
UNIT 9 CHIPKO MOVEMENT

Structure

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9.1 INTRODUCTION

Gandhi's life and works have been a continuous source of inspiration to different movements as you would observe in this course. Today the environmental issues have taken a centre-stage in many parts of the world. In this area of global concern too, Gandhi's footprints are evident. Infact, Gandhi is now being considered as one of the earliest environmentalists and especially since the onset of the Chipko Movement in the Garhwal Himalayan region. As Guha rightly observed, 'Ever since Mahatma Gandhi has been the usually acknowledged and occasionally unacknowledged patron saint of the environmental movement' (A.Raghuramaraju, p.223). Gandhi's concern has primarily centred on the Western model of development and its negative implications if a country like India chose to adopt the model. As had already been observed in one of the earlier Units, Gandhi warned against making India like England and America as it would amount to enormous exploitation. The Chipko movement, which finds its origins in the protests against commercial exploitation of the forests by the contractors in connivance with the forest officials, is a landmark environmental movement in India, marked by the adoption of Gandhian mode of protest.

Aims and Objectives

After reading this Unit, you would be able to understand

- The significance of the non-violent environmental movements
- Gandhi's views on the protection of nature and environment
- The origin of the Chipko Movement and the Gandhian mode of resistance against forest resource exploitation
- The beginning of the 'eco-feminism' in India.

9.2 GANDHI-THE CHAMPION OF ENVIRONMENTAL CAUSE

In one of the earlier Courses, we have studied Gandhi's views on nature and environment. From that we can draw an inference that Gandhi's practice and preaching of an austere life is an important reference point for anyone who is interested in the environmental issues. His simple living and high thinking, apart from the precepts he set forth in his ashrams, speaks volumes of his adherence to the principle of living with nature. As Guha points out, 'Gandhi's reservations about the wholesale industrialisation of India are usually ascribed to moral grounds- namely the selfishness and competitiveness of modern society- but they also had markedly ecological undertones' (Raju, p.225). This is further echoed in the words of Pravin Sheth who remarks that Gandhi warned against three uninterrupted movements that create environmental degradation problems, such as uninterrupted industrialisation, urbanisation and profit motives of the capitalist system at the cost of developing countries. He further says that 'Gandhi expected a balanced approach all along the line so as to threat neither man nor nature. Gandhi was ignored when he insisted on such equilibrium between technology, economy and society. But experiences have forced us to turn to him with appreciation' (Pravin Sheth, 1994, p.59).

The synchronisation of man-nature relationship was much emphasised by Gandhi but was thoroughly neglected in the post-independent period. To quote Sheth again, 'in Gandhian paradigm, respect to nature is as intrinsic as respect for diverse traditions, cultures and patterns of community living and livelihood' (Sheth, 1994, p.63). While earlier he was criticised for his so-called utopian ideals, he is now being revered for his views, around which many of the Western as well as Indian environmentalists have begun to congregate. But as is observed, Gandhi himself had an uncanny knack of combining a Utopia vision with shrewdly practical means (Raju, p. 226). Gandhi's life of austerity created an example to follow at an individual level; at the societal level, his views found an effective reverberation through the life and works of his close followers like Kumarappa (whose work *Economy of Permanence* sets an example of a sustainable society) and Mira Behn (Madelaine Slade, who chose to leave her affluent life to become a follower of Gandhi and live an ascetic life in the Himalayan region). Gandhi's preference for a traditional way of life endowed with natural air, water and sunshine and dislike for urban life is well known. By speaking for voluntary reduction of wants and use of minimum resources, Gandhi set a fine example to emulate for many a generation to come. Undoubtedly, we can say that Gandhi's ideas and views influenced the later environmental thinking, practice and also created the momentum for further non-violent environmental movements.

9.3 ENVIRONMENTAL MOVEMENTS

Environmental movements are generally understood as those movements that are taken up against the development projects as the latter depend on vast amounts of natural resources and their injudicious use and exploitation. The concept of development is usually prevalent in a market economy, where 'development' is associated with the material progress of the individual and the maximum extent to which he/she can enjoy the fruits of materialistic progress. It promotes a thorough consumerist lifestyle, even projecting the lavishness of the lifestyle as a basic necessity. This brings in with it the concept of 'resource exploitation' through 'conquest over nature', which is highly mistaken as available in abundance. It overlooks the fact that nature provides only to a certain extent

and that resource depletion poses major threat to human survival. Therefore the movements are often organised to protest against the exploitation of the nature thus bringing in the concept of ecological and environmental sustainability.

According to the noted environmentalist, Dr.Vandana Shiva, ‘movements are major social and political processes, however, and they transcend individual actors. They are significant precisely because they involve a multiplicity of people and events which contribute to a reinforcement of social change’ (Staying Alive, 1988, p.68). The movements related to environmental and natural resource protection witnessed large participation from the concerned local and other communities. They have been movements of social change that set classic examples for all times to come.

It is also appropriate to quote her words relating to the ecological movements. *‘Ecology movements are political movements for a non-violent world order in which nature is conserved for conserving the options for survival. These movements are small, but they are growing. They are local, but their success lies in non-local impact. They demand only the right to survival yet with that minimal demand is associated the right to live in a peaceful and just world. With the success of these grassroots movements is linked the global issue of survival. Unless the world is restructured ecologically at the level of world-views and life-styles, peace and justice will continue to be violated and ultimately the very survival of humanity will be threatened’* (V.Shiva, 1988, p.37).

The modern environmental movements in the West started long after the industrial revolution set in and changed the lives of people into an affluent and consumerist lot. Sheth describes that ‘in USA, modern environmental movement passed through different though not entirely unrelated waves’ (Sheth, p.28). At first there was a movement for land and wildlife conservation, followed by pollution control measures and third related to lobbying for regulation to minimise industrial wastes. Grassroots green movements followed thus heralding a completely new era of voicing environmental concerns.

Unlike the West, India’s concern for environment and nature date back to centuries where the concern for natural resources and elements formed a part of the lifestyle of the people. The emphasis has been more on the spiritual and moral dimensions of life rather than materialism and affluence. Thus the care and concern for nature has been inherent since ages in our society. The post-independent and much later the liberalised economic phase saw many a structural changes in the economy thus exposing the nation to materialistic and consumerist lifestyle.

The 1970s saw the environmental issues coming to the international fora with the Stockholm Conference being one of the pioneering conventions on this issue. India committed itself to the protection of the natural environment according to the International norms and rules. Around the same time, the Chipko Movement or Andolan has already been in the making, which later inspired subsequent movements on environment.

Environmental movements in India have been more or less conducted at the grassroots level and more so not by the educated elite but by simple village folk and tribals depending on the region. These have been initially characterised by protests against the big companies indiscriminately using the forest resources for commercial purposes. Later the movements focussed on water issues, flora and fauna, biodiversity, and massive deforestation till the recent river pollution, the prime examples being the Ganga and Yamuna clean-up action plans.

One of the earliest known cases of forest conservation dates back to 1730, where around 300 members of the Bishnoi community in the Rajasthan State, led by a woman called Amrita Devi tried to protect the **Khejri** trees from felling by clinging to them and sacrificed her life in the process. The natural resource exploitation is said to have started prominently during the British rule, when the enormous forest resources were used for commercial purposes and for the railway network link. The local tribes and communities are especially involved in saving the natural resources not only for sustaining their livelihood needs but also for the nation at large. Chipko Movement is one such pioneering movement in the post-independent India and set an example to be emulated by others.

9.4 CHIPKO ANDOLAN (MOVEMENT)

The Chipko Movement, which is also identified chiefly as a women's movement, originated in the Garhwal Himalayan mountain region of the present Uttarakhand state. The region is known for its fragile ecology, often prone to earthquakes, erosive rivers and steep valleys that are least conducive to agricultural growth. Its vast forest cover and reserves enables the local communities to pick the fodder, fuel and fibers that contribute to their daily sustenance. With no opportunities for viable income, the men folk search for income outside the region while the women are left in the villages often leaving them as the real custodians of the available resources.

The region was also prone to massive deforestation as the commercial exploitation of forests took place on a gigantic scale in order to meet the needs of ever growing population and urban settlers. It is important to note that the first forest laws were enacted during the British rule. With more demand for wood for commercial and rail link purposes, 'in Tehri Garhwal State, between 1840 and 1885, the forests were leased out to contractors for exploitation' (Weber, p.20). 'The forest laws were enacted to safeguard the vested interests of contractors. Power moved from the hands of the local people into those of government forest officials' (Ibid, p.19). The encroachment by the influential contractors was highly resented by the local population, an encroachment on the resources over which they had traditional rights.

With massive felling of trees and deforestation in the hills, and with the trees becoming few and far, the village women, who rely mainly on the forest resources for the sustenance, found it difficult to spend enormous time and energy in collecting the necessary fodder and fuel. They would, sometimes go to distance of at least five kilometers to collect the necessary supplies. With the denuding forests, there was also a danger of devastating floods and landslides submerging the houses, crops, and affecting the movement of people and throwing out of gear the irrigation facilities.

It is crucial to note the extensive contribution of Mira Behn (Madelaine Slade), a close associate of Gandhi, who moved to the Himalayan region as early as in 1940s. In order to promote agricultural growth, the cattle are the most important source. To take care of these, Mira Behn started **Pashulok** (Animal World), a cattle centre in the region. She was one of the first to realise the drastic effects of the deforestation and how it triggers the water crisis. Further, she also noted the disappearance of **banj** trees, replaced by the commercially important pine trees. The basic ecological nature and functions of both the trees are different from each other, with **banj** being more eco-friendly. Also, Mira Behn spoke in high veneration of the Himalayas. As she says, 'it is not we who are testing the Himalayas, but the Himalayas who are testing us; and by the looks of things we are

proving unfit. Unless we humble our minds and approach the Sacred Mountains as disciples before a mighty **Guru**, we cannot expect to win favour' (KM Gupta, Mira Behn, Gandhiji's Daughter Disciple, 1992, p.111). She warned as early as in 1950 that '**Something is Wrong in the Himalayas**' and elaborately explained the demerits associated with deforestation, water-logging and soil erosion; she further regretted over how the private enterprises are exploiting the resources, making it a 'business proposition, carried on by people who have no background of agricultural experience, and who think only in terms of soil exploitation for quick return' (ibid, p.148). Sunderlal Bahuguna worked closely with Mira Behn and inherited many of her meritorious thoughts and ideas regarding the above mentioned issues. Later, he was instrumental in giving necessary guidelines and direction in the Chipko Struggle.

Sarala Behn (Catherine Mary Heilman) was also a disciple of Gandhi who in 1936, joined Gandhi at his Sevagram ashram to assist in the former's experiments in basic education. She worked in the hills of Kumaon region and 'started an Ashram for girls along Gandhian lines and soon collected a band of dedicated young women social workers around her. She too strove to create environmental awareness. In 1961, she created the 'Uttarakhand Sarvodaya Mandal' to work for the uplift of the population and the protection of the hill environment' (Weber, pp.29-30).

In order to protect the forest region and thereby the livelihood necessities, the women of the region largely combined with the cooperatives and Gandhian organisations like Dasholi Gram Swaraj Sangh (DGSS), Gangotri Gram Swaraj Sangh and so on. Their concerns related to forest reserve conservation and taking care of the needs of the local population. But 'soon, a new separation took place between the local male interests of commercial activity based on forest products, and local women's interests for sustenance activity based on forest protection' (Vandana Shiva, 1988: p.71). Nevertheless, this does not undermine the role of men who actively took part in the Chipko Andolan. As Shiva puts it, 'the significant catalysers of the movement are women like Mira Behn, Sarala Behn, Bimala Behn, Hima Devi, Gauri Devi, Gunga Devi, Bachni Devi, Itwari Devi, Chamun Devi and many others' (V Shiva, 1988, p.68). Further, 'the philosophical and conceptual articulation of the ecological view of the Himalayan forests has been done by Mira Behn and Bahuguna, the organizational foundation for it being a women's movement was laid by Sarala Behn, Bimala Behn in Garhwal and Radha Bhatt in Kumaon' (ibid, p.71). The men of the movement like Sunderlal Bahuguna, Chandi Prasad Bhatt, Ghanshyam Shailani and Dhoom Singh Negi were glad to acknowledge themselves as their students, messengers and followers and played crucial role in spreading the movement to different parts of the state.

