

CHALLENGES TO THE ENVIRONMENT TOWARDS THE SUSTAINABLE DEVELOPMENT IN UTTAR PRADESH

Joseph K.J.¹ and Dr. Chhuttan Khan ²
Department of Geography,
^{1,2} Shri Venkateshwara University, U.P. (India)

ABSTRACT

Climate change is perhaps the biggest challenge to the environment facing towards the sustainable development in Uttar Pradesh and depends on how effectively this challenge is tackled. Research objectives of this study were to: 1)To explore challenges to the environment towards the sustainable development in Uttar Pradesh.2)To develop sustainable sustainable development planning in Uttar Pradesh for global climate change adaptation. The methodology employed the adoption of social scientific (Quantitative) to explore environment towards sustainable development mitigation plans and strategies for Uttar Pradesh.

Keywords: Agro-ecosystems, Sustainable Development, Alleviation, Project Development Documents

1. Introduction

Sustainability and sustainable development are often conceptualized as consisting of three dimensions - society, economy and environment. Climate change is perhaps the biggest challenge to the environment facing towards the sustainable development in Uttar Pradesh and depends on how effectively this challenge is tackled.

Impacts on the human population and economy, planning and implementation strategies. It has also been found that ways in which identified factors act and interact to degrade the Uttar Pradesh's ecosystem a 1% rise in the population growth could result in a 1.38% rise in the carbon emission (mospi.gov.in, 2020).

In Uttar Pradesh health, agriculture, livelihood, environment, everything depends on how effectively UP state able to tackle this problem. Climate patterns are dramatically changing, threatening of sustainable agriculture production in UP. All this with rising population and changes taking place, the agriculture has been adversely affected, therefore opening space for the food crisis in the country.

Research objective

The aims of this study were to:

- 1.To explore challenges to the environment towards the sustainable development in Uttar Pradesh.
- 2.To develop sustainable sustainable development planning in Uttar Pradesh for global climate change adaptation.

The objectives of sustainable development in Uttar Pradesh appears to be broad, grouped under four properties of agro-ecosystems (1) productivity (measured as net income or yield or food value, etc), (2) stability (measured as coefficient of variation of yield or net income), (3) sustainability (difficult to measure in terms of quantity) and (4) equitability income distribution).

The significance of the review of the literature, in this chapter, is that it focuses on the literature survey that seeks to analyze the challenges to the environment towards the sustainable development in Uttar Pradesh. It will study the impact of climate change on environmental improvement in the UP; this will also help them solve problems of measure the food security, sustainable agriculture production and sustainable development in Uttar Pradesh.

2. Literature review

Present study enlightens the previous studies on the relationships between climate change, sustainable environment and towards the sustainable development in Uttar Pradesh perspectives.

Literatures undertaken for reviews in this chapter have taken into consideration the work done in India as well as in the other countries. Through an examination of literature, one could find several research papers, scholarly articles, journals, books, government agencies reports, international organization reports, newspapers, paper, dissertation and other related subject matter published in context to the present topic. These studies will help to not only identify important indicators but also give a methodological solution.

(Bayrakal, 2003) focused on the natural conflicts and contradictions that come in the way of the concept of sustainable development in the context of environment and sustainable development in Uttar Pradesh. He has discussed in the context of, (i) awareness and attitudes of the people at the grassroots level towards environment and sustainability specifically with regard to inter- generational equity, (ii) sustainability within agriculturally developed and (iii) the role of technology and its relevance for environmental protection and sustainable agriculture development. It has aggravated the problem of degraded soils, problems of pests and plant diseases.

(Haque, 2006) in their paper pointed that the aspect of sustainability that is pro-poor and pro- environmentally sustainable. This will ultimately, increase the growth rate accompanied by narrowing down the disparities in regional productivity growth. This implies that in future, greater emphasis will be given to agriculture in rain-fed and dry regions, where there is a concentration of mass poverty and food insecurity in the country. Besides large and medium irrigation projects, watershed development projects, both macro and micro, should be undertaken on a massive scale.

The author views that producing an adequate quantum of food grains is only a part of the story of self-sufficiency in food. It is also necessary to ensure that the food produced reaches all sections of the society including the needy persons.

Ashutosh Tripathi (2010) had made an attempt in his study to understand the impact of climate change in the Indo-Gangetic plains by taking into account people's perception. The study also tried to quantify the people's perception and relate them to temperature, rainfall and agriculture production records to measure the accuracy of these perceptions. It was successful in discovering the overall description of climate change includes the traditional weather description and key outcome of interviews and their correlation with available climatologically and production data. It established that the people living in the study area very much observed these changes, which were happening and affecting indirectly the lives of the people of the region.

(Srivastava R, 2015) in their study examined how farmers and local people of eastern Uttar Pradesh (UP) in the Indo-Gangetic region of India perceive climatic change. The study concludes that the Changes in climate perceived by local people are significantly favoured.

(Ahtesham, 2020) Framework' created by the UNDP to assist developing countries to create adaptation strategies considering sustainable development challenges.

