



Role of Women in Ecological Sustainability: A Sociological Study of 'Five' Environmental Movements and Environmental Activists of India

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ABSTRACT

The entire world is undergoing major ecological crisis not only due to Covid-19 pandemic but mostly due to social constructivist approach of environment. Social constructivist theory emphasize that individuals learn when they actively construct knowledge and understanding (Santrock, 2001). Since women have a close connection with nature and environment due to the social construction of femininity where they are portrayed as caregivers of family with soft, docile and nurturant ideals, their relation with Mother Earth is age-old. Historically, they have always been the major protectors of natural resources against any environmental destruction in order to draw a link between andro-centrism and environmental destruction. Women, all over the world have always been responsible for the conservation of resources for the families. They also lead the charge in terms of exploring the world's water resources and even protection of forest resources in order to prevent it from deforestation. World Bank (1991) also highlighted the role of women in environmental conservation including their role in the management of natural resources like water, soil, forest and energy which has a profound impact on their everyday lives since women embody reservoir of traditional and contemporary knowledge about the natural environment surrounding them. Further, their role has also been emphasized in one of the sustainable development goals which include gender equality. It is against this backdrop that the present paper attempts to explore the role of Indian women in ecological sustainability. It also analyzes the contribution of women in five environmental movements of India along with the role of women environmental activists in ecological sustainability. Methodologically, content analysis has been used in order to explore the contribution of Indian women in different environmental movements of India as eco-feminists. The findings reveal that Indian women being close to nature has always played a significant role in different environmental movements of India like Bishnoi movement, Chipko movement, Appiko movement, Narmada Bachao Andolan, Navdanya movement where women environmental activists like Amrita Devi, Medha Patkar, Vandana Shiva and Radha Bhatt have contributed either as leaders or active participants of the movement. Presently, there are many environmental activists who have also helped in the conservation of their environment and preventing it from any kind of environmental degradation and ecological crisis caused by social constructivist approach such as deforestation and lumbering. However, the non-governmental organizations, environmental conservation agencies and the common man need to recognize and mobilize women to protect and enrich the natural resources for sustainable purpose. Thereby, since women are more close to nature, they are always able to understand the environmental issues and problems in a better way. It is due to this reason that is the need of the hour to consider including their views in implementing several policies and projects for a gender-inclusive environment.

Keywords: Ecology, sustainable development, social constructivism, ecological sustainability, eco-feminism, multicultural eco-feminism.

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INTRODUCTION

The entire world is undergoing major ecological crisis not only due to Covid-19 pandemic but mostly due to social constructivist approach of environment. Social constructivist theory emphasize that individuals learn when they actively construct knowledge and understanding (Santrock, 2001). The social constructivist approach draws a relation between environment and society where environment is being affected by intervention of man-made destructive techniques like deforestation which threatens the ecology.

Ecology can be defined as the science of nature which involves both flora and fauna and human kind life too. Due to the social constructivist approach, environment is highly affected and it is becoming a challenge to conserve it for sustainable purpose.

Due to this, the issue of ecological sustainability has become rampant in contemporary society. Sustainability can be defined as the capacity of area to provide the present generation with both direct and indirect benefits that humans derive from ecosystem and conserve such benefits for future (USDA Forest Service 2000). The concept of ecological sustainability came into existence since with the emphasis on conservation of ecosystem and species diversity which are the components of ecological sustainability. Ecological sustainability involves the maintenance and restoration of the nature, composition and structure of ecosystem which also includes the diverse flora and fauna along with the productive capacity of ecology (219:36).

Sustainable Development and its goals

Sustainable development is a process which not only helps to meet the needs and demands of present generation but future generation as well. Sustainable development involves seventeen goals (SDGs) for fair and sustainable health at every level: from biosphere to local community. The objective of such goals is to alleviate poverty, protection of ecosystem and ensuring that all people on earth enjoy peace and prosperity not only in present generation but also for future.

The 2020 Agenda for Sustainable Development and its 17 Goals (SDGs) which has been adopted by world leaders embrace a roadmap towards progress that is not only sustainable but encompasses all aspects and social problems of society. As one of the SDG goals, achievement of gender egalitarian society is also essential and integral part of it. Such gender equality can be attained only if the rights of all women are ensured and proper justice is meted out to them for a gender-inclusive environment and economy that would be equal for both the gender and will ensure equal distribution and sustenance of resources for the present and future generations of men and women and third gender as well.