The organisational base of the women in the region at first found its origins in the anti-alcohol movement and later prohibition movement in 1965. It further spread to utilising the local forest resources by the local people and led to organised protests against the commercial exploitation of the forests. One of the inspiring words against this exploitation was put down by Raturi in his famous poem:

Embrace our trees

Save them from being felled

The property of our hills

Saving it from being looted

One of the key events took place 'in 1973 when around 300 ash trees had been auctioned in Mandal to a manufacturer of sports goods'. With the protest against it by the women of the region led by a 75 year old Shyama Devi, the contractor withdrew but the focus subsequently shifted to the Alaknanda valley, in the village of Reni. The region was already devastated by the massive floods of the 1970 wherein water inundated 100 sq.kms of motor roads, washed away 6 metal bridges, 10 kms of motor roads, 24 buses, 366 houses collapsed, 500 acres of paddy crops destroyed (Guha, 1989, p.155). It was attributed to the denuding of the forests for commercial purposes and felling of trees in the region. Large scale auction and plans for felling of trees in the region was planned by the commercial contractors but had to backtrack their activities because of the active role of the women and the villagers who kept constant vigil on the former's activities. On one such occasion, sensing the absence of men from the village, the commercial contractors sent their labour to axe the trees before the villagers get to mobilise and start protecting the trees. Later, as the women spotted the labour with axes, who came to cut the trees, they protested and vowed to protect the trees. Small groups of women kept constant vigilance and hugged the trees in order to prevent the felling. Led by Gauri (sometimes referred as Gaura) Devi and Gunga Devi, along with their co-workers, the movement was a much successful one. Consequently, the government imposed a ban on the commercial green felling in the region.

This incident gave the movement a further momentum to mobilise all the villages in the region to protest against the commercial felling of trees, as it led to the fragile ecology dwindling further. The women trekked far and wide for about 75 days appealing to their counterparts in the region to join the demonstrations and vehemently protest against the commercial exploitation of the forests. The method of hugging the trees to prevent their felling was actually used for the first time by Dhoom Singh Negi in Salet forest near the village of Pipeth in Henwal (V Shiva, 1988, p.75). Another significant event that took place in 1977 was against the auction and cutting of trees in the Adwani forests, in the Narendernagar district. Bahuguna undertook a fast against this measure but the felling order was not withdrawn. The women, who became the 'front-line soldiers', as pointed out by Weber, gathered and tied sacred threads to the trees as a part of their vow to protect them and constantly guarded the forests. The axe-men returned with armed police to keep the people away from the area but the volunteers already took positions to guard the trees. When questioned by the contractor as to why the women wanted to stop the felling, they sang in chorus thus:

What do the forests bear?

Soil, water and pure air.

Soil, water and pure air

Sustain the earth and all she bears.

The movement, consequently, was successful and the Adwani Satyagraha, as it is known, gave new directions and strength to women especially to protect their forestry system and instilled in them a new confidence to continue the struggle. In some of the regions, the women even defied their men folk and took part in the movement. To quote Turner's work, one of the prominent women of the movement, Gaura (Gauri) Devi recalls that 'it was not a question of planned organisation of the women for the movement, rather it happened spontaneously. Our men were out of the village so we had to come forward and protect the trees. We have no quarrel with anybody but only we wanted to make

the people understand that our existence is tied with the forest' (Guha, 2000, p.159). The Chipko movement was not confined to Reni but spread to Tehri, Kumaon and other areas of the State like Adwani, Amarsar, Chanchnidhar, Dungari, Paintoli and Badiyagarh. The most beneficial outcome of the movement has been the Government's order imposing a ban on the felling of trees in the region apart from the joint forest management mechanisms that followed later. Chipko thus stands out as the most significant movement in the arena of environmental protection. It further highlights the role of women as the torchbearers of similar movements everywhere.

9.5 CHIPKO AS AN ECO-FEMINIST MOVEMENT

There have been arguments-both for and against the Chipko Movement's label as a women's movement. While the contribution of the local communities consisting of both men and women is not ruled out, the extraordinary role played by women, who with firm determination pledged to restore the nature to its pristine, attracted worldwide attention. Undoubtedly, the movement has been a complete non-violent achievement, and can be likened to Satyagraha in the environmental arena. Since by nature women are known as nurturers of creatures- living and non-living-'ecofeminism takes the woman-nature connection a step further' (Turner, 2003, p.4. see URL). Most of the interpretations are heavily drawn from the arguments of Dr.Vandana Shiva with special references to her works, 'Staying Alive-Women, Ecology and Development in India' and her joint work with Maria Mies, 'Ecofeminism'.

Firstly, the nature is viewed in terms of feminine principle. Since the ancient ages, women in general and India in particular are considered as an inseparable part of nature. At one level, nature is symbolised as the embodiment of the feminine principle, and at another, she is nurtured by the feminine to produce life and provide sustenance (Shiva, 1988, p.38). This is a manifestation of shakti or energy, from which all existence arises. This energy is called nature (Prakriti). Nature, both animate and inanimate is thus an expression of shakti, the feminine and creative principle of the cosmos; in conjunction with the masculine principle (purusha), Prakriti creates the world. Further, nature is inherently active, a powerful, productive force in the dialect of creation, renewal and sustenance of all life (Ibid). From this, the world derives its activity and diversity manifest in the form of life on earth-mountains, trees, rivers, animals etc. The human being, so much a part of this world of creation, ideally is to live in consonance with nature. Regrettably, man's attitude towards nature has turned into that of a dominant force, who can subjugate nature to the maximum extent. This, in a way, symbolises man's eternal urge to demonstrate domination over woman.

Shiva identifies women as traditional natural scientists, whose knowledge is ecological and plural, reflecting both the diversity of natural ecosystems and the diversity in cultures that nature based living gives rise to (p.41). She credits women with producing and reproducing life not merely biologically but also in terms of providing sustenance, more so a social role. Mies, who worked on 'Ecofeminism', describes woman's special relationship with nature. The relationship is based on mutual reciprocal process, mutual cooperation and as producers of new life. With the disharmony between both created by the affluent and consumerist culture, the natural relationship finds enormous strains. Shiva attributes the disharmony as triggered 'by the arrival of masculinist, reductionist, industrial, colonising forces of Western culture'. It is appropriate to quote her words in this context: 'an ecologically sustainable future has much to gain from the world-views of ancient civilisations

and diverse cultures which survived sustainably over centuries. These were based on an ontology of the feminine as the living principle....not merely did this result in an ethical context which excluded possibilities of exploitation and domination, it allowed the creation of an earth family' (Turner, 2003, p.5).

The large number of women participating, even defying their men, demonstrates their innate power or shakti. In India, inspite of women's suppression, there is a universal agreement, even if grudgingly, that women are nurturers of nature. The ancient civilisation and texts have often put women on a higher pedestal in the context of ecological/environmental concerns. This view finds a wide spread critique among the Western scholars, thus bringing to the fore the cultural differences and the perception of nature as a sacred force to be restored and not exploited.

At the same time, there is also a critical perspective that women are dependant on nature for their own sustenance which is also economic nature. Since the disharmony disturbs the latter's sustenance, they are compelled to take up the cudgels of resource protection and not just for restoring nature to its original glory and definitely not out of selfless motive. A reference in support of this argument is found in Turner's article. Though there is no doubt regarding the disproportionate burden on the women due to environmental degradation, the concern is not limited to preserving the health of the forest. Mawdsley (cited in Turner's article) observes that if a hill woman's needs and responsibilities for subsistence conflict with 'sound ecological practice', then she will likely give priority to the more immediately pressing (Turner, p.6). The women's environmentally friendly ways are ascribed to their short-term benefits. Infact, the household responsibility and the necessities are said to be the main reasons for a woman's friendly co-existence with nature.

Another criticism that faces the ecofeminist perspective is that it failed to end the marginalisation of women. Though the movement has brought forth the issues of forest management and concern for ecological conservation, it failed to mitigate the woes of women who continue to move far and wide in search of resources necessary for subsistence. Further the non-participation of women in the official roles like joint forest management bodies further deprives them of playing a direct, constructive and authoritative role. Thus, the discrepancies in representation are obvious rendering the constructive role of women in the whole debate obsolete. The movement otherwise has brought in few policy changes related to the protection of environment and natural resources.

Whether the Chipko movement was led by women or witnessed a participation of large number of women due to which it was called an eco-feminist movement leads to several debates. What concerns the most in this context is the preservation of ecological resources. Even if an economic motive is attributed to the women's participation, it should be remembered that the resources needed for subsistence is far less than the massive tree felling efforts of the commercial contractors. Thus comparing women's subsistence needs to contractor's greed would be totally unwarranted. Even if a short-term economic motive is attributed to women's resistance, the scenario of long-term benefits of forest conservation cannot be underestimated.

In final, the arguments related to ecofeminism as put forward by Vandana Shiva deserve meritorious scrutiny. Considering the background of ancient Indian civilisation and the veneration of nature and ecology in the ancient texts, the adoption of Spartan life was in consonance with the prescribed rules and regulations of life, that impose little or no stress on the ecology or vast biodiversity. Man's endless desire to conquer nature for fulfilling unmitigated wants is an alien concept in the Indian context. Reverence of nature as

bhumata (mother earth) and *vana devata* (forest deity, mainly goddess) confirm the significance attached to the natural resource protection in the Indian culture.

Lastly, the Chipko struggle is essentially an effort to save the natural resources and forests for the benefit of all. In the words of Shiva, 'the Chipko struggle is a struggle to recover the hidden and invisible productivity of vital resources, and the invisible productivity of women, to recover their entitlements and rights to have and provide nourishment for sustained survival, and to create ecological insights and political spaces that do not destroy fundamental rights to survival. Chipko women provide a non-violent alternative in forestry to the violence of reductionist forestry with its inherent logic of indispensability. They have taken the first step towards recovering their status as the *other* silviculturists and forest managers, who participate in nature's processes instead of working against them, and share nature's wealth for basic needs instead of privatising it for profit'(Shiva, 1988, p.95).

9.6 SUMMARY

The concept of development in a market economy concentrates on material progress and the growth of commodity production as the main tenets for a contented human life. What it ignores consists of two crucial elements: (1) the air, water, land and other living beings, flora and fauna are all part of the universal existence and (2) any resource depletion affects the women and children first, the former who play a significant role in ecological conservation and latter, who represent the future generation. It needs to be remembered that any development agenda that ignores the real welfare of all and that which exploits nature as well as humans is bound to return negative effects. The Chipko struggle/movement is precisely a struggle against this concept of development. It was against the commodification of forest resources, and fighting for the conservation of resources useful for the local population and fighting for the rights of subsistence. The women, often the marginalised and the first and the most affected in any negative development trend, had displayed an enormous capability to become 'their own leaders, their own decision-makers, their own sources of strength' (Mies and Shiva, 1993, p.246). As Weber points out, 'the Chipko activists have found an effective means of conducting environmental campaigns along non-violent lines. Much can be learned from their experience, and a knowledge of their struggle can bring strength to those fighting a similar battle in other parts of the world' (pp.12-13). Thus the movement also demonstrated the resurgence of woman power and their concern for the mother earth and ecology. It brought into light the burning issue of judicious use of 'natural capital', which would, in the long run, benefit the whole humankind, and through it, the recovery of earth's most precious resources.

9.7 TERMINAL QUESTIONS

1. What do you understand by environmental movements? What positive changes do they bring in the social realm?
2. Trace the origin of the Chipko Movement.
3. 'Chipko Movement is an ecofeminist movement'. Do you agree with the statement? Give reasons.

SUGGESTED READINGS

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UNIT 10 NARMADA BACHAO ANDOLAN/TEHRI DAM

Structure

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 - Aims and Objectives
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- 10.4 Narmada Bachao Andolan
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- 10.6 An Overview
- 10.7 Summary
- 10.8 Terminal Questions
 - Suggested Readings

10.1 INTRODUCTION

The Narmada Bachao Andolan (movement) and the Tehri Dam constitute two prime examples of non-violent struggle against the big dam constructions. They involved the Gandhian method of fasting and staging protests by involving large number of people in their mass movements. The main reason for such protests is not a mere agitation against the dam construction. It involves the rehabilitation of those who lose their land and valuable property in the process. For dams largely displace the local population whose livelihood is closely linked with the natural surroundings. Large dams pose a much higher risk in that sense and are often opposed by the communities concerned.

