

**STATEMENT OF FACTS IN APPLICATION NO: 26/2012 OF THE NATIONAL
GREEN TRIBUNAL FILED BY THE GOA FOUNDATION AND ANOTHER**

INTRODUCTION

For the reasons and with the objectives stated in annexure A2 office Order dtd 4-3-2010, the Ministry of Environment & Forests Government of India constituted the Western Ghats Ecology Experts Panel (WGEEP) for a period of one year from the date of issue of the order. The report had been directed to be submitted within six months from the date of constitution, additional submissions if any to be made thereafter. The panel had been categorically mandated *inter alia* :

- (i) to assess the current status of ecology of the Western Ghats region.
- (ii) to demarcate areas **within the Western Ghats Region** which need to be notified as ecologically sensitive and to recommend for notification of such areas as ecologically sensitive zones under the Environment (Protection) Act, 1986. (*highlighted*)

The WGEEP submitted the two volume report to the Ministry of Environment & Forests on 31st August 2011 and the Ministry has uploaded the Report on its website on 23rd May 2012. The Ministry has asked for public feedback within a period of 45 days i.e. on or before the 5th July 2012. The panel has proposed a zoning plan for the region, recommending that the Ghats including three contiguous midland areas of the state should be classified into three eco-sensitive zone with various degrees of restriction on land use for development and agriculture. It had also recommended for setting up three tier authorities to monitor implementation of the report and the management of the eco-sensitive zones. The 5th respondent got a copy of the report on 26-11-2011. As there were several recommendations therein which could not have been accepted by the state Government a meeting of the line departments and concerned Scientific institutions was held on 16-11-2011 to ascertain their views on the report. Based on the views expressed by the stake holder government departments and agencies, Government adopted their stand on the report and conveyed to the 1st respondent vide the state government letter No 3527/A2/ 11/ Env't dtd 31-1-2012. There occurred serious discussions in the state legislative assembly on the impacts of the recommendations on the development front especially power generation. State Government has expressed their reservations and dissent to the recommendations detrimental to the environment sensitive development plans of the state vis-à-vis the recommendations

prohibiting or regulating such plans. The 5th respondents have also set up an expert committee to examine the report of the WGEEP to identify the recommendations that the state would have to object being impractical or unfavorable to the interests of the state. The expert committee is functional. meanwhile as per office order No: 1/1/2010-Re (ESZ) Pt. dtd 17-8-2012 the 1st respondent has constituted a high level working Group under the Chairmanship of Dr: K. Kasturirangan Member (Science) Planning Commission to examine the WGEEP report in a holistic and multidisciplinary fashion keeping in view of the comments received from the state governments, Central Ministries, stakeholders and other related important aspects .The said Working Group is also functional. The terms of reference includes the most significant issue i.e the constitutional implications of center –state relations with respect to conservation and sustainable development of the Western Ghats region. The Working Group has been directed to submit an action plan to implement the WGEEP report in the most effective and holistic manner within a period of two months from the date of issue of the order. The application has been filed before the Hon: Tribunal at this juncture.

Para 1

The Western Ghats Regions of the state of Kerala are by and large protected under the forest laws and the conservation measures adopted by the 5th respondent. The ecologically fragile areas of the state have been statutorily determined under the Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act 2003. The applicants have no case that they had to resort to direct or other actions for establishing any environment related activity for protection of the Western Ghats of Kerala.

Para 2

The 5th respondent has enacted several statutes and implemented several conservation measures for the sake of the Western Ghat regions of the state. These measures have been adopted and being implemented without environmental activism.

Para3

The ‘River Research Center’ mentioned in this para is not a respondent in this application. The 5th Respondent has no information about any of the applicants having been ‘instrumental’ in the formation of the WGEEP. The 5th Respondent is not aware of any decision of the respondents to seek the technical assistance of the River Research Centre or any other similar organization in preparing the ESAs for Kerala Western Ghats. In fact it was a mandate of the Panel. There are complaints that the ‘River Research Center’ which was also instrumental in the opposition against the Athirappally hydro electric project which is a term of reference of the WGEEP , in influencing the panel recommend against the Athirappally

project. As a matter of fact only anti Athirappally dues are reflected in the WGEEP report whereas the contentions of agencies like Kerala State Electricity Board are not reflected at all.

Para 4

The environmental activities referred to in this para has no relevance to the recommendations of the WGEEP in its report which is of direct impact to the development plans of the 5th respondent and human activities in the proposed Ecologically Sensitive Zones outside the conventional Western Ghats regions

Para 5

As regards the applicants' claim of pressurizing the state governments to change forest policies from its commercial objectives to the ecological perspectives in the commissioned study of the WGEEP on 'Forest Management in Kerala in context of evolving forestry and conservation concerns for Western Ghats' (Dr: S K Khanduri IFS, Director, Environment Management Agency Kerala, Thiruvananthapuram) the historical position is commented as follows:

'Post independence forest management continued the same regime with actually added pace of conversion into plantations in wake of emphasis on industrialization and recommendations of the National Commission on Agriculture (NCA, 1976) regarding commercial forestry development and for this purpose, setting up Forest Development Corporations. The systems continued till 1980 when larger control of forest management was taken over by Central Government based on the 42nd constitutional amendment in 1976. In 1987, a moratorium was imposed on harvesting of timber from natural forests and at present only workable timber from the dead and wind fallen trees is collected (Rao and Kumar, 2007). Kerala Forest Policy 2010 has also resolved to continue the moratorium on selection felling'.

Para6- No remarks

Para 7

In this para the applicants seek to evaluate the present status of southern Western Ghats falling within the geographic limits of the three states of Karnataka, Tamil Nadu and Kerala jointly, without considering the special problems confronted in this state as to land use, population pressure, socio-economic factors etc. The Wildlife Institute of India (WII) classification used four levels of planning units for the Biogeographic Classification of the

Western Ghats Regions. Relevant information from its web site (<http://www.keralaforest.org/images/abc/bgareaskerala.pdf>.) is furnished below:

a) The Biogeographic Zone: Large distinctive units of similar ecology, biome representation, community and species like the Himalayas and the Western Ghats. Within India the classification recognises ten Zones, divided into 25 Provinces. The Zones are:

.....

5. The Western Ghats with 2 provinces

The Biogeographical Regions of the Western Ghats

One of the major Tropical Evergreen Forest regions of the country, the Western Ghats occupies an enviable position in our eco system. It is estimated that two-thirds of India's endemic plants are found here. In addition to the immense biological values these forests claim, they also play an essential role in maintaining water supply to energy generation and irrigation schemes and to the huge river systems - the Krishna, Godavari and Cauvery. The biological communities are genetic store houses and have tremendous untapped potential for biological and chemical development in the fields of medicine, chemistry and industry.

The Western Ghats enjoy high rainfalls and have good soil resources facilitating the cultivation of cash crops like tea, coffee, cocoa, rubber, cardamom, quinine etc. However, these crops have caused intensive pressure on the remaining forest lands. The total area of the Western Ghats zone is about 160,000 sq. km of which forests constitute roughly one-third. Of this the evergreen forests of principal conservation interest cover some 15,000 sq. km. or 9% of the zone. The forest zone stretches from the hills south of the Tapti River in the north to Kanyakumari in the south. In the west the zone is bounded by the coast. The zone has great physical diversity. Elevation ranges from 500 m to 2700 m from sea level. There are areas that receive 5000 mm rainfall per annum as well as areas with much less rainfall, as low as 600 mm per annum with prolonged dry seasons. This gradient produces a change from evergreen to semi-evergreen to moist deciduous to dry deciduous formations. The altitude imposes additional factors of cold and exposure, leading to the development of 'stunted montane' communities. There are major biogeographic barriers or forest gaps such as the Moyar Gorge, Palghat Gap and Shenkottah Gap, which separate the Nilgiri, Anamalai and Agastyamalai mountain blocks. Biogeographical Sub-divisions of the Western Ghats .The Western Ghats can be mainly divided into two distinct zones: Costal plains and Western Ghats mountains. **The plains are a small unit, separated from the uplifted ghats in all geological and geographical classifications of India. The plains are totally deforested and have no protected areas.** The Ghats are subdivided into 12 latitudinal regions as follows:

Dangs - Below Ghats Areas Surat and North Maharashtra

Upper Krishna Drainage Central and South Maharashtra, Goa and North Karnataka

Kanara North-Central Karnataka

Coorg South-Central Karnataka

Mysore-Lower Nilgiri South Karnataka - North Tamil Nadu

Wayanad Plateau North Kerala Nilgiri North Kerala and Tamil Nadu

Anamalai N-Central Kerala and Tamil Nadu

Palani An easterly spur in Tamil Nadu

Periyar-Cardamom S-Central Kerala and Tamil Nadu

Varushanad- Andipatty an easterly spur in Tamil Nadu

Agasthyamalai South Kerala and Tamil Nadu

These sub-divisions have physical differences in geology, land form and climate which are reflected in differing communities of evergreen forests with distinctive assemblages of endemic taxa. **As already mentioned, Kerala falls within two biogeographic zones: 5, the Western Ghats and 10, the Coasts. The Malabar coastal region of biotic province 10 A, Western Coasts, The Malabar plains region of biotic province 5A, Coastal Plains and five regions of biotic province 5B, Western Ghats.** (highlighted)

Approximate areas are:

10 A Coast - 70 sq km or 0.2% of the state

5 A Coastal Plain - 23,500 sq km or 60.5%

5B Western Ghats - 15,300 sq km or 39.3%

A further sub-division is used in the Western Ghats province, with five regions recognised for conservation management. They are Wayanad, Upper Nilgiri, Anamalai, Periyar and Agasthyamalai. Kerala with a total area of 38,870 sq km is one of the most important forest areas of India. High rainfalls on the Ghats have blessed the state with tremendous biological values of great variety. However, the pressures of a fast developing economy have caused loss of vast areas of forest cover and consequently, legal forest land now covers only 24% of the total land area. Though small in size, Kerala has considerable ecological diversity. The

peculiar topography of the state created spatial variation in climate and soil parameters. The high levels of local endemism can be attributed to biogeographic barriers provided by the large valleys. Today Kerala has 15 Protected Areas totaling 2,308 sq km or 5.9% of the total land area, which is inadequate to protect the great biological wealth of the forests’.

Para 8

The Western Ghats consists of high mountains, gorges and deep-cut valleys. The mighty Western Ghats, a sequence of Rocky Mountains, edges the eastern boundary of Kerala and ascends roughly up to 1,500 m above sea level with the lofty peaks rising up to 2,500 m. Standing tall at a height of Anai Mudi with an altitude of 2695 meters (8,842 ft) is the highest peak in South India. The unbroken chain of the Western Ghats only breaks at Palakkad where a natural pass called Palakkad Gap is located. From the Western Ghats, the land inclines to west on to the plains, into an uninterrupted coastline. The narrow piece of land on the eastern border, close to the Western Ghats, encompasses precipitous mountains, deep valleys and gorges which are covered with thick forests. Almost all the rivers of the state originate here.. 41 of Kerala’s west-flowing rivers and 3 of its east-flowing ones originate in this region. Generally the Western Ghats in the state rang between elevations of 250–1,000 m (820–3300 ft). The western lower elevations of the Ghats are areas of major plantations like tea, coffee, rubber and various spices.

Kerala has a total forest area of 11,125.59 sq.kms including 7 wild life Sanctuaries, covering 28.88 percent of the total land area of Kerala. This is greater than the national average of 19.50. The entire forest area is spread over the Western Ghats. The Western Ghats is considered to be a repository of endemic, rare and endangered flora and fauna. Although Kerala lies close to the equator, its proximity with the sea and the presence of the fort like Western Ghats, provides it with a unique climate making it green even during summer. The temperature varies from 27°C to 32 °C. Southwest Monsoon and Northeast Monsoon are the main rainy seasons. Kerala receives an average rainfall of 118 inches (3000 millimeters) annually thanks to the mighty Western Ghats. It can be asserted with no uncertainty that the Western Ghats saves and serves the state of Kerala as a bulwark sustaining the state as it is.

Para 9

As regards the proliferation of major river valley projects the averment in this para that those are ‘either to irrigate the drier tracts to the east or to generate power by taking advantage of the steep slopes to the west,’ amply justifies the inevitable activity. This human centric activity cannot be avoided in the agro- centric socio economic structure prevailing. River

Valley projects with due environmental safeguards are possible and in a way it has a positive side of preserving its own ecological elements. The International Commission on Irrigation and Drainage in its position paper on 'Role of Dams for Irrigation, Drainage and Flood control' (pp18-19) explains the position as under:

'Every human activity modifies the environment. Some changes are for the good, some are not, but the awareness in the society about size and scope of the adverse impacts plays an increasing role in decision making. Effort is made to mitigate and compensate such effects while increasing the positive impacts, so that sustainability of development is maintained and the natural resource base is not eroded. The challenge is to ensure that the positive effects on environment outweigh negative effects. Mitigation/enhancement measures have been evolved, over a period of time, by concerned professionals. ICOLD and ICID have prescribed detailed listings, criteria and guidelines for study of environmental impacts and their mitigation. Many countries have developed appropriate policies and measures for compensating negative impacts. While respecting the privilege of countries/governments to develop their water resources plans and priorities, it will be only fair to expect that adequate compensatory packages are provided by them to the adversely affected people and to ensure that such people are better off after the project implementation than before it.

Adverse impacts with and without a dam.

In the developing world, land and water development is required to take care of the population pressures and the poverty level of societies. As development reduces the poverty level and improves the standard of living mainly by providing employment generation, this in itself has positive effects. While adverse impacts of a dam can be taken care of, the availability of fresh water, a sovereign country no doubt will preserve its basic right of deciding its own priority of developmental needs and most suited options. Global criteria can at best indicate guide lines. ICOLD and ICID have prescribed detailed listings, criteria and guidelines for study of environmental impacts and their mitigation on the other hand reduces environmental degradation. The positive impacts on environment are manifold. In absence of a dam or a water withdrawing facility, the environmental degradation continues unabated especially in less developed regions because of population pressures. Environmental impact studies therefore have to be carried out for both, with and without dam scenarios. The environmental cost of constructing a dam is normally smaller than that in a situation without the dam, if the continued degradation in absence of a dam due to poverty and population pressures during the life of the dam is considered. It is often to be concluded that the environmental cost of building and using a dam in a developing country is smaller than that of not doing that dam project. The extent of submergence and evaporation loss from a large storage project is lesser

than that from a series of equivalent small storage projects. Apart from assessment of adverse impacts with and without a dam, it is sometimes required to carry out the assessment for situations before and after completion of a dam project as one time exercise. Both assessments are important as they provide important insight into the environmental concerns and their containment.’(www.icid.org/dam pdf)

Para-10

The ecological, geological and climatic significance and influence of the Western Ghats are multitudinous. It is indisputable that the Western Ghats need to be conserved with its environmental elements. As to the observation that the Western Ghats qualifies a an ESA under the Pronab Sen Committee’s criterion, primary as also auxiliary, as an ESA , the following findings of the WGWEF in para9, page 17of its report on the criteria adopted by the Pronab Sen Committee and the Panels’ inference thereon is relevant;

‘The Pronab Sen Committee set up in 2000 by the Ministry of Environment and Forests proposed a series of species, ecosystem and geo- morphology based parameters to decide upon ecologically sensitive areas in India. The Sen Committee’s foremost criterion for identification of an ESA is endemism and the committee proposed that the area of occurrence of every endemic species need to be protected in its entirety. The Western Ghats harbors well over two thousand species of flowering plants , fish, frogs, birds and mammals amongst the better known groups of organisms, and no doubt thousands more amongst less studied groups including insects. Amongst themselves these endemics would cover the entire geographical extent of the Western Ghats and all conceivable habitats, including many disturbed ones such as roadsides. The Western Ghats regions thus qualify an ESA under several other primary as also auxiliary criteria proposed by the Pronab Sen Committee. WGEEP fully endorses the conclusion that follows this set of criteria for the identification of an ESA, and recommends that the entire Western Ghats tract should be considered as an Ecologically Sensitive Area.

