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## Natural Resource Management and Rural Development transformation: A Critical Review

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**Abstract:** *Geographical Areas that have a lot of natural resources may be expected to make use of them effectively to gain a benefit over comparable regions. Yet, having a lot of resources is not useful if they aren't managed well. Changes in regional economies and social values necessitate a comprehensive approach to management decisions about natural resources, including the factors of how, where, and why these decisions are made. The study investigates the attitudes regarding the importance of natural resources and their contribution to regional and rural development. Research methods include normative research through secondary data that includes documents, book reports and journals articles. The results emphasize resources that qualify for sustaining and revitalizing and rural development trajectory. The results identify areas with resources that are suitable for sustaining and revitalizing the regional and rural development trajectory.*

**Key Words:** Natural Resources, Management, Sustainable Development, Rural Development, Modernization.

Natural environments like woods, the mangrove forests, peatlands, and rangelands provide numerous significant advantages that are necessary for the security of food. Those advantages are called ecological services and include making soil, cycling water, pollination, pest control, wild foods, and bug protein (Brady, et. al, 2019). Because of this, natural environments and materials play a big role in agrarian systems that produce food (Goudie, et. al, 2018). Natural environments also support the resilience of food systems by doing things like protecting against floods and wind, keeping the local temperature stable, giving groundwater for cultivation, and stopping soil loss (Varvodada, et. al, 2022).

Nature is the all-encompassing, made and changing realm that includes all living things, nonliving things, and human beings, and it changes between and among living things and through the life process (Nature, et. al, 2022). Natural resources can be understood by looking at the definition: "The environment is made up of all the biological, chemical, physical, and social factors that shape a person's surroundings. Every single of these variables is a resource that a person relies on to build an enhanced life's journey" (Barrett, et. al, 2022). A natural resource is any part of our natural world that people can use to improve their lives. This includes water in the ground, elements in the atmosphere, forests, rangelands, fish, aquatic bacteria, as well as people. Earth's materials come in two primary types: Nature limits the amount and quality of resources that can be used up and people can damage these natural resources. These are things like trees, water, land, petroleum and coal, and furthermore. Nature has an infinite supply of endless resources of nature that are unlikely to likely to run out because of human interference. Examples of these are sunlight, the atmosphere, and rain (Tietenberg, et. al, 2018) and these are the natural resources.

**Rural Development Transformation-** The progress of rural regions remains very important to the continued development of the whole country .population on farming for a living, and nearly a third of rural India still lives less than the poverty limit (Ashley, et. al, 2001). Because of this, it is essential for the governing body to work hard and give them sufficient resources to raise their level of existence. In a lot of significant ways, rural growth appears to be living taken on its own life (Pan, Y., et. al, 2024). In spite the collective efforts of government agencies and commercial companies to uncover a hidden formula for achieving economic prosperity in rural areas, these regions persist in adhering to their own persistent patterns of both progress and stagnation. Rural economies that appear to be without hope either continue to be hopeless, despite the greatest efforts of those working on development, or unexpectedly display signals of good health and vitality that are difficult to understand even for the most knowledgeable observers (Van derPloeg, et. al, 2017).

**Natural resource management & rural development transformation-** Efficient lands and natural resource management methods that promote sustainable agricultural output, preserve ecosystem services, and increase the well-being of rural households (O Connor, et. al, 2005).

Community-centered natural resource management entails empowering and involving populations in making choices and overseeing actions related to natural assets. It also requires decentralizing the responsibility for these assets to individuals and regional organizations that take a lead in their usage (Davidson, et. al, 2024). Community-centered management of natural resources is a comprehensive term utilized to refer to the strategy employed while planning a scheme for managing

the environment, instead of being a particular kind of initiative. When addressing financial connections as the natural world and difficulties with climate change, the majority believe economic growth to be identical with modernity (Dietz, et. al 2020). The expansion of the economy fosters an environment conducive for economic progress and enhances the standard of living by increasing the ability of individuals, companies, and neighborhoods to optimize gains via reducing transaction costs and ethically generating and exchanging valued goods and services.

The gross domestic product, or GDP, serves as a measure of economic progress within a region. However, it is insufficient to just rely on this measure when making decisions about the town's economic growth and the general welfare of its residents Alexandra, B. (2016). It's mostly due to the fact that GDP fails to capture the progress made in terms of leisure time, environmental conditions, individuals' genuine freedom of expression and action, their trust in the social justice system, and their access to education and healthcare. Economic development is a long-term collective endeavor aimed at enhancing both the regional and local economic environments.

The studies aim is to ensure sustainable growth of natural resources and to protect environment by adopting various measures and provide strategies for rural development, to analyze the solution and examine socio economic priorities.

