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# Colonization of the Western Himalayas and the cultivation of Pine: A Literary Perspective

Abstract: Blessed with a plethora of flora and fauna including a diversity of geographical ranges, the western Himalayas have acquired a special space in the cultural landscape of the country. However, of late, there has been a negative impact of 'modernisation' on the sensitive ecosystem of these mountains with far-reaching consequences affecting the life of humans. The paper intends to identify certain changes in the cultural behaviour of the people thus affected by the process of colonization. The worldview affected by an extreme form of utilitarianism supported by a cultural imperialism with its ideological basis in the notion, that the "entire universe is thy territory", is largely responsible for the cultural and environmental chaos in the region. By way of calculatingthe impact of colonization on geographical landscape of the Himalayas, we have examined the role of pine cultivation in the said region. The paper also highlights the importance of Traditional Ecological Knowledge in healing the wounds thus inflicted by "modernity".

Key words:Culture, Imperialism, Colonization, Traditional Ecological Knowledge (TEK), Chirpine.

1. Introduction

Culture and Geography, the two very closely related terms, have a significant role in shaping and influencing each other. The culture of a country depends on its environment, climatic conditions and human behaviour. The phenomenon of cultural changes affecting the geography of a country has been examined by different post-colonial cultural analysts as well as scientists. While writers and theorists like Chinua Achebe,Ngugi O Thiongo and Frantz Fanon developed their theories around the colonization and subsequent exploitation of Africa, authors like Amitav Ghoshand V S Naipaul have studied the phenomenonin a wider context both through their fictional and non-fictional writings. In his book, *The Great Derangement*, AmitavGhosh discovers the malaise in a culture ridden with mindless consumerism: "Consumerist Culture, which generates desires- for vehicles and appliances, for certain kind of dwellings, for furniture and extravagant lifestyle, is intimately linked with the wider histories of imperialism and capitalism *(Ghosh 2016)*. In his analysis, Ghosh discovers another culprit—the European colonizationof the countries of the so-called Third World, a process that can hardly be separated from the subsequent imperialism through cultural modes of exploitation, and capitalism which only boosted their economic and political dominance over the colonies. Compelled by their imperial and capitalist orientation, the colonisers brought about significant changes in the geographical and cultural landscape with along-term detrimental impact on the environment.

In order to fulfil their unending requirement for raw materials, market and extravagant desires, the British expanded their empire in various parts of the world including India, Africa, Australia, New Zealand, Canada, West Indies and different colonies on the African coast. The British Empire constrained natives of colonies to disparage their alleged subordinated culture to invoke self-hate attitude among them. With an analysis of the major historical, political and social events that took place in 19$^{th}$ century, one can safely conclude that the foremost intention behind this move was to establish supremacy of Western Culture so that the exploitation of the land and resources could be expedited.

Though literary and other post-colonial sources have found favour with the researchers working in different areas of humanities, the cultivation of pine and its harmful effects have not been studied from this angle. The process of colonization and its impact have been attempted in the present study in the theoretical framework of modern critical debates, especially the *Ecocriticism*. Here lies the uniqueness of this study.

Since the present thesis studies the effect of Colonization on Environment through literary sources, it fills the gap in the study of environment.

## 2. Effects of Colonization on the World

With the advent of industrial revolution and subsequent rapid industrialisation of Western world, wanton destruction of nature and natural resources set in *(Ramakrishnan 2008)*. Having decimated much of the natural resources of European countries, attention shifted to the natural resources of the tropical region. The period of political colonization of Asia and Africa, which lasted up to the first half of the 20th century, was characterised by exploitation of the rich natural resource base of the tropical and subtropical regions of world, to meet the development needs of the then rapidly industrialising western Europe. This period also saw colonization of the Americas and the Australian region by European settlers, at the expense

of the indigenous peoples of these regions. With sparsely settled human population and large geographical area rich in natural resources available at the disposal of these settlers of the 'New World', industrialisation of the temperate zone began rapidly. With de-colonization, many of the already impoverished countries, facing foreign debt and rapidly expanding human population, resorted to further exploitation of natural resources. This led to large-scale deforestation and biological resource depletion from a variety of habitats caused by anthropogenic activities, leading to biodiversity loss on an unprecedented scale*(Ramakrishnan 2008)*.

