

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

**Original Application No. 99/2018
(M.A. No. 257/2018 & M.A. No. 258/2018
And
Original Application No. 431/2018**

IN THE MATTERS OF:

**Citizens for Green Doon & Ors. Vs. Union of India & Ors.
And
Common Cause Vs. Union of India & Ors.**

**CORAM : HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE DR. JUSTICE JAWAD RAHIM, JUDICIAL MEMBER
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Present: Applicant: Mr. Aagney Sail, Mr. Ritwik Parikh, Advs. Mr. Gaurav Kumar Bansal, Adv.
MoEF Mr. Balendu Shekhar, Mr. Sriansh Prakash and Mr. Rajkumar Maurya, Advs
Respondents No. 3 Mr. Rahul Verma, AAG
Ms. Pinky Anand, ASG, Mr. Rajesh Ranjan, Mr. Sumit Teterwal, Advs.

Date and Remarks	Orders of the Tribunal
Item Nos. 06 & 07 September 26, 2018 R & PS	<ol style="list-style-type: none">1. This order will dispose of Original Application No. 99/2018 and Original Application No. 431/2018, as both the applications concern "<i>Chardham Mahamarg Vikas Pariyojna</i>" (<i>Chardham Project</i>).2. Original Application No. 99/2018 was filed on 27.02.2018 by way of "public interest".3. According to the averments in the application, the project entails road widening of approximate of 900 kms of National Highways- (i) Rishikesh to Dharasu - NH94, (ii) Dharasu to Yamunotri -NH94, (iii) Dharasu to Gangotri - NH108, (iv) Rishikesh to Rudraprayag - NH58, (v) Rudraprayag to Gaurikund (Kedarnath) - NH109, (vi) Rudraprayag to Mana Village (Badrinath) - NH58 and (vii) Tanakpur to Pithoragarh - NH125. These National Highways mainly connect the <i>char-dham</i> route

