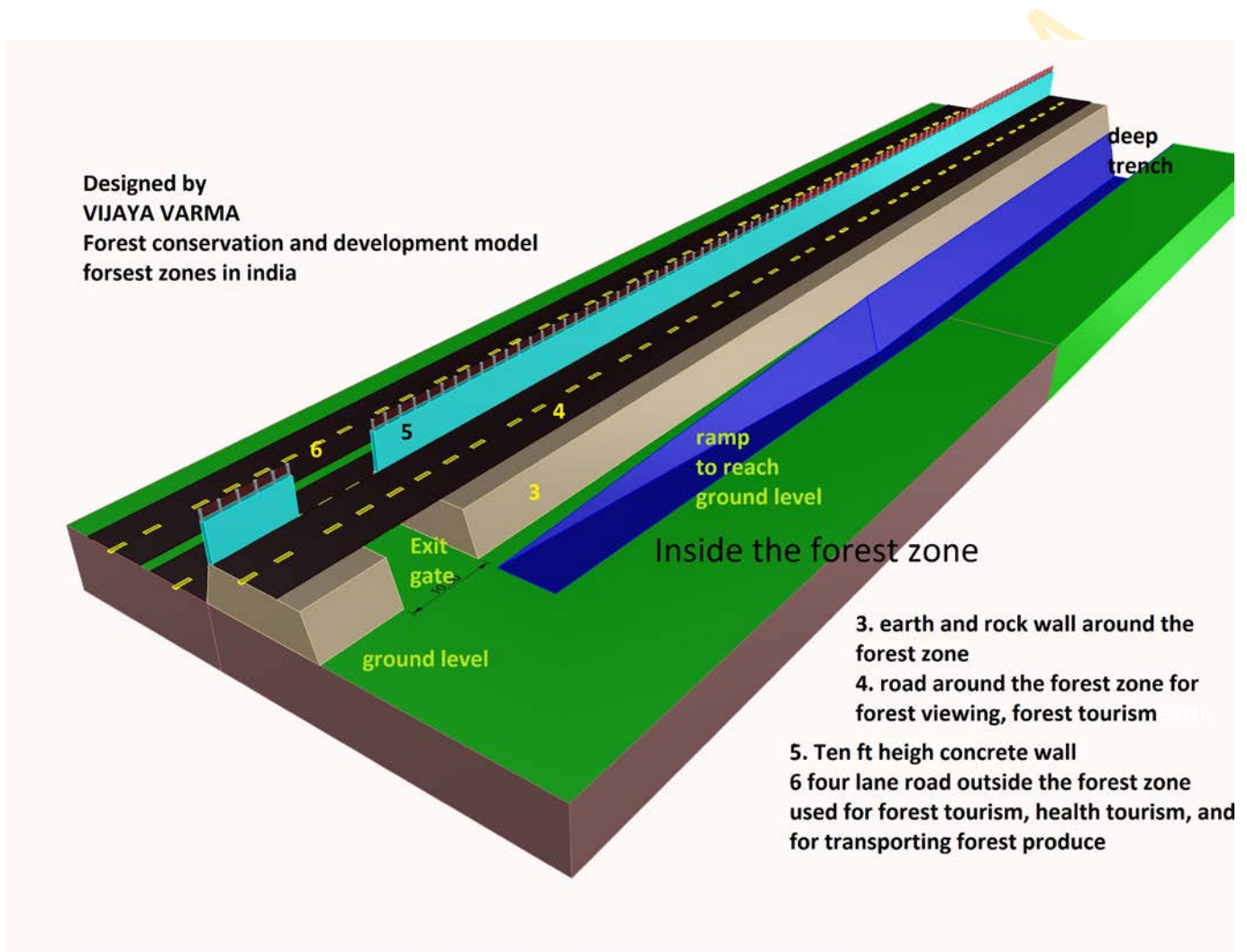


National Forest Conservation and Development policy for India



National forest conservation and development policy

National forest policy is visualised for the up gradation of water security, health security, and for the protection of biodiversity. Besides that, the national forest policy, water resources management and solar power sector reforms combined together could help reduce the carbon footprint in India to net zero by 2040.

The total forest area is 24% of the geographical area of the country. The tree cover area is only 4% of the geographical area of the country. According to unconfirmed estimates, large tracts of forest area have been encroached upon by people for agriculture, dwelling, mining, and other purposes, leaving only 19% of the geographical area under forest cover. This policy provides concrete measures to cover at least 15% of the geographical area of the country with very dense forest consisting of high canopy trees. The forest cover should be of 50% fruit bearing trees and 50% non-fruit bearing trees.

The objectives of forest policy are as follows

1. Conservation, fostering, management, and protection of forest areas from encroachments, forest fires, smuggling of forest timber, illegal mining, and poaching of animals.
2. Water conservation to sustain flora and fauna and to make all rivers perennial.
3. Establishing a “Green Army” for afforestation and reforestation
4. Stopping wild animals from straying into human habitats and destroying agricultural crops.
5. Development of forest tourism to generate employment for tribal people, and revenues for maintaining wildlife sanctuaries, forest parks, and water bodies.
6. Increasing forest products and giving full rights on forest produce exclusively to tribal people.
7. Releasing wild animals from cages, enclosures and confinements in zoo parks to relocate them in the secured forest zones of their natural habitats, to enjoy their full freedom of life in hunting, roaming, and reproduction.
8. Saving agriculture crops from the troops of monkeys that are proliferation at rapid pace across the country, and putting them back in forest zones. The development of forest zones would be such that no animal from forest zone can come out of it and stray into human habitats.

Method of raising forest cover

To protect, nurture and develop 15% of the country's land area, it requires a lot of manpower, machinery, and logistics. It requires an annual investment of 3 lakh crores for 5 years. Thereafter, it requires 1 lakh crore per annum per maintenance of the entire forest area in the country. This amount of money can be generated through forest tourism. The value and benefits of dense forest on 40 million hectares of land are unmeasurable. It will create a luxurious and safe habitat for a variety of animals and birds apart from valuable forest produce.

In this context, the central government should take a revolutionary step for the protection of forest cover. It is advised to raise the fourth division named “Forest Conservation Force” to add to the Indian Armed Forces. If the three divisions of the armed forces are responsible for ensuring the defence of India and its sovereignty, the newly created “FCF” could be responsible for the raising and protection of India's 15% forest cover. This fourth division of Indian Armed Force is an ambidextrous unit that could be used both in war time and peace time. This fighting unit would be continuously in the combat mode against adverse climate change, and always on duty in the full protection of forest zones.