However a uniform set of regulations cannot, obviously be promulgated under the EPA for this entire region. Hence WGEEP recommends the adoption of a graded or layered approach and suggest that the entire Western Ghats be characterized as comprising (1) Regions of highest sensitivity or Ecologically Sensitive Zone 1(ESZ1), (2) Regions of high sensitivity or ESZ2, and the remaining (3) regions of moderate sensitivitySEZ3. These will be complementary to areas already declared as Protected Areas, which will continue to be managed under regulations prescribed by pertinent acts such as the Wild Life Protection Act . Thus , WGEEP has come up with four colour maps spanning the entire Western Ghats depicting Pas, ESZ1, ESZ2, and ESZ3.’ (highlighted)

Para 11

Annexure A2 office Order constituting the WGEEP has been issued mainly on the premise of the environmental sensitivity and ecological significance of the region and the complex interstate nature of its geography, as well as the possible impacts of climate change on this region.

Para 12 - No remarks

Para 13

The fifth respondent is not a party in Writ petition No: 4095/2011 of the High Court of Bombay. The Annexure A3 order dated 21-3-2012 pertains to issue of notification to declare Sawantwadi- Dodamarg corridor as ecologically sensitive area. It has nothing to do with the fifth respondent.

Para 14

The fifth respondent seriously and stoutly disputes the statements of the applicant in this para. In para 19 the applicants have stated that they rely upon the report of the WGEEP in its entirety and that the same may be read as if it has been verbatim incorporated in their application. But conspicuously their specific prayer in the application is only to direct the respondents not to issue any consent/ Environment clearance/NOC/Permission under the Environment (Protection) Act 1986, Water (Prevention and Control of Pollution) Act (& \$, Air (Prevention and Control of Pollution) Act 1981, Forest (conservation) Act 1980 and Biodiversity Act 2002 within the Western Ghats area in respect of areas which have been demarcated as ESZ 1, and ESZ 2 as mentioned in para 19 of the application.

The WGEEP evolved the zonation as in paras 9 and 10 of the report (pages 16 to 21) based on a study published in *Current Science* in January 2011. (*Gadgil, M. et al. 2011*) titled Mapping Ecologically Significant and Sensitive Areas of Western Ghats: Proposed Protocols and Methodology. The authors were of the following view on grading the Ecologically Sensitive Areas (ESA)

‘There could be no immediate consensus on how to weigh each of these attributes but one simple way (but obviously unacceptable to all) would be to weigh the three criteria (Abiotic, Biotic and socio-cultural) equally. We wish to continue such a process with the hope that once the results are out there could be further discussions revaluation, and revision of the ESAs. However for the time being we propose that all the three attributes viz: biological, geo-climatic and public perception are developed and graded as given in the table 1 below. Each of them is divided into three categories, based on the importance of the

biological component, environmental sensitivity and valuation by the public and are ranked accordingly. These attributes are later overlaid as shown in Table. The biological and geo-climatic layers are first combined and public perception layer is overlaid on this to arrive at the different grades of ESAs.

Once the grids are assigned with these grades/ranks, areas for demarcating ESAs are identified as set of consecutive grids with similar grading/ranking. However the more fine scale borders of the ESAs can be developed with local inputs from the forest managers and the stake holders before they are legally declared as ESAs.

Conclusions:

We are aware that the protocol and methodology provided here for mapping ESAs cannot be final and may not be directly adaptable without further discussions. However it is our hope that responses from a wider section of experts and the consequent discussions help significantly towards developing a more generic methodology on which there could be more consensus. In the meanwhile, however WGEEP has been compiling the datasets required for the purpose for mapping the ESAs along Western Ghats using these steps.

Any constructive suggestions during the process would be highly appreciated’.

However when it came to the application of the grid concept in section 9.1 of the report, it is done based only on the scientific postulates without any further verification or consultation. When the authors themselves have admitted that the purpose of the paper published in the ‘*current science*’ was first to invoke discussions and suggestions from a wider section of experts on the conceptual and methodological details arrived at by the WGEEP’ and also conceded that ‘As the methodology described in Section 20 indicates **we could not compile the full set of data indicated above , nor have we been able to cover all the criteria proposed by the Pranob Sen committee, primarily due to lack of time.**’ (*Vide Box: 4, Section 9.1, page 18*) This limitation faced by the committee is also admitted in section 6 of the report on boundaries of the Western Ghats. In page 7 of the report of the WGEEP the Panel has revealed that ‘**We must however admit that the Western Ghats Ecology Authority, when put in place, will have to take another look at the boundaries we suggest, since we have not been able to find time to examine and refine these with enough care.** It seems unprecedented to use unproven yardsticks in a scientific study and making recommendations based on that. (Highlighted)

A perusal of the minutes of the meetings of the WGEEP would testify that the panel had not envisaged designating regions outside the conventional Western Ghats areas to be brought within the regulatory regime for conservation of the Western Ghats. Extracts of the relevant minutes to prove the above points are submitted herewith as follows:

EXHIBIT-R5 (1) Western Ghats Expert Group: Work Plan

EXHIBIT R5- (2) VIII. Brainstorming Session on Criteria for deciding Ecologically Sensitive Areas

EXHIBIT R5-(3) Minutes of the Meeting of the MPs of the Western Ghats Region with the Minister of State (I/C) E&F along with the Members of the Western Ghats Ecology Expert Panel held on 17 th August, 2010 at the Parliament House Annexe, New Delhi.

EXHIBIT R5-(4) Minutes of the fourteenth meeting of Western Ghats Ecology Expert Panel (WGEEP) held at Indian Institute of Science, Bengaluru, from 16th to 17th August 2011.

The highlighted portions in the above exhibits may be specially adverted to, which would bear testimony to the statements herein requiring a review of the recommendations on zonation and regulations to be in consonance with the ground realities and the peculiar situation of the state warranting a departure from the standards adopted by the WGEEP, for special consideration.

Again in Section 10 of the report at page 25 the Panel has commented that ‘

‘It will be clearly be desirable to put in place a system of zonation that jointly considers micro-watersheds and village boundaries to decide on Specific limits of ESZ1, ESZ2 and ESZ3’ as well as to arrive at a locality-specific management plan. This would be a task that will have to be initiated by the Western Ghats Ecology Authority through a broad-based participatory process when WGEA is put in place. However, as a first step, we suggest the Ministry of Environment and Forests provisionally notify the initial limits of ESZ1, ESZ2 and ESZ3 based on WGEEP analysis. This may be most appropriately done at Taluka/ Bloc level. With this in view, we have gone ahead and assigned ESZ1, ESZ2 and ESZ3 levels to all the 134talukas of Western Ghats. The assigned level to the taluka is the ESZ that covers the largest fraction o the taluk’.

The report *per se* reveals that it is merely based on the incomplete scientific exposition in Appendix 4 of the report and not based on the further improvements suggested in Box 4 thereof that the zonation has been done. The report admits that non ecologically sensitive and non Western Ghat areas have been included in their zones and identified Talukas which vitiates their recommendation. The people owning land and or living in such non sensitive areas, but dragged into the zones are denied their fundamental rights.

It cannot but be said that the Panel has failed in identifying and demarcating the appropriate areas **within** the western Ghats which need to be notified as ecologically sensitive to recommend for notification of such areas as Ecologically sensitive Zones under the environment (Protection) Act, 1986, as it had been specially mandated. Therefore the zonation particularly ESZ. 2 and ESZ. 3 as has been made by the WGEEP cannot be accepted either as scientific, or in conformity with its mandate to that task.

Para 15

36 out of 63 taluks, 80 out of 152 Block panchayats and 546 out of 978 Grama Panchayats of the state falls within the Western Ghats Region. However the facts stated in prepara do not justify the confirmative assignment. Whereas the report in Section 10 page 21 speaks of separate treatment of Western Ghat Regions of each state for the purpose of ESZ assignment, there is no apparent evaluation of attributes with the criteria to be used for each of them in respect of Kerala. Instead it is generally stated that the extent of area covered by existing protected areas plus ESZ1 And ESZ 2 together will be around 75% and the extent of ESZ3 will normally be around 25% of the total area which in the absence of verifiable data and details is unacceptable to the 5th respondent. Views of the concerned Government Departments, Public Undertakings and Scientific Institutions on the recommendations were elicited and also based on the inputs the State Government prepared its response to the recommendations as called for by the 1st respondent and conveyed as per letter No:3527/A2/11.Envnt dated 31-1-2012. A copy of the State Government's views on the report of the panel is produced herewith as **EXHIBIT R5- (5)**. It may be treated as if incorporated herein. For the facts and reasons adduced in Exhibit R5-(5), the assignment of ESZs as has been attempted and recommended by the WGEEP is unacceptable to the 1st respondent.

Para 16

16.1 The ESZ assignments made by the WGEEP cannot be considered rational and practical. The 5th respondent has a strong case that it is not taking in to consideration of the ground realities not to speak of the abject lack of ground level verification. In Section 6 of the report the WGEEP itself has stated that the higher mountain ranges further south of Kodagu (about 12degrees N)

‘including the Nilgiris, the Anamalais, the Cardamom Hills and the Agasthyamalai range, being referred to as distinct geological entity named as the southern block (Mani 1974). For our purposes we use the term Western

Ghats in the broader sense to include the entire tract of hills from the Tapi to Kanyakumari.’

In the matter of identification of the eastern and western boundaries of the Western Ghats the WGEEP has adopted the following criteria:

‘For the purpose of defining the boundary of the Western Ghats, we used altitude and forest area or vegetation as drivers defining the boundaries. Our operational definition for therefore is forest area above a certain altitude. Accordingly we demarcated the eastern edge by identifying the forested areas that are above 500 m; the rationale for this cut off followed from the digital data which showed that, in general, 500m constitutes the elevation at which the Western Ghats rise discretely from the Deccan plateau. For the western edge, we used a cut off of forested areas at 150 m and above as the Ghats fall more steeply down to the coastline as compared to the eastern side of the Ghats. We also found that whenever the forested areas at elevations of more than 150m drop directly into the ocean or within a distance of 1km of the coastline, it was difficult to define the coast. Hence in such situations (as in parts of (Maharashtra), the coastline itself was considered as the western edge of the Ghats. We used the land-use map developed by Forest Survey of India to demarcate forested areas, and GTOPO30 (Global 30 Arc-Second Elevation Data Set) for altitude details at 1x1km resolution. The boundaries were defined by overlaying these two datasets and following the criteria defined above. We also used the annual cumulative NDVI (normalized differential vegetation index) values as a surrogate for vegetation or forest cover but eventually found that the Forest Survey of India’s map per se was sufficient for the purpose’.

A perusal of the report as such gives the inference that the Western Ghats for the purpose of the WGEEP as far as it relates to the state of Kerala had to be considered as the forested hill tracts which is a distinct geographical entity as far as the state is concerned. In so far as the boundaries of the Kerala Western Ghats could have been distinctly differentiated and fixed with reference to biological, Geo-climatic, attributes and stake holder evaluations it was not necessary that arbitrary and irrational zonation methodology was adopted and the Western Ghats regions stretched to in appropriate areas where regulations are proposed to be clamped for conservation of the Ghats.

16.2 Kerala, a narrow strip of land in the south –western margin of the Indian peninsula, is bounded by Western Ghats in the east and Lakshadweep sea in the west. On the longitudinal profile the land may be divided into three zones, namely the high land, the middle land and the low land, including coastal plain. Though this forms the conventional system of physiographic classification, it provides the basic information for detailed studies on natural regions, their spatial occurrence and characteristics. Physiographic provinces of Kerala have many peculiarities of their own. Geological events such as the west coast faulting and the Western Ghats upliftments are the major events responsible for the emergence of the Kerala's peculiar natural regions. Since these events took place more or less on a longitudinal sense, the natural regions are distributed in the similar fashion. A major break is evident in the Palakkad region, where the monolithic Western Ghats has a 30 kms wide gap. But for this Palakkad gap, the rest of the state exhibits a uniform distribution n of natural regions.

The state is a narrow strip of land with five physiographic divisions, the mountain peaks (>1800m; 0.64%), highlands (600-1800m; 20.35%), middle lands (300-600m; 8.44%), lowlands (10-300m; 54.17%) and coastal plains and lagoons (0 -10m; 16.40%). Mountains and peaks above 1880 m are very few in number, the highest being Anamudi peak. (2695m). The highlands follow a general trend along the direction of the Ghats, starting from extreme north to south of the state. The undulating western fringe of the highlands and the lateralized rocky spurs projecting westwards and parts of the crustal breaks (passes) form the midlands. The low lands falling under the longitudinal range of 10-300 m consists of dissected peneplains. The vast low lying areas fringing the coast is not only an important physiographic unit of the state but also important in terms of economic activity and demographic distribution. Beach dunes, ancient beach ridges, barrier flats, coastal alluvial plains, flood plains, river terraces, marshes, and lagoons constitute this unit. (*State of the environment report :2007 Vol:I:PP6-7*)

16.3 The above geographical features of Kerala are distinct and dissimilar making it possible to divide the state vertically in to three natural geographic divisions, the Western Ghats (High Range) or highlands, Plains or midlands and Coastal area or lowlands. The zonation adopted by the WGEEP transcends the physiographic limits of the conventional Western Ghats and intrudes even in to the entirely unrelated and peripheral coastal plains in the form of SEZ 3grids. Actually the kind of zonation the WGEEP has recommended is not as mandated by the first respondent and as per the resolutions of the WGEEP itself in the matter of demarcation of areas **within the Western Ghats** to be notified as Ecologically Sensitive Areas under the EP Act.

16.4 The first meeting of the Panel held on 31st March, 2010 had resolved to assess the current status of the ecology of the Western Ghats Region, demarcation of areas **within the region** to be notified as ecologically sensitive zones under the Environment (Protection) Act, 1986, as also to recommend modalities for the establishment of the Western Ghats Ecology Authority under the Environment (Protection) Act. The Second Meeting of the W G E E P held on 7th May 2010 at, Coimbatore had decided to undertake a comprehensive assessment of the potential Ecologically Sensitive Areas **within the Western Ghats region** on a scientific basis calls for a sound information base.

The WGEEP held a Brainstorming Session on land use policy in Western Ghats at the Indian Institute of Science, Bengaluru on 3rd March 2011. Smt: T.M. Sudha, Senior Town Planner, Department of Town and Country Planning, Kerala gave a presentation on the Opportunities in Participatory Planning in Evolving a Land Use Policy for Western Ghats Region. She gave an introduction about Kerala including an overview of the Kerala Western Ghats. Ms. Sudha highlighted the peculiarities of landholdings and settlements in Kerala which included scattered homesteads and rural –urban continuum. She said that urban sprawl is very common in Kerala and the per capita land availability is very less. To limit the urban sprawl a judicious land use policy along with comprehensive development plan which includes concerns of environment was required. The Western Ghats Ecology Expert Panel met on 24th March 2011 at Paryavaran Bhavan, New Delhi with the Hon'ble MoS (I/C) E&F. This was followed by Pronab Sen criteria for determination of ecological sensitivity. **He said that Pronab Sen Committee did not provide for any guidelines for the management of Ecologically Sensitive Areas (ESAs).** It was decided that the **'WGEEP members responsible for each of the allotted states would give broad proposals of ESAs for their respective states'**. In the twelfth Meeting of WGEEP and Expert Consultative Meeting held at Kerala Institute of Local Administration, Thrissur from 3rd to 5th May 2011, **Prof M.K. Prasad opined that if the Western Ghats definition adopted by the WGEEP does not coincide with the official Government definition there might be problems with respect to implementation of different schemes.** It was clarified that the present definition encompasses all the Western Ghats taluks which are covered by the Government definition hence there would be no problem.

16.5 A close reading of the minutes of the meetings and workshops held by the WGEEP gives the irrefutable inference that:

1. The panel initiated its works for identifying the ecologically sensitive zones **within** the Western Ghat regions as mandated in Annexure A2.

2. No ground truthing had been carried out to check the reliability of the ecological sensitivity scores for each grid as finally demarcated by the panel and recommended.

3. Views expressed by the MPs of the state in the interactive meeting with the Minister of State Environment & Forests along with the Members of the Western Ghats Ecology Expert Panel on 17th August, 2010 at the Parliament House Annex, New Delhi [ExhibitR5 (3)] were not considered by the WGEEP. Neither has the assurance in respect of Kerala given by the Hon: Union Minister had been adverted to.

