

ROLE OF WOMEN IN ENVIRONMENT CONSERVATION

***Dr. P. Mago, 1Dr. I. Gunwal**

***Principal, SRCASW, University of Delhi, New Delhi**

1Department of Microbiology, SRCASW, University of Delhi, New Delhi

***Corresponding Author-**

Dr. Payal Mago

SRCASW (Shaheed Rajguru College of Applied Sciences for Women)

UNIVERSITY OF DELHI

NEW DELHI, INDIA

Email id- payal500@hotmail.com

Contact No- 919560922869

ROLE OF WOMEN IN ENVIRONMENT CONSERVATION

Abstract

Growing population and technological advancement are continuously putting a strain on the environment and on country's natural resources. Over-exploitation of the country's resources like land, water, fuel etc. has resulted in degradation of resources. Hence, it is utmost important to conserve and promote the natural resources and environment. Women have direct contact with natural resources like fuel, food and fodder, forest, water and land especially in rural areas where 70% of Indian population reside and directly dependent upon natural resources. Before 18th and 19th century, it was considered that women have no role in environmental conservation and promotion, as well as they were avoided in all major sphere of social life. But after spreading awareness about their rights and duties and taking cognizance of their surrounding they consciously tried to raise voice against environment degradation. Women play a critical role in managing natural resources on family and community levels and are most affected by environmental degradation. In communities around the world, women manage water, sources for fuel, and food, as well as both forests and agricultural terrain. From the high level to the grassroots, the 1992 UN Earth Summit, India's Chipko movement and Kenya's Green Belt Movement all highlighted the role of women's voices and perspectives in sustainable development. Similarly, now –a-days Medha Patekar, a social worker, Menaka Gandhi, an environmentalist and politician are playing key role for the conservation and promotion of the environment. Therefore, conservation of natural resources and promotion of environment cannot be done without involving the women in planning and training for promoting the values for conservation and promotion of environment.

KEY WORDS: Growing Population, Conservation, Natural resources, Degradation, Environment

INTRODUCTION:

Environment comes from the French word 'environner' means surround. Environment is the sum total of water, air and land, interrelationships among themselves and also with human beings, other living organisms, and property. On the other hand, Women were considered as a weaker sex from ancient times. All over the world, women are predominantly responsible for management and conservation of resources for their families. Whether it be exploring the world's water resources or protecting the forest resources, fearless women are leading the charge. In the early 1970s, an interest in women and their connection with the environment was sparked, largely by a book written by Ester Boserup entitled, *Woman's Role in Economic Development*. Starting in the 1980s, policymakers and governments became more mindful of the connection between the environment and gender issues. Changes began to be made regarding natural resource and environmental management with the specific role of women in mind. According to the World Bank in 1991, "Women play an essential role in the management of natural resources, including soil, water, forests and energy and often has a profound traditional and contemporary knowledge of the natural world around them". A lot of studies on women and environment have shown that women is very close to nature and they are significant actors in natural resource management and they are major contributors to

environmental rehabilitation and conservation. The Interdependence of women with nature can be evolved from the following observations:

- (i) Women are having base and skills for natural resource management
- (ii) They are better managers for natural resources.
- (iii) They have sensitiveness towards Environmental
- (iv) They have high ecological consciousness.

Natural resource depletion and environmental degradation has direct consequences for women's time, income, health and social support system.

The knowledge of women regarding the forest produces which have high herbal and medicinal value gained through long experience is disappearing with deforestation. Unconscious and ruthless exploitation of natural resources, which resulted in environmental degradation, has a direct impact on women.