	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>(Yamunotri, Gangotri, Kedarnath and Badrinath) in the State of Uttarakhand.</p> <p>4. Reference has been made to the press release of Press Information Bureau (PIC) dated 23.12.2016 to the effect that the project is to improve connectivity to <i>Char-Dham</i> pilgrimage centres in the Himalayas, making journey to these centres safer, faster and more convenient. Thousands of pilgrims travel to these holy shrines every year between the months of May and October. The shrines are located on the banks of rivers Yamuna, Bhagirathi, Mandakini and Alaknanda in critically fragile environmental areas of the Ganga basin in Himalayan regions. The four valleys on the <i>Chardham</i> route are biodiversity hotspots.</p> <p>5. The Himalayas control the climate of the nation as they act as a natural physical barrier preventing frigid, dry and cold winds from entering into the country, thereby keeping the southern areas warm. Additionally, this area forms the origin of the mighty Ganga that is directly and indirectly responsible for the food and water security of billions along the path upto Ganga Sagar. Harboursing some of the most pristine dense forests, the vicinity of the <i>Chardham</i> Mahamarg Pariyojna entails 3 national parks (Gangotri National Park, Uttarkashi - 2,390 sq. kms., Govind National Park, Uttarkashi - 472 sq. kms. and Nanda Devi National Park, Chamoli - 624 sq. kms.), 2 wildlife sanctuaries (Govind Wildlife Sanctuary - 485 sq. kms. and Kedarnath Wildlife Sanctuary - 975 sq.kms.) and 1 biosphere reserve (Nanda Devi Biosphere Reserve -</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>5860 sq. kms.).</p> <p>6. Ganga-Himalayan basin is susceptible to climate change and this fragile Himalayan eco-system is also facing grave risk owing to increasing global temperature.</p> <p>7. Natural disasters like glacial lake outburst, flash floods, cloud burst, land-sinking, land-sliding, earthquakes have been witnessed many a times in the recent past and the intensity and frequency of these events is only increasing.</p> <p>8. Champasar glacier, Gangotri glacier, Chorabari glacier and Satopanth glacier are respectively the names of the <i>Chardham</i> glaciers. Retreat of glaciers is a global phenomenon wherein the loss of mass by different glaciers owing to the impact of climatic changes is clearly visible. Gangotri glacier is one of the largest glaciers in the country and is also one of the fastest receding glaciers of the Himalayas. One of the main dangers of these retreating Glaciers is the formation of lakes and the danger of GLOFs - Glacial Lake Outburst Floods. Such an incident was noted in 2013 where a GLOF event of Chorabari glacier resulted in massive downstream flash flood that claimed thousands of lives.</p> <p>9. Amongst all the North - Indian Himalayan States, Uttarakhand State is found to have the highest number of landslide prone/ unstable zones. The entire <i>Chardham</i> route falls in Seismic Zone IV and V and has witnessed many earthquakes in the past, some have been severely devastative. In the year 1991 in Uttarkashi and in 1998 in</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>Chamoli district faced a massive earthquake that led to massive loss of lives and properties. Cloudbursts and subsequent flash floods are a common phenomenon in the Himalayan states. Though, earlier flash floods meant only water moving downstream but this phenomenon has changed over the years. As the glaciers retreat, huge quantity of delphs is left behind in paraglacial zones which are sediment hotspots. When the cloudburst takes place in the upper areas, the water in the river drags down the sediments from these areas thereby increasing the river bed level and causing massive floods downstream. This is the kind of flash floods that have occurred in the recent past in the state of Uttarakhand as in 2012, massive sediments in Asi-Ganga (main tributary of Bhagirathi) resulted in severe devastation downstream claiming several lives and destruction which is still not restored. Similar phenomenon was seen in June-2013, when flash flood event in all <i>Chardham</i> Valleys which also got compounded due to obstruction in the flow of the river in downstream. The National Institute of Disaster Management (NIDM), after June-2013 calamity of Kedarnath, has done extensive study of the causes of state's vulnerability in terms of landslides, earthquakes, cloud burst and flash floods.</p> <p>10. Development activities in ecological sensitive areas of the State have been responsible for increased vulnerability of the region to disaster. Increased human activities have further added to the vulnerability of the region.</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>11. Unscientific development and land use pattern, poor socio-economic conditions, forest degradation and deforestation, increasing population and tourism pressure etc. Development of hydropower projects, construction of roads and river bed mining are the main developmental activities, which directly or indirectly enhance the vulnerability of the region to natural hazards.</p> <p>12. As a result of the disasters and unplanned anthropogenic activities, many sites of the mountain slopes along the <i>Chardham</i> highways have become unstable and critical landslide zones have been activated along these highways. A study of slope stability carried out by Geological Survey of India (GSI) after June-2013 disaster in Uttarakhand identified that a number of landslides have been activated along the <i>Chardham</i> route. The GSI report observed and stated that, "...The main factor responsible for triggering of the landslides are abnormal downpour causing flash floods, toe-cutting, saturation of slope forming material. Also, anthropogenic activities like road cutting, encroachment of human in the river/nalabank and unplanned urbanization, etc. have aggravated the situation..." It further recommends that- "In hilly region landslide related hazards can be reduced/ minimized by avoiding unplanned excavation and if cutting is essential sustainable measures may be adopted immediately."