



WOMEN ROLE IN ENVIRONMENTAL PROTECTION: A CASE STUDY IN GANGUDUPALLI VILLAGE, CHANDRAGIRI MANDAL, SRI BALAJI DISTRICT, ANDHRA PRADESH, INDIA.

Dr.K.Kiran^a, Ms. Dasireddygari Jyothi^b, Dr. E.Mahadevareddy^c

a : Academic Consultant, Department of Environmental Science, b: Student, Department of Rural Development, c: Academic Consultant, Department of Adult & Continuing education, Sri Venkateswara University, Tirupati-517502,

Abstract: The natural environment refers to all living and non-living components that exist without human interference. This word is frequently used to describe the Earth or specific areas of it. It includes all living organisms, weather patterns, climate, and natural resources that influence human survival and economic endeavours. In developing countries like India, women bear the primary responsibility for managing and conserving resources within their families. They dedicate significant amounts of time to tasks such as gathering and storing water, ensuring access to fuel, food, and fodder, as well as overseeing the management of various types of land, including forests, marshes, and agricultural areas. This paper discusses about how a women play a key role in protecting the natural environment by studying the practices and daily activities of Gangudupalli village women towards environmental protection.

Index Terms: Women, India, Gangudupalli village, Environmental Protection, Sustainability, etc.

I. INTRODUCTION

The term "environment," which means "to surround,". The word "environment" refers to the interaction of water, air, and land, as well as their interactions with one another, humans, other living things, and property. According to Schultz et al., [1] the women, environment and development (WED) -debate is based on a critical perspective of development policies, emphasizing the connection between modernization/industrialization, technology, and environmental degradation. Women, on the other hand, have long been considered the lower sex. On a worldwide scale, women are often in charge of managing and saving resources for their families. Women are breaking new ground in a range of sectors, including the investigation of the world's water resources and the conservation of forest resources.

Women play a vital role in the management of natural resources, including land, water, forests, and energy. Women in underdeveloped regions of the world are regarded as the primary consumers of natural resources such as land, forests, and water, as they are accountable for collecting food, fuel, and fodder [2]. They possess both traditional and modern knowledge about the natural environment surrounding them. In the past, women were often overlooked or disregarded, but there is now a growing recognition of the significant impact they have on the environment. Additionally, there is an increasing understanding of how the environment affects the health and well-being of women. This shift in perspective is evident in events such as the 1992 UN Earth Summit, the Chipko movement in India, and the Green Belt Movement in Kenya. These initiatives highlighted the importance of women's voices and perspectives in promoting sustainable development at all levels, from the highest decision-making bodies to local communities. In recent decades, environmental movements have increased as the movements for women's rights have also increased. Today's union of nature preservation with women's rights and liberation has stemmed from invasion of their rights in the past [3,4].

In the Asian and Pacific Island regions, the majority of women involved in the economy are engaged in the agriculture sector, which encompasses various activities such as work in own-account farms, labor in small enterprises for processing fruits, vegetables and fish, paid and unpaid work on other people's land, and collecting forest products. However, only a small percentage of these women, ranging from 10-20%, have been able to secure tenure to the land they work on due to economic and legal barriers. One such barrier is the gender disparity in access to loans, which results in women receiving fewer and less favorable loans to acquire land compared to men [5].

Women's direct involvement with the environment has resulted in a deep grasp of it. As a result, Women act as agriculturalists, water resource managers, traditional scientists, etc among others. Women interact with the natural and man-made environments more extensively than males, owing to their major duty for domestic and home administration. As a result, individuals are more vulnerable to the negative consequences of degraded home, neighbourhood, and city environments, and they incur a greater cost associated with living in substandard homes and communities with inadequate residential and health infrastructure. Women are predominantly responsible for farm work and domestic food production across the globe [6,7,8,9]. Although there is a growing trend of women taking on more agricultural tasks and expanding their involvement, the gender-based division of labour remains unchanged in terms of reproductive work.

It is imperative to comprehend the diverse methods through which women have actively engaged in the preservation and administration of the environment, with the intention of incorporating them into environmental management initiatives. The purpose of this manuscript is to evaluate the participation of women in environmental management, specifically focusing on a small village.

II. STUDY AREA

Gangudupalli is a Village in Chandragiri Mandal in Chittoor District of Andhra Pradesh State, India. It belongs to Rayalaseema region. It is located 6 KM from Chandragiri town and 21 KM towards West from District headquarters Sri Balaji. According to 2011 census, Gangudupalli Village Local Language is Telugu. Gangudupalli Village Total population is 1080 and number of houses are approximately 250. Female Population is 53.3%. Village literacy rate is 61.6% and the Female Literacy rate is 33.0%. Their major occupation is Agriculture, Cattle maintenance, Silkworm cocoon cultivation. Apart from that, few of them doing Jobs and businesses at various sectors located in and around Tirupati.

In this paper, we employ two different categories of data. The initial category consists of secondary source materials, acquired from prior research on women's participation in environmental preservation and control. These materials encompass books, journal publications, and articles obtained from online sources. The second category of data was procured from primary sources, specifically through the distribution of questionnaires to the women residing in the rural area of Gangudupalli Village.

III. REVIEW

3.1. Water Resource Management

Etta [10] conducted a survey in Mariko Lower-income settlement in Lagos, which revealed that women hold a pivotal role in managing communal water resources and fulfilling household water requirements. Women are primarily responsible for regulating and supervising communal taps or water points, and they often secure these sources to prevent damage by children. At the household level, women and girls are burdened with the task of fetching water for various domestic activities such as cooking and washing. Conversely, men tend to dominate the water trade. Unfortunately, these sources are susceptible to pollution, especially from untreated sewage, which poses significant health risks [11,10]. In rural areas, women are solely responsible for procuring water for their domestic needs. However, the methods and practices employed in obtaining water, particularly from riverbanks, contribute to water pollution [12].

