

TANK – HEART OF RURAL ECONOMY CASE STUDY OF A VILLAGE IN INDIA

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Abstract: Throughout the ages, human communities have always been dependent on various resources to meet their daily needs and ensure their survival. These resources, in turn, have played a crucial role in determining the success or failure of entire civilisations. One such resource that has contributed significantly to the well-being of communities is tank water. This water is mainly used for irrigation and other livelihood practices, and over time, communities have developed complex socio-cultural practices around its use. Water management has always been a matter of great concern for political regimes. Water is considered an essential resource, and its availability can have a significant impact on the prosperity of communities. To ensure a sustainable existence and avoid conflicts, it is crucial to conduct comprehensive and longitudinal studies among smaller communities. These studies should focus on various aspects of tank water management, such as the ecological, social, and economic factors involved. By combining and comparing the results of these studies, a comprehensive understanding of the complex interplay between humans and nature can be obtained. This understanding can then be used to formulate policies and practices that promote sustainable water management. It is essential to recognise the significance of tank water as a valuable resource that has sustained communities for generations. Therefore, a collaborative approach is necessary to ensure its effective use for the benefit of all. By understanding the intricate relationship between humans and nature, we can create a sustainable future that benefits everyone.

Index Terms - Resources, resource management, tank, communities, CPRs.

INTRODUCTION

Natural resources are the basic building blocks of our planet, playing a crucial role in sustaining the existence and growth of life forms. These resources come in various forms, including minerals, water, air, and soil. They are essential in providing inputs for various human activities, such as agriculture, manufacturing, and transportation. The conservation and preservation of natural resources are crucial for ensuring their availability in the long term. Without proper management, natural resources can be depleted, leading to negative consequences such as environmental degradation and ecological imbalances. Therefore, it is our responsibility to prioritise the conservation and preservation of natural resources. The value of natural resources can be transformed technologically, improving their usefulness and efficiency. However, it is important to consider the social and environmental impacts of technological advancements to ensure that they do not cause harm. Also, when multiple communities share a resource, it is essential to understand the resource holistically, considering the needs and perspectives of all communities involved. In conclusion, natural resources are essential for the sustainable development of civilisations. By managing them responsibly, we can ensure their availability for future generations (McElroy and Townsend, 2009: 38).

Objectives:

1. To understand the traditional agricultural and irrigation water management practices
2. To understand the government intervention programmes in water management and their implication for resource management and livelihoods of the people.
- 3.

Abbreviations and Acronyms

CPR: common pool resources.

RESEARCH METHODOLOGY

Colin Murray (2002), a researcher of livelihoods, has proposed two distinct approaches to study the topic in detail. The first approach is known as the circumspensive approach, which involves analysing the current state of affairs by collecting data through surveys, interviews, and other participatory techniques over a specific time frame, usually six months to a year. This method is useful for understanding the connections between various socio-economic activities. The second approach, called the retrospective method, aims to reconstruct changes that occur over a longer period. Researchers use various techniques to capture these changes in detail. Incorporating both the approaches in research is highly recommended by Murray, as they provide a more comprehensive understanding of livelihoods. It is essential to note that the circumspensive approach provides a snapshot of the current state of affairs, while the retrospective method is useful for understanding the changes that have occurred over time. By utilizing both approaches, researchers can gain insight into the complexities of livelihoods and how they evolve over time (Murray, 2002: 489-505).

The researcher began by conducting a thorough review of government records to identify a suitable village for fieldwork. After an extensive search, one village was selected. In order to establish a good relationship with the study area, the researcher conducted transect walks with key informants in the region. During these walks, the researcher was able to observe and document the physical and social characteristics of the area. The researcher also had the opportunity to interact with the community and gain valuable insights into their daily lives. As the researcher's language skills were similar to those of the study group, the researcher was able to establish trust and rapport with the community. Group discussions were held to refine the questions that would be asked during the interviews. The group discussions were vital in ensuring that the questions were relevant and appropriate to the community. The researcher also took the opportunity to learn more about the community's beliefs, values, and attitudes toward their environment and resources. As agriculture was the primary occupation of the villagers and water was essential for their work, the researcher aimed to understand the community's worldview about this valuable resource. To gain deeper insights into the community's perspective, the researcher conducted life histories of some experienced farmers. The life histories provided a rich source of information about the changes that had occurred in their lives, including changes in farming practices, access to water, and the impact of technology on their work. Overall, the researcher's approach was designed to provide a detailed and comprehensive understanding of the study area and the community's relationship with their environment. The detailed information gathered during the fieldwork was critical in identifying the challenges facing the community and developing suitable interventions to address these challenges.

