



SUICIDAL RESISTANCE:

Understanding the opposition against
the Western Ghats conservation in
Karunapuram, Idukki



Suicidal resistance:
*Understanding the opposition against
the Western Ghats conservation in
Karunapuram, Idukki, Kerala*

Dr. Lavanya Suresh

M. Suchitra



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Suicidal resistance: Understanding the opposition against the Western Ghats conservation in Karunapuram, Idukki, Kerala

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KERALA
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Community Hall
Temporarily closed

Aohakkada
அச்சக்கட

Preface

We are delighted to present this book/ monograph before you, the reader. It is a product of a year-long study we conducted in Karunapuram village panchayat of Udumbanchola taluk in Kerala's Idukki district. Idukki is located in the southern Western Ghats and is the rooftop district of the state, with two of the highest peaks south of the Himalayas.

We decided to do this study when we noticed that there was a gridlock in the conservation efforts of the Western Ghats. In 2013-14, the high range districts of Kerala were burning. There were mass protests, shut-downs and bandhs for days at a stretch; offices and vehicles of the forest department were set on fire. The protests were against the recommendations of the Western Ghats Ecological Expert Panel led by eminent ecologist Madhav Gadgil and a second high-level panel led by space scientist K Kasturirangan. These committees were appointed by the Central Government's Ministry of Environment & Forests to make recommendations for conserving the Western Ghats. The process was started in 2010 after a prolonged legal battle waged by environmentalists led to strict directions from the National Green Tribunal under the

Supreme Court of India. It was the reluctance of the Central and the state governments to take necessary steps for protecting the Western Ghats that forced environmentalists to approach the court.

The conservation of the Western Ghats is of great importance, especially in the age of global warming and climate change. The 1600-km long mountain range, also known as Sahyadri, runs parallel to the west coast of India. The chain starts from south of Tapi river in Gujarat and passes through five states-Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala and ends near the southern tip of the country. Geological evidence suggests that the mountain range is approximately 150 million years old and has stood the test of time. This ancient range is, in fact, older than the Himalayas.

The Western Ghats is one of the most significant mountainous landscapes in the world, with seven types of vegetation; it is a treasure trove of biodiversity. The forests of the Western Ghats are some of the best representatives of the non-equatorial tropical evergreen rain forests in the world. It is recognised as one of the 34 Global Biodiversity Hotspots and one of the World's Eight Hottest Biodiversity Hotspots with a high level of endemism. The Western Ghats, having just 4.8 per cent of India's total land area, contains more than 30 per cent of the country's plant, fish, bird and mammal species; many of which are found only here and nowhere else on the earth. Considering the global significance of the Western Ghats, the United Nations in 2012 declared 39 sites on the Western Ghats as World Heritage; of that 20 are in Kerala.

This range also mediates the rainfall regime of Peninsular India by intercepting the southwest monsoon winds. The Western Ghats modulate the climate, the river flow and groundwater recharge of the entire region. It is the catchment area for river systems that drain almost 40 per cent of India. Many major rivers of south India such as the Godavari, Krishna and Kaveri, and all the 44 rivers of the state of Kerala, originate from the Western Ghats. Over 45 million people depend directly on the Western Ghats for livelihoods; around 245 million people living in peninsular India receive most of their water from the rivers originating in the Western Ghats.

As for Kerala, the conservation of the Western Ghats is of utmost importance. With 20,000 sq.km, Kerala has the highest proportion of its territory in the Western Ghats; about half of the total area of the state is in the Ghats. The state's water security, food security, cash crops in the high ranges, paddy fields and coconut farms in the midland, industries, and even the coastal fisheries, depend on the rivers that originate in the Western Ghats. Without the Western Ghats, the state's economy will collapse. In a nutshell, the survival of the state depends on the Western Ghats.

However, in all five Western Ghats states, the forests and the fragile mountain ecosystems are being destroyed in the name of development, urbanisation, mining, irrigation and hydroelectric projects, encroachment, timber smuggling, monoculture plantations, chemical farming, tourism resorts and infrastructure development.

We are intrigued by the fact that the stiff resistance against the Gadgil and the Kasturirangan reports happened even when farmers in the high ranges face economic issues because of loss of crop productivity and danger to livelihood due to climate change. Further, the resistance came from the most literate state; a state which is often hyped to have an efficient and active decentralised three-tier Panchayati raj System under the 73rd and 74th Constitution amendments.

The irony of this turn of events is that it was in Kerala in the late 1970s and early 80s, that conservation activists, and members of the scientific community, media and non-governmental organisations came together with the determination to save the evergreen forests of the Silent Valley in Palakkad district, a part of the Nilgiris Biosphere in the southern Western Ghats, from being destroyed for a proposed hydroelectric project. Perhaps for the first time in the history of the nation, a major hydroelectric project which was once given a green signal was abandoned for the sake of forest conservation. Silent Valley was declared a National Park in 1984 by the Central government. The success of the Silent Valley movement inspired many environmental movements within the state and in other parts of the country, built around the paradigm development without destruction.

It is in this same state that from 2013 onwards we witnessed stiff opposition to the conservation of the western ghat proposed by the reports. The protests, combined with the aggressive stance of the Kerala government against the panel reports, reinforced the negative position taken by governments in the other Western Ghats states. As a result, even after a decade of initiating conservation efforts under legal compulsion, the Centre has not yet issued its final notification on the Western Ghats.

This gridlock, we thought, was severe, considering the urgent need for conservation of the Western Ghats. This problem drove us to ask the following questions:

1. What discourse informed farmers' protest against the Gadgil and Kasturirangan committee?
2. What are the views of indigenous communities regarding conservation? Why did they take different stand from farmers during the protests?

3. What are the views and stances of the local bodies when it comes to conservation? Are they in agreement with farmers idea of conservation? Do they have their own plans for conservation?
4. What are the views and stands of the Bio-Diversity Management Committees and the Kerala State Biodiversity Board on the issue of conservation?
5. What were/are roles played by the people's representatives from the high ranges?
6. What are the important policies and actions taken by the state government for/against conservation of the Western Ghats? What is the state government's stance on development and environment?
7. What is the popular discourse on the Gadgil and Kasturirangan committee reports and the Western Ghats conservation?
8. Who benefits from the discourse around the organised resistance against the Gadgil and Kasturirangan committee reports?

The reason we sort to answer these question in the field site of Karunapuram village, Udumbanchola Taluk in Idukki District is because, the district, taluk and the village, once with dense evergreen rain forest, bamboo, reed, grassland and wetland, have undergone tremendous changes in demography, landscape and land use, ecology and climate. Over the years, the village, which used to get rain throughout the years, has become a water-starved region. Udumbanchola constitutes a significant part of the Cardamom Hill Reserve (CHR) forest. Scientific data reveal that rainfall is dwindling, the temperature is going up, and pest attacks are increasing in the CHR. Our study points towards a possible economic collapse and consequent social unrest in the region unless the government and people take urgent concerted efforts towards conserving the Ghats.

When we started our fieldwork in August 2018, the state was devastated by a severe flood. There were many massive landslides and loss of lives; mostly in the Western Ghats regions. Idukki was ravaged. Exactly one year later, another flood hit the state. A significant reason for this was the destruction of the forests in the hilly regions. Conservation of the Western Ghats and the Gadgil report once again emerged as a hot topic of discussion. Our study assumed more importance in the context of the floods and severe droughts that followed.

Can Kerala, or any other Western Ghats state, afford to make further delays in taking efforts towards conserving the Western Ghats? A large section of environmentalists think that the recommendations of the

Gadgil committee are the answer to address the disasters happening in Kerala. Should efforts begin again to revive the Gadgil report recommendations that were rejected by the Centre and the states as well? More importantly, can the Gadgil report address the fundamental issues of conservation rather than just the symptoms? We have attempted to look into these issues.

This monograph contains a journalistic essay and with voices and data from the ground, an academic paper analyzing the primary and secondary data, and a photo feature. We are happy to include the interview of Prof. Madhav Gadgil in this book.

We express our gratitude to the residents of Karunapuram, president of the village panchayat, ward members, and others for spending time and energy talking to us in detail. Our special thanks to Saji Poothappara for helping us throughout the study providing contacts and information.

Let us express our sincere thanks to Dr. J Devika and the Centre for Development Studies for funding the project and helping us making this study a reality. We also thank Viju B, Anamika and Archana for their comments during the presentation of the first draft of this book. ■



M. Suchitra

NALPATHAM NUMBER MAZHA

A gentle rain that vanished from the Mountains

It was the most fearsome night in the life of Mariamma Joseph.

That night three wild elephants emerged right in front of their *aanavaay veedu*: a grass-thatched hut erected on a single bamboo pillar at the centre with an opening only in the front, like an elephant's mouth. The opening was covered by an empty jute sack hung from a wild vine. One of the jumbos pulled the pillar out, while another one got hold of Mariamma's husband Joseph with its trunk, threw him out, and hit him. She, a teenager, seven months into her second pregnancy, ran screaming for life through the deep wilderness of a dense, dark, damp forest, clutching her one-year-old baby boy to her bosom.

"*Onnalochichu nokkikke, oru kochu vayattilum oru kochu tholelum. Enna cheyyum njaan?* (Just imagine, a child on my shoulder and another in my womb. What could I do?)," pauses 80-year-old Mariamma, dressed in traditional white *chatta* and a blue-checks *kaili*. Trying to check the flood of emotions, she sits silently looking down for a brief while.

She could be reliving those moments; the moments between life and death.

That scary incident happened about six decades ago. Soon after she, 19, with a growing belly, and Joseph, 26, a hard-working youth, carrying their son on his shoulder, trudged up the tough terrains of

kizhakkan mala. *Kizhakkan Mala* means the eastern mountain. It refers to the Western Ghats- the mighty mountain ranges, stretching along the west coast of India. The southern part of the range towers like a formidable fortress along the eastern border of Kerala, a state in the extreme south-west of the country. The proximity of the Western Ghats to the Arabian Sea makes the state an ecologically fragile narrow strip of land trapped between the sea and the mountains.

Mariamamma lives in Karunapuram, a village panchayat in Idukki, a Western Ghats district bordering Tamil Nadu in the central eastern part of Kerala. She lives alone. Her not-so-big concrete house is one among many such residences on both sides of a tarred road climbing up the gentle slope of a hill. Her 2.5-acre farm has pepper, coffee, cocoa, nutmegs, ginger, turmeric, and not-so-healthy coconut and arecanut palms.

The locality, *Anjekkar*, meaning Five Acres of Land, is a part of a larger area called Kallar Pattom Colony, a village panchayat in the making. The colony, born in 1955, a year before the birth of Kerala, got its name after Pattom Thanu Pillai, a chief minister of Thirukochi (Travancore-Cochin), a short-lived state in Independent India. The state was formed in 1949 by merging the princely states of Travancore and Cochin. Pattom has also served as the chief minister of Kerala during February 1960-September 1962.

Mariamamma is originally from Changanassery in Kottayam district. She got married at 17 to Joseph from Muttar, then a part of Kottayam but now in Alappuzha district. "We're living in dismal conditions. I used to cry and complain a lot about our poverty. One day *achayan* asked me whether I was willing to live in a faraway forest having elephants. I didn't have to think twice. I was ready to go anywhere with him to make a better living," she recalls.

They accepted an offer of five acres by the government. Joseph's father, two brothers, and his sister accompanied them. The family, like about 1400 other families, migrated to the Western Ghats under the High Range Colonisation Scheme. This scheme was initiated in 1954 by the then Thirukochi government led by Pattom. The scheme was started close to the heels of the Grow More Food Campaign of 1940s promoted by the Travancore Kingdom during the Second World War when a great famine struck British India.

We will come to it later in detail.

Mariamamma and Joseph got a five-acre plot (Block 1037) in Ramakkalmedu, now a tourist destination with more than a lakh of visitors a year. The hilltop has a huge statue of *Kuravan and Kurathi* depicting the Sangam period of ancient Tamilakam. From the recently-

built watchtower, you can see villages, towns and farmlands of Tamil Nadu on the other side of the mountains. Having constant winds with a speed of 35 km an hour, Ramakkalmedu has a few private wind farms with huge windmills on the hilltops. The Kerala government is on its way to make this scenic spot an international tourist destination.

“When we arrived, the place was full of dense woods, bamboo clumps, grass, and swamps. There were elephants, leopards, wolves, bison, bears, and poisonous snakes. Even at noon, a thick blanket of mist would cover the air. The weather was biting cold,” recalls Mariamma.

The plot was first allotted to someone else who left it unable to bear the harsh weather and fearing wild animals.

While she enthusiastically narrates her story, a picture of the then Western Ghats, older than the Himalayas, emerges in my mind: majestic and grand, solid and serene; misty peaks piercing smoky clouds; the rugged terrains draped in rain-drenched evergreen forests; gigantic trees with creepers twining around the trunks; the closed canopy and the woody shrubs underneath blocking sunlight touch the dark and humid forest floor; rolling hills with crispy emerald grass; bamboo thickets; snaky silver streams cascading down along shiny boulders into deep gorges; meadows with blooming blossoms; animals, birds, insects, reptile... the sounds and scents of the woods.

“We used to get heavy rains during the monsoon months from June to September. It was not sudden and harsh, the way it rains now. We could very well predict when the rain would start and end. The rest of the year, there would be gentle rain. We used to call it *nalpatham number mazha*.”

“*Nalpatham Number Mazha?*” I echo her words in surprise. *Nalpath* means forty in Malayalam, the regional language. I have never heard of rain with a number as its name!

Mariamma smiles. “It has another name too; *noolmazha* (*nool* means thread). That rain was gentle with slender strands like soft, white cotton threads. The number 40 denotes the width of a thread.”

I could feel *noolmazha* drizzling in her memory.

Like hundreds of other families, they too worked hard enduring all miseries to make the land livable and cultivable. There were no farmhands available and no one was in a state to pay wages. They worked in each other’s land slashing and burning woods. They grew tapioca, a starchy tuber, in large areas, rice, sugarcane, yams, vegetables, and lemongrass. The untouched fertile forest soil gave them lavish yield.

It was then that the frightening jumbo incident happened. She tells me every minute detail of that incident. To cut a long eventful story short, Joseph survived.

“By the grace of the Virgin Mother. After that incident, he was known as *anakuthi Joseph* (elephant-hit Joseph),” she burst into laughter wiping her tears.

The family built up their life, step by step starting with a petty shop. Business gradually flourished. They bought another plot from a friend. Five more children were born to them. Joseph died eight years ago. Two of her sons live not so far. They have their own houses and farmlands. Three daughters are living in towns in the plains with their families.

“Do you ever have an urge to go back to your native place?”

“Never. This’s my home. I have spent more than 60 years of my life here. This’s the world achayan and I so painstakingly built.”

“Did anybody at any stage try to evict you?”

“No. Why should anybody evict me? I have title deed for my land.” She goes on to add there were rumours of a possible eviction a few years ago followed by strong protests by people for days at a stretch. “If by any chance, eviction happens, that will be the beginning of my Last Journey,” she says seeing me off.

The story of Mariamma and the stories of thousands of others like her are very recent; they are of miseries and hardships of weaving the threads of new lives in dense forests braving raw weather, wild animals, and epidemics such as Malaria. Their stories are of aspirations for a better life.

These stories would later develop into many other stories; stories of greed, land grabbing, betrayals, encroachment, illegalities, and irregularities.

It’s also a catastrophic tale of an ancient mountain range undergoing drastic and irrevocable changes; a gruesome story of displacement and colonisation of indigenous communities and their alienation from forest, land, livelihood, and culture; it’s an appalling story of ecological devastation, collapse of lives, livelihoods, and economy.

Finally, it’s a story of despair.

The story of a gentle rain that vanished from the mountains.

Older than the Himalayas

I arrived in Karunapuram a couple of days ago.

The panchayat is located at about 950 meters above sea level in Udumbanchola taluk. The taluk, with undulating hills and valleys, is a major part of the Cardamom Hills, a plateau right below the Kannan Devan Hills, the real High Ranges. The entire plateau is drained by the Periyar, the state's longest river. The Cardamom Hill Reserve (CHR) is the capital of Indian small cardamom with 70 percent of the total production in the country. Karunapuram lies on the extreme east of the plateau.

My visit is an attempt to understand the impacts of climate change on the lives and livelihoods of people living in CHR. Idukki is often called the rooftop of Kerala. In the upper region, the Ghats rises steeply to 2695 meters forming Anamudi, the highest peak in south India. Formed in 1972, Idukki, the second-largest district in the state, grows mainly tea, cardamom, pepper, coffee in the high ranges, and rubber in the low ranges. All these cash crops are sensitive to climate change.

I'm also keen to understand why the residents of Idukki, mostly settlers, along with those living in other parts of the Western Ghats, fought fiercely against the two committees appointed by the Ministry of Environment, Forests, and Climate Change (MoEF & CC) to make recommendations for the conservation of the Western Ghats.

The first one, the Western Ghats Ecology Expert Panel (WGEEP), chaired by eminent ecologist Madhav Gadgil, was appointed in 2010; the second one, the High-Level Working Group (HLWG), headed by renowned space scientist K Kasturirangan, was set up in 2012. The high range regions in Idukki, Wayanad, and Kozhikode districts were burning with protests over the recommendations by these committees.

Isn't it suicidal to resist the conservation of the Western Ghats, the very source of our lives, and the base of our existence? Doesn't conservation assume renewed importance in these difficult times of climate change? It's this mountain range that determines monsoons, climate, weather patterns, ecology, freshwater availability, food production, and the economy of Peninsular India. It provides a cool climate for the cash crops, water for the midland farming, and the nutrients for the coastal fisheries. It's the backbone of Kerala's economy.

The Western Ghats forest is a part of the remaining few tropical rainforests in the world that make just six percent of the global forest area. Being big carbon sink, the forests keep our planet healthy. This mountain range is extraordinarily rich with plants and animals. In 2012, 39 sites in the Western Ghats were declared as World Natural Heritage by UNESCO (the United Nations Educational, Scientific, and Cultural Organisation). Out of these 20 are in Kerala. Then what makes the residents bitter about the conservation?

The Western Ghats or the Sahyadri is a mountain range on the western side of India. The range runs north to south along the western edge of the Deccan Plateau and separates the plateau from the narrow coastal plain along the Arabian Sea.

The range starts near the border of Gujarat and Maharashtra, south of the Tapti river, and runs about 1500 km through the states of Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala ending at Kanyakumari, at the southern tip of India. The exact boundaries of the Ghats are yet to be defined. According to the WGEEP, the mountains cover an area of approximately 1,60,000 sq.km.

The history of large-scale migration to the Western Ghats is not even a century old. But this magnificent mountain range has millions of years of evolutionary history that goes back to the formation of continents. They kept on coming together and drifting apart. Long, long back, about 250-million years ago, all the continents were a giant single landmass called Pangaea. This supercontinent broke up about 200-million years ago to form two minor supercontinents, Gondwana and Laurasia. Gondwana comprised what is now South America, Australia, Antarctica, Africa, and India.

The Indian subcontinent was a part of the east coast of Africa. It broke off about 150- million years ago and moved north. During its long journey, the Indian subcontinent passed over a deep-seated volcanic hotspot.

The heat generated caused basaltic magma resulting in a crustal arching forming the Deccan plateau. Geological evidence indicates the Western Ghats are the faulted and eroded edge of the plateau. The Indian subcontinent then collided with Asian landmass creating a mountain range- the great Himalayas. The Western Ghats is much older than the Himalayas.

The mountain range is almost perpendicular to the Arabian sea and intercepts the monsoon winds making high rainfall, particularly on the much steeper western side. The annual rainfall varies from 2000-7600 mm on the western side to less than 600 mm on the eastern side with gentle slopes.

The range is the headwaters of all the major rivers such as the Kaveri, the Krishna, the Godavari, the Tungabhadra, and many smaller rivers of South India. All the 44 rivers in Kerala originate from this range or its foothills. These rivers drain almost 40 percent of the country's land. They, along with their diverse ecosystems such as flow zones, flood plains, mangroves, wetlands, and deltas, play a major role in maintaining the ecological balance. These rivers provide water and food security to about 500 million people. Around 50 million people

live in the Ghats regions. It's home to 40 indigenous communities who depend on the forests for their water, food, fuel, fodder, and livelihood.

The dense tropical forests also make rains by creating clouds through the process of transpiration. Rainforests store water, and during the dry season, trees draw water from the forest floor and release it back to the atmosphere as clouds and mist. This helps the forest streams maintain their healthy flow throughout the year. Without rainforests continuously recycling large amounts of water, feeding the streams, rivers, lakes, and irrigation systems, droughts would become common, leading to widespread food shortage and diseases.

A 2018 study published by the scientific journal of Geophysical Research Letters reveals that the transpiration from the thick vegetation over the Western Ghats accounts for one-quarter of the rainfall over Peninsular India.

The wide range of rainfall and extremely varying microclimatic and topographic conditions in the Western Ghats have resulted in the development of diverse forest ecosystems like dense evergreen rainforests, semi-evergreen forests, the high-altitude shola forests, grassland, dry forests, and thorny shrubs.

These forests have exceptional levels of biological diversity. The mountain range, having just 4.8 percent of India's total land area, contains more than 30 percent of the country's total plant, fish, bird, and mammal species; many of which are found only here and nowhere else on the earth. It has been recognized as one of the Eight Hottest Biodiversity Hotspots in the world. The International Union for Conservation of Nature (IUCN) has identified at least 325 globally threatened plant and animal species in the Western Ghats.

The southern Western Ghats, the mountain stretch in Karnataka, Kerala and Tamil Nadu is higher than the northern part, and much richer in biodiversity than the northern part. The southern part extends from the Nilgiri Biosphere Reserve, the first biosphere in the country, in the north to the Agasthya Biosphere Reserve in the south. It's one of the five major breeding grounds for the endangered tigers, leopards, and black panthers. Endangered mammals such as lion-tailed macaque, Nilgiri Tahr, Nilgiri Langur, and Malabar-large spotted civet live only in this part of the world. The Nilgiris Biosphere Reserve supports about 10000 elephants, the largest population of Asian elephants in the country.

The recorded species data include 4500 plants, 650 trees, 179 amphibians, 157 reptiles, 219 fish, and 334 species of butterflies. Many of these species are seen only in the Western Ghats. The region is also internationally known as an endemic bird area with 508 species. New species are added to the list every year.

The central government has set up protected areas including the two biosphere reserves, 13 national parks to restrict human access, several wildlife sanctuaries to protect specific endangered species and many reserve forests, which are all managed by the state forest departments to preserve some of the important, undisturbed ecoregions.

As for Kerala, conservation of the Western Ghats is extremely important. Except for three regions, the rest of the state lies on the western side of the mountains. The state has 450 km (28.12 percent) of the Western Ghats within its territories. Barring Alappuzha on the coast, all other 13 districts have a portion of the Ghats in their boundaries. About half (48 percent) of the state's total land area (38863 sq.km) is *malanadu* or the High Land. The midland, *idanadu*, with smaller foothills and valleys, constitutes about 40 percent, and the coastal area is 12 percent.

Without the Ghats, Kerala will perish. It's the source of water security for the state's 33 million people. The plantation economy of the state depends on the Western Ghats. Cultivation of rice, the staple food, depends on the water from the rivers originating from the Ghats. Kerala has a thickly-populated 580 km coast. Around a million people directly or indirectly depend on the fisheries. The marine wealth depends on the water flow and the nutrients discharged into the sea by the rivers.

Imagine what happens if a single river, the Periyar, dies. The 244 km-long river originating from the forests of the Southernmost part of the Cardamom Hills. The river basin occupies nearly 60 percent of Idukki and 47 percent of Ernakulam districts. A majority of the hydropower projects of Kerala including the giant 780MW Idukki Project are built across the Periyar. They contribute about 80 percent of the state's total power. Several villages and towns in Central Kerala heavily depend on this river for their irrigation, industrial and drinking water requirements. If the Periyar dries up, one million people in the metro city of Kochi, located close to the river mouth, will not get drinking water. The Eloor industrial estate near the Kochi city houses a quarter of the state's manufacturing units. All these units use water from the river (and discharge hazardous effluents to the river killing it).

Kerala's forest scenario is precarious. As per the 2018 forests statistics, the state has 11521 sq.km forest area; 29.65 percent of the total geographical area of the state. Due to large-scale destruction, the Western Ghats forests have been reduced to nine fragments. According to the 2017 Forest Survey of India Report, the state has 20321 sq.km of forest cover; a six percent increase from 2015. However, dense forest is only 1663 sq.km; just four percent of the state's total area. The rest is highly degraded and can't perform their natural ecological functions. Of the total forest area, 1557 sq.km are plantations, mostly teak.

During 2016-2018, Idukki lost 18285 acres (74 sq.km) of forest cover. (Wayanad's loss was much ahead with 29653 acres). Over the years, desertification has been happening in many parts of the Western Ghats. Being the wettest region in south India, Idukki used to get about 5000 mm of rain in a year, much higher than the state's average of 3000 mm. But now several parts of the district, including Karunapuram, are water-stressed.

Conservation and controversies

Despite being a critically important mountain landscape, the Western Ghats in all the five states have historically been one of the most human-impacted and threatened ecologically sensitive areas in the country. The fragile forest ecosystems have suffered huge destruction and degradation starting with large monoculture plantations and timber extraction by the British since the middle of the 19th century, and then dams for hydel projects and irrigation, thermal power plants, windmills, increase in human population, fast-pace urbanisation, construction of houses, roads, rail, and other infrastructure facilities, industries, indiscriminate mining, quarrying, forest plantations such as teak and eucalyptus, mass pilgrimage, tourism, mushrooming resorts, chemically- intensive and highly polluting farming. Wildfire is also causing huge destruction to the Western Ghats forests.

An analysis by the Indian Space Organisation's remote sensing centre shows that a shocking 35 percent of the original Western Ghats forests has been destroyed in 93 years between 1920-2013. The Gadgil committee estimates that of the 1,60,000 sq.km area of the Ghats, hardly one-third remains under forest cover, and that too is highly fragmented and facing high levels of degradation. Even the protected areas are under tremendous pressure from the surrounding human-dominated areas. Human encroachment into forests has resulted in rising human-wildlife conflicts.

The Central Water Commission's National Register of Large Dams (2011) shows 2258 dams have been built in the Western Ghats region. Many more are there in the pipeline including the proposed Athirappilly Hydro Electric Project in Kerala. The state has 60 large dams constructed mainly on the Bharathapuzha (all irrigation projects), the Periyar, Chalakudy, and Pampa and Kuttiyadi (mostly hydropower projects). Most of the Western Ghats rivers have lost their natural flow pattern and water quality and are dying. The deforestation and change in land-use patterns in the Western Ghats have resulted in large-scale soil erosion, siltation of tanks and reservoirs.

The Central government had launched a multi-sectoral programme, the Western Ghats Development Programme, in 1974-75, during the Fifth

Five Year Plan of India. From the Sixth Plan onwards, Special Central Assistance (SCA) for the Hill Area Development (HADP) was distributed between WGDP and HADP. The focus was the economic well-being of the population in the hill areas, ecological restoration, conservation, and watershed development. The programmes failed to make much progress due to faulty planning, implementation, and inadequate funds.

In 2008, the centre formulated the National Action Plan for Climate Change; the conservation of the Himalayas was included as one of the eight national missions while the Western Ghats left out.

Forest destruction and illegalities continued even after passing many legislations, rules and policies including the Wildlife Protection Act (1972), the Water (Prevention & Control of Pollution) Act (1974), the Forest Conservation Act (1980), the Air (Prevention & Control of Pollution) Act (1981), the Environment Protection Act (1986) Protection Act (1986), the Environment Impact Assessment Act (1994,2006), the National Biological Diversity Act (2002), and the National Climate Change Action Plan (2008). The states have their own climate change action plans. Environmental activists have been taking up the Western Ghats destruction issues since the late 1970s engaging in campaigns and legal battles.

The Central government was forced to appoint the Madhav Gadgil and the Kasturirangan committees after a prolonged legal battle fought by Goa Foundation, a non-profit organization, against the indiscriminate iron ore mining in the state that resulted in huge forest destruction. The activists moved the National Green Tribunal (NGT) and the court directed the Centre to take immediate action for the conservation of the Ghats. Activists were fighting similar cases in various courts in all the five states against the inaction of the central and the state governments.

First, MoEF appointed WGEEP in August 2010 under the Environment Protection Act (EPA), 1986, and asked it to assess the status of the Western Ghats and submit a plan within a year for its protection. When this was done in mid-2011, the ministry sat on the document for nine months, refusing to release it even for public debates.

The Greens, highlighting an unholy nexus between the mining lobby and the governments, again approached the NGT. The tribunal directed the Centre to take immediate action on the recommendations. The High-Level Working Group (Kasturirangan Committee) was then set up in April 2012 to advise the government on how the recommendations of WGEEP should be implemented.

In April 2013, the Kasturirangan Committee submitted its report.

Instead of making suggestions for implementing the recommendations of the Gadgil Committee, the second panel came up with yet another set of recommendations going beyond what it was asked to do. However, in October the ministry accepted the report in principle rejecting the Gadgil report.

This evoked angry reactions. Most of the ecologists and environmental activists blamed it as a dilution of the Gadgil report. On the other hand, people living on the Western Ghats, except some groups of Scheduled Tribes and Scheduled Castes, strongly opposed both the reports. Protests were the strongest in Kerala. There were strikes, shutdowns, and road-blockades for days against the “anti-people” and “anti-farmers” reports.



In Idukki, residents locked their homes, took to the streets, cooking and sleeping on the roads. Even school children were made a part of the agitations. In the northern districts of Kozhikode, Wayanad, and Kannur, the protests turned violent. An office of the Forest Department was gutted in Thamarassery in Kozhikode; forest department’s staff and police personnel were attacked; angry mobs vandalised the department’s vehicles.

In Idukki, the agitations were led by the High Range Protection Council under the leadership of a few priests of Syro-Malabar Catholic Church, the largest and strongest denomination of the Catholic Church in the country. A pastoral letter by the Bishop Idukki Diocese condemning the Gadgil report was read out in all its parishes appealing people to take to streets against it. The Left Democratic Front (LDF) led by the Communist Party of India- Marxist (CPI-M), the then opposition in the state legislature, joined hands with the church. The ruling United Democratic Front (UDF) led by the Indian National Congress also joined the agitations.

The debates on the two reports have been messy and uninformed. There are three key differences between the Gadgil and the Kasturirangan reports. First is on the extent of the area that should be awarded protection as an eco-sensitive zone (ESZ). The Gadgil panel identified the entire Ghats as ESZ. But it created three categories of protection regimes and listed activities that would be allowed in each based on the level of ecological richness and land use.

The Kasturirangan panel used a different method. It removed cash crop plantation, farmland and human settlements from the Ecologically Sensitive Areas (ESA). It also made the distinction between what is called cultural landscape and natural landscape. The purpose was to remove already modified areas under private control from protection to avoid unnecessary conflict.

The Kasturirangan report's area of ESA is 37 percent of the Western Ghats— 60,000 sq.km-much less than 137,000 sq.km proposed by the Gadgil committee.

The second difference is over the list of activities permissible in the protection regime. The Gadgil committee's recommendations on this are comprehensive, from banning mining, red-category industries, genetically modified crops in agricultural areas, new hydroelectric projects, and a gradual shift from chemicals to organic farming, and decommissioning of old dams, and a gradual shift from plantations to natural forests. It is perhaps exactly the right formula for this region.

The Kasturirangan panel had already removed substantial areas of humanly modified lands from protection, so it decided to impose restrictions on what it called highly interventionist and environmentally damaging activities in the ESA areas. All mining, including quarrying; red-category industry, including thermal power, and buildings over 20,000 sq m area would be banned. In the case of hydropower projects, the panel set tough conditions to ensure adequate flow in rivers and distance between projects.

The third difference concerns the governance framework. The Gadgil panel suggested that the final demarcation of each zone (ESZ1, ESZ2, ESZ3) must be based on extensive inputs from local communities and rural and urban local self-government institutes under the overall supervision of a national-level authority, with counterparts at the state and district levels. The Kasturirangan panel argued for strengthening the existing framework of environmental clearances and setting up of a state-of-the-art monitoring agency.

The Kerala government after rejecting the Gadgil report, appointed a state panel headed by Oommen V Oommen, the then chairperson of the Kerala State Biodiversity Board (KSBB), to study the Kasturirangan report. The panel came up with suggestions of exempting all plantations, human habitations, and agriculture farms from the list of ecologically sensitive areas, and marking the already protected areas under the Forest Department as ESA.

The irony of this turn of events is that it was in Kerala in the late 1970s and early 80s, that conservation activists and members of the scientific community, media and non-governmental organisations came together with the determination to save the undisturbed evergreen rainforests of Silent Valley from being destroyed for a proposed hydroelectric project of the Kerala State Electricity Board (KSEB). The 89-sq.km untouched forest is a part of Nilgiri Biosphere Reserve. Perhaps for the first time in the history of the nation, a major hydropower project that was once given a green signal was abandoned for the sake of forest conservation. Silent Valley was declared a National Park in 1984 by the Central government led by Indira Gandhi. The success of the Silent Valley movement inspired many environmental movements within the state and in other parts of the country, built around the paradigm development without destruction.

However, thirty years after Silent Valley, people living on the highland regions were up in arms against the conservation committees.

While rejecting the Gadgil Committee report, Oommen Chandy, the then chief minister of Kerala had stated in the legislative assembly that the state could protect its environment and the Western Ghats within the provisions of the existing laws.

Kerala flooded

Five years down the line, Kerala was devastated by floods. The worst ever floods in its history since 1924.

Media term it "Flood of the Century". Thirteen of Kerala's 14 districts were affected; 483 people lost lives; more than five million people were relocated to relief camps.

Torrential rains continued for two months. India Meteorological Department data indicated from June 1 to August 19 Kerala received 2346.6 mm rainfall as against the expected 1649.5 mm; 42 percent above normal. Between August 1 and August 19, the state recorded abnormally high rainfall; 164 percent above normal.

By the second week of August, most of the 60 major dams were full. Unabated rains forced the authorities to open the floodgates of 37 dams, including that of Cheruthoni (a historic event since this happened after 26 years). This was done to regulate the water level in the Idukki dam. The arch dam, built across a narrow gorge between two granite hills is one of the highest in Asia. Owned by KSEB, it started operation in 1975. The dam had submerged vast stretches of pristine evergreen rainforest.

When the dams were opened many rivers including the Periyar, the Pampa, the Chalakkudi, the Manimala, and the Achankovil rivers, swelled. Lowland regions in the central districts of Ernakulam, Thrissur, and Pathanamthitta flooded the most; cities and towns in the floodplains of the rivers submerged. Fishers, coast guard, border security force police, army, navy, and air force, youth, civil society organisations, all jumped in to the rescue and relief operations. The government put the initial loss is Rs 40000 crore.

The torrential rains caused 5191 landslides in Kerala's Western Ghats, estimated Hyderabad-based National Remote Sensing Centre (NRSC), a wing of the Indian Space Research Organisation. Idukki was ravaged by 143 massive landslides and hundreds of smaller ones. Hillslopes came crashing down with roaring water and huge landmass; houses disappeared without a trace in a split second; roads, shops, and vehicles were washed away. With 59 deaths, the toll was the highest Idukki. More than 33,000 people took refuge in temporary relief camps. Cash crops in 11000 acres got destroyed. The spice capital is in a deep depression.

The disaster was washing away lives and livelihoods in a massive way; washing away numerous ecosystems; washing away biological diversity in huge quantities. What could be the cost of such losses that cannot be estimated?

The flood has brought back debates on the urgent need for conserving the ecologically fragile and disaster-prone Western Ghats, the midland, and the coasts. The Gadgil report, a report that doesn't exist officially, has once again become a hot topic. The media are abuzz with debates and discussions, for and against the report. The flood has forced more people to join the Gadgil bandwagon, it seems.

"The Gadgil committee had warned categorically about the precarious state of the Western Ghats. These disasters are not sudden. They were

predicted five years ago. Many of the ravaged areas were marked as ecologically sensitive and fragile by our committee," says V S Vijayan, a member of the WGEEP and former chairperson of the Kerala State Biodiversity Board.

Environmentalists in the plains are busy organising meetings making Madhav Gadgil address the audience. Reporters queue up for a face to face with him.

"This is partially a man-made disaster," Madhav Gadgil told us when we met him soon after the flood at the Government Guest House, Ernakulam (Cochin), a city that might submerge if the Arabian Sea rises one meter.

"If the state government, the local bodies, and the public had taken the conservation of the Western Ghats and the climate change issues seriously, we could have reduced the magnitude of the present calamity. Forget about my report. Start doing something NOW. It's already late."

Too late, perhaps?

Could the five years and a devastating disaster have changed the mindset of the people living in the upland regions? Could they be pondering over their survival and sustainability at least now? Better to talk to them face to face.

I set out from the ravaged plains to the bleeding mountains.

The bus traversed along the badly-damaged Neriamangalam-Cheruthoni forest road. The road was winding up the ripped slopes with bleeding gashes. Roots of the not-yet-fallen wild trees protruded through the large red cuts like broken veins.

At Cheruthoni, people were yet to recover from the shock of watching massive landslides and swelling of the river. The town is in the floodplain of the Cheruthoni river, a minor tributary of the Periyar. When the shutters opened, the dry river swelled and flowed madly, washing away a bus stand, a parking place that could house 200 vehicles, a four-story shopping complex, ten small shops, and a few farm patches; all were built right on the riverbed when the shutters of the dam remained closed for two decades. Just across the bridge, a house sits right at the top of a broken slope; it may fall at any time.

At Painavu, the district headquarters, a couple of kilometers from Cheruthoni, the scenes are heart-breaking. All three relief camps are packed with grieving humans who lost their dear ones, houses, crops,

and cattle. A crowd is a mixed group of the marginalised tribal and dalit communities and settlers.

“I now feel what Gadgil said was true,” Raju Krishnan, a 32-year-old *Urali* adivasi youth laments. His family and some others were living in Kallemadu settlement, growing pepper and cardamom in eight acres. None of them has any land ownership document to claim compensation for their loss. “Once the relief camps get closed, where shall we go and live?” asks Raju adding that they were not a part of the protests against the Gadgil-Kasturirangan reports.

Some others like Vinu P Thomas, president of a traders’ association in Cheruthoni insisted on constructing whatever they lost to the river exactly in the same old locations. “The government says we encroached the floodplains and constructed the buildings illegally. If so, then why did the panchayat and KSEB give us the required permissions for the construction of the buildings and provided us the electricity connections? We have title deeds. Come what may, we shall not relocate from this place,” he said.