Aims and Objectives

After reading this Unit, you would be able to understand

- The post independent era's planning and development through large dams
- The cases of Narmada and Tehri dams
- The impact of these large dams on the livelihoods of the local population
- The objectives of a non-violent struggle against large dam constructions

10.2 DAM CONSTRUCTIONS

Essentially, the reason for large dam constructions is tapping the water resources for irrigation, hydro-electric projects and for supply of drinking water to the population. As Goldsmith and Hildyard point out, from the ancient civilisation times, Sumeria, Babylonia, Egypt, Ceylon and Cambodia had been proud witnesses of the engineering skills of the

large dams. However, as on today, the construction of the dams involving the use of concrete technology and earth moving machines, have acquired new dimensions. Their sheer size and complexity have multiplied, with many of them being acclaimed as engineering marvels. 'In Egypt, the Aswan high dam is 17 times higher than the great pyramid of Cheops. In Ghana, the Volta dam is large enough to impound a reservoir covering 8500 sq.kms, 5% of the total area of the country and an area almost the size of Lebanon. In Brazil, plans to harness the power of the Amazon and its tributaries with a complex of dams capable of providing 66000 MW of electricity will entail flooding an area the size of Montana. The Itaipu dam on the Parana River will alone generate 12600 MW of electricity- the equivalent output of 13 large nuclear power stations (Daniel Duedney, 1981, p.13).

With the growing population levels in the developing countries, more and more water resources are being required and where available, exploited for various purposes. Many a time, the water resources are even controlled by the MNCs, leading to massive local protests, later assuming national and international dimensions.

Many of these dams are constructed with the funding from IMF, IBRD and other international aid agencies. Their number has now multiplied drastically. For example, in Philippines, known to most of us as a small nation in the South East Asian region, an estimated 861 dams are supposed to be in pipeline.

Many of the water development projects promise an improvement in the lives of the mankind with better access to water resources, prevention of floods, decrease in the soil erosion and elimination of the waste. They are even viewed as important symbols of national heritage and prestige, sources of employment and as tools of economic development through hydro-electric projects and as major irrigation sources. The explicit purpose of the dams was to tap the large rivers and thereby extricate the drought and flood stricken people of our country from their miseries, providing employment temporarily, making available paramount irrigation facilities (Vijay Paranjpye, Dam: Are we Damned, in Major Dams, 1981, p.31).

The hydro electric projects are perceived as sources of energy at a cost effective price and the irrigation projects are seen as the most productive means to the farming community and system. The developing countries, with most of them having attained their independence in the late 1940s and early 1950s, having taken up the projects of large dam constructions, embarked on the so-called path of development, to keep pace with their counterparts in the developed nations to provide better living standards to their citizens.

10.2.1 Dam Constructions in India

By the end of the British rule in India, the country witnessed the construction and operation of large dams numbering over a hundred, primarily to confront famine that afflicted the nation. They were still viable considering the low cost of construction and the number being few. But, the increase in their number in the post- independent era continued and were seen as 'monuments of progress'. Some of the dams constructed during that time include Hirakud, Damodar, and Bhakra-Nangal. The expenditure for the dam construction assumed huge proportions and the subsequent Planning Commissions assigned great importance to these 'monuments of progress'. At the same time, post-construction, many of the dams added to the fury of the flood in various states and thus

the vulnerability of the people to the hazards of such large projects became glaringly evident. Some of the negative impacts included:

1. The destruction of agricultural land
2. Rendering the fertile land into salt encrusted areas
3. Uprooting of people from their homes for dam and reservoir constructions
4. Destroying their social and cultural lives and jeopardising their health
5. Severe damage to the land through earthquakes and deteriorating quality of the drinking water and
6. Exposing the real beneficiaries of the projects-MNCs, industries, elite and those in the political class who commissioned the projects. (Goldsmith and Hildyard, p.14, vol.1).

10.3 SOCIO-ECONOMIC-ECOLOGICAL IMPACT

Large dams simply destroy the livelihood patterns of the people living in the vicinity of the construction areas. They also destroy people's love, attachment and sentiments associated with their personal possessions, property and land, acquired mostly as an inheritance. As they are subjected to displacement, their social fabric of life and traditional ethos of their culture too are displaced, making them strangers in their own country. Their assimilation into other culture, therefore, is not easy making them much vulnerable and hostile lot. Surprisingly, most of them reject the huge sums of money they are offered and settle for nothing less than being allowed to stay where they are. Women, in particular, are the affected lot, who have to make major adjustments in their life patterns. Having been displaced, children too get uprooted from their traditional social and cultural life. Following the resettlement in another place, this displaced lot are seen as intruders. 'The new settlers are bitterly resented by the original inhabitants of the area, leaving much scope for the land disputes and violent outbursts' (Goldsmith and Hildyard, p.30).

The displaced are also usually compensated with inappropriate and inferior quality in housing, thus making the accommodation of large family units most difficult; they are often subjected to less privacy, security and more inconvenience.

Most importantly, the ecological consequences prove to be all the more damaging. Not only do the displaced lose their land and property, but also their resettlement in an alien area puts much pressure on the use of resources. With more number of people being added as resettlers, the resources become scarce and inevitably lead to fight-to gain control over the resources. Further, the release of water during floods damage vast areas of agricultural land and sometimes, even leads to soil erosion.

Further, the cost of resettlement, rehabilitation and compensation assumes huge proportions that put heavy pressure on the exchequer of the state. The relocation expenses, insufficient compensation and possession of an inferior land or none-are all high costs associated with the displacement due to dam construction. A shift to urban areas often compels the people to live in slums, severely affecting their healthy living.

Goldsmith and Hildyard aptly observe the situation thus: 'deprived of their traditional culture, and stripped of the support of their community, many of those who are resettled

drift towards the cities. There, a now familiar tragedy repeats itself. The men frequently turn to alcohol whilst the women are often forced to prostitute themselves simply to earn the where-with-all to feed themselves and their families. Malnutrition and disease are rife, jobs almost impossible to find. It is a world far removed from the 'paradise' offered to them by the authorities. Unfortunately, it is world in which most of them will spend the rest of their lives' (vol.1, p.48).

10.4 NARMADA BACHAO ANDOLAN

'Like the Ganges it is a sacred river and from source to mouth it is by very for the most beautiful river in India'. Further, 'of all the rivers of India none is surrounded by more romance; for strange fantastic beauty it ranks high among the rivers of the whole world' (Geoffrey Maw, p.2).

The above description is of the river Narmada, the largest west-flowing river in the Indian peninsula, that arises on the plateau of Amarkantak in the Shahdol district of Madhya Pradesh. It covers the states of Madhya Pradesh, Maharashtra, Gujarat and parts of Rajasthan. Its course is 1312 kms to the Arabian Sea through lush forests, hills, agricultural regions and rocky gorges. It has around 41 tributaries, surrounded by 3 mountain ranges of Satpura, Vindhya and Maikal, and on the fourth side merges into the Arabian Sea. On its basin, the villages constitute 81% and comprise mainly tribal population consisting of Bhils, Gonds, Baigas and others whose primary occupation is agriculture. The Narmada basin is rich in its natural resources.

The Narmada Valley Development Project

According to the Planners of India, Narmada valley is a backward region that lacks irrigation facilities. The mineral and natural resources are unexploited, hydro-electric power is under-utilised and infrastructural facilities are dismal. The features of the underdevelopment like low electricity consumption, little industrial activity, slow urban growth, below average agricultural yields, lack of modern medical, educational and banking facilities were very much evident.

Though the idea of the project was conceived in 1946, the states through which the river takes its course have got entangled in deciding the resource use, the area to be irrigated and sharing of water. The project commenced after the Narmada Water Disputes Tribunal (NWDT) gave its consent for the planning and work on the largest single river valley project in India.

According to the Master Plan, the project has:

- 30 major dams, 10 on the main river and 20 on the tributaries
- 5 hydro electric schemes
- 6 multi-purpose schemes
- 19 irrigation schemes
- 135 medium schemes
- 3000 minor irrigation schemes

The cost estimate of the project as on date is 18,000 crores of rupees. The central and

state governments, unable to fund the entire project, sought aid from the World Bank (IBRD). The so-called beneficial features of the project include:

- 50 lakhs hectares of land irrigation
- Generation 2,700 MW power
- 11,500,000 people to benefit

The project also promised to provide employment, to check floods, supply water for domestic and industrial use and promote tourism.

In reality, the project not only lacked meticulous planning but also careful implementation as it involved a large-scale exploitation of natural resources on the river basin, threatening to submerge the vast areas of forest and agricultural land. The region being geologically seismic zone, the earthquakes posed severe threat to the region, threatening an acute damage to the dam. Over 150,000 acres of forest land came under the submergence threat and the total area of forest under the threat of flood constituted around 350,000 hectares, amounting to around 11% of the river basin's forests. The submergence also posed immense pressure on the adjoining areas and its land resources due to large scale migration of people, threatened by the submergence fears.

The NWDT laid down certain directives to take care of the displaced people and the compensation that needs to be paid, in place of the land they have lost. It called for an adequate resettlement grant, and the provision of basic amenities like housing sites, primary schools for children, health dispensaries and transport facilities. The directives did not contain the provision for land acquisition for the displaced and directed the latter to acquire land with the resettlement sum provided by the government. It had also posed new challenges like unemployment and inadequate measures of alternative incomes in the new villages. The rehabilitation efforts varied from state to state with Gujarat providing better compensation and resettlement facilities as compared to Madhya Pradesh and Maharashtra. With no hope for secure economic future, the displaced launched the Narmada Bachao Andolan in order to assert their rights and ensure justice. The Andolan is one of the longest struggles against a development project in the post-independent era, asserting the rights of the displaced and demanding an adequate compensation package for such communities.

The Narmada Bachao Andolan or the Save the Narmada Movement is essentially a movement against the pattern of development as mentioned above. It is a crusade to ensure justice of the affected people due to dam construction. The main thrust of the Andolan is to oppose the Sardar Sarovar Project, the largest dam to be built on the Narmada. The struggle started in 1985, relied on hunger strikes, solidarity marches and mass media publicity to spread awareness of the issue, making it one of the pioneering non-violent struggles undertaken to ensure justice to the people. In 1989, it became a full-fledged environmental and livelihood movement, vehemently opposing the dam construction and demanding a just resettlement policy. Medha Patkar, an inspiring leader of the movement, undertook several fasts and hunger strikes that eventually led to an independent review of the project by the World Bank, one of the sponsors of the project and eventually to its withdrawal in 1995. The activists of the movement faced stern police action and lathi charges throughout the course of the struggle. The activists who took part in the struggle hailed from Badwani, Omkareshwar, Alirajpur, Jhabua and so on.

The issue was finally taken to the Supreme Court wherein the NBA filed a writ petition asking the Court for the stoppage of the dam construction. The initial ruling of the court was favourably disposed towards the NBA, ordering the stoppage of the work and asking the state governments concerned to evolve effective resettlement and rehabilitation policies. But the subsequent orders allowed for the dam construction but with specific conditions. The Grievance Redressal Committees were formed in the respective states to look into the issues of rehabilitation and monitor the process of resettlement. The ruling of the Court in 2000 envisaged the completion of the project as expeditiously as possible, thus assuming the role of a 'vigilant observer'. On October 18, 2000, the Supreme Court of India delivered its judgement on the project, allowing an immediate construction on the dam upto a height of 90m. It also authorised the construction as per the original planned height of 138m, provided it is approved by the Relief and Rehabilitation Subgroup of the Narmada Control Authority. Though the verdict was not in favour, the NBA continued its incessant nonviolent struggle; following an unwarranted police action against the activists, the Jabalpur High Court recognised the displaced people's right to protest, hunger strike and peacefully conduct their struggle. It passed orders to the state government to adequately compensate those satyagrahis who were subjected to illegal arrest and police action. The issue of rehabilitation was discussed again recognising their right to life and livelihood. Many of the activists courted arrests, waged non-violent struggles and demanded land-based rehabilitation for the landless apart from the demand to take action against the corrupt officials involved in disbursing the funds to the resettlers. There were also massive struggles as the Indira Sagar and Omkareshwar affected people continued their indefinite hunger strike for many days and were joined by others who started three-day relay fast in solidarity. It was evidently clear that the people have asserted their resolve to carry on the struggle, with peaceful agitations to achieve their full rights and just demands.