</p> <p>13. One of the most pertinent observations to be made in connection with the designated route of <i>Chardham</i> project is the occurrence, recurrence and kind of disasters</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>it has witnessed in the recent past. While the 1900's record the massive 1970 flash flood incident in Alaknanda valley, similarly severe flash flood incident of 1978 in Bhagirathi valley, earthquakes of Chamoli and Uttarkashi of 1998 and 1991 respectively; the new millennia, however in just 17 years has already documented several incidents of disaster in this area. Massive land sliding incidents like Varunavat tragedy of 2005, Bhatwadi land sinking incident of 2010, Pithoragarh landslide tragedy of 2016, severe flash flood incidents of 2004, 2012, 2013. Even in the otherwise considered stable lower altitude areas like Narendra Nagar, Rishikesh etc. have witnessed massive landslides in 2014 and 2016. The intensity and increased frequency of these incidents is a disturbing yet pertinent reality that must be accepted.</p> <p>14. In a fragile ecology such as this, human intervention in terms of anthropogenic activities have also contributed in increasing the vulnerability of the <i>Chardham</i> area, besides having caused and escalating the impact of disasters. Study of landslides by GSI along the <i>Chardham</i> route has clearly mentioned that road widening activity is one of the main triggering factors of landslides by making the slopes unstable. Citing a specific incident, the GSI report of Uttarkashi, 2014 in Chapter IV on the route to Gangotri dham states: "IV. SLOPE STABILITY ASSESSMENT ALONG NATIONAL HIGHWAYS :</p> <p>Causative factors for sliding: (vi) Anthropogenic activities like widening and construction of new roads have also disturbed the toe of natural slope,-</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>e.g. at Dharasu Bend slide-1 & 2 due to “road widening operation the old slide was reactivated and huge amount of debris accumulated on the highway and blocked vehicular traffic for many days. ...”</p> <p>15. That this entire area is highly prone to landslides, earthquake and has a history of severe disasters in the past. Each of these disasters caused the extremely fragile slopes to collapse and form landslides. A study done by Geological Survey of India (GSI) after June-2013 has recorded hundreds of landslide incidences along this <i>Chardham</i> route. All the three studies conducted by GSI after June-2013 disaster in Uttarakhand raised serious concerns towards the road construction activities and hold them responsible for landslides and disasters.</p> <p>16. Cutting of trees loosens the soil thereby making the slope unstable. The <i>Chardham</i> project involves excavating and cutting away the base of the steep mountain slopes, cutting of thousands of valuable trees (like <i>Devdaar</i>, <i>Ton</i>, <i>Kail</i> etc.) and thus further destabilizing the mountains and in fact turning the entire area into an active landslide zone. It is pertinent to mention that not only will this block traffic and disrupt local life and tourist inflow greatly, in every monsoon people will lose their lives when the landslides fall with even greater force. Even more worrying is the fact of these <i>Chardham</i> valleys being a highly seismic zone with a history of earthquakes. If slopes are destabilized in this manner, in case of an earthquake the consequences to life and ecology will be unimaginable. That unplanned cutting and destabilization of slopes will</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>create a nightmarish scenario with collapsing hills every monsoon. This will deteriorate and even terminate traffic flow instead of helping it. This has been witnessed wherever the terrain has been disturbed through unconsidered human activity.</p> <p>17. Blasting is regularly done for cutting of slopes in the hills. The practice of blasting in the hills has been objected to and advised against by various disaster related reports. After the disaster of September, 2012 in Okhimath and Asi-Ganga valley, a detailed report by the Disaster Mitigation & Management Center (DMMC), Department of Disaster Management, Govt. of Uttarakhand was submitted which found blasting as a primary cause of destabilizing the hills, the DMMC recommended complete stoppage of blasting in the hills, in order to prevent them from weakening any further.</p> <p>18. Owing to the fragile ecology of the area, the impact of the disasters in the State of Uttarakhand has been seen to be compounded. The concern with reference to the fragility of the area, was taken up by the Hon'ble Supreme Court of India in its judgment delivered on 13th August, 2013, in <i>Alaknanda Hydro Power Co. Ltd. Vs Anuj Joshi & Ors., Civil Appeal No. 6736/2013 (2014) 1 SCC 769</i>. The Apex Court took suo-motu notice of the overburdened and fragile ecology of the area owing to the anthropogenic activities - such as dam construction and the aspects of tunneling, blasting, muck dumping, deforestation etc. associated with the same.</p> <p>19. The forest cover of Uttarakhand has been negatively</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>impacted in the recent survey done by Forest Survey of India (FSI) due to diversion of forest land for developmental activities. The 2015 report of FSI says that there has been a loss of about 260 Km² of forest in 2 years between 2013 to 2015 in the State of Uttarakhand. According to the National Forest Policy (NFP) 1989, Himalayan states should maintain at least 66% area under forest cover which serves as a buffer for Glaciers and has a role for the collection of ground water from where mountain springs and lakes originate. A grave concern is that the forest cover in the range of the altitude of 1000-4000 meter is decreasing which will directly pose a threat to the health of Glaciers and will have negative impacts on other water bodies. Recently, a report of National Institution for Transforming India (NITI AAYOG) on Himalayan water springs too raises serious concerns on water security in Himalayan region. It says that 60% water springs in Indian Himalayan Region are drying up and load of infrastructural development on sensitive ecosystem is one of the major cause.</p> <p>20. According to the applicant, the project will adversely impact the environment. The project entails blanket widening of existing <i>Chardham</i> project roads of 900 kms passes through four districts namely Uttarkashi, Tehri, Rudraprayag and Chamoli. The entire <i>Chardham</i> project area falls in the catchments of Ganga-Bhagirathi, Yamuna, Alaknanda and Mandakini river valleys where the widening upto 12-24 meters includes cutting of thousands of trees, excavation of hills, dumping of muck, blasting of rocks and movement of heavy machineries in</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>the highly sensitive terrain of Himalayas.