Through the spider web

Cheruthoni is a gateway to the high ranges. The bus climbs for an hour, passing the Idukki dam, to reach Kattappana. Located 900 meters above sea level, Kattappana is a valley surrounded by hills. It was a dense forest a few decades ago inhabited only by the indigenous tribes of Mannan and Urali. Over the years, the town has flourished to have about 42000 residents, large houses, vast stretches of cardamom plantations, two bus stations, wholesale and retail spice shops, hotels, and restaurants. A panchayat, Kattappana was upgraded to a municipality in 2015- the first municipality in the high ranges of Idukki.

Karunapuram village panchayat is located 18 km from Kattappana, on the right side of the State Highway connecting the tourist hotspots of the Periyar Tiger Reserve (Thekkady) and Munnar (the Kannan Devan Hills). The panchayat with 17 wards was formed in 1976 bifurcating the neighboring Pampadumpara panchayat to the west. Out of the 30473 residents, a majority are small planters with less than five acres of landholding. Karunapuram shares its southern border with Vandanmedu village panchayat with huge cardamom estates. Nedumkandam, the taluk headquarters, is about 10 km to the north. Beyond the eastern border, it’s Tamil Nadu; the eastern slope of the Western Ghats.

Every nook and corner of Karunapuram is well-connected by roads; mostly tarred. As Tomi Plavuvachathil, president of the panchayat, puts it, “The village has a network of roads like a spider web.” He sees it as a sign of development. “Our panchayat pays a lot of attention to

development and infrastructure building,” says he leaning on to his car parked on the side of a road in Moshappara, rocky terrain in his ward (No:9). Moshappara overlooks the farmlands far below in Kambam and Komba valleys across the border. The view is enchanting.

I strain a little to hear what he says. The wind is howling.

A drive through the “spider web” is a bit shocking. Was this region once a part of a magnificent rainforest? Hard to believe! Not a single patch of wilderness remains anywhere in the village. Homesteads with pepper, coffee, jackfruit, banana, cocoa, nutmeg, turmeric, and ginger along with cardamom farms are spread right up to the edge of the Ghats. The sky is dotted with coconut and areca nut palms as it would be in the lowland. Schools, government offices, banks, churches, temples, mosques, markets, and hospitals...Not so far, I can see a hillslope blasted by a granite quarry.

I dropped in to see K Unnikrishnan Nair, 48, headmaster of the Kallar Higher Secondary School that celebrated its Golden Jubilee in 2015. He says, being migrants, the settlers have brought along them the habits, culture, and agriculture of their native places.

Unnikrishnan lives not far from Mariamma’s house in Thookkupalam, an emerging town with a few hotels, restaurants, textiles, spices and medical shops, a market, and a bus stand. It’s a meeting point of three village panchayats: Karunapuram, Pampadumpara, and Nedumkandam. The junction, located on the banks of the Kallar, a small river, is noisy with autorickshaws, jeeps and buses, private and government, plying between Nedumkantam and Kattappana, Kottayam, Kumily, and Munnar.

Thookkupalam means hanging bridge. There was a narrow bamboo bridge across the Kallar. A sturdy concrete bridge replaced it. The Kallar and its minor tributaries, Koottar and Amayar streams, are choked by new buildings coming up encroaching the floodplains. With all the solid waste and sewage from the hotels and shops, the river has turned a drain of dirt. The Kallar has a small dam across it seven kilometres from the junction.

Unnikrishnan’s father also came to Kallar Pattom Colony under the HRC scheme. “The river was perennial in my childhood. We used to swim and fish for hours,” he recalls the good old time- of his and that of the river. He and his friends would run to school, holding a banana leaf over their heads, partly drenched in *Noolamazha*, splashing the puddles on the narrow, slippery mud road. The five acre-land allotted to his father got divided among Unnikrishnan and his three brothers. They all built separate houses in their plots.

An ironic sigh of relief

Karunapuram heaved a sigh of relief when the relentless rain was wreaking havoc in the rest of the state. "You know why? We're lucky to get sufficient water to fill our rainwater harvesting tanks," laughs C N Sujatha, the teacher at the Anganwadi, a rural child-care centre under the Integrated Child Development Scheme of the Central government, in Ward No.7. She takes me to a 10000-liter big tank in the backyard of the building. "See, it's full now. Enough for us to pull on for a few months."

The village panchayat has been facing severe water scarcity for the past two decades. The residents tell me about dwindling rainfall and rising temperature. "*Noolmazha* now rains only in our memories," says TV Jose, 55, a former panchayat member. "It has gone away from the skies of the entire CHR."

Jose relocated to the high ranges at the age of three along with his father from the plains of Kanjirappally in Kottayam district. "We now have a long dry season. I don't know how the plantations in the high ranges will survive."

Unlike others, Jose has no memories of a thick forest at Kambamedu, the location he lives. The government had gone for a large-scale clear-felling in the late 1950s and auctioned timber, says he. An agent was roaming around showing the settlers the areas that could be encroached upon. He pocketed Rs 100 from each migrant family as a fee for this service. Jose's father took over 10 acres of forest which later got divided among him and his 13 siblings. A few of his siblings bought more land later expanding their property.

Karunapuram, like other villages in the Western Ghats, had several small natural ponds, locally known as *oli*, on the hillslopes. These ponds would get filled up by the runoff from higher elevation during monsoon. When they are full, water would overflow to ponds further down by gravity. This is a traditional water harvesting system that would recharge the groundwater continuously.

"Whenever we needed water, we would just go and fill our pots from *oli*," Thankamani, a 47-year-old resident of Ward No 9, says. She is an Accredited Social Health Activist (ASHA). Most of the small natural tanks have dried up. The dry tanks were filled up with soil permanently for planting cardamom and other cash crops.

Thankamani buys water from private agencies at the peak of the summer. Karunapuram and its neighbourhood have several such



agencies that cash in the crisis. Thankamani bought 26000 litres of water at the time of her daughter's marriage a few months ago paying Rs 5 a litre.

"Where do they bring water from?"

"I don't know. Some parts of the panchayat still have water. I think some families sell water to these agencies."

Sibichan Thomas, a 43-years old planter in Karunapuram, with 3.5 acres of cardamom plantation, remembers watching cattle neck-deep in the water on his way to school. The village has almost lost its wetland and grassland. Acute shortage of water and fodder has made cattle rearers jobless. Many of them sold off their cows and goats. Those who continue to keep a few cattle buy grass from Tamil Nadu, paying Rs 20 for a handful.

Depleting groundwater

To roll over the water scarcity, a majority of the residents have resorted to borewells. Going by what the residents say, the number of borewells is rising alarmingly. While the panchayat has about 7500 houses, borewells could be around 8500. Sibichan had dug a 250 feet borewell 16 years ago. When it failed recently, he dug another one that failed even at a depth of 1200 feet. The rich estate owners with big farms in the neighbourhood, especially in Vandanmedu, have many borewells for irrigating cardamom, and this adds to the woes of the small planters in Karunapuram.

According to some media reports, Karunapuram tops among the state's panchayats as for the number of borewells. To roll over the water scarcity, a majority of the residents have turned to borewells. Going by what the residents say, the number of borewells is rising alarmingly. The panchayat has about 7500 houses, but the number of borewells could be nearly 8500. Sibichan had dug a 250 feet borewell 16 years ago. When it failed recently, he dug another one. It did not fetch water even at a depth of 1200 feet. The big planters in the neighbourhood, especially in Vandanmedu, have many borewells for irrigating cardamom. They aggravated the woes of the small planters in Karunapuram.

However, Tomy, panchayat president, denies this as baseless news. However, neither the panchayat office nor the land revenue office has no data on this. "Granting permission for digging a borewell is the responsibility of the mining and geology department," explains G Muralreedharan, Karunapuram village officer. Since, the Geology and Mining department is located at Thodupuzha, some 100 km away in the low ranges, most often, Karunapuram residents don't bother to get

any permission from anybody. Even the ward members are in the dark about the number of bore wells even in their locality.

Just like Karunapuram, several villages and towns in Idukki face severe groundwater depletion. This had led to the flourishing of a bore well mafia in the district. Several Tamil Nadu-Karnataka based borewell companies have their sub offices in Idukki.

“They charge exorbitant rates bleeding people white,” points out Bhanu Kumar, a retired revenue officer.

The expenses start from around R 1 lakh and go up with the depth and width of the well. Small planters raise money to dig borewells by pledging gold, taking loans from banks, or borrowing money from private money lenders. Sibichan says in 2015, two persons have committed suicide in Udumbanchola taluk after their borewells failed. This information could not be confirmed.

Karunapuram is one of the 227 village panchayats in the state where Kerala Rural Water Supply and Sanitation Agency (KRWSSA), a government body, is implementing Jananidhi, a 381-crore water supply project funded by the World Bank.

Viji Shaji, chairperson of the panchayat’s Welfare Standing Committee says the project is being implemented only in her ward (Ward No1. Thoorkupalam). The other wards didn’t have sufficient groundwater to implement the project.

The panchayat members seem a bit reluctant to talk about the water crisis. Negative media reports have adversely affected the panchayat, they tell me. Jessymol Kurien, 49, the village council member representing ward 16, says a few exaggerated water crisis reports have even spoiled the marriage prospects of the youth. Besides, when such reports appear in the media, the land value falls, points out she.

The panchayat is financially assisting the residents in a small way to build rainwater harvesting facilities. “Half of the houses have rainwater harvesting tanks. Isn’t it a significant achievement?” asks Renuka Gopalkrishnan, 46, vice president of the panchayat and chairperson of the local body’s working group on finance.

But to harvest rain, there must be good rainfall. Residents tell me monsoons have failed them in a row for two-three years in recent times.

I’m curious to know the kind of works taken up in the panchayat under the Mahatma Gandhi National Employment Guarantee Act (MGNREGA), the law that ensures the Right to Work. The legislation was passed in 2005 by the then Indian National Congress-led United Progress Alliance (UPA) government at the centre. The world’s biggest rural wage

labour programme, aims to enhance livelihood security in rural areas by providing at least 100 days of wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. The panchayats are the principal authorities for planning and implementing this programme.

Through the process of employing works that address causes of chronic poverty such as drought, deforestation and soil erosion, the Act seeks to strengthen the natural resource base of rural livelihood and create durable assets in rural areas.

The priorities of the programme are water conservation, drought-proofing (including afforestation), renovation of traditional water bodies, including de-silting of tanks, land development, micro-irrigation, flood-control and protection works, including drainage in waterlogged areas. The attempt is to link livelihood security with locally relevant eco-restorative activities that would have a long-term impact. Kerala has linked this programme with Kudumbashree, a poverty-reduction and empowerment programme for women.

"We're trying to link MGNREGA with the agriculture sector. We also take up building of check dams wherever it's possible, digging rain pits for recharging groundwater," says Vineetha K C, chairperson of the panchayat's working group on agriculture, water, soil and environment protection. Under the environment protection, the local body is mainly taking up the anti-plastic drive."

Digging of several rain pits on the steep slopes by the local bodies as a water conservation programme has contributed to the massive landslides, some media reports have pointed out. So for the time being the panchayat has stopped rain pit digging. Clearing the plants from the banks of the streams and roadsides, unscientific slope alterations for road widening, and construction of check dams have also been said to have contributed to the landslides.

The Ghats and the Humans

Ask the residents the reasons for erratic rainfall, rising temperatures, and the alarmingly depleting groundwater table, you would get an array of answers.

"Global warming and climate change. The whole world experiences that."

"Forests along the Tamil Nadu-Kerala border have been destroyed. The dry climate of Tamil Nadu is spreading to Kerala."

"A lot of trees have been cut for setting up plantations."

"Earlier we're growing the traditional varieties of cardamom. New hybrid varieties need many more rounds of irrigation."

“Coir factories in Kambam and Theni in Tamil Nadu used to burn huge quantities of waste till recently. That could be a reason for this area becoming drier.”

“Granite quarrying and sand mining.”

Put all these answers together with a bit of history, a clearer picture will emerge.

Researchers have found strong evidence for human presence since the Stone Age in many locations of the Western Ghats. Tools, pottery, burial urns, umbrella stones, hood stones, and menhirs have been found from different parts of Idukki. But we still don't know much about the rise, progression, and the collapse of those societies.

The ancient and medieval history of the region is closely linked to the trade of spices in the world market. The monsoon-soaked rain forests were home to wild varieties of many spices like cardamom, pepper, cinnamon, and nutmeg.

Spices were a main source of income to the exchequers of the rulers. In the ancient, medieval, and modern period of history, different dynasties—Chera, Chola, Pandya, Vembolinadu Keezhmalinadu, Thekkumkoor, Vadakkumkoor, Poonjaar, and Travancore—had tried to establish domination over the high range region during different centuries.

Ancient Kerala (Chera Nadu) was a prime destination for traders from the Mediterranean countries, Rome, Egypt, Portugal. The region had direct contact across the Arabian Sea with all the major ports of the Mediterranean, Red Sea, and those of the Far East. Ancient ports such as Muzris, Alappuzha and Vizhinjam were bustling with the spice trade.

About three hundred years ago, tribal communities such as Muthuvan, Mannan, Urali, Ulladan, Malavedan, Mala Pandaram, Malapulayan, Paliyan, and Mala Arayar, were the only inhabitants in the densely forested region. They are believed to have migrated to this region at different points of time in the thirteenth and fourteenth centuries. A few of the communities have their roots in the eastern side of the Western Ghats and some others migrated from the western side. They were engaged in hunting, food gathering, shifting cultivation, and collecting forest produce including honey, wax, and wild varieties of pepper, cardamom, and other spices for the rulers. They are considered to be the indigenous communities of the Western Ghats.

Then came a group of Tamil speaking people in the second half of the 18th century from the eastern side. They settled in the Anjanadan villages in the north-east part of the present Idukki district. They were also engaged in farming clearing forests in a small way.

Large-scale destruction of the Western Ghats forests started in the last decades of the 19th century with the Europeans setting up plantations in Peerumed and Munnar. In 1877-79, the Royal Family of Poonjar, a principality in the central Travancore, leased a large tract of land of 588 sq. km in Munnar in the Kannan Devan Hills to John Daniel Munro, the British Resident of Travancore. The land, called the Kannan Devan Concession Land, was covered with thick forests and grassland. The grandeur of the Western Ghats, the thick evergreen forests with wildlife is well documented in J D Munro's account of the High Ranges.

The landscape of the Idukki part of the Western Ghats started changing drastically with the members of the North Travancore Land Planting and Agricultural Society, an association founded by Munro and H. G. Turner of the Madras Civil Service, started buying several more plots developing their estates. They cleared vast stretches of forests, tilled the hillslopes, and tried growing coffee, sisal, cinchona, before switching over to tea that suited for the high-altitude climate. A lot of Tamil labourers were brought in for the plantation work. Roads were built to transport tea and timber. Ropeways were set up. The British planters even established a railway station and a steam engine railway line in Munnar in 1902. This railway line was washed away in a devastating flood in 1924. The Old Munnar railway station is now being used as the head office of the Kannan Devan Hills Plantation.

Almost around the same period, significant changes were taking place in the Cardamom Hills too. In August 1897, through a historic proclamation, Sri Mulam Thirunnaal, the then Maharaja of Travancore, declared about 870 sq.km (87000 hectares) of forests as Cardamom Hill Reserve Forest (CHR) for promoting cardamom. The Maharaja started giving land on lease for growing cardamom into more areas. The proclamation changed the status of cardamom and the destiny of Cardamom Hills as well. Cardamom changed from a natural forest plant to a cultivated plant.

After the proclamation, the CHR land was brought under the revenue department while the Forest Department in charge of the trees, a sort of dual administrative system. Cutting of trees was strictly prohibited, cardamom being a shade-loving tree that grew under four layers of the rainforest canopy.

This dual system of administration was continued even after Independence paving the way for legal complications and confusions regarding land, trees, and title deeds.

Along with leasing out land for cardamom cultivation, Travancore Maharajas also opened up vast stretches of ecologically fragile grassland, wetland, and rocky land for growing rice and pepper. These lands located within CHR were not suitable for cardamom.

With this, small streams of Tamil-speaking cultivators and labourers from the eastern plains climbed up the hills through forest paths. The influx gained momentum when the first commercial cardamom estate in India was set up in Pampadumpara in 1922 by John Joseph Murphy (1872-1957, a young Irish planter, after securing land from the Travancore rulers. From this large estate of 1200 acres, loads and loads of cardamom were taken to Madras port by headload workers. With the success of this plantation, many more cardamom estates came up strengthening the stream of Tamil migrants. It was easier to reach the High Ranges through the gentler slopes on the eastern side than the steep and rugged Western side.

There had been some trickling in of Malayali settlers since 1910, it became a large influx during the Grow More Food Programme followed by the High Range Reclamation Scheme and the High Range Colonisation Scheme. These were initiated and organized by the governments.

The Grow More Food programme was launched when a severe famine struck British India in the early 1940s. It was the time of the Second World War (1939-45). Most of the grains produced in the country were diverted to the war front. Besides, a severe cyclone hit the eastern coast of India destroying vast stretches of rice fields in Bengal and Orissa. The acute food shortage led to the starvation death of about three million people in Bengal alone.

Travancore was badly hit too by the famine. In Cherthala and Ambalappuzha 21000 people died. The poor and the landless peasants took up the cudgels against the rulers. Subsequently, Travancore leased out 24000 acres of wetland and grassland in the Western Ghats for growing food crops, mainly rice and tapioca. Each lease, (*kuthakappattam*) was for five acres. It was called off in 1954.

By then the process for reorganising the states based on spoken language had started. The highlands of Idukki being dominated by Tamil-speaking people, the demand for merging this region with Tamil Nadu became strong. Protests led by Travancore Tamil Congress turned violent in many places such as Marthanadam killing civilians and the police.

The government was not ready to let a region rich with natural resources go from its boundaries. To make a dominance of Malayalis here, the Thiru-Kochi government formulated the High Range Colonisation Scheme encouraging the landless to migrate to the High Ranges for growing food. Under the HRC scheme too, the government offered a block of five acres of forest to the landless. Financial aid of Rs 1000 to build a house and buy farm tools was also offered to each family.

Religious and caste organisations were given the responsibility of the land distribution process. Applications were called for; thousands of people applied; lots were taken to decide who should be given land; 8000 acres of thick forest were demarcated for this; surveys were conducted in four areas- Kallar in Udumbanchola taluk and Kanthallur, Marayur and Deviyar in Devikulam.; plans were prepared; locations for houses and places of worship were decided. The biggest was the Kallar Pattom Colony with 1397 housing plots in 6860 acres; each of five acres.

“During the Grow More Food Campaign, the government encouraged people to migrate to the High Ranges, clear forests, and grow food. Whereas the HRC scheme was completely organized, designed and engineered by the government,” points out T Rajesh, an employee with the Nedumkandam village office. He is the author of *Idukki Charithrarekhakal*, a book in Malayalam on the land issues in Idukki. His grandfather migrated to the High Ranges in 1950 from Meenachil in Kottayam. Rajesh perused old land documents for two years. Labelling all the people living in the High ranges as “encroachers” is painful for us, the third generation born and brought up in Idukki, says he.

But he confesses that along with each wave of mass migration, large-scale encroachment and destruction of fragile ecosystems had also taken place.

It was the policies of the government, before and after independence, that led to migration, encroachment, destruction of the forests, and messing up of the title deed issues. The arrangement of dual administration of CHR- land under the revenue department and trees under the forest department continued even after the formation of Kerala. This created a lot of confusion between the two departments.

The large-scale encroachment of forests in the 1940s and the 1950s during the Grow More Food and other schemes, had created concerns at the government level by the end of the 1950s itself. The state government had even formed two commissions to assess the encroachment issues. The state also came out with the legislation, the Kerala Forest Conservation Act, in 1961. But encroachment continued.

In fact, after the formation of the state, forest encroachment has been regularised four times changing the cutoff dates for eviction: 4 January 1957, 1 January 1960, 1 January 1968, and the final cut-off date was fixed as 1 January 1977.

However, the government could not implement its policies. In 1980, when the Forest Conservation Act was enacted by the Centre, CHR again became a reserved forest under the definition in the new legislation. This led to a lot of legal complications. The law made it

mandatory to get the Centre's approval for diverting the forest land for non-forest purposes. In CHR, the land was under the revenue department. By then people had made huge investments in CHR converting forest land for all sorts of infrastructure development activities. The Congress-led government at the Centre yielded to the persistent requests from the Congress-led state government for diverting "forest land" to give title deeds to the pre-1977 "encroachers".

In 1993, the state government formulated a set of new rules "Kerala Land Assignment (Regulation of Occupation of Forest Land before 1.1.1977" and started to distribute title deeds. This paved way for a long-drawn legal battle between the environmentalists and the state government. The Supreme Court issued its verdict on this case in 2009 favouring the state government.

"The period from 1993 to 2009 was a period of fear and uncertainty for thousands of families, the legal occupants as well as the encroachers," points out Rajesh. They could not buy, sell land, or get loans from banks. The Gadgil committee was appointed close to the heels of the Supreme Court verdict. "Naturally many people thought it was a scheme for evicting them from the occupied land."

Construction of dams, starting with the Mullaperiyar in 1887, has also contributed to the destruction of forests. With 18 dams, Idukki tops the districts in Kerala as for the number of dams. Most of those who came to Idukki as construction labourers stayed back while townships like Cheruthoni emerged in forest land.

The initial encroachments were in search of better livelihood opportunities by the poor. However, since the 1990s, commercial interests, particularly the resort, plantation and quarry lobbies, dominated the scene.

In the past two decades, the high range regions have witnessed a tourism boom, a flurry of infrastructure development, and mushrooming of resorts. This has led to serious illegalities, irregularities, land grab by forging documents, the encroachment of the forest and the government revenue land, and environmental destruction and degradation. Much of this happened in connivance with some corrupt officials of the revenue and the forest departments.

For instance, 10 revenue and forest officials, including a former district collector were suspended in 2002 after an inquiry by a state government committee found them guilty of "serious lapses" in the encroachment of Mathikettan Shola forest in Udumbanchola taluk by a few private parties. The report prepared by the state additional chief secretary observed that organised encroachment in Mathikettan forests

had started way back in 1966. However, large-scale encroachments were reported starting from 1996. In the 2001 incident, about 500 acres were encroached by some individuals with illegal title deeds.

A Scattered tribal kingdom

The night is chilly.

I'm in Kovilmala, the headquarters of one of the two tribal "kingdoms" in the country. The other is in Tripura, in the northeast.

It's a small village and settlement of the Mannan tribe, tucked away in a valley on the fringes of a forest of the Western Ghats, in the Kanchiyar village panchayat in CHR, some 20 km from Kattappana. Kovilmala (called Kozhimala by outsiders), was a part of Udumbanchola taluk till recently. The settlement has about 250 tribal families living in small houses. While kingship continues after 70 years of democracy, the kingdom is a tribe of about 3000 families living in 56 *kudis* (settlement) scattered in six village panchayats in Idukki district.

I'm here hoping to meet Raman Raja Mannan, the 32-year-old King of the tribe. Raja Mannan is the title of the position. The king's original name is N Binu. He was enthroned in March 2012 after the death of his uncle King Ariyan Raja Mannan. The tribe follows a matrilineal system in which the eldest nephew becomes the successor when a king dies. A graduate in economics from Maharaja's college in Ernakulam city, 130 km away, Raman Raja Mannan is the only literate one among all the kings the tribe had so far.

The day is special and the king is in his glittering royal attire: a long blue kurta with golden spots, white tights, and a white frilled turban with a golden border. It's the day of *Kalavoottu*, the biggest traditional annual festival of the Mannan community. *Kalavoottu* is a tribute to Nature for providing sufficient harvest.

The common ground is fenced with multi-colour shining papers and illuminated with tube lights; groups of children and teenagers hang around an array of stalls with toys, balloons, sweets, glass bangles, bead necklaces, earrings, and ribbons. The elderly, with blankets around their shoulders, throng around the few petit coffee shops. *Koothu* will be performed by a group of artists, all men, on the decorated stage at the end of the ground. The spectators include a large-number of non-tribals, local media reporters, and a few government officials from the Integrated Tribal Development Project office at Kattappana, and x have also gathered as spectators.

On the *Kalavoottu* day, Mannan families from all the settlements come with gifts to Kovilmala to pay tribute to the king. A new king can

begin his rule only after he receives gifts from his “subjects”. The king has limited powers in the present democratic administrative system. He has a council of nine ministers called *Kanis* (community leaders) for assisting him in taking decisions in some internal affairs such as marriage, divorce, and some minor disputes. The community members go by the laws of the country in all criminal and civil disputes.

The king and the ministers are busy welcoming the guests and posing for photos in different combinations. In between, I manage to talk to one of the ministers.

The story he told me goes like this: their ancestors were warriors under the Pandya dynasty in ancient Tamilakam; the Pandya King after getting defeated in a battle with Cholas, fled Madurai along with the surviving warriors to the interiors of the dense forests and established a kingdom there some hundred years ago. Since then, the Mannan tribe has always had a king ruling them. Their tutelary deity is Madura Meenakshi of the famous Madura temple in Tamil Nadu. They were living alone with the wild animals in harmony with the rhythms of Nature. They were engaged in hunting, fishing, and farming in a small way growing millets and rice. They had special rights for collecting honey, wild pepper, cardamom, and other spices.

“Do you grow the same crops now?” I ask the king.

“Most of us grow nothing now.”

“Why?”

“A majority of us own just 10-20 cents (1 cent=0.01 acre) of land. What can we grow in that? We have been living for generations inside forests without having any land documents. We’re living in a community. We worshipped mountains, forests, and rivers. We lost all our land to the settlers for a pittance or nothing. We had them in their initial years of hardship. We even gave our land for free or on lease to grow food, but we’re duped.” he adds.

Mannans, especially women, were known for their excellent handicraft skills. Women used to make bamboo baskets and *Kannadippaya*, a unique, smooth, and thin mat, that could be rolled so small to put even into a flute. Seventy-year-old Thankamma, who used to make *kannadippaya* tells me getting bamboo is not easy now, and only a few know the skill. The ITDP had tried to revive it but the efforts failed.

Later, I managed to get some time to talk to the king. He confirmed what his minister said about how the settlers from the plains took away most of the tribal land by hook or by crook. The land alienation continued even after the state enacted legislation in 1975 for the

restoration of the alienated tribal land and prohibiting the transfer of tribal land to outsiders.

It's a long story of injustice and betrayal; by outsiders and by the state. The Dhebar commission appointed by the Central government in 1960 to look into the issues of tribal land alienation had recommended that all tribal land alienated after January 26, 1950, the date on which the constitution of the country came into effect, should be restored and given back to the original owners. But the Centre as well as the state governments ignored this. In April 1975, in the wake of spreading Naxalism, an extreme-Left radical Communist movement, in the country, the then prime minister, Indira Gandhi, called an urgent meeting of the state revenue ministers. The meeting decided that the states should immediately enact legislation to restore the alienated tribal land and prevent further alienation. It was also decided that each state would prepare a crash programme for effective implementation of the law, which would be periodically reviewed.

Accordingly, the Kerala government enacted the Kerala Scheduled Tribes (Restriction of Transfer of Land and Restoration of Alienated Land) Act (KST Act, 1975). The Act was passed unanimously by the state legislative assembly and included in the Ninth Schedule of the Indian Constitution to ensure that the Act should not be challenged in any court of law.

As per the Act, all tribal lands taken by non-tribes through sale or lease or mortgage or by force after 1960 became illegal and invalid. Transfer of tribal land to non-tribes was a punishable offense under the Act. However, the rules for implementing the Act were formed only after one decade in 1986 with retrospective effect from January 1982.

Under the legislation, all transactions of tribal land from 1960 to 1982 became invalid and such lands were to be restored to the original owners. The tribes were supposed to give back the amount of money that might have been spent by the occupiers for buying land or the improvement of lands. For this, the government would give loans to tribals which they were to repay within 20 years. While a majority of tribals did not have land ownership title deeds, the Act applied to only those who had land records.

Even after 1986, the state government did not implement the Act. Responding to a public interest petition in 1988, the Kerala High Court in October 1993 ordered the government to implement the Act in six months. As many as 8,553 applications involving a total area of 11,000 hectares were filed at the state-level for restoration. The revenue divisional officers rejected about half of the applications for want of land documents to prove ownership. Only 496 were decided upon and the decision was implemented only about 100 cases.

The government stopped tribal land restoration saying that there would be conflict and violence between the settlers and the tribes. The court extended the last date for carrying out its order for two-and-a-half years, ending in April 1996. The government failed to carry out the orders of the court. In August 1996, the principal secretary for development of the Scheduled Tribes and the Scheduled Castes (ST/SC) filed an affidavit that there was difficulty in implementing the Act because of the organised resistance to it from the settlers. On August 14, 1996, the court ordered that within six weeks ending September 30 the authorities should restore the alienated land and give them to the original owners.

To meet the deadline, the government introduced a new Bill, the Kerala Scheduled Tribes (Restriction of Transfer of Land and Restoration of Alienated Lands) Amendment Bill, on September 23, 1996, despite widespread opposition from tribals and their supporters. In 1999 it got the President's approval. The amended law, favouring the settlers, legitimised all transactions of tribal lands between 1960 and 1986. This, in effect, was counter to the original intention of the restoration of alienated lands.

The tribal land alienation in the state continued even after 1999. The successive governments in the state did not bother to implement the legislation. In 2001, after 45-day long protests in front of the state secretariat led by adivasi leader C K Janu in Thiruvananthapuram, the government assured the tribes that it would distribute cultivable land to the landless tribals. In 2014, the tribals staged a 162-day long *Nilpusamaram* (standing protest) again in front of the secretariat.

"Instead of giving cultivable land, the state government has been fooling the tribes with false promises and holding title deed distribution jamborees mainly for the settlers," says the king. Outsiders, including resorts and farm developers, are still buying tribal land; most often in connivance with the officials of the revenue department.

"Why does the government fail the tribes?"

"We're not a significant vote bank so our demands get ignored. The government always tries to please the settler communities that have strong political clout and money power. It's really difficult for us to survive and preserve our culture and identity," says the king.

True. According to the 2011 Census of India, the Scheduled Tribe population in Kerala is 4,84,839; a mere 1.5 percent of the total population. Idukki district has the second-highest number of tribals (55815) after Wayanad (1,51,443). Over the years the tribes in Idukki have become an abysmal minority constituting just five percent of the district population.

"You're the king of the Mannan tribe. Have you given any representation to the government for getting land?"

"After getting the title of king in 2012, I have given many appeals to the government in vain. I'm fed up. The government respects my title and invites me for public functions; but nothing beyond that."

"How does your community pull on?"

"A majority, especially women, are daily-wage labourers in cardamom plantations owned by the settlers. Others go for *thozhilurappu*."

Thozhilurappu refers to MGNREGA.

"Do the tribes have any say in deciding what kind of work should be done under the employment guarantee scheme?"

"No. It's decided by those in charge of the scheme."

In 2006, the Indian Parliament enacted The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (FRA). The law vests several rights over forest lands to forest-dependent Scheduled tribes and other forest dwellers, including individual rights over occupied forest lands, community rights over Non-Timber Forest Products (NTFP), and other forest produce, and the rights to protect and manage Community Forest Resource Rights within traditional village boundaries.

The Act was notified by the Ministry of Tribal Affairs in 2007, and the rules were formed in 2008 and amended in 2012.

The legislation was aimed at rectifying the historical injustice of denying the forest dwellers the rights on forests and forest governance. The Indian Forest Act of 1865, updated in 1878 and 1927, excluded the right of land and resources including minor forest produces. The main concern of the 1927 act was to prevent the appropriation of timber by any agency other than the state. The Forest Conservation Act, 1980, too failed to recognise the rights of the indigenous communities.

Supporters of the Act claim that it will redress the historic injustice done against the forest dwellers, make forest conservation more effective and transparent. However, those who argue against the law feel implementation of the law will lead to massive forest destruction that will be detrimental especially in the backdrop of global warming and climate change.

According to the Forest Statistics 2015, Kerala has 29.1 percent of its land area as legal forests. Of this, 77.6 percent are natural forests,

13.5 percent are forest plantations, 5.2 percent are leased for various purposes, and 3.63 percent have been diverted for non-forest purposes under the Forest Conservation Act of 1980. Only 1.94 percent is the land owned by Tribal Settlements inside the forest.

The Gadgil committee had categorically recommended the implementation of the Forest Rights Act. However, the voices of the tribal communities remained the most unheard during the anti-Gadgil-Kasturirangan agitations.

"Have the members of your community applied for title deed under the Forest Rights Act?" I ask the king.

"Yes. We have applied for individual rights and community rights, but not yet received," replies he. "There is a delay in implementing the law. The forest department feels if we're allotted title deeds on the forest land, non-tribals might grab that too."

"What was your stance regarding the Gadgil report reports? Did you come out with any public statement during that time?"

"I know the conservation of Western Ghats is extremely important. I'm also aware of the fact that it will be beneficial for the tribes. However, I maintained silence during the time of protests. I did not issue any public statement for or against the reports."

"Why did you prefer to be silent?"

"We are living among and surrounded by powerful settlers. As you know we're a minority in the state, district, block, and panchayat. Most of the tribal settlements have non-tribals as residents. Kovilmala is not different. The settlers could be our neighbours, friends, or employers. It's not easy to come out in public airing our views. We will be isolated and threatened if we go against the tide. You know, a procession against the Gadgil report had passed through even this settlement. It was organized by a church in our neighbourhood."

"What was the stance of your people?"

"The tribes are a divided community. There is no unity even within a single tribe. We're also divided along the political lines. We have our hierarchies. Most of the tribals were misled to believe that the reports were harmful. I had to face tremendous pressure from the political parties and my community as well for coming out with a public statement against the Gadgil-Kasturirangan reports. I was also under pressure to participate in the protest meetings, but I refused."

"You're the king of your tribe. Do you have any say on your community regarding matters like this?"

“No. My community respects me as a leader. But we’re a part of democracy. Like others, the tribals also have their democratic rights. How can I interfere with it? If they want to be a part of a political movement, they’re free to do so. But if I ask them to not hoist flags of the political parties within our settlement, they may listen to it. That’s all.”

“Has the way of living of the tribes changed significantly?”

“Definitely. We’re Nature worshippers. We had immense knowledge about the rhythms of Nature, forest, and weather. We could make an exact prediction when it would rain and how much. We had our administrative system, our medicines. We never polluted water sources. We did not consider wild animals as enemies. But it has become increasingly difficult to preserve our culture. Over the years, we have imbibed the culture of settlers. The approach of the government and the general categories of people inflict inferior feelings in our minds. The formal education system to alienate us from our culture. In Kovilamala, we try hard to keep at least some of our rituals and festivals alive.”

Kooth is about to start, and we wind up our conversation.

Changes in land-use pattern

In the last century, CHR has undergone a drastic change in land-use patterns; mostly between 1900 and 2000. According to the census statistics, during 1951-61, Udumbanchola witnessed a population increase of 675 percent! The population pressure and the changes in the land use pattern have led to significant changes in the ecology of the region.

Wherever a drastic change happens in the natural vegetation, land use, and landscape, it will have drastic impacts on ecosystems. Land use changes affect soil, rain, groundwater recharging, and the flow of surface water.

A study by R Raju and Anil Kumar of Centre for Earth Sciences published in 2006 in the Journal of Indian Society of Remote Sensing shows in 1910, 95 percent of Udumbanchola taluk was under natural vegetation--evergreen rainforests with bamboo, reed, and bush type trees, and shola forests with grassland. This was reduced drastically to a mere 2.9 percent in 1997. The CESS study shows the human settlement area went up from 0.73 percent in 1910 to 30 percent in 1997.

Tapioca, the crop of the initial years of migration, provided the settlers a community feeling uniting the families for harvesting, peeling, and drying. However, large-scale cultivation of tapioca, a weak-root tuber, led to drastic changes in the soil structure. When huge wild trees of the tropical rainforests with strong and deep roots holding soil tight were cut and replaced with tapioca, soil erosion became high.

The settlers, after engaging in the large-scale cultivation of rice and tapioca for some years, switched over to cash crops by the mid-1960s. The Central government, in pursuit of more foreign currency, wanted Kerala to focus on cash crops as the climate of the state's high land was suitable for such crops. In turn, the centre assured the supply of grains, including rice, the state's staple food. By then, Idukki's low ranges had lost all its biodiversity to rubber plantations. The Rubber Board, formed in 1947, under the Central Commerce Ministry, with Kottayam as its headquarters, promoted the development of natural rubber with a lot of incentives. The board encouraged the farmers to go for mono-cropping of rubber removing all other trees. Rubber severely affected the fertility of the soil making it dry.

Since the 1970s, pepper, a rainfed crop that does not need intensive care and water, became the main crop of Karunapuram. However, the crop was badly affected by severe droughts in 1983, 1985, 1986, and 1987. Prices of coffee hovered very low at about Rs 60 for a kilogram. Meanwhile, the prices of cardamom started picking up. In the past decade, prices of cardamom have spiralled up from Rs 300 to Rs 2,500 a kilogram. Several planters, going by profitability, switched over to cardamom from pepper, as the main crop.

The traditional varieties of cardamom being shade-loving, new planters grew more trees, while the large estates in the CHR retained the tree cover. However, this didn't last long.

Njallani invades CHR

In the early 1990s, another drastic change happened in CHR leading to a huge loss of forest cover. Njallani, a high yielding variety (selection) of cardamom, invaded CHR.

Njallani was developed in 1987 by a farmer-duo; Rejimon Joseph and his father Sebastian Joseph. This selection gives a yield 4-5 times higher than the traditional varieties. It's bigger in size, better in colour and each capsule has about 18-36 seeds. The traditional variety has less than 20 seeds in a capsule.

"Njallani was a revolution. The increase in the cardamom production in Idukki and Kerala can be attributed to the variety we developed," claims Rejimon, a resident of Kattappana. More than 90 percent of the cardamom area in CHR at present is under Njallani and other high-yield varieties such as Palakkodi, Elarani, and Elaraja.

These high-yield varieties need less shade under irrigated conditions. Despite CHR being a part of the ecologically fragile forest ecosystem, trees are subjected to heavy pruning. Planters remove undergrowth and three layers of the tree canopy.

CHR flooded in pesticides

Since the high-yielding varieties are highly responsive to chemicals, farmers apply 10-15 rounds of a cocktail of concentrated chemicals with many rounds of irrigation.