There shall be no fresh recruitments for FCF. This new division is to be formed by the appointment of personnel from the three divisions of the army. 10% of the three armed divisions are to be deputed on a rotational basis to this new division who work for one month in this new division. The total strength of the 4 army divisions will remain the same. That means three divisions have given birth to this new army unit that works in peacetime. In war time the fourth division will converge in the parent divisions. The servicemen in this new division work for 30 days and go back to their parent division. The strength of this new green army division could be 1 lakh active personnel. Only the posting of chief of this division is permanent.

The nature of services provided by this new green army called "Forest Conservation Force" could be like this.

- A] Raising saplings in nurseries
- B] Broadcasting seeds by helicopters on forest areas
- C] Transporting saplings from nurseries to mountain tops, mountain slopes, and other forest areas
- E] Aerial surveillance of forest cover by helicopters.
- F] Dousing forest fires by using helicopters.
- F] Digging of trenches and formation of earthen bunds by excavators and JCBs
- G] Rescuing people by helicopters from flood-hit areas, providing food packets and essential supplies for marooned people.
- H] Transporting central armed forces by helicopters in Maoist-affected areas.
- J] Carrying troops, food supplies and military hardware in wartime
- K] Using helicopters as air taxis for forest tourism, and medical emergencies in remote areas.
- L] Check poaching, illegal cutting of forest trees, illegal mining in forest zones, and forest encroachments.

So, as you understand from the nature of the services rendered by this new armed division, the main requirement is heavy duty helicopters. This green army division requires 600 military helicopters that can be used both in peace time and war time. The helicopters should have the capacity of transporting 20 to 30 army personnel and 5 to 10 tons of cargo. Multi-purpose heavy duty helicopters are to be acquired for this green army division so that they can be used as attack helicopters in war time. The cost of the heavy duty military helicopters may be around Rs 100 to 200 crores. The investment for procuring helicopters would be Rs 1,20,000 crores. This investment is supposed to be useful for all four divisions of the army in war time.

The structure of this green army division

The entire forest area of 60 million hectares could be divided into 500 divisions and 5000 sub-divisions. Each division will cover 120000 hectares of forest area provided with one helicopter, 200 green army personnel, and 1000 civil workers for raising saplings in nurseries. Each division is to be divided into 10 sub-divisions. The sub-divisions are seed collection centres. The seeds collected at sub-divisions will be transported to division headquarters where they are processed for germination. Each division's forest area is approximately 1200 square kilometres. Each sub-division covers an area of 120 square kilometres. The army personnel will take bags of seeds by helicopter to broadcast in forest areas that fall under this division. The army personnel take the saplings raised in the nursery by helicopters to plant them in forest areas with the help of civil workers. To plant trees on mountain tops and mountain slopes, green army personnel will drop down from the helicopters. Afforestation and reforestation is carried out by the green army by sowing seeds before the monsoon and after the monsoon at the regular intervals until forest area begins to appear with tree plants. Planting saplings is also necessary for faster growth of trees.

Forest areas planted with big trees like Banyan, Peepal, Neem, Mahogany, almond, walnut, teak, tamarind, mango, jack, sapodilla, Jamun, redwood, cedar, babul, bakul, deodar, sandalwood, Sal, and pine will form into everlasting highly dense forests to support a variety of animal and bird life. Banyan tree is the king of forest. It grows in height and spreads laterally with aerial roots that sprout from its branches and descent downwards to enter into the soil to become new trunks. With so many trunks, it never dies. These big trees absorb lakhs of tons of carbon dioxide through their leaves. As the tree grows, the absorbed carbon from the atmosphere gets deposited in its branches, trunk and roots. Carbon deposited in dead leaves will join the soil.

Banyan trees are best suited for mountains with rocks as they require less moisture and less soil requirements to take root. There are many other trees that grow on boulders and blocks of granite. Out of 60 million hectares of forest land, there are already 10 million hectares of thick forests. To create 50 million hectares of dense forest, 250 crores of trees are to be raised. Most of these trees should be developed by sowing seeds multiple times in a year and continuing for many years. That is why it requires a fourth army division to combat climate change by creating forests with big and tall trees.

As forest cover in India is mostly of mountain ranges, the pilots will get daily training to manoeuvre the helicopters at higher altitudes. Deputation to the green army division is itself a training period for helicopter pilots; for army personnel it is for practicing mountain warfare, testing the skills in mountaineering, and acclimatization to hostile environments in harsh weather conditions.

Securing the forest areas with earthen embankments, concrete walls, and power fencing

The entire forest area in the country shall be divided into 500 divisions, further into 5000 sub-divisions, and fortified for the security of nature's wealth with rock and earthen walls without disturbing the habitats of tribal people and their livelihood. The main purpose of this new forest policy is to secure the lifestyles, traditions and employment of tribal people.

The entire forest area is to be fully protected with earthen embankments to stop straying of animals into agricultural lands, preserve flora and fauna, and arrest illegal poaching and felling of trees. Classify the entire forest area into 4 categories.

1. Forests for herbivorous animals
2. Forests for herbivores and carnivores
3. Mangroves
4. Botanical, Ayurveda, Vanaprastha, tourism and health parks.

The entire forest cover in the country is spread in small, medium, large areas across the country. They have to be converted into highly protected zones without decreasing their spread areas by constructing earthen walls around them. All herbivores and carnivores could be sheltered in the larger forest zones. Herbivores include the bigger animals like elephants, rhinoceros, hippopotamus, giraffes, zebras etc., and smaller animals like the impalas, gazelles, elands, the blackbucks, chinkara, nilgai, deer, caribou, moose, porcupines, rabbits, wild boars and others.

Middle size forest zones shall be categorised into 2 types

Half number of the middle size forest zones should be reserved for smaller herbivores like the impalas, gazelles, elands, the blackbucks, chinkara, nilgai, deer, caribou, moose porcupines, rabbits, wild boars, etc., along with smaller carnivores like leopards, cheetahs, panthers, etc. These midsize forest zones will give a level playing field to both herbivores and carnivores.

The remaining middle size forest zones should be reserved only for smaller herbivores. The government should build 2BHK houses, hospitals, schools, and colleges exclusively for the

tribal people around the periphery of these middle size forest zones. Tribal people shall have the full rights to use forest products like fruits, nuts, honey, etc. The over-populated antelopes and antlers should be auctioned only to the tribal people either for their food consumption or for the resale in nearby towns and cities.

