

**MATRIX ON THE COMMENTS FORWARDED BY MS. PRERNA BINDRA, SHRI KISHOR RITHE,
AND DR DIVYABHANUSINH CAHVDA ON THE MINUTES OF THE 23rd MEETING OF THE
STANDING COMMITTEE OF NBWL**

S.No	Minutes approved by the Hon'ble Chairperson	Comments received from Ms.Pruna Bindra, Shri Kishore Rithe and Dr Divyabhanusinh Chavda
1.	<p>Non-official members specifically Ms. Prerna Bindra, Dr Madhusudan, Dr Kishore Rithe and Dr Divyabhanusinh Chavda raised a number of issues including the one relating to recording of the minutes of the meetings of the SC. According to many of them, the procedure being followed by the SC for recording of minutes was quite ad-hoc, and they, therefore, wanted the procedure being followed in Forest Advisory Committee (FAC) meetings to be followed by the SC also in respect of its meetings. They also complained that the copies of the detailed proposals as received from the States were not being made available to them on time. Member Secretary submitted that it would be incorrect to say that no proper procedure was being followed in recording the minutes of the meetings of the SC. He pointed out that even at present procedure as laid down in the Notification issued by the Ministry of Environment and Forests (MoEF) vide F. No. 6-1/2006 WL-I dated 14th September 2010 was being followed in letter and spirit for recording of minutes. However, he stated that there was always scope for improving the procedure further based on relevant suggestions of the non-official members. He assured that the copies of the detailed proposals received from the State Governments/CWLWs would be made available to the</p>	<p>Non-official members raised a number of issues as follows Ms. Prerna Bindra expressed her concern over the manner in which the proposals were being submitted for consideration of the Standing Committee of NBWL. The information provided in the fact sheet for the proposals was often incomplete, misleading and even false, instances of such agendas were provided in writing to the Chairperson & MEF Mrs Jayanthi Natarajan for her consideration.</p> <p>Ms Prerna Bindra also cited the examples of misinformation like proposal for of 1,750 MW Demwe Lower Hydro Electric Project in Lohit District, Arunachal Pradesh where the closest distance from WLS is only 50 metres but the proposal mentions 8.5 km. The document also mentioned Forest Clearance granted whereas FAC has sought the opinion of NBWL as per letter dated March 2011. The NEAA has passed Interim Order directing MoEF to ask the Standing Committee-NBWL to examine downstream impact on river dolphins and on IBAs. This was not communicated to the Standing Committee. In another example, with regards to Kaimur WLS the letter from regional MoEF office stating violation of FCA was not placed before the Standing Committee-NBWL, as was the fact that the matter was before CEC. She said that the some of the maps provided were incomplete and not legible. For example, Proposal for taking up recce survey and investigation in the Galathea National Park by BRO for construction of road from Shastri Nagar to Indira Point, Andaman & Nicobar Islands (6-67-2011-</p>

