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Perspective

Role of Science, Technology, Executive, and Public (STEP) in Environmental conservation and waste management and the scenario in Politically and Militarily Conflicted Regions (PMCRs) of the world

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Abstract

Environmental conservation and waste management is a great challenge around the world. The realization of safe water, air, sanitation, and hygiene (WASH) for the world is a distant dream. Barring few developed countries, the rest of the world, and more importantly, the third-world countries are struggling hard to achieve safe WASH. India and China are no exceptions. Given the massive population of these two countries, open defecation issues, unscientific waste disposal practices, and poor health and hygiene infrastructure; achieving safe WASH remains a challenge. While science and technology for the conservation of the environment and waste management are advancing day by day, active participation of the executive and the public is insignificant at least in PMCRs. STEP minus E or/and P can't solve the challenges of environmental conservation and waste management. Safe WASH demands enormous attention from science, technology, executive, and the public (STEP) coherently.

Introduction

Role of science, and technology in sustainable environmental conservation

The role of science, technology, and innovation is essentially important to address holistic development and sustainability challenges. It is because the use of science, technology, and innovations enhances the output of the aims of sustainable developmental and conservational policies. Given the present circumstances of global warming and the subsequent loss of biodiversity and natural resources, it is therefore in the larger interest of humans in particular, that judicious scientific and technological knowledge is applied to brave the threats of global warming by adopting the relevant mitigation measures. A study by [1-6] have identified the best scientific and technological practices to achieve the environmental policy targets related to clean water and biodiversity conservation in Africa. Given the huge gap that exists between developed, developing, and underdeveloped countries vis-à-vis the advancements in science, technology, and innovations, it is hard to imagine the realization of sustainable development goals (SDGs) for the world set by the member states of the United Nations in 2015, the means of its implementation described by [7]. In order to overcome and reduce this gap, it is the duty of the developed states of the world to make possible the easy transfer of scientific knowledge, technological advancements, and innovations to developing and underdeveloped states. By not doing so, we cannot realize the safe WASH and SDG's. Further developing and underdeveloped states should be encouraged to adopt low-cost, eco-friendly, and equally efficient technologies (eco-technologies) such as constructed wetlands for wastewater

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treatment more importantly when these states cannot afford to put in place costly but highly technological systems. This will ensure the implementation of the broader vision of science, technology, and innovations.

Role of executive/government in sustainable environmental conservation

The executive/Government of the states must adopt participatory and democratic approaches involving all the stakeholders to realize safe WASH and SDG's. Undemocratic and autocratic policies aiming to achieve safe WASH and SDG's lacking scientific and technological inputs from the scientific community won't yield desired results. The authors argue that this "E" is a very critical part of the overall framework of the STEP and unfortunately it is hard to ensure an effective and responsible "E". The reason is that except for very few member states of the UN, all other states have uneducated and unscientific executives and bureaucrats in place that define the environmental laws and conservation policies of their respective states. It is meaningless to imagine the successful execution and implementation of an environmental policy set by an executive with little or no knowledge of the environment and the importance of its conservation unless the executive is like Tulsi Gowda of Mysore India [8], or Bilal Dar of Kashmir Valley India [9].

Role of the public in sustainable environmental conservation

Public, as by the oxford dictionary means ordinary people in society. But our definition is little elaborated and we define the public, the common people, or the people of the society comprising all genders, colors, castes, creeds, ages, and classes.

The environment is for the public and the environment is by the public, with this tagline, the authors argue that unless and until the "P" of the STEP is not involved directly or indirectly in decision-making for sustainable environmental conservation, it is difficult to achieve safe WASH and SDG's. The present world needs billions of self-less and voluntary serving public like Tulsi Gowda and Bilal Dar, described earlier, for environmental conservation, but this seems impossible. In these situations, incentivizing the public for environmental services remains a good option as is described by [10] in their study about conservation strategies of the Nima watershed, Colombia.

