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Contents

Obituary

Chief Editors Note

'Environment and Sustainability:

Contestations and Confrontations' 09

Dr. Sobha B Nair

Environment and Sustainability

Dr. P. K. B. Nayar 20

Environment & Development: Mapping
different approaches to Sustainability

Dr. Manisha Rao 31

Sustainable Living in Times of Climate Crisis

Dr. Abhilash R. 46

Women as Stakeholders and Beneficiaries in

Post Flood Survival strategies:

Case analysis of Kadamakudy Island

Dr. Jyothi S Nair & Remyamol M.R 59

The Culture of Household Waste Management in
the Cultural Capital of Kerala, Thrissur

Dr. V Shinju & Ms. Aswathy V 74

The Threats of Climate Change are not
Gender-Neutral: Women as Victim and Alleviator

Shilujas M

86

Towards Sustainable Habitations: Relevance of
Alternative Housing Patterns in the Context of
Natural Disasters in Kerala

*Dr. Amrutha Rinu Abraham &
Dr. Sudheeran T.S.*

103

Industry Induced Involuntary Migration:
Unfolding the Story of Alappad

M. Pradeep Kumar & Vishnu J. Menon 124

Repercussions of Development Induced
Displacement. A study of Residents Adjacent to
Technopark, Thiruvananthapuram

Dr. Lekshmi Chandran

144

Health Issues Faced by Older People in
Kerala during Flood

Dr. Amala Mathew

156

**The Threats of Climate Change are not
Gender-Neutral: Women as Victim and Alleviator**

Shilujas M

Abstract

It is well evidenced in climate change discourses that those who are most at risk of environmental decay include marginalized populations due to geography, age and gender. Different manifestations of climate change increase challenges to women's health and survival. There are more chances for women to suffer from the harmful effects of extreme weather events, including floods or drought in developing country like India. While women have made comparatively small contributions to global warming, they bear the brunt of the health effects of climate change. Among these groups, pregnant and lactating women will be particularly vulnerable. Efforts to prevent, mitigate and address the effects of climate change should therefore include integrated action plan to address these ill-effects on women. Better and sustained funding of women's health is essential to protect them from the negative effects of climate change. Women and children must be able to participate in climate change mitigation and adaptation strategies at the national and local level. This present paper explains in detail on the major rights and livelihood-related impacts of climate change on women and children in Kerala. It is an attempt to summarize how far their basic human and environmental rights are undermined in the planning implementation process. Open discussions with the experts and professionals is the method of data collection.

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Introduction

The impact of climate change and its effects in a society does not fall evenly across different cross sections of society. Various elements like poverty, inequality, imbalanced power relations, poor life conditions etc. determine the intensity of emerging challenges and disasters due to climate change. Since the duties, responsibilities, positions, powers and individuality borne by men and women across societies differ, the rising challenges of climatic change and its remedial measures also are different for men and women. The impact of climate change is comparatively high on women and children than men and grownups. The effect of climate changes on the general health conditions is not negligible and moreover it is deeply reflected on child health. Climate change accelerates the recurrence of natural disasters like draught, flood and solar winds along with the outbreak of epidemics like Malaria, cholera and diarrhoea, which again has a high toll on children.

National and global research and reliable data are required to better plan and promote women's inclusion in the climate adaptation, so that the value and capacities of women's engagement in climate change discourse improve. In low- and middle-income countries like India, 8 in 10 women are responsible for collecting of drinking water. Women are responsible for over 70% water related routines, globally. In India alone, women make up over 65% of the agricultural workforce. But, even though women are more likely to assess the impact of climate crisis on their lives and are more vulnerable to such impacts, there are no reliable indicators in order to measure women's role and engagement in climate change adaptation. Not just because of their role and dependence on natural resources, women are fundamental part to climate crisis debate because of their disproportionate vulnerability to climate threats. Yet, we could identify no single standard measure focused on these issues (Singh 2018).