<p>non-official members at their place of residence 15 days in advance of the meeting of the SC.</p> <p>The non-official members opined that the extant rules and procedures prescribed for the Standing Committee of NBWL, were inadequate, and, therefore, required a review with a view to making suitable amendments therein to make the functioning of the Committee more transparent and effective.</p> <p>Chairperson assured to further look into the issue personally, and to explore the possible ways and means for effecting improvement in the functioning of the Committee including the procedure of recording of minutes of the SC meetings based on the suggestions of the non-official members.</p>	<p>WL), Proposal to exploit 12,40,000 TPA high grid magnesite deposit at Chipprian Hills and setting up 300 TPA dead burnt magnesia plant at Panthal near Trikuta Wildlife Sanctuary(6-93/2011-WL). In some cases the projects themselves were not marked in the map viz. Proposal for construction of Baglinga M.I. irrigation Project at Taluka Chikaldhara, Amravati (6-111/2010 WL-I).</p> <p>It was further said that even the <i>information on legal status of the project is absent</i>, i.e., whether a proposal was 'sub-judice' or not were not indicated. Some of the projects were submitted to SC-NBWL without information whether they are cleared by the respective State Board of Wildlife. She cited the examples viz. Submission for diversion 19.503 hectares of forestland from Rajaji National Park (File No 6-1/2003, WL-I), Proposal for construction of Baglinga M.I. irrigation Project at Taluka Chikaldhara, Amravati (6-111/2010 WL-I), Proposal for diversion of 26.86 hectares of forestland from Askot Musk Deer Wildlife Sanctuary, (6-88/2011, WL).</p> <p>Ms Prerna Bindra added that Standing Committee was a statutory body and the decisions legally binding, it was crucial that the decision making process be an informed one.</p> <p>Mr.Kishor Rithe: Mr. Rithe explained that the SC has to function according to expectations of judicial institutions like Hon'ble Supreme Court, High Court and National Green Tribunal. As the projects (inside Protected Areas) put before the Standing Committee of the NBWL for consideration due to provisions of Wildlife Protection Act, 1972 as amended in 2006 and projects in 10 km periphery of Protected Areas as per the Hon'ble Supreme Court order dated 14.02.2000 and 25.11.2005, we need to know the legal status of each project as per the provisions</p>
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		<p>of Environment Protection Act 1986, Wildlife Protection Act 1972 and Forest Conservation Act 1980. However, if the Standing Committee discusses the proposals without having the above mentioned information, and other relevant information, its decision can be easily challenged in the court of law. Out of 12 projects to be discussed in the meeting today ie on October 14th, 2011, in 10 projects the status whether the projects are sub-judice, is not known. So the Member Secretary of the Standing Committee should consider this aspect seriously and improve the submission of these proposals before Standing Committee.</p> <p>Also, it was pointed out that Chief Wildlife Warden's opinion justifying recommendation (by SBWL) for rejection or clearance for the project is very important for assessing the impacts of the project on wildlife species and Pas by the Standing Committee (NBWL).</p> <p>In most cases, descriptive remarks from CWLW are absent.</p> <p>A letter written by members of the National Board of Wildlife to the Hon'ble Chairperson on these issues dated September 25th, 2011 was submitted (this may kindly be minuted, the letter is annexed for your convenience). The Hon'ble Chairperson acknowledged receipt and said she would read in detail and give it due consideration.</p> <p>Most members pointed out that there were several proposals that had been rejected several times by the Standing Committee but were still being placed for reconsideration before the Standing Committee. It was pointed out that in the 22nd meeting the then that (minutes from the April 25th meeting) "The Chairman desired that the proposals which had earlier been rejected by the Standing Committee/Court should not be included in</p>
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		<p>the agenda, unless any additional information or new facts had been provided by the State Government in respect of the proposal.”</p> <p>Hon’ble Chairperson said that she was aware of the concerns of the non-official members and that she would give this serious consideration. She agreed with the member’s that the mandate of the committee was conservation of India’s natural heritage. She said she would hold a separate meeting of the Standing Committee to consider and discuss the conservation matters and concerns of the non-official members held in first half of December 2011.</p>
2	<p>...Hon’ble Minister for Environment and Forests and Chairperson of the SC, NBWL in her address to the committee welcomed all the members and other officials to the meeting of the Standing Committee of NBWL. She stated that she accorded highest importance to the Standing Committee as each and every decision of this apex Committee had a bearing and consequence on the status of wildlife conservation and the development process of the country, and, therefore every single decision should be taken in good faith and in the best interest of the country. She also expressed that her determination and commitment to conservation of natural resources was absolute and complete, and expected all the participants to give her strength to remain steadfast on her resolve by rendering expert and impartial advice. Hon’ble Chairperson reiterated her belief in the saying that “<i>the Planet Earth is not inherited from our ancestors, but we have borrowed it from our next generation</i>”, and, therefore, were duty-bound to take all steps to</p>	<p>Dr Divyabhanusinh Chavda: Please insert the following after first para on page 2:</p> <p>The Hon’ble Chairperson requested every member to introduce her/himself. Dr. Divyabhanusinh Chavda introduced himself and said that our remit was protection of flora and fauna whereas, we had become a clearing house of development projects in protected areas. Other non official members expressed similar concerns.</p> <p>The Hon’ble Chairperson assured that she would address these concerns.</p>