**Review of literature-** Ariyani, N., (2023) stated that the limitations of GDP lie in its inability to measure advancements in recreation, environmental quality, individual autonomy, faith in the judiciary, and access regarding health care and schooling. Development in the economy is a collaborative and ongoing effort to improve the two regional and local economies.

Majumdar, K. (2020) investigated that rural change is commonly understood as the process of modernizing regions that are rural, promoting rural growth, altering the financial system, and facilitating the movement of people from farming to other parts of economy. The study of rural change has utilized several theoretical methods, including single-dimensional and multidimensional frameworks. These strategies have employed diverse indicators to assess the extent and characteristics of rural change and transformation. Critics argue that the rural development method to studying rural change is flawed since rural transformation does not necessarily entail progress.

Anderson, D.A. (2019) examined that the field's assist policy makers objective is to evaluating the trade-offs between development and the natural world, today and tomorrow, with advantages and unpredictable repercussions. Research findings presented applicable to the daily decision-making processes of people, companies, and governments. & provides educators and students with a user-friendly, pertinent, and also addressing current events in the area and notable economic and political shifts.

Li, J., et al., (2018) marked that due to rising urbanization as well as industrial both towns and villages inevitably undergo growth and change. However, it analyzed that regional areas may face challenges in bridging a growing divide. This study presented an outline for assessing the growth trajectory in rural conversion. The model aims to provide a clearer understanding of the method through measuring rural change, identifying the elements that influence it, and quantifying the impact of these variables.

Tomashuk, I. (2017) investigated issues related to the administration of development in villages, analyze the efficiency of managing the resources in these regions, examine the socio-economic objectives for their growth, and identify appropriate solutions for these challenges in the present-day context. The systemic method used rural areas. This study examined the current status, challenges, and potential of agriculture management. The need for substantial alterations in the nation's rural management strategy is established.

Liu, Y., et al., (2016) concluded that the metropolitan-rural connection in geographical locations objective was to focus on the transition of towns and cities and the growth of these regions. The research quantitatively evaluated these topics has a great importance in China's modernization efforts and the overall strategy of both rural and urban growth and its aiming for combining research in agricultural geography and rural development .

Ohlan, R. (2016) evaluated the structure and level of rural growth in India by employing a comprehensive evaluation methodology that incorporates that the transition in India is supported by an enhancement in the degree of rural development. The data shows that there has been a minor decrease in India's. There are significant geographical inequalities in the process of rural change. According to the research, it was suggested that implementing strategies targeted at certain rural community patterns in various regions might be a successful approach to creating a more connected urban-rural development pattern in India.

Bruckmeier, K., et al. (2016) showcased the findings of a study undertaken as a component of the CORASON program and aimed to investigate the current stages related to rural sustainable growth in European countries. It depicts several prerequisites & circumstances that become significant while linking rural growth plans with tactics for environmentally

friendly growth.

Rodrigo, I., et al. (2016) examined various case studies on sustainable rural development. These were conducted as part of the CORASON project's four thematic tasks. The following areas are encompassed: other than agriculture rural economic benefits, innovative fiscal growth, preserving nature and safeguarding of biodiversity, and responsible utilization of resources. They observed fading economic importance of farming remains a well-documented long-term development in all nations and regions due to the influence of a process of modern and urbanism.

Rabinowicz, S., et al., (2014) evaluated that in light of the global instability in all three areas, objectives to recognize, the poor sector is facing a period of crisis. For the bulk of the impoverished population globally, those reside in rural areas, the everyday existence is characterized by fiscal, social, and environmental uncertainty. They are very susceptible to vulnerability, inequality, Identifies that the educational system serves as an instrument for change by equipping rural residents with the necessary information, abilities, and instruments to enhance their lifestyles. In order to ensure the effectiveness of this transition, it is essential to consider the specific circumstances and needs that face rural communities. Therefore, sustainability must be included for this evolution.

Imai, K. S., et al., (2014) indicated that the growth of the rural sector is most efficient to lower poverty in rural sector. Additionally, This research observed that a rise overall population in large cities does not play any part in lowering poverty as a whole Indeed, in certain instances, a demographic increase in major towns can exacerbate poverty, it is crucial to prioritize strategies which strengthen the village agriculture.