The major goals of SDGs include:

- a. No poverty
- b. Zero hunger
- c. Good health and well-being
- d. Quality education
- e. Gender equality
- f. Clean water and sanitation
- g. Affordable and clean energy
- h. Decent work and economic growth
- i. Industry innovation and infrastructure
- j. Reduced inequalities
- k. Sustainable cities and communities
- l. Responsible consumption and production
- m. Climate action
- n. Life below water
- o. Life on land
- p. Peace, justice and strong institutions
- q. Partnerships for the goals.

LITERATURE REVIEW

Women and environment:

Since women are socially constructed and socialized as caregivers of family with nurturing attitude towards family and nature, so they are responsible for the conservation of resources for their families.

Due to the increasing ecological crisis, women have also become an important agent of environment conservation since women are close to nature due to the social construction of femininity --- being nurturant, soft, docile, caretakers of family. Women, all over the world have always been responsible for the conservation of resources for the families. They also lead the charge in terms of exploring the world's water resources and even protection of forest resources in order to prevent it from deforestation.

During the early 1970s, an interest in connecting women with the environment was raised which was reflected in a book written by Ester Boserup entitled 'Women's Role in Economic Development'. It was mainly during 1980s that the policymakers and governments became more concerned about the gender and environmental issues. Henceforth, changes were made regarding the role of women in environmental management for gender-inclusive environmental policies. World Bank (1991) also highlighted the role of women in environmental conservation including their role in the management of natural resources like water, soil, forest and energy which has a profound impact on their everyday lives since women embody reservoir of traditional and contemporary knowledge about the natural environment surrounding them.

Three roles of women are recognized and distinguished by Moser (1991):

1. As managers and protectors of natural environment
2. As rehabilitators of physical environment in terms of safeguarding ecological sustainability
3. As innovators of using proper technology which will help in the creation of new environments.

As observed by Dankelman and Davidson (1998), women play a significant role in managing their natural environment due to which they adopt several mechanisms to deal with the ecological crisis they encounter. Since women and nature are closely interconnected historically, they are mostly immortalized as powerful symbols of nature: Mother Earth, Artemis in Greek mythology and even Earth Goddess (Gunwal & Mago, 2021).

Environmental protection movement in India originated with the Kehjrali movement but gained impetus through the Chipko movement, Appiko movement, Save Silent Valley movement and Narmada Bachao Andolan. This signifies that the major trend in environmental protection movement in India also reflects the fact that most of the participants or leaders were women including Adivasis and poor women. Through their role as farmers and even collectors of water and firewoods, women have established a close connection with the natural environment since women along with girl children as marginalized sections of society has also been victims of environmental degradation like natural disasters. Thereby, women are the active participants in environmental conservation than men since they are directly influenced and affected by nature than the opposite gender (Gunwal & Mago, 2021).

The role of women in safeguarding the environment is immense which involves their role in myriad governmental and non-governmental forestry and environmental programs:

1. Chipko Movement/ Vriksha Andolan
2. Community forestry programs
3. Social forestry programs
4. Individual conservation programs
5. Green-belt movement
6. Keeping the city atmosphere clean and hygienic program
7. Green India and clean India programs.

Since women are close to nature, so they help in the sustainable use of their natural environment. Women in rural areas are always involved in household chores and activities like collection of food, water, fodder and fuel which enhances their knowledge of their environment and allows them to implement the appropriate conservation practices and technologies for environmental protection. (Ram Pandit & Eddie Bevilacqua, (2011) Social Heterogeneity and Community Forestry Process). These villagers in poor and developing countries like India played a significant role in initiating environmental movements which breaks the myth about the role of people from the West in these movements (Gunwal & Mago, 2021).