3. Effects of Colonization on Western Himalayan Region

Based on the history of the British settlements like Mussoorie in the present day Uttarakhand, the colonization of the Himalayan regions can be traced back to the early 19th century. Around the same time or a little later, the British colonizers had sent their roots in different other parts of the state for several purposes including housing their army, for their recreation, or even for their asylums. Places like Mussoorie and Lansdowne including several others had been developed as favourite places of the Empire. In this aforesaid process, these regions witnessed sharp transformations in agrarian and forest ecosystem with noticeable and potentially irreversible changes in attendant relations with forests, farms and pastures. The British colonizers significantly altered the landscape of Himalayan region for their vested economic and commercial gains. Both flora and fauna were affected by those changes. This pernicious changeover was from Banj (Himalayan Oak) to Chir pine, the two ubiquitous trees found in the lower to mid Himalayas *(Sivaramakrishnan, 2008)*. Banj is much prized by villagers as a source of fuel, fodder, and leaf manure, by chil (or chir) pine, a species more valued commercially as a source of timber and resin *(Guha R., 2001)*.

Before the advent of the British into India, the Himalayan forests existed as a verdant canopy of deciduous and evergreen trees, including these conifers. In India, many traditional societies have accumulated a whole lot of empirical knowledge on the basis of their experience whilst dealing with Nature and natural resources. This Traditional Ecological Knowledge is based on the intrinsic realisation that man and Nature form part of an invisible whole, and therefore should live in partnership with each other. This eco-centric view of traditional societies is widely reflected in their attitudes towards plants, animals, rivers, and the earth *(Ramakrishnan, 2008).* Moreover, According to an Indian mythology, after performing harsh penance by king Dilipa's son Bhagirath, Ganga was deputed to Himalayan kingdom as reward. It was not discussed with Ganga and so, she threw a tantrum and promised to wash away the earth if she were forced to leave heaven. However, the gods had committed themselves and could not go back on their word. Lord Shiva saved the day by assuring the other gods that he would spread his dreadlocks over the mountains to protect them from Ganga's fury and that after percolating through his tangled tresses, she would emerge on to the plains as a peaceful, life giving river.

Dreadlocks were a very apt analogy used by the ancients to evoke an image of Himalayan broadleaf forests. The fury of the southwest monsoon breaks over the ranges every year, but the heavy downpour is met by a dense canopy of leaves and broken down into a fine spray, which percolates into the soil and recharges the springs and streams that water upland forests and villages. Dense broadleaf forests covered the hillsides and valleys, while poorer soils along the crest of ridges and very steep slopes was colonised by stands of chir pine. All this changed with the growing population and European ideas applied to the exploitation of Himalayan forests *(Smetacek, 2016).* Thus, in Himalayan region, species such as oaks, have cultural importance and these species perform not so obvious functions such as maintenance of soil fertility through efficient nutrient cycling, soil moisture conservation through

extensive root system, and thereby support biodiversity *(Ramakrishnan, 2008).* Due to its unique capacity to absorb water for a longer duration and releasing it very slowly, the oak tree is considered as the 'hill people's best friend' *(Sinha, 2002).* This gives rise to springs around which hill villages have been established. Its leaves are used as fodder, it has leafy canopy and rich undergrowth of grasses, which protect the soil from being directly hit, by rain, and its wood is used for making agricultural implements. But the early 19th century witnessed a mass exploitation of trees like oak, sal and deodar for commercial use by the British, leading to a substantial loss of the original cover *(CSE 2002)*. Further, during the pre-British period, the human population in the Himalayas was low and oak and other forests were in abundance to support the forest-based agriculture and to meet the demands of construction and cottage industries, such as iron smelting, charcoaling, and mining at subsistence level. The colonial rulers encouraged agricultural activity in the Himalayas immediately after their arrival (1816) to generate revenue *(Gadgil&Guha 1992)*. Sal was largely over-exploited during the pre-railway era when organized forestry had not yet been conceived, hence its exploitation was unrestrained. It was overexploited further under the pressure of the early railways era and the military demands of the two subsequent world wars. Deodar's overexploitation resulted when sal became scarce to meet the requirement of railway sleepers *(Denniston 1993)*. Chir pine was not exploited until improved technology for resin processing was made available in the beginning of the 20th century *(Sinha, 2002)*. Large-scale pine plantations in place of the other native trees for procuring resin later in the 20th century further depleted these trees and reduced the diversity of these forests. Unfortunately, the trend continues even today with fast-growing exotic species like eucalyptus, pine and Japanese cedar replacing the original forests.

## 4. Causes of this Transformation

In the 1940s, Mahatma Gandhi's English disciple, Mira Behn, set up an ashram in the Himalayas of the present-day Uttarakhand province of the country. Travelling in the hills, she was dismayed by the forest department's efforts to convert forests of the banj oak into monocultures of chirpine. This was done for strictly commercial reasons, chir being much in demand as a source of industrial timber and resin *(Guha R., 2013).* The great tree of the mountains was the deodar (Cedrusdeodara), whose dense and elegant wood was ideal for construction and railway use. Most of the massive cuttings of the nineteenth century were in the deodar forests. Silviculturists gradually learned that the deodar is not only slow growing but difficult to propagate *(Tucker, 1982)*. On the other hand, Chirpine is the fastest growing among the conifers found in the Himalayas *(Sinha, 2002).* The species is hardy, frugal in its soil requirements and adapted to degraded sites which are deficient in nutrients.

