



Rebuilding Nature-Human Connections: Lessons from Ralegan Siddhi and Hiware Bazar

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Abstract

Human intervention in river basins can be categorized as either positive or negative, with the latter being more commonly observed. Over the past five decades, significant changes to river systems have resulted from human activities such as urbanization, unscientific land use, and the overexploitation of water resources. However, there are instances where human efforts have successfully restored natural resources in degraded regions. This paper analyzes two notable case studies from India: Hiware Bazaar and Ralegan Siddhi, which demonstrate the potential for sustainable resource management through positive human intervention. Documentary analysis was employed to understand the cases and is based on secondary sources. The analysis highlights the potential for humans to reconnect with nature. The study emphasizes that through conscious planning and the integration of indigenous knowledge, it is possible to restore natural resources and manage them sustainably, paving the way for an improved quality of life in the future.

Keywords: Human intervention, nature-human connection, sustainable development, natural resources

Healthy and resilient natural systems are intricately linked with sustainable development and are fundamental to human well-being. We know that the world's freshwater resources are unevenly distributed across the planet – over 60% of the Earth's freshwater supply is found in just 10 countries. We also know that water scarcity affects more than 40 per cent of people around the world – approximately 3 billion people – two-thirds of whom reside in one of the five major emerging national economies. In 2011, 41 countries reportedly experienced water stress – 10 of which were close to depleting their supply of renewable freshwater. By 2050, the UN projects that recurring water shortages will affect at least one in four people. The ever-expanding water demand of the world's growing

population and economy, combined with the impacts of climate change, is already making water scarcity a reality in many parts of the world. Understanding how to protect and restore water-related ecosystems and to protect them has become the vested responsibility of this generation.

It was found that humans intervening in environmental issues could make a significant difference in the region and can have desirable effects. Human Intervention in the river basin can be of two categories. It can be positive and it can be negative. Widely seen is the negative impact of human intervention in the river basin. It was stated that for the past 50 years human intervention has made significant impacts on the river system. Urbanisation, unscientific land use, overexploitation of rich water resources etc were the reasons behind this. There are case studies where humans intervened with nature and were able to get back the natural resources in the region resulted in the increased quality of the region. Thus the successful practices in managing water resources would help and encourage others to tackle the issues at their root. This paper analyzes two case studies from India, focusing on the experiences of Hiware Bazar and Ralegan Siddhi.

In the international conference on the Water and Environment held in Dublin in January 1992, the experts argued that 'Development has stressed freshwater ecosystems. Human consumption, industrial and agricultural production, and the modification of freshwater systems to support this development have resulted in the diminution or loss of many aquatic species, and habitat degradation. These losses, in turn, have adversely affected human health and development as fisheries, wildlife, flood protection and overall water quality have declined. To achieve long-term, sustainable development, such adverse environmental effects must be avoided. Sustainable water resource development is the development that promotes the quality of human existence and the natural functions of the biosphere. The Conference recognized the need for fundamentally new



approaches to development and management which can only be brought about through political commitment and involvement from the highest levels of government to the smallest communities’.

Mariele Evers et.al in their article ‘The Pluralistic Water Research Concept: A New Human-Water System Research Approach’ stated that, ‘The use and management of water systems are influenced by several factors, such as economic growth, global change (e.g., urbanization, hydrological-climatic changes), politics, history and culture. Despite noteworthy efforts to develop integrative approaches to analyze water-related problems, human-water research remains a major challenge for scholars and decision makers due to the increasing complexity of human and water systems interactions,

The central message of the report *Charting our Future* is that any strategy to achieve water resource security must be a joint effort—integrated with broader economic decision-making—by governments, investors, NGOs, and water users in agriculture, industry and cities.

Today, water has a prominent place in academic research, due in part to a widening awareness of multiple global water crises, in which water is increasingly scarce, destructive or polluted. As water is perceived as endangered or dangerous, researchers are rediscovering the profound implications of water for human societies and cultures. Just as biophysical life is unthinkable without water, so too is social and cultural life. (Franz Krause & Veronica Strang (2016)). It is evident from the urgency shown by these agencies that water is an increasingly scarce and valuable resource and one of the principal concerns is our failure to recognize and accept that there is a finite supply of water. There is also a consensus that the growing water scarcity and misuse of freshwater pose serious threats to sustainable Development. (Singh et.al,2017)

All these articles and reports point out the importance of the management of water resources to be water-sufficient in the future. To overcome the water stress condition prevailing a combined effort is a necessity and it has started in various corners. Documentation of these success stories will catch up with others so that they may also be able to move on the same path.

