BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

Original Application No. 488 of 2014

IN THE MATTER OF:-

Court on its Motion Vs. State of Himachal Pradesh & Ors.

CORAM : HON'BLE MR. JUSTICE SWATANTER KUMAR, CHAIRPERSON
HON'BLE MR. JUSTICE M.S. NAMBIAR, JUDICIAL MEMBER
HON'BLE DR. D.K. AGRAWAL, EXPERT MEMBER
HON'BLE PROF. A.R. YOUSUF, EXPERT MEMBER

Present: **Applicant:** **Appearance not marked**
Respondent No. 1: **Mr. Anup Rattan, Addl. AG**
Respondent Nos. 1to6: **Mr. Suryanarayana Singh, AAG**
Respondent No. 7: **Ms. Panchajanya Batra Singh, Adv.**

	Date and Remarks	Orders of the Tribunal
	Item No. 17 January 20, 2015	In furtherance of the order of the tribunal, Mr. Amrik Singh Nagpal is present and is represented through the Counsel. Mr. Praveen Kumar Sharma is not present however, is represented by the Learned Counsel. In furtherance to our previous order a detailed status Report has been filed on behalf of the Superintendent of Police, Shimla as well as the Forest Department of State of Himachal Pradesh. It has been stated on behalf of the State of Himachal Pradesh that the area in question is the land constituted adjoining the reserve forest. It is also confirmed that the trees have been felled illegally, unauthorizedly and without permission of any of the competent authority. It is further stated that some of the trees have been felled in the Government forest land. In this report, it has been indicated that the value of the wood is about 35 lakhs and that there is possibility of stumps of baan trees to revive and re-grow. Efforts can be made to revive as many as 426 baan tree stumps to re-grow. However, for the remaining trees, re-forestation would be required.

Forest is not a concern only for scenic beauty, however, forests are known to be the lungs of civilization. They have various advantages not only to the environment and ecology but directly to the inhabitant in and around the forest area. *Inter alia* we may notice the contribution that the forests make to the environment:

"IMACT OF TREE FELLING ON ENVIRONMENT

Trees play a very important role in maintaining the ecological balance in the biosphere. SINCE THE BEGINNING, TREES HAVE FURNISHED US WITH TWO OF LIFE'S ESSENTIALS, FOOD AND OXYGEN. On an average, one tree produces nearly 260 pounds of oxygen and absorbs up to 48 lbs of carbon dioxide a year. WITH THE EVOLUTION OF HUMAN CIVILIZATION CONTRIBUTION OF TREES IN MAKING OUR LIFE COMFORTABLE INCREASED SEVERAL FOLD, I.E., THEY PROVIDE US NECESSITIES SUCH AS CLOTHING, SHELTER, MEDICINE, AND TOOLS. TODAY, THEIR VALUE CONTINUES TO INCREASE AND MORE BENEFITS OF TREES ARE BEING DISCOVERED AS THEIR ROLE EXPANDS TO SATISFY THE NEEDS CREATED BY OUR MODERN LIFESTYLES.

TREES CONTRIBUTE TO OUR ENVIRONMENT BY PROVIDING OXYGEN, IMPROVING AIR QUALITY, CLIMATE AMELIORATION, CONSERVING WATER, PRESERVING SOIL, AND SUPPORTING WILDLIFE. DURING THE PROCESS OF PHOTOSYNTHESIS, TREES TAKE IN CARBON DIOXIDE AND PRODUCE OXYGEN WE BREATHE. They provide us with fresh air to breathe, shade in summers, food, and other benefits without which we cannot even think of living. TREES CONTROL CLIMATE BY MODERATING THE EFFECTS OF THE SUN, RAIN AND WIND. LEAVES ABSORB AND FILTER THE SUN'S RADIANT ENERGY, KEEPING THINGS COOL IN SUMMER. TREES ALSO PRESERVE WARMTH BY PROVIDING A SCREEN FROM HARSH WIND. IN ADDITION TO INFLUENCING WIND SPEED AND DIRECTION, THEY SHIELD US FROM THE DOWNFALL OF RAIN, SLEET AND HAIL.