	<p>protect the natural wealth of our country for the next generation. She expressed her confidence in the commitment and performance of the members to protect the rich flora and fauna of the country. She also invited the members of the Committee to meet and discuss with her separately any pressing issue relating to wildlife conservation....</p>	
<p>3.</p>	<p>Agenda item No.1: Confirmation of minutes of 22nd meeting of the Standing Committee of NBWL held on 25th April 2011.</p> <p>The members while agreeing to the Member-Secretary for incorporation of their suggestions to the minutes also desired that their concerns regarding the “rules and procedure” for conduct of Standing Committee of NBWL also be placed on record.</p> <p>The chairperson said that the minutes would be confirmed only in the next meeting after receiving any additional comments from the members.</p> <p>Hon’ble Chairperson thereafter, decided that all the suggestions made by the non-official members be incorporated in the minutes appropriately and thereafter be circulated to the members. The Committee decided to confirm the minutes of 22nd meeting of Standing Committee of NBWL accordingly. In compliance, the comments are incorporated as under:</p> <p>Comments had been received from Dr M. K. Ranjitsinh, Ms Perna Bindra and Mr Kishore Rithe. The committee decided that the additional comments received from</p>	<p>Ms. Perna Bindra pointed out that comments/objections raised in the meeting are not recorded meticulously and precisely. Also, since the proposals are rushed through leaving little time for discussion, due to inadequate time, it is requested that comments and objections raised during the meeting by all members, and those sent immediately thereafter should be officially recorded.</p>

	<p>the members should also be appropriately incorporated in the minutes of the 22nd SC Meeting. In compliance, these comments are incorporated as under: Following shall be added and read in conjunction with the already recorded minutes: Ms. Purna Bindra pointed out that comments/objections raised in the meeting are not recorded meticulously and precisely. Also, since the proposals are rushed through leaving little time for discussion, due to inadequate time, it is requested that comments and objections raised during the meeting by all members, and those sent immediately thereafter should be officially recorded.</p>	
4.	<p>Agenda Item No. 3: Items proposed by the members of the Standing Committee:</p> <p>Agenda items and suggestions proposed by non-official members could not be discussed due to paucity of time. However, the Chairperson assured that a separate and exclusive meeting shall be organized in December 2011 to discuss and deliberate only upon the agenda items and issues raised by the non-official members.</p>	<p>Dr Divyabhanusinh Chavda: Please redraft Agenda item 3 on page 6 as under:</p> <p>The Standing Committee was informed that the agenda items proposed by the non-official members would not be taken up at this meeting because of the paucity of time.</p> <p>Dr. Divyabhanusinh Chavda stated he wanted to bring to the Hon'ble Chairperson's attention certain things that had happened in the past and said that the concerns of the non-official members had not received the kind of attention that was required. A special meeting was to be helped to address these, but the meeting had not taken place. We had for all practical purposes become a clearing house for development projects in protected areas. Surely, this was not the intent of the Wildlife Protection Act. Its intention is that we protect the flora and fauna whereas, the development proposals lead only to their destruction.</p> <p>The Hon'ble Chairperson appreciated Dr.</p>

		Divyabhanusinh Chavda's concerns and said that she would hold a meeting in the first half of December to take up the non-official members' agenda items.
5.	<p>2.[4(B)(12): Proposal for denotification from Radhanagari Sanctuary for Savarde minor irrigation project, Maharashtra.</p> <p><i>"I record my dissent on this clearance given the harmful ecological impacts, which were also discussed in the meeting. It is understood that the area to be submerged is under very good forest cover which will be destroyed irreplaceably."</i></p>	<p>Mr. Kishor Rithe strongly objected on the proposal and submitted that it would affect the Critical Wildlife Habitat process and resettlement work in the sanctuary as per the Government of Maharashtra's affidavit in the Hon'ble High court, Nagpur Bench. A cumulative impact study, of all major and minor irrigation projects in and around Radhanagri Wildlife Sanctuary, should be conducted first to know the total ecological impact of all such schemes on ecology of the region and biodiversity therein. Mr Rithe <i>also wrote a letter to then Chairman dated 5th February 2011 expressing these concerns and requested to reject the project.</i></p>
6.	<p>4.1 (2): Diversion of 79.474 ha of forest land in Kutch Desert Wildlife Sanctuary and Wild Ass Sanctuary for Construction of Gaduli to Hajjpir-Odma-Khavda-Kunriya-Dholavira-Maovana-Gadakbet-Santalpur Road (S.H. Road) Gujarat</p> <p><i>Following shall be added and read in conjunction with the already recorded minutes:</i></p> <p><i>"The non-official members notably Ms Prerna Bindra, Dr Ranjitsinh and Dr Divyabhanusinh did not favour the construction of the proposed road as according to them, the construction of road would have adverse impact on Kutch Desert Wildlife Sanctuary and Wild Ass Sanctuary. They also stated that the road was in close proximity to the only wild ass habitat and also the Flamingo City, the only breeding site of Greater Flamingo in the country. The availability of an alternate alignment was also suggested."</i></p>	<p>Ms. Prerna Bindra: The non-official members notably Ms Prerna Bindra, Dr Ranjitsinh and Dr Divyabhanusinh did not favour the construction of the proposed road. They said that the construction of road would have adverse impact on Kutch Desert Wildlife Sanctuary and Wild Ass Sanctuary. They also stated that the road was in close proximity to the only wild ass habitat and also to the Flamingo City, the only known breeding site of Greater Flamingo in the country.</p>