Studies also reveal that women are significant actors in natural resource management and help as major contributors of environmental rehabilitation and conservation. Historically, they have always been the major protectors of natural resources against any environmental destruction in order to draw a link between andro-centrism and environmental destruction. Movements that are enlisted in the pages of history like- Bishnoi Movement, Chipko Movement, Narmada Bachao Andolan and Silent Valley Movement have always firmly supported and highlighted the fact that role of women in ecological sustainability is very much significant. Men have always exploited the God-gifted natural resources as per their choice but noteworthy to mention that their women only gave up their lives, protecting our green environment. This has given rise to a social movement known as eco-feminism.

Eco-feminism and its impact on society:

Eco-feminism can be defined as a social movement and a practice which helps to explore the relation between andro-centrism and environmental degradation. It is also awareness where any kind of exploitation of nature is linked with western man's attitude towards men and tribes. (Birkeland 1993, Pg 18). The term eco-feminism was coined by the French writer Françoise d' Eaubonne during 1974.

Within the patriarchal framework, the attributes associated with masculinity like physical strength, toughness and courage are given higher status than the attributes associated with femininity which includes nurturing, softness and emotional dependence. This has resulted in 'hierarchical dualisms' (Warren, 1987, Pgs 6-8). According to Vandana Shiva, it is due to these socially constructed attributes of femininity like caring attitude, compassion, affection due to which women maintain and conserve the nature. It is due to this that the concept of eco-feminism has come into existence. Eco-feminism eventually leads to the rise of another domain called Multicultural Eco-feminism.

Multicultural Eco-feminism and environmental protection:

Eco-feminism is a multicultural ecological theory of environment protection that indicates the crisis and trap that human beings are encountering in public environment in recent times. Eco-feminism has indeed made positive efforts in multiculturalism by not only paying attention to women's human and cultural ecological public environment but also on

the cultural ecological protection of the spirit of women who are involved. The three aspects of women's spiritual and cultural ecological protection are being mentioned- i) spirit of promotion, ii) paying attention to the cultivation of inner nature, iii) possessing a conscious sense of regeneration. In particular, the amalgamation of spiritual and social dimensions is indeed a conscious act of protecting the cultural ecological environment (Dong and Kim, 2022, Pg 4).

NATURE AND SCOPE OF RESEARCH

The present research will explore the following objectives:

1. To explore the meaning of ecological sustainability.
2. To find out the role of Indian women in ecological sustainability.
3. To explore the contribution of women in five environmental movements of India.
4. To analyze the role of women environmental activists in ecological sustainability.

NATURE OF METHODOLOGY USED

The present research has been conducted by using secondary data- content analysis. Content analysis is a research technique which helps to make replicable and valid inferences from texts to the context of their use (Krippendorff, 2004). This emphasizes on the inferential nature of content analysis which either uses an inductive/ deductive or abductive process where conclusions are drawn from certain premises and samples.

DATA ANALYSIS

Environmental movements led by Indian women

1. Bishnoi movement: The fact that Indian women are responsible for environmental protection can be traced back to 1731 A.D when the Bishnoi people of Rajasthan protested against the felling of trees through the Bishnoi movement. This movement initiated with the royal order of Maharaja Abhay Singh due to the issue of deforestation (cutting of Khejri trees) which were worshipped by Bishnois, for the construction of fortress. The villagers mobilized themselves against the order under the leadership of Amrita Devi who hugged the tree in order to prevent any form of environmental degradation since the Bishnoi people used to get their food and fodder from the trees. Due to massive protest by villagers which involved losing their lives through the non-violent means of protection, the order was impeded by the Maharaja. The villagers also upheld eco-friendly principles by saving water through traditional water harvesting system, indigenous cultivation method for locality. This signifies that Bishnoi movement was the benchmark for environmental protection in India, before Chipko movement came into existence.

2. Chipko movement: The Chipko movement was the second protest movement which initiated in the year 1973 at the Garhwal region of Uttar Pradesh (Chamoli district). The proponents of Chipko movement were Sunderlal Bahuguna, a Gandhian follower and Chandi Prasad Bhatt, a Marxist. Chipko movement was started with the denial of the government to supply ash tree to the Dasholi Gram Swarajya Mandal (DGS) which is a worker's cooperative for processing plant of forest produce, especially for making plough in Chamoli district. The movement was also led by other environmental activists like Bachi Devi, Gauri Devi and other women of Garhwal region who

saved the felling of trees by hugging them in order to protect them from environmental degradation. Further, in 1977, large number of rural women also saved the Adwani forest under the leadership of Bachchni Devi. Thereby this movement also continued the issue of tree hugging protest led by Gauri Devi and Bachchni Devi and found success against the chopping down of trees.