4. Problems of land use practices and peculiarities of land holdings in Kerala presented to the panel by Smt: T.M. Sudha, Senior Town Planner, Department of Town and Country Planning, were also not considered.

5. The Panel was of the stand that the Pronab Sen Committee did not provide for any guidelines for the management of Ecologically Sensitive Areas (ESAs) and if the Pronab Sen Criteria is applied **the whole Western Ghats** will classify as ecologically sensitive area, implying it need not be so.

6. Participatory approach with the involvement of the local people was not adopted for demarcation of the ESZ.s

7. the present definition of Western Ghats admittedly encompasses all the Western Ghats taluks which are covered by the government definition and hence the panel expected no problem. But the government definition of the western ghats adopted by the Wgeep is not forthcoming.

8. no rationale or grounds have been adduced in the report for grading the non Western Ghat regions (not being part of the conventional highlands but falling within the midlands and coastal plains) as SEZ to be protected or regulated for the sake of the Western Ghats.

9. the deliberations of the panel and decisions were centered on the forest ambience and Ecological attributes of protected areas and in the lines of the guidelines as per the Wild Life Protection Act. No decision is seen to have been taken by the WGEEP for extending the zonation to any other regions not falling within the conventional Western Ghats.

10. The panel has not considered the relevant and significant matters of public interest as adduced in Exhibit R5 (5) while considering and recommending the SEZs and zonal regulations therein, which no democratic government can shut its eyes to.

11. Section 9 of the report refers to the prohibition that could be imposed by the central Government under Section 5 of the Environment (Protection) Rules 1986 on the Ecologically Sensitive zones being identified. But the action under Rule 9 shall be with particular reference to the attributes laid down and only after following the procedure prescribed therein. But the Panel itself has conceded that 'However, a uniform set of regulations cannot obviously be promulgated under the EPA for the entire region'. (Section 9, p17) However the Panel not only demarcated the ESZs but also prescribed a uniform set of regulations applicable across the SEZs, even as the zonation lacks the data and methodological process criteria (box 4. P18 of report) adopted in arriving at the demarcation process for each zone in the respective unit. The Panel has opined that 'It will clearly be desirable to put in place a system of zonation that jointly considers micro watersheds and village boundaries to decide on specific limits of ESZ I, ESZ 2 and ESZ 3, as well as to arrive at a locality specific management plan. This would be a task that will have to be initiated by the Western Ghats Ecologically authority through a broad-based participatory process when it is put in place.' For the very reason the extant recommendations of the Panel on zonation may not be acted upon.

For the above reasons and those categorically reported to the 1st respondent by the fifth respondent vide Exhibit 5, the zonation as recommended by the WGEEP especially in the traditional midlands and coastal areas of the state are wholly unacceptable to the 5th respondent. The 5th respondent has very serious reservations and anxieties over the zonation process adopted by the Panel and request that those may not even be considered tentative or illustrative. Nevertheless the 5th respondent wish to clarify that all possible conservation and protection measures are being taken and will be ensured in the conventional Western Ghat regions of the state. In this context the report appeared in '*The Hindu*' daily dated 22-8-2012 is extracted below:

'Madhav Gadgil, head of the WGEEP, told The Hindu over the phone from Mumbai that the grid size of 9x9 km was selected because the available computerized information was in that scale.

"Within the available time frame we had to prepare the report, it was a scale we could handle because of the earlier work done". He however said there was a need to develop the map further on a finer scale.'

The use of large grids leads to the inclusion of non Western Ghat areas into various zones.

Para17

Not applicable to the 5th respondent.

Para18

18.1 General recommendation on restricted or prohibited activities across the entire Western Ghats as a single unit is repugnant to the admission of the WGEEP in para 2 page 17 of its report in section 9. When the WGEEP has unequivocally found that a uniform set of regulations cannot obviously be promulgated under the EPA for the entire Western Ghats region, (section 9, p17) it is precisely what is done and recommended by the panel in section 13 of the report. As to how the zonation and the regulations applicable to each zone for the listed activities in the Western Ghat region of the state would jeopardize human activities in the other thickly populated geographical areas has been elaborated in Exhibit 5.

18.2 Even as the report says that the zoning proposed is not final, the WGEEP has made elaborate recommendations as broad set of guidelines as starting point for regulatory as well as promotional measures in the three zones. Even though the guidelines given in Table 6 of the report are titled “Proposed guidelines and summary recommendations for sector-wise activities’, those are prohibitory and restrictive conditions on activities across the Western Ghats as graded by the WGEEP. Other than the objections conveyed in Exhibit 5, the Chief Minister of Kerala has brought the reservations of the state in the matter of the recommendations to the personal notice of the MoS for Environment & Forests by his Demy official letter No 3527/A2/2011/Env. dtd 3-3-2012. The concerns and apprehensions in clamping further restrictions in the beneficial enjoyment of the non-forested land of the state has been demonstrated .In the matter of the proposed zonation and restriction of activities therein the Chief Minister has remarked as under:

‘Even the extant regulations and legislations like the Coastal Regulation Zone Notification, Conservation of Paddy land and Wetland Act (State Act) which cover lesser extents are being opposed by many as anti developmental. As a matter of fact two third of the land in Kerala is already under some zoning regulation or other. Now the Government is unable to setup even minor Sewage Treatment Plants to save the coastal cities and its water bodies from the grave threat of sewage pollution, owing to the strict application of the regulatory regime.

If further checks and controls are imposed it would only aggravate the environmental and ecological degeneration of the scanty land and water resources, apart from restraining the state government from utilization of its natural resources, thus jeopardizing the bonafide development needs. The state Government are committed for the sustainable conservation of the Western Ghats and it is testified in the report of the WGEEP itself. If the Ministry could facilitate model conservation projects such as the biodiversity conservation project proposed

at Udumbanchola (vide my letter No. 662/A2/Env't dtd 26-10-2011) and empowerment of Biodiversity Management Committees (BMC) which are functional in all the Grama Panchayats of the state, the purpose of the report could be better served'.

18.3 After making recommendations for control and prohibition of human activities in the three SEZs as proposed, the WGEEP has remarked that 'the overall planning and development of the extensive Western Ghats region would have to be placed within the framework of the proposed Ecologically Sensitive Zones.' An approach thereto has been suggested in Box 11 of the report at page 48-49 in the note prepared by Prof. Edgar Rebeiro. However in Part C of the note it has specially been stated that '*Therefore for the WGEA to succeed it should be developed within the context of State Regional and Urban Development Planning Acts and with the term 'development' being refined to incorporate conservation and preservation*'. It also reveals that the recommendations in Section 13 of the report on regulation and controls within the SEZs as recommended are not following a comprehensive consultation process involving people and Governments of all the concerned states for conservation, protection and rejuvenation of the Western Ghats region as per para 7(iii) of the terms of reference of the WGEEP (Annexure A 2). The recommendations in Section 13 have occasioned widespread objections from all stake holders. The matter has been come up for discussion in the Kerala Legislative Assembly more than once. It has been clarified on behalf of the state government that the State government will stand by Exhibit 5 and that the unduly restrictive and impracticable recommendations seriously affecting the hydroelectric and major irrigation projects of the state are unacceptable. Such complaints have been expressed by other states as well whereon on 11-6-2012 the Chairman of the Panel has sent an e-mail message to the members, to come up with actionable points for discussion and to serve as a basis for citizen feed back to the WGEEP report now on the Ministry's website. Quoting the response of the Maharashtra state on the report, it is conveyed that:

'In response Dr. Madhav Gadgil clarified that the report did not make any rigid, final set of recommendations, but was meant to serve as basis of an informed decision making process through democratic means'. Here also the conservation plan of the Kerala State Biodiversity Board for the biodiversity rich areas of Udumbanchola Taluk has been commended. While advocating for such participatory programmes, however it has also been exhorted that 'Nevertheless WGEEP strongly recommended its adoption. In the meantime, the Ministry of Environment and Forests GoI must take immediate steps to safeguard the precious natural heritage of the Western Ghats. With this in view WGEEP strongly recommends that Ministry of EN& F immediately notifies under EPA the limits of ESZ1, ESZ2 and ESZ3 as proposed by the WGEEP at taluka level along with appropriate regulatory regime as suggested in Table 6'.

18.4 Prof: Madhav Gadgil and Dr: Ligia Noronha (member of the panel) have articulated the same views in their article titled 'To know is to Protect' published in 'The Hindu' on 13-6-2012 reiterating that '**the final delimitation of the zones as well as formulation of locally specific management regimes be undertaken by involving local bodies**'(highlighted). The recommendations which even according to the panel requiring further discussions cannot be accepted as final and acted upon by the respondents. Even though majority of the recommendations for conservation could be implemented in the traditional Western Ghats those need further examinations at the grass root level and thorough review and reconsideration in respect of those for power and water resources management sectors. The 5th respondent is cognizant of the need to protect the Western Ghats and its ecology. However there are impracticable recommendations on zonation and restrictions which are unacceptable to the state Government. Therefore the 5th respondent has constituted an expert committee to consider the adverse impacts of the recommendations in the report and to suggest remedial measures. Also the 1st respondent has constituted a high level group to examine the WGEEP report in a holistic and multidisciplinary fashion keeping in view of the comments received from the state governments /Central ministries/stakeholders etc considering the imperative of equitable social growth of the region in the most sustainable manner with special attention and importance to the preservation of the precious biodiversity, wildlife, flora and fauna of the western Ghats and to prevent further degradation of the same. The Committee has started its work. Therefore the application has become infructuous.

18.5 In the matter of the restrictions and prohibition of activities purportedly made as tentative suggestions 'to serve as basis of an informed decision making process through democratic means', but recommended to be notified by the Ministry immediately the stake holder Government Departments and Public Undertakings have serious reservations and complaints. The major objections and problems are summarized below: The general complaint is that the recommendations and zonation as made by the WGEEP for the Ecologically Sensitive Zones (ESZ) and regulatory regime are not taking into consideration of the ground realities of Kerala. The regulations proposed are too much, severely hampering other development activities in more than 60% of the state's land area. The recommendations would affect Kerala the most despite it having the highest component of forest cover, conservation measures admired by the WGEEP itself, and the largest body of statutes and regulations for environmental care. The state has enough legal controls for conservation of the Western Ghats (WG) and further controls would be redundant and a disincentive for the conservation activities adopted. More specially the following critical situation pertaining the sectoral regulations recommended by the WGEEP are pointed out for consideration of the Hon: Tribunal:

18.5.1 Agriculture

Recommendations for ban on pesticides within the fixed time line of 5, 8, 10 years in the three ESZ may not be feasible. So also shift to 100% organic cultivation within the proposed periods would not be possible, given the obligations of food security and high-tech farming. It would not be practicable to phase out all chemical fertilizers. Organic farming could be practical in selected areas. Imposing conditions on unwilling farmers, without effective alternatives for agro-chemicals would be counterproductive. It may not be possible in commercial cultivation to phase out pesticides without alternatives. In Kerala, Red and Yellow insecticides have already been banned. Total ban of others as recommended is not practicable. It can be done in a systematic and phased manner. Local Self Government Institutions of the state can also facilitate organic farming in a phased manner. The state government already has an organic farming policy and it could be practiced at selected areas and promoted in a phased manner.

18.5.2. Land use restrictions

Land control with respect to development activities as proposed in the report may not be possible. The proposed Western Ghats Ecology Authority would create problems for revenue administration in 24 taluks. Majority of the quarries are in EZAs, where quarrying is proposed to be banned/regulated. But there is a recent Supreme Court order permitting quarrying with prior EIA clearance. It is Government's policy to give pattayam for eligible settlers with cutoff date 01.07.1977. The recommendations would come in the way for implementation of the policy. The report would necessitate redoing the action so far taken under the relevant forest laws for transfer of land to issue pattayam. It also creates a situation where majority of the population has to suffer for the remaining. The social issues involved cannot be ignored. In the response to the points raised by the MPs from the state in the meeting of the MPs of the Western Ghats Region with the Minister of state Environment& Forests along with the members of the Western Ghats Ecology Experts Panel held on 17th August 2010 at Parliament House Annexe New Delhi, the Hon: Minister had made the following assurance:

‘MoEF recognizes that the state of Kerala will need a special dispensation, as the area of forests in proportion to the land area is the highest in the state. We cannot wish away settlements where people have been living in the same areas for more than 100years. Such settlements will be given special consideration’.
(highlighted).

The above consideration should actually be extended to the 5th respondent. When the life pattern in the areas to be brought under regulations and that outside is the same, separate development strategy for each area would not be possible. Kerala already has sufficient environment friendly statutory regime. There are national and local laws imposing restrictions on land use in forest and ecologically fragile lands. Further

restrictions and statutory institutions to oversee the activities are unnecessary and may not serve the purpose intended.

18.5.3. Industries

Kerala is not a mineral rich state. Now mining activities are there in 36 taluks. 80% of the mining are less than 5 hectares in extent. As regards regulation of industries, the state is promoting only non-polluting industries. As for those causing pollution, the EIA procedure is being followed for clearance. Making it more stringent would be burdensome. All new Red and Orange category industries are to be banned in ESZ1 and ESZ2 and all such existing units to be switched over to zero polluting by 2016. Hospitals fall under red category and resorts and hotels under orange category as per statutory classifications and hence will be restricted under the recommendations of the WGEEP and hence can be accepted only with due consideration of the human requirements. Clamping zonal restrictions as recommended would effectively thwart the states right for industrial development and infrastructural advancement following the legally permitted procedure of getting prior environmental clearance as per the statutory guidelines prescribed by the 1st respondent.

18.5.4. Forest

Forest Statistics at a Glance

Geographical area of State	:	38,863 sq. km
Population of the State (2001 Census)	:	3,18,41,374
Density (persons/sq. km)	:	819
Total Forest Area in the State	:	11,309.4754 sq.km
Total Plantation Area	:	1,477.393 sq.km
Total EFL Area	:	132.57 sq.km
Diversion of Forest Land	:	410.34 sq.km
Area of Encroachment	:	68.08 sq.km
Scheduled Tribe Population (2001 Census):		3,64,189
Tribal Population (inside Forests)	:	73,492
No. of Tribal Settlements	:	723
Settlement Area	:	215.32 sq.km
Per Capita Land (as per 2001 Census)	:	0.122 Ha
Per Capita Forest Land (as per 2001 Census):		0.036 Ha
Revenue from Forest (Rs. in lakhs)	:	22,370.51
Area under Sanctuaries & National Parks:		2,698.709 sq. km

Forest related legislations and statutes

Kerala Forest Act (1961) and Amendments

The Kerala Cattle Trespass Act, 1961

The Kerala Cattle Trespass Rules, 1962

Kerala Land Reforms Act, 1963
 The Kerala Forest (Collection of Drift and Stranded Timber) Rules, 1965
 The Forest Settlement Rules, 1965
 The Kerala Private Forests (Vesting and Assignment) Act, 1971
 The Kerala Private Forests (Tribunal) Rules, 1972
 The Kerala Preservation of Private Forest Act, 1972
 The Wildlife (Protection) Act, 1972
 The Kerala Private Forests (Vesting and Assignment) Rules, 1974
 The Kerala Private Forests (Exemption from Vesting) Rules, 1974
 The Kerala Restriction On Cutting And Destruction of Valuable Trees Act, 1974
 The Kerala Restriction On Cutting And Destruction of Valuable Trees Rules, 1974
 The Kerala Forest Produce Transit Rules, 1975
 Kerala Private Forests (Vesting and Assignment) Appeal Rules, 1977
 The Kerala Forest Produce (Fixation of Selling Price) Act, 1978
 The Kerala Forest Produce (Fixation of Selling Price) Rules, 1978
 The Forest (Conservation) Act, 1980
 The Kerala Vested Forests (Management of Reserved Areas) Rules, 1980
 The Kerala Rules For Payment of Compensation to Victims of Attack by Wild Animals, 1980
 The Forest (Conservation) Rules, 1981
 The Kerala Preservation of Trees And Regulation of Cultivation in Hill Areas Ordinance, 1983
 The Wildlife (Protection) Licensing (Additional Matters For Consideration) Rules, 1983
 The Kerala Forest (Grazing) Rules, 1985
 The Kerala Preservation of Trees Act, 1986
 The Kerala Forest Development Fund Rules, 1989
 The Recognition of Zoo Rules, 1992
 The Wildlife (Protection) Rules, 1995
 The Wildlife (Specified Plants Conditions for Possession by Licensee) Rules, 1995
 The Kerala Captive Elephants (Management and Maintenance) Rules, 2003
 The Forest (Conservation) Rules, 2003
 Declaration of Wild Life Stock Rules, 2003
 The National Board for Wildlife Rules, 2003
 In order to preserve the trees outside forest area, the Government have made certain regulations under The Kerala Promotion of Tree Growth in Non-forest Areas (Amendment) Ordinance, 2006. Under the Ordinance, there is severe restriction on / cutting of sandal trees which can be effected only directly by the Forest Department. Other than sandal, cutting of trees of the following species from homesteads (<0.5 ha) is regulated by issuance of felling permits by the Forest department.(source : Kerala State Action plan on Climate Change, Department of Environment & Climate Change ,2012)

Higher the restrictions in the non forest areas, the higher will be instances of encroachments in to forest areas. The other sensitive areas in between may be brought under

ESZ-II. But there are practical problems as to the administrative set up proposed through the WGEA. As per a Supreme Court Judgment Eco Sensitive areas are required around each sanctuary. That not having been done, an area of 10 km around the sanctuaries is required to be maintained, which in itself are restricted areas. All such legally restricted areas will constitute 82% of the forest areas of the State. Protected areas (PA) are outside the purview of the zonation as per the report. Likewise the other forest areas must also be brought outside the ESZ classification. There are special state specific laws for conservation of forests. So also the legal measures in the state are more than that of other states falling within WG areas. Forest areas are at present under stringent restrictions. An additional Regulatory Authority would only compound the existing problems for development activities in the state. The proposed objectives of the WGEA are sweeping. The Forest Department, which itself is now a regulatory authority would be required to take the permission of the WGEA in all the management and planning activities for conservation of the forests. As for prevention of monoculture plantations of species such as Eucalyptus, it can be done only in a phased manner since the Forest department has contractual obligations. Now there is Joint Forest Management Committees involving non-tribals as well, which need not be dispensed with.

