried out research in Asia, Africa and South America for over 30 years. He serves as the Editorial Board Member of *Journal for Nature Conservation* (Elsevier) and Associate Editor of *Frontiers in Environmental Science*. Between 1989 and 1993, he served as a Visiting Scientist at Smithsonian Institution (Washington, DC). He also serves as Tata Visiting Chair in India and has authored 25 books, 80 book chapters and 250 research papers published in peer-reviewed journals.

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