3.2. Women in Agriculture

Women's contributions to agricultural production have been significant worldwide, with the Food and Agriculture Organization reporting that they are responsible for producing more than half of all food grown in 1996. In certain regions, such as sub-Saharan Africa and the Caribbean, women produce an astonishing 80% of basic foodstuffs. Adebayo et al [13] found that in Asia, women provide between fifty and ninety percent of the labour force for rice cultivation, while in Adamawa State, Nigeria, 60% of women are involved in farming. Jayasheela [14] outlines the various roles that women play in Indian agriculture, including production and distribution, planting and cultivation, weeding, hoeing, harvesting, and storage.

Women in Gangudupalli Village play a significant role in the agricultural sector by contributing to the production of rice, groundnuts, and sugarcane. Additionally, they are actively involved in cultivating livestock crops for their cows, buffalos, goats, and other animals. This highlights the close interaction between women and the environment, particularly the land. As victims of soil degradation, women have actively participated in initiatives aimed at conserving soil. A notable example of their involvement is the Agro-forestia project in Yatenga, Burkina Faso. Moreover, Igbo women have taken on traditional male agricultural responsibilities, in addition to their existing roles within the female sphere [15, 16].

3.3. Solid waste disposal

In the specified research domain, the rate of solid waste accumulation surpasses the pace of population expansion. The disposal of solid wastes commonly occurs at designated dumping sites or undeveloped areas. Women, owing to their proximity to the environment, actively engage in environmental stewardship by undertaking responsibilities such as cleaning and upholding cleanliness, particularly in relation to garbage disposal. Acknowledging the health hazards linked to waste, women assume the responsibility of ensuring its consistent removal at the communal level.

IV. RESULTS

The present section presents the outcomes of the questionnaire survey carried out to examine the extent of women's involvement in environmental management within the specified study area, namely Gangudupalli Village. The demographic characteristics, specifically age and marital status, of the women are presented in Table 1. It is worth mentioning that a mere 17.6% of the women surveyed are below the age of 22 years. The majority, accounting for 66.4%, belong to the middle age group (23-50 years), while only 16.0% are aged above 50 years. This distribution of age indicates that a significant proportion of the women are still in their prime years and possess the necessary Vigor to actively engage in environmental management activities.

Table 1. Age and marital status of survey women

S.No	Age Group	Number	Percentage
1	Below 22 years	18	17.6
2	Middle age (23-50) Years	65	66.4
3	Above 50 years (51-75)	17	16

Table 2 displays that a significant majority of female participants, specifically 66.4%, are involved in agricultural activities in the study area. Organic farming is the most used method of soil conservation by women. Planting trees is recognized as an effective approach to safeguarding the environment and mitigating hazards such as windstorms and erosion. The survey results indicate that almost 76.2% of women in the study area have planted trees or flowers within the past five years, further supporting the notion that women actively engage in tree planting. Fruit trees, such as mango, sapota, papaya, and various fruit plants, are frequently planted by women, serving the dual purpose of environmental protection and providing fruits for household consumption.

Table 2 Women involvement in Environmental Management

Involvement in Farming	Percentage(%)
Yes	66.4
No	33.6
Planting trees (Farming/Around the house)	Percentage (%)
Yes	76.2
No	23.8
Conserving methods	Percentage (%)

Organic farming planting	55.7 44.3
Major activities in Environmental Cleaning	Percentage (%)
Weeding	22
Sweeping	63
Drainage	15

The challenges faced by women in environmental management within the study region were identified by the participants as follows: firstly, there is a lack of environmental consciousness among the general population; secondly, there is a shortage of waste disposal facilities; and finally, there is an insufficiency in drainage systems.

V. RECOMMENDATIONS

To achieve sustainable development, it is recommended that active involvement of women in environmental management be promoted, while considering the obstacles they currently face. To bring about a transformation in the mindset of the populace and equip them with relevant knowledge, it is crucial that environmental education becomes mandatory for the majority of women. This will address the issue of individuals carelessly discarding paper scraps, fruit peels, plastic cans, and polythene bags on the streets for mere amusement.

Additionally, prioritizing women's education and ensuring access to education for girls should be considered a policy imperative. Educated women will play a significant role in bridging the gap between the environment and development. It is important to duly acknowledge and support the empowerment of women in sustainable human development, as well as their role in safeguarding the environment.

VI. CONCLUSION

In conclusion, it is evident that both married and single women have actively engaged in the preservation of the environment. However, a noteworthy proportion of women involved in this endeavour are married. This substantial presence of married women within the study area implies that they are more inclined to assume responsibility for the conservation and cleanliness of the environment due to their roles as homemakers. Consequently, this study has examined the diverse ways in which women have actively contributed to the protection of the environment and the management of natural resources, aiming to ensure the sustainable utilization of environmental resources.

Based on the findings, recommendations are proposed, particularly those that can facilitate the empowerment of women. The crucial role of women as managers of resources, advocates for the environment, and activists within their communities must be acknowledged when devising strategies for environmental protection. It is imperative to provide women with the opportunity to participate in environmental matters at the local, regional, national, and international levels. For women to have a substantial influence on decision-making processes, their representation should be equal to that of men. As resource managers, women should be consulted and supported in their ongoing efforts to safeguard the environment. Specifically, a greater inclusion of women in decision-making processes concerning environmental policies, programs, and funding is essential.

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