About two to three million people in the forest and tribal belts of India earn their livelihood by carrying fuel load on their head and of these, 90 per cent are women. The year round collection of minor forest produce and herbs have traditionally provided extra income, valuable nutrition and medical support. As women operate in a labour intensive and non-monetized economy, they have become victims of profiteers, middlemen and also the men in their families. Recent studies revealed that women are the direct victims of such environmental degradation, pollution etc. to illustrate, in some areas a few decades back women went to fetch water from sources that were few feet away. But now, because of excessive mining and allied activities, they have to walk miles together for a pot of drinking water. Though environmental degradation affects the human beings in general, but women are considered to be the main victims of environmental degradation. Women's direct contact with environment has produced them deep- knowledge about the environment. Women, being primarily responsible for domestic and household management, interact more intensively with the natural environment and build the environment more than men. Consequently, they are more likely to suffer from a degraded home, neighbourhood, and city environment and to shoulder more of the burden that goes with living in poor housing and communities with inadequate residential and health infrastructure, since they spend more time at home and its immediate vicinity (7). Women in India are playing a crucial role in protection and conservation of environment. Women in our country have brought a different perspective to the environment debate, because of their different experience base. Poor women's lives are not compartmentalized and they see the issues in a broad and holistic perspective. They understand clearly that economics and environment are compatible. Women have recorded successes in solving environmental problems all over the world. In India, the women realized that degradation of productive land has led to the erosion of top soil; the choking of water drainage was causing salinity and loss of food crops. They collectively lease degraded land and revived them through traditional farming. In three years, 700 acres of land were restored to productive use (26). Moser (1991) distinguishes between three roles for women:

- i. As managers or maintainers of the natural environment,
- ii. Rehabilitators of the natural environment in the sense of sustainable development, and
- iii. As innovators in the use of appropriate technology in the creation of new environments.

(5) Dankelman and Davidson (1998) observed that women play a key role in managing their natural surroundings and adopt several mechanisms to deal with the kinds of environmental crisis they face. Women and the environment are closely bound and interconnected. Throughout history, women have been immortalized as powerful symbols of nature: Mother Earth, Earth Goddess, and Artemis in the Greek mythology, and Mother River (the Yellow River) in Chinese history.

Role of Women in Conservation of Environment in India

Environmentalists are those who work towards the betterment of our environment. These are the people who have lobbied for environment protection when the common man would rather sleep peacefully and care for his own benefit. These people have worked for a cause greater than them. By saving the environment they have saved and impacted us too.

The origin of the environment protection movement in India dates back to Kehjrali movement and gain momentum through Chipko movement, Appiko movement, Save Silent Valley movement and Narmada Bachao Andolan and the major trend in the environmental protection movements in India emphasises the fact that environment movements in India reflects the trend that most participants are women, Adivasi's, and poor people (29, 3). Women and environment are closely bounded and the intimate relation between women and nature led to the emergence of theory of ecofeminism, which is a field bridging ecological ethics and feminism that seeks to explore the conceptual connections between environmental degradation and sexist oppression (32). Women through their role as farmers and collectors of water and fire-woods have a close connection with their local environment and women children as well as marginalised sections are the prime victims of environmental degradation especially at times of natural disasters (2, 25). Thus women actively participate in environment protection than men as women are directly affected and influenced by nature than men (24). Women have been involved in several governmental & nongovernmental forestry & environment programs.

1. chipko movement / vriksha andolan / vriksha mitra
2. Community forestry programs
3. Social forestry programs
4. Individual conservation programs
5. SHGs conservation programs
6. Green-Belt movement
7. keep the city clean programs
8. green India clean India programs

The sustainable use of the environment by women is the result of their closeness to nature. Most women, especially in rural areas, are involved in household activities like the collection of food, water, fodder and fuel, which enhance their knowledge of the environment, thus

enabling them to implement the appropriate conservation practices and technologies. (Ram Pandit & Eddie Bevilacqua, (2011) Social Heterogeneity and Community Forestry Process). People in Western countries think they originated the environmental movements without knowing that the villagers in mostly poor and developing countries initiated these movements.

Environmental Movements lead by Indian Women-

1. Bishnoi's first environmentalists of India:

The direct concern of Indian women with environment protection can be traced long back to 1731 A D, The Bishnoi people of Rajasthan credited for the first use of Chipko tactics against tree felling (9). Bishnois movement began with the royal order of Maharaja Abhay Singh to cutting of Khejri trees, worshipped by Bishnois, for construction of fortress. The villagers under the leadership of Amrita Devi protested against the order as she hugged the tree, as a new form of dissent. Amrita Devi and her three daughters were beheaded for disobeying royal order. Just before her martyrdom, Amrita Devi declared, "If a tree is saved even at the cost of one's head, it's worth" (17). Maharaja stopped order as 363 Bishnois lost their lives in non violent method for protection of trees. They are upholding eco friendly principles still by saving water by traditional water harvesting system, indigenous cultivation method for local areas and not killing any animals (10). Thus Bishnois movement laid the foundation of environment protection movement in India. This movement started by Amrita Bai in 1731 A D was revived by Bachni Devi and Gaura Devi of Uttar Pradesh in 1972. They snatched the axe from the wood cutters and warned contractors not to cut the trees.