Scarcity and misuse of fresh water pose a serious and growing threat to sustainable development and the protection of the environment. Human health and welfare, food security, industrial development and the ecosystems on which they depend, are all at risk unless water and land

resources are managed more effectively in the present decade and beyond than they have been in the past. Therefore, understanding the co-evolution or interaction of human-water systems and its social dimensions is essential to effectively tackle the shortcomings in sustainable water management. Across the globe, policymakers, civil society and the business sector are increasingly becoming aware of the challenge facing global water resources, and the need to carefully manage these resources. Progress has been limited, however, and overall, too slow. One missing piece has been the lack of a rigorous analytical framework to facilitate decision-making and investment into the sector, particularly on measures of efficiency and water productivity. At this juncture scientifically documented details and analysis of the locally evolving water resource management model is a necessity and will be of great help to revive the existing water resources

I. Methodology

The study is descriptive as it deeply looks into the impact of human intervention in the area and also tries to analyse the dynamics involved in it. The study was done based on secondary data resources. The secondary sources constitute all published and unpublished written data viz: manuscripts, Journals, Gazetteers, Scholarly articles and books.

Case 1

Hiware Bazaar, a village located in the Ahmednagar district of Maharashtra, lies in the foothills of the Sahyadri range. Historically, the region faced severe drought and acute water scarcity due to its rain-shadow location, receiving only 300-400 millimetres of rainfall annually. This limited rainfall, combined with deforestation, poor water management, and overexploitation of groundwater, created an environmental and social crisis. The agricultural economy collapsed, forcing many villagers to migrate to urban centres in search of a better life. By 1990, only 12 per cent of the land in Hiware Bazaar was cultivable, literacy levels were at a dismal 30 per cent, and unemployment was rampant. The village’s declining socioeconomic conditions also led to the rise of illicit activities like alcohol production and associated crimes.

Hiware Bazaar faced significant challenges, including acute water scarcity due to degraded forest cover, poor water management, and overexploitation of groundwater, which left the region classified as "overexploited" for water availability. Unsustainable rainfed farming and land degradation led to agricultural decline, while the



lack of medical facilities and quality education, coupled with unemployment and alcoholism, deepened social issues. The absence of cohesive governance further exacerbated these problems.

The turning point came in 1990 when Popatrao Pawar was elected as sarpanch. He initiated a community-driven approach to water conservation, that encouraged the intervention of people in the region. The activities focused on watershed development through check dams, percolation tanks, and afforestation, while banning harmful practices like water-intensive crops and illicit alcohol production. The more transparent government policies and the resultant governmental schemes had attracted investments in infrastructure. It has improved the sanitation, education, and healthcare facilities in the region. These efforts led to significant outcomes, including water security, agricultural revival, economic prosperity, and social transformation, making Hiware Bazaar a model for sustainable rural development and inspiring similar initiatives across India.

Case 2

Ralegan Siddhi, a village in Maharashtra, was once plagued by severe poverty, widespread unemployment, rampant alcoholism, and crippling indebtedness. The social fabric of the community was deeply fractured, with mutual suspicion, conflicts, and the use of money and muscle power to perpetuate malpractices. These issues created a climate of fear and insecurity, particularly for children and women. Education was neglected, with children facing significant difficulties, while girl children were kept at home due to fears of attacks by drunkards and other social evils.

Caste divisions further deepened the fragmentation within the community. The drought of 1972 exacerbated the situation, devastating agriculture and livelihoods. Governmental initiatives to address the crisis failed largely due to inadequate planning and a lack of public involvement in program implementation. This combination of factors pushed the village into a state of despair and decline, leaving its residents to grapple with immense social and economic challenges.