Also, Resin tapping became a source of revenue since 1911 and by the end of the First World War resin out-turns only from Almora rose to 35000 quintals. The yield of the resin was of special importance for the Himalayan region since this had been considerably increased where even trees of 25 cm dbh had been allowed to be tapped for increasing revenue and yields *(Bisht, 2002)*. Chir pine too could not escape over-exploitation particularly during the post-independence period because still government hails the colonist legacy of revenue generation. According to the study done by ICFRE, Dehradun, Chirpine yields a good quality oleo resin, which on stem distillation generates two industrially important products viz., turpentine oil (about 70% ) and rosin (about 17%). Rosin is extensively used in many industries viz., soap, paper, paints and varnishes, Pinoleum, sealing waxes, oil cloth, inks and disinfectants. Turpentine is chiefly used in preparation of paints and varnishes, polishes, chemicals and pharmaceuticals. It is also used for dissolving fats, resin and for domestic purposes. Also, Chir was recommended for railway sleepers and ship building.

5. Consequences of this transformation

Chir pine covers about 16 percent of the forest area in Uttarakhand only. Chir pine occurs in abundance in the outer hills from 600m to about 1800m altitude. Chir pine needles are highly inflammable and are considered main casual agent of forest fire in this region *(Bijalwan, 2018)*. The species itself is highly resistant to fire due to thick bark but its exposed resin ducts make it prone to fire.

KS Kapoor, a scientist at the Himalayan Forest Research Institute, Shimla says:

"*In the past, pine used to be a favourite of foresters because it is hardy, and can grow in any kind of soil. However, there are two negative impacts of the chir pine — frequent forest fires; and the allelochemistry, whereby pine leaves ooze a substance that hampers the growth of any other vegetation under them*" *(Guha R., 2001*).

This transition had serious ecological implications, for the thick undergrowth characteristic of banj forests absorbed a high proportion of the rainwaters of the fierce Himalayan monsoon. This water then slowly percolated downhill. Below the oak forests were thus found "beautiful sweet and cool springs," the main source of drinking water for the hill villagers *(Guha, 2001)*. By contrast, Chir pine creates with its pine needles a smooth, dry carpet, which absorbs nothing and which at the same time prevents the development of any undergrowth worth the name. In fact, often the ground in a Chir pine forest is as bare as a desert *(Shiva, 1991)*. When the monsoon beat down on these southern slopes of the Himalayas dominated by chir, the rain rushed down the slopes, carrying away soil, debris, and rock, contributing thereby to floods.

In a 1952 essay titled "Something wrong in the Himalaya", Mirabehn had warned about the 'deadly changeover' from banj (himalayan oak) to chir pine forest. "*The banj forests are the very centres of nature's economic cycle on the southern slopes of the Himalaya. To destroy*

*them is to cut out the heart and thus bring death to the whole structure*," she wrote. The warning went unheeded. In 1970, the Alaknanda valley saw a deadly flood and the Kedarnath valley an even deadlier flash-flood in 2013 *(Yadav, 2016).*

## 6. Conclusion

The forests of Uttarakhand have been badly ravished due to the cultivation of pine which is foreign to the soil of this region. The British, for their vested interests, promoted the cultivation of pine—a practice that has been sustained by the successive Indian governments as well. Due to the flawed government policies, the hills lost their original vitality, leaving the region in a semi arid state. In the foregoing pages, an attempt has been made to comprehend the issue of native versus foreign, with establishing the fact that the plants native to a soil should only be promoted.

In this regard Mira Behn writes:

> "*The problem is not without solution, for if trees are lopped methodically, they can still give a large quantity of fodder, and yet not become weak and scraggy. At the same time, if the intruding Chil pines are pushed back to their correct altitude (i.e. between 3,ooo and 5,ooo feet), and the Banj forests are resuscitated, the burden on the present trees will, year by year, decrease, and precious fodder for the cattle will actually become more plentiful*." (Guha, 2001).

The process of colonization was also responsible for the transformation of a worldview that had been guiding the people since times immemorial. This subtle, sudden ideological transformation distorted the age-old perception about the flora and fauna of the region. The study of this key motif in the Myths, Traditional Ecological Knowledge and literary works of the region can be exceedingly helpful in controlling the unbridled cultivation of Pine is one such consequence of this changed world view.

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