But the subsequent hearing of the court and its verdict severely reprimanded the officials concerned to carry out the rehabilitation of the displaced without which the dam construction may be halted. While allowing the continuation of the dam construction, the court passed strict orders for the rehabilitation work that required an immediate attention simultaneously.

For its consistent non-violent struggle, the NBA won the 'Right Livelihood Award' that aimed at bringing justice to the society at large. The movement also witnessed an active participation from Baba Amte (1914-2008), known for his yeomen service to the leprosy patients in the tribal areas. As aptly noted by the Right Livelihood Award panel, 'The issues of land for the displaced, the rehabilitation policy at a national level and development planning without displacement have become national issues with NBA interventions, influencing policy making and mass movements. NBA has been effective in its multiple strategy at the executive, legislative and judicial level, campaigning against the destruction and displacement caused by large dams and for the rights of the affected people – farmers, laborers, fishermen and others' (see URL).

10.5 TEHRI DAM

Tehri Dam Project

The Tehri dam project was conceived as early as 1949 and was envisaged as one of the highest dams in the world. The project report of the Geological Survey of India, in 1969, observed that 'a fault, 20 metres wide, approximately exists along the bed in the dam

site. Treatment of this fault zone shall be a costly affair' (Jain, 1987, p.38). The dam site, situated at the Bhagirathi river site, between the rivers Bhagirathi and Bhilangana near the Tehri town, is an area of high seismicity, often prone to earthquakes of severe magnitude, measuring upto 7 points on the Richter Scale. As pointed out by an eminent lawyer and president of Tehri Dam Movement, the river Bhagirathi follows a weathered course, and at the dam site, weak metamorphic formations occur in the foundations. The river gorge is characterised by shale structures subject to intensive weathering and disintegration. The rocks in the exterior zone of the slopes of river gorge are brittle and heavily cracked. The rocks on which the dam is proposed to be built are highly deformed and unlikely to be able to bear the weight of 2.62 million acre feet of water of the impounded lake' (VD Saklani, 1987, p.29). Vijay Paranjpye, summarising the historical aspect of the dam, observes thus: 'the Tehri dam, expected to be 260.5m high will be the fifth highest dam in the world. It will impound 3.22 million cubic m of water. The reservoir will extend upto 45 kms in the Bhagirathi valley and 25 kms in the Bhilangana valley with a water spread area of 42.5 sq.kms. The reservoir is expected to irrigate 2,70,000 hectares of land, and also generate 346MW of firm hydel power. The turbines in the powerhouse at Tehri have installed capacity of 1000MW...the dam will have an additional installed capacity of generating 400MW. Besides, the Tehri Dam is also expected to supply 500 cusecs of drinking water to Delhi. The dam will also submerge Tehri town and 23 villages in its vicinity, 72 other villages will be partially submerged and some 5200 hectares of land, 1600 hectares of it being cultivated land, will be lost to the reservoir. Finally, about 85,600 persons will be displaced because of the dam' (Paranjpye, INTACH Series, 1988, p.23). The Indian Planners did not take into account the high seismicity threats to the region and relied more on the principal findings of the report that endorsed the construction of the dam.

Opposing the Dam Construction

From its very inception, the dam issue received considerable opposition from the local population of the region. The locals not only consider the river as sacred but also the adjoining areas wherein it takes its course. Moreover the people of the region are highly aware of its fragile nature and the magnitude of damage to be inflicted because of the development projects and natural disasters like earthquakes. Since it also involves their displacement, the opposition to the dam found spontaneous response. In spite of their opposition, the dam construction found approval from the government. To assert their livelihood rights, the local population from around 35 gram sabhas formed the 'Tehri Bandh Virodhi Sangharsh Samiti' (TBVSS) that precisely means Anti Tehri Dam Committee. The TBVSS conducted mass protests and Satyagraha involving people from all groups, age and communities. The Working Group, constituted by the government for conducting an assessment of the Environmental Impact of Tehri Dam, recommended a continuous monitoring of the faults at the numerous locations of the dam site, continuous seismic monitoring to take appropriate control measures and contemplated the preparation of a detailed geomorphological map of the catchment area.

In the meantime, the TBVSS continued its representations to the government regarding the non-viability of the project and the ensuing risks. It filed a writ petition in the Supreme Court in 1985, challenging the decision of dam construction. Its main arguments were that (1) the dam to be located in a seismically active and tectonically risky area had a high probability of failure and would therefore endanger the lives and property of people at settlements such as Munikireti, Rishikesh, Haridwar among others situated on the river

Ganga downstream, (2) habitations like Uttarkashi situated on the river Bhagirathi upstream of the inlet of the reservoir from Dharasu would be lost, and (3) it would create a feeling of insecurity, among the people at the various locations on the reservoir rim slopes and therefore the project would jeopardise the right-to-life guaranteed to the citizens under the Constitution. The case, popularly known as TBVSS v State of Uttar Pradesh (1986) and TBVSS v Union of India and others, was filed in the Supreme Court of India. On the overview the TBVSS unsuccessfully challenged the Supreme Court in the writ petition in 1985.

The petition was dismissed by the Supreme Court in 1990 following a limited enquiry into the issue. The Tehri Project was rejected by the Environmental Appraisal Committee that had unanimously decided on the stoppage of the dam construction. The Central Government, relying on the opinion of the Department of Mines convinced the court regarding the viability of the project. It was further referred to a renowned seismologist of international repute, who further reiterated the recommendations of the high level committee of experts as in accordance with the international experience, practice and the design of the dam. The Project was finally approved and finalised after an independent seismologist's report. In October 1991, an earthquake measuring 6.1 on the Richter scale hit the Garhwal region in which around 2000 people were killed and damaged the regions of Tehri, Uttarkashi and Chamoli. This opened up debate on the safety of the Project though the dam was not damaged. On 14th December 1991, 5000 people led by environmental activist Sunderlal Bahuguna brought the work to a complete halt. In August 1995, the government started the reconstruction at the dam site. (see URL <http://coe.mse.ac.in/td.htm>)

Rehabilitation of the Displaced

The rehabilitation policy of the State, unfortunately, specified regressive measures. Not only was the amount provided as compensation inadequate but also was grossly miscalculated owing to the application of ad hoc rules or directive or administrative orders that suited the policy makers. It was also highly inadequate to buy new land; further the value of the land was undervalued and thus smooth resettlement measures were relegated to the background. The administration lacked sensitivity towards the displaced and the inhuman conditions the displaced were subjected to.

As pointed out by Sunderlal Bahuguna, the leader of the movement, the humanitarian aspects of the dam construction were highly neglected. 'When clearance to such projects is given without taking into consideration the human and social aspects-which in fact, should be given top priority while dealing with human lives-such decisions become cruel, inhuman and detrimental to the national interest in the long run' (Bahuguna, 1987, p.35). The TBVSS pointed out the following lacunae in the resettlement matter: (1) land allotted as compensation faced problems of denudation and erosion (2) inadequately defining the 'family' that needs immediate rehabilitation (3) unwillingness on the part of authorities to increase the amount earmarked for rehabilitation (4) rehabilitation of individual families as against the whole village (5) policy of divide and acquire by officials (6) land for landless policy was neglected and the displaced provided inadequate monetary compensation (7) faulty estimation of the affected number of people (8) lack of public relations (9) officials' false claims of rehabilitating monuments and archaeological buildings (10) implementation of rehabilitation scheme tardy (11) major flaws in evaluating and compensating for fixed immovable property like houses, wells, barns etc., and (12) suffering of the ousted consequent to dam construction does not find mention in the Detailed Project Report. The

Tehri Dam has been opposed consistently and invoked protests by the environmental organisations and local people. Further, it involves the relocation of more than 100,000 people from the region; it has led to continuous legal battles, law suits and civil protests regarding the resettlement issues. The Tehri issue did receive support from a wide range of civil society and other organisations but could not legally win the case and stop the work at the dam construction site. It continues to relentlessly fight against the government and its agencies regarding the issues of rehabilitation and resettlement. Through relentless efforts, it brought the issue to the fore at the national and international levels that led to heated and compelled debates regarding the safety of the large dam projects all over the world.

10.6 AN OVERVIEW

The issues of Narmada and Tehri reflect the systemic flaws that engulf judicious planning of large dam constructions in India and abroad. They also clearly reflect the official apathy towards the sensitivities of the local communities concerned. The dam constructions without consideration pose immense dangers to the overall structure of the systemic planning and implementation. For any plan to be implemented, it requires the weighing of pros and cons of the project concerned. These massive constructions severely affect the socio-economic fabric of the communities that get displaced in the process. Not only are they deprived of their basic right to a decent life but also are subjected to hostile behaviour in the newly settled regions and their original inhabitants. Further, it requires the efforts of civil society and non-governmental groups who can effectively take up the case of these communities and communicate or pressurise governments to reconsider the projects. All over the world, the mega hydel projects are increasingly contributing to the global warming process; these involve massive concrete structures that disrupt the pristine nature and damage the fragile ecology of the regions concerned. The concerns of the local communities need to be taken into consideration and should be adequately compensated where there is massive displacement. Non-violent struggles effectively convey a strong message to the state organisations but are often repressed by it. The state needs to play a sensitive role in order to curtail further damage to its subjects. It should adopt a community-oriented approach and allow the local communities to have rights over their resources. No projects can be successful unless the local communities are taken into confidence and are empowered to assert their basic livelihood rights. These dam issues are not just ecological issues. They have intricate connections to our daily life and largely determine the course of our livelihoods. They thus involve the socio-economic dimensions which, when ignored, are likely to impose unprecedented damage. The need of the hour is to evolve effective plans and protect the fragile environment that is responsible for our sustenance.

10.7 SUMMARY

The Narmada Bachao Andolan (NBA) and the Tehri (TBVSS) issues raise the issues of not just the environmental issues but the issues related to livelihoods of the people who find themselves displaced due to the unplanned and inconsiderate planning of the large dam constructions. At the outset these movements have lost out to the powerful governmental planning agencies, whose short-sightedness has threatened the very existence of the people living in the vicinity of dam construction areas. Their relentless battles against the government and their commitment to asserting their rights through non-violent means have earned for them respect, dignity and unflinching support from the society at

large. These movements also reiterate the relevance of non-violence that gives us a ray of hope in the world that is afflicted by violence and injustice, which is at times, promoted by the very institution of state. The need of the hour is to understand the local ecology, social and economic aspects of the local population before embarking on the projects at a gigantic scale. The understanding of the nature and its benefits to the mankind would augur well for our future.

10.8 TERMINAL QUESTIONS

1. Trace the socio-economic and ecological impacts of the dam construction in India.
2. Discuss at length the case of Narmada Bachao Andolan and its non-violent struggle against the Sardar Sarovar Dam.
3. Examine the Tehri Bachao Andolan and its non-violent struggle to save the Himalayan region.
4. 'Non-violent struggles ensure socio-economic and ecological justice'. Justify this statement in your own words.

SUGGESTED READINGS

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Web Resources

<http://www.rightlivelihood.org/narmada.html>

www.narmada.org

www.sabrang.com/news/2005/narmadaverdict.pdf

UNIT 11 SILENT VALLEY

Structure

11.1 Introduction

Aims and objectives

11.2 The Importance of 'Silent Valley'

11.3 The Hydro Electric Project

11.4 Movement against the Project

11.5 Summary

11.6 Terminal Questions

Suggested Readings

11.1 INTRODUCTION

"If the misery of our poor be caused not by the laws of nature, but by our institutions, great is our sin."