2. Chipko movement (1973):

Chipko movement was started in 1973 at Garhwal division of Uttar Pradesh specially Chamoli District. The protest movement was organised by Chandi Prasad Bhatt, who aired the slogan of "ecology is permanent economy." Chipko movement was led by Sunderlal Bahuguna, Bachi Devi, Gauri Devi and women of the Garhwali area saved trees by embracing them. Again in 1977 a large number of rural women saved the Adwani Forest under the leadership of Bachchni Devi. The movement begin with the government refusal to supply ash tree to the Dasholi Gram Swarajya Mandal (DGSM), (workers' cooperative) for processing plant of forest produces (especially for making plough) in Chamoli District. Instead government gave green signal for Simon Company to cut ash trees for production of sporting goods. The DGSM organised protest against government decision to promote Simon Company instead of villagers. This boosted the Chipko protest. Women formed Mahila Mandal for the protection of forest as they understand the forest degradation has more direct impact on their lives. For poor men of the area development opportunities by the Simon Company are new avenues for reduce the dependence on women, by woks on hotel, and construction works. But women want to preserve the status quo and protect environment through forest protection of Garhwali Hills as it is the question of their survival (12). The method of tree hugging protest led by Gauri Devi and Bachi Devi found success against chopping down the trees. Simon Company stopped cutting of trees. The main slogan of women was, the forest is our mother's home, we will defend it with all our might which prove their eagerness to protect forest (10).

3. Appiko movement (1983)

Appiko movement is important environment conservation movement in Karnataka, to protect Western Ghats forest. Appikko movement was initiated by Panduranga Hegde. In September 1983, men, women and children of Salkani (a village in Western Ghats) "hugged the trees" in Kalase forest (8,31). This movement was against government policy to open forest for industrial development. The members of Mahila Mandal include Adivasi women joined for protection of rainforest by writing down to the government for halting of woodcutting. The village women conducted awareness programmes through foot marches, slideshows, folk dance, street plays, and dramas (Karan, 1994). Thus with the strong protest from people, Government forced to halt industrial policy on Western Ghats which resulted in destruction of forest (18,13).

4. Silent Valley movement (1976)

Silent Valley is one of the important biodiversity hotspot in Southern end of Western Ghats in Kerala. The Silent Valley Movement was against the decision of Kerala Government to construct a dam for hydroelectric power project in the Silent Valley forest (1,27,6). The Malayalam poet and environmentalist, Sugatha Kumari was the prominent leader in this movement. Despite the offer of employment and development in the area, people, especially women opposed the hydro electricity project. As a result the project was cancelled by personal interventions of the then Prime Minister Indira Gandhi in 1980 and Silent Valley was declared as a National Park in 1984 (4).

5. Narmada Bachao Andolan (1985)

India's Narmada Bachao Andolan (NBA) is an environment movement against the building of a number of dams along the Narmada River funded by World Bank. The NBA spread to three states of Gujarat, Maharashtra, and Madhya Pradesh as the construction of Sardar Sarovar Dam affect the environment and settlement of people of these areas. NBA, which led by the Medha Patkar, Baba Amte, and Arundhati Roy had turned into the International protest, gaining support from NGO'S all around the globe. With strong protest from NBA World Bank withdraw project in 1993 (28,20). But the case continued in Supreme Court.

6. Navdanya movement (1984)

Navdanya is India's largest organic movement. Navdanya began in 1984 as a program of the Research Foundation for science, Technology and Ecology (RFSTE), a participatory research initiative to provide direction and support to environmental activism. "Navdanya" means "nine crops" that represent India's collective source of food security (Preston –Pile, 2007). The main aim of Navdanya is to save seeds from biopiracy³⁴ and with this intention, setup 111 Community seed banks³⁵ in 17 states in India. They are strongly campaigning against Genetically Modified Seeds and actively participating in biodiversity conservation (30). Mostly the members of Navdanya Movement are women farmers from various parts of country (21).