</p> <p>21. Forest approvals have been given for various segments of the project in different micro-watersheds. According to the applicants, 13 Stage-I approvals and 2 Stage-I & II approvals of Forest Clearances (FC) pertaining to various segments of the <i>Chardham</i> project totaling to diversion of 373.1485 ha of forest land involving cutting of about 25,303 trees spread over a stretch of 356.368 kms have been given. In the application for forest clearance, no declaration of the name of the project was mentioned. More than 25,000 trees have already been cut between December and January 2018.</p> <p>22. There is no necessity for widening of the route on NH-94. Such widening is in violation of Guidelines in “Hill Road Manual” issued by Indian Road Congress (IRC SP:48:1998). According to the IRC guidelines for hill roads the width of National or State highways for double-lane is set to 8.8 meter (carriageway including shoulders). This could be reduced for unstable locations. 15-20 meters widening is violation of the guidelines and absolutely unnecessary which poses direct threat to the stability of hill slopes. There is no compliance of the directions in regard to Disaster Management Plan, ecological studies related to the road widening, carrying capacity study (CCS) of this terrain, master plan for <i>Chardham</i> area and eco sensitive zones. Trees to be cut involve <i>Devdaar, Pine, Ton, Kail</i> etc. Apart from the trees, there will be adverse impact on smaller trees, shrubs, bushes and bamboo which are part of the flora and</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>ecology have not been counted at all. The project will also affect the wildlife. Animals use the roads for crossing from slopes to river banks and such animals may be endangered on account of speeding vehicles. Cutting of trees may lead to more land slides.</p> <p>23. Apart from cutting of trees, illegal dumping of muck in the forest area will also cause damage to the forests and its flora and fauna.</p> <p>24. The applicants have relied upon (i) Geological Survey of India Report of Uttarkashi, 2014, (ii) National Institute of Disaster Management Report (iii) Disaster Mitigation & Management Center Report etc., indicating negative impacts of developmental activities in the mountains areas. Such activities may also impact catchment areas, cause more landslides, soil erosion and other adverse impacts on the fragile ecosystem.</p> <p>25. The project has not been cleared in terms of EIA Notification, 2006 under the Environment (Protection) Act, 1986. To avoid the said requirement, the stretch of 900 kms covered by the programme has been treated and classified into smaller stretches of less than 100 kms as they are falling in different sub-catchments for which requirement of impact assessment has been dispensed with. There is also violation of process and procedure for obtaining forest clearance, except only for particular stretches, where comparatively less trees are to be cut. Cumulative effect of destruction of trees, slope cutting, destruction of catchment area etc. has not been considered. Thus, it is alleged that there is violation of EIA</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>Notification, 2006, Forest (Conservation) Act, 1980, Wild Life Protection Act, 1972, the Environment (Protection) Act, 1986, and Articles 14, 21 and 48A of the Constitution of India. There is also violation of environmental jurisprudence which are recognized as part of Article 21 and also a part of Section 20 of the National Green Tribunal Act, 2010. The applicants accordingly seek a declaration that the project is illegal and also seek restoration of the affected areas by constituting an Expert Body to revise the entire project.</p> <p>26. In <i>Original Application No. 431/2018</i>, filed on 04.07.2018, the applicant seeks direction for taking precautions ensuring stability of slopes, having a comprehensive muck disposal plan and having independent experts of geologists and environmentalist to review the plan of muck disposal.</p> <p>27. The applicants rely upon Section 3 of the Environment (Protection) Act, 1986 and have expressed their concerns that the project should not cause disaster or affect ecology and human lives. It is suggested that necessary precautions are required to be taken. The requirement of EIA has been bye-passed by fragmenting the area of 900 kms into different projects. Debris is being directly thrown along the slopes, next to the road which slides down directly into the river. This may add to landslides and flooding. Unnecessary felling of trees is taking place.</p> <p>28. Reference is also made to the report of the National Institute of Disaster Management. It is stated that muck</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>disposal policy during road construction is important for stability of slopes and for protection of the river beds. Debris generated will be to the extent of 5,40,00,000 cubic meter for which no proper plan has been prepared. It is in violation of Rules for Management of Construction and Demolition Waste. The rules provide for precaution during construction of road. National Action Plan on Climate Change, 2009 is required to be followed and so is the requirement to follow National Mission for Sustaining the Himalayan Ecosystem. Reliance is also placed on Uttarakhand State Action Plan on Climate Change which deals with proper muck disposal and prohibits disposal of muck into the water bodies. On the issue of debris disposal, reference is made to “Investigation in the areas around Okhimath in Rudraprayag district on the aftermath of landslide incidences of September, 2012 - A Report”. The applicants also rely upon ‘Geological Survey of India Report of Uttarkashi, 2014’ and ‘Governance for Sustaining Himalayan Ecosystem (Guidelines & Best Practices)’, ‘The Training Module on Comprehensive Landslides Risk Management prepared by NIDM’ and ‘Policies to Mainstream Adaptation to Climate Change and for Sustainable Development in the Himalayas’.</p> <p>29. In its reply filed before this Tribunal on 16.03.2018, Respondent No. 1 has stated that the programme aims at improving National Highways connectivity to <i>Chardham</i> Shrines. Various projects have been entrusted to four agencies (i) State PWD of Uttarakhand, (ii) Border Roads Organization (BRO), (iii) National Highways and (iv) Infrastructure Unit of the Ministry. 26 projects</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>involving 479 kms. of length will cost Rs. 5,168 Crores.</p> <p>11 other projects involving 153 kms. of length will cost of Rs. 3,379 Crores. 