The usage of chemicals in CHR has gone up to an alarming level. A 2009 study by the National Institute of Advanced Studies, Bengaluru, reveals that cardamom plantations in Idukki are among the regions in the world that use the highest levels of pesticides. On average, planters use 27 kg of pesticides in a hectare of cardamom plantation and 9 kg in a hectare of tea garden. India's average pesticide use is 0.5 kg per hectare. The study found residues of at least seven pesticides in cardamom collected from CHR. Levels of highly toxic pesticides like triazophos, quinalphos, and endosulfan were high. The Central Insecticides Board advises only two pesticides for cardamom, quinalphos, and phenthoate.

About 10 big pesticide companies are operating in CHR. Multinationals such as Syngenta, Bayer India, United Phosphorus Limited (UPL), Tata's Rallis India, FMC India top the list. These companies engage their agents in the villages. They visit farmers frequently and interact with them giving instructions. Krishi Bhavans, offices under the state agriculture department, give awareness classes once in a while, says Ashwathi Vasu, the agriculture officer in Karunapuram.

However, Krishi Bhavan's intervention is not effective. Farmers generally follow what other farmers do and what the representatives of the pesticide companies suggest. If one farmer gets good yield after using a particular pesticide in certain quantities, everyone else would attempt that.

Suresh Kumar, the secretary of Koottar Co-operative Bank in the panchayat points out that pesticide companies lend their products to farmers. Suresh grows cardamom in two acres and pepper along with other spices in one acre. His grandfather migrated to Kallar Pattom Colony from Pala in 1955. His bank has a depot selling fertilisers and pesticides prescribed by the government. Prices are lower compared to that of the pesticide companies. "However, farmers go for the products of private companies since they have constant interactions with the company representatives. They can pay the price after the harvest. Our bank cannot lend fertilisers and pesticides," says he. According to him, farmers' loan repayment capacity has gone down due to the escalating cost of cultivation.

Indiscriminate use of pesticides has contaminated the region's ecosystem. NIAS study shows CHR soil has high levels of toxic pesticide and insecticides such as Phorate, DDT, fungicide hexaconazole, and

mercury. Nitrobenzene is another toxic chemical that is liberally used in the flowering season. It is known to cause cancer, alter genes, and affects embryo development, reveals the study. Diseases like asthma, cancer, dermatitis, and reproductive disorders are common among people living close to plantations, point out ASHA workers under the Karunapuram Primary Health Centre. "In my ward (Ward No 1-Thoorkupalam) alone, there are 11 cancer patients," says Lakshmi, an ASHA worker.

However, the village panchayat has not done a detailed study on this. A study by the Kanchiyar village panchayat shows between 1994 and 2004, about 100 people died of cancer in this particular village panchayat alone.

High endosulfan residues in cardamoms imply it is still being used in Kerala despite a 2005 ban in the state. Residents of Karunapuram openly talk about unlabelled pesticides in cans being smuggled from Tamil Nadu. Every day around 500 jeeps overloaded with labourers, mostly women, reach Kambanmettu, an entry point from Tamil Nadu. The Excise and police officials at the check post confess it's not possible to check every vehicle.

A lot of labourers from Madhya Pradesh, Jharkhand, Odisha, West Bengal, and Bihar are also employed in the cardamom plantations for spraying pesticides. Shyam Hembron, 31, a Santhal tribal youth from Jharkhand, has been working in a five-acre cardamom farm close to Thoorkupalam for the past five years. It was a priest in a church who brought him to Karunapuram. "Whenever my employer needs more farmhands, I call in my relatives," says Shyam.

Ironically, the chemical flooding of CHR continues even after Kerala's making of organic farming policies in 2008. The planters are aware of the dangerous health impacts of toxic chemicals on health, soil, water, and air. But they seem to be trapped in a market-driven economy.

High cost, High risk

Cardamom requires a cool climate, moderate temperature, and gentle rain. The highest yield is from July to September. This was the time when the state was flooded. Villages in CHR, including Karunapuram suffered at least a 30 percent reduction in cardamom production. Immediately before the floods, CHR experienced a severe summer. Vast stretches of plantations lay dry in the scorching sun.

Due to low production, prices of cardamom soared to unprecedented levels; Rs 4500 a kilogram from Rs 900 a few months ago. But small planters like Sujit.G make no benefit from the price jump. He has three acres of cardamom with a yield of 250-300 kilograms from an acre. But after the floods, he got not even 100 kgs.

The story is the same with big plantations too. Subhash Divakar, manager of Spring Valley, a 100-acre plantation in Udumbanchola, confirms the loss. Cardamom is a high cost-high risk-climate sensitive plant. "The cost of cultivation of cardamom is huge. A small change in the climate would have high impacts on the yield," he explains. Prices of cardamom are even otherwise highly fluctuating. Erratic, dwindling rainfall and rising temperatures make planters concerned about the sustainability of plantations.

Subhash gives a rough picture of the annual average cost of production, revenue, and profit of cardamom. A one-acre farm would have about 500 plants. Cardamom farming is chemically intensive, water-intensive, and labour intensive. Workers need to be employed for clearing weeds, preparing the land, applying chemicals, irrigation, and plucking raw berries. The cost of production in one acre comes around R 2.5 lakh. The yield from one acre (after drying or curing) could be 500 kilograms. With prices at an average of Rs 1500, the revenue from an acre would be around Rs 7,50,000, and the profit after deducting all other expenses like salaries for permanent staff comes around Rs 3-4 lakh an acre.

"About 30 percent of the cost of production is for pesticides alone. For other chemicals, it comes around 20 percent. For irrigation, each round costs around Rs 15000, and curing (drying in large electric dryer) charges is Rs 10-15/kg. To get 500 kg of dry cardamom, there should be about 1000-2000 kg of raw berries," says Subhash.

If the climate is adverse, the loss will be huge. Spring Valley lost about 40 percent of the yield after the floods.

The blasted mountains

At Alliyar, not far from Koottar, residents are an aggrieved lot. A granite stone quarry has been blasting and mining the hillslope since 2012.

About 20 families are living in the vicinity; most of them are poor daily wage labourers. The blasting of the hilltop, mining, crushing of stone, heaping of overburden, transportation of the stones have made their lives hell. They take me around to show the cracks on their houses and water harvesting tanks. The blasting of the rocks starts early in the morning. "We're eating and breathing dust; many of us have developed allergies and respiratory diseases," says T R Santhosh, a resident living just below the quarry, showing red patches all over his body. Eight of the families have lost their drinking water source; a small stream flowing down to a natural pond. Some other families had to sell off their cattle. They show me a video of a school bus blocked on the road by an overloaded truck with stones. The cardamom plantation on the slope below the quarry is covered with dust. The villagers have

been protesting against the rock blasting in their neighbourhood. The quarry was closed for a while, then started blasting again.

I meet the quarry people. They tell me they have all the necessary permissions from the Department of Mining and Geology, the Kerala State Pollution Control Board, and the panchayat. The quarry falls within the limit of Karunapuram village office but in Pampadumpara panchayat. The village office, after visiting the site, has reported to the revenue office, in support of the residents. However, the gram panchayat thinks that the area is not an ecologically sensitive region.

“The quarry mafia is very strong with money and muscle power. They have their goons. They enjoy support from local and state-level politicians and ministers. When we protest, the government and police take action against us,” says Omana, an anganwadi teacher. There were media reports from the neighbouring district of Pathanamthitta about quarry mafias running a parallel governance system providing provisions and cash to the residents, employment as goons to the local youth, and pension to widows.

A 2015 study “Mapping of Granite Quarries in Kerala, India: A critical mapping initiative” done by T V Sajeer and Alex C J, scientists working with the Kerala Forest Research Institute, Peechi, found that 5924 stone quarries were functioning in the state; 2438 in the northern part, 1969 in the central part and 1517 in the southern part of the state. Of the total quarries, only 750 had a license from the state department of mining. The quarries occupied 7157 hectares of land.

The state has 44 river basins. According to the KFRI study, 96 percent of the granite quarries in the state are within 500m buffer distance from the drainage network of the rivers. The Periyar basin had 562 quarries.

Further, the study found there were 1486 granite quarries in ESZ 1, 169 in ESZ 2, and 1667 quarries in ESZ 3 identified by WGEEP. In the Ecologically Sensitive Area identified by HLWG, there were 655 granite quarries.

Most of these quarries are likely to cause mudslides and earthquakes. T V Sajeer had explained to me the strong correlation between earthquakes and lineaments. Kerala had experienced 115 earthquakes between 1983 and 2015. Among them, 78 earthquakes occurred at places where stone quarries were functioning.

The disaster management plan for Idukki reveals the district is prone to tremors and earthquakes. Many of the inmates at the relief camps in Painavu told me there were tremors before the landslides.

The Kerala Mines and Minerals Rules amended in 2017 do not mention the distance to be maintained from quarries to a forest. The forest

department has recorded the occurrence of landslides in its 22 forest divisions in five circles including the high range circle.

Soil excavation, drilling, blasting crushing, loading, transportation, and debris dumping cause air pollution, noise pollution, dust deposit on canopy cover, disfiguration of hillocks, wetland destruction, loss of topsoil, nutrient depletion, change in soil character, unsustainable, land use, and reduction in infiltration of water, groundwater depletion, contamination, increased runoff, loss of natural vegetation, and loss of biodiversity.

I ask Santhosh, who is a supporter of CPI(M), whether he had taken part in the protest against the Gadgil-Kastururangan reports. "Yes. All of us participated in the protests. Now, I feel we're misinformed," he says.

CHR: on the verge of collapse

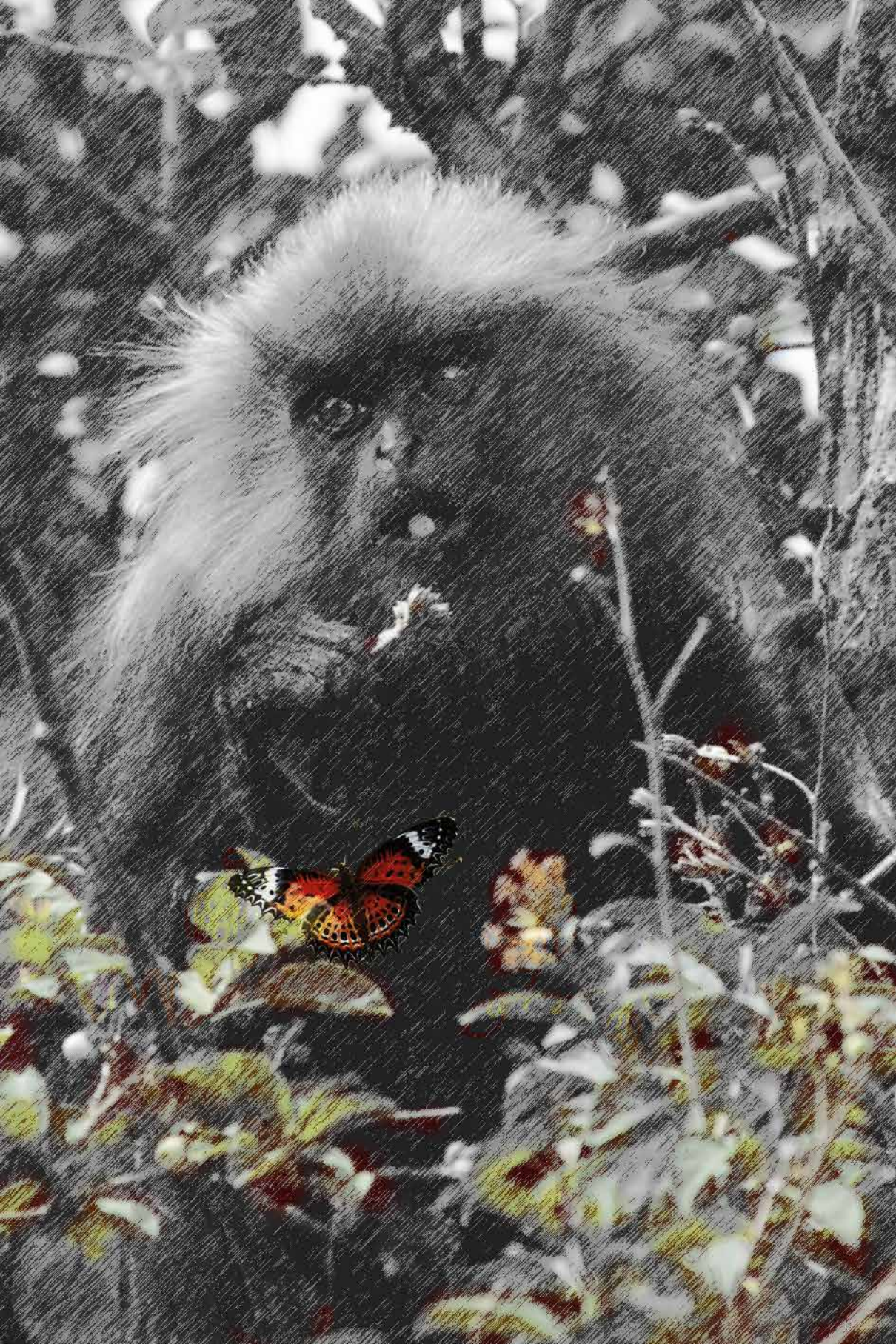
At the Cardamom Research Station in Pampadumpara, Muthuswami Murgan, director of the institute, is not very hopeful about the sustainability of livelihoods in CHR. Cardamom plantations are the biggest employer in Idukki district. About 74,000 persons, including 49,000 women, in 35,000 families work in the plantations. At least around 12,000 commuting workers from Tamil Nadu also work in the cardamom sector.

Murugan warns about an imminent economic collapse in the CHR that may lead to social unrest because of the loss of biodiversity and climate change. According to him, CHR has lost almost 70 percent of its original biodiversity. Besides, all the climate change parameters are negative, indicating a very grim scenario.

"CHR region has already fallen into an acute water shortage. Considering the available data, the situation might turn explosive in the next few years," he says.

The institute has rainfall and temperature data for the past 50 years. The data reveal disturbing trends. Being a tropical rainforest region, CHR used to get significant rainfall with an average rainfall of about 3000 mm for earlier decades.

"However, much has changed in the past twenty years. CHR got less than 1700 mm in the past decade," points out Murugan. The number of rainy days is decreasing; the number of dry days between January and May is increasing. "For a forest to be qualified as a rainforest or an evergreen forest, it must get at least 600 mm of rainfall in the driest month of the year. This has not been happening in the past few years. For instance, this year, during January-April, we did not have a single rainy day," says he.



Cardamom is originally a rainforest plant. It loves a rainy climate and a cooler environment throughout the year. The data with the research institute during the decade 2000-2010 reveal that the surface temperature has increased by 0.3 degrees Celsius. Between 2010 and now, the rise is about 0.4 degrees. Murugan warns about a four-degree centigrade rise in temperature by the turn of this century. Day-time and night-time temperatures are increasing too.

When the climate was stable, the rain was gentle and uniform. In the thick shade of the forests with high biodiversity, topsoil was never exposed to the sun. Evaporation was very less. When the soil remains drenched, pores in it would be filled with water and they won't have enough air for the pests to breed. This would suppress the population of pests and their attacks.

Being juicy, popular varieties such as Njallani are more susceptible to pest attacks. Unlike the high-yield varieties such as Njallani with slender stems, the traditional varieties had thicker stems resistant to pests like stem borers. Murugan says climate change will aggravate pest attacks.

"In earlier times, root diseases were much less. Now the topsoil dries very fast. Root-feeding insects like Millie bugs, nematodes, scales, and root grub multiply very fast. They may cause huge economic loss," Murugan warns.

Cardamom curing is a highly expensive and energy-intensive process. About 1500 cardamom curing units operate in the high ranges. Each drying machine costs around Rs 8-10 lakh. To house the large machine, a concrete shed is needed.

These electric units operate round the clock in three shifts. Since the power supply is erratic in the high ranges, especially during the monsoon months, these units would work on fuelwood. Around 6 kgs of firewood is needed for making one-kilogram dry cardamom. Fuelwood is brought from Tamil Nadu. According to Murugan, this has led to the large-scale cutting of trees, mainly tamarind, with negative impacts on the ecology of the neighbouring state.

The curing units release a huge amount of carbon. One kilogram of firewood releases at least 1.5 kg of carbon dioxide. In CHR at least 2 lakh tons of firewood is used with a possible emission of three lakh tons of CO₂ to the atmosphere.

In the past 25 years, intensive cardamom cultivation has caused significant degradation of the tropical rainforest in the CHR, says Murugan. The Forest trees have modified structurally and functionally. Shockingly, according to him, only three introduced species, karana (*Vernonia Arborea*), jackfruit (*Artocarpus heterophyllus*) and

chandanavembu (*Toona Ciliata*) constitute more than 50 percent of the total tree species in the CHR. The ecologically stable and important former tree composition has almost disappeared, and the CHR forests are unable to do their ecological and environmental functions, says he.

The negative effects of climatic change have been observed very frequently in cardamom hills, particularly, the resource-poor water-scarce areas like Karunapuram. "Rainfall, temperature, and soil health, all depend on the ecology of the region and land use pattern. Efforts need to be taken to bring back at least some extent of the rich biodiversity. This is possible only with the participation of people. It's extremely important for the economic and livelihood sustainability of CHR," warns Murugan.

Struggles for survival ?

The conservation of the Western Ghats with the participation of residents is easier said than done. The protests against the Gadgil-KAsturirangan reports were strong and wide-spread.

Neither the WGEEP nor the HLWG has made any recommendations for the dislocation of the tribals or settlers from anywhere for "development" or for "conservation". In fact, under the Environment Protection Act of 1986, neither the central government nor the state government has any power to take away land from people.

Even then people in the high ranges took to the streets.

Karunapuram also witnessed strong protests. People took to the streets. They cooked on the street, slept on the street. Newspapers carried the pictures of school kids on their knees praying for protection.

I posed the question "Why did you protest?" to people I met. The replies from most of the settlers:

"The reports were anti-people and anti-farmers."

"We won't be allowed to grow annual crops."

"We won't be allowed to till our farms."

"We can't use pesticides."

"We would be evicted if the reports get implemented."

"This area will be converted into an animal corridor."

"We won't be allowed to cut trees which we grew."

"All the development activities will be stopped."

"We won't be allowed to use cement and sand for constructing houses."

I ask another question: "Have you read the reports?"

"No. We have not even seen the reports. They are big reports in English. Will ordinary farmers ever read such reports?" The abridged Malayalam versions of the reports were published by different groups in 2013. But most of the residents have not seen them.

"Then how did you know they're anti-people and anti-farmers?"

"They told us so."

"Who?"

"Everybody was saying so. Political leaders panchayat council members. It was a huge issue. Every day there would be protest gatherings at every junction. Meetings, speeches, notices, pamphlets, news reports. Not only in our village, throughout the district. Wherever we go we would hear the same scary things."

While describing in detail about a big protest meeting in his locality (Kambamettu) attended by about 2000 people, T P Jose told me it was he who first printed notices against the Gadgil-Kasturirangan reports to mobilise people.

"What made you oppose the reports and mobilise people?"

He gives me the same "anti-farmer- anti-people- eviction- animal corridor" reply.

"Have you read the report?" I repeat the question.

"Yes, but only recently. At that time, priests in my church (the Syro Malabar Catholic Church) explained the content. They had even delivered speeches on this issue during the mass in the churches. Our bishop (Mathew Anikuzhikattil of Idukki Diocese) had issued a pastoral letter saying that the reports were anti-people and anti-farmers and we should strongly oppose them," he says. " Besides, almost all the political parties, the otherwise rivals, LDF and UDF, got together opposing the reports. It's a mass movement. Can we keep away from such mass struggles for our survival?"

Struggles for survival!

"Are you against the conservation of the Western Ghats?"

"No, no. It should be conserved but only with the participation of people living here."

That's what the Madhav Gadgil report recommended!

"You said you read the report recently. What do you feel now?"

"I didn't see anything anti-people or anti-farmer. After this flood and all the landslides, I feel we're taken for a ride by the political parties and the church."

In the whole commotion, did the media take efforts to give the right information to people? I ask Jose.

"Most of the people here read *Deepika*, *Mangalam*, *Mathrubhumi*, *Malayala Manorama* and *Deshabhimani*," points out T P Jose. "*Deepika* is managed by the Syro Malabar Church. That newspaper and *Managalam* have been catering to the settlers all these years. They consistently wrote against the Gadgil and Kasturirangan reports. *Deshabhimani*, (the CPI-M mouthpiece) too wrote against the reports. *Mathrubhumi* and *Manorama* initially took neutral stands. But the church called for boycotting these newspapers, and that affected their circulation. Then they also started giving good coverage to the protests."

The news channels, as they always do, made the issues sensational with 24X7 noisy discussions. Those discussions made the residents more alarmed.

Avira Ulahannan, a retired school teacher and farmer with five acres of land, who came to Karunapuram in 1970, does not agree with Jose's view on the reports or the Church. Ulahannan was very active in campaigning against the reports. He claims he has read the reports and sticks to the anti-people, anti-farmer argument.

"There may not be anything directly against farmers. But if the Gadgil report gets implemented, it would affect our lives."

"Can you explain?"

"The Gadgil report says monocropping should be stopped; chemical farming should be phased out. The report also says no farming should be discouraged on high slopes. How can it be possible? We invest a lot of money on cardamom. It's a high-cost spice. We can't take any risk," says he. People like him are keeping alert to watch whether the reports would crop up again.

"The state is flooded. Idukki is devastated. Don't we have to do something to conserve the Western Ghats?"

"All this happens because of global warming."

"If the reports come up again, what will you do?"

"We'll fight it out again."

Abraham Chacko, a planter from Pathanamthitta district having 30 acres of farm in Udumbanchola, feels the conservation of the

Western Ghats is extremely crucial for the sustainability of plantations. He is trying to develop a model farm growing cardamom through natural farming methods. He welcomes the Gadgil committee's recommendation on phasing out chemical farming. "But the committee recommended organic farming. I think even that is harmful. Natural farming is the best. But I can't say this in public. They will kill me," he laughs. He confesses that words such as "conservation", "environment", and "biodiversity" make people upset.

Chacko feels the government should have taken initiative to explain the process and the importance of conservation of the Western Ghats to people and to allay their fears during the time of preparation of the reports. "Ward level meetings would have been helpful to an extent. But that never happened. If the government has the political will to assure proper market linkage, fair prices, availability of organic inputs in time at reasonable prices, a lot of farmers will switch over from the toxic farming since they are aware of the health risks of the pesticides, says he. "But no government will do that. It's the pesticide companies that rule the roost."

Several planters in CHR possess some acres of government land on lease. The lease gets renewed every 20 years for a paltry Rs 250 a year. This is one of the reasons for planters coming out against the reports.

Father Jacob James, the pastor of an independent church in Karunapuram, supports the Gadgil report. He, earlier working with the Church of South India, a small denomination of the Catholic Church, had given speeches to a small audience highlighting the need for conservation. He also feels the residents of the high ranges should have been taken into confidence during the process of preparation of the reports.

"Why did the priests lead the agitations?"

"They may be having some benefits from resisting conservation efforts." He didn't elaborate.

Father Jacob James is from Thodupuzha in the lower ranges. His grandfather, a Malayaraya tribesman, got converted to Christianity years ago. This tribe is one of the most socially, educationally, and economically forward among Kerala's 36 listed Scheduled Tribe groups. Jacob came to Karunapuram 22 years ago and married Rosamma from a settler's family. "I'm born and brought up here, so I know how the climate has changed. It was misty and cool even at the peak of the summer. Now we have also started using fans like those in the plains," says Rosamma. The family sold off a few cattle because of the fodder shortage.

Rosamma did not participate in any agitation. Many other women who were a part of the protests tell me they took part because the men in their families asked them to do so.

Karunapuram panchayat has only eight tribal families. These families kept away from the agitations. Like the Mannan king, most of the indigenous people in Idukki, confess that they didn't do much to make their voices heard. They remained neutral without coming out in favour or against the reports.

"The reports were a hot topic in almost all the tribal settlements. Our chiefs and elders felt the conservation of the Western Ghats would benefit our communities. However, the youth were confused. We're also in the dark about the content of the reports," says 30-year-old Ramachandran S, a Muthuvan youth from Kanthallur, who welcomes the Gadgil report. At the time of the protests, most of the tribes in Idukki were unaware of the recommendations of the Gadgil committee on the Forest Rights Act, he adds.

Janardhanan G, chief of Memuttomkudi settlement of the Urali tribe, narrowly escaped a murder attempt against him while trying to organise a meeting to get the Gadgil report explained to people. The meeting was organised at Moolamattom Town Hall (in the low ranges). "We invited a priest from the CSI Church, who was supporting the Gadgil report. But the High Range Protection Council foiled the meeting. They acted like goons physically attacking us," Janardhanan says. Encroachment of the tribal land by outsiders is a continuing story, and the educated Malayaraya people often take the side of the land grabbers in exploiting the poor tribes, says he.

John Pervanthanam, chairperson of Save Western Ghats Forum, a group of environmental activists, says the attempts to explain the content of the reports were foiled by the combined forces of political parties, religious organisations, and the quarry-plantation-resort lobbies.

"Some political leaders have quarries in some others' names," he says. "The Syro Malabar Church has close associations with these groups. The church has several institutions in the high ranges, some of them are on the encroached land. First, they would set up the crosses on the hilltops, and then make those locations places of worship." Political parties have their offices too on the encroached land, he points out.

Participatory Democracy!

As per WGEEP (the Gadgil committee), 25 out of 63 taluks in Kerala were in the ESZ; out of this, 15 were in ESZ1, eight in ESZ 2, and two taluks in ESZ 3. All the five taluks in Idukki were in ESZ 1. The committee had clearly pointed out that including a taluk in a particular zone did

not mean the whole taluk was in that zone. It only meant the taluk contained an ecologically sensitive area. Local bodies were to mark the boundaries and come up with suggestions for protecting the sensitive area. Kasturirangan panel identified 123 villages in Kerala as ESA; 48 were in Idukki.

Since 1989, MoEF has notified several ecologically sensitive areas (ESAs) under the not-so-stringent Environmental Protection Act, 1986. The Pranab Sen committee appointed by the central government had proposed certain criteria for identification of ESAs. However, as the WGEEP noted, India still lacked a global consensus either on the criteria to define ESAs or on a workable methodology to identify them. Besides, there are no clear guidelines on the management regime that should prevail in ESAs. The Pranob Sen Committee has not addressed this issue at all, notes WGEEP.

All these factors contributed to continuation of illegal activities in the declared ESAs. For instance, the Aravallis, a range of mountains, running 800 km from the northeast to southwest across the state of Rajasthan, was declared an ESA in 1992. In the next decade, the centre granted about 60 mining leases here, reveals a 2009 study "India's Notified Ecologically Sensitive Areas (ESAs): The story So far..." by Meenakshi Kapur, Kanchi Kohli and Manju Menon of Kalpavriksh, New Delhi. The study also points out that a lot of illegal activities were still going on in regions such as Murud-Janjira (Maharashtra), Doon Valley (Dehradun, Uttarakhand), and many other ESAs.

In the case of Doon Valley (Deharadun, Uttaarakhand), ESA Notification came as early as 1989. But many people didn't even know about the existence of any such notification. The issues started right from the first process of preparing the mandatory Master Plan for the area. At every stage, it got diluted. The government departments were not serious about the Ecological sensitivity of the region. The Forest Department was giving away forest land for constructing a landfill in the area. Illegal structures were regularly coming up and a big portion of land was illegally being used for constructing private schools, colleges, and hostels.

The Gadgil committee noted how the poor in a few ESAs in Maharashtra have been suffering from the harassments of some corrupt officials while those who engage in illegalities escape with impunity. The committee pointed out that protected area networks were governed by exceedingly rigid management regimes with local communities having little role in utilizing, managing and conserving them.

"The Western Ghats region has some of the highest levels of literacy in the country, and a high level of environmental awareness. Democratic

institutions are well entrenched, and Kerala leads the country in capacity building and empowerment of the Panchayati Raj Institutions,” the Gadgil report noted in its preface. Kerala being the most literate state in the country with an efficient three-tier Panchayati Raj system, and Goa having already formed Vision 2021 with inputs from Grama Sabhas, the ecological conservation of the Western Ghats would be a positive deviation with strong participation of the people, the committee hoped.

Kerala’s three-tier LSG system is supposed to be much advanced with a better financial devolution, greater roles played by the local bodies in formulating and implementing annual plans, and the greater extent of people’s participation in development planning. Following the 73rd and 74th amendment to the Constitution in 1993 to transfer powers to local self-governments (LSGs), the Communist Party of India (Marxist)-led Left Democratic Front government in Kerala had launched a massive participatory programme called People’s Campaign for Decentralised Planning (People’s Plan Campaign) in August 1996 to be implemented as the Ninth Five Year Plan (1997-2002).

The campaign was designed in a phased manner with clearly defined objectives. Identifying the needs of the people by holding grama sabha was the first step in decentralised planning. The next step was to organise development seminars to make an objective assessment of the natural and human resources available in the locality. The suggestions that emerged from the development seminars were reviewed and discussed sector-wise by the task forces constituted at the local level. This is followed by annual plan preparation and finalisation.

The progressive nature of the planning process was a leap forward towards decentralised governance. The People’s Plan Campaign provided space for the common people to intervene in the planning and implementation of developmental programmes at the level of local self-government. The campaign mode was changed and restructures as the Kerala Development Programme when the UDF government assumed power in 2001. The campaign got institutionalised.

While making the recommendations, the Gadgil committee had categorically made it clear that its recommendations were not final; the committee was just giving a broad and general framework for the conservation of the Ghats. The committee wanted the report to be immediately translated into local languages and discussed and debated at all levels of the Panchayati RAj system including grama sabhas. After discussing each recommendation in detail, the local bodies should formulate the plans for the conservation and the management. The committee strongly observed that without

the participation of local residents, the conservation efforts of an ecologically sensitive area would end up fruitless. Madhav Gadgil has written a strong letter to Kasturirangan later in 2012, when HLWG committee recommended a rigid management regime instead of a participatory mode of conservation.

Interestingly, residents of Karunapuram seem to be totally unaware of the recommendation of the Gadgil committee on the role of the local bodies and grama sabhas in the development and the conservation processes. Many of them, like Sujith, tell me they hear this for the first time! This was never mentioned in the speeches by the political parties or the religious leaders.

“Do you participate in grama sabha?” I ask Sujith.

“No. We don’t get time. Most of us attend only the meetings for identifying beneficiaries for various schemes,” he replies with a tinge of embarrassment in his voice. Stanly, the taxi driver who is taking me around, says people seldom participate in grama sabhas, and even if they do, they will never be allowed to raise environmental issues. If anybody tries to raise issues like quarries or pesticides, that person will be shouted down by others.”

Including Karunapuram, Idukki has 52 village panchayats and two municipalities. I asked Tomi Plavuvachathil, president of Karunapuram panchayat, the stand taken by the local bodies.

“All the local bodies in the district opposed the Gadgil and the Kasturirangan reports. Most of the local bodies passed resolutions against the recommendations. Not only the local bodies, even the state government rejected the Gadgil report. The government appointed another committee to look into the recommendations of the Kasturirangan Committee.”

“Do you think the reports were anti-people?”

He didn’t give a direct answer for this question.

“Local bodies are local self-governments. They can decide on their own?”

“That’s true, and as people’s representatives, each member of the village panchayat council has a responsibility to give the right information to people. But, you know, it’s extremely difficult to go against the tide. Different political fronts rule the local bodies, and local bodies are under tremendous political pressure. The panchayat council itself is divided as the ruling front and the opposition front. They’re divided along the party politics of the state and the country. As you say, legally local bodies might have a lot of powers and roles in local

development, but we cannot function independently. We do what our party leaders ask us to do.” he says. Elections to the local bodies are fought mainly among the political fronts in the state. Winning elections is difficult for independent candidates unless they have good support from any of the fronts.

The panchayat president goes on to say that all the political parties, including his (Indian National Congress) have tried to catch fish in the troubled waters with their district leaders strongly opposing the reports. “Except P. T Thomas. He was our MP at that time. But he had to pay a huge price for his strong stand supporting the Gadgil report,” says Tomi elaborating the political pressure on the people’s representatives.

True. Thomas, a senior Congress leader and the then sitting member of Parliament from Idukki, had come out publicly supporting the Gadgil report. He demanded its recommendations should be implemented taking people into confidence and protecting their land and livelihood. His strong stand cost him dearly. In the 2014 general election to Lok Sabha, his party denied him a ticket to contest the elections, despite his winning the previous election (2009) with a good majority.

“My stand upset the Idukki dioceses of the Syro Malabar Catholic Church. The Idukki Bishop had openly opposed my candidature. The church has a good say in Idukki. This constituency has traditionally been a supporter of UDF (INC-led United Democratic Front),” he had told me in an interview during the protests. UDF was in power then. Kerala Congress (M), an ally of UDF, enjoys good support among the migrant Christians, mostly Syrian Catholics. Christians constitute 43.4 percent of the population after the Hindus (48.8 percent).

Thomas says the priests have read the reports, and they are aware of the fact that there is nothing anti-farmer or anti-people in the reports. “Yet, they spread rumours. They first scare people and then act as their saviours; a fear tactic to keep people always with them.”

“What did they tell people?”

“They instilled fear in people’s minds telling them that villages declared as ESA will be governed under the Forest Conservation Act; people will be eventually displaced from the region; their land will be taken away to develop forests. People have been made to believe that they will lose their livelihood, and will not be allowed to build houses, shops, hospitals and roads. Can you believe they even spread absurd rumours like within an ESA babies will have to be stopped crying after six in the evening to avoid disturbance to wild animals? People have been told that state highways passing through ESA will become elephant corridors.”

He is deeply sad about how the Congress and CPI-M, the two parties leading the two major political fronts in the state, were misleading people. "Both the parties succumb to all kinds of lobbies," he told me.

As the MP representing Idukki, he had called a meeting in Kattappana to explain the content of the reports to the people. The gathering was very big. People were really anxious and eager to know how the conservation recommendations would affect their lives. "But the meeting was sabotaged by the High Range Protection Council, an outfit led by a few priests such as Sebastian Kochupurakkal. They even held a funeral procession taking my effigy in a coffin. It was like a real funeral procession with priests in the front," says he.

In the general election that was held six months after the agitations, the Gadgil-Kasturuirangan reports became the main poll plank. Idukki parliamentary constituency that has always had a UDF leaning, elected Joyce George, the independent candidate supported by the LDF. The Syro Malabar Church asked people to vote for him highlighting him as the saviour of the High Ranges; he won the election.

"We're always with people"

Mariyapuram.

The office of the High Range Development Society. The society works under the social work department of Idukki Diocese, the Syro Malabar Church. Across the table, sits Fr. Sebastian Kochupurakkal, executive director of the society. He was one of the leading figures of the protests. He has appeared with his vociferous arguments against the Gadgil committee in some live debates on news channels recently during the floods. In front of him on the table lies a bound copy of the Gadgil report. He has kept bookmarks at different portions.

"Have you come to know really why we oppose the report or are you here with preconceived notions?" he asks me. I tell him about the purpose of my visit.

"See, it's entirely different reading the Gadgil committee report from an academic point of view and looking at it from a practical point of view. Gadgil committee recommendations are not practical."

"Can you elaborate?"

"While focusing on the conservation of the Western Ghats, the committee ignored people's livelihood issues, their social and economic investments. Most of the farmers living in Idukki are small farmers. They are under tremendous pressure even otherwise from price fluctuations of cash crops in the international market. Then as you know there are climate change issues. It's impossible to make sudden

changes. Gadgil committee makes a lot of suggestions that would have significant impacts on the lives and livelihoods of residents.”

“Didn’t the report clearly say it was the local communities that should plan and implement conservation?” I counter.

The priest gets slightly irritated. “The committee had to consult the local communities and people’s representatives during the process of the preparation of the report. This has not happened anywhere in Kerala except at Athirappilly.”

I had asked this question to Madhav Gadgil when I met him in Cochin. He said he had worked extensively in Maharashtra and Goa meeting as many people as possible right to the level of panchayats and grama sabhas. Maybe, he said, in Kerala, Tamil Nadu and Karnataka, the panel members might not have had enough time or perhaps the inclination to talk to people accurately. He also pointed out that the recommendations were not final but a framework for discussion at the local level.

Sebastian Kochupurakkal goes on to say that he cannot accept the structure of the Western Ghats Authority suggested by the panel, without a representative of people as a member. This authority overarches the local bodies and the democratic process, says he.

But, the coastal areas of the country have a management system with four different zones with different degrees of restriction on development under the Coastal Regulation Zone Management Notifications (1991, 2011). This was done under the EPA Act. Environmental activists have been pressing MoEF for constituting an authority for the Western Ghats too. WGEEP was asked to suggest the structure of the authority. Since all the Western Ghats states have several people’s representatives, instead of including them within the authority, they would be called for meetings and discussions on the conservation issues, the committee had noted.

“Why did the Idukki bishop issue a pastoral letter saying people would be evicted? There is not a single mention about eviction in both the reports?”

“But that’s what will happen if the reports got implemented. There are about 50000 settlers without title deeds in the district who came to the high ranges before the cut-off date of 1 January 1977 fixed by the government,” says the priest. “Gadgil committee report recommended the implementation of stringent legislations such as the Forest Rights Act. This may be beneficial for the tribes, but what about the settlers? People without the title deeds fear they will be evicted,” he explains.

When I asked this question to the revenue officers at Nedumkandam, they have told me all those who are eligible have been given the title deeds.

Society is promoting organic farming among the farmers in Mariyapuram and neighbouring places. Sebastian Kochupurakkal says farmers are aware of the health impacts of applying huge quantities of pesticides, especially in cardamom plantations. If there is a proper mechanism in place to help farmers to switch over from chemical farming to organic farming, several farmers will happily do that, says he. "In the initial year of conversion, there should be a proper hand-holding from the government compensating the losses farmers might incur. The government must procure the products ensuring the market and prices for organic products," says he.

"This is what the Gadgil committee recommends," I point out.

"First set up the supportive system, and then ask the farmers to switch over. The Gadgil committee put a time limit for the switching over the process. Can it be possible?" he asks. "After formulating the organic farming policy in 2008, the state has not done much to promote it."

"Kerala is flooded. A lot of landslides in the Western Ghats. So, don't you think it has to be conserved?"

"Climate Change is the reason, and none of us are against conservation. We demand that the authorities should take us into confidence."

"How to make the residents aware of the urgent need for conservation of the Ghats?"

"Change your language. The need for conservation should be presented in such a way that they should feel it's for their survival. When the environmental activists from the plains dictate to us what we should do, we feel bad. We're the people living here, and we know the ground realities better." The Gadgil committee report, he still believes, is a conspiracy between the environmental activists in India and international conservation agencies to get the Western Ghats declared as world heritage sites. But the report was clearly against the UNESCO heritage tag being accepted in the way it was done without consulting people, said Gadgil.