3. Appiko movement: Appiko movement was another significant environment conservation movement in Karnataka which was started for protection of Western Ghats Forest. This movement was initiated by Panduranga Hegde in September 1983. As a part of the movement, men, women and children of Salkani village of Western Ghats 'hugged the trees' in the Kalase forest against the government policy to use the forest for industrial development. The movement was also led by the member of Mahila Mandal which included Adivasi women who joined for the protection of rainforest by notifying the government about the halt of wood cutting.

4. Narmada Bachao Andolan: Narmada Bachao Andolan which took place in the year 1985 was an environment movement against the construction of dams along the Narmada River funded by World Bank. The cynosure of the movement was regarding the construction of Sardar Sarovar Dam over the Narmada river which affected the flora and fauna of the area along with the displacement and rehabilitation of people living in those areas. This movement spread to the states of Gujarat, Maharashtra and Madhya Pradesh and was led by Medha Patkar, Baba Amte and Arundhati Roy. Gradually, the movement turned into an international protest, gaining support from different NGOs globally.

5. Navdanya Movement: This is India's biggest organic movement which began in 1984 as a program of the Research Foundation for Science, Technology and Ecology (RFSTE), that takes initiative to provide direction and support to the environmental activism. The word "Navdanya" means nine crops that used to represent India's collective source of food security. The main aim of this movement is to save seeds from biopiracy (unauthorized appropriation of knowledge and genetic resources of farming as well as indigenous communities by individuals or institutions that seeks, via patents or intellectual property, exclusive monopoly control) and with this intension to set up various community seedbanks in almost 17 states of India. Most of the members of the Navdanya movement are women farmers, who belonged to various parts of the country.

Role of women environmental activists in ecological sustainability

1. Amrita Devi: The first woman environmental activist who played a significant role for safeguarding the environment dates 300 years ago in Rajasthan, India. She was the pioneer in her protest against the felling of trees for the purpose of building a palace for the Maharaja of Jodhpur. A leader of the Bishnoi movement, she lost her life in the movement which was followed by large-scale protests by local villagers. Henceforth, the king never asked the villagers to supply timber.

2. Medha Patkar: Medha Patkar was renowned environmentalist who is known for her active role in Narmada Bachao Andolan which was a powerful mass movement against the construction

of a large dam in the Narmada River. The dam which was envisaged to be constructed over the river would displace 320,000 people which would not affect the environment but also the resettlement issues of the local people. It was also alleged that foreign funds were used to hamper the rehabilitation of the affected people. Further, people living nearby the river were not aware about the project due to which Medha Patkar formed the movement in 1989 and has been involved since then.

3. Vandana Shiva: Vandana Shiva is a Delhi based environmentalist and eco-feminist who is known for her proletarian efforts to protect the forests. Organize women's networks and conserve the local bio-diversity. A Gandhian philosopher of science, she is renowned for being the author of several books like *Monocultures of the Mind*, *Staying Alive: Women, Ecology and Development*. She is the founder of various environmental organizations and is also the director of Research Foundation for Science, Technology and Natural Resource Policy in Dehra Dun. During 2003, she was also identified as an environmental 'heroine' by Time magazine.

4. Vandana Shiva's eco-feminist though concept: According to Vandana Shiva, for eco-feminism, humans were actually seen in relationship and context rather than as abstract individual separated from its historical reality. It is due to this that eco-feminism rejected the abstract individualism. Eco-feminism also helped women to create a new paradigm of ecology due to the participation of women in environmental movements and the environmental issues being affected by women directly. Further, since women are closer to nature than men due to their attributes of femininity like care, compassion, nurturing attitude, building community without violence along with high sensitivity on nature, so they can easily resolve any environmental problems.