[Charles Darwin]

The mainstream development models implemented particularly in the Third World have had devastating effects on the ecology and environment of these countries to the extent of endangering the very existence of life forms on the planet earth. The basic problem with the development models prescribed and implemented is the unscrupulous exploitation of nature for short term economic gains of a few powerful individuals. The totalising imperatives of this new wave of development destroyed the forests and ultimately destabilised the 'blue planet'. In the post-war period there was a strong faith in the development models proposed by the west. Most of the developing countries followed these dominant models without raising any question. In India, the large dams were viewed as the "icons of development". Most often, the beneficiaries of these development models in India were the big farmers and the industrialists. Under these circumstances the traditional communities were totally marginalised and they were 'silenced' in the name of "nation building" and "development". In the process, they were evacuated from their homeland without any proper rehabilitation or compensation from the government. The most victimised among these sections are the *adivasis* and other deprived sections.

Large scale deforestation had taken place in the name of development in different parts of India. The destruction of the forests and the building up of huge dams resulted in the drying up of many water abundant rivers, other water bodies and ultimately deprived the local communities of their livelihood.

The growing awareness among the *adivasis* and such excluded sections led to the emergence of large scale protest movements against the concerted efforts of the privileged sections of the society to conquer the forests in the name of development. The movement for protecting 'soil and water' has contributed to the contemporary discourse on development politics. There are assertions from the deprived sections against the well thought out designs of exploitation in the name of development and modernisation. People joined together cutting across parochial social and formal political divisions in the society

to protect their right to livelihood. The civil society has become more active in environmental protection movements and gained acceptance beyond the formal political format. The strong feeling is that major political parties failed to address these types of issues. The need of the time is the active participation of the people in the forest conservation programmes and activities.

In this context we are discussing here the success story of an environmental protection movement in the Silent Valley in the Palghat district of Kerala against the proposed Hydro electric project during the late 1980s. The movement was locally initiated with the strong support from the civil society and later on it was taken up by the Kerala Sastra Sahitya Parishad (KSSP) - the People's Science Movement of Kerala -and finally the government was forced to abandon the project. In a Post-Gandhian perspective, the movement was totally a non-violent one in a non-political space.

As has already been noted, the modern development models failed to address the fundamental base of the human habitation, the environment. In this context, there are many attempts to go beyond the established models of development by local initiatives, which include the resistance against the annihilation of the forest reserve in the name of 'development' and also, the local initiatives for formulating a nature-friendly model of development. The movement in the Silent Valley is noted for its non-political character and admired for its seminal contribution towards creating awareness among the people on the importance of protecting the evergreen forests.

Aims and Objectives

After studying the Unit, you will be able to understand:

- The importance of protecting the forests through people's initiative
- The basic characteristics of the 'new social movements'
- The catastrophic effects of the big projects on environment
- The power of non-violent interest articulation in the civil society and
- The importance of a vibrant civil society in a democratic system.

11.2 THE IMPORTANCE OF 'SILENT VALLEY'

The Silent Valley National Park is one of the last undisturbed rain forests and tropical moist evergreen forests in India. The park is located in the Nilgiri Hills, Palakkad District in Kerala, South India. The first English intrusion into the watersheds of the Silent Valley area was in 1847 by the botanist Robert Wight. The British named the area 'Silent Valley' because of a perceived absence of noisy Cicadas. It is estimated to have a continuous record of not less than 50 million years of evolution. In 1914 the forest of the Silent Valley area was declared a Reserve Forest. However, from 1927 to 1976 portions of the Silent Valley forest area were subjected to forestry operations.

The Silent Valley is rectangular, 7 km (east-west) X 12 km (north-south). Located between 11°03' to 11°13' N latitude and 76°21' to 76°35' E longitude, it is separated from the eastern and northern high altitude plateaus of the (Nilgiris Mountains) by high continuous ridges including Sispara Peak (2,206 m) at the north end of the park. The park gradually slopes southward down to the Palakkad plains and to the west it is bound by irregular ridges. The altitude of the park ranges from 658 m to 2328 m at Anginda

Peak, but most of the park lies within the altitude range of 880 m to 1200 m. Soils are blackish and slightly acidic in the evergreen forests where there is good accumulation of organic matter.

The Kuntipuzha River stretches the entire 15 km length of the park from north to south and fall into the Bharathapuzha. Kuntipuzha divides the park into a narrow eastern sector of width 2 kilometers and a wide western sector of 5 kilometers. The river is characterised by its perennial crystal clear water. The main tributaries of the river, Kunthancholapuzha, Karingathodu, Madrimaranthodu, Valiaparathodu and Kummaathanthodu originate on the upper slopes of the eastern side of the valley. The river is uniformly shallow, with no flood plains or meanders. Its bed falls from 1,861 m to 900 m over a distance of 12 km, the last 8 km being particularly level with a fall of only 60 m. Kuntipuzha is one of the less torrential rivers of the Western Ghats, with a pesticide-free catchment area.

Silent Valley gets copious amounts of rainfall during the monsoons, but the actual amount varies within the region due to the varied topography. The mean annual rainfall ranges from over 5000 mm in the Neelikal area in the west to around 3200 mm on the eastern side of the park. The park being completely enclosed within a ring of hills has its own micro-climate and probably receives some convectional rainfall in addition to rain from two monsoons. In general the rainfall is higher at higher altitude and decreases from the west to east due to the rain shadow effect. Eighty per cent of the rainfall occurs during the south-west monsoon between June and September. It also receives significant amount of rainfall during the north-east monsoon between October and November. The mean annual temperature is 20.2°C. The hottest months are April and May when the mean temperature is 23°C and the coolest months are January and February when the mean temperature is 18°C. The relative humidity is consistently high (above 95%) between June and December because of the high rainfall.

The valley is famous for many rare species of birds and animals. Birdlife International listed 16 bird species in Silent Valley as threatened or restricted: Nilgiri Wood-pigeon, Malabar Parakeet, Malabar Grey Hornbill, White-bellied Tree pie, Grey-headed Bulbul, Broad-tailed Grass bird, Rufous Babbler, Wynaad Laughing Thrush, Nilgiri Laughing Thrush, White-bellied Short wing, Black-and-rufous Flycatcher, Nilgiri Flycatcher, White-bellied Blue-flycatcher, Crimson-backed Sunbird and Nilgiri pipit. Rare bird species found here include Ceylon Frogmouth and Great Indian Hornbill. The 2006 winter bird survey discovered Long-legged Buzzard, a new species of raptor at Sispara, the park's highest peak. The survey found 10 endangered species recorded in the IUCN Red List including the Red winged crested cuckoo, Malabar Pied Hornbill, Pale harrier. The area is home to 15 endemic species including the Black-and-orange Flycatcher. It recorded 138 species of birds including 17 species that were newly observed in the Silent Valley area. The most abundant bird was the Black bulbul.

The mammals in the valley include Gaur, largest of all wild cattle. There are at least 34 species of mammals at Silent Valley including the threatened Lion-tailed Macaque, Nilgiri Langur, Malabar Giant Squirrel, Nilgiri Tahr, Peshwa's Bat (*Myotis peshwa*) and Hairy-winged Bat. There are nine species of bats, rats and mice. Fourteen troops of lion-tailed macaque, eighty-five troops of Nilgiri langur, fifteen troops of bonnet macaque and seven troops of Hanuman langur were observed. Of these, the Nilgiri langur was randomly distributed, whereas the lion-tailed macaque troops were confined to the southern sector of the Park. Bonnet macaques and Hanuman langurs were occasional visitors. The tiger,

leopard (panther), leopard cat, jungle cat, fishing cat, Common Palm Civet, Small Indian Civet, Brown Palm Civet, Ruddy Mongoose, Stripe-necked Mongoose, Dhole, clawless otter, sloth bear, small Travancore flying squirrel, Indian pangolin (scaly anteater), porcupine, wild boar, sambar, spotted deer, barking deer, mouse deer and gaur also live here. There are at least 730 identified species of insects in the park. 33 species of crickets and grasshoppers have been recorded of which one was new. 39 species of true bugs (six new) and two species of Homoptera (both new) have been recorded. 128 species of beetles including 10 new species have been recorded.

Over 128 species of butterflies and 400 species of moths live here. A 1993 study found butterflies belonging to 9 families. The families Nymphalide and Papilionidae contained the maximum number of species. 13 species were endemic to South India, including 5 species having protected status. 7 species of Butterflies were observed migrating in a mixed swarm of thousands of butterflies towards the Silent Valley National Park. In one instance an observer noted several birds attempting to catch these butterflies. The bird species included the Pied Bushchat *Saxicola caprata*, Nilgiri Pipit *Anthus nilghiriensis*, Tickell's Warbler *Phylloscopus affinis*, Greenish Leaf-Warbler *Phylloscopus trochiloides* and the Oriental White-eye *Zosterops palpebrosa*.

The flora of the valley include about a 1000 species of flowering plants, 108 species of orchids, 100 ferns and fern allies, 200 liverworts, 75 lichens and about 200 algae. In addition to facilitating recharge of the aquifer, water retention of the catchment basin and preventing soil erosion, every plant in the park from the smallest one celled algae to the largest tree in the forest has unknown potential for beneficial innovations in biotechnology.

Angiosperm flora currently identified here includes 966 species belonging to 134 families and 599 genera. There are 701 Dicotyledons distributed among 113 families and 420 genera. There are 265 Monocotyledons here distributed among 21 families and 139 genera. Families best represented are the Orchids with 108 species including the rare, endemic and highly endangered orchids *Ipea malabarica*, *Bulbophyllum silentvalliensis* and *Eria tiagii*, Grasses (56), Legumes (55), Rubiaceae (49) and Asters (45). There are many rare, endemic and economically valuable species, such as cardamom *Ellettaria cardamomum*, black pepper *Piper nigrum*, yams *Dioscorea* spp., beans *Phaseolus* sp., a pest-resistant strain of rice *Oryza Pittambi*, and 110 plant species of importance in Ayurvedic medicine. Seven new plant species have been recorded from Silent Valley in 1996 including *Impatiens sivarajanii*, a new species of Balsaminaceae.

Six distinct tree associations have been described in the valley. Three are restricted to the southern sector: (*Cullenia exarillata* & *Palaquium ellipticum*), (*Palaquium ellipticum*) and *Mesua ferrea* (Indian rose chestnut) and (*Mesua ferrea* & *Calophyllum elatum*). The remainders are confined to the central and northern parts of the Park: (*Palaquium ellipticum* & *Poeciloneuron indicum*), (*Calophyllum elatum* & *Ochlandra* sp.) and (*Poeciloneuron indicum* & *Ochlandra* sp.) A study of natural regeneration of 12 important tree species of Silent Valley tropical rain forests showed good natural regeneration of all 12 species. The species studied were *Palaquium ellipticum*, *Cullenia exarillata*, *Poeciloneuron indicum*, *Myristica dactyloides*, *Elaeocarpus glandulosus*, *Litsea floribunda*, *Mesua nagassarium*, *Cinnamomum malabratum*, *Agrostistachys meeboldii*, *Calophyllum polyanthum*, *Garcinia morella* and *Actinodaphne campanulata*.

There is a huge hollow Kattualying tree here which can fit 12 people inside. Throughout human history about 10% of the genetic stock found in the wild has been bred into

palatable and higher yielding cereals, fruits and vegetables. Future food security depends on the preservation of the remaining 90% of the stock through protection of high biodiversity habitats like Silent valley.

The National Bureau of Plant Genetic Resources of Indian Council of Agricultural Research, ICAR (India), Plant Exploration and Collection Division has identified Silent Valley as high in bio-diversity and an important Gene Pool resource for Recombinant DNA innovations. An important example of use of wild germplasm is gene selection from the wild varieties of rice *Oryza nivara* (Central India) and *Oryza Pittambi* found in Silent Valley for the traits of broad spectrum disease resistance in high yielding hybrid rice varieties including IR-36, which are responsible for much of the green revolution throughout Asia.

