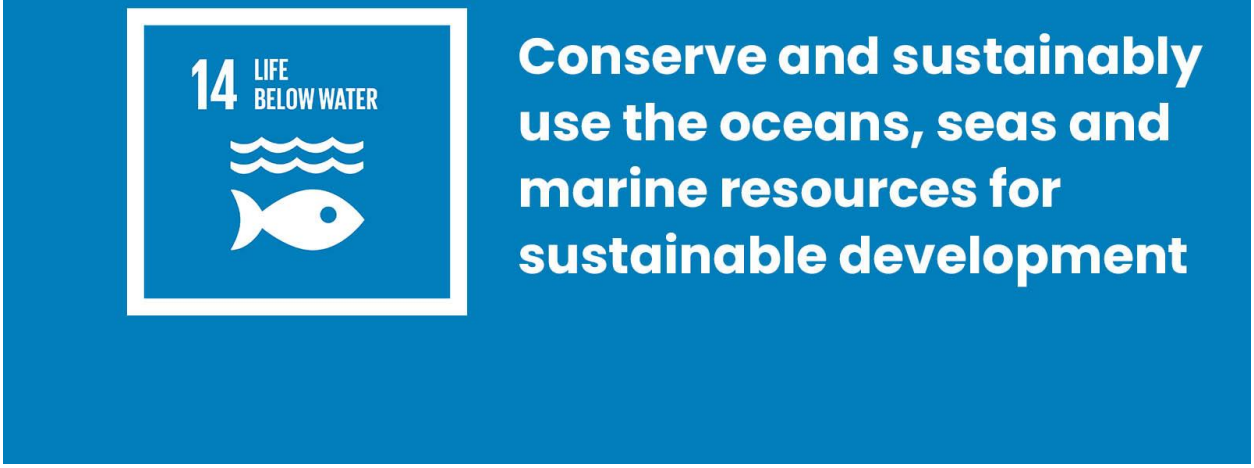
American International University-Bangladesh (AIUB)

SDG Activity Report - 2021

SDG 14:
Life Below Water



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SDG 14: Life Below Water

Contents.

Faculty Research and Publication

Ecocinema, Slow Violence, and Environmental Ethics: Death by Water

Author: SHIBAJI MRIDHA et al.

Brief Description:

In the Anthropocene epoch, slow violence triggered by human-caused environmental disaster is omnipresent across the globe. By forming an alternative media-spectatorship/readership in a media-saturated, fast-changing world, ecocinema can potentially help create an ecocentric environmental ethics, allowing us to question long-held notions of anthropocentrism, speciesism, and other ecological issues. Analyzing two documentaries, A Plastic Ocean and Silent River, this paper investigates the effi cacy of the narratives of ecocinema as a powerful cultural and political text in making environmental slow violence perceptible to human imagination and in taking us one step further to environmental justice activism. Th e study will also examine the way in which water answers back to the environmental injustice triggered by humans through retaliation and revenge, appropriating and expanding Rob Nixon's idea of slow violence and Jane Bennett's concept of thing-power. Closely reading the portrayal of water as a dynamic entity in these two visual texts, this paper argues how the intrinsic value and the agency of water can reveal to humans the problems connected with their strong anthropocentric environmental ethics.

Source: https://deh.ulab.edu.bd/sites/default/files/Crossings_Vol12.pdf

Haor development: From trade-offs to eco-friendly solutions

Author: DR. MOHAMMAD RAFIQUL ISLAM et al.

Brief Description:

he ecosystem of the haors and wetlands in the northeast region of Bangladesh—including the districts of Sunamganj, Sylhet, Habiganj, Moulvibazar, Netrokona, Kishoreganj and Brahmanbaria—plays a vital role in ensuring our food and nutrition security and preserving the environmental balance of the country. There are a total 373 haor wetlands there that cover approximately 43 percent of the total area of the seven haor districts. The region is well known for its beauty and natural resources.

However, it is mostly populated by poor, disadvantaged and vulnerable groups of people living in flood-prone areas, and lacking access to basic services including education, employment

opportunities and decent living standards. Road connectivity along with the transportation system is a serious concern here. In Sunamganj, for instance, there is no road connection between the Upazilas.