Women concern for nature around India:

Women have an integral relation with the environment. Therefore, women are essential for any measure aimed at environmental protection and sustainable development. In fact, women have contributed greatly to the conservation movements in the past.

1. **Amrita Devi:** The first recorded instance of a woman trying to safeguard the environment relates to about 300 years ago when, in Rajasthan, India, a woman Amrita Devi protested to the felling of trees by for building a palace for the Maharaja of Jodhpur. She died in the attempt, which was followed by large-scale protests by the local villagers. As the story goes, the king promised never again to ask the local villagers to supply timber. Amrita Devi belonged to the Bishnoi community, which is known for its love of nature.
2. **Gaura Devi:** The chipko (means= to hug) movement is a topic taught in almost all of the schools. The chipko movement started under the leadership of Gaura Devi who organized the women to hug the tress and prevent their cutting. She was the head of the mahila Mangal Dal, at the Reni village. The day the lumbermen were to cut the trees, Gauri Devi led 27 women to confront them (as the men had been distracted towards Chamoli). She initially tried to talk them out of it, but soon the lumbermen resorted to abusing and threatening. The women thus decided to hug the trees to stop them from being felled. They guarded the trees all night until the lumbermen surrendered and left. News of the movement soon spread to neighbouring villages and people joined in. Same acts were repeated in other parts of Uttarakhand and thus women were seen as providing environmental solutions.
3. **Medha Patkar**– A popular environmentalist, she is known for her active role in the Narmada Bachao Andolan (NBA) – a powerful mass movement against the construction of a large dam on the Narmada River. The proposed Sardar Sarovar Dam is a multi-crore project and would have displaced more than 320,000 people. It was alleged that foreign funds were being used to hamper rehabilitation. Medha Patkar was also concerned that the people living there had no idea about the project. She formed the NBA in 1989, and has been involved since. As a peaceful means to protest, she took up fasting several times. NBA has subsequently created high level awareness.
4. **Sunita Narain**– She is the Director General of Centre for Science and Environment (CSE), and publisher of Down to Earth. She sunita narain began her work in the 1980s along with Anil Agarwal, another prominent environmentalist, and co-edited State of India’s environment report. After the loss of tigers in Sariska, Sunita chaired the Tiger Task Force for conservation in 2005. She is a member of the Prime Minister’s Council for Climate Change and National Ganga River Basin Authority (which employ practices to clean the river). In 2005, 2008 and 2009 she was featured on the world’s 100 public intellectuals list, by US journal Foreign Policy. Also, Sunita has been awarded the Padma Shri. Her research interests are global democracy (emphasizing on climate change) and local democracy (forest resource management and water related issues)
5. **Maneka Gandhi**– She was wife of the famous (now deceased) Indian politician, Sanjay Gandhi. But Maneka Gandhi is known for reasons different from above. She is an animal rights leader as well as an environmentalist. In 1994, she founded People for Animals, the largest organisation for animal’s welfare in India. She believed in ahimsa and the fact that India was in need of a movement to stop the cruel treatment meted out to animals. So she anchored a TV program “Heads and Tails” and authored a book

under the same title. She now chairs the Jury of International Energy Globe Foundation which annually awards the best environmental innovations of the year. For her revolutionary work among animals, she went on to receive some of the highest awards in the world.