16 more projects involving 192 kms. of length will cost of Rs. 3,051 Crores. Total area of muck disposal site for the various <i>Chardham</i> projects is about 153 Ha (at 480 different locations) out of which 143 Ha is forest land. Muck disposal areas/sites are earmarked for disposal and muck is to disposed off in a manner so to avoid damage to vegetation and falling of muck in the river. Accordingly, retaining structures have been constructed around/along the muck disposal sites avoiding spilling off muck in the river. The muck is to be disposed in the earmarked muck disposal sites by the implementing agencies. Widening of roads is done with required mitigation measures like slope protection, treatment of potentially slide-prone areas, stabilization of slopes by adopting adequate engineering measures. Techno-economic feasibility studies have been undertaken by the Ministry, based on extensive survey and investigations. Detailed Project reports have been prepared with the help of Expert Professional Consultancy firms. The infrastructure is being designed considering the severity of seismicity and climatic conditions in the region. The projects have been undertaken after due diligence in consultation with Authorities like Geological Survey of India, Central Water Commission, Indian Institute of Remote Sensing, State Disaster Relief Force, State Government of Uttarakhand, etc.</p> <p>30. It is further stated by Respondent No. 1 that the Government of India, in the Ministry of Environment and</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>Forests, had constituted a High Level Committee vide OM No. 21-270/2008-IA.III dated the 11.12.2012 to review the provisions of Environmental Impact Assessment Notification, 2006 relating to grant of Environmental Clearance for Roads, Buildings and Special Economic Zone projects. The Committee recommended that expansion of National Highway projects which are linear projects upto 100 kms, involving additional right of way upto 40 meters on existing alignment and 60 meters on re-alignments or by-passes may be exempted from the preview of the notification. In view of the said recommendation, the Government of India exempted expansion projects of National Highways upto 100 kms. involving additional right of way upto 40 meters on existing alignments and upto 60 meters on re-alignments or by-passes from the requirement of Environmental Impact Assessment, vide notification dated 22.8.2013.</p> <p>31. No parcel of the sanctioned work or project is longer than 100 kms and requirement of additional right of way is not greater than 40 meters in the present project. Hence, works and projects sanctioned under the <i>Chardham</i> programme are exempted from the requirement of mandatory Environmental Impact Assessment (EIA) and Environmental Clearance.</p> <p>32. Detailed Project Reports for these projects have been prepared in a manner that minimum forest land is diverted and also minimum number of trees are felled for widening of road.</p> <p>33. The works have been undertaken in accordance</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>with Manual of Specifications and Standards for two-laning with paved shoulders issued by the Indian Roads Congress (IRC) Special publication 2015. The roadway width as per this code for mountainous terrain is 11.00 m. Requirement of land and trees has been assessed keeping in mind the terrain of alignment. The potential slide-prone areas have been identified and their stabilization has been taken up on the basis of data obtained from Geological Survey of India, Survey of India, Central Water Commission and other agencies.</p> <p>34. In order to prevent land slide/rockfall, as per the detailed project report, gabion wall, rock bolting, soil nailing, secured drapery system, unsecured drapery system, bio-engineering measures such as hydro-seeding, rock-fall protection measures such as rock-fall barriers, reinforced earth-walls, improvement of drainage, subsurface and surface drainage, chimney drain, chute drain, CD works etc. have been proposed. It is further stated that even though the MoRTH has proceeded on the footing that EIA Notification 2006 does not apply to the present case, MoRTH is now willing to have all aspects examined in the light of EIA Notification and take such steps for protecting the environment as may be considered appropriate without obstructing the ongoing project and to avoid delay and cost escalation and also having regard to the fact that certain trees have already been felled, after following due process.</p> <p>35. Respondent No. 2, the Ministry of Environment, Forest and Climate Change in its reply, filed on</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>12.03.2018, stated that the proposal for diversion for forest lands were considered by the Regional Empowered Committee of the Regional Office (North Central Zone), Dehradun. All the cases seeking diversion of forest land were dealt with under Forest (Conservation) Act, 1980. Site inspection report of concerned DFO giving presence or absence of wildlife in the area proposed for diversion and significance from wildlife point of view was taken. In cases where forest clearances have been accorded, the concerned DFO of the State Government of Uttarakhand has certified that that these areas do not fall in any protected area, Eco-sensitive zone of the protected area or under the wildlife corridor. All the cases where the MoRTH had applied for diversion of forest land under FCA, 1980, the State Government had submitted the Geologist's report and such undertaking has been provided by MoRTH. The diversion of forest land under the Forest (Conservation) Act, 1980, stipulates compensatory afforestation on double the area diverted on degraded forest land to compensate the loss of forest cover due to diversion of forest land. It is informed that the plantation activities have a long gestation period before the significant increase through satellite imageries can be recorded.</p> <p>36. <i>Original Application No. 99/2018</i> was first heard on 31.05.2018 and Judgment was reserved. Thereafter, <i>Original Application No. 431/2018</i> was directed to be heard along with <i>Original Application No. 99/2018</i>. On 09.08.2018, the matter was taken up for re-hearing as the three Members, who had heard the matter earlier and</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>reserved the order, felt that the matter needs to be heard by the present Bench which comprised of four Members. However, in view of order of the Hon'ble Supreme Court dated 27.08.2018 in <i>Civil Appeal No(s). 8518-8520/2018, Citizen for Green Doon & Ors. Vs. Union of India & Ors.</i>, the matter was directed to be heard by three Members by order dated 28.08.2018.