18.5.5. Hydroelectric Power Generation

Power generation in Kerala is largely from hydro resources. Hydel energy is the most reliable and dependable energy in the state. One of the peculiar attributes of the state is the network of river system originating from the Western Ghats, although majority of them are short rapid ones with low discharges. The unique topography of the state and the intensity of rainfall are the favourable factors conducive to the development of hydro electric power. Hydel power is the cheapest, best suited and affordable.

Kerala is bestowed with huge hydro potential by way of plentiful rain and many rivers. As if acted upon by nature's balancing mechanism the state is devoid of any fossil fuel reserves. It is estimated that the vast hydel potential can take care of the power needs of the state for many decades to come. However Kerala could accomplish only two major power projects viz: Idukki(780MW) and Sabarigiri(300MW) with substantial storage capacity so far. Even though the Kerala State electricity Board had been formulating many other large capacity hydroelectric power projects, those could not be developed due to denial of environmental and forest clearances. With the enactment of the forest conservation Act in 1980, the situation became worse and even the medium capacity projects had to be shelved. Some of the major hydroelectric projects which were denied environmental clearance are silent valley (240MW, 522MU), Pooyamkutty(240MW,645MU), Pathrakkadavu(100MW) and Athirappally(163MW,233MU).

Out of the estimate hydel potential of about 6000 Mw in the state, Kerala could harness only about 2040 MW so far, leaving a huge gap between the potential and the harnessed capacity. All the proposed hydel projects in Kerala can come up only in the Western Ghats. The forest cover of Kerala is 29% of its geographical area whereas the state accounts for 28% of the total biodiversity of the country. The WGEEP report has recommended for demarcating select areas of the Western Ghats a “No-Go” areas where no developments will be allowed under any condition so as to protect the ecology of the region. All major, medium and small hydro electric projects proposed by the KSE Board during the next two plan periods have to be stalled if the WGEEP report is accepted in toto. Those include Poringalkuthu SHEP (24MW), Anakkayam SHEP (7.5MW), Achencovil HEP (30MW), Vakkalar SHEP (24MW), Vythiri HEP (60MW), Kanthanpara HEP (66MW), (30MW), Mankulam Stage 2 (40MW), Upper Sengulam (24MW), Anamalai Manali (100MW), Pandiyar-Punnapuzha HEP (105MW), Mananthavady HEP. Pooyamkutty HEP (210MW), Pathrakkadavu HEP (105MW) etc. Hence if the report is accepted in toto will close all avenues for developing more hydroelectric projects in the state. Hence the state government cannot but take in to consideration of the genuine grievance of the Kerala State Electricity Board and request the Hon: Tribunal to direct the 1st respondent to undertake a revisit of the entire recommendations of the WGEEP, undertake adequate consultation with the state government and thereafter take a view of balancing the development needs of the state with environmental sustainability.

Kerala's requirements of power, irrigation and drinking water are now being met by the storage reservoirs at the high ranges proposed to be made ESZ-I. Decommissioning of the dams would virtually fail the state in all the above sectors. All the existing and proposed hydro electric projects are in the proposed ESZ-I. The recommendations that only dams having the height of 3m may be permitted in ESZ-I will effectively thwart the state's proposals for harvesting hydro electrical power, since dams cannot be built at any places in the other zones. There is no alternative for the 2500 MW of power generated in the state from the hydel projects. Diversion of rivers and forests is also not permitted. The condition that the dams 50 years old shall be decommissioned and the prospects of no new dams would prevent the state from having electricity and producing it in the only way by which it could be produced in the state in an eco friendly and economically. The WGEEP had put hurdles in setting up coal based and gas based power plants.

There are 19 major dams in the irrigation sector and 33 major dams in the power sector and two dams in the water supply sector. Most of the dams have crossed the life span of 30-50 years. The WGEEP has recommended that all the dams that have crossed the life span of 30-50 years will have to be decommissioned in a phased manner. All hydel projects conserve

water for use in lean periods. They control floods by storing water and control drought by releasing it as and when required for generation of power, agriculture, industry, domestic uses, salinity control, etc. When all the existing dams that have completed 30-50 years are to be decommissioned and no new storage schemes are permitted, the entire waters of Kerala during the monsoon months would flow to the sea in 48 hours and severe drought would be experienced. As per WGEEP report, only run of the river schemes with maximum height of 3m are allowed in SEZ1 for serving local energy needs of tribal/local communities / plantation colonies etc. A solution to drinking, irrigation and power needs of the common people is not seen furnished in the WGEEP report. Only with storage of water during monsoon the above requirements can be met. Therefore the WGEEP report is accepted, water availability will be a major problem in the state.

Recommendation for decommissioning of dams could create further ecologically disagreeable problems in so far as sustainable eco systems have already been established around the reservoirs and flourishing. It cannot be changed every 50 years. The ecosystems in and around the reservoirs enjoy protection as prohibited areas and the forest profile in the hydel project reservoirs of the state bear testimony to the fact.

18.5.6. Athirappally

Athirappally which is specially looked into by the WGEEP is in ESZ-I. It is not recommended by the committee. It is located in Mukundapuram Taluk, which is outside the ESZ. Feasibility of this hydroelectric project has been cleared thrice by the Central Electricity Authority and five times by the Central Water Commission. Ignoring all the technical clearances, going by the dictates of the NGOs, only their views have been incorporated in the report. Clearance to the project had been given after a public hearing by the special team delegated by the Prime Minister. For the 163 MW project the forest land involved is only 65 hectare that too mainly teak plantations. The WGEEP has not considered the expert opinion. As regards the alternatives for power conservations suggested by WGEEP, Kerala has the best track record in minimizing G & T loss. Now a case for implementation of the report has been filed in the National Green Tribunal. It has to be defended properly, presenting the state's views and position clearly and effectively. As far as Kerala State Electricity Board is concerned the report is damaging. The WGEEP has even commented adversely on the techno-economic feasibility of the project. The grounds adduced for denial of clearance for Athirappally projects will not stand. The question of endemic fish species etc need to be examined more closely in consultation with the respective departments and expert agencies.

A note submitted by the Kerala State Electricity Board to the 5th respondent, containing objections of the Board against the findings and recommendations of the WGEEP on granting

prior environmental clearance by the 1st respondent for the proposed Athirappally Hydro Electric Project of the Board is produced herewith as **Exhibit R5(6)**

18.5.7. Irrigation

There are 18 completed and 5 ongoing irrigation projects in Kerala. Out of the 18 completed projects, 13 have storage and 5 are barrages (SPB, 2011). The storage capacity created by major and medium irrigation projects in Kerala is around 1500 Mm³ and the gross average live storage in the reservoirs at the end of the monsoon is around 1200 Mm³. The estimated irrigation potential of Kerala is 16 lakh ha, but there are several constraints to achieve this target. So far all the completed projects together have about 2,92 lakh ha of net and 5.51 lakh ha of gross ayacut area (Table 6.4). The net and gross irrigated areas in the state from all sources are 3.86 lakh ha and 4.55 lakh ha respectively during 2009-10. This constitutes 18.6% and 17% of the net sown area and gross sown area respectively (DoES, 2010) (source : Kerala State Action plan on Climate Change, Department of Environment & climate Change ,2012)

The report adopts 150 m above MSL as the western boundary of Western Ghats but in respect of Kerala this criterion is not seen adopted. The criterion adopted for determining the boundaries of the ESZ are not clear. The zonation as recommended extends to coastal areas in some cases. Places at 40 m MSL also comes under ESZ regulations. Whereas the northern and eastern limits have been defined, only the western limit has been left out. Whereas the potential areas for reservoirs for hydal projects in the Western Ghats areas of the state have been categorically brought within ESZ, such areas of other states have been conspicuously left out, making it impossible for the state to have projects such as twin Kallar whereas the other state can proceed with their projects at similarly situated areas.

The specific complaints of the department includes keeping it in the dark in the matter of identification of zones and recommendations on regulations especially on curbs on utilization of the water resources of the state, and virtual grounding of all the following new schemes identified for implementation in Kerala as all of them would fall within the ESZ1:

Twin Kallar hydel project in Pampa and Achancovil rivers in Pathanamthitta district
Swami Saranam project in Pathanamthitta district
Pambar irrigation cum hydel schemes in Idukki district
Irrigation and hydel projects in the upper reaches of Kabini river in wayanad district
Schemes in Chaliyar badssinin Malappuram district
Meenachil river valley project in Kottayam district
Projects identified in Shriya and other rivers in Kasargode and Kannur districts.

At the same time areas to the eastern fall of the Western Ghats in neighbouring state are not classified as areas of highest ecological significance a, so that there could be no such curbs

on the projects that could be setup at such places. The proposed WGEA could affect the functioning of the State Water Regulatory Authority for management of the river basins. With the implementation of the report all the 18 dams in the irrigation sector may have to be decommissioned, putting heavy toll to the water and irrigation needs of the people denying them nature's bountiful benefit of the elixir of life, whereas no other state has this unenviable predicament.

18.5.8. Building code

Kerala is fast becoming a single urban agglomeration with its unique settlement pattern compared to other states in the country. The pressure on developable land is very high across the state and hence any development / conservation policy taken at the national level may require suitable modifications to adapt to the ground realities existing, the socio-economic needs of the society and the constitutional obligations of the state.

Para 19

The averments in para 16 above may be treated as the 5th respondent's stand on the recommendations in the report of the WGEEP as a whole. Whereas the specific mandate of the WGEEP was to demarcate areas **within** the Western Ghats region which need to be notified as ecologically sensitive and to recommend for notification of such areas, as far as Kerala is concerned the bulk of the SEZs identified in the state fall **outside** the Western Ghat Regions comprised in the other geographical areas viz; midlands and coastal areas (highlighted). As this zonation puts heavy embargos on the development front, the 5th respondent has set up an expert committee to go in to the report of the Panel, review the recommendations detrimental to the interests of the **State** and to submit a report. The report is awaited.

It is seen that there had been general objections against the approach of the WGEEP from environmental scientists as well. Prof. Madhav Gadgil himself has explained the objections (and certain allegations) raised by Dr .C.P Vibhute against the report, which is available in the website *Amrutmanthan-WGEEP: Rebuttal to objections raised by Dr C P Vibhute*. A hard copy of the rebuttals given by Prof. Gadgil is produced herewith as **Exhibit R5-(7)**. The clarifications given by the Chairman of the WGEEP in paras 3, 4, 6, 7, 8, 9,13and 14 verify the objections and defects pointed out in the above paras as to the unacceptability of recommendations on zonation. The 5th respondent considers the clarification to point No: 9 in Exhibit 6 as evasive and misapropos. The very stand of the Chairman on such vital issues supports the stand of the 5th respondent in Exhibit R 5- (5) that the report should be left to the

state Government to take appropriate actions for conservation of the Western Ghats proper. When the Chairman of the WGEEP holds that

‘the WGEEP has clearly stated that what is proposed are only provisional boundaries and provisional guidelines , both to serve as a basis of informed deliberations through an inclusive process reaching down to all grama sabhas/ ward sabhas throughout the western ghats region. The decisions arrived at through such a democratic process should then be taken up for implementation’
(para 9, Exhibit 6),

the applicants cannot overstep the Chairman’s stand and pray for directions to make the respondents accept the provisional Western Ghats conservation framework as enunciated by the WGEEP in its report dated 31-8-2011 as final. The application is liable to be dismissed on this short ground.

In the response to the points raised by the MPs from the state in the meeting of the MPs of the Western Ghats Region with the Minister of state Environment & Forests along with the members of the Western Ghats Ecology Experts Panel held on 17th August 2010 at Parliament House Annexe New Delhi, the Hon: Minister had made the following assurance:

‘MoEF recognizes that the state of Kerala will need a special dispensation, as the area of forests in proportion to the land area is the highest in the state. We cannot wish away settlements where people have been living in the same areas for more than 100years. Such settlements will be given special consideration’.
(highlighted)

Unfortunately the WGEEP failed to stick to the above decision recorded in the minutes of the said meeting (page242, item 7). It is particularly notable that in the matter of Coastal Regulation Zone, the Notification No : S.O 19 (E) dtd 6-1-2011 of the Ministry of Environment & Forests vide Rule 7(v) thereof specially prescribes areas requiring special consideration for the purpose of protecting the critical coastal environment and difficulties faced by local communities, wherein under clause A (ii) ,the CRZ areas of Kerala including the backwaters and backwater islands are included. Again in rule 8. 2 of the said Notification, in view of the unique coastal systems of backwater and backwater islands along with space limitation present in the coastal stretches of the State of Kerala, special favorable conditions have been stipulated in relaxation of the distance and other regulations and controls generally applicable to coastal states. The 5th respondent has a clear case for special and a discretely differentiated consideration in the matters of zonation and regulations in the matter of the conservation of the Western Ghats as well and the same is craved for, for the facts, reasons and grounds adduced in the above paragraphs. It is unfortunate that the WGEEP did not extend such a consideration to the land starved state despite the recommendations of the MPs from

the state to the panel and the positive response of the Minister for Environment & Forests thereon.

.Para 20

There will not be any fresh restrictions on activities that are currently in the forested Western Ghat regions of the state, on account of the inclusion of the Western Ghats in the list of World Heritage Sites by the UNESCO. Of the 39 Western Ghat sites that won global recognition for their outstanding Universal Value, Kerala accounts for 19, the highest for any single Western Ghat state. Out of these 10 are existing protected areas. 9 are either reserve or interior forests. The activities are already regulated by existing statutes. Hence it has no effect of imposing any new regulations as in the case of the WGEEP recommendations. 'The World Heritage Site' status bestowed on the Western Ghats buttress the stand of the 5th respondent that it is the traditional forested high ranges of the state and not the geographically distinct midlands and coastal plains that are to be reckoned as the 'Western Ghats of the State' and conservation measures adopted.