The smaller forest zones can be reserved for endangered birds and animals, captive breeding centres, and Ayurvedic medicinal plants. All the existing zoological parks shall be converted into botanical, Ayurveda, Yogasana, and health parks. The confined animals in the present zoos should be released from their cages and enclosures, and relocated to the above three types of forest zones for enjoying their independent life in their natural habitat.

Tribal welfare societies should be formed in each forest sub-division for the collective sharing of the revenues from the forest products. But strict guidelines should be formed for the protection of forests. No tree should be allowed to be cut and no forest clearance and no illegal mining should be allowed with the help of tribal people.

Establishing feeding centres for herbivores around the periphery of these forest zones is necessary to decrease their dependence on plants and vegetation. The supply of feed that comprises millets, maize, and finely cut fodder to herbivores will keep the forest healthy and flourishing. Feeding centres shall provide plant vegetation, cut grass, boiled grains and agro by products like bran, chaff, oil cake etc. each day at particular time, both evening and morning to the herbivorous animals in the forest zones. These animals will become habituated to feeding at these centres. Discoloured food grains not fit for human consumption due to flooding of crop fields with incessant heavy rains can be bought by the government and supplied as animal feed to the forest zones. The government shall procure these damaged food grains directly from farmers through its existing procurement agencies. Sometimes the prices of some vegetables fall to lowest rates due to overproduction and farmers get huge losses. Then the government could come forward and buy surplus stocks to arrest the fall in prices. The procured vegetable can be supplied to animal feeding centres.

Balance between forest area and the number of animals

A] There should always be a fine balance between the forest area and the number of animals that live in that area. Overeating of plants, leaves and vegetation could lead to the death of forest cover. The over-numbered herbivores need to be decreased at regular periods. The older animals from middle size forest zones should be relocated to larger forest zones where the herbivores would get decreased by the hunting of big cats.

B] If the population of herbivores is increased over the permissible limits for living in forest areas, the excessive number of antlers and antelopes can be auctioned for food consumption. Now the slaughtering of antlers and some kinds of antelopes is banned in India to conserve their numbers. If their population increases beyond the limit of forest area, then the government could consider the lifting of the animal protection act so that the excessive animals can be auctioned for meat consumption. The revenues from these auctions can be spent on the maintenance and protection of forest zones.

Every year 26 crore poultry are slaughtered for meat. 3 crore cattle and buffalo, 5 crore sheep and goats are slaughtered for meat in India. I do not understand the rationale behind banning the meat consumption of antlers and some kinds of antelopes if their population is grown over the capacity of the required forest habitat.

C] I suggest the government give the permission for farmers to rear the impalas, gazelles, elands, the blackbucks, chinkara, nilgai, deer, caribou, peacocks and moose. The extra number of animals in the forest could be sold to farmers for nurturing in their agriculture lands.

D] The government can also give permission to universities and ashrams to nurture the above animals, peacocks, and endangered birds that are on the brink of extinction.

The existing roads and railway tracks that pass through the forest areas should be elevated to 10 feet in height with under passages for every 2kms so that animals can move under them freely without getting hit by the moving vehicles. Any new roads and railway lines that pass through forest areas should be constructed as forest fly overs with 15 ft height over the entire forest area.

Forest tourism with forest conservation and development

Once the entire forest area in the country is developed into dense forests with water bodies and bustling activities from flora and fauna, it will attract nature lovers from all over the world. I estimate that 5 crore people would visit these forest sanctuaries annually. The revenues from forest tourism could be sufficient to maintain and make these forests evergreen and everlasting. Forest conservation and forest tourism will complement each other for not only reducing pollution but also for meeting 30% of the country's food demand. The government shall promote forest tourism to generate employment and revenues for tribal people in the forest areas. For the promotion of forest tourism, the central government should allot lands around the peripheries of the larger, middle, and smaller forest zones through nationwide online E-auction for the construction of hotels, Vanaprastha ashrams, meditation centres, tapovanas, nature cure hospitals, yoga centres, Ayurvedic hospitals, etc. The conditions to be set for participating in the auctions are as follows.

1. The land allottees should complete the respective projects within 20 months of the land allotment.
2. In case of hotel business, the hotel management should take business account for the hotel business.
3. All payments towards charges for hotel rooms, food, beverages, and other services should be received through debit card/credit card/UPI payments. No cash should be taken. All payments towards hotel expenditure should be paid through online transactions. No cash withdrawals will be allowed from these business accounts. 50% taxes on room charges, and 10% taxes on charges for food, beverages and other services will go to the government. The revenues from these hotels could be spent on the forest conservation and development projects.
4. For the betterment of forest conservation and development, I suggest the central government unreserve 2% of the total reserved geographical area of the country for the forest cover. That means 36 lakh acres of forest land will be available for the promotion of forest tourism on a massive scale. The net reserved land area for forest cover will remain at 23.5% of total geographical area of the country with nominal reduction of below 1% from the present level.
5. If this land bank of 36 lakh acres is properly utilized for the construction of hotels, Vanaprastha ashrams, meditation centres, tapovanas, nature cure hospitals, yoga centres, Ayurvedic hospitals, market yards for forest produce like fruits, nuts, honey, leaves etc., around the forest zones, the tourism industry will get big boost for the rapid development.

Construction of EC walls around forest zones, wild life sanctuaries, zoological parks, and botanical gardens.

Purpose of earthen embankments and concrete walls

- A. To completely stop illegal felling of trees by wood smugglers. This will help grow thick forests with high canopy trees in the entire forest areas of the country.
- B. To stop animals stray into human habitats, damaging crops and endangering human lives. There are lakhs of troops of wandering monkeys in the villages of many states. They are destroying crops and fruits, causing enormous damage to the incomes of farmers. There are also instances of herd of elephants, isolated tiger, bears and antlers entering the farmlands and damaging crops and endangering human lives. With fully protected forest areas, there will be no room for forest animals escape into the human settlements and farmlands. The

troops of monkeys, which are playing havoc with the village life, can be resettled in forest areas.

C. To stop the encroachment of forest areas for agriculture or mining purposes. Illegal mining in reserved forest areas can be fully stopped.

D. If entire forest area is protected and divided into separate zones; one for exclusively for herbivorous animals and the other for both herbivorous and carnivorous animals, then secured habitats for animal and plant life could be provided. Tribal people can be given full rights on forest produce [fruits, honey, nuts, medicinal plants, leaves, etc.] for their livelihood in forest areas that are reserved for herbivorous animals. Tribals, who depend on forests for their livelihood will get secured and higher incomes from the protected and enriched forest zones.