</p> <p>37. On 04.09.2018, the original bench of three Members again expressed the opinion that the matter requires re-hearing by larger bench. Accordingly, we have heard learned Counsel for the parties.</p> <p>38. In <i>Original Application No. 99/2018</i>, learned counsel for the applicant highlighted the need for EIA by treating all the fragmented projects as one. It was submitted that the project will have adverse impact on the environment and ecology. Due procedure for cutting of trees has not been followed. In the light of judgment of Hon'ble Supreme Court in <i>Alaknand Hydro Power Co. Ltd. Vs. Anuj Joshi & ors.</i>, <i>Civil Appeal No. 6736/2013 (2014) 1 SCC 769</i>, it is submitted that report of Disaster Management Authority was required, in view of disaster which took place in June 2013. Reference was made to reports on the subject, already referred to above. Reference is also made to written submissions to the effect that road construction will result in the degradation of the environment and lead to landslides. Like Hydro-Electric Power Project, this project may impact biodiversity of the river basin. Reliance is also placed on the judgment of this Tribunal dated 26.08.2013 in <i>Original Application No. 151/2013</i></p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p><i>Legal Aid Committee (NGT Bar Association) Vs. Union of India & Ors.</i>, observing that Master plan for the State of Uttarakhand, particularly with regard to eco sensitive areas, is required considering the impact of constructions. It is also submitted that there may be damage to the river as well as to geological environment. Cumulative impact on developmental activities was required to be examined particularly when no Environmental Clearance has been taken. In Forest Clearances, procedural lapses have been seen which are in violation of the law.</p> <p>39. Issue for consideration is whether there is violation of law, causing or having potential for damage to the environment by the project in question and whether any safeguards are required to be incorporated for protection of environment even if there is no per se illegality.</p> <p>40. Resume of pleadings, noticed above, shows that concerns raised by the applicants are in the back drop of earthquakes, land-slides, flash-floods and cloud-bursts in the area. Any unscientific development, forest degradation, construction of roads, construction of dams and other such activities certainly enhance vulnerability of the area to natural hazards if carried out in an unsustainable manner. Protection of forest cover is also undoubtedly significant for the preservation of ecology. At the same time, once such concerns are duly addressed, projects for safe and convenient journey in hilly terrain will certainly be in public interest.</p> <p>41. We, thus, propose to first consider the question whether there is violation of law in undertaking the project</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>without mandatory in terms of the said provisions, Environmental Impact Assessment (EIA) in terms of the Environment (Protection) Act, 1986 read with statutory notifications, particularly Notification dated 14.09.2006. Further question is whether even if such assessment is not mandatory in terms of said provisions, is such assessment necessary under the environment jurisprudence principles? On such assessment, what are the safeguards which may render the project sustainable and make it consistent with the principle of inter-generational equity.</p> <p>42. As regards the question whether EIA is mandatorily required, it may be noted that EIA has been recognised as the most valuable, inter-disciplinary and objective decision-making tool with respect to alternate routes for development, process technologies and project sites. It is considered an ideal anticipatory mechanism allowing measures that ensure environmental compatibility in our quest for socio-economic development. In fact, the whole concept is based on jurisprudential principle of 'Sustainable Development' and 'Precautionary Principle' though statutory basis has been provided to the same for effective enforcement.</p> <p>43. The projects covered by the Notification dated 14.09.2006 cannot be undertaken without environmental clearance. This may invite prosecution and punishment under section 15 of the Environment (Protection) Act, 1986 or other provisions. Mere fact that a project is not covered by the said notification is not conclusive to negate</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>such requirement if impact on environment justifies it.</p> <p>One cannot ignore that impact assessment in all cases of potential impact is by itself a part of concept of sustainable development, which in turn is part of Article 21. Thus, even where notification does not require EIA, such requirement may apply by virtue of Article 21, if there is potential of impact on environment. In such a case the Court or Tribunal concerned with enforcement of principle of sustainable development can require this to be done, as mandatory condition, for continuing a project. In our jurisprudence, the protection of environment is fully ingrained. It is not only a part of Directive Principles under Article 48A and Fundamental Duties under Article 51A(g), but also inherent in the Fundamental Right under Article 21 of the Constitution. Principles of Sustainable Development, Precautionary Principle, and Intergenerational Equity are not only part of our jurisprudence, in terms of case law but also incorporated in Section 20 of National Green Tribunal Act, 2010. Needs for development have to be fulfilled consistent with these principles. There can be no development at the cost of environment¹.</p> <p>44. Matters falling under category 'A' under notification dated 14.09.2006 issued by the Central Government under section 3 of the Environment (Protection) Act, 1986 require prior Environmental Clearance from the</p>
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¹ Intellectuals Forum Vs. State of A.P - (2006) 3 SCC 549, Bombay Dyeing & Mfg. Co. Ltd. - (2006) 3 SCC 434, M.C. Mehta v. Union of India - (2004) 12 SCC 118, Tirupur Dyeing Factory Owners Assn. v. Noyyal River Ayacutdar Protection Assn - (2009) 9 SCC 737, T.N. Godavarman Thirumulpad v. Union of India - (2000) 10 SCC 606, Narmada Bachao Andolan v. Union of India - (2000) 10 SCC 664¹ Vellore Citizens Welfare Forum Vs. Union of India and Ors. (1996) 56 SCC 647, N.D. Juyal and Ors. Vs. Union of India and Ors. (2004) 9 SCC 362, Lafarge Umiam Mining (P) Ltd., Vs. Union of India and Ors. (2011) 7 SCC 338, and G. Sundarrajan Vs. Union of India and Ors. (2013) 6 SCC 620.