The priest thinks the burden of conserving the Western Ghats should not be put solely on the shoulders of the residents. While the committees suggest building codes for the Western Ghats regions, the rest of the state lacks such restrictions. "Most of the big resorts, quarries, and eucalyptus plantations here are owned by the rich from the plains, not by the small planters. Tourists are also from the plains."

Sebastian Kochupurakkal goes on to say that the Western Ghats mountains are blasted for stones for building mega projects like Vizhinjam port owned by Adani Group. "The media say the port needs about 70 lakh tons of stones. The conservation committees are silent on such issues," he says.

I ask him about the allegations against the church of instigating fear in the minds of the people.

"That's for making the issues communal. It was the church's interventions that brought development to the high ranges. Whether it's education, health, or social welfare. It was the church that took leadership, not the government. We'll continue to be involved in people's issues. We're always with them."

He denies the allegations against the church of possessing illegal land. But he confesses that there could be some places of worship that do not have title deeds. "If there are encroachments and illegal possession of the land, let the government take it back," he says.

He could be sure that no government in Kerala would dare to do that. Since the formation of the state, political power has been shifting frequently between the coalitions of LDF and UDF. Rarely any single party controls a majority in the legislature. Small political parties and the constituents they represent have a stronghold on the government. Minor parties and factions have crucial roles in the making and unmaking of governments in Kerala's volatile coalition politics in Kerala. The church has a good say over the voters and parties such as Kerala Congress.

In Idukki, attempts by the revenue and forest officials to evict encroachment often lead to big controversies. Mostly such attempts are foiled by the political leaders.

Last year in April, the district revenue officials tried to remove a 30-foot high metal cross from the government land in Pappathichola Hill in Munnar. This triggered a political storm in the state. The cross was built by a little-known group called Spirit in Jesus, an independent organisation. This organisation was said to have encroached on about 30 acres of government land. Some make-shift constructions were also made there.

Instead of supporting the officials, the Kerala chief minister Pinarayi Vijayan strongly criticised the move. He said the cross was a religious symbol and how it was removed sent out a wrong message that the Left government was against the Christian faith. He said the revenue officials should have consulted the elected government before initiating the anti-encroachment drive.

Sebastian Kochupurakkal tells me that people will never accept any conservation plan initiated by the forest department since they were at the receiving end of the department's rigid management system which was hostile to common people. Could be true. The department incorporated the concept of participatory management much later. "They give priority to wild animals while being hostile to humans."

Before winding up the conversation, he asks a crucial question:

"If the forest department is serious about the conservation of the Western Ghats and its biodiversity, why does the department develop its plantations within prime forests? Why doesn't it take over leased forest land from private companies even after the expiry of the lease period?"

That question makes sense.

Mistaking ESA for EFL

Another factor that scared small planters of the Western Ghats districts in the state was mistaking ecologically sensitive area (ESA) for Ecologically Fragile Area defined under the Kerala Forest (Vesting and Management of Ecologically Fragile Land Act.

The state enacted EFL Act in 2000; the Act came into force in 2005 with effect from 2000. The Act was formulated for the conservation and management of private land with forest cover contiguous to reserved forests, and minimizing degradation of forest eco-system and biological diversity. As per the 2018 statistics, the state has notified EFL of 34268.5 acres (138.68 sq.km).

Several people feared that the ESA areas will later be declared EFL under the state legislation and will be taken over by the forest department without giving any compensation. No compensation is payable under this legislation.

The EFL Act has indeed given a lot of trouble to small farmers. There are many disputes in various courts regarding the status of the EFL. While the forest department says the land is EFL, the owners who lost the land say it was farmland. The state government had appointed four tribunals in 2012 to settle the EFL case. Cases are going on.

Most of the notified land under this legislation was originally vested with the government under the Kerala Private Forests (Vesting and Assignment) Act of 1971. This legislation was implemented as part of land reforms. The vested private forests were to be distributed to agricultural workers for cultivation. No compensation is payable under this Act.

However, according to forest officials, several private parties recaptured the vested land by winning cases through fabricated documents. Many plantations in the state have illegal possession of land notified as EFL.

Forest officials who don't want to be named told me that there were lapses in implementing the legislation. The Act got implemented in such a way that there was no differentiation between small farmers and big plantations.

Environmental believe the confusions over ESA and EFL were rigged by big plantations that illegally keep vast stretches of the Western Ghats forests in their possession.

The invincible mafia

What they say could be true.

Since 2000, the high range regions have witnessed a huge boom in tourism and a resort spree. Hotels and restaurants mushroomed.

Most of the big plantations in Kerala are either in deep forests or on the fringes of the protected areas. Some of them have been working since the middle of the 19th century. Plantation companies possess vast stretches of forest land under the old lease agreements, and also under legislation such as the EFL Act. These lands are not supposed to be diverted under the Kerala Land Reforms Act, 1963, and Kerala Land Conservancy Act 1957, a law to check unauthorised occupation of government land.

However, investigations by the forest department have detected many irregularities including violation of lease conditions and the Forest Conservation Act, the encroachment of surrounding forests, use of forged documents, lessees holding on to land even after having lost cases in courts, diversion of plantation land for building resorts, selling it to others, and mortgaging the leased land in banks.

The Kerala Land Reforms Act 1963, while fixing 15 acres as the maximum limit of land that an individual could possess, had exempted plantations from its purview. There is no ceiling for plantations.

There was, however, a condition for the exemption: if the plantation land is used for any other purpose, its character would change and it would immediately come under the provisions of the Land Reform Act, including the provision on the ceiling of 15 acres. Plantation companies violate this condition.

Plantation companies have also EFL land in their possession. During 2008-2011, the forest department had regained possession of 5930 acres (2,400 ha) of EFL from 32 plantations in Nelliampathy in Palakkad

district. Besides keeping ecologically fragile land illegally, many plantations have encroached on protected forests and constructed resorts, officials point out. The forest officials, who led the eviction drive often face physical attacks and life threats.

In 2012, the then UDF government in power amended the Land Reforms Act in favour of the plantations allowing them to use five percent of plantation land for hotels, resorts, and other tourism projects. The attempt to amend the Land Reforms Act had started in 2005 itself, but it got the Indian president's approval only in 2012. It was estimated that the state has nearly five lakh acres of plantation. The amendment allowed about 25000 acres of the Western Ghats to be used for tourism.

In 2006 the Kerala government conducted a detailed inquiry into the landholdings of Harrisons Malayalam, the biggest landholding plantation company in Kerala. The company established its business back in 1834. According to the state government, the company holds as much as 59363 acres of illegal land in Kerala.

In 2013, the government constituted a High-Level Enquiry Committee headed by M G Rajamanikyam, an IAS officer, as a special officer. According to the committee, the company held 76769.80 acres of land in which 59363 acres have no legal documents or ownership deeds. The committee also found that HML has alienated 12658.16 acres and there was a forgery of documents.

The committee recommended that the rightful ownership of land leased to private companies before 1947 came to the state government under the Indian Independence Act, 1947. Accordingly, the activities of HML has violated the Kerala Land Reforms Act of 1963.

However, the government lost its legal battle against the company in the Kerala High Court. It filed an appeal in the Supreme Court, but the court rejected the appeal.

In 2007, the LDF government led by V S Achuthanandan had launched a demolition drive against those resorts and hotels that violated laws and rules in Munnar on the ground that they were on plantation land, which cannot be put to any other use. The government's task force had observed that about 3000 structures, including seven big resorts, violated environmental and land-use laws. The unprecedented move had caused ripples across the state but ended midway when the landholders moved the Kerala High Court. The government lost the case.

Similarly, in 2013, Madhav Gadgil had pointed out that 2700 quarries were functioning in the Western Ghats region of Kerala, and 1700 of

them were without a license. He had urged the state government to carry out transparent public auditing on these quarries. The government should make public the satellite images and spatial data on quarries in the state and release the license number of the quarries and the survey numbers of the plots where they were located, he stated.

His statement had put Kerala's Mining and Geology Department on the defense. It came out with a counter-statement claiming that it had issued long-term mining permission to 487 units with which they could operate for 12 years and license of one-year validity to 2308 granite quarries.

"The plantation-resort-quarry lobbies in the high ranges have tremendous clout," points out John Peruvanthanam.

A long chain of protests

Why was it so easy for the political leaders and others to get the settlers organized in a flash for a protest?

I got the answer when I chanced upon 80-year-old Thankappan in a cardamom curing unit. He told me the protests against the Gadgil-Kasturirangan reports were just a newer one in a long chain of struggles that started the very next years of their arrival in Kallar Colony.

Thankappan is a resident of the Third Camp in Karunapuram. In 1955, there had been three camps inside the forests where the surveyors and the newcomers stayed. The camps had trenches around them to get protection from elephants.

In the initial days, the settlers faced the hardship of building up a new life within the forest. A majority of them were poor; equals in that sense. They were leading a kind of community life helping among themselves without having religious barriers.

Pattom Colony witnessed the first agitation in 1956. Apart from a block of five acres of land, the government had promised each family R 1000 as an aid to build houses and buy farm tools. "But the government didn't keep this promise. None of got the promised money in time," says Thankappan. "Pattom Colony became *Pattini* Colony (starving colony)."

Leaders among the settlers with political background got organized and twenty-five of them staged the first *pattini jadha*, Hunger Procession, a journey by foot, to Thiruvananthapuram, the capital, and submitted a memorandum to the government. Nothing happened.

Days of hunger and hardship continued. In between, the first Communist ministry through ballot came to power in Kerala with

EMS Namboodiripad as the chief minister. The colony rose into new hopes. They decided to meet the chief minister, and staged the second *Pattini Jadh*a with the slogan "...Pattom thannoru coloniyil pattiniyane sarkkare... (the colony formed by Pattom is in hunger)." The padayatra was terminated at Kottayam on the request of the chief minister who agreed to hike the financial aid to R 2000.

The scenario was peaceful for five years. However, by 1962, the colony once again became turbulent on the issue of repayment of the loan given by the government.

Thankappan leaves without finishing the story. I get the rest of the story from 91-year-old A Pared Labbakutty. He came to Kallar Colony in 1955.

The struggles continued throughout the 1960s for different causes. There were huge protests against the Central government's Greater Idukki Power Project that would have led to the submergence of the colony under 40 feet of water. The project was redesigned later. Residents of Kallar Pattom Colony protested again for setting up the taluk headquarters in the colony at Nedumkandam; when Idukki district was formed there were strong protests against the move to set up the headquarters at Thodupuzha in the low-ranges; as a fallout of the agitation, the headquarters was set up at Painavu near the Idukki Dam, midway between the high ranges and the low ranges.

With more facilities coming up, the region witnessed yet another wave of the influx of people from the plains, who encroached the forests in between the already allotted blocks. Later, there were agitations for title deeds.

The state government had carried out two major eviction drives in the uplands of Idukki in the 1960s. The first one was in 1961 centering Ayyappancoil. During this eviction, 1700 families of poor farmers and labourers were evicted from 8000 acres of forest by employing a large armed police force. Police burnt the houses of the farmers and destroyed their crops. That eviction was for the Idukki power project.

"The armed police took away around 10000 people a rainy night by force and threw them in a remote place in Amaravathi near Kumily, about 65 kilometers away without even providing a shelter," says Kanchiyar Rajan, a member of Kattappana block panchayat council. Then parliament member and communist leader A K Gopalan held a 11-day fast over this issue. The state government finally agreed to give one-acre land to each family.

The second eviction drive was in 1964 in Churuli and Keerithodu, a site near Painavu. This was in the name of forest conservation. There was

firing by the police; houses were ransacked; shops were set on fire. People became violent and set a police shelter on fire.

In 2012, when Kerala and Tamil Nadu fought a bitter battle over the Mullaperiyar dam, residents of Karunapuram were actively blocking vehicles coming from the Tamil Nadu side at Kambammedu. The controversies over the Gadgil-Kasturirangan reports erupted soon after the Mullaperiyar struggle.

Unlike in the cases of the tribes who have been evicted from their lands many times for various projects, the encroachment eviction drives in the past have organised the settlers. When you say “conservation”, they hear “eviction”.

“The settlers carry fears of a possible eviction at the back of their mind. That makes them vulnerable to even the slightest provocation,” points out Labbakutty.

Where have all the BMCs gone?

Ironically, CHR suffered yet another wave of tree felling during the 2013-2014 protests. A large number of residents in CHR cleared the trees on their homesteads and farms and sold timber for a pittance. Agents of timber merchants in the plains came up the hills and poured fuel on the fire telling the residents that they would not be allowed to cut trees that they grew once the reports got implemented. Hundreds of trucks with loads of timber climbed down the mountains.

“The timber lobby pocketed huge profit in this way,” Saji Poothappara, a former member of Karunapuram village panchayat council. He is a small building contractor.

Where were all the Biodiversity Management Committees gone during the protests and thereafter? Aren't they the watch groups of environment and biodiversity?

In 2012, Kerala had added one more feather in its cap by becoming the first state in India to have completed the formation of Biodiversity Management Committees (BMC) in the local self-government institutions. In October that year, the then chief minister Oommen Chandy had formally declared the constitution of BMCs in 978 village panchayats, 60 municipalities, and five corporations in the state. The declaration came immediately before the 2012 UN Convention on the Biological Diversity (CBD) held in Hyderabad.

The committees were constituted under the national Biological Diversity Act 2002, the Biological Diversity Rules 2004 and the Kerala State Biological Diversity Rules 2008. India enacted the national legislation as a signatory to CBD, an international convention for the

conservation of biological diversity, sustainable use of bioresources, and ensuring equitable sharing of benefits that come from the use of biological diversity.

As per the national and state rules, all the local bodies must constitute a BMC and prepare a People's Biodiversity Register (PBR), a document on local biological resources and traditional knowledge. The registers were prepared after a detailed mapping of biodiversity with the boundaries of the local bodies- plants, trees, shrubs, creepers, crops, tubers, medicinal plants, ornamental plants, fruits, wild and domestic animals, mammals, insects, reptiles, fisheries, landscape, waterscape, and soil type.

The Kerala State Biodiversity Board explains that PBR is not simply a register with names of species and their distribution in a particular area. It's a comprehensive database recording people's traditional knowledge and insight of the status, uses, history, ongoing changes, and forces driving these changes on the biological diversity resources of their localities. This registers also provide information on the current utilization patterns of biodiversity, its economic benefits to the local communities.

The state started the process of forming BMCs in 2009. Kerala has 941 grama panchayats, 87 municipalities and 6 municipal corporations. As per the state's Biological Diversity Rules, BMCs should be constituted in all the village panchayats, municipalities and corporations. It has to ensure the implementation of the goals of CBD at local level. At the grama panchayat level, BMCs should strive to maintain biodiversity conservation concerns in the development planning process at the local level.

By 2012, about 500 BMCs had completed preparing the mandatory PBR. Each BMC has the role of a caretaker of biodiversity within the boundaries of a panchayat or an urban local body. The National Biological Diversity Authority and the State Biodiversity Boards need to consult the local BMCs while taking decisions in connection with biodiversity resources.

"The process of forming BMCs and mapping the biodiversity resources was not easy even in a state like Kerala which has a strong system of self-government institutions," Oommen V Oommen, the then KSBB chairperson had pointed out to me in 2012 during an interview.

The structure of the BMC: president of the local body is the chairperson of the BMC and the secretary of the local body is the member secretary of the committee. Each BMC has six members nominated by the local body: two women, and one from SC/ST categories, and three other members. According to the rules, BMC should include agriculturists,

herbalists, non-timber forest produce collectors/traders, fisher folks, representatives of user associations, community workers, academics, or any person/representative of organisation who the local body trusts to make significant contributions to the mandate of BMCs. All the members should be local residents and their names should be in the voters' list. Besides these members, the local body should nominate six special invitees from forest, agriculture, animal husbandry, livestock, health fisheries, and education departments. An expert technical committee under KSBB is expected to give help to BMCs.

It is now widely recognized that climate change and biodiversity are interconnected. Biodiversity conservation falls within the objectives, principles and commitments of the 2030 Global Agenda for Sustainable Development as well as the three Rio Conventions-United Nations Convention on biological diversity, The United Nations Convention to combat desertification, The United Nations Framework Convention on Climate Change- Kyoto Protocol, and UN Convention on the Biological Diversity. Various global reports underline the fact that protecting biodiversity is as vital as fighting climate change. Biodiversity loss and climate change threaten global peace and stability, food and water security, sustainable development and human health. They are closely intertwined with the state of the oceans, forests and land degradation. Thinking and acting at a local level helps communities fight climate change and build resilience.

However, the voices of BMCs were not heard in Idukki during the protests against the conservation of the Western Ghats and its biodiversity.

I ask Saji Poothappara about the way the BMC of Karunapuram functions. "We don't have such a committee in our panchayat," he says in a matter of fact tone.

"How can it be? BMCs are mandatory under the law." I insist.

"Okay, if you don't believe me, you check it up with the panchayat," he smiles.

I approached a few members of the village council. They didn't even seem to be aware of the existence of such a committee. "What BMC?" they asked in return.

The president of the village council evades the questions saying that the panchayat is doing a lot for the enhancement of biodiversity, like planting trees and recharging borewells.

I ask his office for a copy of the list of the BMC members but in vain.

"Most of the BMCs in Idukki are only on paper," N. Ravindran, Idukki district co-coordinator of the Kerala State Biodiversity Board tells me.

“Neither the local bodies nor the BMCs are interested in environmental issues.” Presidents and secretaries of the local bodies have their political leanings. Besides, all the members are nominated by the president and the panchayat council. They make it a point to not nominate those who are genuinely interested in environmental issues, and the nominated members might not be ecologically-literate. “If a member raises an issue related to the environment or the conservation or preservation of biodiversity, it will be seen as anti-development and that member will be expelled for sure from the committee.”

As per the rules, the local body has to convene at least three meetings of the BMCs in a year. But this never happens. As the district coordinator Ravindran has to ask the local bodies again and again to hold the mandatory meetings. When they fail to do it, he would fix a date. However, presidents and secretaries of local bodies would rarely attend the meetings. They consider these meetings as something not important. Only two-three members turn up and make a hurry to wind up the meeting. “These members nominated by the political parties are unable to deliver their duties envisaged under the legislation,” says Ravindran.

Residents of the high ranges, mainly settlers, are not comfortable with words like “environment”, “biodiversity” and “conservation”. They equate these words to eviction or something against development. “They lack the awareness that no development can be achieved without protecting the environment and preserving biodiversity,” points out Ravindran.

Is the story the same in other Western Ghats districts too?

I call C Surendranath, KSBB coordinator of Kozhikode district. A massive landslide had happened in the hilly region of Kattippara in Kozhikode just before the floods leaving 13 people dead. The reason was said to be a private check dam atop a hill.

He tells me almost the same story.

“It’s quite disheartening to see local bodies and BMCs groping in the dark when it comes to effectively addressing the environmental and socio-economic challenges even after massive disasters,” says he. There are still several panchayats in the state where the local body officials do not know who all are the panchayat’s BMC members and the BMC members in the records do not know that they are the members, says he.

At the same time, in some panchayats in Kozhikode, BMCs have taken proactive roles as watch groups and give complaints to the district administration, revenue, forest, and other departments. But they soon

get disappointed by the adverse policies of the state and the central government.

Recently, in Kottur panchayat, BMC complained to the district administration against a quarry that was functioning for the Vizhinjam port project in Thiruvananthapuram. Nothing much happened.

I met K Balakrishnan, member secretary of KSBB at his office in Kerala's capital Thiruvananthapuram.

When I ask him about the functioning of BMCs at the grass-root level, he says the Board has only an advisory role and it can only make suggestions. It's the local bodies and the BMCs that should implement the suggestions. "The state will soon complete the process of preparing PBRs," says he.

He gives me a copy of a 2013 government order making the BMCs watch groups of environment and biodiversity. There are a few local bodies that have not completed the PBRs, and they have been asked to finish the task by the end of 2019, says he.

I ask for his views on the conservation of the Western Ghats. "Conservation of these mountain ranges and its biodiversity is extremely important. Without the Western Ghats, Kerala cannot survive," says he. He supports the recommendations of the Gadgil committee and underlines the need for political will and commitment to design and implement conservation plans.

No commitment, no political will

After rejecting the Gadgil report, the state government led by Congress leader Oommen Chandy constituted a three-member committee headed by then Kerala State Biodiversity Board chairperson Oommen V Oommen.

The report of the state panel concluded that the method adopted by the Kasturirangan panel to identify ESAs could not be justified. The panel pointed out that as per the Kasturirangan panel if 20 percent of the area of a village is ecologically sensitive, the whole village would come under ESA, even if the remaining 80 percent was highly populated and urbanised. In a state like Kerala, where population density is very high, the Kasturirangan panel's identification of ESA leads to serious problems, said the state panel. According to the panel, a majority of the 123 ESA villages in Kerala were with a population density of more than 250 people/sq. km.

The panel recommended conducting physical verification of the ESA villages identified by the Kasturirangan panel and Ecologically Sensitive Zones 1&2 suggested by the Gadgil committee. Within a village, all

populated areas, farmland and plantations should be excluded from ESAs, said the state panel.

The state panel also said the recommendation of the Kasturirangan report to maintain a 10 km buffer zone around the ESA was not practical since the areas were highly populated and declaring a buffer zone would affect infrastructure development in those areas.

The Kasturirangan committee had identified 13,108 sq. km in 12 of 14 districts as falling under ESAs. However, the state panel included only 8,016.27 sq. km as ESA. Subsequently, the Kerala government apprised the Centre of its stand that only forestland protected by the forest department would be recommended for demarcation as ESA.

Environmental activists and a section of the political leaders strongly opposed the state panel recommendations. The panel's suggestion to repeal the EFL Act drew severe criticism. That was seen as a move to protect big plantations that have encroached forest and EFL land.

The panel has also recommended that the state government should take a decision that permission from the forest department is not needed to cut trees in private land, not only in the Western Ghats but in other parts of the state too. At present, to cut trees in private land, permission needs to be sought from the government under the Kerala Preservation of Trees Act, legislation enacted in 1986 to curb indiscriminate felling of trees.

When the Left Democratic Front government assumed power in the state in 2016, the state was in the grip of a severe heatwave for the first time in its history. The election manifesto of the LDF had stated that, if elected to power, it would take urgent steps to conserve the Western Ghats with people's participation. However, the very first statement of the chief minister Pinarayi Vijayan after taking charge was "We will not tolerate environmental extremism. We will go ahead with the Athirappalli Power Project."

The Gadgil committee had said a strict NO to this proposed project by KSEB across the Chalakudy river in the Western Ghats forests in Thrissur district. This biodiversity-rich forest is home to Kadar, a particularly vulnerable tribe.

On 14 March 2017, responding to a demand by P T Thomas for a general debate on the Gadgil report, Pinarayi Vijayan made it clear in the Assembly that the state government could not ignore the interests of the people while taking steps to protect the Western Ghats. "No one is against protecting the Western Ghats, but the government took the stand that people's interests should also be considered when the Ghats are conserved," he said adding that the report had triggered grave concerns among people.

No one is against protecting the Western Ghats!

In June, just before the floods, in a move that could have a far-reaching impact on the conservation of the Western Ghats, the state government exempted plantations from the Ecologically Fragile Land (EFL) Act. The EFL Act of 2000 makes it mandatory for the government to take over all abandoned or non-operating plantations as eco-sensitive zones.

This was done when the forest department was engaged in more than 50 cases against plantations.

What will happen to these cases? Already a number of cases were pending before the court to take over estates whose lease period had expired.

The picture is grim. A 2018 report published by Global Forest Watch reveals that India has lost a whopping 1200 sq.km of forests since 2016. GFW is a subsidiary of the World Resources Institute (WRI), a US-based NGO, which publishes reports on the basis of NASA satellite images. The forest loss in Kerala was 71.87 sq.km, in 2016, 97.22 sq. km in 2017 and 62.73 sq.km in 2018. Such a high rate has not been witnessed in the state since 2011.

A report "World Heritage Outlook 2" by the International Union For Conservation of Nature (IUCN), presented in the United Nations Climate Change Conference in Bonn last year had warned that ongoing pressure for development would place the Western Ghats under high pressure. It underlined the need for "coordinated conservation responses at all levels, including political, sociological and biological."

Climate Change will probably exacerbate a system already under pressure and has the potential to impact on the large-scale monsoonal processes which the Western Ghats influence, the report cautioned.

Kerala flooded again

August 2019.

Kerala has flooded again, exactly one year after

"The Flood in a Century."

This time the northern Kerala districts of Malappuram, Kozhikode, and Wayanad in the basin of the River Chaliyar, are hit the hardest. In Malappuram district's Kavalappara, a whole village is buried in a massive landslide. This time 120 people lost their lives; more than 1.6 lakh people in the state were shifted to relief camps.

Both Nilambur and Meppadi are part of the Nilgiri Biosphere Reserve.

Both locations have undergone drastic land use changes since the 19th century replacing the original natural rainforest with tea, coffee, eucalyptus, rubber, human settlements. Media reports point to the presence of 22 quarries within a five-kilometers radius of Kavalappara. Both Nilambur and Meppadi were marked as Ecologically Fragile Areas in the Gadgil Report.

Relief camps have come up again in Idukki. Media are live again with the debates on the issue of conservation of the Western Ghats; the same old for-and-against arguments on the Gadgil report. Interviews of Madhav Gadgil appear in different periodicals; he is brought in from Pune and made to address public meetings.

Places of disasters change, but the response to them remains the same. Is this going to be a routine? Floods and Gadgil? Can we afford to start again from an officially- not- existing report, about which a majority of the residents of the Western Ghats districts still have uneasy feelings though unfounded? Can we afford to waste time debating on that report?

At Santhi Niketan Ashram in Nadukani on the top of the Western Ghats, Father Sijo Kurien tells me the floods and landslides have changed his outlook towards Nature and Humans. "We don't have to protect Nature. She is capable of looking after herself. Just leave her alone. That's enough," says he. "But that's not the case with humans. They need to be relocated from ecologically fragile zones to safer zones." He had written articles during the anti-Gadgil-Kasturirangan protests supporting conservation.

Have we become a lost society that indulges in talking rather than learning lessons and rectifying the mistakes?

Lessons Not Learned

Disasters are not merely repeating. They're expanding on a gigantic scale. The state is on the verge of collapse; ecological, social, and economic. Yet, the government seems to be doing business as usual while people and the media seek quick answers for all questions.

In a series of articles written immediately after the 2018 floods, eminent ecologist S Sathis Chandran stressed the need for understanding Nature and its processes in totality to make sense of repeating disasters in Kerala. He has spent nearly 40 years of his life walking the Western Ghats, learning the ground realities, and writing extensively on ecology. As a young scientist, he was a prominent figure in the Save Silent Valley Movement.

"This isn't something sudden. Disasters were in the making for the past many years. Inappropriate development interventions have aggravated

the ecological and disaster vulnerability of the state,” points out Sathis Chnadran in his articles. Kerala has been clearing the way for disasters through deforestation, blasting mountains, denuding hillslopes, indiscriminate mining, unregulated land-use changes for agriculture, infrastructure development, tourism, razing foothills, reclaiming rice fields, choking rivers by encroaching their floodplains, mining sand from the riverbeds, filling up lakes, putting tremendous pressure on the coast by construction of buildings and other structures, he pointed out. To address the issues of Climate Change and disasters, it’s crucial to understand the interdependence of ecosystems- the organic relations between seas and coasts, winds and mountains, rains and forests, forests and rivers, and rivers and seas. “We fail to comprehend the energy transfer taking place between the earth’s surface and atmosphere. Indiscriminate human interventions have broken the water cycle. Any ecosystem interruption could break the rhythm of Nature,” says he.

While the eastern mountains are crashing down, the Arabian sea is getting warmer and acidic. The dynamics between the sea and the coast, patterns of winds, the cloud density and formation are undergoing changes. Cyclone patterns and occurrence over the west coast show a change and recent data suggest that the previously calm sea has also started receiving tropical cyclones of high intensity in a small interval of time. The studies associated with global warming and ocean temperature suggest that the Arabian Sea is warming at a fast rate. Previously, in India, tropical cyclones in the Arabian Sea were restricted to Gujarat. In the past decade though, Kerala and Karnataka have also become more vulnerable to cyclones. A recent example is Ockhi cyclone that struck the western coast in 2017. But sea doesn’t figure in much in the state’s development discourses even after the 2004 Tsunami and Ockhi.



But will the socio-economic-political atmosphere in Kerala allow to curb the ecological destruction that aggravates the severity of natural and climate disasters? Chances are grim. Despite being devastated by two back to back floods, the state has not generated even the basic data on the rainfall in the catchments of rivers, the extent of siltation in each dam due to heavy water discharge, soil erosion, and landslides, subsequent reduction in the depth of the reservoirs, and the safety of the dams.

While Climate Change is a global phenomenon, its impacts and risks are often very much local. The state had prepared an Action Plan on Climate Change in 2010 and modified it in 2014. However, the 1200 Local Self-government Institutions in the state are not yet empowered in such a way to address the severe impacts of Climate Change and disasters at micro-level. They have not prepared ecosystem-based vulnerability maps and short-term and long-term action plans for disaster management, Climate Change mitigation & adaptation. Biodiversity conservation and participatory management of ecosystems are yet to be incorporated into the governance of the LSGIs, despite their forming BMCs and preparing PBRs.

Bringing all the sections of people together to make multi-layer, multi-pronged actions plans for building a Climate Resilient Green Kerala would not have been that much difficult considering the state's legacy of the People's Plan Campaign. The state is said to have inaugurated the second phase of the People's Plan Campaign in 2017. Besides, as a spontaneous response to the 2018 flood, the entire society had jumped into action. Students, teachers, youth, fishermen, environmental activists, civil society organizations, political parties, social-religious-cultural groups, residents' associations, Kudumbashree units, LSGIs all had come together to help the government in the rescue and relief operations. Thousands of youth worked hard day and night. Once the crisis was in control, they organised several meetings, seminars and workshops engaging experts analysing the reasons for the disaster. The unprecedented presence of vibrant youth kindled hopes of a deviation from the current path of destructive development for Reimagining an ecologically-sound and sustainable Kerala.

However, a few months after the floods, the state launched a Rebuild Kerala Initiative (RKI) and moved ahead with the Rebuild Kerala Development Programme (RKDP) leaving people out of that process. International funding and consultancy agencies like the World Bank, Asian Development Bank, and KPMG stepped in.

While launching RKDP, the state kept aside the Post Disaster Need Assessment (PDNA) Report prepared by the UN agencies immediately after the 2018 floods. PDNA is the global methodology developed

by the United Nations, the World Bank and the European Union to assess damage and loss in the wake of disaster and to recommend the recovery needs and strategies. In all, 76 experts from 10 UN agencies (UNDP, UNICEF, UNESCO, UN Women, UNFPA, UNEP, WHO, WFP, ILO and FAO) and European Union across 13 sectors collaborated to develop this report. The report was prepared after visiting 120 villages in 10 districts and interacting with experts, affected people, elected representatives, officials and representatives of civil society organisations.

The vision of PDNA was Building Navakeralam, a Green and Resilient Kerala. The report has suggestions to make Kerala the first green state in India with an eco-sensitive and risk-informed approach. The report also gives several innovations and global examples for the Build Back Better (BBB) strategy. PDNA took integrated water resources management (IWRM), eco-sensitive and risk-informed approaches to land use and settlements, inclusive and people-centred approach, knowledge, innovation, and technology as the four pillars of the recovery and rebuilding programme. It called for internalising the themes such 'Room for the River' and 'Living with Water". PDNA has highlighted the urgent need for enacting a rigorous land-use policy for regulating land-use changes in vulnerable landscapes and enabling sustainable planning at the local level.

The Rebuild Kerala Development Programme, which the government claims as a continuation of PDNA, also outlines a roadmap for realizing a Nava Keralam. It encompasses key sectors such as agriculture, animal husbandry, fisheries, forestry, land, livelihoods, roads and bridges, transportation, urban services and infrastructure, water supply and sanitation, and water resources management; it addresses cross-cutting priorities like climate change and disaster risk management, environment, open data and public sector strengthening; it also covers policies, institutions and investments "that will build the foundations for a resilient, green, inclusive and vibrant Nava Keralam." However, the focus of the programme seems to have shifted to infrastructure rebuilding and securing maximum loans from the international funding agencies.

While PDNA underlines the importance of people's participation and the roles of LSGIs in building back a better Kerala through Eco-Disaster Risk Reduction strategies, RKDP is being implemented under RKI through various government departments. Being a centralised programme not having involvement of the common people from the very start of the programme planning, RKDP is subject to severe criticism from the public.

* * *

Soon after the floods last year, the state's rivers dried up unusually fast; the mercury levels rose sharply. In March-April wildfire engulfed many parts of the Western Ghats. Neelakurinji Sanctuary in Vattavada, Pampadum Shola National Park, and some other forest areas in Idukki's high ranges were engulfed by the fire for days.

The wildfire destroyed more than 3000 acres of shola forests, grassland, and plantations. The forest officials believe that the fire was set by the land mafia. Herds of elephants and other wild animals migrated to safer places. While on the run, many of them landed in human settlements. The Gadgil committee has not made any recommendations on wildfire.

While the mountain tops were in flames, CHR was reeling under severe drought. The dry spell continued for four months. Planters suffered a huge loss.

The story is repeating.

At that time, the general election to Lok Sabha was around the corner; the political parties were setting up stages for their campaigns with broken mountains in the backdrop.

"Who will you vote for?" I asked some in the gatherings.

"This time the church has not given us any specific instructions. We'll decide at the poll booth," they replied.

Dean Kuriakose, the Congress candidate won the election defeating Joyce George, the Left candidate. In 2014, it was the other way around. This time Joyce was highlighted as a parliamentarian who saved the high range of farmers from Gadgil and Kasturirangan.

Even after the ravaging landslides and floods, the conservation of the Western Ghats did not become an issue in the election. Both sides tried to outsmart the other in lavishly making tall promises on development and farmers' welfare.

* * *

The bus is going downhill.

I close my eyes and lean back.

Slowly a soothing rain starts to drizzle in my thoughts, with slender strands like soft, white cotton threads.

Nalpatham Number Mazha.

The gentle rain that vanished from the mountains.

FOREVER.

* * *

Tailpiece:

24 October 2019

The Kerala government decides to reduce the recommended distance from reserved forest area to quarry or crusher from 10 km to one km against a 2004 order by the Supreme Court of India. The one-kilometer area around national parks and reserved forests will be turned into an ecologically sensitive area! ■

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WESTERN GHATS

Gujarat

Daman & Diu
Nagar Haveli

Maharashtra

Andhra Pradesh

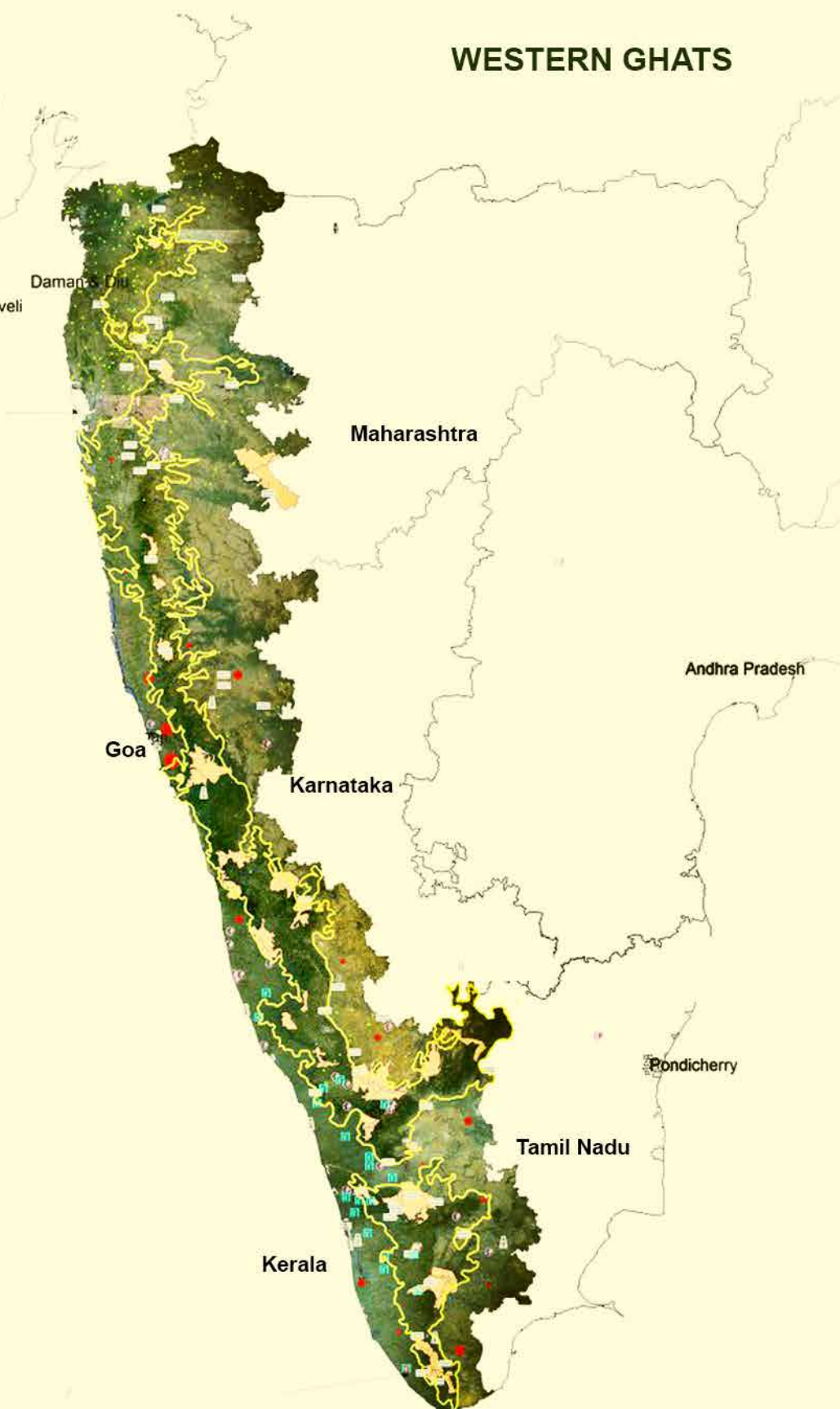
Goa

Karnataka

Pondicherry

Tamil Nadu

Kerala



Lavanya Suresh

WHO WANTS TO CONSERVE THE WESTERN GHATS?