5. Sugatha Kumari: She was a poet and environmentalist who dedicated most of her writings to our Mother Nature. She was actively engaged and stood at the forefront of environmental and feminist movements that took place in South India. She eventually founded the Prakriti Samrakshana Samithi and also participated in the "Save Silent Valley" protest, that took place in the Palakkad district of Kerala.

6. Radha Bhatt: Radha Bhatt led the 2000 kilometres march to raise people's voice for water rights. She actively formulated the Uttarakhand Nadi Bachao Abhiyan in the year 2008 to restrict the manufacturing of a series of hydel power projects which not only threatened the flowing path of Ganga and its tributaries but also destroyed the heavily affected ecosystem of the Himalayan region.

Presently, there are many environmental activists who have been working benevolently for the conservation of their environment. Among them are Padma Shri award winner Sunita Narain who emphasizes both on fighting climatic change and sustainable development. Jamuna Tad was another Padma Shri award winner who along with 100 Adivasi women safeguarded Jharkhand forest from the underworld for a span of 20 years, due to which she was known as 'Lady Tarzan' of Jharkhand forest. Radha Bhatt who was the pioneer of Nadi Bachao

Abhiyan in 2008 opposed the construction of hydro-electric power project which has not only devastated river Ganga but also destroyed the ecosystem of the tributaries which adjoined it (Gunwal & Mago, 2021).

CONCLUSION:

Recommendations for a gender-inclusive sustainable development:

Due to the increasing ecological crisis followed by the need to conserve the environment for sustainable development, it is necessary to include women decision-makers and advisers related to environmental management. Once they are mobilized for environment preservation, they can play a pivotal role in ecological sustainability as they were involved in environmental movements.

FUTURE CHANGES DUE TO ECOLOGICAL IMBALANCE:

Future changes due to ecological imbalance will be highly visible in various aspects-

1. **Changes in future temperature:** Future temperature is expected to rise at least by 2.7° F by 2100; air temperature at ground level will continue to warm more rapidly.
2. **Change in snowpack and permafrost:** Already, the area of snow cover in the Northern Hemisphere has gradually decreased since 1970; Permafrost temperatures in Alaska and the poles have increased over the previous century. For the next century, it is expected to witness that sea ice will continue to decline, glaciers will eventually melt at a much faster pace, snow cover will continue to decrease and permafrost will continue to diffuse.
3. **Change in the sea level:** Warming up of the temperatures will lead to the rise in the sea level by expanding ocean water, melting up of the glaciers from the mountains and causing certain portions of Greenland and Antarctic ice sheets to melt and flow into the main stream of water.
4. **Ocean Acidification:** It adversely affects the lives of many marine species like plankton, shellfish and corals. Acidification of ocean declines the availability of calcium carbonate which is a key building block for shells and skeletons of various marine organisms.

Hence, since women have played a significant role in environmental protection they can also help to control population explosion which is one of the causes of environmental degradation. They also make maximum contribution in terms of family planning and help in meeting the household needs and community energy needs. They are dependent on their own labour animal and bio-mass energy to meet their daily needs not only due to the inadequate energy resources but also due to lack of access to efficient technologies of energy utilization which coerces them to be dependent.

However, with proper environmental education and awareness, women will be able to conserve energy resources more efficiently in comparison with men. They are also responsible for keeping their household clean and hygienic on which depends the health and wealth of their family members. Further, with their proper education and training, the experiences and incidences of most of water, food and air borne diseases can be minimized and curtailed. Due to close relation with Nature, they

are able to understand the environmental issues and ecological crisis better than men. Thus, since women are the active participants of most environmental movements and prospective users of the environment, it is the need of the hour to consider their perspective while planning to safeguard the environment along with implementation of environmental projects for the needful.

With regard to the role of government in implementation of policies, the central government also needs to develop a strategy in order to curtail certain obstacles --- be it legal, administrative, constitutional, social and economic. Such strategy would help women to participate in the sustainable development for the environment. Further, the non-governmental organizations, environmental conservation agencies and the common man need to recognize and mobilize women to protect and enrich the natural resources for sustainable purpose. Thereby, since women are more close to nature, they are always able to understand the environmental issues and problems in a better way. It is due to this reason that is the need of the hour to consider including their views in implementing several policies and projects for a gender-inclusive environment.

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