

## Participation of Women in Environmental Protection and Management: A Case Study of Dakshin Kannada District of Karnataka State

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This study provides a general review and a case study of women's involvement in environmental management in Dakshina Kannada District of Karnataka State. Primary data was collected from online questionnaire survey of women from various parts of the district. Problems faced by the women in environmental management include lack of waste disposal equipment, poor drainage systems and lack of awareness among the general public. Appropriate suggestions were given by respondents to enhance women involvement in environmental protection and management.

**Key Words:** Environmental awareness, environmental attitude, healthier environment, household behavior.

### 1. INTRODUCTION

Studies conducted all over the world on women and environment have shown that women have major role to play in natural resources management and they are crucial actors in environment rehabilitation and conservation. Women through their role as care takers of the family, come in close contact with environment and suffer more directly from environmental problems. Women serve in various capacities as farmers, water resources managers and traditional caretakers among others. Women are not only Knowledgeable about the environment, they are also protective and caring (Shettima, 1996).

Chapter 24 of Agenda 21 of UNCED calls for fuller participation by women at all levels of society and in all forms of decision making, particularly in areas affecting environment and development. The preamble to Women's action Agenda 21 entitled World's Healthy Planet states: "We, women of many nations, cultures and groups of different colors and class, have come together to voice our concern for the health of our living planet and its interdependent life forms".

Women as an active partner should participate in tackling the environmental degradation. On energy, water and waste, UNCED emphasizes the role of women thus:

- Conservation of energy starts in the household and women should perform this process.
- Designers of all water supply and sanitation systems should be required to consult women who are the primary users in the home and
- Women have often found ways to deal with waste economically and safely, whether by reuse or by responsible consumer behavior.

According to Dankelman and Davidson (1998) "Women play a major role in managing their natural surroundings and adopt several mechanisms to deal with the kinds of environmental crisis they face." They also, observed that the response of government has not been significant and as a result women, men and children continue to face problems including pollution, poor services,

human waste pollution, fumes from household fuel and the consequences of soil erosion and flooding.

Therefore, there is the need to understand the various ways women have actively participated in environmental protection and management with a view to integrate them into environmental management programme. This paper analyses women involvement in environmental management with particular reference to Dakshina Kannada District of Karnataka State.

**Study Area**

Mangalore, the capital city of Dakshina Kannada district was ranked first in the most polluted industrial centres in the country in a survey conducted by Central Pollution Control Board during the year 2010. The District has been the industrial hub of Karnataka as it is connected by three modes of transport. In this regard, the survey was conducted to access the women awareness and participation in environmental protection and management.

**Objectives of the paper**

- To categorize women and households as the primary locus of change to bring about transformation in attitudes towards environment.
- To look upon the hurdles faced by women in environmental management.
- To discuss upon the strategies of environmental management in the light of collective action.
- To highlight significant differences in the environmental attitudes when analyzed by demographic variables.

**Methodology**

This paper makes used of two types of data. The first is the secondary source materials obtained from past studies of women involvement on environmental protection and management e.g from books and journal publications, and also articles from the internet. The

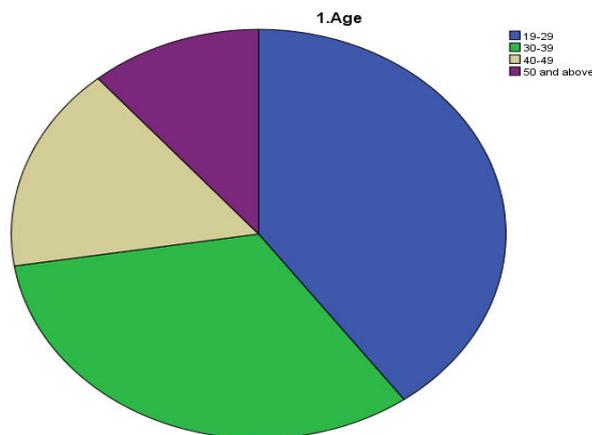
second is from primary sources e.g through the administration of questionnaires. Around 80 women consumers from various parts of the district were contacted and their responses were recorded with the help of an online structured questionnaire. The questionnaire also included general demographic questions such as age, qualification etc. Percentage techniques were used to analyze the findings of this study.

**Results and Analysis**

**1. Age-wise Classification of respondents.**

Age	Frequency	Percent
18-30	32	40
30-40	26	32.5
40-50	13	16.3
50 and above	9	11.3
Total	80	100

Source: Field survey data May 2020



The above table indicates that around 70 per cent of women are below the age of 40. That means a large number of them are youths and have long term environmental impact through their actions.

**2. Educational Qualification:**

Education	Frequency	Percent
Above post-graduation	6	7.5
Post-graduation	29	36.3
Graduation	34	42.5
PUC	5	6.3
High school	6	7.5
Total	80	100

Source: Field survey May 2020

Majority of the women respondents have completed their graduation. Some of them have even completed their Ph.Ds. This trend discloses that majority of the respondents represent higher educational background. By implication, most of the women in the study area are well informed about environmental protection.

### 3. Marital Status

Marital Status	Frequency	Percent
Married	56	70
Unmarried	24	30
Total	80	100

Source: Field survey May 2020

Marital Status indicates that 70% of the women are married while only 30% are single. This high proportion of married women in the study area suggest that they are likely to be more responsible in protecting and keeping the environment clean because of their roles as home keepers.