Para 21

The remedy to erosion to natural capital or unnecessary environmental damage to the Western Ghats as stated in this para is not imposition of more harsh and arbitrary regulations and prohibitions in the other geographic areas outside the Western Ghats. There is no mention as to how the checks and controls proposed for the areas comprised in the SEZs outside the conventional forested and contiguous high ranges would facilitate the environmental well being of the Western Ghats .As stated in Exhibit R -(5) imposing stringent conditions in the populated midlands would only be counterproductive and prompt encroachment in to the high ranges.

There were historical, socio-political, commercial and financial reasons for the migration and settlement of people in the Western Ghats region during the past century and up to a few decades. Later in order to tap the immense potential for power generation for which the state had no other source, and to irrigate the agricultural areas downhill, dams had to be constructed, otherwise the water in the rivers originating from the Western Ghats at average 1.2 km above sea level would have drained to the sea which in a few hours. The extant, stringent conservation laws had not been in effect and the need for environmental conservation was not known to society and not even enshrined in the Constitution of India at those times. All these cumulative actions contributed to ecological degradation in the state's

Western Ghats regions. But that was inevitable and contributed to population increase in high ranges such as Idukki as is evidenced in the table below

Year	Kerala		Idukki	
	Population (in 1000)	Decennial Population Growth (in %)	Population (in 1000)	Decennial Population Growth (in %)
1901	6396	-	47.69	-
1911	7148	11.75	99.60	108.88
1921	7802	9.16	108.80	19.23
1931	9507	21.85	187.77	72.59
1941	11032	16.04	244.42	30.17
1951	13549	22.82	331.60	35.67
1961	16904	24.76	580.23	74.98
1971	21347	26.29	765.61	31.95
1981	25454	19.24	971.20	26.85
1991	29011	13.97	1160.63	19.5

Source: Census of India 1991, Kerala, General Population Table and Census of 1991, Provisional Population Table as given in the thesis referred to below

The following extracts from a research thesis on conversion of natural forests in the state vouchsafe the stand of the 5th respondent for a reworking in respect of the SEZs 2 and :

‘The economic and ecological viability of undertaking conversion of forest depends upon the value of goods and services foregone due to the clearance of tree cover. If the net returns from the farm values of deprived goods lands compensate the values of deprived goods and services, it can be said that conversion of forests is economically as well as ecologically sustainable or sound. The results of EIA show that clearing of forest cover for agricultural activities especially for pepper cultivation is socially, economically as well as environmentally justifiable at 5 and 8 per cent discount rate only at the down hills of the study area. However in the case of midhills, clearing of forest cover for cultivation is justifiable at 5 per cent discount rate, while it is not at all justifiable at 5 and 8 per cent discount rates in the case of uphill areas. It indicates that uphill farms are highly degraded and even a little human intervention in the natural ecosystem generate greater damages to the ecology and society’.

(Impact of conversion of natural forests to agriculture and plantation crops on local economy and environment: Kerala. Govindaru.V. Thesis submitted to the Bangalore University for the Degree of Doctor of Philosophy in Geography. Institute for Social and Economic change, Bangalore, 1994- pages 199-200).

Environmental Justice linked to human well being without compromising on environmental protection as mandated in the Constitution is an avowed policy of the 5th respondent. Environmental degradation that affects the life and livelihood of the poor and vulnerable sections of society will be prevented, for which restrictions in residential areas of such social groups may not be the appropriate step. While firmly upholding environmental justice the 5th respondent has the constitutional obligation to ensure that no such individual or group is disproportionately burdened by arbitrary environmental concerns. There is an internationally accepted norm of paying for the Ecological/Environmental services to the citizens who are forced to forgo with their rights for the common good. The WGEEP is inhuman in proposing no compensation to those who would have to suffer if the report is implemented. States also ought to have been compensated. Environmental issues including conservation of the Western Ghats are critical. However those can be approached and handled only in the light of the ground realities of the state as to land requirement, development needs and priorities concerning human beings as well. Striking a balance between protection of the environment and sustainable development is called for and always practiced by the 5th respondent. Whereas National Wildlife Action Plan and Integrated development of Wild Life Habitats shall certainly be centered on principles of Ecocentrism as stated in this para, those as such cannot be transplanted to human habitats, especially in a thickly populated and land starved state like Kerala.

Apart from the legislative measures listed out in para 18.5.4.*supra*, the following laws govern the field in other matters of direct environmental concerns and the administration of which has earned the encomiums of the WGEEP as is revealed at several occasions in the report and quoted elsewhere in this affidavit:

The Water(Prevention & Control of pollution) Act 1984
The Water(Prevention & Control of pollution) Cess Act1977
The Air (Prevention & Control of pollution) ACT 1981
The Environment (Protection) Act 1986
The Environment (Protection) Rules 1986
The Hazardous Waste (Management &Handling) Rules 2003
The Manufacture, Storage and import of Hazardous Chemicals Rules 1989
The Coastal Regulation Zone Notification 2003
The Environmental Impact Assessment Notification 2004
The Chemical Accidents (Emergency Planning, Preparedness &Response)Rules1996
The Environmental Public Hearing Notification, 1997
The Biomedical Waste (Management& Handling) Rules 2003
The Recycled Plastics (Manufacture & Usage)Rules 2003

The Environment (Setting for Industrial Projects) Rules 1999
The Noise Pollution (Regulation & Control) Rules 2000
The Municipal Solid Wastes (Management & Handling) Rules 2000
The Biological Diversity Act 2002 and Rules 2004, and 2008 (state)
Kerala Riverbank Protection and Sand Mining Regulation Act 2001
The Motor Vehicles Act 1998
The Kerala Conservation of Paddyland & Wetlands Act 2008
Public Liability Insurance Act 1991

Kerala is the first state in India to constitute a state Pollution Control Board. The state has established the Kerala State Biodiversity Board (KSBB) in 2005 itself. The chief Minister holds the portfolio of the independent Environment Department. There is also an Environment & Climate change department under the Environment Department at the field level. To ensure equitable access to natural resources to all sections of the society, particularly the poor, whose survival depends on availability of natural resources, and to ensure sustainable and equitable use of environmental resources for meeting their basic needs of present and future generations is one of the main objectives of the State Environment Policy. The 5th respondent has amply adverted to and are zealously implementing environmental justice promotion in the most practical and democratic and participatory manner as has been acknowledged in the report of the WGEEP. It is submitted that further regulatory and restrictive measures and would only be counterproductive.

Para 23

In the judgment reported as 1997(1) SCC 388, the Hon: Supreme *inter alia* held that:

“The issues presented in this case illustrate the classic struggle between those members of the public who would preserve our rivers, forests, parks and open lands in their pristine purity and those charged with administrative responsibilities who, under the pressures of the changing needs of an increasingly complex society, find it necessary to encroach to some extent upon open lands heretofore considered inviolate to change. The resolution of this conflict in any given case is for the legislature and not the courts.”

A cause of action for invoking the doctrine of public trust as enunciated by the Hon; Supreme court of India in regard to environmental matters has not been made out nor arisen in the matter of implementation of the report of the WGEEP which has been submitted to the 1st respondent on which it has to take a decision first.

Para 24

The averments in this para is not relevant. The applicants have no case that the 5th respondent has failed in the effective implementation of any environmental or conservation enactments. In the response to the points raised by the MPs from the state in the meeting of the MPs of the Western Ghats Region with the Minister of state Environment & Forests along with the members of the Western Ghats Ecology Experts Panel held on 17th August 2010 at Parliament House Annexe New Delhi, the Hon: Minister had made the observations on the performance and obligations of the 5th respondent in the matter of forest conservation and consideration of the social aspects arising out of settlements in the Western Ghat regions and made the assurance quoted in para 19. Those may be given due consideration and the state may be considered separately in the matters of zonation and regulations.

The 5th respondent proudly point out the that the WGEEP has made a number of findings in its report as regards the exemplary activities taken up by the 5th respondent in the matters looked in to by the expert panel. Establishment of fully empowered Biodiversity Management Committees in all the 978 Grama Panchayats of the state, Western Ghat specific conservation programmes like the project of the Kerala State Biodiversity Board for conservation of the Biodiversity rich areas of Udumbanchola taluk in Idukki district(p41), high standards of living of the people of Western Ghats ,Kerala leading the country in capacity building and empowering of Panchayati Raj Institutions (p.12) recommendation that the proposed WGEA should promote the emulation of the Kerala example in all the Western Ghat districts(p51) and facilitation of conservation measures in private lands(p51), are instances. These positive aspects particular to the 5th respondent vouchsafe the willingness, competence and capability of Kerala to implement the conservation measures envisaged in the report and as proposed in ExhibitR5-(5), without compromising sustainable development especially in the vital sectors of power generation and Water Resources Management for which the state has no other way than to look for the Western Ghats.

Para 25

The principles enunciated by the Hon: Supreme Court in the judgments in paras 23 and 24 of the application do not give rise to a cause of action to invoke the same against the 5th respondent for enforcement of their legal rights as attempted in this para. No instances of violation of the above principles by the fifth respondent has been submitted in the application. The fifth respondent is above to the consequences of environmental degradation of whatever nature within its territory. The encomiums of the WGEP to the fifth respondents environmentally benign activities referred to in pre para prove the point. There is no dispute that the respondent is under obligation to preserve and

protect the Western Ghats. As far as the 5th respondent is concerned, all the body of environmental and conservancy legislations holding the field are effectively being implemented in the state. The enactments specified in schedule I of the NGT Act have their own institutional and execution mechanisms built in and do not need a special arrangement of any sort to protect the Western Ghats as recommended by the WGEEP. The allegation that there is inaction of the respondents in protecting the Western Ghats is baseless as far as the 5th respondent is concerned in its obligation to protract the Western Ghat regions of the state and that has been amply demonstrated in the report of the WGEEP itself vide para 24 above. The 5th respondent stoutly deny any failure or defects in discharging the constitutional obligations in that regard, and object to institution of regulatory mechanisms on that ground. The specific query raised by three applicants in para 25(iv) can only be answered in the negative by the 5th respondent. The report of the WGEEP at several places quoted the commendable actions of the 5th respondent in having implemented the enactments in Schedule I of the NGT act in an exemplary manner to be emulated by other Western Ghat states and even by the proposed Western Ghats Ecology authority. The 5th respondent rely on these findings of the WGEEP, and observation of the Hon: Minister for Environment & Forests quoted in para 24 above as to the forest spread in the state to counter the demand for any other agency or authority to look after the natural assets of the state as recommended in the report. In fact the 1st respondent has categorically admitted that the 5th respondent needs a special dispensation in these matters, which the WGEEP was bound to recommend and the 1st respondent is bound to extend.

Views and anxieties of the State Government, with respect to the WGEEP report have already been conveyed to the 1st respondent vide Exhibit 5. Even if it is approved in principle, it would be against the state's interest in certain areas as explained above. There are several areas on which there cannot be any objection, which could be accepted and only in respect of those impacting upon the state's developmental needs and use of meager land resources that there need be objections. With this view point the 1st respondent has been requested to allow the State Government to consider the report and take further action at the state level. The entire activities being regulated as per the recommendations of the WGEEP are state subjects as per the Constitution. The federal concept should also get due consideration as the recommendations largely impinges upon the state's legislative and administrative areas.

Acceptance of the report as such is detrimental to the state's development interests. Developmental concerns and needs of the people should get as much consideration as environmental conservation. Decommissioning of dams, embargo on new hydal projects and the arbitrary zonation cannot be agreed to. The 5th respondent has no case against

conservation of the Western Ghats, but unnecessary and arbitrary restrictions even extending to areas which do not have any link with the Western Ghats cannot be agreed to. If it is implemented as such two third of the geographic area of the state would be under regulations, which is not acceptable. Zonation shall be the responsibility of the State Government. The recommendations thereon shall be reworked in the Kerala context, as those do not take into consideration of ground level realities.

The K.Kasturirangan Committee constituted by the 1st respondent to examine the report has called for the response of the 5th respondent to the report, which will be submitted shortly. While the report itself is under a process of expert scrutiny, the prayer to act thereupon tantamounting to its full implementation is premature and may not be considered. The 5th respondent has through Exhibit R5-(5) intimates the 1st respondent, the competent constitutional authority their willingness to consider the report for appropriate actions. The report has no effect of overriding or nullifying any of the enactments mentioned in the first prayer for interim relief. Actually the very request is illegal and may be rejected. The report of the WGEP is testimony to the fact that the fifth respondent leaves no stones unturned for the conservation of the Western Ghats which is its environmental and climatic sentinel. The prior direct the fifth respondent to discharge such obligation is redundant .the application in so for as it requires the honorable tribunal to issue any orders or directions for implementation of any of the unconfirmed recommendations in the report of the WGEP may be rejected especially as the whole matter is now under consideration of Kasturirangan Committee constituted by the first respondent.

Western Ghats Expert Group: Work Plan

1] Our Western Ghats Expert Group has a challenging assignment ahead of us. Our mandate is:

- (i) To assess the current status of ecology of the Western Ghats region.
- (ii) **To demarcate areas within the Western Ghats Region which need to be notified** as ecologically sensitive and to recommend for notification of such areas as ecologically sensitive zones under the Environment (Protection) Act, 1986. In doing so, the Panel shall review the existing reports such as the Mohan Ram Committee Report, Hon'ble Supreme Court's decisions, Recommendations of the National Board for Wildlife and consult all concerned State Governments.
- (iii) To make recommendations for the conservation, **protection and rejuvenation of the Western Ghats Region** following a comprehensive consultation process involving people and Governments of all the concerned States.
- (iv) To suggest measures for effective implementation of the notifications issued by the Government of India in the Ministry of Environment and Forests **declaring specific areas in the Western Ghats Region as eco sensitive zones** under the Environment (Protection) Act, 1986.
- (v) To recommend the modalities for the establishment of Western Ghats Ecology Authority under the Environment (Protection) Act, 1986 which will be a professional body **to manage the ecology of the region** and to ensure its sustainable development with the support of all concerned states.
- (vi) To deal with any other relevant environment and ecological issues pertaining to **Western Ghats Region**, including those which may be referred to it by the Central Government in the Ministry of Environment and Forests.