RESULTS AND DISCUSSION

Tanks are artificial structures that have three closed sides and one open side. They are created for the purpose of collecting and storing runoff water. When the surrounding land slopes, an embankment may be built along the slope to retain the runoff water before it reaches the drainage stream at the right topographical location after precipitation. This helps prevent flooding and soil erosion. Tanks can also be built with channels that divert water from rivers or catchment basins. These channels can be used to transfer water from one area to another, making it possible to irrigate crops or provide water to a community (Sengupta, 1985: 1920). The term "tank system" refers to several systems that serve different purposes, including irrigation tanks and those connected to groundwater supplies and catchment areas. Irrigation tanks are used to store water for agricultural purposes, while tanks connected to groundwater supplies and catchment areas are used to store water for drinking and other household purposes (Mosse, 1999: 306). Tanks are an essential tool for preserving water. They help ensure water availability during times of drought or when there is a shortage of water. However, it is important to note that the power dynamics at the core of the agrarian economy are reproduced and reinforced by tanks. This means that the distribution of water resources can be unequal, and those with access to tanks may have more power and influence than those without. According to Mosse (2003), "Water is both subject to 'rule' - rather than being 'managed' - and is in a sense an instrument of 'rule' in the south Indian systems of tank irrigation." (Draft paper, 2008).

The research study had a specific focus on the socio-political changes occurring in a particular community that relied heavily on tank water as their primary source of water supply. A qualitative research approach was employed to collect the life histories of various key informants. The research team spent days with each respondent, establishing a good rapport and gaining their confidence, to gather in-depth information. During the research, many respondents expressed their optimism about the government's introduction of new technology and investment, which they believed would result in significant positive changes in their community. In the past, desilting of tanks was done by caste-based organizations and farmers, who based their activities on factors such as drought, demand for soil, etc. This resulted in non-uniformity in the desilting work

across the study area. However, this challenge was overcome by making the desilting work a state-sponsored scheme. This helped achieve maximum efficiency in tank desilting, and the work became more uniform across the study area. However, it is worth noting that such top-down imposition has its challenges. Local variations and sensitivities are often ignored, and state intervention can only be made under specific departments, primarily irrigation.

For generations, farmers have been receiving desilted sand at a subsidised rate to aid their agricultural activities. This practice has been long-standing, and it has been maintained by the government under the current scheme to keep the locals engaged and accepting of the idea that the tank is giving back to them, just like in the olden days. However, it has been observed that this intervention has led to certain social groups and specific communities whose livelihoods depended on the water in the tank being affected adversely. The decentralisation of water usage for irrigation has led to more personalised mechanisation, resulting in a decline in the use of old tools such as wooden ploughs. The farmers have now switched to advanced machinery like tractors, leading to increased efficiency in farming activities. However, the introduction of mechanisation has hurt those previously involved in maintaining the tank. They have lost their traditional jobs and are now struggling to make ends meet. Despite the negative impact on some, the rejuvenated fisheries have benefited significantly from the changes. With the introduction of technologically advanced nets and boats, the entire livelihood has received a fresh energy supply. This has led to an increase in fish production and the overall improvement of the fisheries sector. In conclusion, allocating desilted sand to farmers at a subsidised cost has been essential in maintaining the local economy. However, it is crucial to ensure that the intervention does not negatively impact the social groups and specific communities whose livelihoods depend on the tank and its water.

CONCLUSION:

In this study, the primary goal is to conduct a comprehensive and detailed analysis of how a specific community responds to changes in the management of common pool resources (CPR). The research aims to identify and analyse the key differences between the newly implemented system and the traditional system by examining their respective effects on the community. By conducting a thorough investigation of these changes, the study seeks to offer a deeper understanding of how they impact the community's social, economic, and environmental aspects. The research will provide stakeholders with comprehensive insights into the changes in CPR management and their effects, enabling them to make well-informed decisions about the future management of these resources.

It is essential to recognise that the current research has certain limitations. As explained in the methodology section, the study is more limited in scope as it is focused on a particular period. To create a more comprehensive study, it is necessary to extend the observations over a longer timeline. This would allow for a thesis to be developed based on data collected over time, which would be more appropriate for policymaking. By doing so, we can obtain a more thorough understanding of the phenomenon being studied, and the results would be more representative of the broader population.

Carrying out large-scale projects demands a considerable amount of resources, including financial investment, materials, and extensive human labour. Therefore, the government must take charge of planning and executing such projects. In most cases, the government tends to implement these projects top-down. However, it is essential to gather constant feedback from the bottom up to ensure that the project meets the needs of all communities involved. As mentioned earlier, resources can be utilised for various purposes by different communities. Therefore, diversification is a crucial aspect that must be included in the planning process, and any necessary changes should be made based on recommendations from all stakeholders. By involving diverse opinions and perspectives, the outcome of the project is more likely to be successful and serve the purpose for which it was intended.

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