11.3 THE HYDRO ELECTRIC PROJECT

At first, the Silent Valley got world attention not because of its rich natural diversity, but the successive struggle of the native people against the proposed hydroelectric project in the valley by the Kerala State Electricity Board [KSEB]. In 1928 the location on the Kunthipuzha River at Sairandhri was identified as an ideal site for electricity generation and in 1958 a study and survey of the area was conducted and a hydroelectric project of 120 MV costing Rs. 17 Crore was proposed by the Kerala State Electricity Board. Plans for a hydroelectric project that threatened the park's high diversity of wildlife stimulated an Environmentalist Social Movement in the 1970s called 'Save Silent Valley' which resulted in the cancellation of the project and the creation of the park in 1980. If the project was implemented, the reservoir would have submerged 8.3 km² of virgin rainforest and threatened the endangered Lion-tailed macaque. In 1976 the Kerala State Electricity Board announced a plan to begin dam construction and the issue was brought to the notice of the public.

The Kerala electricity board had started construction works in the proposed region. A vigorous public debate had taken place about the project. The scientific community, political parties, local people, activists and the civil society in general were included in this debate. However, the KSEB announced that it obtained clearance for the construction of the project from the Planning Board and the Science and Technology Department, Government of Kerala. But the fact is that it failed to obtain clearance from any of the concerned authority. The Morarji Desai government at the centre instructed the state government that sanction should be given to KSEB overruling the objections raised by the Science and Technology Department of Government of Kerala and the science community in the state. The project became a prestige issue for the KSEB, the Kerala government and the Prime Minister of the country. On the other side, the science community became more and more aware of the need for intensifying the resistance movement for protecting the rich diversity of the Silent Valley. Finally the science community in Kerala understood that they could not, on their own, fight the cause and they felt that coordinated efforts of both the scientific community and the local people were inevitable for the conservation of the forests.

It was very clear that the authorities who proposed the dam construction have not taken into consideration the kind of destruction that would set in motion in the entire geographical area. In this context it is worthwhile to note that the disastrous earthquake in Koyna in 1968 had been attributed to the weight of water in the Koyna reservoir. The effect of Aswan High Dam on the Nile Delta had been disastrous. Stoppage of flooding

and consequent loss of fertility, increase of soil toxicity due to absence of flooding, reduction of still and consequent rapidity of current causing accelerated erosion of banks, stagnation of water and consequent increase in mosquitoes and diseases especially bilharzias had all added together. The Idukki Project Hydel project in Kerala submerged the entire natural forests. It was widely understood that the proposed dam would alter the eco-system of the valley.

11.4 MOVEMENT AGAINST THE PROJECT

It is very important to note that an environmental movement like the *Silent Valley Movement* got national attention during the 1980s when the state-led development projects were dominating the scene. The dams were viewed as the 'icons' of development. The movement, in unequivocal terms, underlined the importance of protecting the environment for the generations to come. Protecting the lion tailed Macaque became the symbol of non-violent struggle to save the evergreen forests from total destruction. Many environmental groups like the Narmada Bachao Andolan (NBA), Bombay Natural History Society (BNHS) and Silent Valley Action Forum participated in the campaign. The prominent leaders were Vandana Shiva, Medha Patkar, Sundarlal Bahuguna, Baba Amte and Sunita Narain. The campaigns launched through the media, both print and electronic, generated public opinion in favour of the protection of the ecosystem of the silent valley.

As is stated elsewhere, the movement was first initiated by the local people and was subsequently taken over by the Kerala Sastra Sahitya Parishad (KSSP). Various scientific studies conducted by KSSP unequivocally emphasised the need for the protection of ecosystem in its pristine form for serving the interests of mankind. It was the biologist leaders of KSSP who identified the importance of protecting the valley because of its rich biodiversity. They had arranged several public meetings to educate the people. As a result most modern technical terms like the 'genetic diversity' became a household word in Kerala. Even concepts like 'gene pool' and 'deme' became part of the general vocabulary. The studies of the KSSP revealed that very limited section of the people would benefit from the proposed project; specifically, a large chunk of the electricity produced there would go for industrial purposes. Another argument was that by destroying the forest, the energy sources of vast majority of the poor people would be lost once and for all. The KSSP generated public opinion against the project. It had science groups all over the state and through newsletters and journals it had spread the message among the students and youth as also the general public. It had sent a memorandum to the Kerala government about the issues and problems involved. It had organised street plays, exhibitions, public debates, and also conducted a 'marathon march' which covered around 400 villages. The student community also rose against the proposed project and it was the first time in the history of the state where the students agitated for the protection of the environment. Some celebrities who were actually not part of the environment movement like KPS Menon (Sr.) extended support to the cause of the Silent Valley.

The campaign of KSSP was based on a distinct understanding of the following factors:

1. Vested interests, those who reap benefit from the felling of trees from deep forests and other similar activities, were getting protection from the powerful political class.
2. The achievements of Science and Technology are indiscriminately used for the promotion of the interests of the upper crest in the society.

3. It is the responsibility of the People's Science Movement to fight for the protection of the interests of common man and to be in the forefront of struggles to protect the environment to make the planet earth safe for the future generations.
4. Forest conservation is possible only through diverting people's struggles against the policies of the State, which is supporting the interests of certain sections of the population.

As a result of the massive campaign launched by KSSP, the Central Government appointed Dr. M.S. Swaminathan, a leading plant geneticist and agricultural Scientist to enquire about the issue. He visited the Silent Valley area and suggested that 389.52 km² including the Silent Valley (89.52 km²), New Amarambalam (80 km²), Attappadi (120 km²) in Kerala and Kunda in Tamilnadu (100 km²) reserve forests, should be developed into a National Rainforest Biosphere Reserve.

In 1983, the Central Government instructed the State government to abandon the Project and on November 15, the Silent Valley forests were declared as a National Park. On September 7, 1985, the Silent Valley National Park was formally inaugurated. On September 1, 1986 Silent Valley National Park was designated as the core area of the Nilgiri Biosphere Reserve. Since then a long-term conservation effort has been undertaken to preserve the Silent Valley ecosystem.

The Silent valley movement was in several ways crucial to other environmental movements in India. The seminal contribution of the Silent Valley movement is that it educated people regarding the importance of environmental protection. It is further realised that effective environmental protection can be achieved only through the active participation of local people in collaboration with the Science Community with the committed involvement of the civil society.

11.5 SUMMARY

It is very significant to note that the post-industrial developmental models totally discarded the importance of protecting the environment for the very survival of the mankind on the planet earth. In most of the developing countries, the building up of huge dams was the symbol of modern development. In India it was viewed as the 'Temples of Development'. However, the construction of big dams brings forth several environmental problems. But it was overshadowed by the slogans of national development and nation building. In the name of development, the native people were evacuated from their home land and the forests of rich diversity were destroyed. In this scenario, the active involvement of the civil society actors for the conservation of the forests and the natural resources has redrawn the boundaries of politics. The new social movements addressed these problems through the victim's angle and deconstructed the very idea of development. The Silent Valley movement was the beginning of such movements in India. It is very clear that the rejuvenation of the Gandhian developmental discourse is the need of the time.

11.6 TERMINAL QUESTIONS

1. Write an essay on the Silent Valley Movement.
2. How do you look at the Silent Valley Movement from the angle of the new social movements?

3. Explain the role of the KSSP in the Silent Valley movement.
4. The Silent Valley activism is a new beginning to the forest conservation. Elucidate.

SUGGESTED READINGS

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UNIT 12 WATER CONSERVATION MOVEMENT

Structure

12.1 Introduction

Aims and Objectives

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Suggested Readings

12.1 INTRODUCTION

"Water Sovereignty is our fundamental right".

"Water is Nobody's thing but a public good."

"Water is an essential public resource".

"Water is a human right".

(Water Liberation Declaration, Karnataka)

Water is the gift of nature for all life forms on planet earth and it is the cradle of human civilisation and culture. However, of late, our 'blue planet' is facing three different kinds of water crises viz., dwindling fresh water supplies, inequitable access to water and the corporate control of water. In fact, water is not a private property of any single individual, corporation or the state. The attempts to commodify (marketise, privatise, corporatise) water violates the very fundamental right of the people, "the right to life." The 'water conservation policy' approach should be 'bottom to top', in the sense that people's participation in the process should be ensured. This is the fundamental basis of 'water democracy.' This approach advocates for more decentralisation of power on societal matters. In this endeavour, the cultural distinctiveness of the local communities seems to be protected and the traditional knowledge base of a community on the preservation of the water could be beneficial to the whole nation. However, the State is still acting as the sole authority on the natural resources in its territorial jurisdiction and in accordance with the neo-liberal dictums it has been selling out its natural resources to the Multinational Companies (MNCs). The large-scale extraction of the ground water leads to severe water crisis. Indeed, there are resistance movements against these concerted attempts of exploitation of a common property resource like water. The movements are both offensive as well as defensive as there are struggles against the water-thirsty MNCs as also

mobilisations for the conservation of the water through traditional means. By and large, these movements have adopted non-violent methods in their strategies for mobilising public support for the livelihood rights of people at the grassroots level. The widening gap between the demand and supply of drinking water makes it the most precious thing in the world today. The various studies on the problem reveal the tragic situation that the entire humanity is going to face if water conservation is not taken up as a major public policy of all the countries of the world. In many parts of the world, water crisis is very acute. In this scenario, there are many coordinated efforts to address the problem through people's participation. And in many forums, the 'water rights' are equated with the 'right to life'.

Aims and Objectives

After studying the Unit, you will be able to understand:

- The inadequacies of the National Water Policy in India and the emerging alternatives.
- The importance of water conservation and its awareness through people's initiatives.
- The politics of the movement, the counter hegemonic strategy which deconstruct the dominant models of development.

12.2 WATER: A FUNDAMENTAL RIGHT

Water is the fundamental base of all civilisations. Water has influenced the rise and fall of many civilisations. Water resources continually teach societies about the interconnections to be found in the environment and of the need for ecology-based perspectives. Historically, people showed great affinity towards water. Water quantity and quality are basic to the well being of each and every society. Water related issues continue to be vitally important for environmental movements all over the world.

The studies reveal that 20% of the world's population does not have access to safe drinking water. 40% of the people do not have sufficient water for adequate living. More than 2.2 million people die each year from diseases related to contaminated drinking water. By 2050, water scarcity will affect 2 to 7 billion people out of total 9.3 billion. India, with 16% of the world's population, has only 4% of the fresh water resources. In India, the over-exploitation of land, water and forest resources all over the country caused acute water scarcity. The per capita availability of water in India has dropped from 5,000 cubic meters a year in 1947 to less than 2,000 cubic meters in 2002. It is expected to drop further to below 1,500 cubic meters by 2025. Six of India's 20 river basins have already reached the water scarcity threshold of 1,000 cubic meters a year. In 15 States, the groundwater level has been falling at the rate of 5 to 7 per cent every year. Twelve major rivers have been declared polluted and, according to hydrologists, there are no more fresh water sources in India. Accounting for 16 per cent of the world's population, 2.45 per cent of the landmass, and 4 per cent of the water resources, India is facing a drinking water crisis.

Nature is fast losing its capacity to provide water for human needs and ecological balance. The impact of the floods and droughts are becoming more severe. The crazy exploitation of surface and groundwater is leading to a rapid fall in groundwater table. This pathetic situation is the net result of the so-called development activities that the modern capitalist system has been pursuing for centuries. The modern nation state is

viewed as the custodian of the natural resources within its territorial limits. The state-sponsored mega development projects resulted in serious environmental degradation. The icons of modern development, the large and medium dams, totally failed to manage and control the most severe problems like the flood and drought. In many cases the causes of droughts and floods are these big dams. In this process the traditional forms of water conservation are abandoned. Moreover the traditional communities, the main depositories of traditional wisdom, are evicted from their localities. In India, the tribals and others are the most affected group of people as a result of construction of big dams and massive deforestation associated with it.

Under these circumstances, community participation has been emphasised towards efforts for water conservation. In some cases people took initiatives to conserve water without the government support. Here, the local communities are developing a sense of ownership over the natural resources, especially the water bodies of their localities. Through mobilisation, they have been guarding their 'natural rights'- from the marketing strategies of the MNCs and their facilitators.