While women are more likely than men to notice the climate change impacts on agricultural productivity, livestock problems and

water availability, they are less likely than men to receive key information on climate and agricultural information that would allow them to plan for climate concerns. An October 2015 research from Rakai, Uganda has found, women particularly those connected to agriculture and fishery, may be specifically vulnerable. Demonstrating its vulnerability in recent past, India has already experienced extreme weather events such as floods in Kerala, wildfires in Uttarakhand and heat waves in the north and the east. This is a result of 1°C rise in global temperatures.

As women are more adversely affected as their time and distance travelled to collect water increases, they are concerned about the health consequences for themselves and their children. According to IndiaSpend report in February 2019, in Odisha's Bhadrak, women's collectives and self-help groups (SHGs) joined together to generate solutions that ensuring potable drinking water. This effort was in the face of a rise in sea water levels and decreasing monsoon and resultant increase of salinity in local groundwater sources. SHGs also provide a platform for women to discuss flooding and associated women-specific concerns such as the lack of privacy during menstruation and sanitation (Singh 2018).

Inequalities and challenges faced by women contending with the effects of climate change are hard realities. But, there are several examples of women-led climate change planning and adaptation efforts too.

Why Women; Children?

Women are the most poverty stricken category in the world and they constitute the majority of the agricultural labourers of the world and therefore are the immediate victims of climate change. The society has burdened her with the responsibilities of finding, gathering, preparing and serving food in family. Draught, flood and deforestation have adversely affected agriculture and food safety and its impact would be direct and extreme on women in particular. Most women are destined to spend their life travelling miles and miles and waiting for hours to fetch water for drinking and cooking in most parts of the

world. Women, in these cases, are unable to take care of their own and their family's health properly, which is otherwise generally considered a woman's social responsibility. The extra burden of work and lack of adequate resources force young girls to take up responsibilities at an earlier age. Families that emphasise on educating boys and deputing girls to concentrate on household duties are not a rarity in most societies, especially of economically backward ones. Women, who are in direct business with nature on a day to day basis for basic needs like food, water and energy, are hardly given any say in the decision making or policy making discussions and platforms across the world.

In the face of disasters, women usually stay back to look for children and relatives as per their gender roles, it makes them more prone to casualties. In the 2004 Tsunami in Thailand, more women than men died because they did not know how to swim and climb trees like the men and boys did. Thus, natural disasters as a consequence of climate change also create greater risk for women. Recent studies in African countries highlight the link between climate change and women's risk for abuse. Financial stresses due to crop failure and resultant loss in household income increase marital stress, and can result in spousal violence against women. It can also result in economic abuse of women, as men often want to sell the crops the women have grown in the dry seasons, without engaging their wives on the decision.

Children, who are less immune at their growing stage, are easily prone to epidemics. Life in unhygienic conditions and usage of contaminated water for drinking and cooking purposes results in the ill health of children. Such untidy life conditions make children easily vulnerable to diseases like Malaria, Cholera and Diarrhoea. The probability of intestinal parasite infection and growth retardation is high among children living in unhygienic atmosphere. Floods, like draughts, are equally responsible for water contamination. During floods, water from septic tanks and drainages reaches drinking sources and facilitates water borne diseases directly and also acts as breeding grounds for carriers like mosquitoes. This is one of the reasons for the return of superannuated diseases like Malaria, Dengue etc.

especially among children aged between five and ten. The affected children are further prone to physical deformation, malnutrition playing a significant role in it.

The victims of malnourishment due to food insecurity resulting from climate change are mostly none other than children. Malnutrition has its adverse effects on pregnant women and feeding mothers equally, which becomes evident in the ill health and low immunity of new born babies and children under the age five. The victims of sun stroke due to high temperature and the lack of enough shades and canopies are also mostly children. There is also a double increase in the cases of pneumonia, asthma and allergy reported during the last 15 years due to atmospheric pollution and its impact on children is at a terrible pace. Even the after effects of climate change like landslides and flash floods have a deeper and quicker effect on children. The chances of high vulnerability to physical illness destroy even the mental health of a child and it should be seen as a negation of a child's right to live and grow into a complete social being.