	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>Regulatory Authority of the Central Government. Item 7 (f) is “Highways”. The requirement applies to all new National Highways and expansion greater than 30 Kms. and more with additional right of way greater than 20 Meters, involving land acquisition and passing through more than one State. The said notification has been amended on 22nd August, 2013 as noted in para 30 above in the light of recommendations of a Committee.</p> <p>45. The exemption applies to National highways upto 100 kms involving additional right of way upto 40 meters on existing alignment and upto 60 meters on re-alignments or by-passes. There is no challenge to the said notification. We have also noted the stand of the respondents that no parcel of sanctioned work is longer than 100 kms or otherwise outside the notification dated 22.08.2013, which governs the requirement of EIA as per the Statutory Scheme.</p> <p>46. We do not see any reason to reject the stand that the bypasses/realignments have been considered as stand alone projects in the program/part of the road projects. There are 16 bypasses/realignments in the 889 Km <i>Chardham</i> Program bypassing the existing National Highways alignments. Taking into account each bypass/realignment individually, the length of each project individually is less than 100 Kms. and the additional land acquisition involved is less than 40 Mtrs. Accordingly, these projects did not require EIA Approval/Environment Clearance in terms of the Notification of MoEF&CC dated 14.09.2006 and amended</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>on 22.08.2013 vide S.O. 2559 (E).</p> <p>47. We now consider the question whether EIA is necessary <i>de-hors</i> the statutory scheme. On behalf of the applicants, our attention has been drawn to a document prepared by the Ministry of Environment, Forest and Climate Change, in association with G.B. Pant National Institute of Himalayan Environment and Sustainable Development, “Governance for Sustaining Himalayan Ecosystem (Guidelines and Best Practices)”, stating as follows:-</p> <p>“For construction of any road in the Himalayan region of more than 5 km (including extension/widening of existing roads) length where the same may not be tarred roads and environmental impact assessment is otherwise not required, environmental impact assessment should be carried out in accordance with the instructions to be issued for this purpose by the State Governments.”</p> <p>48. Our attention has been also drawn to Uttarakhand Disaster Report, 2013 to the effect that road construction leads to excavation of steep and unstable slopes, felling of trees, dumping of debris down the slope into drainage system of the area. Road construction is very damaging in hilly terrain, particularly in sensitive zones like Himalaya. Scientists have estimated the erosion from road sites to be ten times more than agricultural fields, 200 times more than grass land and 2000 times moiré than forest cover. One kilometer length of road constructed on hilly terrain</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>requires removal of approximately 60,000 cubic meter of debris from the site. Unfortunately, in Uttarakhand most of the roads are constructed without giving much consideration to such important issues, resulting into increased instability and thus, vulnerability to landslides.</p> <p>49. In view of above, we are satisfied that even <i>de-hors</i> the statutory requirement of EIA, such assessment must be carried out for continuing the project. For doing so, steps already taken need not be undone. Further project must be carried out only after carrying out the EIA study and taking safeguards, as per directions in this order.</p> <p>50. Even learned Counsel of the applicants fairly stated that they are not averse to the project which is contemplated to serve the public need for safe and convenient travel to important religious shrines, provided there are adequate safety measures adopted and precaution taken in the process of constructions of roads. The statutory law for protection of trees and wildlife must be strictly observed.</p> <p>51. In <i>Federation of Rainbow Warriors, Margao vs. Union of India and Ors.</i>² decided on 21st August, 2018, this Tribunal held that though the project may comply with the statutory mandate, yet safeguards for environment protection found essential can be directed to be incorporated. While protection and preservation of environment in the present day is crucial, at the same time, there is dire need of harmonization between development and protection of environment. The idea is to</p>
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² Appeal No. 05 of 2018