According to the Preamble of the North India Canal and Drainage Act of 1873 (one of the early legislations in the area of water resource management) the Provincial government was the sole authority which had the power to use and control water of all rivers and streams flowing in natural channels and of all lakes and other natural collections of still water. However, the state can no longer be the sole authority on the natural resources without taking into consideration the interests of the people. The state could control these resources only by ensuring that it would not thereby inflict injuries or disrupt traditional supplies. In the last two decades the Supreme Court of India as well as various high courts issued verdicts and accordingly, the right of enjoyment of Pollution-free water is now a human right. At the same time, several states have decentralised the responsibilities of irrigation management from government agencies to the Water Users Association [WUAs], to ensure people's participation in the water conservation and management.

12.3 WATER AND DEVELOPMENT

Water is an important factor in the sustainable development of a country. The early discourses on development had totally discarded the importance of people's involvement in the formulation and implementation of various projects. In this state-led developmental pattern, the state becomes 'hyperactive', while the role of the people gets diminished. The net result was that, in the name of 'development', the vulnerable sections in the society are totally marginalised and are evacuated from their localities. The drastic decrease in water availability for irrigation has severely affected food security. The government has been promoting water-intensive crops. For instance, of the 3700 dams built in India, 1600 are in Maharashtra. Thus Maharashtra has consumed 40% of the total expenditure on water resources in India. In spite of this out of 45,000 villages in the state 6,000 are facing acute drinking water scarcity and water is being supplied to these places by tankers. In short, the state has been protecting the interests of the water lobbies on the one hand and also promoting water-intensive crops. Here the Rights to livelihood of the people have been violated.

The National Water policy of the Indian government has emphasised that in the allocation of water, priority should be given to drinking water and water for irrigation purposes; but in reality more water is allocated for industry and urban use. The entry of private water companies is being portrayed as a cure for the mismanagement of water resources by the

State and the local authorities. However, in the context of privatisation of water and water bodies poor sections in the society, those who do not have the purchasing power to compete in the market, are the worst affected. The State's policy of transferring of control of water resources to private sector under various schemes, as a result of global pressure and the nexus between industry, politicians and bureaucrats, has violated the basic human rights of local communities, thus leading to the exclusion of poor *tribals* and local residents from using water for their basic subsistence in various parts of the country.

The western-oriented development models are not basically nature-friendly. The univocal imposition of these models in the societies like India brings forth catastrophic effects. In this process the traditional knowledge base of the local areas are totally discarded. The developmental strategies of traditional communities are basically eco-friendly. The growing awareness of the environment degradation had prompted many people to fight the established development strategies that the state had been following. At the same time, the collaborated attempts of the state and the MNCs to sell out the natural recourses of the country led to large-scale opposition from the local communities.

12.4 THE NATIONAL WATER CONSERVATION POLICY (NWP 2002)

At the meeting of the National Water Resources Council held on April 1, 2002, a new NWP 2002 came into being. In this meeting the 1987 national water policy was revised. This was the outcome of a series of discussions on the subject initiated by the government. During the late 1990s, an attempt to revise the NWP 1987 was undertaken. A draft was placed before the NWRC at its fourth meeting held on July 7, 2000. However, the draft failed to bring consensus among the state governments. It comes under the jurisdiction of a group of ministers both from the state and the centre and this group held several meetings and finally submitted the document before the NWRC, on April 1, 2002. It is to be noted that the discussions and clarifications on the subject was reduced to mere internal governmental activity and the public responses were totally ignored. This new policy document failed to go beyond the provisions of the 1987 document. It is still focusing on the so-called 'projects' i.e., the building up of big dams. In the 2002 policy document these things were over-emphasised. The most important weakness of this policy document was the undermining of the two important issues that were widely discussed in the media and the academic circle viz., 'water harvesting' and the 'community management'. One could not find any appreciation of the idea of water harvesting in this policy document. Similarly, the idea of the community management of common property resources is also discarded in this policy document. The PM had said: "The policy should recognize that the community is the rightful custodian of water. Exclusive Control by the government machinery... cannot help us to make the paradigm shift to participative, essentially local management of water resources." This point has totally been undermined in the policy document. The emphasis on the buzz words like the 'participation', 'water users' associations', 'stake holders' are only in the context of big projects. The only reference of the 'community' occurs in the last paragraph of the policy document. This was added only after the Prime Minister's speech. The document says "concerns of the community need to be taken into account in water resources development and management". This weak sentence has nothing to do with the 'community management' in the apt sense of the word. It is noted that this weak sentence was not added in the draft that was submitted in the NWRC meeting. Neither was there any clarity of opinion regarding the water as 'commodity' or water as 'commons'. Activists like Rajendra Singh questioned

the very credibility of this policy document. The word 'asset' in the very first paragraph of the document has been questioned by Rajendra Singh because it resonated 'water as commodity.' There are massive struggles against the concerted attempts to commodify water.

12.5 STRUGGLES FOR 'WATER SECURITY'

The changed role of the state from that of a provider to facilitator is very much reflected in the water policy of the state. The state has become the supporter of the MNCs. In this changed scenario, the interests of the people has been neglected and ultimately resulted in various struggles for the protection of the basic natural rights of the individuals and communities. There are movements in the civil domain for the conservation of water. One could observe two versions of activism namely, a well defined cooperation between the state and the civil society for water conservation and initiative of the civil society to protect resources without any help from the state.

For example, the Madhya Pradesh government has made numerous attempts to create a cooperative relation between the state and the civil society to tackle the water crisis. In the **Jal Abhishek Campaign** (A People's Movement For Water Conservation), the community became the active participant of water conservation. The strategic components of the movements include the following tasks:

- To work on the concept that community should take initiative and government should facilitate.
- Extensive publicity in rural areas and enhancing awareness about need of water conservation and a sense of responsibility in the rural populace.
- To put in place a village level institutional framework for providing leadership to the rural communities and building their capacities.
- To evolve an institutional mechanism of government to provide cooperation and guidance to the community; this would not be of the nature of administrator or controller, but of a facilitator/animator.
- To plan and execute village-wise water conservation activities in the following manner by convergence of financial resources available under various government departments and contribution from the stake holders.

The movements which are not seeking support from the state are also making constructive attempts to resolve the water crisis. This perspective is unconvinced about the role of the state in the society because in the present neo-liberal stage of capitalism, the state has been facilitating global finance capital and has acted as an agent of the MNCs, protecting their interests. Rajendra Singh's 'Rashtriya Jal Chetana Yatra' (National Water Awareness Campaign) can be posited in this context. However, there are attempts to preserve the ground water without any support from the government, and based purely on voluntary activism. For example, Osmanabad, a district in Southern Maharashtra had faced severe drought in three consecutive years. The only relief was the tanker water supplied by the local government authorities. The groundwater has almost depleted and the irrigation projects have failed to cope up with the grim situation. The authorities decided to solve the problem with the people's involvement, without any assistance from the state. In March 2004, the Osmanabad district administration, along with the Tata Institute of Social

Sciences (TISS), launched the “Pani Yatra”, in order to create awareness among the local population about the importance of protecting the ground water. The ‘yatra’ passed through 40 villages in the district and conveyed the message of the importance of preserving the ground water. The “yatra” carried with it a ‘kalash’ containing water collected from a local well. The ‘Pani Yatra’ was supported by around 40 NGOs. The volunteers apprised the villagers about the significance of protecting the ground water. With the assistance of NGOs, the desilty of wells has begun in some villages. Rainwater harvesting has also been introduced and through the Employment Guarantee Scheme (EGS), compartment bounding to retain water has begun. A workshop for village sarpanchs on the importance of water conservation was also conducted.

12.5.1 National Water Awareness Campaign (Rashtriya Jal Chetana Yatra)

Shri Rajendra Singh, the leader of Tarun Bharat Sangh and the winner of 2001 Ramon Magsaysay Award for Community leadership, has been actively campaigning for restoring water resources, and is supported by the United Nations, USAID, and the World Bank. His initiatives to harvest rain water by building check dams in Rajasthan, a severely drought driven state earned him the title of ‘Jal Purush’ or the ‘Water-man of Rajasthan’. Since 1985, Tarun Bhagat Sangh has been working in the Alwar district of Rajasthan, focusing on the revival of Johads, streams and rivers in the area.

He came into prominence for his struggles against marble miners in the Tiger Sanctuary of Sariska in the early 90’s. These mining activities led to the depletion of the ground water in the region. He and his associates at the TBS headquarters in Kishori-Bhikampura in Thanagazi tehsil bordering the sanctuary took up the matter that eventually led to the closure of 470 mines operating within the buffer area and periphery of the sanctuary. A public interest petition was filed in the Supreme Court and in 1991, the court issued an order against continuing mining in the ecologically fragile Aravalli region. Subsequently, a notification by the Ministry of Environment and Forests followed in May 1992 banning mining in the region.

The initial suspicions of the villagers gave way to the recognition of genuine efforts by the TBS in restoring whatever very little ground water was left. Rivers and ponds were drying up and the men of the villages in the region left for cities for earning their daily income. With no farming activities due to lack of water and severe crisis, many efforts were undertaken to restore these shrinking water bases. Nevertheless, the initiatives found a resounding success as water has been restored in the region.

Johads

The “*Johads*”- simple mud and rubble concave shaped barriers were built across the slopes to arrest rainwater with a high embankment on three sides, while the fourth side is left open for the rain water to enter. The height of the embankment is such that the capacity of the “Johad” is more than the volume of run off coming from the catchments based on a rough estimation of maximum possible run off that could come into it. Therefore the height varies from one “Johad” to another, depending on the site, water flow, and pressure etc. The Water storage area varies from 2 hectares to a maximum of 100 hectares. The Water collected in a “Johad” during monsoon is directly used for irrigation, drinking, and other domestic purposes. The advantage of this structure is that apart from arresting and storing rainwater, it improves moisture level at the sub-soil

level in the field, particularly in downstream areas, which recharges ground water and wells. For building “Johad”, the villagers are using simple and cost effective technology, with locally available recourses.

This traditional knowledge was overshadowed by the new developments in the science and technology, and the attempts by Rajendra Singh and his friends had rejuvenated this old system. They faced stiff resistance from the local authorities as they by-passed all bureaucratic channels and dealt with the people directly to fulfill their requirements in the traditional manner. The first “Johad” took three years to build; in the fourth year the group built 50 “Johads”; in the fifth year almost a 100 were built and in 2001 there were around 1000 water structures, thus making it more than 5000 water harvesting structures in 1058 villages. The guidance was provided entirely by the traditional wisdom of the people who have maintained the ecological balance for generations. These water structures were built with the active participation of the community in its construction from the identification of the site to the designing of the structure and by contribution in the cost of its construction and latter in its maintenance, which ensured that all the structures were need based.

With the implementation of the “Johads”, prosperity returned to the region. In 1985 only 20% of the agricultural land was cultivated, now it is 100%, and the villages started selling surplus grains in the market for the first time. As villagers mobilised themselves to improve their quality of life by contributing to building “Johads”, this participation of the people promoted the community to become self-reliant, thus optimising the social cohesion and emotive bonding in the community. The importance of collective action got intensified and the people became more aware of their rights and the importance of protecting their soil, water and the forests. These mobilisations ensured an active and collective participation of the individuals in the ‘gram sabhas’ in a democratic manner and gave a chance to all to have a say in the formulation and implementation of developmental projects.

The ‘Rashtriya Chetana Yatra’ was an attempt to share the water-related concerns between different communities. It was also a campaign against the attempts to privatise water and commercialise it for the world market. A drive to privatise and commoditise water is not only unethical but also destroys community rights and erodes community responsibility in water conservation and sustainable use. The ‘Rashtriya Jal Chetna Yatra’ is committed to rejuvenating the culture and practices of water conservation of the local people. It brings to the fore millions of local traditions and initiatives to revive rivers, recharge aquifers and rejuvenate nature.

The Campaign

The objectives of the campaign are

- Restoration of water resources
- To spread the message of conservation of water and other natural resources
- To revive the local traditional practices of water conservation throughout India
- To generate awareness regarding the National Water Policy, declared on April 1, 2002 and its impact on our life
- To garner nationwide support against the privatisation of the rivers and also against commercialising it

- To generate awareness about the proposal of interconnecting rivers, its impact, need and feasibility
- To promote the role of women in water conservation
- To promote national integration
- To arm poor people, farmers, and the common man against the problems related to water such as drought and famine
- To establish society's right to water.