From the 60's until 2008, development initiatives taken in this region followed a model of "trade-off" between development for its human inhabitants and its environmental integrity. Even then, there were hardly any visible positive outcomes in the absence of well-integrated and cohesive development work. Since the 90's, however, environmental concerns in development initiatives in this area, as elsewhere in the country and even outside, became more prominent and drew theoretical intervention. As a result, Tanguar Haor, located in the Dharmapasha and Tahirpur upazilas of Sunamganj, was declared as an ecologically critical area in 1999, and as a Ramsar site—"a wetland site designated to be of international importance under the Ramsar Convention"—in 2000. The International Union for Conservation of Nature (IUCN) got the authority to protect the Tanguar haor in 2006.

The idea of a comprehensive development framework for this haor region emerged in 2009. A 2012 study by a not-for-profit public trust under the Ministry of Water Resources, the Center for Environment and Geographic Information Services (CEGIS), for formerly Bangladesh Haor and Wetland Development Board (currently Directorate of Bangladesh Haor and Wetland Development), presented a 20-year master plan for the area. Since then, development interventions and outputs continue to be seemingly visible. Furthermore, a 2017 study by CEGIS documents an impact assessment of structural interventions in hoar ecosystem and innovations for solution.

The 2017 CEGIS study acknowledges that any wetland ecosystem is fragile and vulnerable, and haor-wetland is one of the major ecosystems of the country that necessitates a holistic eco-friendly plan for any development action to keep a harmonious relationship between humans and nature, which is also essential for the sustainability of the haor wetlands. Also, the global Sustainable Development Goals (SDGs) 2016-30 called for a departure from the "trade-off" police in development economics and instead sought "eco-friendly" solutions.

The 20-year framework plan is being implemented on a short-, medium- and long-term basis, integrating the multifaceted development interventions including flood management, environmental sustainability, crop production, fisheries and livestock, expansion of education, settlement and health facilities, road communication, navigation, water supply and sanitation, industry, afforestation, and generation of power and energy.

The planned investment portfolio includes 17 sectors: water resources, agriculture, fisheries, pearl culture, livestock, forest, education, health, transportation, housing and settlement, water supply and sanitation, industry, energy and power, mineral resources, biodiversity and wetland, tourism and social services.

An eco-friendly integrated development approach, which would recognise the importance of optimising available resources of the haor region as well as a sustainable development of the

potential of the area by incorporating all relevant social, cultural and environmental aspects, is a must here.

Being a member of the community in this region, I am thankful to the government for its timely policy initiatives, but the haor people would not like to see a repeat of fragile development interventions of the past or the shadow of any corruption. There should be a zero-tolerance policy against "paper-based" development—meaning, development works that exist only in papers, with no real-life outcomes.

A traditional approach cannot encounter the problem at hand nor can it address the need for the kind of development that is needed. This requires a multifaceted development operational modality with diverse and innovative engagements and wide-ranging partnerships including government-entrepreneurial collaboration, public-private partnership, public-private-research institute partnership, GO-NGO partnership, government-university partnership, and government-media partnership. Thus, the government must encourage more innovative and proactive proposals from the parties involved—public, private, entrepreneurial, media, non-government, university, research and advocacy institutes.

Furthermore, an expert commission needs to be built along with a set of quality, performance as well as achievement indicators and timeframe-based measurement tools. Also, more focused research and evidence-based advocacy, as well as innovations and innovative proposals need to be developed.

Recently, I had a discussion with XDsocial, a knowledge-based entrepreneurial and management company, to develop a public-private-research institute/university partnership proposal focusing on social contributions in large-scale local employment opportunity generation, food and nutrition value addition, and innovative reprocessed energy creation for the community. More such initiatives are needed. Such people-centric as well as eco-friendly creative thinking and proposals need to be continually appreciated and supported by the government.