Findings from the literature

The human population in village settings and semi-urban areas are mostly neglected by executive in terms of waste management. Despite advancements in science and technology, it is alarming to report that there is little or no progress in environmental conservation and waste management in PMCRs of the world such as Kashmir valley, India [11], the birthplace of the authors. The reason for it is the absence of a robust and functional STEP in PMCRs. In these regions, when life and liberty are at risk [12,13], environmental conservation and waste management take a back seat [14-16]. In PMCR regions, the overall status of environmental conservation and resource management is extremely poor and remains a distant dream in the village settings and semi-urban areas [17,18].

Various research and review studies have highlighted the effects of waste on the environment, population health, and sustainable development in general [19-21], thus highlighting the insignificant involvement of STEP. Other studies have led to the conclusion that the current, rather isolated efforts for waste management, waste reduction, and resource management are indeed not sufficient from a long-term sustainability perspective [22]. Some other studies have highlighted that the demographic, socioeconomic, and geographic differentiation between urban and rural areas amplify these gaps that prevent the implementation of effective waste management systems on a regional and national scale [23].

The authors didn't find any substantial specific study related to environmental conservation and waste management in PMCRs of the world. Some studies have shown that PMCRs generate distrust, lack of commitment, and cooperation between the executive and the public [24,25]. Kashmir valley in India is the world's old PMCR [26] and is no exception to underdevelopment and environmental mismanagement [27]. Enormous scientific knowledge and technology are available to deal with the waste generated in PMCRs. Lack of trust, cooperation and will among the executive and the public is of great concern. Therefore, it is difficult to realize a robust and functional STEP framework in PMCRs.

Research limitations/implications

The perspective paper reflects a conceptual and theoretical discussion on the importance of the STEP framework for sustainable environmental conservation. The authors believe that most of the world's environmental problems can be addressed only if in a true sense the STEP framework for environmental conservation is adopted. The authors didn't come across a study/research in which a joint effort of STEP is described in sustainable environmental conservation.

Practical implications

An important discussion about the importance of the role of STEP coherently in sustainable environmental conservation is developed.

Social implications

Any agenda set by WHO or UNO for achieving the safe WASH and SDGs is bound to achieve only marginal success if the importance of STEP in sustainable environmental conservation is not well understood.

Originality/value

This perspective article brings out a very important discussion about the role of STEP in sustainable environmental conservation. The authors feel that there is a tremendous scope to study this particular research theme in detail. The role of the executive and public in PMCRs needs to be investigated

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in depth. Only science and technology can't solve the environmental conservation and waste management issues. A joint framework of STEP must be activated for sustainable environmental conservation. The authors have noted the aim and the objectives of the present research problem and are hopeful to bring forth valuable studies in near future, especially from Kashmir Valley, India.