A Study of Resistance to Conservation and its
Undercurrents in Karunapuram Panchayat,
within the Cardamom Hill Reserve in Idukki district

This extended essay puts forth the idea that the ecological is political and the political is ecological. The Western Ghats is not just a mountain range to be conserved, but rather is a political construct that is imagined in different ways by actors operating at different scales. The state and the expert committees with their maps and technology have as Scott (1998) stated tried to render this landscape legible and have produced a system for measurement (maps, databases, satellite images) to make a neat, simple claim for conservation. This legibility and its inevitable reductions poorly fit the dynamics of the local social and natural world. Thus, inevitably opening the door to ecological trouble and social backlash. The current push for conservation is set in the backdrop of a long history of state coercive evictions and a plantation economy that has resulted in drastic land-use change. The resulting conflicts and acts of resistance on the part of local people are attempts to re-establish control over the land and their rights to produce. The discourse of conservation also is based on an artificial division of nature and society that is a product of the development discourse. The argumentative discourse around conservation, while giving space for many voices to speak, does not challenge the inherent idea that conservation is of the 'Yellowstone' variety and is driven by a wilderness idea of 'nature that is devoid of humans'. Hence, it takes us back to Neumann's (1998) thesis that conservation is not only about control over space and resources, but also about meanings that we attach to the resource that we are attempting to conserve.

Introduction

In 2013-14, the high range districts of Kerala were burning. There were mass protests, shut-downs and bandhs for days at a stretch. Offices and vehicles of the forest department were set on fire (Suchitra 2013 (b)). The mass protests were against the reports of the Western Ghats Ecological Expert Panel led by ecologist Madhav Gadgil and a second-high level panel led by K Kasturirangan. These committees were appointed by the Central government to make recommendations to conserve the Western Ghats. The process was started in 2010 under legal compulsions and directions from the National Green Tribunal (Suchitra and Shrivastava 2013).

Interestingly, even when the conservation of the Western Ghats assumes great significance and renewed importance in the context of global warming and climate change, the recommendations of the panels were met with stiff and organised resistance in Kerala, the state that has the highest proportion of its territory in the Western Ghats. The protests were organised and triggered by campaigns that were led by religious, political and commercial organisations.

Apart from environmentalists, the only section of people who supported the implementation of the Panel recommendations were segments of the marginalised tribal communities living in the Western Ghats districts. The media did not highlight their voices. The local bodies and biological diversity management committees either remained silent or sided the agitations against the reports that were branded as being 'anti-people and anti-farmer' (Suchitra 2013 (a)). This happened even when farmers in the high ranges face economic issues because of loss of crop productivity and danger to livelihood due to climate change. It is indeed surprising that even when the Gadgil committee wanted Gram Sabha's to take all the decisions on conservation (Latha 2018), the local bodies took a stand against the report.

Conservation of the Western Ghats recognised as one of the world's top ten biodiversity hotspots, is of regional, national and global importance. These 1600 KM-long ancient mountain ranges running parallel to the West Coast of the country mediate the rainfall regime of Peninsular India by intercepting the southwest monsoon winds. The Western Ghats modulate the climate; the river flow and groundwater recharge of the entire region and is the catchment area for river systems that drain almost 40 per cent of India (Upadhye 2016). In 2012, UNESCO tagged 39 sites including national parks, wildlife and bird sanctuaries and protected forests on the Western Ghats with the 'World Heritage' status. Of this, 20 are in Kerala. Conservation of these

mountain ranges assumes renewed importance in the context of climate change and global warming (Sudhi 2018).

However, the forests and the fragile ecosystems of the Western Ghats, which are being increasingly destroyed in the name of 'development' and due to urbanisation, illegal mining, irrigation and hydroelectric projects, encroachments, timber smuggling, monoculture plantations and tourism (Staff reporter 2017) (Suchitra 2015).

Taking their cue from the mass protests against the Gadgil and Kasturirangan committee, the then state government led by the Indian National Congress convened an all-party meet, where all political parties rejected both reports in unison, dubbing them as 'anti-farmer' and 'anti-people'. Eventually, this helped put the reports in cold storage, where they remain to this day. The state government of Kerala then appointed a panel to do a ground-level verification of the Ecologically Sensitive Areas (ESA) (Suchitra 2013 (a)). The panel recommended all farmlands, plantations and human habitations and other landscapes which are outside the protected forests should not be included in ESA (Nandakumar 2016 (a)). In other words, only the already protected areas under the forest department fall under this newly defined ESA.

The strong sentiment against conservation efforts in the Western Ghats was reflected in the 2014 general elections too. The Indian National Congress went to the extent of denying ticket to its senior leader and the then sitting MP from Idukki parliamentary constituency P T Thomas, who had won the 2009 elections with a good majority. Thomas was the only political leader in the state who openly argued for the implementation of the Gadgil committee recommendations (Suchitra 2014 (a)). The CPI-M candidate, Joyce George, a novice in politics, who took a stand against the conservation reports and enjoyed the backing of the Church, won the election.

The protests, combined with the aggressive stance of the Kerala government against the panel reports, reinforced the negative positions of governments in the other Western Ghats states. As a result, even after eight years of initiating conservation efforts under legal compulsion, the Centre has not yet issued its final notification on the conservation of the Western Ghats. The irony of this turn of events is that it was in Kerala in the late 1970s and the early 80s, that conservation activists, and members of the scientific community, media and non-governmental organisations came together with the determination to save the evergreen forests of the Silent Valley, a part of the Western Ghats in the state's Palakkad district, from being destroyed for a proposed hydroelectric project. Perhaps for the first time in the history of the nation, a major hydroelectric project which

was once given a green signal was abandoned for the sake of forest conservation. Silent Valley was declared a National Park in 1984 by the Central government. The success of the Silent Valley movement inspired many environmental movements within the state and in other parts of the country, built around the paradigm development without destruction (Manoharan 1999). It is in this context that we seek to address two research objectives, one, to understand the role of the local government institutions in conservation, in the context of the discourse around the protests against the Gadgil and Kasturirangan committee reports and two, to understand the underlying social, political and economic factors that drive local resistance to conservation.

This paper has been divided into three parts:

Part 1 - Analysis of the Gadgil and Kasturirangan reports through the lens of decentralisation

Part 2 – The Discourse of Conservation and Conflict: An Analysis of Newspaper Articles on the Conflict in Kerala that Followed the Gadgil and Kasturirangan Report

Part 3 – The field talks - Who wants to conserve the Western Ghats in Karunapuram panchayat, within the Cardamom Hill Reserve in Idukki district?

PART 1

Analysis of the Gadgil and Kasturirangan reports through the lens of decentralisation

To achieve these objectives, we need to identify the underlying social, political and economic factors that drive local resistance to conservation. The field site for the study is Karunapuram village panchayat in Udumbanchola taluk in Idukki district, Kerala. As per the Western Ghats Ecology Expert Panel (WGEEP) report, otherwise called the Gadgil Report, four out of the five taluks in Idukki – Thodupuzha, Udumbanchola, Devikulam and Peerumedu – were demarcated as ecologically sensitive zones (ESZs). The Kasturirangan committee report, which replaced the Gadgil report, demarcated 123 villages identified as ecologically sensitive areas (ESAs) in Kerala, out of which forty-eight villages were in Idukki district (Viju, 2019).

Given that these reports and the reaction to them is what drives this study, it behooves us first to understand what was said in the

Western Ghats Ecology Expert Panel (WGEEP), otherwise called the Gadgil report which is 522 page long and divided into two-part; and in the High-Level Working Group (HLWG) or Kasturirangan Report which is 582 page long and divided into two volumes. The Ministry of Environment and Forests (MoEF) constituted the Western Ghats Ecology Expert Panel (WGEEP) with the mandate to demarcate ecologically sensitive zones and suggest measures to conserve, protect and rejuvenate the ecology of Western Ghats region. The Committee submitted its report in 2011. Due to public opposition to Gadgil report, the MoEF constituted a High-Level Working Group (HLWG) to suggest a holistic approach for sustainable and equitable development while keeping in focus the preservation and conservation of ecological systems in Western Ghats. This report was submitted in 2013. In the wake of the agitation in Kerala, the state government set up a Three Member Expert Committee headed by the Kerala State Biodiversity Board (KSBB) chairperson, Oommen V Oommen to review the Kasturirangan Report, and this Committee submitted its report in 2015 (Suchitra, 2015). Hence, we have included this report in our analysis, as well. Along with understanding the recommendations made by these three reports, we are interested in analysing these reports based on those issues that were contentious during the protest, such as, the report being anti-farmers and that it will lead to evictions. We will also be role envisaged for local bodies and the objectives of decentralisation, in terms of participation and representation, as an analytical frame.

The Western Ghats Ecology Expert Panel (WGEEP)

The Committee's mandate, according to the report, is to move towards a more ecologically and socially sustainable pattern of development. The report seeks to fill the gaps that have been pointed out by the Pronab Sen Committee report (WGEEP, 2011, p. 12). The WGEEP sets up its mandate to ensure the conservation of the entire Western Ghats which harbours a substantial number of plant and animal species that are being threatened by the fragmentation of forests (WGEEP, 2011, p. 16) and severe disturbance to specialised ecosystems. The topographic heterogeneity and a substantial rainfall gradient in the Ghats, has given rise to a great diversity of life forms and vegetation types. The diversity has declined steadily, and as a result, many biological communities and types have been eliminated. However, some conservation practices have protected many elements of biodiversity.

Further, the geological and hydrological features of the Western Ghats harbours extensive grasslands, and the upper catchment areas are critical for the sustainability of the rivers of the Indian Peninsula.

(WGEEP, 2011, p. 21). The sensitivity of the montane shola forest and grasslands and the influence of climate on the Western Ghats need to be taken into consideration. The conservation effort is in addition to areas that are already in the network of Protected Areas, like Wildlife Sanctuaries and National Parks, which have increased instances of man-wildlife conflict.

One key proposal was to designate the entire Western Ghats as an Ecologically Sensitive Area (ESA), with three levels of sensitivity to the regions. These were Ecologically Sensitive Zone 1 (ESZ1), Ecologically Sensitive Zone 2 (ESZ2) and Ecologically Sensitive Zone 3 (ESZ3) depending on the topography, climatic features, hazard vulnerabilities, ecological resilience and origin of rivers, among other factors. The report states that these guidelines are based on the local ecological and social context and consultation with officials, experts, civil society groups and citizens by large, with the starting point being the Gram Sabhas. The mandate of the Committee was therefore to present a complete understanding of the present status and changes in the ecology of the Western Ghats, which is approximately 129037 sq km, with a focus on human interventions. The principal objective of WGEEP was to pinpoint areas which have to be notified as ecologically sensitive zones under the Environment (Protection) Act, 1986 based on empirical facts.

Land Use and Conservation

The Committee observes a change in cropping patterns. It states that in the Ghats, traditionally, paddy was cultivated in the villages and millets and legumes on the hill slopes. The slash and burn type of agriculture has been replaced by 'terrace' cultivation. The traditional horticultural crops have been replaced with tea, coffee, rubber, cashew, tapioca and potatoes. The natural evergreen forest tracts which were inhabited were cleared for the 'newer plantation' which includes pepper and cardamom.

Forests, both those on village common land and state-owned reserved forests have over some time been converted to teak plantations and also face stress from encroachment for cultivation and submergence through river valley projects. Traditionally the water from Krishna, Godavari, and Kaveri was used for irrigation through small channels and ponds. However, now, river valley projects have replaced them in order to irrigate and generate power for far off places. This was followed by the development of resorts and windmills, which have led to negative impacts on the ecology and water resources. The extraction of iron, manganese and bauxite ores from parts of Western Ghats, for export, has proliferated and most of these projects violated all laws.

This development has resulted in severe environmental damage and social disruption (WGEEP, 2011, p. 11).

In recent decades there has been an increase in the building of second-holiday homes and tourist resorts in the plantation and hill stations. Which, in turn, has helped in the development of extensive transport and communication facilities, and urbanisation and growth in population which has displaced the local people. The Western Ghats has a large Adivasi population. The Cholanaikas living in the Nilgiris is the only truly stone age hunting-gathering tribes of Peninsular India. The Adivasis are deeply affected by the degradation of the Western Ghats environment and due to the vested interest of a few, have hardly received any benefits from development.

In short, today's system of development divorces conservation from development, and the policies promote reckless development in a few areas and thoughtless conservation in other areas (WGEEP, 2011, p. 15). The WGEEP suggest that the Western Ghats be developed sustainably and conserved thoughtfully (WGEEP, 2011, p. 13).

Governance

WGEEP, for the first time in the country, has a comprehensive, spatially-referenced database on a series of critical ecological parameters, transparently available in the public domain that can serve as the "basis of a systematic delineation of different levels of ecological significance/sensitivity for a sizeable region". Based on which they suggest:

1. Western Ghats regions of each state are treated separately.
2. Existing Protected Areas are treated as a fourth separate category.
3. ESZ1, ESZ2 and ESZ3 status are assigned only to grids outside existing Protected Areas.
4. ESZ1 status is assigned only to such grids as having a score at least equal, or higher than the lowest-scoring grids falling within existing Protected Areas.
5. Detailed information such as localities of origin of rivers, laterite plateaus, and localities where local communities have expressed a keen interest in conservation can be used to decide on the demarcation of ecologically sensitive localities.
6. The extent of existing Protected Areas plus ESZ1 will not typically exceed 60% of the total area.
7. The extent of area covered by existing Protected Areas plus ESZ1 and ESZ2 together will be around 75%.
8. The extent of ESZ3 will generally be around 25% of the total area.

The Committee also recognises the problems with Ecologically Sensitive Zone for conservation. They state that there are severe flaws in the ESZ/ESA system since it depends on a lot on the bureaucratic regulation. There is little or no meaningful participation by the local community and the absence of bureaucratic transparency and lack of accountability. This breeds corruption wherein the weaker sections suffer harassment and extortion, while the wealthy and the powerful flout the regulations leading to tremendous local resentment. This is seen in the four ESZs constituted in the state of Maharashtra, namely, Murud-Janjira, Dahanu Taluka, Matheran and Mahabaleshwar-Panchgani (WGEEP, 2011, p. 27). The Mahabaleshwar-Panchgani High-Level Monitoring Committee, for example, suffer due to lack of continuity, power, and lack of financial and human resources. It has been noted that the Forest Department does not conserve nature, but makes the poor to suffer harassment and extortion.

To overcome these shortcomings, the WGEEP suggests that the final demarcation of the Zones taking micro-watersheds and village boundaries into account, and taking inputs from "local communities and local bodies, namely, Gram Panchayats, Taluka Panchayats, Zilla Parishads, and Nagarpalikas, under the overall supervision of the Western Ghats Ecology Authority (WGEA), State level Ecology Authorities and District Ecology Committees" (WGEEP, 2011, p. 40). The Committee found the 'Conservation of biodiversity-rich areas of Udumbanchola taluka' project by Kerala State Biodiversity Board an admirable model to be followed elsewhere and recommended the setting up of Biodiversity Management Committees (BMC) in local bodies in both rural and peri-urban areas which could then be linked to state-level Biodiversity Boards and the National Biodiversity Authority.

This highly desirable participatory process will take some time according to the report, but they recommend its adoption. In the meantime, the WGEEP strongly recommended that the Ministry of Environment and Forests immediately notify under EPA the limits of ESZ1, ESZ2 and ESZ3 as proposed by WGEEP at taluka level.

The sectors based on which the ESZ will operate are - Land use, building codes, plot and landscape development, waste treatment, watershed management, water, agriculture, animal husbandry, fishery, forestry, biodiversity, mining, quarry and sand mining, polluting industry, power and energy, transport, tourism, education, science and technology and information management.

Western Ghats Ecology Authority (WGEA)

The Committee proposed that an apex authority for the entire Western Ghats - The Western Ghats Ecological Authority (WGEA) which shall

be the Apex multi-statal authority for regulation, management and planning of all activities impacting all categories of ecologically sensitive zones within the six states, 44 districts, and 142 talukas under the Western Ghats. The WGEA would need to function in a networked fashion with six constituent State Western Ghats Ecology Authorities, appointed jointly by the State Governments and the Central Ministry of Environment and Forests.

The State Governments would approve all the Western Ghats Development Plan schemes with the help of the State Western Ghats Ecology Authorities under the guidance of the Western Ghats Ecology Authority. WGEEP then proposed a District Ecology Committees in all Western Ghats districts. These District Ecology Committees would work with the district level Zilla Parishad/ Zilla Panchayat Biodiversity Management Committees, as well as District Planning Committees.

Given that the report started by praising the decentralised model of Kerala and also explicitly states that people's participation is vital, the centralised system of the WGEA is discordant with other parts of the report. This contradiction occurs at a critical part of the report where in power to conserve is being allocated to a highly centralised system. In fact, the report states, "It is observed that the inputs from local communities and local bodies have at first been taken into consideration and then forgotten in some states ... (WGEEP, 2011, p. 40)". The Committee seems to be guilty of doing the very same thing.

Even when it talks of promoting transparency, openness and participation, it does so through a focus on individual participation rather than focusing on decentralised institutions. The report recommends the revival of Paryavaran Vahinis scheme or committees of concerned citizens to serve as environmental watchdogs and undertake first-hand monitoring of the environmental situation in the district as required. It states that these Paryavaran Vahini volunteers could play a significant role in building capacity of people at the grass-root level for conservation, sustainable development and Eco restoration. This does not address the issue of social justice and representation than an existing PRI would automatically do. Elite capture is a genuine possibility in schemes like the Paryavaran Vahini.

The report, in contradiction to the structure of the WGEA, goes on to say that to promote a participatory, bottom-up approach to conservation, sustainable development and eco-restoration of the Western Ghats devolution of democratic processes as visualised in the 73rd and 74th Amendments to the Indian Constitution should be encouraged. It uses Kerala as a model and states that the other states should emulate the Kerala example in the

implementation of the Biological Diversity Act.

The report also mentions that the Mahatma Gandhi National Rural Employment Guarantee Act, the Extension of Panchayat Raj to the Scheduled Areas Act (PESA), and the Forest Rights Act, as having potential for eco-restoration and sustainable environmental governance. It states that traditional practices such as sacred groves should be encouraged to promote conservation. Giving Kerala as an example, it recommends positive incentives to conserve as done in the state where a farmer who has maintained mangrove growth on his private land is paid conservation service charges.

However, many respondents we spoke to about the Committee and the report stated that the only area with studies in Kerala was the Athirappilly Project. Hence, we have gone into these details in the report as well. The Athirappilly project was given environmental clearance in 1998 and forest clearance on 1997, but there have been oppositions both within and outside the court, and the judgment is awaited (WGEEP, 2011, p. 50). The Government of Kerala had asked the WGEEP to examine the issue, along with a few other projects proposed in the Western Ghats, and give recommendations. WGEEP recommends that the Ministry of Environment and Forest should refuse Environmental Clearance to large scale storage dams in ESZ 1 and ESZ 2. Further, taking into consideration; the biodiversity richness, high significance of fish fauna, the unique riverine ecosystem, the impact of the project on the biodiversity and ecosystem, the impact on downstream irrigation and drinking water, the questionable technical feasibility of the project, the meagre amount of power generated, the impact on the habitats of the primitive Kadar tribes and the high cost of construction, the proposed hydroelectric project at Athirappilly should be refused permission. It was suggested that the Chalakudy River should be declared as a fish diversity rich area and to be managed on the pattern of 'conservation of biodiversity-rich areas of Udumbanchola taluka' of Kerala (WGEEP, 2011, p. 65). The Committee was similarly critical of the proposed hydroelectric project in Gundia River Basin in Hassan and Dakshina Kannada districts of Karnataka and of the development of mining, power production and polluting industries in Ratnagiri and Sindhudurg districts of Maharashtra (WGEEP, 2011, p. 71). WGEEP found that the impacts of these projects would be manifold.

The report was also critical of industries that are located without consulting the Zoning Atlases for Siting of Industries (ZASI),



wherein clearance processes are defective, especially in the sections on biodiversity and socio-economic issues. The Committee details the high level of social frustration and discord because the 'inputs' obtained during the Public Hearings are often ignored and lack of robust environmental impact assessments. It found that the Biological Diversity Management Committees (BMC) did not exist in States like Maharashtra and Goa. The mining, industrial and power project activities that are proposed, conflict with local economies. There is also conflict in the context of the acquisition of land for industrial power and mining projects. All this often culminates in social discontent due to failure in enforcing laws (WGEEP, 2011, pp. 72-73) and due to a lack of functioning grass-root institutions under 73rd and 74th amendments of the Indian Constitution in most states in the Western Ghats. Therefore, according to the Committee, the current moratorium on new environmental clearance should be extended until satisfactory completion of analysis of the Carrying Capacity for each district is done.

The governance structure can be improved according to the report if the Ministry of Environment and Forests, and State Forest Departments assist the Tribal Welfare Departments to implement the Scheduled Tribes and Other Traditional Forest Dwellers Act. The Ministry of Environment and Forest should establish Biological Diversity Management Committees in all local bodies and empower them to levy collection charges according to Biodiversity Diversity Act to fund Biodiversity Management Committee. In collaboration with the local educational institutions, the Biodiversity Management Committee will document the local ecological setting and biodiversity resources.

In its analysis of Mining in Goa as well the WGEEP was critical of the mining industry. The report states the mining and quarrying industry is the second most important industry in Goa and has contributed to export and employment, apart from foreign exchange. However, most mining leases are located in and around Wildlife Sanctuaries and forest areas. The result of the mining operation, concerning Biodiversity loss due to land use and cover change, is severe. Apart from topographical, morphological, land-use changes and opencast mining has also caused changes in water quality and quantity. It is a threat to the paddy cultivation and fertility of agricultural land and causes siltation. The local wells go dry due to mining activities, and this affects agriculture and the lives of the local people. Mining waste which is dumped in high piles is yet another problem. Trucks which move minerals by road from Karnataka to Goa not only cause traffic problems but also cause environmental hazards since the overloaded trucks are often uncovered, and there is spillage over the wayside. The health of the local communities is affected due to air pollution, and agriculture suffers due to lack of groundwater, siltation and mining

dust. Agriculture is pitted against mining, and people are pitted against mining companies. It has been reported that the benefits-cost ratio no longer favours mining in Goa (WGEEP, 2011, p. 76).

In Part 2 of the WGEEP report, the committee has spoken of the role of local actors and institutions in different sectors: Water

Water resource management is of great importance to the Western Ghats as about 245 million people depend on the rivers that originate from these mountains. The Western Ghats is the sources for many rivers that carry rich nutrients and sediments which sustain the coastal and backwater fisheries (WGEEP, 2011, p. 32). However, incorrect land use and human intervention have led to - reduced flow of water during summer, fluctuation in flow throughout the year, lowering of the water tables, crop loss, and poor water quality. The approach to water resource planning and management based on project-oriented, demand-supply and ad hoc systems of governance are to blame. The report recommends among other things an adoption of 'local self-government level decentralised water management plan' that will be developed over 20 years so that the dependence on river water and external sources is reduced and recharge is improved. (WGEEP, 2011, p. 35). The high-altitude valley swamps, which are the origins of rivers, should be declared as 'hot spots' for community conservation. The entire process would be made accountable through participatory sand auditing and strict regulations. 'Eco-restoration of the forest fragments' between the tea and coffee estates and the revival of streams in high



altitudes should be taken up by the Planters, local self-governments and the Forest Department. Further, to improve river flow and water quality, riparian management could be taken up with community participation and involvement.

Agriculture

In the Western Ghats, single crops became predominate during the British rule with the introduction of tea, coffee and teak plantations in the hills. The use of pesticides along with the change in crop cultivation which needed more water lead to fragmentation of forests, soil erosion, degradation of the river ecosystem, and toxic contamination. It has not only impacted the ecology and biodiversity of the Ghats, soil erosion, and environmental contamination but has also made agriculture unsustainable (WGEEP, 2011, p. 38). To address these issues, a clear policy that supports sustainable agriculture is required. (WGEEP, 2011, p. 39). Also, plantations in forest corridors are to be abandoned.

Landscape planning in selected regions/locations, integration of various cropping systems and development could be carried out. There could be a shift from monoculture to polyculture or mixed cropping systems so that soil erosion is reduced, water holding capacity is improved along with productivity and economic returns. Live hedges and binding crops could replace stone pitched bunds. The use of insecticides and fungicides should be phased out within 5 to 10 years. Only after that, the use of weedicides should be discontinued. Organic practices for pest and disease control should be brought in. The use of organic manure should be encouraged by way of subsidies, along with crop rotation and raising green manure crops. Financial support could be provided to the organic and ecological farmers. The crops which are highly water-intensive and input-intensive should be replaced with crops which are less demanding.

A participatory plant breeding and crop improvement programme could be launched at the Panchayat level with farmers using traditional varieties and identifying suitable crop at the local level, with special attention to tribal farming as well. Genetically modified crops, trees and animals should be not be encouraged. (WGEEP, 2011, p. 39). Community forestry should be encouraged to obtain manure, fodder for farming, fuelwood and other needs. Farmers who have abandoned their farms due to them being on elephant corridors and face crop loss due to wildlife should be compensated, and they should grow crops which do not attract wildlife.

According to the report, the creative energy of the local communities could be used to bring about various innovative methods of awareness. Children should be educated and involved in conserving the

biodiversity of the Western Ghats. Under the supervision of Western Ghats Ecology Authority, farmers should be entitled to maximum profits and middlemen should not be involved. Further, premium prices should be fixed, a link between the products of organic practices with the local and regional markets be established, securing carbon credits for organic farmers and ensure government support (WGEEP, 2011, p. 42) is essential.

Animal Husbandry

In Kerala, there are many indigenous breeds of livestock, but to promote dairy farming, the government introduced Jersey and Holstein-Friesian breeds. This resulted in a drastic decline in indigenous breeds of livestock and poultry over the last two decades. This is mainly due to indiscriminate slaughter of local breeds of animals for meat, an increase in the cost of feed and scarcity of low-cost quality fodder (WGEEP, 2011, p. 43). Similar stories from Karnataka, Maharashtra and Tamil Nadu are reported (WGEEP, 2011, p. 43). The Adivasi communities and the local communities, living in the Western Ghats, conserved livestock breeds with specific traits that are suitable to the local environment and local production system. The introduction of exotic crossbreed has not only disturbed the entire production system but has also made the people forget traditional knowledge of feeding and healing. The cost of feeding, managing and healing the crossbreeds is so high that it has become a burden. The indigenous cattle breeds depended on community and forest grazing land, but as grazing land reduced due to plantations and the population of cattle increasing, the cost of grazing the cattle has gone up, and most farmers have switched over to goats. Goats being aggressive grazers, have further damaged the diminishing grazing lands (WGEEP, 2011, p. 45).

The committee recommended that support should be given to farmers who are willing to keep indigenous cattle since the milk production would not be economically profitable. Fodder storing for scarcity periods should be encouraged. Local browsing areas should be considered for goat-rearing projects. Further, grazing restrictions imposed on the grounds of forest conservation should be revisited (WGEEP, 2011, p. 46).

The planning of animal husbandry should be given importance since it has to be integrated with other agriculture activities for sustainability. Rejuvenation of over-exploited land, organic agriculture, and milk production depend entirely on animal husbandry. So, veterinary facilities, animal health surveillance, feed subsidies, good cattle sheds and scientific practices should be provided to the farmers. Financial assistance could be given so that not only nutritional security is taken

care of, but enough fodder is also produced for the stall-fed cattle. Biogas plants could be maintained either at the household level or at a village level (WGEEP, 2011, p. 47). The practice of rearing cattle within the tea-estates could be re-introduced so that the manure produced may be used as fertiliser for plantation, thus achieving the production of organic tea and organically produced milk. The use of weedicides in tea plantation should be stopped, and every village should have a trained animal health worker. The cultivation of medicinal plants and marketing them should be encouraged at the Panchayat level.

Fisheries

Traditionally, the local communities conserved and managed fishing resources and local fish consumption was their primary source of protein. The freshwater fish diversity is now on the decline due to many reasons. Due to its relevance in livelihood improvement and food security, this highly valued resource has to be revived in a sustainable manner (WGEEP, 2011, p. 48). The main issues of concern are loss of habitat, loss of mangroves, pollution caused by pesticides and industrial effluents, dumping of waste in the water, poor river maintenance and management, collecting fish in an unscientific manner, check dams, introduction of exotic fishes, fish diseases, loss of breeding grounds, over-exploitation, trade of unauthorised ornamental fish, decline in indigenous species caused by the introduction of alien fish species, sand mining and excessive tourism activities in freshwater lakes.

The committee recommends that to assess the health and diversity of the fish population and regular monitoring is to be conducted, apart from banning the use of plastic. Conservation of freshwater fish biodiversity should be incorporated into fishery policy documents. Information on population, migration, breeding behaviour and spawning grounds of threatened fishes should be looked into and analysed. Brood-stock maintenance centres and hatcheries should be established. Quarantine and control of exotic species should be made more effective and foolproof. Paddy and wetlands should be reclaimed to reduce the loss of breeding grounds of the fish. Regulation of fishing during breeding seasons should be brought into force. Fish sanctuaries could be established, and sand mining should be restricted. Ornamental fish collection from the wild should be regulated. Native plant species could be used for fencing river banks (WGEEP, 2011, p. 49). Both Central and State governments should use various policies and legal measures which are available to coordinate and implement the desired conservation efforts to save freshwater fishes and to prevent illegal conversion and encroachment on water bodies (WGEEP, 2011, p. 50). The report gives the example of Periyar Lake in Kerala to illustrate the harm caused by exotic species.

Forests and Biodiversity

Forests have been destroyed on a large scale to build roads, to develop projects and forest-based industries which have adversely affected rural and marginalised communities who have not benefited from these developments. It is also noted that community management is more cost-effective than state management. In Van Panchayats, tree damage caused by lopping of branches is considerably less when compared to Reserved Forests. The quality of governance by the state forest and wildlife establishment, as the forest officials harass rural and tribal community and the Forest Department itself is hierarchical and not participative.

While critiquing the elite capture that takes place in Joint Forest Management (JFM) Committees the report points to the fact that the forest department uses the elite to achieve their objectives and bypass actual participation which is complicated and messy. The committee, however, see the Forest Rights Act (FRA) as a way by which actual participative forest management can be achieved as all JFM areas and forest under exclusive village management can be claimed by the community under section 3(1)(i) of the Act and managed as a community resource (WGEEP, 2011, p. 59). Therefore, the report suggest that it is “imperative that we strive to implement not only the letter, but also the spirit of pro-people legislations such as Joint Forest Management (JFM), Extension of Panchayati Raj to Scheduled Areas (PESA), Protection of Plant Variety and Farmers’ Rights Act (PPVRF), Biological Diversity Act (BDA), and the Scheduled Tribes and other Traditional Forest Dwellers (Rights over the Forest) Act (FRA)” (WGEEP, 2011, p. 57).

The report states that the Forest Department should aim for more significant interaction with forest dwellers, involve them in planning and implementation of forestry programmes, community- based forestry programmes and ensure their all-round economic and social development. There should be an emphasis on environmental conservation, increasing role of watersheds and landscape approach to forestry requiring integrated land management. There should be more interaction between agriculture, animal husbandry and forestry. Public awareness about forestry, demand for public participation and appreciation of the role environmentalists should be encouraged. They should also aim at more adaptive, participatory and transparent planning processes. It should be based on research and knowledge from local communities. (WGEEP, 2011, p. 60).

Biodiversity

According to the report, a variety of biodiversity-friendly practices have evolved in India. Besides, the country also has a well-dispersed

network of Wildlife Sanctuaries, National Parks and Biosphere Reserves. However, the current state-sponsored approach has attempted to divorce conservation from development and is opening up large tracts of forests to mining and other extractive industries (WGEEP, 2011, p. 62). The only way to overcome such challenges is to implement all legal and policy provisions that enable and promote local community participation (WGEEP, 2011, p. 66)

Organised Industry

The industrialisation of the Western Ghats has led to pollution, land degradation and people-wildlife conflict (WGEEP, 2011, p. 67). However, industrialisation did not feature in the protest, and this section does not mention decentralised institutions, so we are not going into details about this part of the report.

Power and Energy

The report talks of clean power, micro and mini hydel projects to meet local power demands and renewable energy. According to the committee, an example to emulate is the model micro-hydro community system in Pathanpara Kerala, where financing for the project was secured from the village through cash or kind. Further, the report also talks about introducing benefit-sharing arrangements when land is acquired. Here too the example given is where the Kerala government had mooted a business model for an 80 MW wind power plant with tribals of Palakkad. This will be a partnership between NTPC, KSEB and the tribal people of Palakkad. The commercial agreement will involve a fixed amount of money per unit of power generated on tribal land.

Tourism

The Centre and State promote ecotourism without proper EIA and cumulative assessment, and it is unplanned and unregulated. The committee points to the problem of green tourism, which could lead to habitat fragmentation, increase in garbage, pest species, pathogens and disease. (WGEEP, 2011, p. 84). The carrying capacity of an ecosystem should be kept in mind while allowing tourism; also minimal-impact tourism and strict waste management should be implemented (WGEEP, 2011, p. 85).

Transport

Roads, railways and highways have affected the ecological status in the Western Ghats. Forests, biodiversity and wildlife have been damaged to a great extent. The development of transport infrastructure fragment

habitats and cause biodiversity loss, disturb the natural habitat, increases landslides and restricts animal movement (WGEEP, 2011, p. 86). There have been a number of demands for more railway lines through the southern Western Ghats. The committee, however, speaks of no new railways and major road in ESZ 1 zones and strict regulation when allowed in other zones.

Human Settlements

The original plant diversity has been removed indiscriminately in order to develop the land by politicians, land developers, the common man, corporates and industrialists (WGEEP, 2011, p. 89). Lavish weekend homes in the hills are energy-consuming. Their gardens are not only resource consuming but, the invasive plant varieties which are introduced, are dangerous to the local ecosystem. All these activities prove to be dangerous to the biodiversity of the region (WGEEP, 2011, p. 90). Human settlement has raised issues of increased wildlife hunting, quarrying, hydrological change, increase in soil erosion and significant loss of flora and fauna, so the committee suggests that certain types of areas should be no-go areas.

Further, Special Economic Zones should not be permitted, and privatisation of public lands should be stopped. Within the ESZ 1 and 2 areas change in land use should be regulated, mainly when it comes to change from forest to non-forest use. They also ask the government to refine the policy on hotels, resorts and tourism. The building codes should also be made eco-friendlier.

Towards Multi-centred Governance in the Western Ghats

Governance of the Western Ghats requires many centres for decision making and at many scales, which enable thinking across knowledge domains, social relationships, and competing interests. Governance has to work in a more participatory fashion, and with other forms of governance, processes and norms beyond just legal rules, with a view to achieving desired outcomes. To deal with complexity, the need is for resilient institutions that are able to adapt to changes and pressures around them. It is in this context that WGEEP would like to suggest that resource and environmental federalism should be strengthened in the Western Ghats, and move towards more Ostromian polycentric forms of governance, with many centres of decision-making, which will enable more innovative, responses, learning, cooperation and better adaptation to ecosystem pressures and changes. This should be the ultimate aim of the WGEA. One of the primary processes that should be reformed according to the commission is the EIA process which is rife with defects (WGEEP, 2011, p. 96). The committee also points to the poor implementation of the Panchayats (Extension to Scheduled Areas)

Act, and it states that the entire government machinery should work towards ensuring that the mandate of this Act, which is to empower communities and enable participation, is fulfilled. Commenting on the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act the committee points to the failure of recognising community rights under this legislation, instead of recognition of individual rights has taken precedence, and the focus seems to be confined only to land rights for agriculture. Therefore, the primary focus, according to the report, should be in implementing community forest resource rights and tracking the same.

1. Hence to improve environmental governance, the committee recommends eight principles of conservations. They are (WGEEP, 2011, pp. 104-5):
2. Inclusion and transparency.
3. Decentralised planning, watershed-based, with increased convergence of planning at the grassroots level.
4. As per Part IX A of the Constitution, the District Planning Committees should operate in the Western Ghat States.
5. Ecologically sustainable livelihoods should be brought into the planning process for natural resource management, and tribal communities should be involved wherever relevant.
6. Education to address individual/ community valuation of resources.
7. Appropriate green technologies that reduce the footprint of development.
8. Use of carrying capacity concepts, pollution prevention, the polluter pays principles.
9. Free, Prior and Informed Consent through the gram panchayat should be sort for mega-development projects.

The annexures of the reports talk about the work plan, the process of consultation, organising an Information System, time frames, and minutes of meetings. WGEEP was able to collect such information from not only the civil society but also Government agencies and technical experts. This was done with the help of forty-two Commissioned papers, seven agencies, forty consultations with civil society groups and fourteen field visits. A public website to obtain civil society inputs was also set up.

Report of the High-Level Working Group on the Western Ghats (HLWG)

The state governments argued that the recommendations made by the WGEEP curbed the development rights. So, the Ministry of Environment, Forest and Climate Change (MoEF&CC) appointed

the High-level working group (HLWG) committee headed by K Kasturirangan. The HLWG committee was given a similar mandate as the WGEEP, in addition to the mandates the HLWG committee was required to review the WGEEP report. In doing so, the HLWG sought responses from stakeholders about the report. Given that the analytical frame we are using to analyse the reports is the issues that were contentious during the protests in Kerala and the role of local bodies, it is interesting to note what has been recorded as the reaction of Kerala to the WGEEP Report.

According to the HLWG, Kerala did not accept the restriction on transport infrastructure or the ban on new Hydroelectric projects. The restrictions on dam height and the recommendations concerning decommissioning of dam height and thermal power projects were opposed. Kerala also pointed out that the recommendation on no inter-basin diversion of water from a river is against the Water Policy. The state also objected to the exclusive building code for the Western Ghats region and the recommendation on the establishment of the Western Ghats Ecology Authority (WGEA) (HLWG, 2013, p. 13). The recommendations concerning another water sector, promotion of organic agricultural practices, phasing out the use of insecticides and promoting ecological farming has been accepted by Kerala. It accepted the recommendations about forest and biodiversity and implementation of the Forest Rights Act, provided special funds were available to Biodiversity Management Committees and devolution of funds to the State Department of Environment. Kerala suggested that budgetary support and incentives should be provided for farmers who shift to organic farming. It also suggested that stringent pollution standards should be imposed on red and orange category industries (HLWG, 2013, p. 14). It accepted the recommendation that Genetically Modified Crops should not be allowed in the Western Ghats provided it is subject to State policy (HLWG, 2013, p. 15). The committee has similarly reviewed feedback from over a thousand seven hundred and fifty stakeholders, including local Self Governments, Industry, Experts, and local individuals.