6. **Vandana Shiva**– She is a Delhi based environmentalist and eco feminist. A Gandhi follower, she is well known for her proletarian efforts to protect forests, organize women’s networks, and conserve local biodiversity. A physicist and philosopher of science, she has authored books such as *Monocultures of the Mind*, *Staying Alive: Women, Ecology and Development*, *Biopiracy* and *Soil Not Oil: Environmental Justice in an Age of Climate Crisis*. In 2003, she was identified as an environmental ‘hero’ by the Time Magazine. She has founded and advised various organizations. Vandana Shiva is the director of the Research Foundation for Science, Technology, and Natural Resource Policy in Dehra Dun. She was awarded the 1993 Right Livelihood Award, considered parallel to the Nobel Prize. Navdanya, a national movement to protect the diversity of living resources, was created in 1991. Since its 20 years of existence, more than 2000 varieties of rice have been conserved and 34 seed banks established in 13 states nationwide.
7. **Sugathakumari** – A poet and environmentalist, Sugathakumari have dedicated most of her writings to Mother Nature. She has been at the forefront of environmental and feminist movements in Kerala, South India. Prakriti Samrakshana Samithi was founded by her who also participated in the ‘Save Silent Valley’ protest, a social movement aimed at the protection of Silent Valley, an evergreen tropical forest in the Palakkad district of Kerala.
8. **Radha Bhatt** – Actively formulating in the Uttarakhand Nadi Bachao Abhiyan in 2008 to oppose the construction of a series of hydel power projects that not only threatened the flow of the Ganga and most of its tributaries but imperilled the fragile, heavily deforested ecosystem of the Himalayan state, Radha Bhatt led 2000 kilometres march to voice for people’s water rights.

Environmental Movements lead by Women around the World-

1. **Green Belt movement:** Another movement, which is one of the biggest in women and environment history, is the Green Belt movement. Nobel Prize winner Wangari Maathai founded this movement on the World Environment Day in June 1977, involving 80,000 women in planting of trees. The Green Belt movement aims to bring environmental restoration along with society's economic growth. This movement led by Maathai focused on restoration of Kenya's rapidly diminishing forests as well as empowering the rural women through environmental preservation.
2. **Kenyan land takeover:** In Kenya, starting in the mid-1980s, women protested against the elites and big foreign corporations who were coerced and controlling the production of the land. Rather than allowing food to be grown for survival, women were pressured by both their husbands and the government to cultivate coffee for foreign profit. The protests continued and gained strength over the next couple of decades. The protests eventually ended in a Kenyan power shift enforcing democratic national elections, which resulted in the redistribution of land possible.

Women concern for nature around the world:

Women around the world play a key role in the protection of biological diversity. They have recognized the need not only to protect the bio-diversity, but also to reshape and recreate it.

1. **Rachel Carson:** One of the outstanding women environmentalists is Rachel Carson. Rachel Carson (1907-1964) was a scientist, writer, and ecologist. Rachel Carson wrote the now-famous *Silent Spring*, an expose on the misinformation spread by the chemical industry and the use of synthetic pesticides, specifically DDT. This book spurred the environmental revolution. The overall theme of the book is the commanding- and overwhelmingly negative- effect that humans have on the natural world. Carson's lasting legacy led to the creation of the Environmental Protection Agency in the United States under the Nixon administration and started the conversation regarding the human impact on the environment.
2. **Wangari Maathai:** Wangari Maathai worked tirelessly for both land conservation and women's rights. She was the founder of the Green Belt movement, which focused on environmental conservation and women's rights, in her native country of Kenya. In addition to being honoured by many world leaders for her efforts, she was awarded the Nobel Peace Prize in 2004 for her approach to sustainable development, democracy and peace.
3. **Isatou Ceesay:** Isatou Ceesay, dubbed "Queen of Recycling," is a Gambian activist who started the recycling movement called One Plastic Bag in the Gambia. Ceesay works to educate citizens about recycling and reducing the amount of waste that is created. She founded a project that creates plastic yarn and forms bags out of the upcycled waste. Not only has her project dramatically reduced the amount of waste in her village, but it is also employing hundreds of West African women and providing them with monthly revenue.
4. **May Boeve:** May Boeve is co-founder of the website, 350.org, a organization dedicated to working against climate change by connecting leaders across the world. The aim of the organization is to reduce the levels of carbon dioxide in the atmosphere to a point where global warming will not be as dangerous as predicted. Her organization is going straight to the source: the fossil fuel industry. By limiting the power of the industry itself, they hope to then confront the government about limiting carbon dioxide emissions.
5. **Marina Silva:** Marina Silva is a warrior for the Amazon Rainforest in Brazil. Silva was a colleague of Chico Mendes, who was assassinated for defending the rainforest in 1988. She and Mendes led demonstrations in the 1980s to protect the rainforest from government control. After Mendes' assassination, Silva became a politician and fought for environmental protection, sustainable development, and social justice. Deforestation decreased by 59% from 2004 to 2007, during her political career.