TREES LOWER THE AIR TEMPERATURE AND REDUCE THE HEAT INTENSITY OF THE GREENHOUSE EFFECT BY MAINTAINING LOW LEVELS OF CARBON DIOXIDE. Both above and below ground, trees are essential to the eco-systems in which they occur. Far reaching roots hold soil in place and fight erosion. Trees absorb and store rainwater which reduce runoff and sediment deposit after storms. This helps the ground water supply recharge, prevents the transport of chemicals into streams and prevents flooding. Fallen leaves make excellent compost that enriches soil. In the present day scenario trees in Urban Environments help in muffling the urban noise. In Suburban Environments they help in providing shade canopy and noise buffers and also congenial habitat for suburban wildlife, while in the rural environment they protect the crops from wind, control erosion and create diverse plant and animal habitats.

Despite knowing the importance of trees, human beings are still cutting down the trees and forests have started depleting from this beautiful earth. Deforestation has the following dangers:

- ***Destruction of carbon sinks:***

  Carbon sinks are huge stores of carbon. Large quantities of carbon are trapped by plants in general and trees in particular in the body biomass thereby helping in balancing the carbon dioxide content in the biosphere. Mature trees hold large quantities of

carbon. Each acre of the forest has been taking roughly 0.75 metric ton of carbon out of the atmosphere annually, doing its humble part to counteract greenhouse warming ***[The Case of Missing Carbon: National Geographic]****. A mature tree can absorb up to 48 lbs of carbon dioxide a year (McAliney 1993). In fact, large trees at maturity can store approximately 1000 times more carbon dioxide than saplings (Nowak 2001). This difference highlights the importance of maintaining large tracts of healthy, mature forest, which will be much more useful in establishing carbon sinks than planting saplings* ***[Ravin, A & Ranie, T: Best Practices for Including Carbon Sinks in Greenhouse Gas Inventories]****.*

When a tree is felled and burnt the carbon present in its body gets converted back into carbon dioxide and is released into the atmosphere. Timber extraction may only represent a comparatively small return of carbon to the atmosphere: wood does not release CO2 until it decomposes or is burnt. The oxidation of leaf litter and surface soil biomass in felled areas will add to net emissions in the short term. Where re-growth or restocking does not take place, there is a potential net loss of 50 t C/ha ***[Environmental impacts of land management; Natural England Research Report NERR030; pp 131 – 142]****.*

- ***Soil Erosion:***

  Deforestation makes soil prone to erosion by agents such as wind and water. The roots of trees hold the particles of soil together, thus preventing the fertile top soil from being carried away. Soil erosion leads to loss of productivity of the land due to loss of mineral nutrients and soil microorganisms

- ***Destruction of animal habitats:***

  Apart from domesticated animals and marine and fresh water animals, all other animals need forests as their habitats. These forests do not only provide a place for the animals to roam around but also provide their food and act as a source of protection from predators through camouflage. Actually each plant/tree provides a unique microhabitat of a great array of macro and microscopic animals and when it is felled these organisms are significantly affected. Destruction of the animals' habitats literally kills the animals.

- ***Source for medicine:***

  Many plants/trees are a source of important medicines used for the treatment of diseases in case of human beings as well as domesticated animals. Destruction of such trees leads to destruction of such medicines.

- ***Greenhouse effect and global warming:***

  Nature balances the flow of energy and nutrients. Trees and forests play a very vital role in the flow of energy and cycling of nutrients like carbon, nitrogen, phosphorus, etc., in the biosphere. Destruction of trees/forests results in the disturbance in the natural balance in the cycling process of various nutrients. For example, recent calculations suggest that carbon dioxide emissions from

deforestation and forest degradation (excluding peat land emissions) contribute about 12% of total anthropogenic carbon dioxide emissions with a range from 6 to 17% ***[van der Werf, et al. (2009). "CO_2 emissions from forest loss". Nature Geoscience 2 (11): 737–738]****. Deforestation causes carbon dioxide to linger in the atmosphere. As carbon dioxide accrues, it produces a layer in the atmosphere that traps radiation from the sun. The radiation converts to heat which causes global warming, which is better known as the greenhouse effect.*

Destruction of forests also causes modification of climate of an area mostly leading to desertification and aridity.