How the forest areas can be enriched with plants, animals, birds, and all species of living things is explained here.

1. Water conservation is a must for afforestation and reforestation of entire forest cover in India. As most of the forest area comprises mountains, hillocks and valleys water must be conserved on top of the mountains, at the foot of the mountains and between the mountains. Water conservation is possible by forming ponds on top of the mountains, digging trenches at the foot of the mountains and constructing check dams between the mountains.

2 The trenches should be 8 metres deep and 12 metres wide to store rain water from the forest catchment area. The dug material should be used as a rock and earth wall with a height of 8 metres on the downside of this trench round the entire forest area. The rainwater that comes from forest areas first fills these trenches before overflowing into streams and rivers. This rampart, formed by the mounds of earth dug by excavators, will act as a fortification around the forest area of animal habitat. There must be a provision for a ramp at every 3KMs with a small undug portion. The animals that fell accidentally into these trenches would easily walk to the ground by the ramps. In 10 to 20 years these trenches will be filled with vegetation, dead leaves, pebbles, top soil, etc. There shall be no problem with accumulation of sediments in the trenches. The mixture of these sediments will act as a super sponge to absorb water into the ground. The accumulated mass over the years in the trenches can be supplied to farmers at free for enrichment of agricultural lands abutting forest areas.

3. On top of this 8 metre height rock and embankment a concrete wall with a height of 15 feet and a width of 2 ft shall be constructed. The entire forest will be protected with an eight metre height embankment and with a 15 foot concrete wall on it. Over the concrete wall there will be 4 feet height electric fencing to stop animals that climb the concrete walls.

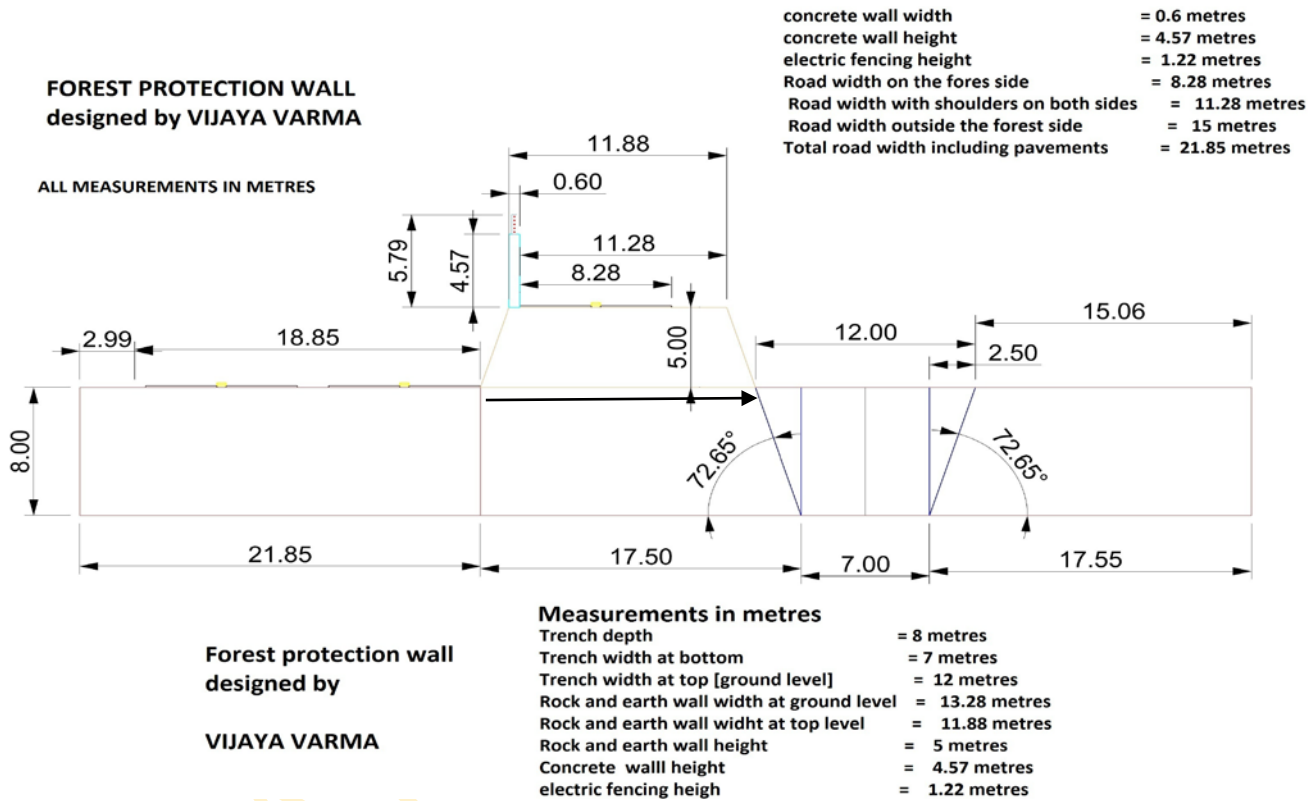
4. In the rainy season the trenches will be with water and overflowed out of the forest through streams and rivulets. The overflowed water will flow through streams and creeks at the downsides of the forest area. To stop animals from coming out of these streams, rivulets, and rivers, concrete basements should be laid at the bottom of the water flowing channels. The concrete pillars from the basement of the river to be raised to the height of the embankments on both sides of this water channel. A horizontal concrete beam is laid on top of the pillars that connect the 8 metre height embankment on either side of the water channel. Between the upper beam and the lower concrete basement rails are fixed vertically at a gap of 15 cm apart. Water will flow between the channels and no animal will escape from the protected forest area. Multiple water outlets are to be built on all streams and rivers that flow out of the forest area so the entire area is sealed so that no animal can escape out of the forest and no one can enter into the forest for illegal cutting of trees and animal poaching.