UNDP reports that women and girls are 14 times more likely to die in a disaster than men. The 2004 tsunami killed four times as many women as it did men while 90% of those who died in the 1991 Bangladesh flood were women, according to the International Union for Conservative of nature (Bhandare 2018). Partly this is because women are not taught to swim or climb trees. Partly it's because they are more likely to stay back to try and save children and elderly parents. Interestingly, a 2008 study of natural disasters in 141 countries finds that in societies where women and men enjoy equal rights, the number of deaths were the same. It is not just mortality. Following a disaster, incidents of sexual and domestic violence shoot up and there is often a spike in the trafficking of children and women (Bhandare 2018).

A resolution adopted by the 4th Session of the UN Environment Assembly in Nairobi in March 2019, acknowledged the disproportionate burden of climate change on women and girls. It also emphasised the "power of their knowledge and collective action". The Assembly, attended by all 193 UN Member states, offers hope

for greater engagement of women in climate action planning and monitoring of their impact. This eloquently says the need to encourage women's participation and leadership in environmental-decision making—from the local to the international levels—and “to support training and capacity building efforts on gender mainstreaming and to ensure meaningful participation in global processes”. The resolution also requests the collection of data on gender equality and empowerment to assess progress on environmental policies and programmes.

Kerala Floods: Speaking through Women

It was evident that women's workload had doubled after the two floods in Kerala.. In an article titled “Kerala Flood: We must recognize increase in women's domestic works after disasters (Das 2019), it has clearly mentioned how women's domestic works get affected during and post disasters. The need assessment survey conducted in four flood affected districts of Kerala, the team members have found the women have faced many difficulties to provide clean filtered water to their family in the aftermath of the floods. As per pointed out in this article the women in villages of Kerala were using very traditional methods like aluminum pot with a sponge from old beds at its base for filtering water. Most of them were boiling water not only for drinking purpose but also for washing utensils. For some of the households nearby water collection points were damaged. There women now had to walk almost double the distance for collecting water, so they got up an hour earlier every morning just to collect water. It is noted that most assessments by aid agencies mainly focus on livelihoods and assets which have been damaged and lost. However, domestic work load and related stress are the aspects which most of the agencies ignored (Das 2019).

In this article Das tells that earlier women in villages used to go for firewood collection once or twice a week, but now it is up to four times for additional boiling of water. Losing of homes, assets and livelihoods due to flood forced women to addition works and recovering from the damages caused by flood. Menstrual hygiene,

sanitation facilities were also collapsed due to the polluted water available after floods. In villages the pathetic conditions of kitchens, damaged utensils and stoves were not addressed yet and going to continue till while the other parts of houses were repaired and restored back.

Inadequate socio-economic resources available to the women, they also find it more difficult to rebuild their lives after disasters. They have limited livelihood avenues, little access to loans and little knowledge of relief and rehabilitation available to them. Studies shows that natural disasters tend to lower life expectancy more in women than in men (Panicker 2019). The mental stress that women faced after the two recent floods is rarely addressed. In fact, in Kerala, trauma counselling after natural disasters is not seen as priority nor is trained personnel easily available. Our disaster management does not take in to account practical ways to help women overcome some or all of these issues. In many cases the women neither know about the services.

What is Eco Feminism?

It is an organization that has gained worldwide recognition. Eco-feminism aims at a consistent development in the socio political sphere by foregrounding the historical relationship that had existed between women and nature. It equally addresses the concerns of both the women who are oppressed within the family/society as well as the nature that is threatened by human exploitation. Both women and nature are the victims of a domineering and controlling force. Hence the subjugation of women by the oppressive male and also the exploitation of environment by the various cultural forces becomes the subject matter of their study. Although women had been an active participant in nature conservation programs for long, it was only in 1970 that ecofeminism as a term got acceptance. The term was first used by a French feminist Franco Yobane in 1997. The famous social activist and environmentalist Vandana shiva plays a major role in the global eco-feminist movement. According to her, a more sustainable and productive approach to agriculture can be achieved by reinstating the system of farming in India that is more centered on engaging