### 4. Women involvement in Environmental Management

As rightly pointed out by Maye (1994), women worldwide are part of a growing movement for the protection of the living world, environment health and security, justice and the alleviation of poverty. Women play a major part in the protection of biological

diversity through their many roles and responsibilities.

Involvement in farming	Number	Percentage
Yes	18	22.5
No	62	77.5
Planted Saplings in the last three years	Number	Percentage
Yes	53	63.3
No	27	33.8
Where planted?	Number	Percentage
Around the compound	46	57.5
None	24	30
On the farm	10	12.5
What are the species planted?	Number	Percentage
Flowers	33	41.3
Fruit trees	18	22.5
None	14	17.5
Others	15	18.8

Source: Field survey May 2020

Majority of the women surveyed (62%) are not involved in farming as the respondents were mainly from urban area. Other studies indicate that women participate greatly in food production especially in developing countries (Etta, 1999; shettima, 1996). One of the ways of protecting the environment and reducing hazard such as wind storms and erosion is by planting trees. In the study area, the survey revealed that almost 63.3% of the women have planted trees or flowers in the last three years. This again confirmed the previous findings that women are actively involved in tree planting.

When asked where the tree or flowers were planted, 57.5% indicated their compounds, 12.5% planted trees on the farm while 30% said they never planted. This is done with the twofold objectives of protecting the environment and also providing farm grown pesticide free fruits for the household.

**5. Environmental Cleaning:**

Women are the main actors in environmental sanitation at homes and communities. Research according to Sheinberg et al. (1998) has shown that across many cultures, women handle waste in their homes. Women are the driving force behind two-thirds of households that regularly recycle. According to 2009 survey women also do most of the housework and therefore most of the recycling.

Environmental Cleaning	Frequency	Percent
Cleaning Drainage	11	13.8
Proper waste disposal	59	73.8
Weeding	10	12.5
Total	80	100

Source: Field survey May 2020

The above table shows that, majority 73.8 per cent respondents indicated proper waste disposal as the main activity in environmental cleaning. This is followed by clearing of drainage 13.8 per cent and weeding 12.5%.

**6. Major Problem faced by women in Environmental Management**

Environmental Problem	Frequency	Percent
Lack of environmental awareness among general public	52	65
Lack of proper waste disposal system	28	35
Total	80	100

Source: Field survey May 2020

“Women can be a force for steering sustainable energy use and conservation in households, classrooms, farms, governments and businesses around the world”. (Kate Frazer, 2012). Respondents were asked to identify the problems faced by them in Environmental management. Majority of women responded that lack of environmental awareness is the major problem (65%), whereas 35 per cent respondents opined that lack of proper waste disposal system is the major problem in environmental management.

**7. Women’s environmental action at the household level.**

Individuals can take action at several levels to protect the environment, including participation in public processes (e.g. by signing a petition) and by practicing environmentally beneficial actions within their day to day lives (e.g. using public transport). However, because few people automatically and consistently carry out such actions, it is recognized that barriers exist to limit those actions. These barriers can be public (e.g. a lack of facilities) and/or personal (e.g. lack of interest). The following questions asked people to report their levels of public and private actions, and to assess their effectiveness or frequency. The below

table shows consumer's actions towards environmental protection. The table indicates the extent to which they adopt these measures.

S I. n o	Activity	Always		Frequently		Sometimes		Never	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
1	Conserve energy, water	48	60	19	23.8	10	12.5	3	3.8
2	Recycle plastic, bottles	23	28.7	14	17.5	31	38.8	12	15
3	Donate old clothes, books	40	50	17	21.3	21	26.3	2	2.5
4	Use of organic products	21	26.3	23	28.7	33	41.3	3	3.8

Source: Field survey May 2020

In the above table respondents replied to the questions on environmental action taken at the household level. Questions were mainly on conservation and recycling habits like energy, water conservation, recycling plastic, donating old clothes and books and use of organic products. Around 60 per cent women said that they always conserve energy and water as against only 3.8 per cent women who are not bothered to conserve energy. This shows women are more aware about the importance of conserving water and energy for future generations. To the question on recycling habits only 38.8 per cent women responded that they sometimes recycle plastic and bottles. This shows poor recycling habits of the women. Around 50 per cent women told that they always donate their old books and clothes. This

shows their humanitarian concern along with environmental consciousness.

### 8. Additional Action Taken

After being asked this series of questions about their environmental behaviors, participants were asked to describe anything else they had done to help the environment. 63% were able to describe additional actions they had taken; remainder could not. The most commonly reported actions were use of cloth bags, organic fruits and vegetables, proper disposal of sanitary napkins, maintain hygiene and sanitation at home, disposal of hazardous waste effectively and recycling water for gardening.

### 9. Conclusion

This research paper supports the previous research that consumers show strong concern for their environment. In addition, this research provides a basis of understanding of the important factors that affect consumers' purchase decision making and factors which motivate and are barriers in environmental management. This research is endowed with additional information in narrowing the research gap with regard to understanding of women consumers' environmental awareness and their behavior towards their environment. Findings could provide fruitful insights for environmental sustainability that enable marketers to prop up greener consumption behavior among women consumers.

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