Recommendations:

- Ø The protection of women decision- makers, planners, advisers and managers related to environmental management should be increased.
- Ø Environmental education should be expanded in rural areas.
- Ø Women when once mobilized play a significant role in environmental protection.

Ø The potential of science and Technology should be utilized to solve environmental related problems and ease women's workload inside and outside the home.

Ø The central government should develop a strategy to eliminate various obstacles-constitutional, legal, administrative, social and economic in nature to women's full participation in sustainable development.

Ø The Government, Non- Governmental Organizations, Environmental Conservation agencies and the common man should recognize and mobilize women as active participants to protect and enrich the natural resources that sustain us.

Ø In spite of all these aspects there must be promotion of disseminating the gender relevant knowledge and valuations of women's role through formal and non-formal education.

CONCLUSION:

Women have always played a significant role in the environmental protection. Furthermore, too women can help control population explosion which has been one of the major factors in environments dreadful conditions. Women are in the best position to make maximum contribution in family planning.

Women have always played a critical role in meeting household and community energy needs. Inadequate energy resources and a lack of access to efficient technologies of energy utilization force the people to depend on their own labour, animal power and bio-mass energy to meet their daily requirements. With adequate environmental education and awareness women can conserve energy resources far more efficiently as compared to men.

Women are responsible for the cleanliness of the household, on which depends the health and wealth of the family members. With proper education and training one can minimize the experiences and incidences of most of the water, food and airborne diseases.

Traditionally women were kept away from the powers of decision making. Their unequal access to education and lack of decision making authority at all levels has lowered their position in the society. As a result it has had adverse effects on income, nutrition, health, social support networks and domestic knowledge.

Practically being close to nature, women are always able to realize environmental issues better. Since women are the prospective users of the facilities, it is necessary to consider their views in planning to save the environment and implementing projects for the same.

DATA ACCESSIBILITY:

All supporting data were obtained from previously published work available via references below and from the output of the international and national articles on which the paper is based.

CONFLICT OF INTEREST:

The author declares that there is no conflict of interests regarding the publication of this manuscript.

ACKNOWLEDGEMENT:

The Authors express their gratitude to the Management of Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, New Delhi, India, for providing necessary facilities to complete this study successfully.

REFERENCES:

1. Ajayan (2009). Silent Valley: 25 years of an Ecological Triumph. Retrieved From <http://www.livemint.com/Home-Page/ZTKhUS56VU5MODk8aYxb2J/Silent-Valley25-years-of-an-ecological-triumph.html> Accessed on 16/9/2015.
2. Akwa L.et al (2008). Analysis of Fuel Wood Utilization Among Rural Women In Akwanga Area of Nasarawa State. Nigeria. The Abuja Journal of Geography and Development. Vol. 1(2).
3. Baviskar, Amita (1995). In the Belly of the River: Tribal Conflicts over Development in the Narmada Valley. Delhi: Oxford University Press
4. Chengappa, R. (2009). 1976-Silent Valley movements: The genesis of green. Retrieved From <http://indiatoday.intoday.in/story/1976+Silent+valley+movement:+The+genesis+of+green/1/76360.html>.
5. Dankelman. I and Davidson, J (1997) women and environment in the third world Landon; Earthscan publication.
6. Dattatri, Shekar (2011). Silent Valley – A People’s Movement That Saved a Forest. Retrieved From <http://www.conservationindia.org/case-studies/silent-valley-%E2%80%93-a-people%E2%80%99s-movement-that-saved-a-forest>.
7. Etta, F.E (1999). Maroko low- income settlemet in Lagos, Nigeria; Gender and Urban Natral resources management in D. L. smith women managing resources Mazigira institute, Nairobi.
8. Ghanashyam, B. (2008). NREGA –Bringing Hope to Small Farmers. Retrieved From <http://indiatoday.intoday.in/articlePrint.jsp?aid=76360> .
9. Gottlieb, Roger S. (1996). This Sacred Earth: Religion, Nature, Environment. London: Routledge.
10. Bhatt, C.P. (1992). ‘Chipko Andolan. Forest Conservation Based on People’s Power’, Environment and Urbanization, 2(1): 7-16.
11. Green Belt Movement (2006). <http://www.wangarimaathai.or.ke/>. The Guardian. "Wangari Maathai obituary". September 26, 2011. <http://www.guardian.co.uk/world/2011/sep/26/wangari-maathai>.
12. Jain, Shobhita (1984). ‘Women and People's Ecological Movement: A Case Study of Womens’ Role in the Chipko Movement in Uttar Pradesh,’ Economic and Political Weekly, 19(41): 1788-1794.