Designs and images of forest protection wall around the forest zones

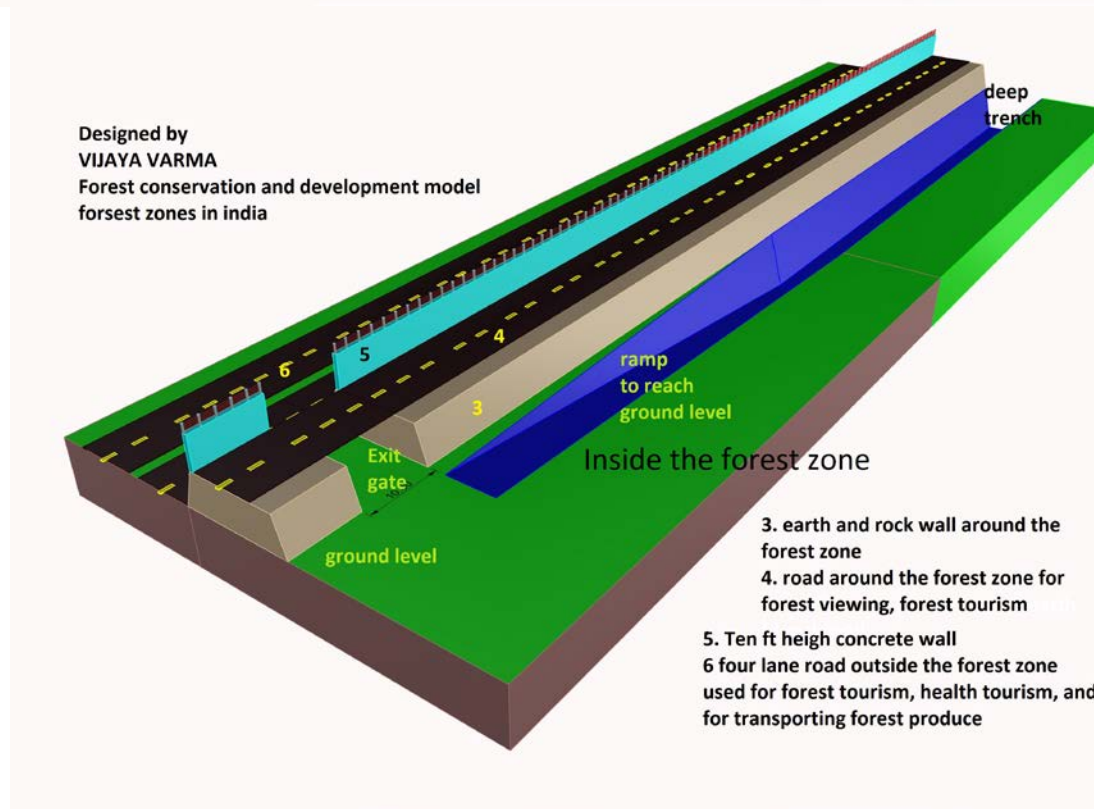
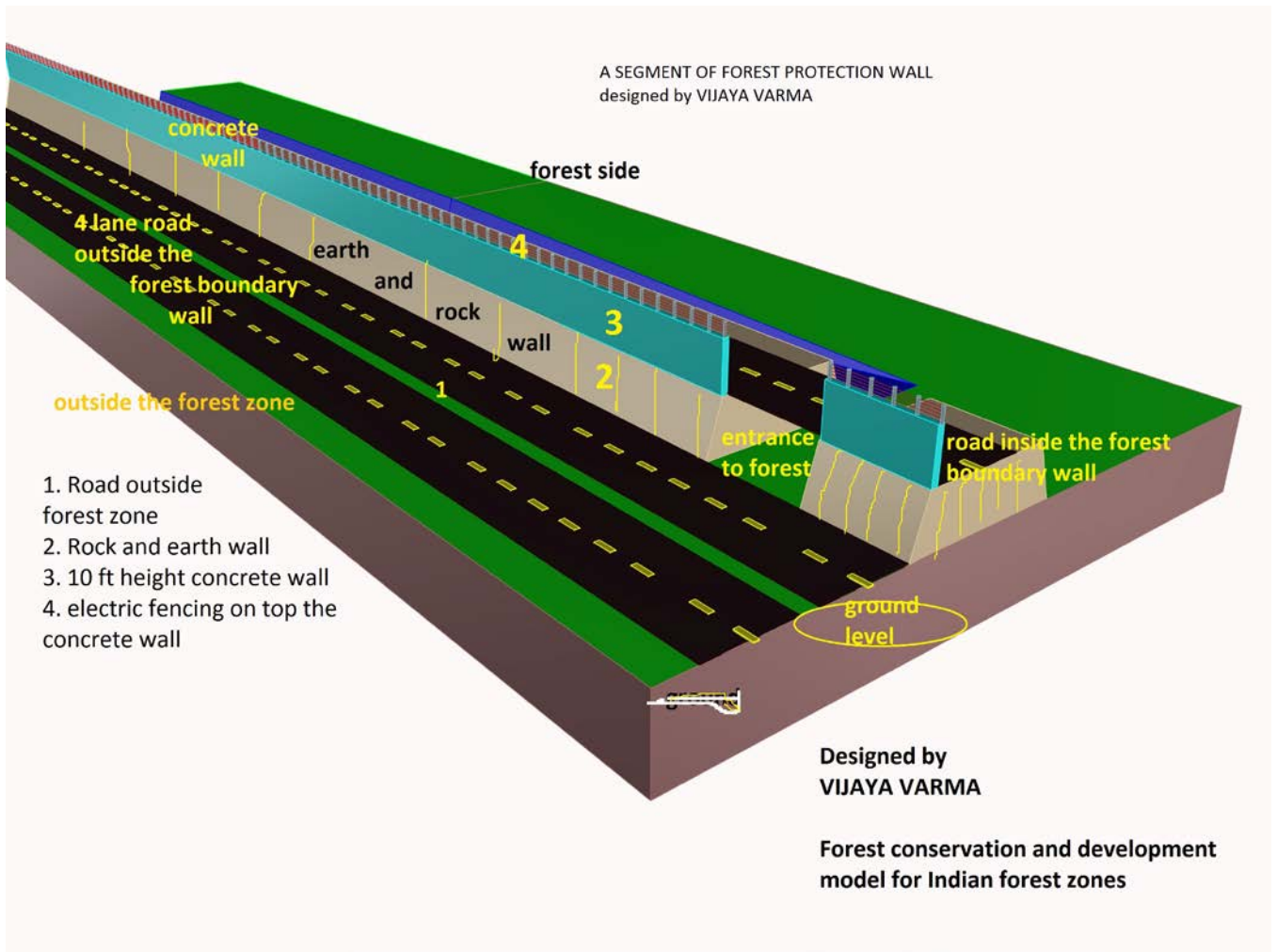
1. Eight metre height and 12 metre wide deep trench around the forest zone with a ramp to reach the ground level at every 3 km length of the trench. This ramp could be used by trucks and tractors for removing and transporting sediments accumulated from dead leaves,