Given both the positive and negative feedback it received, "the MoEF constituted a High-Level Working Group on the Western Ghats (HLWG) to suggest an all-round and holistic approach for sustainable and equitable development while keeping in focus the preservation and conservation of ecological systems in the Western Ghats." (HLWG, 2013, p. viii) HLWG and WGEEP, both aim to establish a starting point to the journey of understanding man-environment relationship and to enable the conservation of the Western Ghats. This journey consists of considering biodiversity, hydrological systems, geological and geomorphological characteristics and climate variations coupled with

impacts of human intervention. Both these committees attempted to understand and relate the demands of development, conservation and local livelihoods.

The report states that the ecosystem of the Western Ghats needs urgent attention and action (HLWG, 2013, p. xii). It has been observed that the natural landscape of the Western Ghats is only 40%, the ecologically sensitive area is 37%, i.e., 90% of the natural landscape. The Protected Areas and World Heritage Sites are included in the 37%. The HLWG used 30 m ASTER (Advanced Spaceborne Thermal Emission and Reflectance) and DEM (Digital Elevation Model) data which consider villages as a unit to demarcate the boundaries of Western Ghats. The HLWG committee used technology to capture spatial data of the region and kept 600m above the sea level as their elevation criteria. The elevation criteria were 600m above the sea level coastline automatically became a part of Western Ghats. The forest area, according to the report, was 1,64,280 sq. Km and identifies the Western Ghats as a natural and cultural landscape (Nagarajan, K Murari, Jayaraman, & Radhakrishnan, 2015, pp. 49-56).

The HLWG Committee allocated 37% from the entire Western Ghats as ecologically sensitive zones. The committee differentiated between cultural and natural spaces and restricted ecologically sensitive zones to natural space. According to the committee, the villages that are located in ecologically sensitive zones would be involved in the decision-making process for new projects. The provision under the Forest Right Act to obtain prior consent from the Gram Sabha to implement project should be strictly executed. The committee acknowledges the harmonious relationship between people and nature and hence recommended initiating policies that promote sustainable development and select green strategies, which promote economic development along while conserving the environment (Chopra, 2014, pp. 12-14.).

The activities with maximum intervention and destructive impact on the ecosystem are to be prohibited according to HLWG recommendation. The cumulative impact is to be considered before clearance is given for any developmental activities (HLWG, 2013, p. xiii). The report recommended a complete ban on mining, quarrying



and sand mining in ESA. All current mining areas in the ESA, “should be phased out within the next five years, or at the time of expiry of mining lease” (HLWG, 2013, p. xiv). Thermal power should not be allowed in ESA, but Hydropower projects may be allowed if there is an uninterrupted ecological flow of at least 30% level of the river’s flow during the lean season. Further, wind energy should be included in EIA notification and brought under the purview of assessment and clearance.

All industries which have low environmental impacts should be promoted, but all Red category industries should not be permitted. Since the orange category includes food and fruit processing, it should not be prohibited altogether. Ban on orange category industries in the ESA region should take place on the bases of the information provided by the Centre. Orange category industries which have high pollution load and environmental impact should be prohibited (HLWG, 2013, p. 109).

The State Governments should ensure sustainable development in the ESA by putting regulations in place. Any building and construction projects which are of 20,000m² and above should not be permitted in an ecologically sensitive area. Neither should townships or area developments be allowed. All infrastructure or development projects/schemes should be subject to environment clearance under the category ‘A’ projects under EIA Notification 2006. If forest clearance is required for a project, all the required information, from application stage onwards should be posted on the website of MoEF and of the forest department of the respective States (HLWG, 2013, p. xv). Any project located within 10km of the Western Ghats ESA, which requires environment clearance should be regulated as per the provisions of the EIA Notification 2006 (HLWG, 2013, p. 125).

The HLWG insisted that the villages and local communities which fall under ESA should participate and be involved in decision making on future projects. All projects will require consent and no objection from the Gram Sabha of the village. The provision for prior informed consent under the Forest Rights Act will also be strictly enforced. This will help the governance and regulations of ESA to work effectively, which will



help to strengthen the existing regulatory institutions, the processes for environment and forest clearance and project monitoring. The local communities should also be consulted while planning for wildlife corridors (HLWG, 2013, p. 125). Infrastructure, including transport, must be considered after cumulative impacts are studied and assessed. Future planning of Railways must take into consideration the safety of animals since there are many incidents of accidents involving wild animals (HLWG, 2013, p. 110).

Financial Arrangements and Incentivising Green Growth

Both people and rich biodiversity populate the natural landscape of the Western Ghats. The economic growth of this region is due to its natural endowment of water, forests and biodiversity. The HLWG, therefore, recommends policies to incentivise environmentally healthy growth across the Western Ghats. The Western Ghats States should get together and negotiate for grant aid from the Centre to protect its natural resources. The States could keep a part of this fund and could use the other part to finance local conservation trust. This money could be used to fund community projects which would help to improve forest productivity and ensure sustainable forest-based livelihood in ESA.

The fund allotted to the State by the 13th Finance Commission for forest and environment conservation should be increased substantially by the 14th Finance Commission. There should be payment for the services rendered by the Ecosystem in ESA and non-ESA regions. If individual State Governments pursue such initiatives, then there may be possibilities for dialogues concerning this issue between the municipalities and the relevant Panchayats.

The Planning Commission could form a special Western Ghats Sustainable Development Fund. This fund could be used to promote programmes designed to implement an effective ESA regime incentivise green growth. The 14th Finance Commission should consider payment for the ecosystem and other services. The funds for environmental management should be made available directly to the local communities who live in and around ESA of the Western Ghats. A part of the Environmental Performance Index could go to the State, and the other half should be paid to the village community, directly. The aim of the 12th Plan should be to approach the present situation with an emphasis on conservation with minimal ecological disturbance. It should also aim at the involvement of locals along with a sustainable model of economic development which will generate livelihood for them.

To build forest based local economies, the Forest Rights Act's categorisation of minor forest produce should be promoted. The

present rules of timber transit should be reviewed and revised. For sustainable agriculture, the cultivators should not only be encouraged to grow organic cultivation but also to build 'a unique brand' which could establish a world-wide market (HLWG, 2013, p. xvi). Policies should be thus formed to improve the productivity of forest for the benefit of the local communities and forest management for inclusive development (HLWG, 2013, p. xiii). The local communities should also get ownership and benefits from the tourism policy. All the 'hotspots' should be monitored, and there should be compliance with environmental conditions and development restrictions. The regulatory provisions to assess the environmental impact of tourism project must be strengthened (HLWG, 2013, p. xix).

The report states that it is time to integrate forest accounts, measurements of the tangible and intangible benefits into the State and National economic assessment. It must account for the millions of reasons why forests play a critical role in the livelihoods of millions of people (HLWG, 2013, p. 111). Therefore, the productivity of the forests should be improved for the economic benefit of the local communities (HLWG, 2013, p. 112). Ecotourism should be promoted for local benefits since it is the source of livelihood and economic growth in the region. However, if it is not regulated, it can cause environmental degradation. Therefore, the carrying capacity of a region for ecotourism has to be assessed (HLWG, 2013, p. 114). The HLWG notes that the UNESCO Heritage tag given to the 39 sites in the Western Ghats are all within the eco-sensitive areas. The State Government should come up with a plan to protect, conserve and value the resources of the region (HLWG, 2013, p. 117). One way of doing this is through payment for the ecosystem services (HLWG, 2013, p. 119).

Further, the desire to use the river for generating electricity cannot be at the cost of the value of the river. A balance has to be maintained (HLWG, 2013, p. 106). To deal with mining, the HLWG recommends that the mining activities in ESA should be banned and the current activities should be phased out within five years or at the time of expiry of the mining lease, whichever is earlier. However, HLWG does not find it appropriate to make any other recommendations, since the matter of iron ore mining in Goa is pending before the Hon'ble Supreme Court (HLWG, 2013, p. 141).

The role of the people as understood by the report is that within the defined ESA, there are 4156 villages. The villages included have 20 per cent of more of an ecologically sensitive area within their boundary. According to the commission, these people have built a deep understanding of the natural environment and co-existed with nature. These eco-friendly practices have to, therefore, be supported and incentivised (HLWG, 2013, p. 99).

Governance

The HLWG points out that all state government have rejected the centralised Western Ghats Ecology Authority that was proposed by the WGEEP report. This committee believes that the present system of environmental governance has to be strengthened and reformed by including better data monitoring systems and the participation and involvement of local communities in decision-making. It also recommends in-service training for functionaries in the current environmental regulatory bodies. Further, sensitivity training about the importance of biodiversity, ecosystem services and local bioresources should be carried out (HLWG, 2013, pp. 121-2). In the rich biodiversity areas, Biodiversity Management Committee should be formed at Panchayat level to document local biodiversity, bioresources and traditional knowledge. The environment and forest clearance systems, both at the Centre and State must be strengthened to deepen the process of public assessment and scrutiny of all projects (HLWG, 2013, p. 123).

Decision Support and Monitoring Centre for the Western Ghats

The necessity to establish a Decision Support and Monitoring Centre in the Western Ghats to address the multiple dimensions of managing the ecology complexity of the landscape is the need of the day according to the committee. The management of Western Ghats ecology involves conservation, protection and rejuvenation, as well as, sustainable development in the Western Ghats. This can be done through regular assessment of the environment and ecology using geospatial technologies which provide a viable means to carry out the monitoring. It also gives a periodic assessment and impacts analysis which is objective. Geo-informatics combines the geospatial analysis with modelling. It makes use of information and communication technologies and compliments the efforts on space and ground segments to provide updated and 'near-real' information to the decision-makers. Spatial Decision System is also used for informed decision making. The information thus gathered can be used for planning and policy formation, to build a political dialogue, assess and report on the condition of the ecology of the entire region, and for the implementation of ESA (HLWG, 2013, pp. 126-7).

This would entail creating a Decision Support and Monitoring Centre for the Western Ghats. The Centre could be located in one of the six States of the Western Ghats, and it will assess and monitor changes across the geographical area. It will also provide relevant and timely information to the governments and the public about the environment and ecology. The research could be conducted on the traditional

knowledge of the region and people on how to survive and cope with adverse conditions and build a sustainable economic future. The Centre could build 'a vibrant political dialogue' in the region using the existing and new knowledge. The centre will be the decision-support for ensuring the enforcement and regulation of ESA. It will enable the process of regional planning, conduct research studies to incentivise green economic growth and set up a monitoring system to track project clearance and monitoring in ESA. It will be a network of all scientific, research and regulatory organisations of the Western Ghats (HLWG, 2013, pp. 130-31).

Climate Change and the Western Ghats

There is no doubt that Climate Change will harm the socio-economic system, physical and biological systems and human health. While formulating policies for the Western Ghats region, several adaptive strategies could be taken into consideration. They are - species-mix plantation and planting of hardy species which are resilient to higher temperatures and drought risk; anticipatory plantation and linking forest fragments. Advance in fire warning strategy could also be implemented (HLWG, 2013, p. 18). Vulnerability assessment indicates that the concentration of vulnerability is higher in the northern Western Ghats and the southern Western Ghats it is the least. The Western Ghats has fragmented forests in the north, and this makes these forests vulnerable to climate changes, forest fires and pest attacks. Afforestation, reforestation, and forest management in the northern Western Ghats may lead to carbon sequestration benefits (HLWG, 2013, p. 20).

Further, it is expected that there will be an increase in the loss of species due to change in the climate. Due to climate-related stress, ecosystems dominated by 'long-lived species' will be slow to show evidence of change and will be slow to recover (HLWG, 2013, p. 21). The report also talks of the effect climate change will have on agricultural plants like rice, maize, sorghum, coconut and cocoa. The impact of climate change can be reduced if crop management strategies are adopted, such as cultivating varieties which are tolerant to climate change. Agriculture Crop Diversity is advised to fight risks like pests and diseases (HLWG, 2013, pp. 22-24). Adaptive measures to tackle climate change should focus on improving yields using the existing available technology, timely availability of water through expansion and improvement of irrigation system. The use of species-mix plantation which maximises carbon sequestration and the cultivation of hardy species which can withstand increased temperature and drought risks should be encouraged. A few pilot adaptation projects should also be launched. Accurate downscaled projected climate data would help in

modelling (HLWG, 2013, p. 26). In term of the impact climate change could have on water, irrigation and hydropower (HLWG, 2013, p. 24) it is found that there is a possibility of facing problems due to severe droughts and flood. The most urgent problem is the non-availability of water, which will likely get aggravated.

The HLWG, like the WGEEP before it, also paid attention to select projects that the government was interested in. For the Athirappilly Hydropower Project the HLWG after visits and dialogues and detailed deliberations on each critical issue, and collection of data on ecological flow, is of the opinion that is of the view that while the project's importance for meeting the peaking power requirements of the State cannot be disputed, there is still uncertainty about ecological flow available in the riverine stretch, which has a dam at a short distance upstream of the proposed project. Hence, unlike the WGEEP, they do not give a definite recommendation (HLWG, 2013, pp. 135-6). HLWG notes that Gundya hydropower project impacts both government forests and green areas on private land. Since it is located in ESA, the Government of Karnataka should reassess the ecological flow in downstream areas, based on a thorough evaluation of hydrological regimes in the area. It should also assess the damage that is caused to the forest before giving permission. HLWG recommends a balance between the need for energy and the environment (HLWG, 2013, p. 137). For the development projects in Ratnagiri and Sindhudurg districts, HLWG recommends that since these two districts in Maharashtra have been categorised as ESA, the sectoral restrictions and regulations will apply. In the remaining areas, including the area outside ESA, but within the Western Ghats, environment forest processes and regulations will apply. However, MoEF should monitor, the cumulative impact of these two projects regularly so that the environmental balance is maintained (HLWG, 2013, p. 138).

Recommendations of Three Member Expert Committee on "High-Level Working Group Report"

The Kerala Government decided to constitute a three-member committee in 2013 under Dr Oommen V Oomen to address concerns that arose due to the previous two reports. According to the report, in Kerala, the area under ESA is larger than the area under Natural Landscape. This means that a part of the Natural Landscape area, human habitat area and agricultural area is included in the ESA. Idukki has the maximum number of ESA areas. This resulted in not only complaints from the public, but also violent protests and unrest. One of the main concerns of the farmers was that they feared that their lands would be declared as under the ESA, then they would be forced to live under strict regulations and development activities would be

stopped. Addressing these concerns, the committee prepared maps of all Panchayat areas. The Expert Committee consisting of Dr Oommen V Oommen, Dr V.N. Rajasekharan Pillai and Shri. P. C. Cyriac, sort public opinion from people's representatives, farmers, NGOs, farmer's organisations and the general public. They gave publicity regarding their sittings and convened sittings at Pathanamthitta, Kottayam, Thrissur, Malappuram, Idukki, Wayanad, Kozhikode, Kannur, Palakkad, Kollam, and Thiruvanthapuram. The officials of Kerala State Biodiversity Board translated parts of the report which were relevant to Malayalam and posted it on the website. After 30 sittings in various places with the participation of 30,000 people, a district-wise comparison was made. It was found that most of the complaints were from Idukki (Oommen, 2014).

The committee recorded opinion about the recommendations of the Kasturirangan Committee Report from different stakeholders. Stakeholders pointed out that the existing rules and Acts should be carried out appropriately before forming new ones. Apart from that, Environmental conservation programmes should not be under the leadership of the Forest department, but rather the Biodiversity Management Committees or the Panchayats with the involvement of the Gram Sabas (Oommen, 2014, p. 14). While forming the Expert Committees Report, nature and environmental protection methods followed by the farmers should also be taken into consideration. It is also stressed that the farmers should be left alone to carry out their farming and daily life without restriction and that they should be allowed to cultivate the crops of their choice (Oommen, 2014, p. 13), but with incentives to move towards organic farming (Oommen, 2014, p. 11) and with a gradual reduction in the use of pesticides in ESA regions (Oommen, 2014, p. 16).

In Kerala, there are hospitals, engineering colleges and large educational institutions in villages which are identified as ESA. Many villages are partially urbanised, and there are many banks, hotels, bus stands and religious institutions. This could potentially lead to many governance challenges. Further, given that the Kasturirangan committee had relied on remote sensing technology, both coffee plantations and cardamom plantations have been mistaken for forests. Also, many thickly populated areas and farms were included in ESA; the committee feels that physical verification is the only method to identify forests and demarcate them as ESA. The committee, however, supports the move to protect sacred groves, ponds, meadows and hills in the villages. Another problematic recommendation in the Kasturirangan report according to this report is the demarcation of a buffer zone, 10 km wide around the ESA. In Kerala, this would mean that mainly large towns would fall under the buffer zone, and development would then come to a standstill (Oommen, 2014, pp. 11-13).

The committee took note of the fact that many plantations which are centuries old and follow eco-friendly cultivation practices, including, many cardamom plantations farmers, who have created agro-forestry-ecosystems (Oommen, 2014, p. 19). In identifying eco-friendly sustainable practices in Kerala, the committee points to people follow homestead farming, which includes, growing varieties of crops, cattle breeds, poultry, aquaculture, apiculture, medicinal plant cultivation and practising organic farming (Oommen, 2014, p. 18).

The Expert Committee recommended that the government should conduct physical verification of all 123 villages demarcated by Kasturirangan Committee and 120 Panchayats identified as ESZ1, ESZ2 by the Gadgil Committee. The government should also verify the population density in these areas so that human-inhabited areas, farmlands and plantations and could be marked and excluded from ESA. It would help to include the protected areas and ecologically susceptible areas which need protection (Oommen, 2014, p. 22). Quoting from the Pranab Sen committee, the report states that “a balance had to be struck between the protection of ecologically sensitive area and the needs of national development...” Only ‘the critical elements of ecological preservation’ should be considered, and it should not interfere with the process of development and efforts to eradicate poverty (Oommen, 2014, p. 20). This quote sums up the approach this committee had to conservation.

In this vein, the committee points to the importance of spices that are grown in the high ranges to the export market and foreign currency (Oommen, 2014, p. 19). This trade should not be impeded, and the State should find a balance between ecological conservation and the livelihood of the people. Further, given that there is no alternative technology for chemical pesticides to switch from chemical to organic farming would result in significant loss to the farmers. Hence the stress on organic farming should be set aside. Farmers should also not be forced to cultivate only indigenous crop varieties as this may result in economic loss for them (Oommen, 2014, p. 24).

However, the report states that the eco-friendly practices of farmers should be recognised and incentivised (Oommen, 2014, p. 26). Instead of turning to organic farming straight away, ‘Good Agricultural Practices’ should be promoted. Within ten years, organic farming could be implemented, and in the meanwhile, the government could compensate for the financial loss that may accrue due to the shift. The committee states that if traditional vegetable producing areas in Kerala, like that in Valtavada in Idukki District, are converted to organic farming, the chances of having a market for these products grows. Branding and marketing of Western Ghats products are essential to get

the right price and incentivise soil and biodiversity conservation.

The committee puts in place practical recommendations on agricultural practices. They say that the government should enable the switch to less toxic pesticides and water conservation through check dams. There should also not be a ban on high yielding crop varieties; instead, local varieties should also be encouraged concurrently since the local varieties can withstand adverse climatic conditions. Financial incentives should be given to farmers who shift from short-duration crops to long-duration crops on the land, which has more than 30% slope. They also speak of integrating farming with medicinal plants. The State Medicinal Plant Board could support the cultivation of medicinal plants (Oommen, 2014, p. 28). They were addressing a very pertinent issue that farmers with lands surrounding the forest that are acquired for wild animal corridors should be given fair compensation and rehabilitation.

The committee recommendations also address animal husbandry and states that there should not be a ban on hybrid cows, instead rearing of vechur cow, high-range dwarf and kasaragod dwarf should be promoted since they have high level of adaptability in hot, humid climate and do not use too much water (Oommen, 2014, p. 30). With regards to plantations, the planting of Eucalyptus, Acacia and Teak should be stopped as they do not contribute anything to the soil and animals, but cash crops like rubber, coffee and tea could not be curtailed.

Addressing man-animal conflict, the committee suggests the digging of 'V' shaped trenches and solar-powered electric fence to protect farmers and their land from wild animals. They also recommend compensation for crop loss due to animal attack (Oommen, 2014, p. 31). Eco-tourism and farm tourism projects, eco-friendly buildings, marketing indigenous products, employment of local communities, integrated farming with an emphasis on indigenous cattle breeds should be implemented. Further, the government should help by providing pollution-free vehicles at a subsidised rate (Oommen, 2014, p. 33). The report highlights the Farm Tourism is conducted in Wayanad and Idukki district as an ideal model (Oommen, 2014, p. 34).

Addressing the problem of mining, the report states that EIA Clearance is a must for all quarries. The quarries which are functioning without a permit should be stopped immediately, and no quarrying should be done within 500 meters of a forest. Vigilance squad, permits and eco-friendly methods are suggested as regulator measures. Quarry functioning in areas which are to be protected as forests should be given notice and then closed. Schemes to restore the abandoned quarries should be implemented. With the assistance of experts and

sand auditing, sand mining in reservoirs and water bodies could be carried out by using eco-friendly technologies so that there is minimum impact on the environment. The government agencies should sell the excavated sand to those who require it at a reasonable price (Oommen, 2014, p. 35).

When commenting on human settlements, they addressed the issue of water and building regulations. According to this committee, the Ground Water Department could first assess the groundwater level and topography of the land before permitting the construction of bore wells. They should also form programmes wherein dry bore wells are recharged and bore well constructions by private agencies should be discouraged (Oommen, 2014, p. 36). Rainwater harvesting and groundwater conservation should be made compulsory. For built infrastructure, pollution auditing should be conducted in all resorts in the Western Ghats and (Oommen, 2014, p. 37) the height of all buildings should not be more than 8m on land with an elevation of 500 mean sea level (MSL). Hospitals, religious institutions, educational institutions and food and milk processing units should be given special consideration and be exempted from restrictions proposed.

The committee stated that Panchayats in the Western Ghats should make a Master Plan wherein eco-friendly building construction, water construction and utilisation of eco-friendly energy sources are incorporated. They should also ban the use of plastic carry bags in the Western Ghats within three years (Oommen, 2014, p. 38). Further, the committee suggested that Funds collected from various ecosystem services and funds from cess should be deposited with the Biodiversity Fund of local Governments and be used for biodiversity conservation activities under the guidance of Bio-Diversity Management Committees (BMC) (Oommen, 2014, p. 39). BMCs have been authorised by the Government of Kerala as Environmental Watch Group. Transparent guidelines are to be followed in selecting BMC members. They should be six in number, and their educational qualification and background in environmental-related activities should be taken into consideration. Their performance should be assessed every three years. Therefore, the Oommen V Oommen report has focused on Kerala's response to the Kasturirangan Report and has made recommendations that are seen to be practical and foreshadows development over conservation. It should be noted that the report was not presented coherently.

Comparison of the Reports

To conclude part one, we compare the three reports and find that WGEEP (2011), HLWG (2013) and Oommen V Oommen (2014) all studied, visited and gave recommendations on how to conserve the Western Ghats. While WGEEP was in awe of Western Ghats and was

more inclined towards nature and less inclined towards the human development, and demarcated the whole of Western Ghats as an ESA (WGEEP, 2011, p. 22), HLWG tried to find a path wherein the human development was not affected to a great extent and was of the opinion that only 37% of WG should be protected as ESA (HLWG, 2013, p. xii). On the other hand, Oommen V Oommen saw its recommendations as being practical as Kerala was already on the path of rejuvenating nature and practising the homestead farming and has an eco-friendly lifestyle (Oommen, 2014, pp. 16-18). WGEEP and HLWG approached the issue of how to protect one of the worlds 'biodiversity hotspots' and at the same time find a way wherein the destruction caused by man in the name of development could be rectified and controlled. WGEEP's unit of analysis was the talukas, and HLWG used villages, but Oommen V Oommen, on the other hand, critiques both these approaches and favours physical verification. WGEEP's recommendations are for the whole of the Western Ghats and deal with various aspects in detail, but concentrating on the rejuvenation of ecology while regulating development activities. HLWG's recommendation is a reaction to the WGEEP recommendations and concentrates on balancing human development and ecological conservation in the light of the public's grievances against WGEEP recommendations.

Development

WGEEP questions the business as usual approach to development and asks for a change in the way we do agriculture, building, mining, energy and infrastructure. HLWG sticks a more consolatory note on these issues, and Oommen V Oommen sticks with recognition and incentivising good practices. These recommendations if placed on a scale, are very reminiscent of the climate change models which look at how much reduction in emissions of CO₂ we can achieve with different policy changes being simulated. The WGEEP is on one end of the spectrum of regulation and conservation and the Oommen V Oommen report on the other end of business as usual.

Specific to Kerala, ironically the WGEEP (WGEEP, 2011, p. 40) has recommended that the whole of the Western Ghats regions should emulate the State. The committee points to the farming method of Kerala like traditional 'Homestead' method, which is explained by Oommen V Oommen (2014, p. 18) as an instance of best practice. This is just one instance where the Gadgil committee is complimentary of the State. However, it is in this State alone that violent protest against the protest broke out.

Comparing specific recommendations, we find that the WGEEP recommends that farmers should switch back to the rearing of the indigenous livestock since the population of the indigenous livestock is

on the decline due to the introduction of exotic breeds and crossbreds. Although there is an increase in milk production, the exotic breed and cross breed is not able to withstand the climatic conditions and succumb to diseases. Only the indigenous breeds can withstand adverse agro-climatic conditions. Tea estates could integrate animal husbandry with tea cultivation as it was done in the past. Oommen V Oommen has no problem with crossbreed although they encourage the rearing of indigenous side by side.

WGEEP recommends that grazing restrictions imposed on the grounds the basis of forest conservation should be reconsidered. Goat-rearing projects should not depend on forest areas for grazing and village communities should be given support to generate fodder requirements. Unused public land could be converted to fodder cultivation lands and a second crop of fodder in paddy fields could be encouraged. HLWG and Oommen V Oommen have not mentioned anything concerning this topic.

Another such topic that only WGEEP deals with is biogas plants at village level to lessen the dependence on firewood to a certain extent, and the slurry from the biogas plant could be used as manure HLWG. Oommen V Oommen has nothing to say about it.

WGEEP recommends that the Western Ghats should follow the Kerala method of conservation and management of the fishery. Analysis and surveys should be carried out regarding migration, breeding behaviour and spawning grounds of threatened fishes. WGEEP has a lot more to recommend on fisheries, but Oommen V Oommen only recommends that explosives and chemicals should not be used to catch fish and invasive fish species should be discouraged. WGEEP and Oommen V Oommen believe that plastic bags should be banned.

WGEEP recommends allowing tourism provided strict regulations for waste management, traffic, noise and other pollution, and water use is followed. The Tourism Master Plan should be based on the carrying capacity of the area after considering the social and environmental cost. HLWG (2013, p. 114) agrees with WGEEP (2011, p. 85) that it has to be regulated and that the carrying capacity has to be assessed and in terms of impact. Oommen V Oommen(2014, p. 33) recommends eco-friendly tourism and farm tourism like that which is followed in Wayanad and Idukki District.

HLWG (2013, p xiii) believes that forests are not to be disturbed by any activity as far as possible. If roads, industries, projects are to be built, the benefit and the development of the activity is to be assessed at a cumulative level. WGEEP (2011, p.42) recommends that the plans should be submitted for EIA scrutiny by the Local Bodies. The

pollution and destruction caused should be at its minimum, and the development should not be at the cost of biodiversity of any kind HLWG (2013, p. 104). However, WGEEP (2011, p. 43-44) recommends that activities which disturb biodiversity should be entirely prohibited in certain areas, especially the Red zone. However, Oommen V Oommen (2014, p.18) recommends that if the State of the Nation is to benefit, then the activity could continue by following the rules and regulations that have been established, i.e. development under stipulated conditions.

There is no difference of opinion between WGEEP (2011, p. 44) and Oommen V Oommen (2014, p.21) when it comes to forest areas, sacred groves, grasslands, rocky areas and hilly areas - they are to be protected, and community forestry should be encouraged. There should be more emphasis on environmental conservation, increasing role of watershed and landscape approach to forestry. WGEEP (2011, p. 60) and Oommen V Oommen (2014, p. 18) recommend that interaction between agriculture, animal husbandry and forestry should be encouraged. Oommen V Oommen (2014, p. Pg 22) believes that the stipulated distance between the forest borders and a human habitat cannot be followed as WGEEP and HLWG have recommended since it could cause a loss of a village or a town. It was the Forest Department's duty to take care of the forests. The department was recommended to plant fruit trees in the forest so that the animals stayed inside the forest and they were to take measures that there was no human animal conflict. Oommen V Oommen (2014, p.31) and WGEEP (2011, p.42) recommended that crop loss due to wild animals should be compensated and farmers and their land should be given protection. Although WGEEP (2011, p.42) recommends that people could be relocated and compensated in almost all cases, Oommen V Oommen (2014, p.10) disagrees and says that local people should not be disturbed, especially those who have been in the same place for a long time and have coexisted with nature. If WGEEP's recommendations were to be followed, Oommen V Oommen (2014, p.32) state that the tribal people may be forced to leave the forest since their life and livelihood would be affected, although both recommend that the tribal people and the communities and their livelihood should not be disturbed. They should be given support and finance for taking care of the forest areas.

HLWG (2013, p.xvi) and WGEEP (2011, p.55-56) recommends that funds which could be negotiated from the Centre should be given to the communities directly or trusts could be formed which could help maintain, rejuvenate, protect and sustain forest, forest activities and biodiversity. It could also, according to HLWG (2013, p. xviii) be seen to improve the productivity of forest for economic benefits for local communities and forest management for inclusive development.

WGEEP (2011, p. 71), HLWG (2013, p.141) and Oommen V Oommen (2014, p.35) recommend that there should be complete ban on mining, quarrying and sand mining in ESA and that the mining areas that were in operation at present should be phased out in five years or at the time of expiry of mining lease. HLWG refrained from making any other recommendations since the matter was pending before the Hon'ble Supreme Court. WGEEP recommends that no new mining licenses should be given until conditions improve and extraction of ores beyond the allowed limits should be stopped. Iron ore content cut off should be introduced, and the closed mines which are shown as existing mines should be closed. It further recommends that any order passed by the Collector and the Revenue Officer excluding any of these mines from Netravali Wildlife Sanctuary should be cancelled. Quarries, functioning without a permit are to be shut down immediately, and quarries could be permitted 500 meters away from the forest according to Oommen V Oommen recommendation.

HLWG (2013, p.xiv) and WGEEP (2011, p.46) believe that thermal power should not be allowed in ESA, but Hydropower projects could be allowed provided there is no interruption in the ecological flow of at least 30% level of the river's flow during the lean season. Further, a study has to be conducted to assess the impact of each project on the flow patterns of the river, forest and biodiversity loss on a cumulative basis and the stipulated rules and regulations are to be followed. HLWG recommends that there should be a distance of 3km between the river and the project. HLWG believes that the river basin should not be affected by more than 50% at any time. Oommen V Oommen (2014, p.27) recommends that check dams and water conservation systems should be promoted in coffee plantations and that the government should aid the process.

WGEEP, further recommends (2011, p.35-36) decentralised water management, operations of reservoir rescheduled, revival of traditional water harvesting, protection of high-altitude valley swamps, participatory sand auditing, declaration of 'sand holidays', rehabilitation of mined areas to revive water resources, revival of hill streams, catchment area treatment, riparian management water conservation measures. HLWG (2013, p.101) firmly states that WGEEP 'blanket prescription' could work against the communities, that is, the poor, tribals and agriculturists, whose interest it is working to safeguard. They also point out that there are areas where specific techniques are followed which not only protect the soil but also recharge groundwater through ponds and use organic manure. Oommen V Oommen on the other hand states (2014, p.36) that exploitation of groundwater by digging too many bore wells should be controlled by regulations formulated by the Government and the Ground Water Department

should assess the groundwater level and the topography of the land before issuing permits. Further, programmes for recharging dry bore wells should be made, and private agencies should be discouraged from constructing bore wells. Protection measures should be adopted for the river banks that have been destroyed by mining. However, if controlled sand mining in reservoirs and water bodies are permitted after sand auditing and subject to expert opinion in an eco-friendly method, there would be an increase in water holding capacity in the reservoirs.

Since Orange category industries include food and fruit processing, they will not be entirely prohibited, according to HLWG (2013, p.xiv). Industries which have low environmental impacts should be promoted as long as they do not come under the Red category. Oommen V Oommen (2014, p.38) believes that if the banning of the industries under the Red or Orange category affects the State or the Nation's economy, it should not be banned. However, it will have to follow the required conditions, and regular pollution inspections should be conducted at regular intervals. Hospitals, Religious Institutions, Educational Institutions and Food and Milk processing units should be given special consideration and exempted from restrictions proposed for Red category. The recommendations of WGEEP (2011, p.45) are stringent and do not entertain any middle path as far as regulating industries are concerned. Both WGEEP and HLWG recommend that all projects will require consent and no objection from Gram Sabha of the village which is in the ESA region. 'The provision for prior informed consent under the Forest Right Act should be enforced. Oommen V Oommen has nothing to say on this.

WGEEP (2011, p.46) recommends that there should be no new railway lines and major roads, but if it is highly essential and subject to EIA, then strict regulation and social audit is a must. A master plan should be prepared for the transport sector in the entire WG that would look into the present needs and future demands, causing the least disturbance to the ecology and facilitating the passage of animals. HLWG has very little to recommend. It believes that (2013, p.110) infrastructure, including transport, should be taken into consideration only after cumulative impacts are studied and assessed. Future planning of Railways should consider the safety of animals since there are many accidents involving wild animals. Further, WGEEP recommends various methods to handle human settlements, holiday homes and migration of the population. Oommen V Oommen and HLWG show no interest.

Governance

Both WGEEP (2011, p.55) and HLWG (2013, p. 121) believe that the present system of environmental governance has to be strengthened

and reformed to enhance effectiveness. While WGEEP suggests a centralised system, WGEA, that contradicts other recommendations of decentralisation that the same report makes, the HLWG talks of networking existing institutions, both research and executive to attain better results.

The WGEEP mentions panchayats, decentralisation and the involvement of people quite often. For instance, WGEEP recommends that the whole organic farming programme has to be integrated with the annual programme of the Panchayat and provision has to be given for it in the annual budget. It also recommends that a participatory plant breeding and crop improvement programme should be launched at the Panchayat level. In the backyard of every tribal and other settlements nursery for medicinal plants as well as medicine making units at Panchayat level should be established on a cooperative basis so that the local communities and their cattle will be less dependent on distant health services. It points out that many Van Panchayats of Uttaranchal are managing forest resources prudently. These should be an implementation of pro-people legislation, such as Joint Forest Management, Extension of Panchayati Raj to Scheduled Areas, Protection of Plant Varieties and Farmers' Right Act, Biological Diversity Act, and the Scheduled Tribes and other Traditional Forest Dwellers Act. The report believes that mining should partner with Panchayats and Primary health centres to provide both diagnostics and treatments to the miners. The committee also points out that the State Government has completely ignored the resolution passed by Gram Panchayat and Panchayat Samitis. Even when describing the functioning of the WGEA in the second part of the report, the committee says it should follow the model of the project by Kerala State Biodiversity Board (2010) concerning powers given to Panchayats. The HLWG one the other had barely mentioned the local governance bodies except in recommending that the Biodiversity Management Committee should be formed at Panchayat level.

In short, all three report, emphasize on the importance of interconnection of ecosystems, environmental conservation and agriculture activities and water security, agriculture and water systems, agriculture and animal rearing, community - based forestry, and the dependence of human beings on all these for all his needs and economy. They take on very different approaches to conservation, an understanding of the environment and also the role of people. The WGEEP has an ecosystem approach to the role of people; however, in terms of conservation, it flows an ecologist approach to constructing nature as one of the wilderness. The HLWG does not entirely commit to an anthropocentric view which sees people as apart from nature but certainly alludes to such an approach. In the context of

decentralisation, the WGEEP lends itself better to the concept but does itself a disservice by contradicting itself and recommending stringent centralised regulation and structure.

PART 2

The Discourse of Conservation and Conflict: An Analysis of Newspaper Articles on the Conflict in Kerala that Followed the Gadgil and Kasturirangan Report

Methodology

In order to understand the discourse of conservation that was constructed about the Gadgil and Kasturirangan committee reports and the ensuing protests, we analysed 386 newspaper articles from the archives of two English dailies - The Hindu and Times of India, for the period of 2011 to 2018. An attempt was made to include translated Malayalam newspaper articles, but due to difficulty in accessing all articles for the chosen period due to non-digitalization, this source was dropped. The time needed to digitize and translate would have exceeded the period of the study. We used the software *atlas ti* to run the content analysis. A discourse analysis was done, as it helps us understand how a particular issue is represented. Discourses include processes, material structure, relations, feeling, believes, the faith of the social world. Different discourses represent different perspectives of the world, and these perceptions are affiliated to the relations people make in the world, which further depends on the positions of power people hold, their relations with others and their social identity. Hence, Fairclough assumes the foundation of discourse analysis is that language or texts are an integral part of social life. The discourse analysis approach studies the social phenomenon through written documents or text, which include newspaper articles, transcripts from interviews, television or web page (Fairclough, 2003). We intend to answer the following research questions through a discourse analysis of newspaper articles:

1. What discourse informed farmers' protest against the Gadgil and Kasturirangan committee?
2. What are the views of indigenous communities regarding conservation? Why did they take a different stand from farmers during the protests?
3. What are the views and stances of the local bodies when it comes to conservation? Are they in agreement with farmers' idea of

conservation? Do they have plans for conservation?

4. What are the views and stands of the Bio-Diversity Management Committees and the Kerala State Biodiversity Board on the issue of conservation?
5. What were/are roles played by the people's representatives from the high ranges?
6. What are the important policies and actions taken by the state government for/against conservation of the Western Ghats? What is the state government's stance on development and environment?
7. What was the stance taken by the popular vernacular newspapers on the issue of the Gadgil and Kasturirangan committee reports and the Western Ghats conservation?
8. Who benefits from the discourse around the organised resistance against the Gadgil and Kasturirangan committee reports?