women (Shiva 2004). She advocates against the prevalent “patriarchal logic of exclusion,” claiming that a woman focused system would be a great improvement. She believes that ecological destruction and industrial catastrophes threaten daily life, and the maintenance of these problems have become women’s responsibility (Shiva, Maria 1993). While we are discussing about the concept of ecofeminism it is inevitable to mention about Chipko movement. The Chipko movement was a nonviolent agitation in 1973 that was aimed at protection and conservation of trees, but, perhaps, it is best remembered for the collective mobilization of women for the cause of preserving forests, which also brought about a change in attitude regarding their own status in society. The uprising against the felling of trees and maintaining the ecological balance originated in Uttar Pradesh’s Chamoli district (now Uttarakhand) in 1973. The name of the movement ‘Chipko’ comes from the word ‘embrace’, as the villagers hugged the trees, and encircled them to prevent being hacked (Express Web Desk 20148). available and if they do, they have no means to access them. In the case of the elderly women all these factors are magnified. Most of the times women are not involved in relief efforts and hence left out of all decision making. This was so even in literate and progressive Kerala (Panicker 2019).

What are Women Capable of?

Women are capable of acting as the most apt, effective and powerful agent who can employ practical solutions to the challenges rising out of climate change and thereby resisting it efficiently. It took almost twenty years to facilitate a scientific analysis about the climate change and its issues and therefore it is evident that a lot more effort is required to understand the impact of climate change upon humanity and its various branches of transactions in life. This also gives revelations to the need of well planned remedies and solutions rather than mere technical moderations for effective results. Even though women are showing interest in the researches happening in the various scientific, social and humanitarian disciplines like Gender Studies, Feminist Epistemology Political Ecology etc., the

statistics are least satisfactory when it comes to the ratio of total researches as well as progress accomplished so far.

The inadequate number of women researchers in the aforementioned disciplines and the lack of women centred researches in general render, the possibility of formulation of laws, policies and decisions that is women friendly, only a dream. The prioritization of commercial interests against the general interest of humanity during policy making cannot in effect have any impact on actual human life conditions. Only solutions and projects based on our knowledge and understanding, of the future of humanity accrued as part of learning, acquisition and realisation from life, will be effective in any sense. It is also a must to ensure that such projects and plans are gender sensitive as well as incorporative in nature irrespective of age to be productive.

It has already been stated that the dominance of men in the conception, planning and execution of policies regarding climate change and its issues are significantly high than women. Since the designing plans in the complex and undefined areas itself is a challenge, the need to experiment novel methods has become the need of the hour. Women can effectively contribute in such situations as their chances of comprising on the health and welfare of children and families are less. Thus in such situations women tend to exhibit more caution and concern upon any decision that may harm a prosperous future and moreover their presence would mark a considerable reduction in the risk involved in the issue. Therefore women's presence and active participation in the policy making would help improve the credibility and viability of any project. It might also in turn lead to a gradual change in the gender inequality that pervades in all walks of life.

A woman need not have to be a researcher, employed or educated in order for her to execute effective remedial measures against climate change and to engage in eco-friendly activities. Every homemaker, through her day to day activities, can be an influential force for the cause. There are precedences of women assuming leadership in various

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parts of the world in the conservation of environment by following eco-friendly developmental projects and in the resistance against ecologically harmful actions. Most women are engaged in professions that are directly related to environment like agriculture, fisheries and small scale industrial jobs. Women's participation and involvement in areas including water, food, energy, health, agriculture and economic transactions need considerable improvement. Even though it is the joint responsibility of every one in a family to cultivate and farm to meet family's requirements, women should gather great strength to pioneer such ventures. Women are, in all aspects, the suitable agents to assume leadership bring back vegetable gardens and effectively inculcate the culture into other family members. Every woman need to have awareness about a smart agricultural system that sustains energy, water, biodiversity and ecology in good prospects. Women on the one hand should nurture indigenous crops and plants and on the other hand should take initiative to test seeds that yield in all seasons alike.

To be able to prepare and have a meal a day using self-cultivated resources would be a great beginning towards the future. To actualise this, basic and essential knowledge about agriculture as a must prerequisite should be made available to women. It should include information on selection of yielding seeds, preparing land for cultivation, finding suitable crops for a season, judicious use of fertilizers, utilization of irrigation sources, planting trees as part of mixed farming etc.