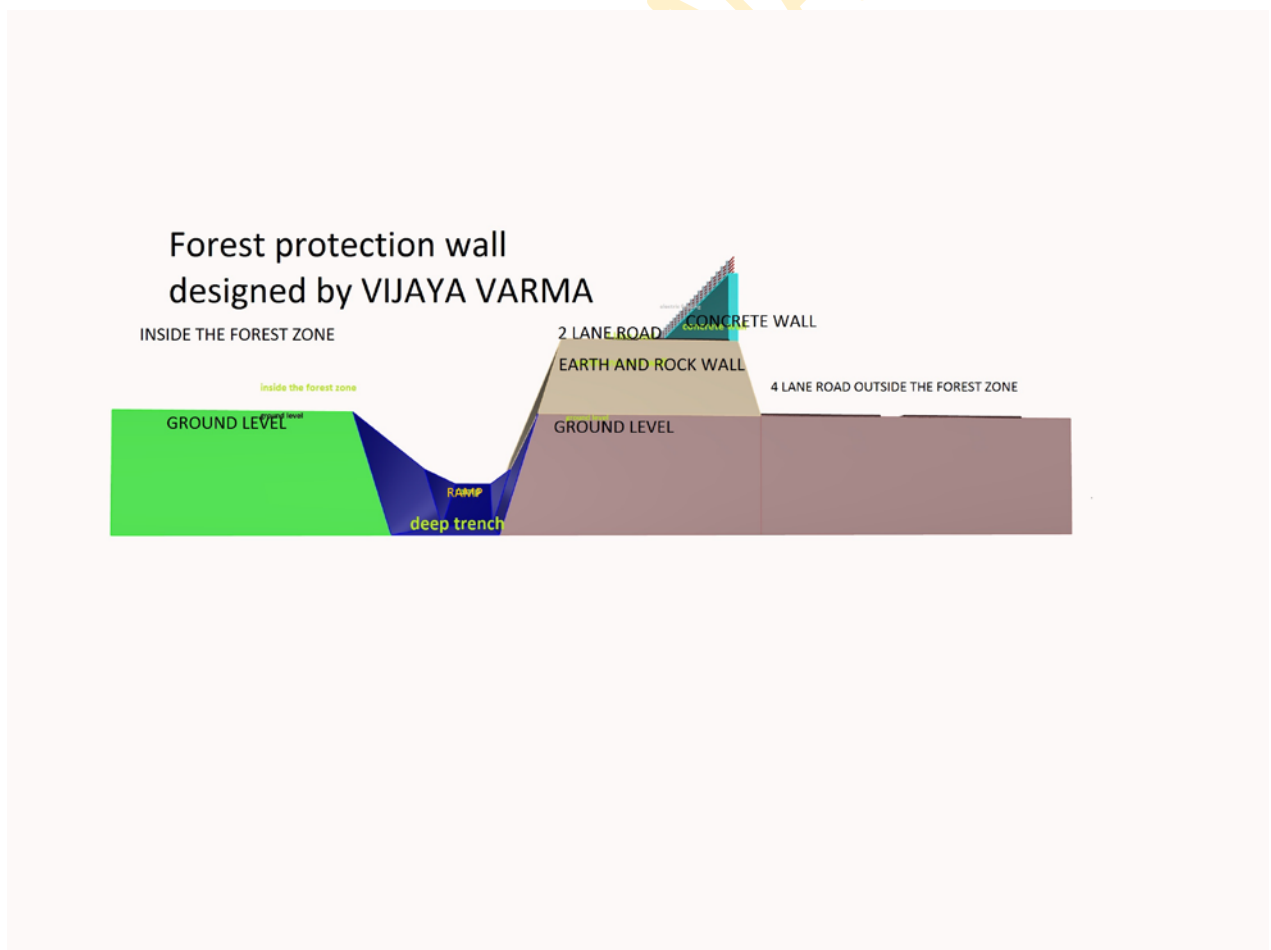
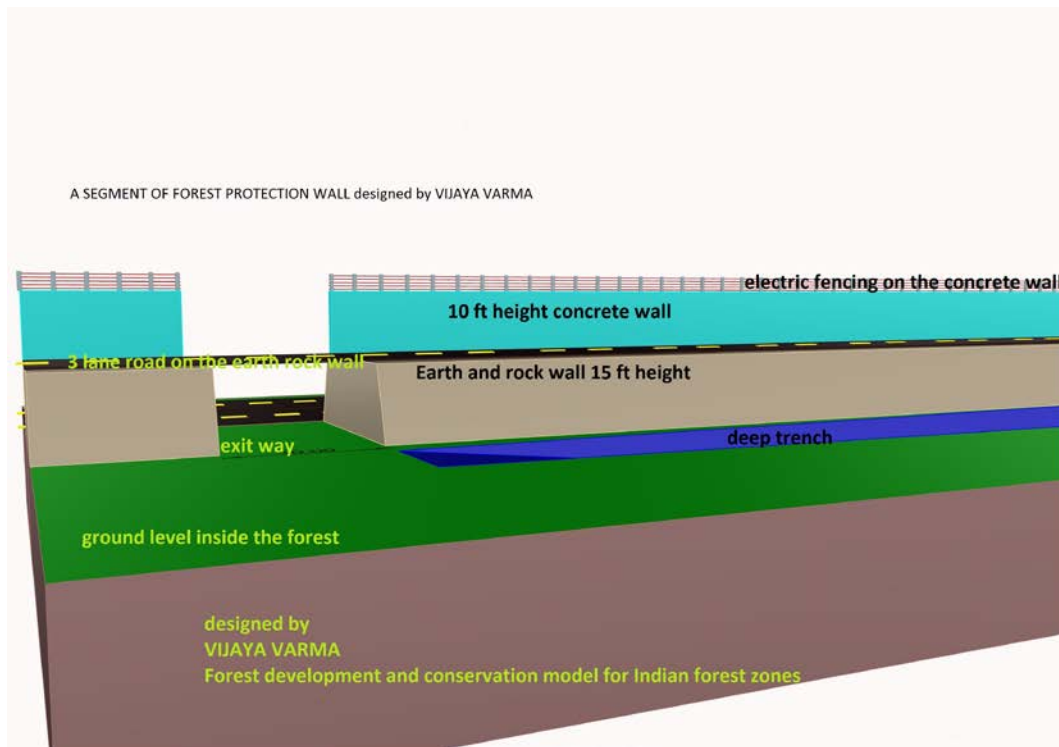
eroded top soil depositions, dead wood etc., at the gap of 3 to 5 years. The soil deposits can be used for the enrichment farm lands nearby forest zones to increase agriculture production.