(Hrynyshyn, 2020) in their paper pointed that adequate quantum of food grains production is necessary for the attainment of self-sufficiency in food. The objectives of the research are to study the accelerating agricultural growth that ensures food security in India. He discussed the aspect of sustainability that is pro-poor and environmentally sustainable. This will ultimately, increase the growth rate accompanied by narrowing down the disparities in regional productivity growth. This implies that in future, greater emphasis will be given to agriculture in rain-fed and dry regions, where there is a concentration of mass poverty and food insecurity in the country. Besides large and medium irrigation projects, watershed development projects, both macro and micro, should be undertaken on a massive scale. The author views that producing an adequate quantum of food grains is only a part of the story of self-sufficiency in food. It is also necessary to ensure that the food produced reaches all sections of the society including the needy persons.

3. Research methodology

The methodology employed the adoption of social scientific (qualitative) sustainable development mitigation plans and strategies for Uttar Pradesh. This Uttar Pradesh in Ground Report India case study highlights the approach taken by a primary climate change reconstruction project in meeting development and poverty alleviation goals.

This paper to design a sustainable development plan for Uttar Pradesh. The plan is based on five key perspectives: 1) economic growth, 2) food security, 3) energy potential, 4) water and health, and 5) land use/land cover change management.

Data disaggregation thus provides a much more nuanced picture of the UP state of sustainable development and enables decision-makers to target specific areas for action. It is therefore essential that SDG 6, which seeks to achieve universal water access and sustainable water use, is met. This is part of the 'data revolution for sustainable development' discussed in the SDG process. This will require using new data collection techniques, such as satellite

monitoring, and new methodologies to standardize the data. For the social dimensions, big data and crowd sourcing could become standard sources for UP SDG reporting. Water for sustainable development: Water supports sustainable development outcomes, analyzing water-dependent jobs and income in particular, and SDG 6 (water and sanitation) targets more broadly.

Research Gaps

The literature reviewed shows that various studies on environment towards the sustainable development in Uttar Pradesh. They were mostly restricted to certain states or specific crops especially cereals production. There was hence a need to carry out a study on the sustainable development in Uttar Pradesh that would cover the issue across whole UP and for all crop groups. Among the gaps in current literature is that the literature of renewable energy for sustainable development, especially for poverty alleviation, rarely looks at climate or carbon. Conversely, development paths will influence future adaptive capacity and mitigation researcher claim that in order to successfully integrate sustainable development, environment at the local scale, local communities must implement the 'principles of participation, social learning and scenario development'.

4. Analysis

A causal-chain analysis was went to illustrate and trace out the ways during which identified factors act and interact to degrade the Uttar Pradesh's ecosystem. Systems of interventions necessary to deal with these problems are noted. Impacts on the human population and economy would require sustainable adaptation, planning and implementation strategies.

Mainstreaming Climate Change and Sustainable Development: The challenge of mainstreaming adaptation with development policies and practices, and also with climate change mitigation, has been studied.

The study finds that factors constraining sustainability efforts and exacerbating environmental problems in Uttar Pradesh include high levels of poverty and rapid increase.

"Sustainable development" implies the use of appropriate technology for the preservation of environmental resources when meeting development needs (Jarvis, 2020). Rural sustainable development includes putting people first, building on their capabilities rather than their needs, and involving them in the decision-making process.

Although some studies have looked at the role of decentralized renewable energy systems in development programs and emissions reductions for climate change mitigation there is little or no literature that examines the additional contributions of UP Govt towards climate change adaptation. In fact, the important role of energy for the achievement of the MDG's has only recently been highlighted (UNDP/ESMAP/World Bank 2005) and energy for climate change and sustainable development is generally an understudied area of academic research (Dopp, 2016).

One of the reasons sustainable development has been overlooked is due to trade-offs between economic costs, maximum GHG reduction and development goals, with priority being put on the production of low cost emissions reductions and the business orientation of the projects .

Project developers are looking for larger scale opportunities to reduce emissions on an industrial scale. Therefore, renewable energy developments projects which are small scale and do not include gases with high warming potential do not receive much funding.

(Singh and Nayak, 2020) enumerates five reasons why green projects are not meeting their sustainable development objectives: 1) confusion over the definition of sustainable development, 2) the desire for low transaction costs, 3) problems with market management, 4) problems with project financing and the use of overseas development assistance (ODA), and 5) uncertainty about the post-Kyoto 2012 negotiations. (Jarvis, 2020) indicates that one of the main problems is that each host country has a different definition of sustainable development, and although these definitions may vary from the national to the local level, sometimes only one sustainability component is considered, specially the economic one.

Other challenges to the environment towards the sustainable development in Uttar Pradesh s are concerned about the development of green projects with high social impacts continues to be an economic one as the low carbon prices and the high transaction costs tend to favor industrial gas projects (Singh & Nayak, 2020).

(Lewis and Warner, 2020) provides an example of fallow and forest management in Panama: despite the carbon offset potential in the region, there is an unequal distribution of resources within the community because of unequal access to assets and different livelihood strategies. If climate change mitigation is to fulfill a triple objective that includes poverty alleviation they must also address sustainable development and agriculture for climate Change adaptation concerns. They also highlight that although renewable energy projects, primarily wind and hydroelectric, are meeting sustainable development goals, it has not been to a large degree.