7.	<p>5.15 --Maintenance and Repair of roads passing through National Parks/Sanctuaries in Madhya Pradesh.</p> <p><i>Following general conditions shall be added and read in conjunction with the 14 conditions already incorporated in the minutes:</i></p> <p><i>“(a) No widening of existing roads shall be permitted, and the status of finishing of the surface of the repaired road(s) shall remain same as that of the original road(s), i.e., untarred roads shall remain untarred after repairs, and only originally tarred roads shall be repaired and tarred.”</i></p>	<p>Ms. Prema Bindra: (I have attached a letter to Ms Prakriti Srivastava dated October 19th, 2011, which may please minuted). Divyabhanusinh endorsed the letter on October 23rd, 2011. The contents of the letter are given below, and maybe minuted. The minutes of the 22nd meeting of the Standing Committee of the NBWL regarding a series of roads in various tiger reserves, national parks and sanctuaries in Madhya Pradesh (from 5.2 to 5.4) are written thus:</p> <p><i>“The Government of Madhya Pradesh had forwarded 13 proposals pertaining to construction/repair of roads passing through various sanctuaries. Standing Committee while according ‘in principle’ approval for construction/up gradation of above mentioned 13 roads desired that Chief Wildlife Warden would submit details separately about (i) roads that are to be newly constructed, (ii) roads that are to be upgraded, (iii) roads that are to be repaired, and (iv) roads that are already tarred or otherwise. A final view on individual proposal would be taken on receipt of the information by the Chairman, Standing Committee in consultation with Members of the Committee.”</i></p> <p>However, the letter Vide No/DM/1918 dated 2/5/2011, from TR Sharma, APCCF (wildlife) states: “in principle approval was given for the up gradation of 12 roads passing through Protected Area of Madhya Pradesh. It may kindly be recalled, and also pointed out in my mail—and previous letter—dated October 5, 2011 that in principle approval was not accorded. Information was sought on maps, the kind of work for which permission was required and it was decided that no gravel road in PAs to be converted to black top, though existing roads, can be repaired as long as <i>they remain in the same form-with no widening, new construction or diversion.</i> The rest-especially, of Construction /</p>
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		<p>widening was to be deferred till information on the same came in, and a final view on individual proposals would be taken on receipt of the information.”</p> <p>The information provided by the state details that the work proposed is upgradation from WBM/Murram roads to concrete cements and tarred roads—which, it may be pointed out, is against a Supreme Court order.</p>
	<p>AGENDA ITEM NO. 4: PROPOSALS LOCATED WITHIN, AND OUTSIDE IN THE ECO-SENSITIVE ZONE OF NATIONAL PARKS AND WILDLIFE SANCTUARIES</p>	
8.	<p>4.1 (1): Proposal involving erection of 2m x 2m structure within Tillanchang Sanctuary, Andaman and Nicobar Islands for temporary use of test firing of dummy missile from submarine by Indian Navy</p> <p><i>Member Secretary informed the Committee that this proposal was for the temporary use of forest land in Tillanchang Island by the Indian Navy for missile testing and involved erection of temporary structure of 2m x 2m as target for testing accuracy of missiles fired from submarines. The test firing is proposed to be carried out once every year for a duration of 7 to 10 days.</i></p> <p><i>Dr Asad Rahmani opined that Tillanchang Sanctuary was the home for the Nicobar Megapode, and test firing was likely to have an impact on the life cycle of the Megapode. He said Megapodes are ground birds found only in the Andaman and Nicobar Islands, population whereof had dramatically declined in recent</i></p>	<p>Ms Purna Bindra was pointed out that this area is the only refuge of the endangered and endemic Nicobar Megapode which has declined dramatically in recent years. Tillanchang Island is of deep historical and cultural significance to the indigenous communities from Trinket and Kamorta Island. The use of armaments and the debris that will accumulate from the test firing will be detrimental to the persistence of wildlife and the continuance of customary practices of communities.</p>

years. He added that it was a Schedule I species under the Wild Life Protection Act. Although very little was known about the ecology of the bird, some studies conducted by the Wildlife Institute of India and the SACON, Coimbatore, he added, indicated that Megapodes come back to the same place for nesting. He also mentioned that even the dummy firing, as proposed by the Navy, would have an impact on the bird. The time and season of firing would be the critical elements in assessing the impact of such firing on the species.