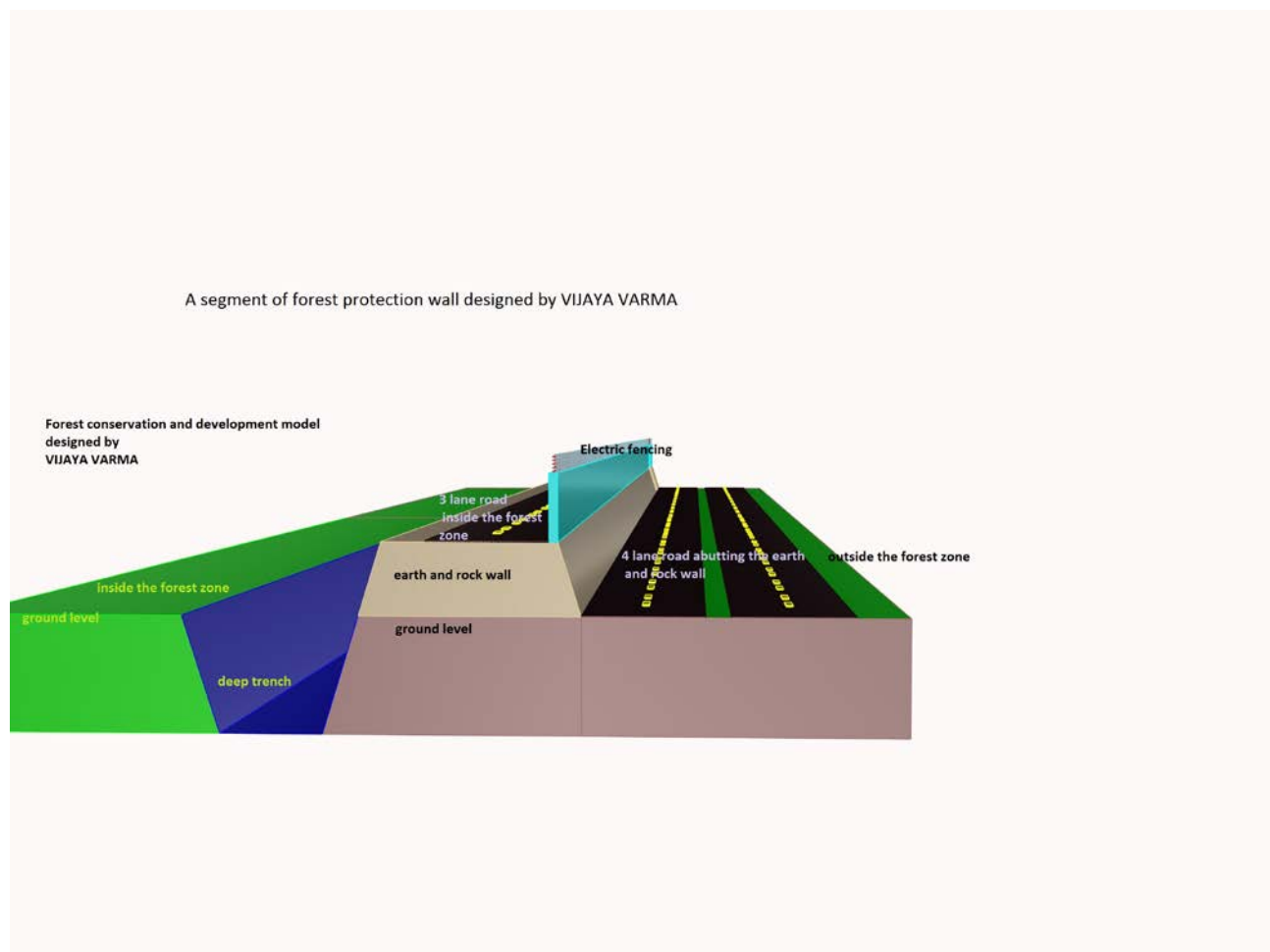
2. Six metre height and 12 metre wide hard compressed earth com rock embankment abutting the deep trench around the forest zone
3. Nine metre wide 4 - lane road on this hard pressed earth cum road embankment around the forest
4. Four feet height electric fencing on the concrete wall
5. Eighteen metre wide 6 lane road that was laid outside and around the forest zones.



Images of the forest protection wall around the forest zones







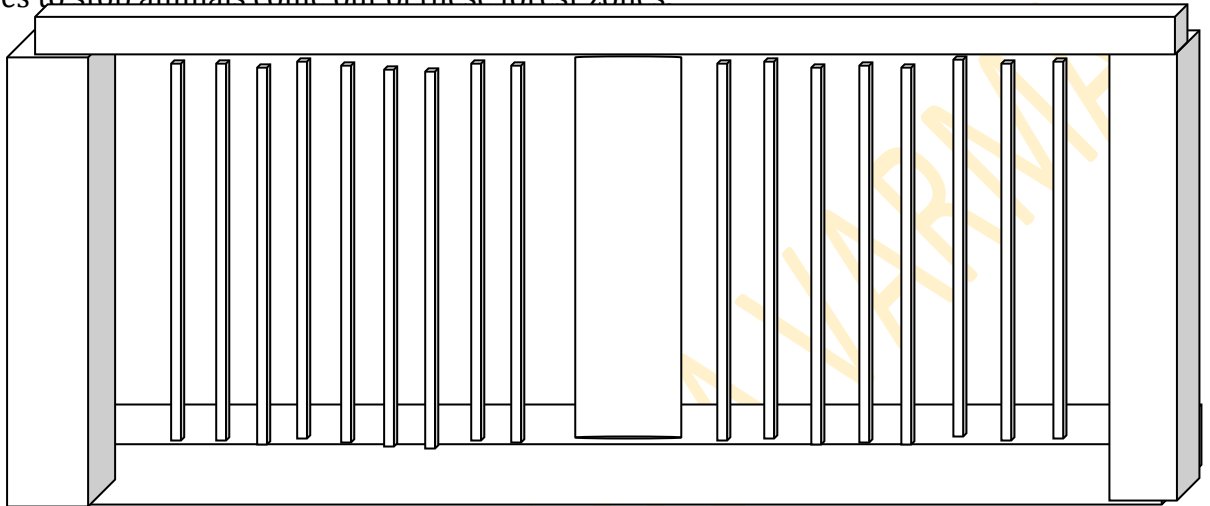
Forest tourism

I will explain here how forest tourism can be developed with the construction of forest protection walls around forest zones. Forest will become new destinations spots for tourists, centres for meditation, health promotion, and convalescence.