The Rashtriya Jal Chetna Yatra started on 23rd December 2002 from Rajghat, New Delhi. The Yatra focused mainly on the water-related issues, an attempt to share the concerns regarding water across the country. The people from different walks of life had participated in the meeting. The Yatra had covered the states of Delhi, Haryana, Rajasthan, Gujarat, Madhya Pradesh, Chattisgarh, Orissa, Jharkhand, Bihar, Uttar Pradesh, Uttarakhand, Maharashtra, Andhra Pradesh, Goa, Karnataka, Tamil Nadu and West Bengal. The prominent figures in the Yatra included Rajender Singh, Arjun Baba, Shrimati Bhagirath, Syed M. Hasnat (Tarun Bharat Sangh), Vandana Shiva, Gautam Bandopadhyay, D.C.Jain (President, Sheonath Bank Regional Development Society), Hemlata Sahu, T.K.Verma and the representatives of various NGOs. The main points of discussions in the Yatra were the strengthening of the society to conserve the water resources and the responsibility for developing their own water policy. The government policy of linking rivers must be reconsidered, as the restoration of the ponds, tanks and lakes are the best way to protect the water resources. The campaign against the state's attempt to sell out the water resources to the MNCs was one of the core themes of discussion.

The involvement of *tribals* and women is the most peculiar feature of this campaign, as they are affected the most. In Madhya Pradesh, the *tribals* shared their experience with the '*jaatha*' volunteers about water conservation. These people were willing to share their ideas with the government authorities for better implementation of the government sponsored projects. However they are not dependent on the government or any other authorities for water conservation initiatives. In many places there were attempts to thwart the community activism. In Gujarat, the yatra was attacked by a group of people, who support the Sardar Sarovar Project. The Yatra vehemently criticised such big projects as insufficient efforts to solve the problem of water crisis. In 14 months, the '*Yatra*' touched 320 Districts in 30 States of India of which 17 states are severely drought affected. Further, owing to a large number of people being displaced from their settlements for the construction of the big dams, people became aware of the government's protection of the MNCs interests that are being supported by the global financial institutions like the IMF, WTO and the World Bank. The developing countries are compelled to sell out their natural resources for repaying the debts they owed to these institutions. Thus, the state has been reduced to a mere facilitator for global finance capital. Therefore, these movements stand against such anti-imperialist strategies.

Some Important Observations

- The water policy of the Central government (NWP-2002) alienated the local communities from their own water resources.

- The current crisis of water is not the inadequate supply but the mismanagement of the available water resources.
- The regeneration of the traditional water resources is the only way to fight against globalisation and privatisation of water.
- Rather than linking water the need of the time is to link the people with the rivers.
- The urgent need of civil society involvement for the protection of the natural resources like water.

12.5.2 The Plachimada Campaign

The Plachimada movement is one of the best examples of resistance against the neo-colonial attempts of exploitation by the MNCs. Plachimada is situated in the Perumatty Panchayat in Palghat district of Kerala. It is a small hamlet, five km from the Tamil Nadu border and 30 km east from the Palakkad Town, the district headquarters. According to the Government of India records and satellite photos, this area is marked as arable land. Most of the villagers are land-less *Adivasis* (indigenous people), classified as scheduled tribes and scheduled castes. Some 1000 families of the Malasar community and 17 to 19 Eravalur families have been facing acute water shortage. This community consists of agricultural wage labourers and not farmers with 80% of them earning their living as farm labourers and 20% subsisting on other labour activities. They get around 100-120 workdays per year; educational and health status of these people are well below the Kerala average (Jananeethi Report, 2003, p.3). The Hindustan Coca-Cola Beverages Private (HCCB), registered as a subsidiary of Coca-Cola of Atlanta, a US centred MNC, in 1993, intended to invest more than US\$1 billion between 1993 and 2003, establishing 27 wholly owned bottling operations supplemented by 17 franchisee-owned bottling operations and a network of 29 contract-packers to manufacture a wide range of its products. The Left Democratic Front Government in Kerala expressed willingness to establish a plant at Plachimada. In accordance with the policy provisions, Coke acquired 34.64 acres, mostly paddy fields for the plant, in 1998. The Perumatty panchayat granted a license to Coke on January 27, 2000. The plant was commissioned in March 2000.

There were three lines of production, returnable glass bottle line, PET line and Maaza line. The Kerala State Pollution Control Board (KSPCB) gave permit to produce 5, 61,000 liters of soft drink per day requiring 3.8 liters of water for a litre of soft drink. The rate of water exploitation was very much evident. There were 130 permanent workers and 250 contract labourers as Plachimada is a part of Moolathara village situated around the factory.

Six months after the company was commissioned, the people in the neighborhood noticed slight changes in the quality and the quantity of the well water. The water turned brackish and milky white and was no longer fit for the household purposes. Nearly 100 people complained of health complications related to the water. The farmers too complained about the drying up of the wells. About 85 lorry loads of beverage products containing 550- 600 cases each, with each case containing 24 bottles of 300 ml capacity left the factory premises daily. Six bore-wells and two open-wells in the factory compound sucked out some 0.8 to 1.5 million litres of water daily. Within two years, the people around the plant experienced problems that they had never encountered before like the receding of the water table and the drastic change in the quality of water spread around

1 to 1.5 km radius of the plant. As the Company made attempts to mitigate the problem by providing tank water to the villagers, people became aware of the critical situation and wanted long-term solution to the problem.

The struggles against the Coca-Cola plant started in the spring of 2002. In January, the Adivasi Samrakshana Sangham led a symbolic protest against the plant. Later on, C K. Janu, the leader of the *Gothra Maha Sabha* took initiatives to mobilise the Adivasis and other Dalit people against the plant. People from all walks of the society joined the struggle. The angry demonstrators, gathered at the factory gate forming a blockade and at least 50 villagers have maintained a picket outside the plant everyday. Coke filed a case on April 26, 2002 in the High Court against the struggle committee and demanded police protection for the plant. The court issued a verdict and accordingly, heavy police protection was provided to the plant. Many people were arrested and this led to a violent situation. In the initial stage of the struggle, the dominant political parties in the state took a negative stand against the campaign. The Janata Dal was controlling the panchayat, but the party was totally against the struggle. The media also took an oppositional stand against the campaign. The coke also initiated propaganda which emphasised that the struggle was politically motivated. However, the struggle persisted with the support of the adivasi women, the Gandhians to the revolutionary left, youth, environmentalists and academicians. To express solidarity, many organisations all over the country arranged protests and dharnas. As a part of their strategy, the Coke put forward an idea of rainfall harvesting. They had implemented many such projects. The prominent political parties, both the national and the local, except the ruling party at the centre, gave open support to the campaign. In the popular imagination, the struggle got an image of a massive campaign against the US imperialism.

The Perumatty Panchayat cancelled the license to the Cola company on April 9, 2003 alleging the depletion of the ground water resources. This led to a series of legal battles between the company and the local government. In its ruling, the High court emphasised that ground water is a public property, held in trust by the government and it had no right to sell it to the private authority. In February, the government banned the use of groundwater by Coke until mid-June when the monsoon was expected to set. The plant stopped operations from March 9, 2004 after the High Court upheld the government order. On April 13, 2005, the Coke filed an application to the panchayat for renewal of license for a period of five years from April 1 2005. The High Court on June 1, 2005 ordered Perumatty panchayat to consider issuing the license within a week of application by Coke. On June 6, the panchayat issued a three-month license subject to certain conditions. Meanwhile, the panchayat and the state government moved the Supreme Court in May 2005 and September 2005, respectively. When Coke complained to the High Court of the panchayat's recalcitrant attitude with regard to court orders, the court directed the panchayat once again to issue the licence on November 16. Coke again applied for the licence on December 7, 2005. On December 20, the panchayat resolved that, "the streams and groundwater in all the areas under wards 1 to 8 and wards 11 to 17 that were privately and publicly held shall be used exclusively for domestic use and irrigation purposes only from January 1, 2006". This was based on the notification, of Chittoor block as a "notified area" by the water resource department on November 19. The panchayat issued the license for three months from January 4, 2006 to April 4, 2006 stipulating that the company shall not extract groundwater for industrial purpose as the panchayat was under the category of "overexploited". The government banned manufacture and sale of Coca-Cola in Kerala in the interest of public health on August 11, 2006

under Section 7(iv) of the Prevention of Food Adulteration Act, 1954, on the basis of a report that Coke contained pesticides.

The Nature of the Conflict

The struggle against the Coke continued on two distinct grounds: firstly, the local people's resistance against the Coke with the strong support from the civil society; secondly, the legal battle by the Perumatty Gram Panchayat against the Coke. The natives followed a non-violent form of struggle/resistance against the company. The post-Gandhian way of struggles like 'Dharna' and 'Pradarshan' (demonstration) received worldwide attention. It was also a struggle between the Governments vs. community. The Kerala government stood in favour of the Coke, by expecting more investment in the state in accordance with the principles of the Washington consensus. So it was a struggle against the state – finance capital combined. The Perumatty Gram Panchayat, in association with several voluntary associations, had sponsored a three-day world water conference in Plachimada in January 2003. Topics that were debated were privatisation of water, climatic changes and the environment and corporate control of water in India. The dharna continued on for more than two years in the factory premises and had been joined by the participants in the water convention. Leading speakers at the conference included Jose Bove, leader of the Confederation Paysanne, a farmers' organisation in France, Maude Barlow, chairperson of the Canada based council of Canadian Public Advocacy Organisations and activist Vandana Shiva. Indeed, the Plachimada problem attracted international attention and the role of global civil society was highlighted. It is to be noted that the active involvement of the local administration and a vibrant civil society has made the movement distinct from many other movements.

12.6 SOCIAL AWARENESS

The two movements we have discussed are the fine examples of the growing awareness among the common people about the emerging dangers threatening their livelihood and survival. The years of 'state activism' in the economy and the society in general failed to ensure a nature-friendly development of all the sections in the society. The big 'projects', in the name of "development", ultimately contributed towards over-exploitation of the nature, environmental degradation and most importantly, the evacuation of the traditional communities from their original habitat. The growing awareness among the local communities about their 'rights' over the soil and water has deconstructed the dominant paradigm of development.

The movements in the society enrich people's cooperation and coordination. By asserting their rights, these deprived sections develop a new democratic culture in the society. A sound democracy cannot be established from the top to the bottom but through people's initiatives, participation and empowerment. The social movements in the society are the outcome of the failed proposals of the modern state. People's initiatives change the society without the support from the state. In accordance with the neo-liberal dictums, the role of the state has changed from the major source of provider in the society towards the facilitator for the global finance capital. The state has been taken care of by the global MNC giants, often discarding the interests of the common people. In this scenario, the people's initiatives to fight against these societal threats and the role of civil society in this realm get intensified. These movements attempt to protect the "local" means, local cultures, knowledge systems, language, etc. from the totalitarian imperatives

of the process of globalisation. The attempts to strengthen the Panchayat raj institutions generate a conclusive atmosphere towards fostering democracy at the local level.

12.7 SUMMARY

The water conservation movement is an attempt for protecting our traditional methods of water conservation. The traditional knowledge systems were overshadowed by the big developmental projects of the state. The movements also bring forth an alternative to the existing dominant models of development. The over-exploitation of the ground water for industrial purposes causes drastic decrease in the availability of water. With globalisation in progress, big water market lobbies and their attempts to commodify water have changed the symbiotic relationship between the 'nature and man'. Indeed, the poor sections in the society are the victims of this neo-colonial exploitation. The two movements that we have discussed here share many commonalities. Both have emphasised the importance of ground water sources, for the sustainability of humanity and life forms on the planet earth positing the 'development' in a people-friendly and nature-friendly perspective. The movements are anti-imperialist campaigns and strongly support the democratic means to change the society in a Gandhian way.

12.8 TERMINAL QUESTIONS

1. Write an essay on the emerging trends on water conservation and its repercussions in India.
2. Write an essay on the water conservation movement in India, with special reference to the National water awareness campaign led by Rajendra Singh.
3. Write a brief note on the Plachimada campaign in Kerala.
4. Write a short note on India's National Water Conservation Policy, 2002.

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