.....
..... (True Extract)

(HIGHLIGHTED)

VIII. Brainstorming Session on Criteria for deciding Ecologically Sensitive Areas

Regarding the agenda items related to criteria for deciding on Ecologically Sensitive Areas, Dr. Ranjit R.J. Daniels who was co-opted by the Panel presented a paper on the criteria for deciding Ecologically Sensitive Areas which focussed on the following:

1. Define ecological sensitivity
2. Classify the entire Western Ghats into landscapes of varying levels of ecological sensitivity
3. Grade the different landscapes along a scale of decreasing sensitivity; example Grade I being the most sensitive, Grade II less sensitive and so on
4. List out the salient physiographic and ecological attributes adopted in grading landscapes
5. **Prepare a map of the entire Western Ghats delineating landscapes by their respective ecological sensitivity grade**
6. The map will generally guide the delineation of any landscape as ecologically sensitive area (ESA)
7. Biological communities and species can be used as tools for prioritizing landscapes
8. Biological communities and species should have one or more characteristics such as being relic, representative, endemic, endangered, of great human use value, etc
9. All other values being equal, **priority should be accorded to landscapes that are likely to complement ongoing conservation efforts when delineated as ESA.**
10. Assessment at 3 levels is needed such as: Landscapes wherein Topography and climate can predict the ecological sensitivity of landscapes and the most sensitive landscapes have shown the least resilience which has been assessed based on our understanding of trends of change in communities of woody plants, amphibians and birds. Landscapes have been classified in six grades viz., Grade I & Grade II are divided on the basis of altitudes, Grade III as Watershed, Grade IV as Hill-coast ecotones, Grade V as cultural landscapes and Grade VI Landscapes that have shown the most resilience. Biological Communities include Relic, Representative, Restricted range, High species richness, High levels of endemism, High ecological service value and Species Endemic, Endangered, Sacred/Venerated and High human use value. The Chairman while summing up the discussion as the criteria to demarcate areas as Ecologically Sensitive Areas in Western Ghats region, opined that the Panel has been

considering the available guidelines as contained in the Pranab Sen Committee Report as well as the experience thus far in already notified Ecologically Sensitive Areas of Matheran, Mahabaleshwar-Panchgani and Dahanu. He also observed that there are a number of practical problems in employing criteria as given in Sen Committee Report. For instance, it is proposed that the area of occupancy of an endemic species needs to be protected in its entirety. Western Ghats harbours well over one thousand endemic species of flowering plants, fish, frogs, birds and mammals amongst the better known groups of organisms, and no doubt thousands more amongst less studied groups including insects. Amongst themselves these would cover the entire geographical extent of the Western Ghats and all conceivable habitats, including many disturbed ones such as roadsides. There are thus obvious difficulties in operationalizing this, as well as other recommendations of Sen Committee. It was also noted that the experience of “India’s notified ecologically sensitive areas” has been summarized in a report published by Kalpavriksh in 2009. It narrates the experiences of three areas of interest to WGEEP, namely, Dahanu, Matheran and Mahabaleshwar. In all these cases the identification of ESAs began with interests of specific groups, in particular, Bombay Environmental Action Group, in protecting these particular areas. In contrast, WGEEP would have to assess the situation over the entire stretch of Western Ghats and then identify particular areas as appropriate for designation as ESAs, assigned to 16 different levels of priority. In all cases so far, the initiative has come from above, and not from the ground level. Surely, **WGEEP should not impose its recommendations in this fashion from above**, and must promote a process of broad based public consultations from ground level up to fulfill its mandate. The Panel also opined that they should look at the global best practices and accordingly pick up the best suitable for the needs of the Western Ghats Region. The Panel suggested that a project on assessing the levels of eco-sensitivity along with the Western Ghats is to be developed by Dr. Ranjit Daniels, Dr. Pramod, Dr. M.S.R. Murthy and Dr. Ganeshiah with Dr. Murthy as nodal person and should be submitted to MoEF for financial assistance. **The outcome of this project would be used by the Panel in demarcating areas as Ecologically sensitive Areas in Western Ghats Region.** The Chairman invited Dr. Pratim Roy and Dr. Latha the co-opted experts to make their observations. It was also decided to request Dr. Pratim Roy of Keystone Foundation, Kotagiri, to write a paper on Sustainable Eco-Tourism in the Nilgiris. Dr. Pratim Roy, Director Keystone Foundation while participating in the brainstorming session made the following observations:

1. Instead of identifying all those areas which are ecologically sensitive and perhaps “re-discovering the wheel” why don’t we demarcate all areas which have ecologically destructive or severely unsustainable practices? Then the areas which are left out could be the landscape that requires to be preserved, the value of conservation enhanced.

2. Fragmentation is the biggest issue. If the panel arrives at how to connect the fragmentation then the flow of ecological processes, linkages and continuity will start to tick again. Pollination flows, river valleys, upstream and downstream linkages.

3. The Panel has an opportunity to do something unique here. In terms of classification of ecology and inventories – if people on the ground – communities across 51 districts to be involved in this exercise then it become truly a partnership between science and people's movements.

SWGIM can help as much as possible the Expert Panel to make this paradigm shift.

4. It may be desirable to have could we have broad criteria and sub-criteria to capture niches and those water-falls and water bodies. 17

5. Western Ghats into 4 zones – North, Central, South Central, South – in each of these areas we could contact local stakeholders – tribals and non tribals whose livelihoods and lives depend on the natural resources that are found in this region. Plantations, rivers, forests, NTFPs, Cultural spaces – if their insights can come forth and they can be a part of this consultation process – then it will be unique and relevant to these changing times. Radio, post cards and places where web based inputs through open source software is possible.

6. Two examples were given to expand on this concept – Hill Wetlands in the Nilgiris – we have surveyed 38 wetlands and have detailed analysis of ecological and livelihood status in those areas. We could plug that in the larger WG Wetlands database. Another example is the Non Timber Forest Produce – through our network we could provide across the Western Ghats the communities and their dependence on NTFPs, the current practices, the trade and business, the ecological aspects of sustainable harvesting. Perspectives of ancestral domains and home ranges need to be brought in as a current tool for delineation purposes of hills, valleys and plains – which connect culture, ecology, social systems and economy of the region.

7. A strategy of less intensive growth pattern and softer / greener industries in parts of the Western Ghats may enable the promotion of eco enterprises such as eco-tourism, value addition of local products, viable small cottage industries which are ecologically sustainable. Keystone could share their 16 years of local enterprise experience in promoting contextual ventures which improve ecology and biodiversity.

8. A series of panchayats as in the case of the People's Biodiversity Register or 9 districts of NBR may be taken up for local level consultation process for identifying ecological and connected social issues. The WG Fly Through map hosted by the Keystone Foundation is

intended to be an open source and participatory exercise through which other stakeholders and interest-groups can contribute with information on their local ecosystems and environmental issues happening in their area.

Dr. A Latha from River Research Centre, Kerala while participating in the brainstorming session during the meeting made the following important points / observations relating to Western Ghats Ecology and its Conservation:

1. The people living within ESAs when declared should own up the concept and be ready to cooperate in its effective implementation. **Also, there is need to sensitized and rope in the support and consensus of the local self governments, the MLAs and MPs early in the process before finally declaring the ESAs.**
2. There should be a Zonal approach to declaration of ESAs in the long run. Within a larger declared ESA Zone, there can be smaller zones of ‘no touch or no more development’ and there could be zones of ‘development with caution’ just like in the case of the CRZ Notifications.
3. **As far as possible highly ecologically sensitive river basins or landscapes depending upon the extent of PAs, IBAs, Elephant Reserves etc. within them can be considered for ESAs.**
4. The extent of destruction / degradation / human intervention could be one criteria of deciding ESAs. For instance, the extent of dammed stretches in a river basin, extent of dried up river stretches below dams and diversions, extent of mined catchments, extent of catchments with monoculture plantations etc. could be criteria for deciding along with the bio – geographical aspects. For instance the entire Kannan Devan Hills village in Munnar High Ranges is a potential ESA within the larger Munnar landscape.
5. Along with cultural aspects the traditional hunting and gathering areas of primitive hunter-gatherer tribes needs to be preserved for posterity. Hence, while declaring ESAs such areas may be given high priority.
6. Once the ESAs have been declared on a Zonal basis, Perspective management plans with clear prescriptions of what can be allowed and what cannot be allowed within the ESA can be worked out for each ESA. ESA Management Committees can be formed which are multidisciplinary in nature with representatives from different departments, local self governments, MLAs , MPs, NGOs and grass root organizations etc. working within that ESA. They can work under the proposed Western Ghats Ecology Authority to prepare perspective

plans for the respective ESA. Separate monitoring committees can be set up to oversee effective implementation.

7. Along with the declaration of the ESAs the expert panel should also recommend restorative measures in the ESA as part of the perspective planning process to be taken up after declaration based on the context. The Keystone foundation and River Research Centre, Kerala were requested to submit innovative ideas / success stories for effective implementation of Ecologically Sensitive Areas Notifications.

(True copy)

(Highlighted)

Minutes of the Meeting of the MPs of the Western Ghats Region with the Minister of State (I/C) E&F along with the Members of the Western Ghats Ecology Expert Panel held on 17 th August, 2010 at the Parliament House Annexe, New Delhi.

A Meeting of the Members of Parliament (MPs) of the Western Ghats Region with the Members of the Western Ghats Ecology Expert Panel (WGEEP) was held under the Chairmanship of Shri Jairam Ramesh, Minister of State (I/C) E&F on 17th August, 2010, at Parliament House Annexe, New Delhi. The list of MPs who attended the meeting is at Annexure-I. The List of participants of WGEEP and officials of MoEF is at Annexure-II.

.....
..... The Minister then stated that the main idea of today's meeting was to inform the MPs about the working of the WGEEP and that the **final aim of the Panel is to identify 'No Go' areas in the Western Ghats Region where no development would be allowed and to identify those areas where development needs to be regulated considering the environmental sensitivity and ecological significance of the region.** He also clarified that the intention of the Ministry is not to stop development but to come out with ideas and solutions to integrate environmental issues with development so that we may achieve sustainable development of the region. He expressed happiness at the remarkable attendance of the MPs from the Western Ghats Region and said that it shows the keen interest the MPs are taking in environmental issues relating to the Western Ghats Region. With these introductory remarks, he invited the views and suggestions of all the MPs. All the MPs agreed with the need to protect and preserve the environment of the Western Ghats Region including its Forests, Wildlife and other natural resources. They also congratulated the Minister for having constituted the WGEEP and for convening the meeting of the MPs with Experts which is first of its kind and appreciated the democratic process of consultation adopted by the Minister in this regard. The main points raised by the MPs are summarized below, State-wise:-

Kerala.

1. The Athirapally issue which has already been examined by other Committees of the Ministry should not be reopened again.
2. Demarcation of ecologically sensitive areas should not result in disturbing settled people i.e. areas where people have been living for centuries should not be disturbed.

3. Cut throat measures such as providing monetary compensation to adivasis as is being done under the Tiger Project, should not be used in rehabilitating people while preserving forests and wildlife.

4. Biodiversity Committees exist in every Zila but most of them do not have specific agenda. MoEF may consider giving specific agenda to these committees.

5. New Guidelines need to be developed for identifying Ecologically Sensitive Zones (ESZ) as the common man cannot understand about the ESZ. The Guidelines may contain the criteria including for identification of ESZs and the level of sensitivity of the area etc. Geomorphologic Zones may also be included in ESZs so that it can be visualized.

6. There are a lot of legal problems and issues in the Western Ghats of Kerala since the promulgation of the Kerala Forests (Vesting and Management of Ecologically Fragile Lands), Act, 2003. In areas already declared as Ecologically Fragile Lands (EFL) under this Act, it is difficult to carry out even normal agricultural activities, such as plucking of coconuts. This aspect needs to be taken into consideration while demarcating ecologically sensitive areas by the WGEEP.

7. In the Idukki- Munnar region, more than 200 acres of Cardamom Plantations have been classified as forest land. The Cardamom Reserve Land and the CHR issues of Idukki district needs to be settled soon.

8. The State of Kerala is in the process of formulating / implementing organic farming policies as pesticides are reaching the rivers, thus polluting the water, food and soil. Presence of heavy metals and pesticides in fish indicates the seriousness of the situation. This needs to be taken into consideration by the WGEEP.

9. The approach of WGEEP in demarcating areas should be realistic and the Panel must consult the State Government, the Panchayats and even people at the grass root levels before making recommendations.

10. The issues relating to human - wildlife conflicts, especially at Erimala - which is at the boundary between Kerala and Karnataka need to be resolved.

11. Millions of rupees in fuel can be saved if the Kottam – Ambasamudram Road between T.N. and Kerala is opened for traffic.

12. At the Periyar, Munnar and Anaimudi areas, no compensation has reached the affected people so far. Whether Anaimudi area is going to be declared as a Biosphere Reserve or not may be clarified.

13. WGEEP should have more members. Protection of the Western Ghats should not be taken over by environmental fundamentalists.

14. The WGEEP should also identify and document alternative energy projects that are implementable in Kerala as the State is really short of energy and has no gas or coal.

15. Whether it is possible to regenerate Biodiversity once it is destroyed may also be clarified.

16. Different Ministries of the Government are implementing several projects / schemes for development of the region which have similar objectives. But, as there is no coordination / interaction between the Ministries it results in duplication of efforts. There should be a more integrated approach to development between the Ministries of Panchayati Raj, Rural Development and Environment & Forests.

17. The pesticide, Endosulfan already banned by 62 countries of the World is still being used in India. The WGEEP may look into this issue.

(True extract)

(Highlighted)

Minutes of the fourteenth meeting of Western Ghats Ecology Expert Panel (WGEEP) held at Indian Institute of Science, Bengaluru, from 16th to 17th August 2011

4. This was followed by a section on the boundaries of the Western Ghats. The members of the Panel discussed in detail the delimitation of Western Ghat boundaries. Dr. Vijayan opined that if altitude was used as one of the criteria for delimiting the boundaries of Western Ghats then crucial riparian habitats present on the western slopes of the Western Ghats may be left out. Dr. Renee Borges also highlighted the case of steep escarpments present in the Bhimashankar area of the Maharashtra Western Ghats that may also be left out. Finally, it was decided by the Panel that the boundaries proposed by WGEEP could be rationalized and firmed up by the proposed Western Ghats Ecology Authority.

5. Dr. S.N. Prasad made a detailed presentation on the geospatial database on ecological sensitivity. He presented the outputs of the project which included state-wise details on ecological sensitivity grid scores, maps delineating eco-sensitive zones with taluka boundaries and also the boundaries of the Western Ghats from the ecological point of view. The database generated has been made available in the public domain. The WGEEP has accepted the findings of the study which formed the basis for delineating and demarcating the eco-sensitive zones in the Western Ghats region.

6. After this section, the sections on the environmental setting of the Western Ghats and the concept of 'develop sustainably and conserve thoughtfully' was projected. Prof. Gadgil initiated the discussion on **categorizing the whole Western Ghats into three zones** of varied ecological sensitivity and the implications of such a zonation. The members deliberated upon the methodology adopted **for classifying the Western Ghats into three zones**, viz ESZ1, ESZ2 and ESZ3, and the ESZ assignment to various talukas of Western Ghats. It was felt that the main text of the WGEEP report should have a succinct summary of the methodology adopted whereas the details of the methodology could be given in the Appendix. The detailed methodology would also include the limitations of the methodology adopted.

7. The terms Ecologically Sensitive Area (ESA) and Ecologically Sensitive Zone (ESZ) were discussed by the members with special reference to implementation of provisions which would be given in the proposed draft notification. It was felt that the proposals for

declaration of ESAs received from civil society groups and generated through the process of active public participation by WGEEP would be tabulated and presented in a separate box in the main report.

.....
....

13. Prof Gadgil requested Shri Sanjay Upadhyay to provide his views on the proposed WGEA. At the outset, Shri Sanjay Upadhyay mentioned that he has prepared a write up on the proposed WGEA. In his write up, he has used the formulation of Shri B.J. Krishnan on the proposed Authority and supplemented it with additional points.

14. Shri Sanjay Upadhyay projected the salient points with reference to powers, functions, composition and constitution of WGEA. Some of the salient points were: (i) Respective State Governments would be consulted before constitution of the Central and State WGEAs as is done in the case of SEIAA.

(ii) The recommendations of the WGEA would be 'ordinarily binding' on the lines of the National Board of Wildlife resolutions.

(iii) **The boundaries of the ESZ1, ESZ2 and ESZ3 would be provisional** and the notification of these will suggest the process for firming up and rationalizing these boundaries with a comprehensive process of public participation.

(iv) The members of the proposed WGEA would be technical experts and eminent people with practical experience.

(v) The District Ecology Committee (DEC) would be the nodal agency for public participation at the grassroots level. The DEC would be involved in the planning process at the district level and mainstream environmental concerns into the planning process. It would be the body to scrutinize district plans with respect to the ecology of the Western Ghats.

(vi) **The authority would check the veracity of facts presented in EIAs carried out for developmental projects to be undertaken in this region.** Shri Sanjay Upadhyay also detailed the basic tenets of the proposed notification for the Western Ghats Ecology Authority.

15. Professor Madhav Gadgil thanked Shri Sanjay Upadhyay for preparing a note on the proposed WGEA and for giving a presentation on this topic to the Panel at a very short notice.

16. Finally, after detailed deliberations on the contents of the draft final report the Panel members adopted the draft final report of Western Ghats Ecology Expert Panel and authorized the Chairman to submit the final report to the Ministry.

17. Dr. G. V. Subrahmanyam, Member Secretary, WGEEP, proposed a formal vote of thanks to the Chairman and the members of the Panel for their active and whole-hearted participation in the deliberations of the Panel.

True Extract

(Highlighted)

EXHIBIT R5-(5)

REGISTERED/ACKNOWLEDGMENT



GOVERNMENT OF KERALA

Environment (A) Department

No.3527/A2/11/Envt.

Thiruvananthapuram,

Dated:31-01-2012.

From

Principal Secretary to Government

To

Dr.T.Chatterjee,
Secretary to Government of India,
Ministry of Environment & Forests,
Paryavaran Bhavan, C.G.O.Complex,
Lodhi Road, New Delhi-110 510

Sir,

Sub: - Western Ghats Ecology Expert Panel-Report -Comments -Furnished-Reg.