	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>strike the right balance between the conservation of limited environmental resources and development intended in the larger interest of the public.</p> <p>52. We are faced with a similar situation in the present matter. We are conscious of the need to safeguard the ecologically fragile Himalayan region. At the same time, the safety of thousands of pilgrims traveling to the <i>Chardham</i> each year dawns upon us. To use the expression of Justice V.R. Krishna Iyer, “To be trigger happy in shooting at sight every suspect law is judicial legicide”.³ For in this light, and in view of the larger public interest in the construction of highway and also nation’s security, we are inclined to let the project continue but with requisite safeguards.</p> <p>53. We are of the view that all environmental concerns can be addressed by having a responsible and independent oversight mechanism which may monitor the environmental safeguards during the execution of this project.</p> <p>54. Accordingly, we direct constitution of the following Oversight Committee:-</p> <ol style="list-style-type: none"> 1. Justice U.C. Dhyani, Former Judge, Uttarakhand High Court, Chairman Public Service Commission, Dehradun. 2. Representative of Wadia Institute of Himalayan and Geology. 3. Representative of National Institute of Disaster
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³ Bhim Singh v. U.O.I (1981) 1 SCC 166

	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>Management.</p> <p>4. Representative of Central Soil Conservation Research Institute with expertise in Natural disasters, landslides, etc.</p> <p>5. Representative of G.B. Pant Institute of Himalayan Environment.</p> <p>6. Representative of Forest Research Institute, Dehradun.</p> <p>7. Secretary of Environment and Forest Department, Uttarakhand, Dehradun to be Member Secretary/convener/coordinator of the Committee.</p> <p>8. Concerned District Magistrates of the Districts concerned will act as co-coordinator and for arranging visits and meetings at local level.</p> <p>55. The Committee may be constituted within three weeks from today by the Ministry of Environment, Forest and Climate Change, Government of India.</p> <p>56. The Committee shall oversee the implementation of Environment Management Plan (EMP) of the project which shall be got prepared by project or programme proponent by undertaking a Rapid Environment Impact Assessment (REIA) from an accredited agency of MoEF&CC by taking into account the aspects of ambient air quality, stabilization of slopes, identification of landslide hotspots, muck dumping aspects and construction of green roads etc.</p> <p>The Committee shall while undertaking monitoring of Environment Management Plan (EMP) shall especially focus on stability of freshly cut slopes, slope stabilization</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>measures undertaken by way of construction of augmented Breast Walls, Retaining Structures, including RCC structures adherence to the principle of half-cut half-fill in road construction hilly terrain, quantum of muck/debris generated, the sites from where it has been generated, its designated place of dumping, the structural stability of dumping site, need for additional dumping sites, need for augmenting structural stability of existing sites, plan for its eco restoration, budgetary provision for same, post-closure care and maintenance of dumping area by way of extensive mass balance studies, etc.</p> <p>57. We further note that structural stability of muck dumping sites is not upto the mark and we feel that with so much of muck/debris load there is every possibility of some caving in during excessive landslides and other natural disasters. Therefore, stabilizing such sites with Gabion wall/Crate wires at places where load is less seems to be adequate but in high load bearing sites, augmented RCC structures followed by strengthening by way of grids through engineering and bio-engineering methods would stabilize such sites. State Government to also notify Debris Dumping Policy which includes details of environmental restoration and restitution. The Committee shall also look into disaster management and disaster preparedness measures.</p> <p>58. The above Committee will have liberty to take technical inputs from any other agencies, if necessary. The Committee can also consider any suggestions or concerns by any public person. The Committee may have</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>its own Website to receive and disseminate information.</p> <p>59. The Committee shall also monitor and supervise the execution of project taking into account the following concerns:</p> <ul style="list-style-type: none"> (a) Effective stabilization of hill slopes. (b) Auditing of muck disposed site and its restoration. (c) Preparedness for disasters and its management. (d) Compensatory afforestation – The programme proponent considering the ecological fragility to also examine the possibility to increase the number of plants to be planted for every tree felled than the stipulated requirement and also examine the possibility of transplanting and relocating the trees instead of felling them. It is also advised that programme proponent shall also endeavor to plant tall trees and have elaborate post care and maintenance programme including soil conservation works and measures for contingent situations. (e) Formulation of Disaster Management Plan and Muck Disposal Plan. <p>60. The task of the Committee will not end at Rapid EIA/EMP Study as directed above and issuing directions for ushering in sustainable tenets in the project. The Committee will continue monitoring throughout the execution of the project. During this phase, the Committee has liberty to take technical inputs from any other agency to the extent found necessary.</p> <p>61. In the event the civic authorities plan to expand the</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>realm of tourism in the area, the Carrying Capacity Assessment shall be done mandatorily by the State Government which shall serve as a tool for further sustainable tourism development in the area.</p> <p>62. The Chief Secretary, Uttarakhand, Uttarakhand Administration and the Project Proponent shall devise the mechanism whereby they shall plan to provide pedestrian path-ways for devotees who undertake to do <i>Padyatra</i> to religious places viz Yamnotri, Gangotri, Kedarnath and Badrinath. Such pedestrian path-ways may be provided both towards hill side and valley side wherever such possibilities exists.</p> <p>63. The Chief Secretary, Uttarakhand; Uttarakhand Administration and the Project Proponent to ensure that no road side restaurants, <i>Dhabas</i> and road side amenities etc. come up along the expanded road width except at designated places and if need be, the Project Proponent acquire such land parcels along the road width so that no such road side <i>Dhabas</i> come up at the later stage. The Administration to also ensure that at appropriate locations, additional parking facilities and wayside amenities are provided for tourists.</p> <p>64. The Chief Secretary, Uttarakhand and Uttarakhand Administration shall ensure that all the encroachments along entire road of length the “<i>Chardham Mahamarg Vikas Pariyojna</i>” (<i>Chardham Project</i>) are removed and report in this regard be submitted to Tribunal.</p> <p>65. The Chief Secretary, Uttarakhand and Uttarakhand Administration shall devise a Policy whereby old diesel</p>
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	<p>Item Nos. 06 & 07</p> <p>September 26, 2018</p> <p>R & PS</p>	<p>vehicles which are 10 years old and petrol vehicles which are 15 years old are prohibited to ply along the entire road length of “<i>Chardham Mahamarg Vikas Pariyojna</i>” (<i>Chardham Project</i>).</p> <p>66. The Chief Secretary, Uttarakhand and the Uttarakhand Administration shall devise a policy by way of introduction of E-vehicles and CNG buses in a time bound manner. The Public Sector Undertaking which are such authorities for providing CNG, shall devise ways and means for putting up the re-filling stations along the entire length of “<i>Chardham Mahamarg Vikas Pariyojna</i>” (<i>Chardham Project</i>).</p> <p>67. The Chief Secretary, Uttarakhand and Uttarakhand Administration shall undertake appropriate landscaping and develop bio-diversity parks, arboretum etc. on the muck dumping sites so restored and also along the vacant Government land as available along the length of “<i>Chardham Mahamarg Vikas Pariyojna</i>” (<i>Chardham Project</i>). The Forest Department of Uttarakhand shall also submit an action plan for undertaking afforestation and soil conservation works on the degraded waste land and forest land along the entire length of “<i>Chardham Mahamarg Vikas Pariyojna</i>” (<i>Chardham Project</i>) and submit an action plan in this regard.</p> <p>68. We now sum up our conclusion as follows:-</p> <p>(i) Statutory EIA in terms of notification dated 14.09.2006 under the Environment Protection Act, 1986 is not required in view of exemption of notification dated 22.08.2013.</p>
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(ii) *De-hors* the notification dated 14th September, 2006, rapid EIA and preparation of Environmental Management Plan is necessary which has detailed elaboration on slope stabilization, muck disposal and muck management compensatory afforestation, disaster management, etc. is still necessary having regard to the nature and location of the project and potential impact on environment.

(iii) Such Rapid EIA must take into account all aspects of air quality, stabilisation of slopes, identification of landslide hotspots, construction of green roads, muck disposal arrangements, compulsory afforestation, including the requirement of transplanting trees instead of felling trees wherever possible, disaster management and preparedness measures.

(iv) The Committee will also continue to function till the completion of the project.

(v) Even after completion of the project, any further expansion of tourism or undertaking of any further projects on the road sides will require carrying out of Carrying Capacity Assessment by an expert body.

69. In view of above, the applications are disposed of.

70. The Report of the Committee may be furnished to this Tribunal by e-mail at filing.ngt@gmail.com.

71. A copy of this order may be sent to all the concerned by e-mail for compliance.

72. List for consideration of the Report as and when received.

....., CP
(Adarsh Kumar Goel)

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