The codes used for each of these research questions are:

Table 1: Codes for analysis

RESEARCH QUESTIONS	CODES
What discourse informed farmers' protest against the Gadgil and Kasturirangan committee?	Negative opinions on Gadgil Negative opinions on Kasturirangan Positive opinions on Gadgil Positive opinions on Kasturirangan Neutral opinion Call to protest Call to end the protest Misrepresentation of the report
What are the views of indigenous communities regarding conservation? Why did they take a different stand from farmers during the protests?	Views of indigenous communities View of non- indigenous communities
What are the views and stances of the local bodies when it comes to conservation? Are they in agreement with farmers idea of conservation? Do they have their own plans for conservation?	View of panchayat View of Farmers Plans to conserve by PRI

<p>What are the views and stands of the Bio-Diversity Management Committees and the Kerala State Biodiversity Board on the issue of conservation?</p>	<p>Views of the Bio-Diversity Management Committees Kerala State Biodiversity Board</p>
<p>What were/are roles played by the people's representatives from the high ranges?</p>	<p>Statement of MLA Statement of MP Statement of ex-MLA Statement of ex-MP Statement of Ministers Statement of Bureaucrat Statement of Syro-Malabar Catholic Church Statement of the Orthodox Statement of CSI church Statement of Latin Catholic Statement of any other church Statement of political parties Statement of civil society Statement of expert</p>
<p>What are the important policies and actions taken by the state government for/ against conservation of the Western Ghats? What is the state government's stance on development and environment?</p>	<p>Policy Law of the central government Laws of state government Administrative laws of state government Case law of HC Case law of SC Official statement of state government Official statement of the central government</p>
<p>Who benefits from the discourse around the organised resistance against the Gadgil and Kasturirangan committee reports?</p>	<p>Benefit of miners Benefit of church The benefit of small farmers The benefit of large farmers/ plantation owners The benefit of global capital The benefit of local capital Benefit of politicians Benefit of parties</p>

The Analysis

Discourse shapes the thoughts, actions and identities of people. This is in line with Hajer's definition of discourse that, "An ensemble of ideas, concepts, and categorisations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities." We need to keep in mind that Discourse theory does not judge whether the ideas that constitute discourse are true or false but only that they exist - shaped by social phenomena (Art, B et al. 2010). When we study the newspaper reports about the protest, we find three different themes. The first theme is about the misrepresentation of fact, which is demonstrated in the following excerpts from newspaper articles:

Report dated: 16 Dec, 2012, 'Addressing an international conference on Conservation of Forests, Wildlife and Ecology organised by the Kerala Law Academy here on Saturday, Prof. Gadgil said the Union government was trying to suppress the panel report and evade a democratic debate on its recommendations. This, he said, was responsible for misinformation and distortion of the report, triggering a storm of protest by some interest groups.'

Report dated, 18th Dec, 2013, 'Mr. Krishnankutty, who had translated the Gadgil report into Malayalam, maintained that the controversy about the report was owing to the ignorance of the people about its contents. "Unfortunately, people, including farmers, were overwhelmed by emotion when it came to an understanding the report," he said. According to him, different vested interest groups and religious leaders also played their roles in misguiding the public."

Report dated, 2nd Oct, 2018, "'The people, who created an uproar about the Gadgil Report has no interest in its contents. Their concern was purely personal, and hence, they crucified Gadgil in all ways possible," he said. Mr. Thomas said that people in the high ranges were misinformed about the report leading to their uprising and added that religious bodies also played a major role in spreading wrong information in this regard.'

Misrepresentation is one of the most often quoted ideas. It has been stated that the reports are misrepresented in different ways to serve the interest of crony capitalists to defeat the purpose of conservation and mislead the people. The second theme is of vested interest, as can be seen below:

Report dated 4th Dec, 2013, 'All these protests against the Gadgil committee report are from vested interest groups and not from genuine farmers.'

Report dated, 9th Nov, 2013, 'Professor Gadgil said political and religious leaders with vested interests were launching frequent campaigns against the report.'

Report dated, 19th Dec, 2013, 'The Western Ghats Protection Committee will strengthen its agitation against attempts by mainstream political parties to destroy the ecologically fragile region while protecting the interests of encroachers and quarry mafia.'

There are several reports that claim that the protest is being triggered by vested interest. We also see that the authors of the reports themselves are often quoted saying this. Illegal miners, encroachers, politicians and religious leaders are blamed.

The third theme is fear of evictions as a consequence of the implementation of the reports, therefore the reports themselves are seen as being against the interest of the people, as demonstrated the following reports:

Report, 5th Dec, 2013, 'The pastoral letter from the Bishop Mathew Anikuzhikattil, head of the Idukki diocese, terming the WGEEP report as an international conspiracy, was read out in a few churches in Idukki and Kanjirapally dioceses last Sunday. The letter, which castigates the report as terrorist activity, said that a large section of farmers of Idukki would be thrown out of their farmland if the report is implemented.'

Report, 17th Dec, 2013, 'A people's convention organised by the Wayanad Samrakshna Samithi here on Sunday decided to submit a memorandum signed by five lakh people in the district to Prime Minister Manmohan Singh, demanding rejection of the alleged anti-people recommendations of the Madhav Gadgil Committee report on conservation of the Western Ghats.'

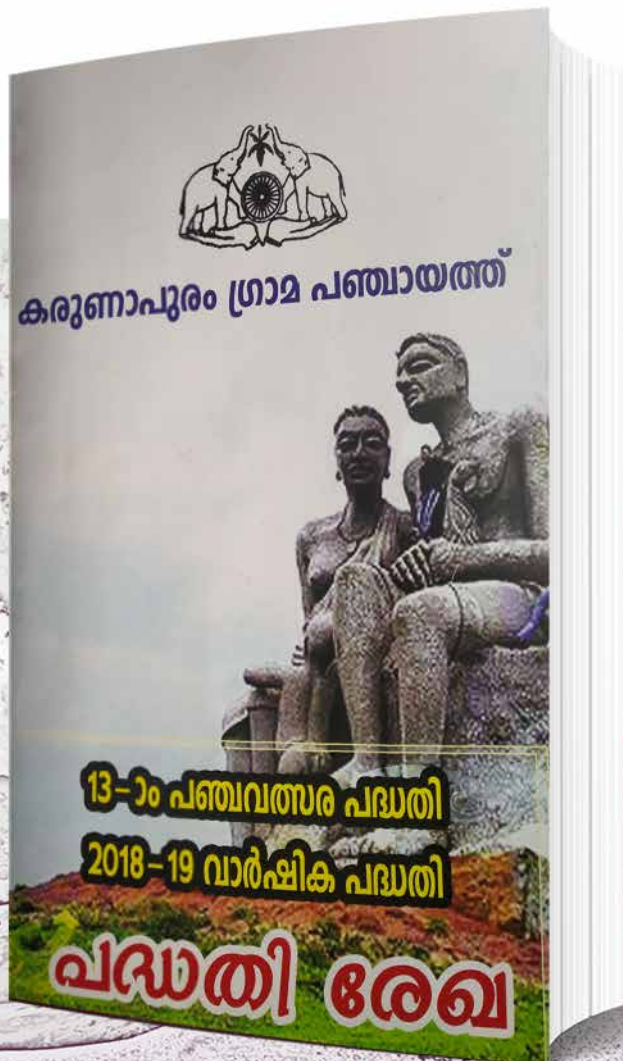
Report, 16th Nov, 2013. 'Rural areas of Kozhikode district witnessed tense scenes in the dawn-to-dusk hartal on Friday called by the LDF and the UDF against the implementation of the Kasturirangan panel report.'

Report, 31st Oct, 2013, 'Farmers' organisations led by the Indian Farmers' Movement (Infam) have decided to stage dharnas and take out protest marches on November 1 in Kozhikode and Malappuram districts to protest against the recommendations of the Kasturirangan and Madhav Gadgil panel reports which they believe are a threat to their livelihood and are aimed at forcing farmers in the Western Ghats regions to abandon their land.'

The discourse thus can be categorised into the following, and we can identify and track the changes in discourse within these categories:

(i) misinformation - the discourses shift from a fear of livelihoods of farmers being affected through 'conservation' and 'limits to growth' in the environmental discourses to the idea of misinformation and vested interest at play to create this fear.

(ii) vested interest- the regulatory discourses around 'State regulation and hard environmental laws' deals with the fear of regulation and



control, that will benefit the powerful at the cost of the powerless. It is felt that it violates the principles of federalism and decentralisation, taking power away from the people.

(iii) Eviction - In essence, the eviction discourses and the fear of losing land shaped the reasons for collectivisation of people to protest and words such as 'anti-farmer', 'terrorists', 'non-practical', 'conservation-oriented action', 'against socio-economic welfare' set the stage.

The progression of the discourses shows us the changing role of actors like the farmers and the State. It draws from not just the protest that is happening as a reaction to the Gadgil and Kasturirangan report, but also from a long history of suspicion towards both conservation policies, as well as, state intervention in the high ranges of Idduki. The insights that can be drawn from this exercise is that the narrative about this discourse is complex and is collectively constructed by both the State and the people.

We need to understand the meanings associated with the creation of these narratives. As stated, "discourse defined here as an ensemble of ideas, concepts and categories through which meaning is given to social and physical phenomena, and which is produced and reproduced through an identifiable set of practices." (Hajer & Versteeg 2005) Therefore, the discourse of misinformation, regulation and eviction are not about the facts, but more about how said facts are interpreted and given meaning in the context of the protest. The reiteration of these ideas by people and institutions who are in positions of power, like the authors of the report Prof. Gadgil and Dr V.S. Vijayan talking about misinformation, or the church putting forth the fear of eviction, puts in place a convincing narrative on conservation that is highly political and influences how the people perceive the issue. "Language is not just a neutral medium mirroring the world, but profoundly shapes one's world view and reality" (Hajer & Versteeg 2005). The words were chosen by people in power, and its reporting in the press constructed a world of contestation that played out through hartals and protested in the streets. This revealed the embeddedness of conservation politics in the landscape of Kerala's socio-economic structures. Further, this is not a product of just this protest, but rather should be seen as being developed through the operation of socially accepted rules and norms that to a great extent are driven by capitalist market considerations of the institutions that reproduced these ideas, whether it be the church or the media.

To illuminate mechanisms through which these happen and answer the 'how questions' we have set up at the beginning of this analysis, we need to rephrase our query to answer the question of how the

meaning of conservation keeps evolving amidst political contestations and how different actors put themselves in this context. This can be seen in the following reports:

Report, 29th April, 2014, 'Kozhikode: The Madhav Gadgil committee's prescriptions to save the Western Ghats ecosystem might have earned brickbats from the state government and political and religious establishments alike. But, Padinjarathara panchayat in Wayanad has expressed its readiness to embrace the panel's stringent recommendations to protect their natural resource and livelihood. A joint meeting of the panchayat board and various social and environmental groups have decided to favour a near-total implementation of the report, barring a couple of recommendations, Padinjarathara will also become the first panchayat to hold special 'environment gram sabhas' this week to explain the Western Ghats Ecology Expert Panel (WGEEP) report to people and evolve collective decisions on environmental issues.'

Report, 13th June 2016, 'The Naranammoozhy grama panchayat committee has decided not to grant the Dangerous and Offensive Trade (D&O) license for granite quarrying in the environmentally-sensitive Chembanmudy hill Ranni Taluk.' (located in the Ghats)

Report, 7th March, 2014, 'He said most of the area where villagers grew rubber, with financial assistance from Rubber Board, and cultivated tapioca, colocasia, and elephant yam had been categorised as ESA.' 'The voice of Kollamula is firm. We will not permit politicians to enter our village and campaign for election before withdrawing the panel report as such,' he said.

We see here three very different stances on conservation and the reaction to the reports. These different standpoints have constructed the Western Ghats as a contested space. Western Ghats Conservation is set up in such a way that it is politically invented and reinvented as being either pro-people or anti-farmer; it is both vilified and glorified. A unity of opposing ideas makes up the landscape. Given this shift, discourse analysis becomes significant to answer questions about the 'politics of conservation' such as 'Conservation of what?' and 'Conservation for whom?' These questions are further institutionalised through definite ideas about environmental conservation being expressed and implemented in environmental laws and policies from colonial time. "As the units within which policy has to be made coincide ever less with the constitutionally defined settings, policymaking becomes a site of cultural politics, leading people to reflect on who they are and what they want. The polity becomes a discursive construction, established via the deliberation of shared problems."

(Hajer and Versteeg 2005). This plays out in the following reports:

Report, 22 March, 2014, 'Committee chairman OD. Thomas said on Friday that the 112-page draft notification issued by Ministry of Environment has not assuaged the worries of farmers about the recommendations made in the K. Kasturirangan and Madhav Gadgil report on Western Ghats conservation. He said the notification was aimed at misleading farmers.'

Report, 4th Jan, 2013, 'It suggests that some experts of the Western Ghats Ecology Expert Group be inducted in the Forest Advisory Committee, which clears proposals under the Forest Conservation Act. The Central government, invoking the provisions of the Environment Protection Act, can notify areas in which industries shall not be established, fix maximum allowable limits of pollutants for an area, and decide on the environmental compatibility of land use. It also proposed that all forest be kept out of the purview of ecologically sensitive zones. The panel's suggestion that service charges be paid as incentives to encourage continued conservation-oriented action will only have limited application, the department says. Only a few owners of mangroves responded to an incentive project announced by the department last year. Moreover, such incentives will never match the benefits of alternative land use in the State, where land value is very high, it pointed out.'

Report, 8th Jan, 2014, "'After its recommendation to scrap the Kerala Forest (Vesting and Management of Ecologically Fragile Lands) Act, the committee said, 'the government should not interfere in cases that are already in the court in connection with EFL land issue.' This was a clear indication of things to happen for the debilitation of the Western Ghats. The only way for the conservation of the Western Ghats is to implement the Gadgil report," she said.

From these reports, we understand that the legal provisions on conservation are understood by different people in the context of the two reports, Gadgil and Kasturirangan, in different ways. Further the struggle and protest themselves are affecting the understanding of what the legal provisions mean and what we are seeing is an interplay of environmental discourse with other broader or 'internally interwoven' meanings about the environmental discourse that is not homogeneous. Rather there is a fragility and contention associated with even what basic terms of law mean. Which interpretation prevails also becomes a part of the political struggle. Therefore, this environmental discourse has material and power effects, as well as affecting material practices and power relations. "It also allows one to

ask if environmental policy is about nature and the environment at all or rather about redistribution and reconfiguration of power in the name of the 'environment'" (Feindt & Oels 2005) as is illustrated in the following reports:

Report, 17th Nov, 2013, 'Mr. Muraleedharan said the violence over the Kasturirangan report was planned to create panic among the people. It was part of vote bank politics by the CPI(M) and the Congress. The church was also being involved. Thamarasserry Bishop Mar Remigiose Inchananiyil had made a speech provoking aggressive behaviour by followers.'

Report, 22nd, Nov, 2013, 'BJP State president V.Muraleedharan has accused the Bishop of Thamarassery and Idukki of trying to stir up a revolt in the name of the Kasturirangan committee report and demanded that the State government take legal action against them for making provocative statements.

Report, 2nd Oct, 2018, '“The people, who created an uproar about the Gadgil Report had no interest in its contents. Their concern was purely personal, and hence, they crucified Gadgil in all ways possible”, he said. Mr. Thomas said that people in the high ranges were misinformed about the report, leading to their uprising and added that religious bodies also had played a major role in spreading wrong information in this regard.'

Another theme that we see in the context of the reports is the idea of sustainable development, which is a dominant idea in how the environment and its conservation is thought about. However, sustainability, development or environment are all not apolitical concepts. The definitions of these concepts are socially constructed and influenced by the politics of various actors as they interact within existing social, political and economic structures. To understand the issue, therefore, it is vital to understand the role played by various actors (Nygren 1998) like the church, farmers, politician, miners, plantation owners, Adivasis, panchayats and various non-governmental organisations. The excerpts from the newspaper quoted above show us that the church and State accuse each other of spreading misinformation and being anti-farmer. The political parties play off this conflict and make populist statements that they are picked up by local organisations and form part of the language of protest. The following reports show us statements by a few of the less powerful actor:

Report, 22nd Oct, 2013, 'The Adivasi Gothra Maha Sabha (AGMS) has urged the Union Ministry of Environment and Forest to execute the recommendations of the Madhav Gadgil panel report on the Western Ghats. Addressing a press meet here on Monday C.K Janu, chairperson and M. Geethanandan, convener, Bhoo

Parishkarana Samiti, said that the recommendations of the panel should be executed to conserve the remaining flora and fauna of the Western Ghats. The stance of the LDF, as well as the UDF in this regard, was only to support the granite quarry and sand-mining lobbies and such a move would make the State a barren land in the near future, they alleged. Representing the concerns of the Kadar tribes, VK Geetha, a member of the community, said the proposed dam would displace about more than 90 Kadar families from the Vazhachal and Pukalappara settlements. "The proposed site for the dam is hardly 400 meters from the Kadar settlements. Our livelihood is solely dependent on the forest and the river," she noted.

Report, 23rd Oct, 2013, 'Various Dalit organisations under Kerala Dalit Maha Sabha (KDMS) have strongly come in support of the implementation of the Western Ghats Ecology Expert Panel (WGEEP) prepared by Madhav Gadgil. At a meeting in Thodupuzha, they criticised the revised report prepared by Dr. Kasturirangan.'

Report, 25th Oct, 2013, 'Adivasi Gothra Maha Sabha (AGMS) alleged that the government decided to appoint a committee to study the Kasturirangan committee report was aimed at sabotaging the proposals to protect the Western Ghats. AGMS chairperson CK Janu said real estate and mining lobbies, with the connivance of political parties and the government, were carrying out propaganda that the implementation of the report would lead to the mass eviction of people from the high ranges.'

Report, 30th Aug, 2013, 'Kochi: A tribal community chief in Idukki has come out strongly in support of the Madhav Gadgil committee report, though mainstream political parties like the Congress and the CPM have criticised it, Raman Rajaj Mannan, the king of Mannan community, who rules over 46 hamlets, comprising 3,000 families in the forests of Idukki district, said, "The forest cover in the State is shrinking, and the only way to save it is by implementing the Gadgil report. "

These excerpts demonstrated that the narratives of the powerful and the powerless play out very differently. The reports illustrate that conservation is loaded with diverse associations and meanings for different actors. Simultaneously, they illustrate how social hierarchy is often reproduced in the articulation of political positions, and how concepts of conservation changes between different social and cultural actors (Nygren 1998).

We see that this tension also exists when we compare the

recommendations of the reports. Conservation of the Western Ghats, wherein nature is seen as separate and completely isolated from humans, lends itself to conflict. According to this philosophy, protection of nature then means to reduce any human interaction in order to protect the sanctity of forests by way of state regulation. This way of thinking tends to turn a blind eye to the local population and social rights. It does not differentiate between the harm caused by locals, who are an integral part of the ecology and who might be sustaining it and the destructive practices of large firm or plantations. People have become used to seeing this type of conservation, and regardless of the approach, a conservation measure may take, the people are distrustful of it. The WGEEP report tries to move away from such a stance with little success as local people are still frustrated that they are always the ones who bear the cost of conservation.

Report 5th March, 2014, '123 ESA villages in the State. "All we are asking for is the freedom to grow some tapioca, elephant yam, and colocasia for our sustenance. Crops have failed. Agriculture is in crisis. This is our circumstance," Lucy Mani, a panchayat member said.'

Report, 12th Feb, 2014, 'Protesters, under the banner of the Western Ghats People Protection Committee, gathered outside the main gate of the District Collectorate on Tuesday and spoke about the uncertainty caused by the Madhav Gadgil-Kasturirangan reports to their livelihoods.'

A way in which governments try to ease such concerns is by moving towards more conservation for-profit model, that says the only way the environment can be protected is by making environment economically lucrative by way of ecotourism businesses, forestry etc. Both the Kasturirangan and Oommen V Oommen report take such a stance by advocating improvement in the value of resources and engaging local people in ecotourism activities. This view says that economic growth will result in the welfare of all, but in reality, the trickle-down of capitalism rarely happens, and while large corporations benefit massively, the local population suffers. Further, local people are made into landless labour in their own lands. This truth is not unknown to the people, and they push back against such attempts. As can be seen in the excerpt below:

Report, 28th Nov, 2013, 'Ecological conservation is not something which a professor sitting far away should do. Stop the implementation of the Professor Madhav Gadgil, and K. Kasturirangan reports and start talking to the local people, and with the permission of the gram sabhas concerned form local

biodiversity committees to build a mechanism for ecological preservation of the Western Ghats regions. A people's report should be prepared on ecological conservation. This is our unilateral decision," the panchayat's resolution expresses the people's decision.'

The core problem here is that the push to conserve brings out tensions that already exist due to problems of inequality, such as, insecure land tenure regimes and social marginalisation. The feeling is that conservation efforts such as the Gadgil and Kasturirangan report puts the burden of the active management of resources on the local people without striving for structural transformation and struggle against institutional regimes and hegemonic authority.

Report, 20th April, 2013, "Develop recklessly and conserve thoughtlessly is the latest motto wherein the local community and its interests have been sidelined by external forces," he lamented.

Report, 22nd Oct, 2013, 'He pointed to a quote from the Gadgil report that said, "increasingly, the Western Ghats areas are now being occupied by urban individuals/Developers with land holdings ranging from 0.5 acres to 1000+ acres. These people are politicians, developers, the common man, corporates, and industrialist." "The motivating force behind the hartal today are those people who live in the cities buy large expanses of land in ecologically sensitive areas of the ghats," Mr. Sreevalsan said, supporting the observation in the Gadgil report.

This brings us to the narrative of protection of the environment and economic growth that is envisaged as two goals that are in conflict with each other. The conflict is evident in the following reports:

Report, 19th Dec, 2013, 'Mr.Jayarajan said if the report was implemented farm and plantation sectors in the district would be slowly eliminated.'

Report, 20th June, 2014, 'In contrast, the Kasturirangan Committee report would benefit only miners and industrialists. Many of its action items were easy to evade because they were not restricted by time, acting merely as suggestions and not directives, he said.'

Report, 28th Oct, 2013, 'While business interests having stakes in granite quarrying, real estate, timber and tourism, who thrive in the biodiversity hotspot for decades, are opposing the report, the UDF government is under pressure to implement its salient recommendations.'

There is this constant fear of limits to development. The Gadgil and Kasturirangan report made an effort to integrate and bring synergy between environment conservation and economic development that can result in a positive-sum game between the economy and ecology. Rather than seeing environmental protection as a brake on growth, conservation was the sort to be promoted as the application of stringent environmental policy as a positive influence on economic efficiency and technological innovation (Berger, G., Flynn, A., et al. 2001). In a world obsessed with capitalist goals determined by free trade, capital mobility, and an overall commitment to market liberalisation, this type of ecological modernisation should have been the solution. However, on the local scale where the actual regulation plays out these tensions between conservation and development efforts is not seen as synergic, but rather as two opposite goal posts.

The fundamental belief system that sees environmental protection as a precondition of long-term economic development is missing from the narrative. This would require internalising care for the environment into existing patterns of economic production and consumption or, in other words, facilitating change in environmental policy within the broad framework of modernity, which would then determine a more positive discourse about the environment. However, the broader policies of development have been centred around economics and business. Further, we do not see a shift from a Government of hierarchical command to a Governance with the involvement of various actors and a more self-regulatory model of people and local institutions. The current discourse observed around the protest fails to motivate social actors to embrace environmental protection. Further, this is a situation fraught with politics, power and influence playing a significant role in setting the discourse of conservation.

“History and humans are not so much ‘driven’ by objective interests, rational calculations, social norms or overt power struggles, but by knowledge production and (collective) interpretations of the world.” (Arts, B., & Buizer, M. 2009). The interpretation of the reports by the people in the context of this conflict gives us a way to understand this knowledge production on conservation. The words used in the reporting of the conflict are “interest of”, “against”, “anti-people”, “anti-nature”. This builds a frame of reference to the past and current fear of being dispossessed and evicted. This has a long history:

Report 20th Jan, 2013, ‘The people in these areas, especially in Idukki district, had settled there as part of the government-sponsored ‘Grow more food programme’ after the Second World War. There was an all-party decision in Kerala, approved by the Union government, that all settlers prior to January 1, 1997,



should be given title deeds. Similarly, the restriction proposed on monoculture would affect the traditional plantation crops of the State, such as coffee, rubber, and cardamom, which were the mainstay of the State's agriculture economy. With regard to eco-sensitive zoning, the memorandum said the main drawback of zoning as far as Kerala was concerned was that it had been carried out without considering the special problems of the State with regard to land use, population, and socio-economic factors.'

The obvious way of understanding this is that historical distrust of state-driven conservation activities is manifesting itself in the current protest. However, this approach ignores the nuances which are brought forth by bringing together the multiple narratives of biodiversity, sustainable development and development that interplay with the fear of eviction. The power relations that this creates between the expert scientist and the local farmer leads to diversity and complexity in the narrative that is rife with power dynamics and power struggles (Healey 1996). If we focus on material conditions of who should get what, we see that local people are the ones who pay the price of conservation, if we ask how people come to understand and value the qualities of their environments, then the narrative becomes complex as can be seen in the following report:

Report 25th July, 2012, 'The Forest Department and most government agencies consulted by the State government on the recommendations had opposed them. The Electricity Board had accused the panel of "acting with a closed mind and being under the influence of other agencies."

Report, 16th Sept, 2018, 'Mr. Babu Paul said that there should be a serious rethink on how an agricultural activity is carried out in a highly fragile area like Kuttanad. He said that those who criticised the Gadgil report are the ones who have not read it.'

Report, 1st June, 2014, 'The (CSI) Bishop said settler farmers were at the receiving end of the Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act of 2003, and their apprehensions should be allayed. The Bishop alleged that it was the mining, quarrying, resorts and sand mafia who were sponsoring agitations against Western Ghats conservation. Even today nearly 2,000 illegal quarries were functioning in the Western Ghats, he said. The Bishop said there was 'not a single line' against the interests of the farming community in the 500-odd pages of the Gadgil report. Moreover, it stands for sustainable development. The letter will be read out during the Environmental Sunday Service on June 1.'

Report, 15th Nov, 2013, 'Protests have broken out in the hilly areas of Kannur, Kozhikode, Malappuram, Wayanad and Idukki district

of the state over the implementation of five recommendations of the Kasturirangan report on the conservation of the Western Ghats.’

Through these quotes we can see that conservation is understood as a set of ideals that are either working for or against the people and these ideas are communicated by diverse groups of people in many ways leading to a contentious arena of ideas. In such a situation, then “the power of the ‘better argument’ confronts and transforms the power of the State and capital.” (Healey 1996). This can be contextualised within the broader international conservation discourse, where conservation that has neglected to include local people, has been criticised as ethnocentric, favouring Western ideas of nature (e.g. Anderson and Grove 1987); elitist, overlooking resource management by indigenous inhabitants (e.g. Colchester 1994); ecologically outmoded, based on models that ‘freeze-frame’ the ecological status quo (e.g. Zimmerer 1994), and self-defeating, because outside pressures eventually impinge on protected areas, generating conflict (e.g. Adams and McShane 1992) (Jeanrenaud 2009).

This leads to a shift of perceptions within the international conservation discourse, such that, first, the local people are seen as the main actors to achieve conservation objectives. They are no longer blamed as the principal agents of destruction, or if they are, more attention is given to the ‘poverty’ which forces people to depend on non-sustainable resources. Second, other new narratives began to extol the virtues of ‘traditional people’ who have lived for generations in ‘harmony with nature’. In contrast to earlier discourses, they are now considered to make significant contributions to global understandings of sustainable use and conservation.

At the same time, counter-narratives were developing in the 1990s that asked ‘nature conservation for whom and for what?’ ‘species of special concern – to whom?’ and ‘who decides?’ The broader challenge presented by the new thinking is not merely to redraw the map of conservation, but to change what that map is actually about in such a way that the indigenous people who are most affected personally by conservation policies also have a say in the decision making (Jeanrenaud 2009).

However, this line of thought can also be derailed as is seen in the New Traditionalist discourse prevalent in the studies about Indian ecology and environmentalism. New Traditionalist discourse is one that valorises pre-colonial Indian traditional practices and blames the deforestation and the Indian ecological crises on the colonial era practices. According to this discourse, traditional, pre-colonial Indian values were along the lines of harmonious social relationships and

sensitive ecological resource use, while colonialism brought with it and imposed on the people alien social, economic and ecological relationships in India. Further, this discourse supports the revitalisation and reverting back to these traditional Indian values as opposed to conventional development strategies which it says still propagate the essence of the colonial era policies. This narrative has been captured very well in a paper by Sinha (2000), where the author finds that the factors that led to ecological degradation that this discourse faults the colonial policies with, predate this period, taking place in the pre-colonial times as well. In addition to that this discourse paints the Indian Traditional culture in a monolithic and homogenous way taking the community of the hill people of Himachal as an example to represent the whole of the country with the portrayal that Indians have traditionally been close to nature and inherently engaged in nature conservation through sustainable and balanced practices. It also associates an empowered position for women in this era and imagines a time with an equitable society while ignoring the caste and gender stratifications of the time. While the philosophy of Jainism and Buddhism were perhaps closer than Hinduism to this sentiment of closeness to nature, this ideology ignores the tension between the respective schools in a broad narrative of Indian thought. This narrative forgets that forest dwellers were marginalised by Hindu tradition.

Within new traditionalism, the Chipko movement also becomes an autonomous and spontaneous display of traditional Indian values of ahimsa and Gandhian Thought by the Indian women. However, this view rejects the political nature of this movement which has its roots in socialist and communist ideology and activism. The Chipko movement was not about the non-use of forests since they were considered holy as New Traditionalism portrays, but rather it was a fight for the use of forests by the local population. The movement was also a fight for the locals to have more political say.

These broader discourses on conservation can be seen to play out in the instance of the protest against the Gadgil and Kasturirangan committee as well. The different roles ascribed to local people, the dichotomy of West and the East, traditionalism and modernity and romanticising the traditional peasant life, all play out in the instance in the newspaper reports of conservation we have analysed here.

To summarise, we find the narrative of conservation that was built around the protests against the Gadgil and Kasturirangan report was interactive, diverse, disrespectful of differing opinions and argumentative. The 'arena' of the press where these discussions took place led to contesting claims on the truth of what type of conservation the reports proposed. The political space in Kerala allowed for the

subject of conservation to be criticised and was accommodative of opposing views and changing contexts. In such a process one could argue that if these diverse views are fed back into the policymaking process, it will lead to better policy, but the process itself being driven by violent protests on the ground brings in another dimension of power that muddles this argumentative construction (Healey 1996) of Conservation. It, therefore, becomes crucial to conduct field-based interviews to understand the participant's viewpoints and further clarify how conservation is understood.

A situation like the protests brings about the need for change, a place where discourse can happen, where people who make the initial move in a way that does not reestablish the existing dominance of certain groups lead the way for a new narrative on the issue to emerge. In such an instance, it becomes imperative to ask the participants what they value and not go forth with assumptions. The style of this discourse being argumentative also tells us who the main participants are in this situation.

PART 3

The field talks - Who wants to conserve the Western Ghats in Karunapuram panchayat, within the Cardamom Hill Reserve in Idukki district?

Methodology

Therefore, we categorised the actors who were prominent in the protest as follows and interviewed participants from within each category:

- Farmers
- Members of the biodiversity management committees
- Panchayat members
- District-level officials
- NGO workers
- Ex-Members of Parliament,
- Church bishops and priests
- Scientists
- Environmentalists and activists
- Local media reporters
- Gadgil and Kasturirangan's interviews
- Other activists who work on the Western Ghats

The newspaper articles were used as a starting point to identify the participants. A lot of the discussion that happened in the media was rich in detail, and it formed the bases of our interview guide. We used qualitative research methods and tools for data collection; this included open-ended and close-ended interviews, focused group discussions and narratives.

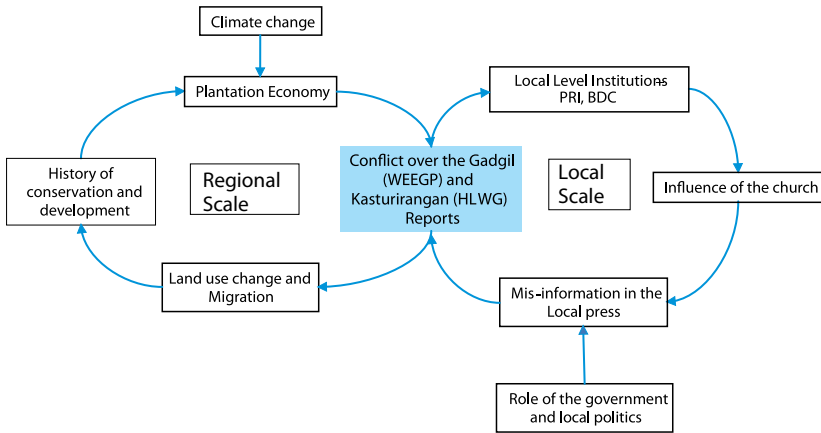
The field site for the interviews was Karunapuram village panchayat in Udumbanchola taluk in Idukki district. Idukki district on the Western Ghats is considered as the roof of Kerala. In terms of socio-economic and geographical indicators, the District consists of Devikulam, Udumbanchola and Peermedu taluks with an area of 436345 sq. Km, which is the second largest in Kerala. The District lies in two physiographical divisions, i.e., high land and midland. According to the 2011 census, Idukki District has a population of 1108974. The density of population is 255 per sq. Km, the literacy rate was 91.99% in 2011, and the sex ratio is 1006 per 1000 male. Periyar, Thaliyar and Thodupuzhayar are the main rivers that flow in this District, and more than 50% is under forest cover. Agriculture and dairy are the primary sources of occupation. Cardamom, Tea, Rubber and Coffee account for more than 50 % of the total cropped area, and pepper occupies about 25%. (District Planning Office, 2020).

The resistance against the Gadgil and Kasturirangan reports was the strongest in Idukki (Suchitra 2014 (b)). Out of the 123 ESA villages identified by the Kasturirangan committee (Nandakumar 2016 (b)) 48 fall within Idukki district, and as per the Gadgil committee the whole District is ESA (Suchitra 2014 (b)). The interviews were conducted from September 2018 to May 2019. The total number of respondents interviewed across all categories of participants listed above is 45.

Analysis

The interviews from the field helped us gain insights into the reaction to the Gadgil and Kasturirangan committee and the conflict that emerged. In order to consolidate the various points learned from the field in a coherent narrative and contextualise them historically, we shall lay out our findings based on a chain of explanation that is depicted in figure 1. This analytical figure is based on the understanding of conservation that we gained from the discourse analysis done. From the analysis, we can posit that control of resources and landscapes when appropriated from local producers or producer groups through the implementation or proposed implementation of conservation policies and laws can lead to a fear of or an actual disablement of local systems of livelihood. This, in turn, leads local producers to collectivising and trying to leverage power to gain control over the resource.

Figure 1 - Chain of explanation



This chain of explanation reflects the history of conservation that has been led by coercive measures imposed by the state in the name of conservation. The primary model of this form of conservation is the Yellowstone model of forced evictions (Robbins, 2012, p. 182). This idea of conservation as territorialising of space and control to keep out local communities requires the coercive might of the state not just to enforce conservation rules, but also to create a hegemonic discourse of nature that is pristine only if devoid of humans and hence the only way that conservation can be achieved. This depends on a very Edenic notion of non-human nature that is very common in the global environmental conservation narrative (Anderson and Grove 1987). This control over space that is part of the conservation effort is made legible through maps and zoning (Scott 1998) which brings to mind the entire debate around the environmentally sensitive areas (ESA) which is at the heart of the Gadgil and Kasturirangan reports and the conflict that ensued.

Now to understand the different components of the framework that is being used to organise the findings from the field and contextualise it in the history of the region. Using the issues mapped out on the left of the framework, we explain the history of the region. Here we look at Land use change and Migration, History of conservation and development, Plantation Economy. These factors operate on a regional scale in the field site but are significantly impacted by the broader processes and concerns of Climate change. On the right side of the framework, we provide the finding from the field that operates on the local scale and work within the constraints of state and local

politics. Together they form a chain of issues that explain the conflict surrounding the recommendations of the WGEEP and HLWG report. The different parts of the framework are expanded upon below:

Land-use and Migration

According to an Environmental Vulnerability Index, Idukki stands second in Kerala, after Alappuzha, due to the presence of dense and shola forests (Sarun et al., 2018). In terms of a socio-economic vulnerability index, Idukki stands as the most vulnerable due to factors such as a high percentage of the population depending upon the primary sector, the highest percentage of socially deprived class and low overall human development indicators (Sarun et al., 2018). Hence, this region is vulnerable on a variety of fronts. This is because of its historical context.

In 1905, 87 per cent of Idukki district was under forest, but by 1965, the forest cover reduced to 65 per cent, and by 1973, it drastically fell to 33 per cent within eight years (Sivanandan, Narayana, & Narayanan Nair, 1986). This is because the Travancore state, a monarchy during the pre-British times, actively encouraged commercial cultivation of cardamom, as land revenue and tax on agriculture were the primary sources of revenue. Sivanandan, Narayana, & Narayanan Nair (1986) note that cardamom earned the highest foreign exchange among the spices. They also find that various rules about land revenue and land allotment from 1860 to 1925 were meant to attract more people to commercial cultivation. The expansion of the area under cardamom in the High Ranges of Idukki towards the end of 19th century and the beginning of 20th century was a result of the state policy of uniform taxation, assigning of land rights often on forest lands on payment of land value, and by issuing patta. Large scale immigration ensued, in the form of large capitalist cultivators and also a substantial number of small and medium farmers and farm labourers from the low-wage areas of Tamil districts. A significant expansion of cardamom cultivation was seen in the 1920s when the cardamom prices showed a steep upward trend.

Post-Independence, another wave of immigration occurred, and the new immigrants resorted to massive encroachment of forest lands and later agitated for its regularisation. The government policy of legitimising encroachments on lands declared as unsuitable for cardamom cultivation, acted as an incentive to encroach further. This led to a domino effect and widespread denudation of forest lands. The new immigrants from central and low land areas of the state introduced crops like rice, coconut, tapioca, pepper and rubber, which are not conducive to the forest ecosystem. Tillage and ploughing in steep slopes led to widespread soil erosion, degradation and

deforestation. This history is not only recorded in the literature on the topic but was also narrated by the respondents. Therefore we find that it remains within the lived memory of the people.

During the interviews both activist and government functionaries attributed the rampant deforestation due to migration in this region of the Western Ghats (Malabar and Travancore) in the 19th century to four state policies: One, the Royal Proclamations encouraging plantations; two, the Grow More Food campaign in the early 1940s; three, the colonisation programs of the state before 1950s; and four, major hydro-electric power projects. Therefore, as a consequence, starting from the 1920s, population growth in the coastal plains was 306 per cent, whereas the growth in the highlands, foothills and uplands was 1342 per cent, which led to associated development of road building and settlements. Suresh, Rajesh, & Pradeepkumar (2018) state that the severe famine in Travancore during 1944 forced the hands of the government to open up forest lands for cultivation. An immigration wave, comprising mainly of Syrian Christians from central Travancore took place in the aftermath of the war years. During the early 1940s, the government granted exclusive farming rights called kuthakapattam to the new immigrants. Sekhar, Kuriakose, Sankar, & Muraleedharan (2009) noted that along with migration, such policies also led to land-use change due to an increase in commercial plantations of cassava and rubber. Mining also contributed to this change. Hence, we see much change in land-use patterns in the high ranges of Kerala.