Since responsibilities like fetching water for cooking and drinking are usually carried out by women in any society, women themselves, in most cases, are to bear the brunt of this day to day difficulty. Therefore women need to raise their voice for a better way to ensure drinking water facilities in the future including digging public wells, building water reservoirs, harvesting rain water etc which can invite large scale attention from local self-governments and authorities. Understanding water scarcity as a major future threat and bringing up future generation with a proper awareness about the frugal use of fresh water is the need of the hour. Women shoulder the biggest

responsibility of finding, gathering, preparing and serving a family food requirements on a daily basis. So, a woman should have an approximate idea of a family's consumption requirements for a day, week, month and year. This understanding and awareness should enable her judiciously use the resources so as to ensure the availability of all kinds of vegetables and fruits in all seasons by following proper conservation and preservation methods. In addition to this women can make use of the traditional and conventional methods of preservation of not only fruits and vegetables but also of seeds to get a good yield.

Women should collectively raise protest against logging of trees for construction and cooking. They can resist such activities by actively involving in planting trees in the vicinities and preparing plant nurseries in the locality. They should be aware of the use of unconventional fuel and energy sources like solar, wind and bio-waste energy resources, by having and organising group discussions on a regular basis.

The physiological threats and diseases that have risen as a result of climatic change have a large scale impact on women, since an ailment to any member in a family indirectly becomes a woman's concern and demands considerable effort and dedication. The cause of surprising return of epidemics like Malaria is nothing but the result of climatic change. Women struggling hard to take care of her ailing relatives have become an ordinary sight. In most cases women are at a loss, without knowing effects, remedial measures or solutions. To differentiate a skin disease from a sun burn, a mother should receive necessary awareness and knowledge about it. Women should be given proper awareness and education regarding the effective measures to counter various diseases including cost effective treatment available today.

Even though the productive work carried out by the women for their families are too high, they are not paid for it. Therefore, women's contribution to the family revenue is very less. Our tradition and culture still are hesitant to send women for earning jobs. In some

other cases women themselves do not take up paid jobs since they are already burdened with household works. This is where women are needed to be given awareness about small scale and domestic job opportunities whereby they can earn without leaving their home. Maintaining small dairy and poultry farms, aquariums for ornamental fish, mushroom cultivation, bag- sandal-umbrella and candle making units are all such areas where women can be given training easily and which can be set up with small initial capital. Women who are willing to step into such endeavours should also be given necessary information about potential fund sources and loans that may help them to set up production units. Income for women will lead to better savings and bring thrift in family expenditures. Moreover, economic independence of women will boost the general infrastructural hygiene and health of families. Women can impart economic life style to the children easily and ensure responsible spending of money in life.

What is the mode of interference?

The principle aim of this movement is to bring focal attention to the gender based perspectives by enabling women voice to be heard and addressed and also bring about discussion on climatic changes and its aftermath. Firstly, it produces effective scientific information by studying the climatic variations and its resultant effects / disasters by assessing it based on the discourse of humanities and social science. What is most important is that these laws that are made at the national and global level should be convincingly addressed. The main intention behind giving voice to women and in encouraging their participation is to improvise the quality of science and governance. The field of science and engineering technology, hitherto dominated by men must broaden their perspective to include within its framework an equal participation of the female gender. It is a necessity that women must come to the forefront and actively indulge in implementing projects in the field of weather and technology. So the active participation of women in science and research is essential for effective outcomes.

Amidst the prevailing gender discrimination, disparity faced by women in education and job sector, health issues; widening difference

in male-female population ratio and increasing atrocities and violence against women in general, women find it hard to voice against climate change and its threats. Therefore it is necessary to adopt some changes to enable and empower women to help them overcome the threats posed by climate changes. We need to ensure women's representation at international venues like U.N.F.C.C (United Nations Framework Convention on Climate Change). Participation of women in organizations and venues that discuss injustice and discrimination against women (Convention on the Elimination of all forms of Discrimination against Women) are also to be improved. Women should also be given voice in ventures like Committee on the Rights of Children and be given equal opportunity in the planning and execution of the funds and the projects designed. All meetings held and conferences convened should ensure a better gender ratio of participants so as to render a sea change in the perspectives and outlooks about women and their role in international issues like climate change and sustainable development.