The Chief Wildlife Warden, Andaman and Nicobar Islands explained that the Indian Navy had explored the option of test firing on many other islands of the area, and had found the proposed area as the most suitable from the point of view of the least disturbance to the wildlife and human habitation. He reiterated the commitment of the Navy to undertake the test firing for only 7 to 10 days in a year.

Dr Divyabhanusinh Chavda agreeing with Dr Rahmani favoured that no decision on allowing the test firing should be taken in absence of a study to assess its impact on the bird. He opined that even the sound of firing could disturb the bird.

The Committee, after hearing the members and the Chief Wildlife Warden decided to have a site inspection by Dr Asad Rahmani and the Chief Wildlife Warden, Andaman and Nicobar Islands, and requested them to submit a joint report for consideration of the Committee in its next meeting.

9.	<p>4.1 (2): Proposal for taking up reconnaissance survey and investigation in the Galathea National Park by Border Roads Organization for construction of road from Shastri Nagar to Indira Point, Andaman and Nicobar Islands</p> <p><i>Member Secretary informed the Committee that the proposal was for carrying out a reconnaissance survey for construction of the proposed road and an area of 5.25 ha of forest land of the National Park was required for the purpose. The earlier road was damaged and partly submerged during the 2004 Tsunami, and was an important artery connecting the communities. The proposed road would also improve the management of the Galathea National Park because at present there was no easy access to the park due to absence of road connectivity.</i></p> <p><i>It was pointed out by the members that this was the nesting site of the leatherback turtle and that the construction and new alignment of the road may prove to be detrimental to the turtle.</i></p> <p><i>The Committee, after discussion, decided that the joint team of Dr Asad Rahamani and the Chief Wildlife Warden, Andaman and Nicobar Islands tasked to carry out site inspection of Tillanchang Sanctuary would also visit and inspect the proposed site in Galathea National Park, and submit a report for consideration of the Committee in its next meeting.</i></p>	<p>It was pointed out that the Galathea National Park also marks the beginning of the Tribal Protected Area of the Greater Nicobarese. The Galathea National Park is globally recognised as a key nesting site for the endangered Leatherback Sea turtle. The earlier road used to pass along the former coastline, and was subject to continual erosion and landslips. The alignment of this road will need careful selection given the regeneration of this ravaged coastline post tsunami, and thus allowing stability rather than inducing erosion or such damage that can ensue from construction</p>
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<p>10.</p>	<p>4.1 (3): Proposal for installation of coastal surveillance RADAR and power supply source in Narcondam Island Sanctuary, Andaman and Nicobar Islands</p> <p><i>Member Secretary informed the Committee that the proposal for installation of static RADAR with its power supply source, and other ancillary establishment required diversion of 0.6736 ha of forest land of Narcondam Island Sanctuary. He added that the proposal had been moved by the Indian Coast Guard to monitor the movement of vessels in the sea waters along the Indian Coast. He also mentioned that Narcondam Island was situated at a strategically important location offering opportunity for keeping a close watch on the poachers and intruders frequenting the open waters in the area. Installation of RADAR by the Indian Coast Guard besides securing the open waters around the Island, would also benefit the wildlife by keeping a check on activities of poachers. He also informed that recently, the MoEF had submitted a report to the Planning Commission suggesting, inter-alia, measures for control of poaching in the sea waters of Andaman and Nicobar Islands. The recommendations of the report also included strengthening anti-poaching measures using surveillance with the help of the Indian Coast Guard.</i></p> <p><i>Dr Madhusudan, Nature Conservation Foundation, supported by Dr Rahmani opined that Narcondam Island was the only home for the critically endangered Narcondam Hornbill and, therefore,</i></p>	<p>Ms Prerna Bindra pointed out that the Narcondum Island is an extremely small island of about 6.28 sq. km. and is susceptible to environment disturbances. It is known for, and is the only habitat for population of Narcodum Hornbills that are endemic to the island.</p> <p>She stressed that the A&N islands were ecologically fragile and home to rare and endemic species found nowhere else in the world and also home to unique cultures and practices for indigenous people. Therefore the impacts of any proposed project/activity need to be very carefully assessed.</p>
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	<p><i>any activity that had an impact on this species should be viewed with utmost caution. He suggested that the Indian Coast Guard could harmonize their requirement of installing the RADAR within the existing establishment of the police outpost on the Island.</i></p> <p><i>Ms. Prerna Bindra pointed out that the Andaman and Nicobar Islands were ecologically fragile and home to rare and endemic species found nowhere else in the world and was also home to unique cultures and practices of the local indigenous people.</i></p> <p><i>The Chief Wildlife Warden informed that only a very small area of 0.67 ha of land was required for the purpose and that the RADAR system could also be effectively used in the anti-poaching activities as the site was frequented by foreign poachers for illegal fishing including sea cucumbers.</i></p> <p><i>The Committee after detailed discussions decided that the same joint committee of Dr Asad Rahamani and the Chief Wildlife Warden, Andaman and Nicobar Islands would carry out a site inspection of Narcondam Island Sanctuary also, and submit a report for consideration of the Committee in its next meeting."</i></p>	
11.	4.1 (5): Proposal for development of skywalk for promotion of wildlife tourism at Bhalleydhunga involving 2.10 ha of Maenam Wildlife Sanctuary in South Sikkim	Ms Prerna Bindra said that the Red Panda, the State Animal of Sikkim is found in the area and this project would have an impact on the species, and other rare wildlife of this biodiversity hotspot. Though the area asked for diversion from the sanctuary has been reduced to some extent as compared