5. Conclusion

This signifies that there needs to be greater accomplishments within sustainable development goals. This study, however, does have one bias as the authors indicate their main source of information were the Project Development Documents (PDD's), in which project developers tend to highlight the positive impacts of the projects while minimizing or avoiding negative impacts. Keeping this in mind, if fieldwork was carried out in the sites included in the study, there is a probability the sustainable development grades would be lower.

This paper also focused on renewable energy technologies that include small-scale solar, wind, hydroelectric and biomass energy. This confirms the conclusion of other studies, including those claiming that green projects can have a greater potential on sustainable development, that benefits of renewable energy projects are only present at the regional scale in Uttar Pradesh.

There is a relationship between energy consumption and poverty levels. While the quality of life has improved and their energy consumptions have increased, emissions are still considerably low, leading to the creation of a small amount of emissions reductions.

According to the (Jarvis, 2020), achieving sustainable development would imply the use of appropriate technology for the preservation of environmental resources when meeting development needs. In poverty-stricken areas, the dependence upon natural resources tends to be higher; therefore, technological solutions must also include environmental responsibility. By working on the three pillars of sustainable development (environmental responsibility, social acceptance and economic feasibility), alleviating poverty can put these populations on a path towards development. Achieving rural sustainable development includes putting people first, building on their capabilities rather than their needs, and involving them in the decision-making process.

It is also meeting climate change mitigation goals as a green project and it can also be said to be meeting sustainable development goals by improving health and education conditions of the nearby communities. However, because of its nature, it is still ambiguous if sustainable development goals are really being met, mainly because of the difference in expectations between the communities and the utility.

The study also pointed out that among nine factors; five are more significant for the productivity of the crop. These factors are average rainfall, evening humidity, variation in humidity and maximum temperature. They have a negative impact on the productivity of the crop while average humidity has a positive impact. They have recommended that the environment should be preserved to maintain the productivity of crops otherwise; our country will face many challenges such as flood and drought in Uttar Pradesh.

The study suggested that in order to achieve the objective environment policy towards the sustainable development in Uttar Pradesh. There should be a state policy that integrates environmental concerns with markets, promotes efforts towards developing appropriate technologies which are sustainable economically as well as environmentally and removes imperfections in the agrarian structure i.e., land, labour and capital markets.

Thus, climate change affects livelihoods and almost all aspects of sustainable development in Uttar Pradesh

References

(2020). Retrieved 3 September 2020, from <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

Ahtesham, S. (2020). Sustainable development - goals and challenges ahead in developing countries. *International Journal Of Public Sector Performance Management*, 6(2), 144. doi: 10.1504/ijpspm.2020.10028297

Bayrakal, S. (2003). Pollution prevention: progress towards sustainable development?. *International Journal Of Environment And Sustainable Development*, 2(4), 425. doi: 10.1504/ijesd.2003.003852

Becker, S. (2013). Has the World Really Survived the Population Bomb? (Commentary on “How the World Survived the Population Bomb: Lessons From 50 Years of Extraordinary Demographic History”). *Demography*, 50(6), 2173-2181. doi: 10.1007/s13524-013-0236-y

Cardoso, M., Brito, R., & Almeida, M. (2020). Approach to develop a climate change resilience assessment framework. *H2open Journal*, 3(1), 77-88. doi: 10.2166/h2oj.2020.003

Dopp, K. (2016). Global Warming, Atmospheric Carbon, and Anthropogenic Carbon Emissions. *SSRN Electronic Journal*. doi: 10.2139/ssrn.2803297

Haque, N. (2006). Promoting Domestic Commerce for Sustainable Pro-poor Growth. *The Pakistan Development Review*, 45(1), 151-156. doi: 10.30541/v45i1pp.151-156

Hrynyshyn, V. (2020). CLUSTER ANALYSIS OF FOOD SELF-SUFFICIENCY OF REGIONS. *Investytsiyi: Praktyka Ta Dosvid*, (4), 65. doi: 10.32702/2306-6814.2020.4.65

Jarvis, P. (2020). Environmental technology for the sustainable development goals (SDGs). *Environmental Technology*, 41(17), 2155-2156. doi: 10.1080/09593330.2020.1772547

Lewis, K., & Warner, D. (2020). Editorial for the Special Issue “Sustainable Agriculture for Climate Change Adaptation”. *Climate*, 8(5), 60. doi: 10.3390/cli8050060

Ministry of Statistics and Program Implementation | Government Of India. (2020). Retrieved 4 September 2020, from <http://www.mospi.gov.in/>

Singh, S., & Nayak, S. (2020). Development of Sustainable Livelihood Security Index for Different Agro-Climatic Zones of Uttar Pradesh, India. *Journal Of Rural Development*, 39(1), 110. doi: 10.25175/jrd/2020/v39/i1/125991

Srivastava R, C. (2015). Climate Change Observed over the Indo-Gangetic Basin. *Journal Of Earth Science & Climatic Change*, 06(04). doi: 10.4172/2157-7617.1000271