What can the local authorities do about this?

Kerala, already high on human development indices, now has a unique opportunity in how it design its reconstruction and what position will it gives to women. Realising the contribution of women in the production-reproduction cycle of life from time immemorial and understanding the great their great role in the development of human societies are really relevant here. The innate expertise and experience held by women should be utilised to its best possible extent when it comes to tackling issues like climate change. Women might bestow us with better prospects of sustainable development and environmental conservation, if they get better livelihood options and better resource management methods. The result of such advantageous opportunities will be indirectly reflected in a society consisting of husband, brother, parents, friends and children.

The required and proportionate remedial measures against climate change must be adopted, taking the specific gender roles and responsibilities in each society into consideration. All disasters, due to epidemic outbreaks, global warming and climate change, generally have a high impact on women and therefore women must be properly

armoured against all calamities. For this, there should be Inter-Ministerial Task Force formed effectively.

The local authorities and administrators should form policies in future giving due consideration and importance to the power and control of women over natural resources so as to prepare women and the downtrodden to lead a prosperous life, alleviate poverty, conserve natural resources and face climate change. They should also ensure active involvement of women in lowering consequences of climate change and encouraging new eco-friendly adaptive measures by recognizing the scope of utilizing their skills and innate capacities. There should be urgent measures to keep women updated with knowledge regarding the utilization and management of natural resources from time to time. Local authorities can also provide better facilities for successful cultivation, harvest, procurement and processing of agricultural products as a result of initiatives led by women. Establishing crop/seed banks for housewives who are into farming will lead not only to effective preservation of crops and their potential market but also to the general food security of the society.

Local administrative authorities should affirm the active involvement of women in the reduction of climate challenges and the formulation of eco-friendly policies. They should incorporate women activists, professionals, homemakers, child helpline activists and women reformists into bodies that formulate decisive policies. Even though women are playing formidable role in the regulation of ecologically harmful activities, most of them go unacknowledged and unrecognized. If the efforts of women in environmental conservation become news and gain public attention it will be a great encouragement for such further ventures and those who support these will also have a boosted morale.

Local authorities can plan effective measures in the case of children with regard to climate change consequences.

Out of the categories like the poor, the old, women, pregnant ladies and children who suffer most because of climate change and its aftermaths, it is the children who constitute the larger percentage

of victims. In all discussions and debates, therefore, the focus should be the children. There should be efforts from the local administration to ensure and facilitate a healthy, nutritious growth of physical and psychological dimensions of a child. In order to achieve this, authorities concerned may seek guidance from erudite scholars and experts in the field as it is necessary to nurture the future generation according to their fullest possible talents. Government should utilize the skills, talents and social relationships of children for the effective execution of disaster management projects and local empowerment programmes. In all interactive and social spaces for children, including home and school, it is to be ensured that even in any adverse conditions, the day to day activities, needs lifestyles, surroundings and relationships of children are least affected. The various ways to ensure this can only be found through a collective effort and enthusiasm. Children can become pilot agents of remedial measures against climate change. Encouraging the use of bicycles in schools and colleges, initiating ventures like green/ eco clubs, making students a part of rainwater harvesting and planting trees are all some of the effective ways of utilizing children's energy to the cause. Teaching the children the use of ceramic, glass and steel utensils to cook and store food can also bring change in the affairs.

We should keep in mind that, as in the case of any social adversity, it is the children who immediately respond and react against climate change and the disequilibrium it brings.

Despite acknowledging the strength and capacity of women in the fields of agriculture, water management, food, tree planting, health, money management and thriftiness, more women empowerment programmes are to be organised. For the effective utilization of funds allotted to meet and overcome challenges of climate change, participation of local women community is inevitable. It is an absolute truth that any remedial measure would be ineffective and insufficient if it cannot hold the spirit of women's life experience and requirements. Gender equality must be ensured while conceiving, planning, designing and practising any project or action. To counter and check a global threat like climate change we need to support and

encourage indiscriminate, united and sensible operations that involve women from all cross sections of the society.

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