**Table 1.1 Synthesis of reviews**

S. No.	Name of the Author and Year	Title of Study	Objective of Study	Key Findings
1.	Ariyani, N., & Fauzi, A. (2023)	'Pathways toward the transformation of sustainable rural tourism management in Central Java, Indonesia'.	The study aim was to see the limitations of GDP lie in its inability to measure advancements in recreation, environmental quality, individual autonomy, access regarding health care and schooling.	The study found that the development in the economy is a collaborative and ongoing effort to improve the two regional and local economies.
2.	Majumdar, K. (2020)	'Rural transformation in India: Deagrarianization and the transition from a farming to non-farming economy'.	The objective was to examine these strategies have employed diverse indicators to assess the extent and characteristics of rural change and transformation.	It was investigated that Rural change is commonly understood as the process of modernizing regions that are rural promoting rural growth.
3.	Anderson, D. A. (2019)	'Environmental and natural resource management'.	objective was to evaluate the tradeoffs between development and the natural world with advantages unpredictable repercussions	Research findings were applicable to the daily decision-making processes of people, companies, and governments.
4.	Li, J., et al. (2018)	'Measuring model of rural transformation development'.	It's aiming for combining research in agricultural geography and rural development.	Due to UK I rural development faces challenges, overall strategy of both rural and urban growth.
5.	Tomashuk, I. (2017)	'Problems and prospects of management of rural development'.	The research aims to investigate issues related to the administration of development in villages.	The need for substantial alterations in the nation's rural management strategy is established.
6.	Chhan, R. (2016)	'Rural transformation in India in the decade of miraculous economic growth'.	It aims to evaluate the structure and level of rural growth in India by employing	Targeting different community in various regions is successful approach.
7.	Bruckmeier, et al. (2016)	'Natural resource management for rural sustainable development'.	Aimed to investigate the current stages related to rural sustainable growth in European countries.	This text showcases the findings of a several prerequisites & circumstances that become significant while linking rural growth plans.
8.	Rodrigo, I., & da Veiga, J. F. (2016).	'Portugal: Natural resources, sustainability and rural development'.	Its objective was to examine various case studies on sustainable rural development. These were conducted as part of the CORASON project's four thematic tasks	Observed fading economic importance in all nations and regions due to the influence of a process of modern and urbanism.
9.	Rabinowicz, S., & Chinnapan, V. (2014).	'Good practices in pursuit of sustainable rural transformation'.	Its object was to ensure the effectiveness of this transition.  to recognize , the poor sector is facing a period of crisis.	The educational system serves as an instrument for change by equipping rural residents with the necessary information, abilities, and instruments to enhance their lifestyles.
10.	Imai, K. S., Galha, R., & Garbero, A. (2014)	'Poverty reduction during the rural-urban transformation: rural development is still more important than urbanization?'	Objective was to strengthen both the village agriculture and other industries.	The findings indicated that the growth of the rural sector is most efficient to lower poverty in rural sector.

### Research Questions-

1. How Community-driven approaches to handling natural resources play a significant role in facilitating rural development change?
2. What are the ways in which participatory approaches in natural resource management might improve resilience of communities and living condition of within rural places?

**Discussion-** It come to the find that how Natural resources and Rural development both are parallel to each other as in which peoples and natural resources connect with each other & the Same was researched by Imai in 2014 as the growth of population in cities increases poverty as compare to rural area, which affects the rural development. In the way, improving the rural structure and their livelihood and providing them opportunity & facilities will directly help in managing & preserving natural resources with sustainable growth & in same context it was stated by Anderson, D. A. in 2019 & Bruckmeier, K., & Tovey, H. in 2016 that there is a linkage between development and natural resources and preserve the same for future development in political & economic shifts , but managing natural resources also faces such hindrances like GDP & same was discussed by Ariyani, N.,et. al, A. in 2023 that economic development is collaborative & long term effort to improve in rural areas with the limitation of GDP.

The rural development enhance the livelihood of individual which is directly related to modernization, industrialization process and same was explain by Majumdar in 2020, Liu,et .al in 2016, Rodrigo ,et. ac in 2016 that rural development not always involve development but it's a process of modernization, and due to modernization & industrialization the rural growth faces challenges and stated that there is economic importance of agriculture which affect by U&I , respectively.

Providing a solution and safeguards for the same like education, geographical inequality and socio economic policies in the same context some measures are provided by Tomashuk, et. al in 2017, Rabinowicz, et. al in 2014, Ohlan,et. al in 2016 that socio economic policies, and education can serve as best initiative for change in rural development of individual to enhance their livelihood and they should targeting a different community in various region will become a successful approach, respectively .

**Conclusion-** The aim of this study is to analyze importance of natural resources and their contribution to rural development. It drawn from the research that the general public regards the utilization of certain resources like herbs, lakes, and rivers are the crucial factor for rural advancement. Undoubtedly, regional development is influenced by the natural environment, and in turn, the natural environment also affects growth. The sustainable management of natural resources should be a fundamental aspect of policy actions. The shifting trends in regional and rural economies suggest the need to reconsider the decision-making process for natural resource management. The research offers a comprehensive analysis of the public's perspectives on the importance and relevance of natural resources, as well as their potential contribution to regional and rural development.

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