Certainly, the people are the ends and means of any development initiative, and eco-friendly solutions are needed for sustainable development. We do not want mindless development in the haor region. The development must be eco-friendly so that it will have no adverse effect on the future generation and indeed the vital ecosystem of this region.

Source: https://www.thedailystar.net/opinion/environment/news/haor-development-trade-offs-eco-friendly-solutions-1700227

Comparative analysis of heavy metals and water attribute constraints of Buriganga and Turag river of Dhaka, Bangladesh-reassess

Author: DR. M. MOSTAFIZUR RAHMAN et al.

Brief Description:

This article presents a comparative analysis and review of water attribute constraints of Buriganga and Turag river over the last four years. Physico-chemical characteristics provide significant evidence on status and health of aquatic ecosystem. This research is conducted to analyze the physico-chemical and biological water attribute factors of two major rivers Buriganga and Turag in Dhaka, Bangladesh. In this respect, poor water attribute is ascribed to anthropogenic activities in the area. This document re-assesses theoretical indication on the effect of contaminated river water. A laborious review has done on the current literature of ecological risk and water defilement in respect of environmental, public and commercial borders in the river basin region.

Source: http://hbrppublication.com/OJS/index.php/RRJES/article/view/1601

Heavy Metal Concentrations and Human Health Risk Assessment of Selected Wild and Cultured Fishes of Bangladesh

Author: DR. FARZANA KHALIL et al.

Brief Description:

This study was conducted to estimate the concentration of selected heavy metals such as chromium (Cr), manganese (Mn), cobalt (Co), nickel (Ni), copper (Cu), zinc (Zn), cadmium (Cd), and lead (Pb) as well as the possible risk to consumer health from the flesh of three wild and cultured fishes (Labeo rohita, Mystus cavasius, and Heteropneustes fossilis) collected from the Meghna river, Narayangonj and Rajoir fish farm, Madaripur district respectively. Heavy metal concentrations were determined using Atomic Absorption Spectrometric method. The average concentration of heavy metals were found in the wild fish samples in the range as Cr (0.295-1.647), Mn (0.900-1.294), Ni (0.063-0.198), Cu (0.179-0.529), Zn (5.487-8.343), Cd (0.004-0.009) and Pb (0.193-0.290) mg/kg dry weight while in the cultured fish samples in the range as Cr (0.043-0.315), Mn (0.975-2.36), Co (BDL), Ni (0.005-0.095), Cu (0.238-0.978), Zn (5.487-8.305), Cd (0.004-0.009), and Pb (0.238-0.286) mg/kg dry weight respectively. The hierarchy of mean concentration of heavy metals in wild fishes was Zn> Mn> Cu> Pb> Cr> Ni > Cd and in the cultured fishes, the order was found Zn> Mn> Cr> Pb> Cu> Ni > Cd. The present study showed that the wild fish accumulated higher concentration of heavy metals in their muscles than the cultured fish. The analyzed Ni, Cu, Zn, Cd, and Pb were below the allowable level specified by international agencies (FAO, WHO, EU, CE, USEP). In order to assess the human health risk, the Target Hazard Quotient (THQ), Hazard Index (HI), and Target carcinogenic Risk (TR) were calculated. The TR values suggested that the fishes posed low to moderate carcinogenic risk from Cr, Ni and Cd. Consequently, continuous and excessive consumption of these fish species over a lifetime will increase the possibility of causing cancer.

Source: https://www.banglajol.info/index.php/BJZ/article/view/56257

Life Events and River Metaphor, the Semantic Model and Visualization

Author: DR. KHANDAKER TABIN HASAN et al.

Brief Description:

This book discusses the intricate structure of events that occur in human life from philosophical point views as well as their practical implications in life. It provides an in-depth analysis of Causalities and the Semantic Model as a computable structure for recording, organizing, and tracing events those are interrelated. The model resembles metaphorically the natural flow of occurring in river systems. Alongside the model, this book illustrates visualization methods of such complicated data structure and its interfaces.

Source: https://my.scholars-press.com/catalog/details/store/gb/book/978-3-639-71593-4/life-events-and-river-metaphor,-the-semantic-model-and-visualization