Ref: - (1) Letter No.1/1/2010-RE-ESZ dated 15.11.2010 from Dr.G.V.Subarmanyam,
Advisor, Ministry of Environment & Forests

(2) This Government letter of even number dated 23.11.2011

Attention is invited to the reference cited. With regard to the report of the WGEEP and the recommendations therein, I am directed to convey the following views of the Government of Kerala.

(i) The WGEEP has attempted to define the Western Ghats (WG) from an environmental view point. Conventionally in Kerala, WG is considered in the geographic point of view as the eastern most and elevated forest regions of the state. In the case of the eastern side of the WG, the panel adopted 500M as the cutoff elevation to determine the boundaries, while for the western edge, the cut off is 150m. (This is an approximation). The panel has admitted that the proposed WGEA will have to take another look at the boundaries since they have not been able to find the time to examine and refine these with enough care. **Therefore the recommendations on the boundary are not objective and final.**

(ii) The panel admits that a uniform set of regulations cannot obviously be promulgated under EPA for the entire region. Hence it adopted a graded or layered approach (ESZ-1, ESZ-2, and ESZ-3) .i.e. region of highest sensitivity (1), high sensitivity (2), and moderate sensitivity (3). Protected Areas (PA) in forest are a separate category. **When the boundaries are not fixed, further zonation of the areas to be regulated seems without basis. Also the panel has admitted that zonation adopted was without full set of data as per the criteria adopted for demarcating ESZs, nor have it been able to cover all the criteria, due to lack of time. The zonations suggested in the report is totally faulty and unreliable as accepted by the authors. Some taluks and some areas are dragged into zones without any basis.** Therefore the recommendation on demarcation of ESZs cannot be accepted as such.

(iii) WGEEP clarifies that ESZ-1 status is assigned only to such grids (a 9x9 km spatial differentiation) as having a score at least equaling or higher than the lowest scoring grids falling within the existing PAs .Such a criterion is not seen adopted for SEZs-2 and 3. WGEEP leaves it to the proposed WGEA, to be done through a participatory process when it is put in place. WGEEP recommends that as a first step, the MoEF may provisionally notify the initial limits of the ESZs at block or taluk level as suggested. In Kerala 15 taluks come under SEZ-1, 2 under SEZ-2 and 8 under SEZ-3. **As the zonation is not after ground level verification, provisional zonation is arbitrary.** It may be pointed out that In Thiruvananthapuram the 9x9 zonation covers the entire breadth of the district in 5 zones (2 PAs, one SEZ-1, one SEZ-2 and one SEZ-3) reaching the coastal area! Such sweeping and overwhelming regulatory measures even if it is purported to be for general welfare may not be agreed to.

(iv) The WG region of the state is governed by the following extant legislations; These unique laws and statutes are sufficient to protect the environment.

FOREST

1. The Kerala Forest Act
2. The Kerala Private Forests (Vesting and Assignments) Act 1971.
3. Kannan Devan Hills (Resumption of lands) Act
4. The Kerala Restriction on cutting and destruction of valuable trees act 1974.
5. The Kerala Preservation of trees Act
6. The Kerala Forests (Vesting and management of Ecologically Fragile Lands) Act, 2003
7. Kerala Promotion of Tree Growth in non-forest Areas act- 2005

REVENUE

8. Kerala Promotion of River Banks and Regulation of Removal of Sand Act 2001.
9. Kerala Land Conservancy Act. 1957
10. Kerala Land Utilization Order 1967
11. Kerala (Restriction on Transfer of lands and Restoration of alienated lands) Act 1975
12. Paddy and Wet land Act, 2008

WATER RESOURCES

13. Kerala Irrigation and Water Conservation Act 2003
14. Pampa River Basin Authority Act, 2009.

CENTRAL ACTS

15. The Indian Forests Act- 1927
16. Forest (Conservation) Act- 1980/1988
17. Biodiversity Act, 2002
18. The Environment Act, 1986
19. The Scheduled Tribes and other Forest Dwellers (Recognition of Forest Rights) act 2006.
20. Wild Life Protection Act. 1973

The above legislations take good care of the WG conservation as intended under the proposed WGEA. The WGEA is proposed to be a regulatory body under the Environment (Protection) Act. But all the above legislations authorize appropriate authorities (not being the WGEA) for implementation. **The WGEA would be extra legal to that extent.** The environmentally sensitive people of Kerala are its ‘watch dogs’ for protecting its

environment. Therefore an additional authority would be redundant. If at all some more legislations are required to protect the environment, it should be left to the state Government; under the federal structure of our country. If at all an authority is to be formed, Kerala should be left out as it is geographically, environmentally, demographically and culturally different from other states sharing Western Ghats (WG).

(v) The state is conventionally divided in to 3 distinct geographic regions, the Highlands above 250' (76.2m) above msl the Midlands between 250, and 25, (7,6m) and Lowlands up to 25' (7.6m) msl. Area wise it is 18653.5, 16231.2, and 3979.3 km² respectively for each units. It may be pointed out that the EFL areas in 984 bits would come to 132.5 km² and that also comes within. Width of the state ranges from 11 to 124 kms only. The Highlands include the High Ranges (>600m) its foothills (300-600m) and upland regions (100-300m) which are residential or agricultural lands. Any attempt to stretch the regulated areas beyond the existing boundaries of the WG (now forested areas or lands classified as forest / plantations adjoining the forests) and/or governed by the existing laws as is applicable to each region would be counter productive and unnecessary for the sake of the WG. **The effort may be to administer the existing legal frame work more effectively so as to achieve the objectives of the WGA under the existing dispensations.**

(vi) Total area of the state is 38,863 km². WG is 21,856 km² (56% of total land area). Inland and Coastal Wetlands extends to 1279.30 km². About 300 kms is under Coastal Zone Regulation. Paddy Lands coming under the ambit of the Kerala Paddy Lands and Wet lands (Conservation) Act comprise of 3818.3 km². In all the regulated areas in existence come to 26983.6km² (69.4%).Balance available for habitation, cultivation and development activities is just 11879.4km² (30.6%), that too subject to zonal restriction under Municipal Laws and the Kerala Building Rules. Though the state is only 1.1% of the total land area of the country, it supports 3.13% of the total population. A further regulatory regime on the effective land area for habitation and development would be grossly unjustifiable and unnecessary. Only 30 % of the land is at present outside the purview of zoning under some laws and introduction of further zones would make life impossible.

The report of the WGEPP makes special, mention of the state in the matter of biodiversity conservation, and activities in furtherance of WG conservation. The panel has lauded the formation of Biodiversity Management Committees (BMC) in all the 978 Grama Panchayats in the state.(The first in the country to have this achievement) , the Udumbanchola Biodiversity Conservation Programme,(a conservation programme of direct WG ecology restoration), incentives for mangrove conservation activities etc. as models to be emulated. The state Government has further such plans like the Sabarimala Master Plan, Pampa Action Plan, Conservation of Biodiversity rich areas outside Protected Areas, etc: for conservation of the WG areas ,which **with possible incentives**

from the Govt: of India, could better achieve the goals of the WG conservation without further regulatory measures under a central Authority, seriously jeopardizing the development needs of the state.

(vii) Over the last one century rural and urban population of Kerala increased by 4 and 18 times respectively registering a five fold increase on the whole. In 1901, the population of the state was only 6.4 million, which almost doubled in 40 years. The next doubling took only 30 years. The population density, a mere 165 persons/ km² in 1901 increased to 819 in 2001, exerting significant pressure on land, as per capita land availability dropped from 0.61ha to 0.12ha. Demand on land on housing and urbanization rose many times resulting in the decline of availability of agricultural land. Kerala suffers from very high unemployment. Approximately 10% of India's unemployed population lives in Kerala. Unemployment fuels large scale migration both within and outside the state and country. This leads to migration to highlands in search of more agricultural lands which paves way for encroachment of forest lands. Further regulation of any kind **in midlands and lowlands, on land use would only catalyze such environmentally denigrating activities.**

(viii) All the WG states except Kerala have land east of their WG boundary, whereas the WG is the eastern boundary of Kerala with a land parcel of just 11-124 kms in breadth. Excepting the regulated areas, the free land would be a few islets sandwiched between the regulated areas. If the WGEEP proposals are accepted, the same region would be subjected to more than one zone. For example Coastal Zone Regulation and ESZ Regulations where the three ESZs would come in conjunction. In the case of development projects the EIA procedure under the EIA Assessment Authorities would be an added restriction, which altogether would make things impossible and may turn counter productive. As far as Kerala is concerned, WG is a geographically, geologically, and morphologically distinct and composite subunit of the state's landscape, unlike the eastern slopes which descend more gently and merge with the deccan plateau. Hence distinct conservation and regulatory measures can be adopted and implemented for the WG regions of the state as a separate entity, without the other geographic entities of the state. **In fact the conservation of the WG proper is more important and relevant for the low altitude areas in midland and lowlands, rather than regulations in the low altitude areas for the benefit of the WG.** Towards this end the state Government has already initiated various programmes such as empowerment of BMCs of Grama Panchayats as the authorized agency for the immediate cognizance of environmentally degrading activities in the Panchayats and to report to the concerned authorities for timely actions. The proposed WGEA is almost in the lines of the EIA Authority. Proliferation of the Authorities (State Government proposes to form the Vembanad Eco Development Authority there is provision to form the state River and wet land Authority, River Basin

Boards etc;) having concurrent and overlapping jurisdiction might perhaps ‘spoil the broth’. The existing laws, statutory popular fora like the BMCs in all the Grama Panchayats, and the hyper sensitive environmentalists of the state would more than serve the purpose. At the same time the conventional WG should be protected and conserved at all costs, for which the State Government is committed.

(ix) Some of the proposals in WGEEP report are draconian. For example, decommissioning of dams older than 50 years, would leave the State without power in a few years.

The above mentioned plausible adverse effects of the recommendations of the WGEEP and proposed WGEA may be considered while finalizing the Western Ghats Ecology Conservation Plans taking into due account of the genuine concerns and issues raised by the state.

I am also directed to convey the alternative suggestion of the State Government that the Ministry of Environment & Forests may send the report to the state for appropriate action, at state level.

Yours faithfully,

JAMES VARGHESE
Principal Secretary to Government

Copy to:-

Dr.G.V.Subramanyam,
Advisor,
Ministry of Environment & Forests,
Paryavaran Bhavan,
C.G.O.Complex, Lodhi Road,
New Delhi-110 510.

WGEEP – Recommendations on the proposed Athirappilly Hydro Electric Project

- In Thrissur district, Irinjalakuda comes under ESZ1 category, Trichur (ESZ2) and Vadakancheri (ESZ3). The proposed Athirappilly Hydro Electric Project area does not come under any of these ESZ's. But the report says that the proposed Athirappilly Project falls in ESZ1 and hence recommended for denial of environmental clearance.
- In the report the biodiversity data for entire Vazhachal forest division spread over an area of approx 526 KM² is considered whereas the proposed Athirappilly project covers only 26km² and submergence only 1.04 KM². **It is doubted that the data of such vast area is taken to undermine the project itself.**
 - WGEEP in its report had elaborated all the issues voiced by the opponents against the proposed Athirappilly project including verbatim of the report forwarded to the Prime Minister's Office by the Chairman of the Bio Diversity Board Dr.Vijayan in 2005. **None of the views and opinions expressed by the officials representing KSE Board, Tourism Dept, Irrigation Dept, Tribal Welfare Dept. and Forest Dept. in favour of implementation of the proposed Athirappilly project is included in the WGEEP report.**
- The techno-economic feasibility of the project was examined by the apex organization of the country as per statute viz; Central Electricity Authority on several occasions and accorded TECHNO-ECONOMIC CLEARANCE (1996 & 2003). The water availability of the project was cleared by the apex organization of the country viz-Central Water Commission on several occasions (2004, 2005, 2010). **WGEEP has not accepted the orders issued by the apex technical organizations like MOE&F, CEA, and CWC etc in the country on various issues but accepted the views presented by the people who are against the Project. Thus the credibility of the report is doubtful.**
 - In the WGEEP Report it is mentioned that the Hon' High Court of Kerala had quashed the environmental clearance on two occasions. But the judgment was only on procedural grounds, and the environment clearance was not interfered with on any

substantive ground touching the merit of either the clearance or the project as stated in the WGEEP report viz

- Environmental Clearance - **20.1.1998**– Application submitted on 31.12.1996 and amendment to EIA notification making public hearing mandatory came into force w.e.f 10.4.1997.
 - Environmental Clearance –**10.2.2005** – Public hearing conducted on 6.2.2002 and amendment to EIA notification making EIA reports to be circulated among the public made mandatory came into force w.e.f 13.6.2002.
 - **Present status of Environmental Clearance:** Environmental Clearance of **18.7. 2007** was challenged before Hon' High Court. The case is pending. Later show cause notice was issued by MoE&F (4.1.2010). The matter is now pending consideration of MoE&F with due recommendations of EAC since 17.7.2010
-
- In the conclusion of the WGEEP report, it is mentioned that action for reducing T&D loss and to repair and restore to full capacity all the existing HE Projects as per the judgment of Hon'ble High Court delivered on 17th October 2001 is to be taken. This is in fact a verbatim of the representation forwarded to the Prime Minister by then Chairman of Salim Ali Foundation Dr. V.S Vijayan (who is a member of WGEEP). This has been included in the WGEEP report without verifying whether the same has been complied by KSE Board or not .The T&D loss in the state is one of the lowest in the power utilities in the country and utilization of generation capacity is also above 95%.
 - Three hydro Electric Project proposals viz Athirappilly Project (163 MW) & Pooyankutty Project (240MW) of Kerala State and Gundia Project (200MW) of Karnataka were referred to Western Ghats Ecology Expert Panel (WGEEP) by MOE&F. **The WGEEP had recommended to deny environmental clearance to the Athirappilly Project and Gundia Project as the proposed project(s) falls in Ecological Sensitive Zone 1 (ESZ1).**
 - **All the issues raised against the project like water availability, techno economic feasibility, impact on tribal population, impact on drinking water and agriculture downstream, pattern of flow of water downstream and water falls etc were examined by different expert committees including a committee deputed by the hon'ble Prime Minister and the project was cleared thrice i.e. during 1998,2005 and 2007 by MOE&F.**

- **What is required for the proposed Athirappilly Project (163MW) is only a very small dam with a height of about 23 meters. The total extent of forestland, which is to be cleared, is only about 62 ha.**
 - KSE Board is of the view that recommendations of WGEEP should have been basically evaluation of trade-offs for balancing the development needs with environmental sustainability, examination of scope of mitigation and capacity of the ecosystems to withstand the impact. The proposed Athirappilly Project therefore needs to be considered in light of this overarching principle. In such circumstances, the trade-offs for this green power project and ecological impacts were to be judged carefully, and thereafter a view was to be taken by WGEEP as done by various Expert Appraisal Committees of MoE&F. To holistically consider the present case of Athirappilly, several inputs/views received from the MoE&F, KSE Board, other government departments, scientific organizations, R&D institutions like TBGRI should have also been considered rather than rely on inputs from one particular member of WGEEP /NGO's.

Gundia project of Karnataka

- The EAC of MoE&F in their 55th Meeting held on 10th & 11th February 2012 had reviewed the Gundia Project of Karnataka. The EAC of MoE&F in their 56th Meeting held on 30th & 31st March 2012 had again reviewed the Gundia Project of Karnataka. It was observed by EAC that Western Ghats dense vegetation being too large an area almost 20,000 Km² stretching from Maharashtra to Kerala would have species and diversity spread over the entire area. This is because the hydrometeorology, soil, landform etc. are similar over the entire Western Ghats. **Constructions of Gundia project influencing around 200 Km² may have environmental impact but would not lead to extinction of certain RET species from the entire Western Ghats.**

The EAC had scheduled to discuss the project in its next meeting

Amrutmanthan - WGEEP: Rebuttal to objections raised by Dr C P Vibhute
Link of this article --} <http://wp.me/pzBjo-M6>
Link of the Amrutmanthan Blog --} <http://amrutmanthan.wordpress.com/>

Rebuttal to objections raised by Dr C P Vibhute

A Pune based environmental consultant for industries Dr. C. P. Vibhute, has termed the report on Western ghats by the committee of experts headed by Madhav Gadgil as incomplete, erroneous and technically faulty and has demanded that it be scrapped.