1. The 4 lane road abutting the deep trench will be used for plying electric buses, electric cars and electric vans to transport tourists for the forest viewing. The highly enriched forests with high canopy trees, water bodies, lakes, waterfalls and plenty of animals roaming in their natural habitat will give the tourists the utmost delight they want. There will be feeding centres at some places along the 4 lane road where animal feed could be served to herbivorous animals twice in a day at a particular time. These animals will be accustomed to come to these animal feeding centres. Tourist can watch at the closest proximity to these animals in droves at feeding centres.
2. The deep trench, the hard pressed earth cum rock wall, the concrete wall, and the electric fencing will not allow animals stray into the human habitats.
3. The timber smuggling and animal poaching will come to an end permanently.
4. Outside the forest zones and along the 6 lane road hotels, restaurants, meditation centres, Vanaprastha ashrams, nature cure hospitals, rehabilitation centres, film studios, market yards for tribal people for selling forest produce like fruits, honey, nuts, leaves, and herbal medicines can be built for taking forest tourism to newer heights.
4. The tribal people will get increased incomes from the forest produce got from the fully developed forests.
5. The tribal people will get huge employment opportunities because of increased forest tourism.
6. The surrounding farm lands can be enriched by the accumulated deposits in the trenches without depending upon chemical fertilizers to increase agriculture yields.

7. The money menace has become ominous proportion due to formation of countless troops of monkeys. They can be captured and relocated into the highly protected zones relieving farmers across country from the damages being caused to their crops by monkeys.
8. There are approximately 150 zoological parks in India. All the animals in these can be relocated into the fully protected zones so that the emptied zoos can be converted into botanical gardens, health resorts, tourist resorts and meditation centres.
9. Illegal mining will completely come to an end.
10. Encroachment of forests soil erosion, pollution of water bodies in the forests will also stop.

Weirs are to be constructed across the streams and rivers that flow out of protected forest zones to stop animals come out of these forest zones



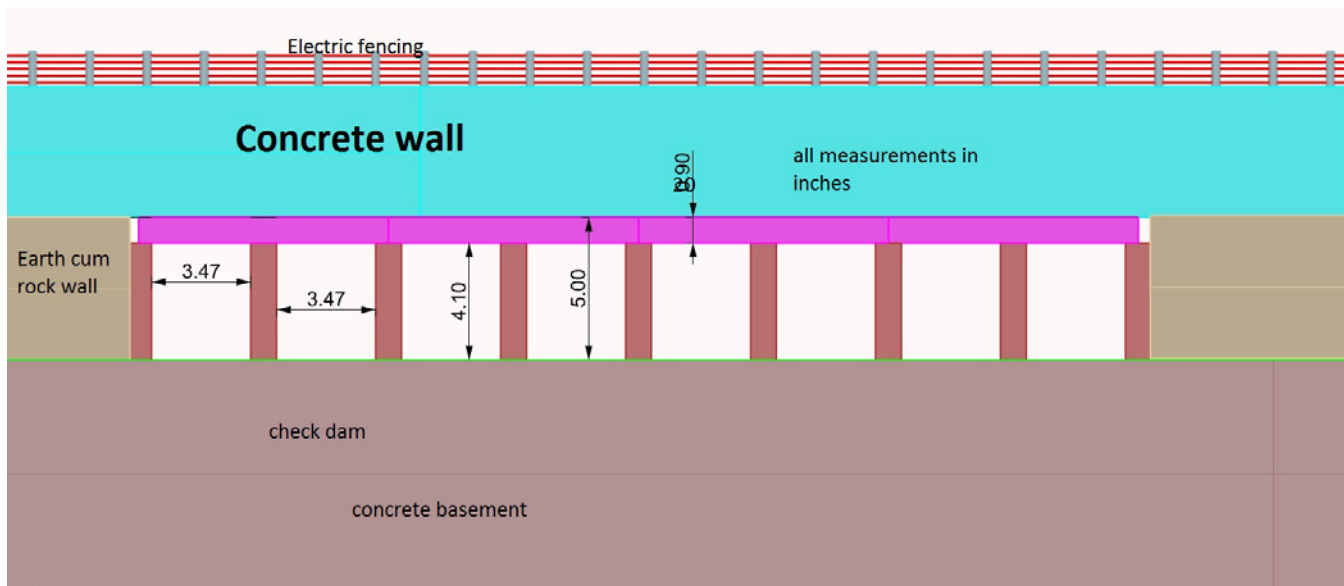
Formation of ponds on flat mountains. Approximately 40% of peninsular mountains are nearly flat-topped up to 20% corresponding to their base areas. If the top areas of the mountains, which constitutes 10% of the total occupied land area of the peninsular mountains, are levelled and formed into one hectare ponds, 1000 TMC of rain water can be stored on mountain tops.

1. The available top area of the mountains shall be levelled and divided into one-hectare portions. A 5 metre width and 3 metre depth around each hectare should be dug and this dug material should be used for pond embankments of the height of 3 metres. The centre of the tank shall be left untouched for raising high canopy trees. Trees are also raised on the embankments of all ponds. The purpose of these tanks on mountain tops is to preserve every drop of rainwater that falls on the mountains and stop it running down the mountains. So the entire mountain tops will be covered with high canopy trees surviving on the water stored in the ponds. This stored water in the rainy season on mountain tops slowly percolates through all its sloping sides to its feet, where deep trenches are dug to catch the running waters from mountain slopes. Heavy forests can survive on mountain slopes in the hot summer season also, by absorbing water that slowly oozes from multiple ponds on mountain tops.

2 The most important step in water conservation is the construction of check dams across streams in mountain valleys. These 3 metre height check dams, at regular distances in valleys, will inhibit the flow of running water streams between mountains and help forming of small brooks and lakes. The countless number of check dams on all peninsular mountain ranges help water conservation at a huge level at low cost, without damaging flora and fauna. These check dams between mountains, and ponds on mountain tops keep forests evergreen and will become highly productive in terms of fruits, honey, lac, herbs, fodder for animals and other forest products. These evergreen, highly productive forests enabled by

water conservation projects hugely benefit tribals who primarily depend on forest products for their livelihood.

A design of a check dam on streams, rivers, and rivulets that flow out of forests to not only store water but also to check animals from coming out of the forests through them.



Imagine how our earth would be transformed into a green and blue earth, if 10% strength of the armed forces, and 10% of defence budgets of all countries in the world are utilised unitedly for the programs of afforestation, reforestation, and water conservation. The major problems of global warming, air pollution, water pollution, and food scarcity will become nothing before the combined green army of the world.

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