This history that we have collaborated with literature was narrated by the environmentalists and scientists who were interviewed. Also, most participants who lived in Karunapuram have a history of migration to the high ranges. As can be seen in the interview of one participant, Mr A (Male, age 64, Christian, Graduate, retired schoolteacher, farmer, owns five acres) said, "I am from Pala, came here in 1976. Those days, this Panchayat had acres of paddy fields." This recollection of a different landscape and the change that occurred across their lived memories was a standard narrative by local people.

History of Conservation and Development in Idduki

This history of land-use change and migration is further complicated by the conservation and development efforts seen in the high ranges across centuries. Before colonisation, the ownership of forests was in the hand of princely rulers. However, access to forests was unrestricted, and there were established common property regimes where the symbolic and religious relationship of trees and forest played a crucial role. The common property regimes were inequalitarian, and control over access was not allowed to all people as the caste system

determined common property rights. The forest was either reserved for the king, donated to Brahmins or left as commons. When the British colonised the area, forest management was centralised and commercialised for the timber trade. The rights of local communities were restricted, and most were excluded from the forests, this created conflicts between the locals and the colonisers (Aravindakshan, 2011, pp. 56-62).

A similar pattern of control was observed in the Cardamom hills of Idukki district, which was historically under dispute between the Travancore and Cochin kingdoms. It was believed that the Pooniat family had brought the land from Rajahs of Malayali, but the sovereignty of the land was not transferred. However, the sovereignty was given to Travancore when they conquered the principalities of Changanacheri. These uncertainties were further amplified when the British began to control the area. However, in 1822 a joint commission decided to re-establish Travancore's control over the hills. In 1861 the Pooniat Rajah reclaimed control by granting land for plantations to the British. Simultaneously, teak was being extracted from the high ranges by the British for military and commercial purposes and deforestation escalated at an alarming rate (Moench, 1991).

At the same time, the Adivasis of the region were treated as labourers, and their practice of shifting cultivation was falsely blamed for the depleting conditions of the forest. Between 1800 to 1880, there were a number of clashes between the Adivasis and the government which used its military might to crush resistance and protect its control over the hills and the revenue it generated from extraction. The Adivasis were further pushed to the margin after the establishments of coffee plantations in the Western Ghats, where land brought under plantation and most European families settled in houses with extensive grounds.

Monopolising Cardamom trade became another reason to control the forests, the origin of cardamom can be traced back to Travancore, where the Cardamom hills constitute 80 per cent to 85 per cent of the produce in Kerala. During the British colonisation, Lieutenants Ward and Conner established the cardamom department, which then leads to deploying a large number of guards and frontiers to protect the produce from the forests from smugglers. Subsequently, the cardamom department in 1909 was affiliated with the land revenue department, where the superintendent held the responsibility to permit the use of forest including firewood and other non-timber forest products (Moench, 1991).

In the 1950s, it was declared that there would be dual ownership by the revenue department and forest department over the Cardamom

hill reserve, where the land belongs to the revenue department, and the trees are the responsibility of the forest department. This history set the stage for the reality confronted by the people of the region in the present.

Many lawyers and activists pointed out that this dual ownership was a primary reason for the illegal construction and development activities by resort mafias in the Udumbanchola and Devikulam taluks. The Cardamom hill reserve is approximately 87,000 hectares, in which 10,000 hectares of land are leased to plantation owners. From the 10,000 hectares, 8,000 hectares belonged to cardamom plantation owners who have title deeds and 1,300 hectares is encroached. Section 7 of the Kerala Land Assignment Act, 1960, framed the Cardamom Lease Rules which granted a lease to plantation owners, but this is considered illegal under the Kerala Forest Act, 1961, and the Government of India legislation – The Forest (Conservation) Act, 1980. A Central Empowered Committee (CEC) was appointed by the Supreme Court to look into this ambiguity (Raman, 2017). This situation was made more complicated when in 2017; the state government stated its intention to convert all land in the Cardamom hill reserve to revenue land.

Plantation Economy

The political economy of cardamom further complicates this history. Cardamom is an export crop and also one that is heavily dependent on the pesticide industry. Further, more than 80% of India's small cardamom production is from the state of Kerala. In the past, cardamom was grown using minimum manure and chemical inputs. However, with the introduction of high yielding varieties in 1990, there was a spike in deforestation as the crop required a more open forest system and also an increase in chemical fertilisers and pesticide inputs. This was incentivised by the fact that the cardamom yield had increased phenomenally. Although Kerala has stated, in 2016, that it wants to switch over to organic farming and has provided incentives to do so, it has turned into an unviable proposition as farmers buy pesticide from Tamil Nadu which is just across the border. Theni district of Tamil Nadu shares its border with Idukki and provides a lot of chemical inputs to the plantations. Another problem with this cash crop is that the cardamom variety called green gold, which is grown in more than 90% of the total area in Kerala, depletes surface soil nutrients at a rapid rate. This incentivises the use of chemical fertilisers. The volatile market does not make the situation easy, and a fall in global prices leads to losses that are usually borne by farmers. These farmers to offset their losses expand the cultivation into forested areas or use more fertilisers and pesticide which is harmful on the long run (Murugan, Ravi, Anandhi, Kurien, & Dhanya, 2017, p. 1058).

Having established the historical facts of the region, we now look at how climate change is perceived.

Climate Change

At the global scale, climate change sets the stage and influences the plantation economy and land-use change. It ultimately changes the rules of the game. It is within this new reality of the climate crisis that people react when faced with socio-ecological problems. The forest cover in Idukki has a significant influence on the rainfall, crop yield, cropping pattern and the ecological wealth, which in turn affects the profitability of the District. In Idukki, the official statistics show that the forest cover in the District is 51%, but in reality, it is much less. Climate change and change in the rainfall received has led to an agricultural crisis in the District (M S Swaminathan Research Foundation, 2008). Studies have shown that the districts of Alappuzha and Idukki, though different in terms of relief features, share a high degree of vulnerability to climate change impacts (Sarun et al., 2018). This played out in the floods in 2018 and created a sense of urgency in the minds of the people. There is a sense that their livelihoods are at stake, and the state needs to protect them from the hazards of climate disasters. As can be seen in this quote from an interview with Mr M (age 52, owns 1.5 acres, though not a full-time farmer, Congress supporter) - "Our weather is dependent on what happens across the border in Tamil Nadu. Earlier the Tamil Nadu side had many trees, and they stood like a fort. When the weather was hot, the dry winds from the plains in Tamil Nadu would not reach us because of the forest on the border. However, then the Forest Department cut down the forest as it was eucalyptus trees, but they did not replace it with any other tree either. This led to a change in the weather in our District. Now, the summers are very hot. Also, coir burning is rampant in Tamil Nadu and leads to much pollution in our District as well. Kumli, Karunapuram and Nedukandam panchayats – close to the TN border receive the least rainfall."

This interview demonstrates the interactions between regional land-use change, forest cover, and how it affects the persons lived reality. It is this innate understanding of climate process that brings the reality of climate changed from the global to the local. However, there is no agreement as to how the risk of the climate crisis has to be addressed. The same participant said the following,

- *"Do you think we need to conserve the Western Ghats for safeguarding your livelihood?"*

Answer: "Yes, we should. Not sure if the people alone can do so. We had distributed saplings in the Panchayat. Though people planted them, we did not take care of the conservation perceptively. People grow

trees, and a similar amount of trees are being felled. We need trees as a means against climate change, and to beat the heat. Eucalyptus and its nursery are banned here as the tree draws too much groundwater and nutrients."

- *"Why was there an outcry against the Gadgil-Kasturirangan reports? Did you participate in the protest?"*

Answer: "Protest was massive. Everyone here was part of the protest. Initially, people did not read the reports. But, we need to conserve the Western Ghats. Lakhs of people inhabit the high ranges. The reports cannot be implemented totally. Now, people have been planting trees, especially after moving to cardamom farming. But the problem is high use of pesticides in cardamom cultivation. Some people grow cardamom in their compound. And these pesticides are sprayed using huge motors, as hand pumps are not sufficient to eject the worms/pests, which sits inside the leaves. As a result, the number of cancer patients is growing in high ranges."

A reading of this quote reveals the argumentative tension that defines the discourse of conservation during the period of the protests in 2013 to the floods in 2018. There is no whole-hearted push for conservation despite a knowledge of climate change risks that the respondent saw manifest by way of the Kerala floods. A reason for this could be the internalisation of the definition of conservation being state control and pristine nature. The Kerala floods made climate change become a defining factor in the answers we got from the respondents, which is why in our chain of explanation, it stands above the rest. Further, one of the most common ways in which climate change is perceived at the local level is through water resource. For example, another participant, Mr S (works at a bank, also a farmer with 3 acres of land. Education: M.Com), says "I was born here and grew up here. So I can tell you the changes we experience. Earlier we used to get good rains. Now also we get rains, but it is not evenly spread. Sometimes, it rains well but only for a short time. Rivulets and springs are drying up. These same rivers used to have water till the beginning of summer, but no longer because we do not get enough rain. The Panchayat has done some study, and they say this is because of climate change. This true as we experience acute water crisis in the summer. I think it is because our Panchayat borders Tamil Nadu. The hot climate of TN is slowly spreading to our areas too. Also, people have dug borewells. The number is going up. Some home have 2 to 3 bore wells, and because of this the groundwater level is going down."

Hence, climate change is not perceived as a distant problem. The participants are conflating weather patterns with climate change;

however, the concept has very much become a part of the everyday parlance and is a lens through which the people are processing their socio-ecological problems.

Local-level Factors

When we move these factors down to the scale to the local level and analyse our open-ended interviews, we find three themes and interacting issues of misinformation, land ownership by the Church and the role of local bodies that construct the discourse of conservation on the ground, as depicted in our chain of explanation. This idea of asymmetric information tends to be a product of the lack of awareness of the reports' content that prevailed before the floods of 2018. This led to uncertainty and rumour-mongering which provided fertile ground for the Church, ruling and opposition political parties, and other interest groups to mislead farmers and create an atmosphere of the fear of eviction and restrictions on activities that lead to the bitter opposition to the reports' recommendations. A study on the issue (Nair & Moolakkattu, 2017, p. 56). states that information asymmetries were engendered through tardiness in making the reports public, delayed translation of the reports into Malayalam, no discussion of the contents of the report, a disinformation campaign run by some groups, and insinuations of a conspiracy by international forces and environmental extremists. This led to much push back from the people, and they feared the notification of ecologically sensitive areas (ESAs) in the region. We found a similar narrative when we spoke to the farmers. One participant (Male, 64, Christian, Graduate, retired schoolteacher, farmer, owns five acres) answered the questions as such:

- *If conservation is a must, why did the people protest?*

Answer: People were misled on the Gadgil, and Kasturirangan reports. They were told this entire area would be converted into the forest area, making it an elephant corridor up to Thekkady, those wild animals would be brought here in lorries and set free.

- *Who misled the people?*

Answer: High Range Samrakshana Samiti (HRSS) was formed with community leaders leading it. The trust factor is higher when it comes to community leaders. People are more attracted to them. Community leaders have been with the people from the migration period. So, people here were faced with a problem; obviously, community leaders will intervene. But, how much facts were told to the people is the apparent question. It's obvious that people have not read all three reports – Gadgil, Kasturirangan, Oommen V Oommen.

A meeting was called in Kattappana where MP PT Thomas brought Oommen to explain to the people about G-K reports. About 1000



people were present, but they refused to listen to both of them. They distributed leaflets with negative information and blamed Thomas for their miseries. If that meeting had turned out well, if Oommen was allowed to talk, things would have been positive. Certain people with vested interests had a hand in hijacking the meeting. Thomas is innocent. Whatever he said came true during the flood of 2018.

Disaster struck at humanmade constructions, not in barren lands. So, it's vital to bring in control over such constructions that harm the environment. Government is reconstructing roads that were ravaged by Periyar. Ideally, a survey and scientific study should have been held to make a different route. Otherwise, we could be inviting the worst scenario in future. Without a scientific study, we are indulging in constructions that could lead to more significant disasters in future.

Every media has a specific agenda. Their news coverage is bound to that agenda. In the case of print media, to get an objective view on an issue, we have to read at least three newspapers. By this, I don't mean media is bad. It has a specific role to play. Media should have presented the news on Gadgil and Kasturirangan well, studied the reports and presented how it would have impacted the WG districts and people. The media did not analyse the reports or the issue. During the protests, most reports led to creating confusion among people. Instead of presenting facts, the media highlighted the allegations by the HRSS or environmental activists. Such coverage was a factor in leading to violent protests.

- *Among the agents – media, Church and politicians – who gained from the protests?*

Left Democratic Front was the biggest benefactor from this. They used HRSS to gain in the election. Idukki is a United Democratic Front (Congress-led) stronghold. That altered in the last Lok Sabha poll. LDF got an MP in Idukki.

- *What is the Church's interest in this?*

Every congregation wants to protect the devotees. Maybe the Church believed that they have to protect and support the interests and wealth of their followers. Gadgil and Kasturirangan reports were accessible to everyone. It's not true that only the Church was well-versed with the reports. It's a fact that Church too highlighted only the anxiety and confusion if these reports were implemented. Everybody's intention was good, but whether they comprehended the issue well is the question. In the last four years, everybody is silent on the issue. Two months back, the NGT finalised the Oomen draft, yet there was no protest here. If the report is relevant, the government should start the next step."

This interview weaves together the connections between local politics, the Church and misinformation. It shows that the powerplay is not as hidden as one would assume, but rather in a vibrant argumentative democratic political space like Kerala, is discussed and perceived by the people. The time frame of our research, spanning from the release of the Gadgil report 2011 to the actual interviews being conducted from September 2018 to May 2019 also affects this narrative as our interviews were conducted post the 2018 flooding and subsequent drought.

The one link left in the chain of explanation is the role of local bodies. The Gadgil committee report was very appreciative of the environment management in Idukki specifically. The report also praised Kerala for its democratisation of resource management and the functioning of the biodiversity committees and panchayats. It, in fact, asks other states to emulate the system. However, the newspapers reported that several panchayats passed resolutions against the implementation of the Gadgil and Kasturirangan report. The panchayats were active in the protests against the reports. In the interviews with panchayat member, there is a contradiction in the narratives. For instance, Mr.S, a panchayat member (Congress), said all the political parties, including his, tried to capitalise from highlighting the conservation reports as anti-farmer. He said the then sitting MP, P T Thomas (Congress) was not given a ticket for contesting the 2014 Lok Sabha election because of his firm stand on implementing the Gadgil report. As the MP of Idukki, Thomas had convened a mass meeting to explain to people about the content of the conservation report. However, the meeting was sabotaged by some people belonging to the High Range Protection Council. He said after the floods and widespread landslides, people have started feeling that what Thomas said then was right. He too said the Western Ghats should be conserved with the participation of people. They should be taken into confidence. Nothing should be imposed on them. It is they who have to make the efforts. He also pointed out people had bitter experiences with the Forest Department, so there is nothing to be surprised about people, who were misinformed, opposing conservation efforts. He also confessed that panchayat members, who live among the people and represent them, have a significant role in giving correct information to people. However, due to political reasons/pressure, they were not able to do their duties.

Further issues emerged from a focus group discussion with four women panchayat members. All of them said drinking water is the main issue in their wards. They said they did not know much about the content of the conservation reports. They do what the political leadership asks them to do. One person even narrated how a priest who came there to speak about the need for implementing the Gadgil report was driven

away by them. None of them was even aware of the existence of the Biodiversity Management Committee (BMC). This last point is the most surprising but held true when other members were interviewed as well. There is no integration between the panchayats and the BMC.

Environmental issues here are understood in terms of livelihood issues and dealt with accordingly. Water is one of the most common concerns for Panchayat members, and this reflects the concern that the people themselves feel. It is the most immediately felt need, and scarcity of it defines the narrative of environmental conservation. If this was an issue that could be managed through the implementation of the MNREGA or other local schemes, the Panchayat is very active. However, the idea that climate change is a global crisis that is now playing out in their villages leads to a feeling of being overwhelmed. One former vice-president of the Panchayat states, "Panchayat is doing a lot to conserve nature. We have been planting more trees. But, now there's a climate change everywhere. I remember heavy rains from June 1 lasting for 25 days; that has given way to severe heat."

This tells us something about conservation. The idea is that a concern for the environment is driven by material reality (Agarwal, 1992), but conservation is not understood in the same vein. It is about control by the state at a scale above the local. It makes local institutions feel like it is not their concern and is an issue to be dealt with at another level. The link between every day and the broader benefits of conservation are not articulated. Instead, it is the cost of conservation that the local institutions see themselves bearing.

Conclusion

This article brings forth the idea that the ecological is political and the political is ecological. The Western Ghats is not just a mountain range to be conserved, but rather is a political construct that is imagined in different ways by actors operating at different scales. The state and the expert committees with their maps and technology have as Scott (1998) stated tried to render this landscape legible and have produced a system for measurement (maps, databases, satellite images) to make a neat, simple claim for conservation. This legibility and its inevitable reductions poorly fit the dynamics of the local social and natural world. Thus, inevitably opening the door to ecological trouble and social backlash. The current push for conservation is set in the backdrop of a long history of state coercive evictions and a plantation economy that has resulted in drastic land-use change. The resulting conflicts and acts of resistance on the part of local people are attempts to re-establish control over the land and their rights to produce. The discourse of conservation also is based on an artificial division of nature and society

that is a product of the development discourse. The argumentative discourse around conservation, while giving space for many voices to speak, does not challenge the inherent idea that conservation is of the 'Yellowstone' variety and is driven by a wilderness idea of 'nature that is devoid of humans'. Hence, it takes us back to Neumann (1998) thesis that conservation is not only about control over space and resources, but also about meanings that we attach to the resource that we are attempting to conserve. ■

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INTERVIEW

Dr. Madhav Gadgil / M Suchitra

“STRENGTHEN DEMOCRACY; THAT’S ALL WE CAN DO”

Even though people would have benefitted from your report, most of them have still resisted it. In the background of global warming, climate change and the floods in Kerala, what is the importance of conservation the Western Ghats?

The natural heritage everywhere has to be conserved. The Western Ghats, in particular, which is rich in many aspects, is important even if you take a completely anthropocentric viewpoint. Peninsular India gets water from the Western Ghats, and most of the rivers of the region including the major rivers such as Kaveri, Krishna and Godavari originate from the Western Ghats. Even Andhra Pradesh and Telangana, which don't have any stretch of the Western Ghats in their geographical boundaries, depends on the Ghats for water. All of us know how it modulates the climate. It is one of the most important repositories of biological diversity – in fact, the world's richest repository, especially in wild plants. All this has been discussed repeatedly.

In India, the livelihood of a large number of people depends on the health of natural resources. Even the rich, who propagate the theory that the nature is for humans and the natural resources must be utilized to the maximum extent for development, want beautiful surroundings to have a sense of well-being. They're attracted to advertisements that say, "These are in beautiful natural surroundings". So, I don't think elaborate justification is needed for the conservation of the Western Ghats. It's extremely crucial in all respects to conserve the Western Ghats.

The concept of environmentally sensitive areas comes in the Environmental Protection Act 1986. But the government appointed your committee Committee in 2010. It's along gap of 25 years. What happened during these 25 years?

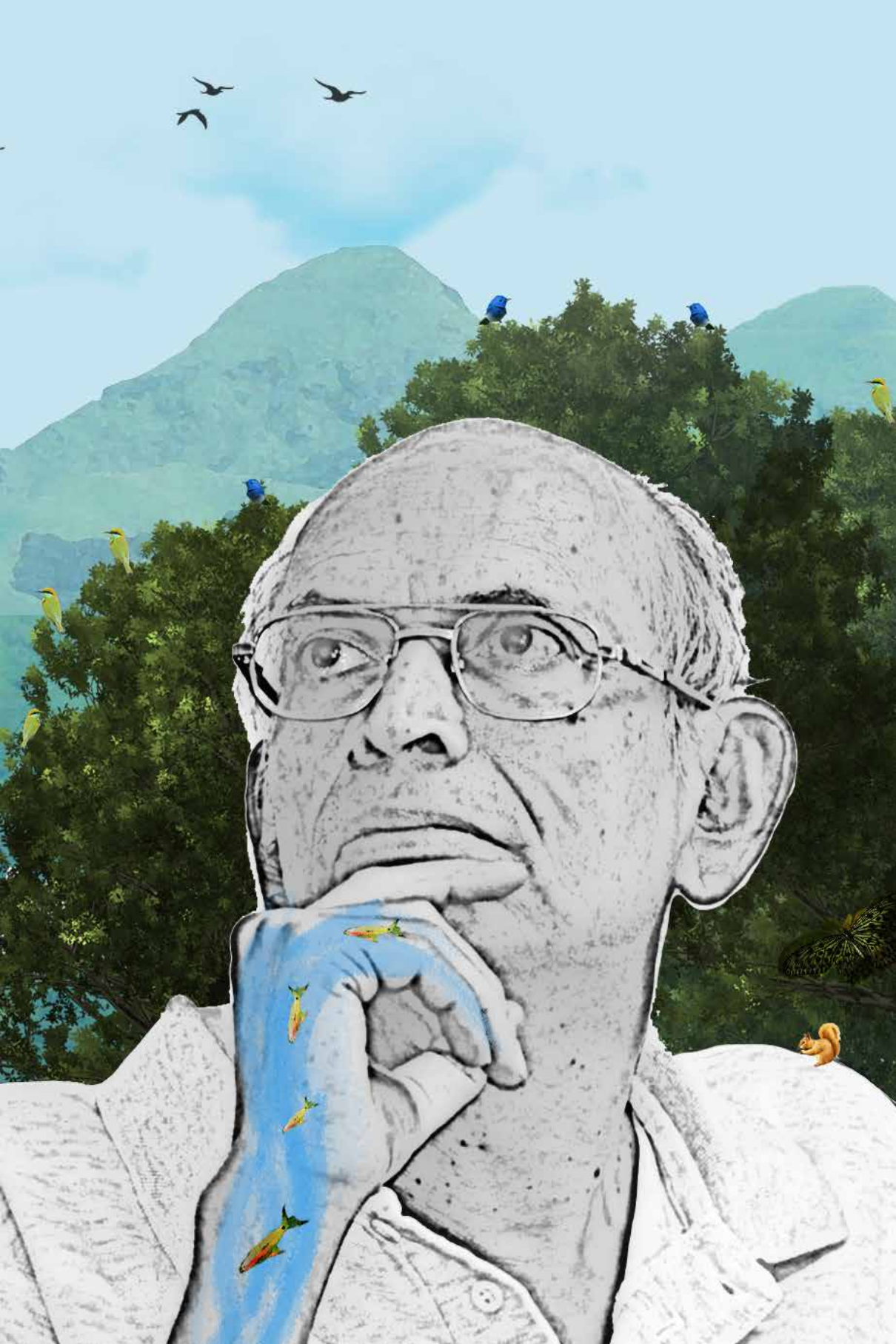
Words like “environmentally sensitive,” and “ecologically-fragile” were used initially in Maharashtra. A group called Bombay Environment Action Group, I think, began to propagate the idea that we must declare ecologically sensitive areas. In Maharashtra’s Murud area on the coast, not far from Mumbai, Matheran Mahabaleshwar and Panchgani, which are two hill station areas, and Dahanu in Palghar district – these four were declared eco-sensitive in 1988-89. Later, the ministry declared some more regions as ESAs.

The initial bitter experience of people in those areas is, in fact, one of the factors why people turned against the idea of eco-sensitive areas. In Maharashtra, the contention at the ground-level was that these were all declared to protect the interests of a wealthy section of the population in Mumbai, some of whom owned orchards in Dahanu and holiday homes in Murud and Matheran. The high-level committees appointed by the Central Government were insensitive to the interests of the local people and catered to the interests of the wealthy property owners in these four areas.

Secondly, all environmental conservation measures instituted in this country were administered and managed by the forest department, and sometimes revenue department. These measures were not to actually enforce conservation but to harass people and extort bribes. In Mahabaleshwar and Panchgani, I spent some time as part of our panel’s work. My students, who came from that area, gave me a letter, which we have quoted in our report. The letter suggested that though the management of Mahabaleshwar and Panchgani areas maintained that there would be no further exploitation of groundwater, they allowed people to dig wells for a bribe of Rs 20,000. Groundwater was not being protected, but the people were being arrested and bribes were being extracted from them.

Any action that ought to have been taken to protect the environment was ignored. They took me to areas where new hotel projects were coming up and where trees were being felled in large numbers. People said that while they were prevented from cutting dead trees on their plot, a large number of trees were being felled. And actually, I saw that there. So, people have a feeling that this kind of heavy-handed management by a corrupt, coercive bureaucracy is what an ecologically sensitive zone means. Hence, there is resentment throughout the area.

In Kerala, too, I’m told people had similar experiences in an eco-fragile land area. So, this is a major reason that could easily turn



people against our report without really reading it carefully as we had specifically cited this evidence from Mahabaleshwar. We mentioned this was no way to administer ecologically sensitive areas, and that they should be administered on the basis of proper ground-level consultations. Also, the details both of the zones' limitation-delimitation as well as management must be worked out on the basis of inputs from people. People, however, did not believe that would happen and thought that they would suffer and the environment would not be genuinely protected.

In Idukki and other WG districts in Kerala, people allege that the Gadgil and Kasturirangan committee members did not consult even the people's representatives?

Our panel had nine members, among them were two members from Kerala. I took the responsibility of fieldwork in Maharashtra and Goa, where I worked extensively and met people, right down to the level of gram sabha, and explained to them the objectives of the process and the need for the conservation. It is possible that in Karnataka, Tamil Nadu and Kerala, the panel members couldn't do such extensive work. I had time as I was a retired scientist from the Indian Institute of Science and I had devoted myself to this, but they might not have had the time or perhaps the inclination to talk to people accurately.

There was a very strong agitation and a forest office was set on fire. As a reporter, I felt there was intentional misleading and misinforming of the people. Did you feel so?

Yes, it was quite brazen. I was amazed. Our report had explicitly supported proper implementation of the Forest Rights Act; an entire section is dedicated to that. During a meeting in Kasaragod, two politicians favoured implementation and two were against it. I was there. A gentleman, who was against the report, stood up and started claiming that the Gadgil Report was anti-people in every way and that the report should not be implemented. So people were being told brazen lies. Secondly, our report is clearly against the UNESCO heritage tag being accepted in the way it was done without consulting people. There is a clear statement in the report. Even today, people say Madhav Gadgil got money from UNESCO. All around, there was such a brazen level of propaganda.

There was propaganda by politicians and the church, even bishops issued pastoral letters. People said the report was in English and that they could not read or understand it.

In Kerala, there was a push to translate the report into Malayalam. In Marathi, I prepared some material – I enjoy writing in Marathi – for

newspapers where I explained a lot, though I could not reach enough people. In Kerala, the full report was translated, maybe a little later, into Malayalam, and many people did not have access to it. It's not true that at the people-level, there was only agitation against the report. I have been to Kozhikode, where the town hall was overflowing with people in favour of our report. In Kozhikode, an anti-quarry agitation was held in which one person was killed. It's not true that people were uniformly misled and that they were against the report.

But in the high ranges, a majority of people were misled, while only a few came out publicly like P T Thomas, former MP.

Yes, he strongly supported the report. Also, some members of the legislative assembly and some from the CPI and the Congress supported it.

You submitted the report in 2011. But there was a gap of eight months before the Central Government published the report. Those eight months were really very crucial?

The government made the report public only under RTI pressure. Recently, the then Central Information Commissioner gave an interview on how the case finally reached him and how he gave a verdict saying that the report must be made public. Then the government moved the Delhi High Court appealing the CIC verdict to be overruled. However, the Delhi High Court gave a stronger order against suppressing the report. Finally, it was made public by the end of May 2012.

After publishing your committee's report, the government appointed the High Level Working Group led by Kasturirangan. Did they consult you?

No, the committee never consulted me. I was amazed, because prior to his appointment, Dr Kasturirangan and I had been good friends for years. His committee's mandate was to examine and perhaps modify our committee's report. A minimal scientific courtesy called for him to ask me to explain our report. He never did that. I think he was under political pressure, or perhaps the members of that committee were under pressure, I cannot say. I was surprised because it was totally against public interest, which you are supposed to pursue, and against personal and scientific courtesy. But that's how it happened.

In your report, the whole Western Ghats was declared ecologically sensitive area. But the Kasturirangan committee divided the Western Ghats into two landscapes. What do you feel about this difference in approach?

He called it a natural or cultural landscape. It's a completely unscientific way of looking at the landscape. We have provided an elaborate

discussion on ecological sensitivity. In *Current Science*, we had published a paper outlining the criteria we were going to use to define sensitivity and why. There were responses from people. Then we implemented that methodology. This was done in a scientific and open participatory way. The Kasturirangan Committee did nothing of the sort. Our database, on the basis and the logic on which we made this classification, was available to the public from the beginning. I requested Dr Kasturirangan to make his database available to me to scrutinize it. He never responded. The whole operation was opaque. I think it was a completely improper way of doing things.

I studied the Kasturirangan Report, and I wrote an open letter to him in *The Hindu*. He, unfortunately, never responded. Many people proposed a dialogue where both Dr Kasturirangan and I could participate. I was always ready but he never agreed to that. Frankly, I have no idea why.

In Kerala, the government and the all-party meet rejected both the reports. They appointed Dr Oommen V Oommen, who came up with a third report. Did you analyse that report?

I have no idea who Dr Oommen V Oommen is and what he might be reporting. By then, I had lost interest, so I never looked at that report.

In the last report Kerala submitted to the central government, only the already protected areas come under ESA?

Yes. This is ridiculous as all you are saying is that you are not going to violate the forest and wildlife acts. Nowhere in the country should you violate these acts. It's a completely meaningless statement

Was the opposition against your report stronger in Kerala?

MG: I can't say. It depended on the local context and so on. In Tamil Nadu, both the reports were mostly ignored by people for whatever reason. In Karnataka, some groups opposed, while some supported. In Maharashtra, too, some groups protested.

Your committee wanted the local bodies to take a big role in the conservation process. But in Kerala, even the local self-government institutions are vertically divided among the main political fronts. The grama sabhas don't seem to be empowered the way they are envisaged to be.

These problems exist at all levels. People often say only corrupt people get elected to the grama sabhas. I ask them, "Have you examined any statistics?" I have done that. I did collect data from a few village panchayats, for the state legislature and the Parliament. The proportion of people who are accused of criminal acts is not high in the village panchayats; it's probably higher in the state legislature and the

Parliament. That doesn't mean we are going to reject parliamentary democracy. So yes, there will be these political divisions, but they are everywhere. So you have to go to as broad a base as possible. Strengthen the democracy. That's all we can do. We have to take forward the local level empowerment process envisaged under the 73rd and 74th Constitutional amendments.

While preparing the report, did you think this flood could happen?

MG: One cannot visualise the magnitude and timing, but we felt there could be continued deterioration and adverse impacts. We tried to say that. We have pointed out that in our report. We have even marked the ecologically fragile regions. We had expressed concerns over the floods in the regions such as Nilgiris.

As a spontaneous reaction to the flood, thousands of people had come as volunteers to help the government. But they seem to be left out from the rebuilding Kerala process.

If that's the case, it seems improper. Exclusion of people from the development as well as the conservation processes are something that should not be allowed to grow. Our Constitution demands that people must participate in the processes of democracy.

Isn't it high time for a deviation from the GDP-based development?

Yes. We must examine and review the vision and processes of development. We cannot indefinitely escalate demands on natural resources which are finite. We cannot have infinite growth. You can't go on thinking of just the man-made capitals and GDP, which is defined in a narrow sense. I have been writing on this for a long time. However, we cannot ignore the sum total of man-made capitals too. Reputed economists like Stiglitz developed the proper methodology and the European Economic Community had implemented this to some extent. So, you have a valid, academically sound methodology available; this is how we should be thinking at the conceptual level and at the ground level. The democratic framework must be operational.

In an article you have said Kerala should go back to the People's Plan?

Yes. We need to resurrect that spirit. I had a lot of friends who were involved in the 96-97 People's Plan Campaign and I interacted with them. I thought that this was the most progressive move in the country at that time. The rest of the country should also adopt this. ■






PHOTO ESSAY

CHR: ON THE VERGE OF COLLAPSE

Photographs

Vidhya C. K

M Suchitra

Surendranath C

Text : M. Suchitra

Suicidal resistance: Understanding the opposition against the Western Ghats conservation in Karunapuram, Idukki, Kerala



Wall of Words: A writing on the outer wall of the Forest Department office in Painavu, headquarters of Idukki district, that says, “Come again to tell the tale of Idukki to the next generation.” The story of Idukki is a story of migration, encroachment, forest destruction, plantations, dams, disastrous infrastructure development, displacement of indigenous communities, and drastic land-use changes. It’s a catastrophic tale of ecological devastation and the Western Ghats undergoing irrevocable changes leading to severe changes in climate.



Falling rooftop : Idukki, the rooftop district of Kerala was ravaged in the 2018 floods by hundreds of major and minor landslides. The district is ecologically fragile with high disaster vulnerability.

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An Old Face of Migration: *Mariamma Joseph, a resident of Karunapuram, migrated to the Western Ghats in the late 1950s under the High Range Colonisation Scheme initiated by the government. Her story and the stories of thousands of others like her are of aspirations for a better life, miseries and hardships.*



Edged Out: Raman Raja Mannan, the 32-year-old “King” of the Mannan tribe in Idukki. Some 300 years ago, the tribes were the only human inhabitants of the Western Ghats forests. The influx of migrants from the plains pushed the tribes to the edges. They are alienated from their land, livelihood, and culture. The Mannan women were known for their excellent handicraft skills. They used to make bamboo baskets and Kannadippaya, a unique, smooth, and thin mat.

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Changing Landscape: *Udumbanchola taluk constitutes a major part of the Cardamom Hill Reserve (CHR). CHR was once covered with dense evergreen rainforests, shola forests, grassland, bamboo and reed clumps. Over the years, the taluk has undergone tremendous land-use changes. CHR is the capital of Indian small cardamom production.*



No rain to be harvested: *Karunapuram village panchayat does not have a patch of forest. Homesteads look like those in the plains. The panchayat is extremely water-stressed. A half of the 7500 houses here have rainwater-harvesting systems. But not having sufficient rain to be harvested, the tanks remain empty most of the year.*

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Higher than the Western Ghats? Ramakkalmedu in Karunapuram is now a tourist destination with one lakh visitors a year. The hilltops have been destroyed for building a huge statue of Kuravan and Kurathi, and a watch tower. The place also has a private farm with large windmills



“Big” Advantage: *Unni Thomas, a farmer with 25 acres of farmland with pepper and cardamom, maintains a big pond. Water conservation has paid off for him, but he is convinced that only big farmers can afford to dig big tanks.*



Fading Shade: *Cardamom is originally a shade-loving forest plant. But high-yielding varieties that don't require much shade have invaded CHR. Trees are subjected to heavy pruning. Large-scale cardamom cultivation has led to a significant change in the canopy structure and biodiversity loss. CHR has lost almost 70 percent of its original biodiversity. Three species of trees (karana, jackfruit and chandanavemb) cover more than half of CHR.*

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Poison Spray: A migrant labourer from Jharkhand is spraying pesticides with a motor. Pesticide use in cardamom plantations in Idukki is among the world's highest. Indiscriminate use of high levels of toxic chemicals such as triazophos, quinalphos, phorate, DDT, endosulfan, hexaconazole, nitrobenzene has led to serious contamination of the region's ecosystem. These chemicals are known to cause cancer, alter genes and affect embryo development.



Charge of Pest Brigade: Over the past decade, annual rainfall has come down from 3000 mm to 1700 mm in CHR, and the temperature has gone up by 0.3°C. The changes in the climate have led to increased pest attacks. Being juicy, popular varieties such as Njallani are more susceptible to pest attacks. Insects such as stemborer, millie bugs, nematodes, scales, and root grub multiply very fast. They may cause huge economic loss.

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Livelihood travails: Cardamom cultivation is labour-intensive. Thousands of migrant labourers from Jharkhand, Bihar, Chhattisgarh, and Odisha work in CHR. Cardamom plantations are the biggest employer in Idukki district. About 74,000 persons, including 49,000 women, work in the plantations. Nearly 1200 labourers, mainly women, commute daily between CHR and the villages and towns in Tamil Nadu.



Adding to Global Warming: *Cardamom curing is a highly energy-intensive. About 1500 cardamom curing units operate in the high ranges. These electric units operate round the clock. Since the power supply is erratic in the high ranges, these units work on fuelwood. Firewood is brought from Tamil Nadu. This has led to large-scale cutting of trees. Scientists point out that in CHR at least 2 lakh tons of firewood is used with a possible emission of three lakh tons of CO₂ to the atmosphere.*

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Blasts of Doom: Quarries continue to blast the mountains. Residents living around a quarry in Alliyar in Karunapuram village have developed allergies, skin rashes and asthma. Drinking water resources and plantations downs the hill are covered with dust



Callous Campaigns: *In CHR, Rainfall, temperature, and soil health, all depend on the ecology of the region and land use pattern. Efforts need to be taken to bring back biodiversity at least to some extent. This is possible only with the participation of people. However, even after the ravaging floods and landslides, the conservation of the Western Ghats did not become an issue in the 2019 Lok Sabha election campaigns. The main political fronts tried to outsmart the other in making tall promises on infrastructure development and farmers' welfare.*



Building Back Better Future? *The Government Medical College & Hospital at Painavu. The Post Disaster Need Assessment Report prepared by ten UN agencies immediately after the 2018 Kerala floods, underlined the need for internalising themes such as Integrated Water Resources Management, Room for the River, Living with Water and Build Back Better. However, the Rebuild Kerala Development Programme, launched by the state government seems to focus on infrastructure rebuilding.*

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SUICIDAL RESISTANCE:

Understanding the opposition against
 the Western Ghats conservation in
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This is the second in the series resulting from the small research projects supported by the Research Unit on Local Self-Government at the Centre for Development Studies on Kerala's emergent ecological challenges and the preparedness of our local democracy to tackle on them. The study area is situated in Idukki District and seeks to understand how far ecology is included in local governance, in the context of the discourse around the protests against the recommendations of the Gadgil and the Kasturirangan committees. In this work, a journalist and a researcher collaborate to present the underlying social, political and economic factors that drive local resistance to ecological conservation.

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