The transformation of Ralegan Siddhi began with the intervention of Anna Hazare, a renowned activist and Gandhian, who played a pivotal role in mobilizing the community to address the village's challenges. Hazare, drawing inspiration from Gandhian principles, initiated activities to involve the local population, initially facing limited participation. However, over time, his efforts gained

momentum as he actively organized the youth into a collective called 'Tarun Mandal.'

One of the first initiatives undertaken with the participation of the youth was the construction of a temple in the village. This temple served as a symbol of moral rejuvenation and a communal space for discussions. The temple premises became a hub where villagers gathered to deliberate on their collective problems and devise solutions.

The community's first major decision focused on watershed management and rainwater harvesting. Comprehensive measures were undertaken to utilize every drop of rainwater effectively. Structures such as check dams, trenches, and drainage systems were built to enable water conservation and groundwater recharge. These micro-watershed schemes significantly improved the water availability in the region, ensuring a year-round supply and laying the foundation for the village's revival.

Farmers in Ralegan Siddhi, who previously struggled to secure loans individually from banks, came together to form cooperative societies. This collective approach enabled farmers to access financial support more easily, facilitating investments in rainwater harvesting and irrigation infrastructure. Through these cooperative efforts, every farmer in the region gained access to rainwater and improved irrigation facilities, ensuring better agricultural productivity and enhancing their livelihoods.

The transformation of Ralegan Siddhi highlights the profound impact of collective community action and sustainable interventions. By addressing the region's water scarcity through proper planning, rainwater harvesting, and irrigation management, the villagers not only ensured year-round water availability but also ushered in prosperity and socio-cultural revival. This intervention significantly improved agricultural productivity, revitalized moral values, and strengthened social cohesion. The case underscores the central role of water in shaping the dynamics of society, demonstrating how its effective management can drive holistic development and sustainable change.

II. Discussion and Conclusion

The two cases of Hiware Bazaar and Ralegan Siddhi demonstrate that there remains significant potential for humans to reconnect with nature. This reconnection can be achieved through conscious and well-planned strategies under effective leadership. Leadership plays a crucial role in mobilizing communities to address the challenges



they face. Capable and trustworthy leaders can inspire collective action by earning the trust of the people and guiding them toward solutions. Even if initial participation is limited, the visible success of early interventions often motivates broader community involvement over time. This highlights the importance of informed and visionary leadership in enhancing sustainable and transformative change.

Prioritizing issues based on the community's immediate needs emerged as another effective strategy for organizing people as a collective. Addressing their most pressing concerns cultivated a sense of ownership and ensured active participation by channelling their energy and volunteer efforts toward solutions. Additionally, the role of administration is critical in supporting such initiatives. Transparent policies and well-implemented governmental schemes play a significant role in enabling and sustaining community engagement, providing the necessary resources and framework to amplify the impact of local efforts. The key factors contributing to the success of people's participation in watershed management at Ralegan Siddhi include the emergence of effective local leadership, the establishment of moral guidelines for all, adherence to voluntary codes such as bans on uncontrolled grazing and tree cutting, partnerships between government and NGOs, inclusive involvement of all societal groups, long-term holistic development efforts spanning 10-20 years, the use of simple yet efficient watershed management technologies, and prioritizing the village assembly in decision-making processes. (Mishra, n.d.). However, a noted limitation of this model is its reliance on a strong and highly motivated local leader, a characteristic common to many Gandhian models of development. Its scalability and effectiveness in other regions, particularly in the proposed 300 counties, remain to be fully assessed. (Mishra, n.d.)

Sustainable water resource management has been and still is a major challenge for decision-makers, even though integrative approaches and concepts have been developed to address problems related to floods, droughts, water quality, environment and ecology. Water resource Management initiatives have started worldwide to grow sustainably. Water is central to some of the flagship programs in India. The modernization of India is intrinsically linked to the modernization of its water management systems. With 17% of the global population but only 4% of the world's water resources, India faces a critical challenge in ensuring the efficient use of water across

agriculture, industry, and domestic sectors. Sustainable management and conservation of water resources are essential to meet current demands while safeguarding these resources for future generations. Understanding the degradation of water resources and addressing its impacts on human communities are crucial steps toward achieving sustainable development and ensuring the long-term well-being of humanity.

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