- ***Trees, and plants in general, affect the water cycle significantly in a number of ways***

  - *The tree canopy intercepts precipitation, and a part of it is in the process evaporated back to the atmosphere;*
  - *Tree litter, stems and trunks slow down surface runoff;*
  - *their roots create macropores – large conduits – in the soil that increase infiltration of water;*
  - *they contribute to terrestrial evaporation and reduce soil moisture via transpiration;*
  - *their litter and other organic residue change soil properties that affect the capacity of soil to store water.*
  - *their leaves control the humidity of the atmosphere through the process of transpiration* ***[Scherer et al (2013) Soil, Water and Plant Characteristics Important to Irrigation, North Dakota State University, Fargo, North Dakota]****.*

*Chopping down vast swathes of forest is known to have an effect on climate, but what is the impact of cutting down a handful of trees? A recent study by Zhang et al. (2014) shows that even small-scale land clearance – a few hectares or less – causes a noticeable change in local temperature. According to climate models, tropical deforestation causes warming, while loss of forest at high latitudes brings about cooling. The transition from warming to cooling occurs at latitude of around 35°. But most land-use change occurs at far smaller scales: To see whether the loss of only a few trees has any impact on the climate of an area Zhang et al (2014) studied 40 locations across North and South America and 12 locations in Eastern Asia****[Zhang et al. (2014). Response of surface air temperature to small-scale land clearing across latitudes. Environ. Res. Lett. 9 (3): 7pp]****. They observed that at tropical and subtropical latitudes (15°S to 20°N) local deforestation caused a warming effect of more than 0.5 °C on daily maximum temperature. In boreal latitudes (over 45°N and S) a cooling effect of nearly 1 °C on daily minimum temperature was reported. The team found that small-scale deforestation has the greatest localized warming effect in the tropics – between 10°N and 10°S. After that the impact decreases, switching to a cooling effect at latitude of around 35°.*

Research also suggests probable increases in under-storey native plant cover and richness after tree over-storeys are mostly or completely removed. As the pattern of the plant cover changes, it affects the composition of the faunal assemblages in the area as well

[Abella, S. R. & Springer, J. D. (2014), Effects of tree cutting and fire on understory vegetation in mixed conifer Forests; Forest Ecology and Management (2014)19pp]*. Generally, species favoring closed-canopy conditions with larger diameter trees are negatively affected when cutting results in grasslands or oak woodlands with small diameter trees and open canopies. Conversely, species favoring grasslands or very open woodland are positively affected.*

Felling of individual trees tends to be most significant outside woodland because the individual trees themselves, particularly veteran trees, are critical to the interest, for example in orchards, hedges and parkland ***[Read, H. (2000), The veteran tree management handbook (Peterborough, English Nature, 2000]"***

This brutal attempt on the nature by or on behalf of Smt. Parminder Kaur, Mr. Amrik Singh Nagpal and Mr. Praveen Sharma is an assault which has, besides its other aspects which the law would take care of, a direct impact on ecology and environment of the area to cut down 477 trees is a matter which should have shaken the authorities in the State and it ought to have acted with greater care and expeditiousness.

The Learned Counsel appearing for Mr. Nagpal and Mr. Praveen Sharma submit that they would file a detailed Reply to place their side of the case before the tribunal. We find the request to be reasonable. The Learned Counsel upon instruction from the client who is present in the court submit that for the purpose of restoration of the environment and to prevent its degradation, they would voluntarily deposit a sum of Rs. 10 lakhs by way of bank demand draft within one week from today with the Forest Department of DFO Rural Shimla. At this stage, we would make no further observations to avoid prejudice to the rights and contention of either of the parties before us. Let the amount of Rs. 10 lakhs for restoration of the degraded environment, plantation of 4770 trees on the land in

		question from where the trees have been cut and fell and remaining trees which cannot be accommodated on this land, shall be planted at the nearby area identified by the Forest Department. The sum of Rs. 10 lakhs would be utilized in addition to the Rs. 20 lakhs already deposited by the owner of the land only for the purposes of restoration and reforestation and ensuring maintenance of saplings now planted. We further direct the Forest Department to take immediate steps to take all care and cautions and make all efforts to ensure that the 50 trunks and roots of trees which are remaining at the site in question and which are capable of being revived or as much number of trees remaining trunks and roots should be revived as suggested by the Forest Department itself. This work would be carried out by the Forest Department in coordination with the Legal Services Authority of the High Court of Himachal Pradesh which has involved school children for the purposes of plantation and ensuring proper protection of the trees at least for the first 5 years. We would request the Hon'ble Judge incharge of the Legal Services Authority of the High Court to direct the concerned quarter for commencing the plantation and efforts to revive the trees at the site in question immediately. The Status Report into aforestated issues and the action plan should be placed before the Tribunal complete and comprehensive in all respective before the next date of hearing. We also grant time to file Reply to show cause Notice issued to the owner of the land Ms. Parminder

		Kaur. List on 23rd February, 2015 at Shimla. .....,CP (Swatanter Kumar) .....,JM (M.S. Nambiar) .....,EM (Dr. D.K. Agrawal) .....,EM (Prof. A.R. Yousuf)