He has released a Press Note (in Marathi) consisting of 16 objections against the WGEEP Report. Dr. Madhav Gadgil and other members of the panel have prepared a point by point rebuttal of objections raised by Dr. Vibhute.

We present below, English translation of Dr. Vibhute's objections together with the clarification to each of the points, released by Dr. Madhav Gadgil, on behalf of the WGEEP (Western Ghats Ecology Expert Panel), constituted by the Ministry of Environment & Forests' (MoEF) of the Central Government.

“Dr C P Vibhute, who has made a number of baseless allegations against the report of the Western Ghats Ecology Expert Panel, has apparently failed to grasp much of significance that is stated in the report. For instance, in his point 2 he states that there is no mention of the opinion of the experts who have studied bio-diversity. Pages 227- 235 of Part II of the Report lists names of 80 experts invited to write Commissioned Papers. Some 44 of these are experts in biodiversity, others are experts in a variety of fields including geology, history, economics and law. Most of these experts contributed Commissioned Papers; all these papers have been available on the Panel's website. The report also has details of a number of brainstorming sessions the Panel organized with record of names and opinions of the experts.”

Now to take up each of Vibhute's points:

- 1) 'Western Ghats Ecology Expert Panel' report has been uploaded on the website of the Environment Ministry for inviting suggestions from the public. After studying the same, prima facie it appears to be incomplete, deficient, technically erroneous. From the report

it appears that excessive importance has been given to the opinions expressed by the people during the meetings as well as the reactions expressed by the NGOs. This would become clear from the points given below.

As clarified above, the Panel has had wide ranging interactions with scientific and technical experts, both during the work of the Panel, and outside as part of the Panel members' professional work over many years. Of course, we value the understanding and conservation traditions of the rest of the society as well. We were specifically asked in our mandate to consult the people and Governments of Western Ghats, and we have done so. We have talked to fishermen and farm labourers, forest dwellers and orchard owners. We have talked to mine owners and beach shack owners. We have talked to members of gram panchayats and members of Parliament. We have talked to NGOs and IAS officers. We believe that such an inclusive approach has led to a very balanced report.

2) There is no mention of the opinion of the experts who have studied bio-diversity. This assertion has been partly dealt with above. The Panel has organized a website and comments and views posted by a large numbers of experts on this website have run to thousands of pages. Besides, the Panel members themselves are some of the best recognized experts on biodiversity. Gadgil has been awarded the Centennial Medal by Harvard, considered the world's best university, for his contributions to this field.

3) There is no scientific basis for the Eco Sensitive Zones shown in the Western Ghats. Because there is no consensus among the experts with regard to determination of borders in this context.

MoEF constituted WGEEP in March 2010 with a mandate to demarcate areas within Western Ghats Region which need to be notified as ecologically sensitive. This concept of ecologically sensitive areas is very much an Indian invention, rooted in attempts by civil society to use the Environment Protection Act 1986 to promote sustainable development alongside protection of the natural heritage. The term 'Ecologically Fragile Area' was first used in 1991 for Dahanu Taluka in Maharashtra, followed by the declaration of other ESAs like Mahabaleshwar-Panchgani and Matheran. These are all initiatives of civil society organizations or are a consequence of a resolution of Indian Board for Wildlife in 2002 to protect areas up to ten kilometers from the boundaries of Wildlife Sanctuaries and National Parks.

Initially, there were no guidelines available on what areas may be considered as ecologically sensitive, nor on working out an appropriate management regime. These issues were addressed in 2000 by the Pronab Sen Committee. Pronab Sen committee, appointed by Ministry of Environment and Forests had recommended in 2000 that the Government should establish a comprehensive programme for generating base-line data on different aspects relating to bio-geographical regions in India, systematically map and record such information on ecological characteristics, and establish a comprehensive monitoring programme and network involving not only government agencies but also other institutions, universities, NGOs, and even individuals, particularly those living in and around these areas. Furthermore,

the Sen Committee urged that this be undertaken in Mission mode. Unfortunately, neither had happened. There had, however, been one development of significance, that of district-wise Zoning Atlases for Siting of Industries (ZASI) by Central and State Pollution Control Boards. However, MoEF has not released this exercise; as a result, WGEEP had to start from the scratch.

WGEEP thus needed to address manifold challenges; formulate the non-standard concept of ESAs, develop a database on ecological parameters for the Western Ghats region, assign Ecological Sensitivity scores and delineate Zones of different levels of Ecological Sensitivity over the region, solicit suggestions from civil society and gram sabhas on constituting ESAs, suggest management strategies, and finally, suggest mechanisms for building upon what was necessarily a preliminary exercise. WGEEP attempted this in a fully transparent, participatory mode, while, at the same time observing due scientific discipline.

Ecological Sensitivity being a non-standard concept, WGEEP began by organizing a web-based discussion, and publishing a paper in Current Science in January 2011. The following working definition was arrived at: ESAs as those areas that are ecologically and economically important, but, vulnerable even to mild disturbances and hence demand careful management. Since sensitivity scores had to be arrived at within a year over this extensive tract, our focus was on accessing pertinent computerized databases. Fortunately, several were available: Western Ghats boundary, boundaries of states, districts, talukas, Shuttle Radar Topographic Mission (SRTM) 90 m resolution data, Protected Areas, Forest types of India, percent forest, unique evergreen elements, forest with low edge, Enhanced Vegetation Index of MODIS, riverine forests derived through drainage and forest cover, data on endemic plants, vertebrates, and dragonflies- damselflies, Red list Mammals, Important Bird Areas, and Elephant Corridors.

Such exercises, like the globally accepted Important Bird Areas, naturally involve subjective elements, but we sought to put it on an objective scientific basis by explicitly stating the methodology and making public the nature and quality of the information used, along with its limitations. We can confidently state that we have done very well in fleshing out this important concept and developing an appropriate scientific methodology in a transparent, participative mode. We have created an Environmental Decision Making System on a regional basis for the first time for India. Of course there are many disagreements, including on boundaries of the zones. In his pioneering work on “Social Functions of Science” Bernal defines science as an organized enterprise of scepticism. Science progresses through doubts and disagreements without allowing itself to suffer from paralysis by analysis. So the country needs to build further on this exercise, improving it as we go along.

4) Owing to the drivers used by the panel, borders have been created for unviable zones. Height from the sea level and green cover have been used for creation of the eco sensitive

zones. Green cover consists of the crops raised by the farmers as well as other trees and forests. Therefore the borders of the zone have been wrongly indicated.

It is important to note that the concept of ecologically sensitive zones is quite distinct from that of Wildlife Sanctuaries or National Park. As mentioned above the whole of Dahanu Taluka has been designated as ecologically sensitive and is being managed so as to promote environmental conservation hand in hand with sustainable development. So all forms of land uses may fall within ecologically sensitive zones. Furthermore, we had to work with data on a crude scale without access to details of Panchayat and watershed boundaries. Therefore we explicitly stated that our boundaries are tentative and only provisionally drawn on basis of taluk boundaries. The Panel has not prescribed rigid boundaries for Western Ghats, for Ecologically Sensitive Zones 1, 2 and 3 and given a set of inflexible restrictive prescriptions to be followed for various development initiatives in these zones. Quite to the contrary, WGEEP has stated that what is proposed are only provisional boundaries and provisional guidelines, both to serve as a basis of an informed deliberations through an inclusive process reaching down to all Gram Sabhas/ Ward Sabhas throughout the Western Ghats region. The report suggests that an excellent precedent exists whereby the Goa Government placed the database prepared by Goa Regional Plan 2021 before all Gram Sabhas for correction of any errors as well as suggestions. Additionally, the report does not only talk of regulation, it suggests promotional measures such as payments to farmers for sequestering carbon in the soil, or protection to sacred groves or pools or to wild life.

5) The expert panel has not used bio diversity index e.g. Shannon Weaver or Simpson Index for zoning. Had they been used, human settlements would have been excluded.

Vibhute has not understood the concept of ecologically sensitive zones, which can include human settlements as in case of existing ESZs like Dahanu taluka or Mahabaleshwar-Panchgani. Furthermore, he does not seem to understand the context in which alpha diversity indices he quotes are relevant. They will not exclude human settlements. Moreover, they are relevant for looking at individual communities and not at whole regions as we are doing. Incidentally, we not only understand long standing work on diversity indices, we have contributed to further development of these indices as is evident from the following two publications:

Ganeshiah, et al. Avalanche index: a new measure of biodiversity based on biological heterogeneity of the communities.

Pramod, Gadgil et al. On the hospitality of Western Ghats habitats for bird communities.

6) It has been mentioned in the report that due to the 9 X 9 km grid, it was not possible to distinguish among a lake or a river or a water-shed or an administrative head quarter of a taluka or a human settlement.

Certainly, as honest scientists, we have stated these limitations, clarified that what is proposed are only provisional boundaries to serve as a basis of an informed deliberations through an inclusive process reaching down to all Gram Sabhas/ Ward Sabhas throughout the Western Ghats region.

7) While preparing the report a taluka has been included in the Eco Sensitive Zone without considering the taluka or the village boundary fixed by the government.

As noted, the whole concept of ecologically sensitive zones started with the whole Dahanu taluka being declared one. Furthermore, we reiterate that WGEEP has clearly stated that what is proposed are only provisional boundaries to serve as a basis of an informed deliberations through an inclusive process reaching down to all Gram Sabhas / Ward Sabhas throughout the Western Ghats region.

8) As a result of this residential area has been included in the zone. This is quite dangerous.

As noted above the Government has already constituted whole Dahanu taluka, Matheran, and Mahabaleshwar-Panchgani with many residential areas as ecologically sensitive. Of course, they have to be managed with proper reference to the locality specific context as we emphasize in our report.

9) Construction of new dams in Eco Sensitive Zone 1 is prohibited in the report. If the Environment Ministry accepts this recommendation, then green and cheap hydraulic power generation stations cannot be constructed. Moreover, expansion programme of the Koyna Hydraulic Power station will be blocked. The Central Government should rethink about this recommendation.

WGEEP proposals are being wrongly portrayed as “**Conservation by Imposition**” as if the Panel has prescribed rigid boundaries for Western Ghats, for Ecologically Sensitive Zones 1, 2 and 3 and given a set of inflexible restrictive prescriptions to be followed for various development initiatives in these zones. Quite to the contrary, WGEEP has clearly stated that what is proposed are only provisional boundaries and provisional guidelines, both to serve as a basis of informed deliberations through an inclusive process reaching down to all Gram Sabhas / Ward Sabhas throughout the Western Ghats region. The decisions arrived at through such a democratic process should then be taken up for implementation.

10) It has been mentioned in the report that existence of 4000 different kinds of plants, 350 types of ants, 330 types of butterflies, 174 types of flies, and 269 types of snails has been endangered. This information has not been verified.

The plant figures are based on two data sets:

a) Database compiled by Ganeshiah and colleagues from over 120 floras, and reports published on Western Ghats, and incorporated in the Sasya Sahyadri database and the literature cited therein. Sasya Sahyadri has now become a globally used database for the plants of W Ghats.

b) Field work led by Ganeshiah involving 7 groups of 4 members each for five years who scanned the entire W Ghats at a scale of 40 km² with a km transect in each of the grid. This means a total of $7 \times 4 \times 5 = 140$ man years.

The butterfly data comes from Gaonkar, H. Butterflies of Western Ghats, India including Sri Lanka: a biodiversity assessment of a threatened mountain system. Unpublished report submitted to CES, IISc and Zoological Museum Copenhagen (Denmark) and Natural History Museum (London) vols I & II.

All available information on Western Ghats biodiversity has been summarized in the book by Ranjit Daniels co-authored with Jayshree Vencatesan: Western Ghats: biodiversity, people, conservation. This is the most up-to-date and authentic compilation available today. Daniels was intimately associated with the work of the Panel as is clearly indicated in the report.

No other global hotspot has been surveyed as intensively as Western Ghats and if one is looking for data on conservation it will be impossible to find better database. We can claim with confidence that several WGEEP members have contributed to this happy state of affairs.

11) All this information has been taken from Mr. Gunavardhane's book 'Toxy'. The panel has not verified if the information is correct or not. This is a most irresponsible allegation as the answer to points 10 and 12 makes abundantly clear.

12) It has been mentioned that there are 120 mammals in the Western Ghats. But no appendix giving their list has been given in the report and it has also not been mentioned if it includes domestic animals.

The list of 120 species of mammals was derived from the most authentic source available, Nameer P Ommer. Checklist of Indian Mammals, Published by the Kerala Forest Department and Zoo Outreach Organization, Coimbatore.

We certainly have plans to further strengthen the database, give all references etc. This proposal is still being processed.

13) The ground level reality has not been checked while preparing the report. The report has been prepared on the basis of casual meetings with the villagers in the Western Ghats.

This is another incredibly irresponsible allegation. All Panel members have huge field experience of several decades covering amongst ourselves the entire stretch. This can be seen from the hundreds of highly cited publications that anybody can access by going to the Google Scholar website.

14) There are different versions as to Eco Sensitive Zone should be made applicable to totally how many talukas. The map on the Page no. 24 of the report shows 35 talukas in the zone. But the table on Pages 93, 96 shows 28 talukas in the zone. Which out of these is correct?

Given the small scale, the overlap of Protected Areas with Taluk boundaries and difficulty of fitting in Taluk names, the maps cannot be interpreted properly on the scale included in the report. Of course there are larger scale maps for which these problems vanish, but they could not fit in the report. The information in the table of taluk-wise ESZ 1, 2, 3 assignment is correct.

15) It is said that Zero pollution system should be made applicable till 2016 and social audit should be carried out. This recommendation has been made in the case of the industry in Ratnagiri and Sindhudurga Zillas. No detailed information about the social audit has been provided.

Social audit has been made an integral part of MGNREGA programme and Andhra Pradesh has the most effective system in place as mentioned in the report.

16) The report has recommended preparation of a cumulative environment impact report. This is welcome. The panel does not seem to be aware of the fact that Central Environment Expert Committee calls for such a report from the project bearer.

The Panel asked the Ministry of Environment and Forests if any Cumulative Impact Assessments were available with them. None were forthcoming. Incidentally, several of the Panel members have been involved in a variety of EIAs over the years and are very well familiar with the system.

Some other related articles are available at the following links:

1. Follow-up Response to 'Western Ghats Ecology Expert Panel' Report - by Dr. Madhav Gadgil --} <http://wp.me/pzBjo-LM>
2. We must force the Govt for implementation of the Western Ghats Ecology Expert Panel (Dr. Madhav Gadgil committee) Report --} <http://wp.me/pzBjo-Lg>

LIST OF EXHIBITS OF RESPONDENT 5

<u>Exhibit</u>	<u>Subject</u>
EXHIBIT-R5 (1)	Western Ghats Expert Group: Work Plan- Annexure I to Minutes of the first meeting of the WGEEp held on 31-3-2010 at ATREE, Bangalore.
EXHIBIT R5- (2)	VIII. Brainstorming Session on Criteria for deciding Ecologically Sensitive Areas – Extract from the minutes of the second meeting of the WGEEP held on 7-5-2010at BSI Coimbatore.
EXHIBIT R5-(3)	Minutes of the Meeting of the MPs of the Western Ghats Region with the Minister of State (I/C) E&F along with the Members of the Western Ghats Ecology Expert Panel held on 17 th August, 2010 at the Parliament House Annexe, New Delhi.
EXHIBIT R5-(4)	Minutes of the fourteenth meeting of Western Ghats Ecology Expert Panel (WGEEP) held at Indian Institute of Science, Bengaluru, from 16th to 17th August 2011
EXHIBIT R5- (5)	Copy of letter No : 3527/A2/11/Envvt dtd 31-01-2012, the 5 th respondent had sent to the 1 st respondent.
EXHIBIT R5-(6)	Objections of the Kerala state Electricity Board on the special report of the WGEEP on the proposed Athirappally hydeo Electric project
EXHIBIT R5-(7)	Website <i>Amrutmanthan-WGEEP: Rebuttal to objections raised by Dr C P. Vibhute</i> - Hard copy of the rebuttals given by Prof: Gadgil .