References

1. Sheppard D. Conservation without frontiers: The global view. In The George Wright Forum 2000;17, 2,70-80. George Wright Society.
2. Wilson DC, Rodic L, Modak P, Soos R, Carpintero A, Velis K, Simonett O. Global waste management outlook. UNEP. 2015.
3. World Health Organization (WHO). Progress on household drinking water, sanitation and hygiene 2000-2017: special focus on inequalities. World Health Organization. Report, 2019; 1-71.
4. World Health Organization (WHO). Ambient air pollution: A global assessment of exposure and burden of disease. Report, 2016; 1-121.
5. Narain S, (Ed) State of India's Environment. A Down to Earth Annual (State of India's Environment). Centre for Science and Environment, New Delhi. 2016.
6. Webersik C, Wilson C. Achieving environmental sustainability and growth in Africa: the role of science, technology and innovation. Sustainable Development, 2009; 17(6), 400-413.
7. Bhattacharya D, Ali MA. The SDGs–What are the "Means of Implementation"?. Future United Nations Development System. 2014.
8. Manoj AR. Tulsi Gowda: When a Barefoot 'Tree Goddess' Shone at the Padma Awards 2020. https://www.thebetterindia.com/265547/padma-shri-award-tulsi-gowda-barefoot-viral-picture-karnataka-forest/ 2021.
9. Bhattacharya AB, J&K: 18-year-old takes it upon himself to clean Wular Lake Single-Handedly. https://thelogicalindian.com/story-feed/get-inspired/kashmir-wular-lake-rag-picker/?infinitescroll=1. 2017.
10. Rodríguez-de-Francisco JC, Budds J. Payments for environmental services and control over conservation of natural resources: The role of public and private sectors in the conservation of the Nima watershed, Colombia. Ecological Economics, 2015; 117, 295-302.
11. Chaku BL. The Dal lake of Srinagar (Kashmir Valley)—An environmental degradation. In: Chadha, SK (ed.) Himalayas: Environmental Problems, Delhi: Ashish Publishing House, 1990; 37–43.
12. Duschinski H. Reproducing regimes of impunity: Fake encounters and the informalization of violence in Kashmir Valley. Cultural Studies 2010; 24(1): 110–132.
13 Junaid M. Death and life under occupation: Space, memory, and violence in Kashmir. In: Visweswaran, K (ed.) Everyday Occupations: Experiencing Militarism in South Asia and the Middle East, Philadelphia: University of Pennsylvania Press, 2013; 1–28.
14. Peluso NL, Vandergeest P. Political ecologies of war and forests: Counterinsurgencies and the making of national natures. Annals of the Association of American Geographers, 2011; 101(3), 587-608.
15. Van Etten, J., Jongerden, J., de Vos, H. J., Klaasse, A., & van Hoeve, E. C. (2008). Environmental destruction as a counterinsurgency strategy in the Kurdistan region of Turkey. Geoforum, 39(5), 1786-1797.
16. Visweswaran K. Geographies of everyday occupation. In: Visweswaran, K (ed.) Everyday Occupations: Experiencing Militarism in South Asia and the Middle East, Philadelphia: University of Pennsylvania Press, 2013; 1–28.
17. Bächler G. Environmental degradation in the South is a cause of armed conflict. In Environmental change and security, Springer, Berlin, Heidelberg. 1999; 107-129.
18. Le Billon P. The political ecology of war: natural resources and armed conflicts. Political geography, 2001; 20(5), 561-584.
19. Zhang DQ, Tan SK, Gersberg RM. Municipal solid waste management in China: status, problems and challenges. J Environ Manage. 2010 Aug;91(8):1623-33. doi: 10.1016/j.jenvman.2010.03.012. Epub 2010 Apr 21. PMID: 20413209.
20. Ferronato N, Torretta V. Waste Mismanagement in Developing Countries: A Review of Global Issues. Int J Environ Res Public Health. 2019 Mar 24;16(6):1060. doi: 10.3390/ijerph16061060. PMID: 30909625; PMCID: PMC6466021..
21. Singh J, Laurenti R, Sinha R, Frostell B. Progress and challenges to the global waste management system. Waste Manag Res. 2014 Sep;32(9):800-12. doi: 10.1177/0734242X14537868. Epub 2014 Jun 17. PMID: 24938296.
22. Kaštelan-Macan M, Ahel M, Horvat AJ, Jabučar D, Jovančić P. Water resources and waste water management in Bosnia and Herzegovina, Croatia and the State Union of Serbia and Montenegro. Water Policy, 2007; 9(3), 319-343.
23. Mihai F. Population access to waste collection services: urban vs rural areas in Romania. Bulletin UASVM Agriculture, 2012; 69(2), 464-466.
24. Calo F, Parise M. Waste management and problems of groundwater pollution in karst environments in the context of a post-conflict scenario: the case of Mostar (Bosnia Herzegovina). Habitat International, 2009; 33(1), 63-72.
25. Ibtisam K, Karim A. Impact of global warming, military conflicts and industrial processing wastes on environment. J. Environ. Res. Develop, 2012; 7(2), 1127-1153.
26. Mukherjee K. The Kashmir conflict in South Asia: voices from Srinagar. Defense & Security Analysis, 2014; 30(1), 44-54.
27. Bhatt S. Kashmir ecology and environment: new concerns and strategies 2004; 6 APH Publishing.

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