13. Klassen, Courteney (2013). Indian villagers hug trees (Appiko) to stop deforestation in Karnataka, 1983-1990. Retrieved From <http://nvdatabase.swarthmore.edu/content/indian-villagers-hug-trees-appiko-stopdeforestation-karnataka-1983-1990>.
14. Mariama A and Henshall J (1995). Gender and the Environment: Women's Time Use as a Measure of Environment Change. *Global environmental Change*, Vol .5 P 337.
15. Maye. A, (1994). Women: the Resource manager UNEP, Vol 6. No4, pp. 23-24.
16. Mishra, A.(1978) "Chipko Movement:Uttarakhand Women's Bid to save Forest Wealth". *People's Action*. New Delhi
17. Moksha (2014). 'Bishnoi Communication for Perfect Life, Death and Enlightenment: An Ecological Perspective', *Scientific Journal of International Research*, 1(2):91-114.
18. Mondal, Puja (2015). Appiko Movement in India (Useful Notes). Retrieved From <http://www.yourarticlelibrary.com/essay/appiko-movement-in-india-usefulnotes/32985/>.
19. Moser, C.O.N .(1991).Gender Planning In the Third World: Meeting Practical and Strategic Needs. In R. Grant and K. Newland (eds) *Gender and International Relations*, (83-121).Buckingham: Open University Press.
20. Nakhoda, Zein (2010). Narmada Bachao Andolan (NBA) Forces End of World Bank Funding of Sardar Sarovar Dam, India, 1985-1993. Retrieved From <http://nvdatabase.swarthmore.edu/content/narmada-bachao-andolan-nba-forces-endworld-bank-funding-sardar-sarovar-dam-india-1985-1993>.
21. Navdanya. <http://www.navdanya.org/earthuniversity>.
22. Navdanya. <http://www.navdanya.org/home>
23. Preston –Pile, Ken (2007). 'A Return to the Land, Vandana Shiva's Campaign for Sustainable Agriculture in India,' *Peace Power*, 3(2):1-10.
24. Rao, Manisha (2012). 'Ecofeminism at the Crossroads in India: A Review', *DEP*, 20(12): 124-142.
25. Raymond E., Wiest Jane S.P., Mocellin D. Thandiwe Motsisi, Winnipeg, & Manitoba.(1994). *The Needs of Women in Disaster and Emergencies*. United Nations Development Programme.
26. Ress, P. (1992). Women success in Environment Management, UNEP, *Our Planet*, Vol. 4. No 1. PP 16-18.
27. Rohith, P. (2012). *The Silent Valley and its discontents: literary environmentalism and the ecological discourse in Kerala (1975-1984)*. (Doctoral Thesis) University of Hyderabad
28. Roy, Arunthathi (1999). *The Greater Common Good*. Retrieved from www.narmada.org/gcg/gcg.html.
29. Shiva, Vandana (1988). *Staying Alive: Women, Ecology and Survival in India*. New Delhi: Kali for India.

30. Shiva, Vandana, Barker, Debbie & Lokhart, Caroline (2011). *The GMO Emperor has no Clothe. A Global Citizens Report on the State of GMOs - False Promises, Failed Technologies.* Synthesis Report Published by Navdanya International.
31. Srinivasaraju, S. (2013). *Once there was a River.* Retrieved from <http://www.outlookindia.com/article/once-there-was-a-river/226478>.
32. Warren, Karen J. (ed) (1994). *Introduction. Ecological Feminism.* London; New York: Routledge.
33. Warren, Karen. J. (2000). *Ecofeminist Philosophy: A Western Perspective on What it is and Why It Matters.* Lanham Md: Rowman & Littlefield.