<p><i>Member Secretary briefed about the proposal, and stated that it was essentially an ecotourism proposal with participation of the local community and was to be implemented by the Tourism and Civil Aviation Department of the State. The proposal had been recommended by the SBWL and the CWLW with certain conditions. One of the unique conditions suggested by the CWLW, Sikkim was apportioning of revenue from the proposed venture in the ratio of 70:30 for the local community and for management and development of Maenam Wildlife Sanctuary, respectively. PCCF/Secretary Forest Department and CWLW gave further minute details of the project proposal. Member Secretary further informed the Committee that the proposal was for development of skywalk and ropeway for promotion of wildlife ecotourism at Bhalleydhunga in Maenam Wildlife Sanctuary, South Sikkim and involved 2.10 ha of forest land of Maenam Wildlife Sanctuary. The proposal involved construction of an environment friendly glass bottom cantilever skywalk beyond the edge of Bhalleydhunga steep face with rain shelter and public conveniences. An area of 0.90 ha of land in the sanctuary would be required for this purpose. Further, an eco-friendly ropeway had also been proposed for access to Bhalleydhunga peak from the base area called Mahadeo Than, requiring an area of 1.20 ha of sanctuary land for its construction. He also informed the Committee that the proposal was considered by the Standing Committee of NBWL in its meeting held on 13th October</i></p>	<p>to the last meeting the disturbance caused by such an activity will go far beyond the actual physical area of the project. Such a project opposes the ethos of a PA. Also, it has been brought to the notice of this member that permission for allied activities has been sought-and granted under FCA in the Yang Yang Reserve forest which is adjacent to the sanctuary and is within the 10 km radius of the sanctuary. The details of this were requested, and the point also raised why this was not before the Standing Committee as it falls within 10 km of the sanctuary. She said that this was a multimillion project and that wildlife needed protected, pristine habitat and not money, which was seconded by most nonofficial members.</p>
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2010. Since the Committee did not find merit in the proposal from the point of view of wildlife conservation and also since the proposal was not site specific, it was rejected. Subsequently, the PCCF cum Secretary had resubmitted this revised proposal for development of skywalk for promotion of wildlife ecotourism at Bhalleydhunga, Maenam Wildlife Sanctuary, South Sikkim for reconsideration of the same by the Standing Committee of NBWL as the project promoted the concept of ecotourism benefiting the local communities.

Shri Kishore Rithe, Satpuda Foundation mentioned that this project was not a site specific activity and, therefore, had been rejected by the Standing Committee earlier. He added that the activity did not have any ecological benefits and would adversely impact the fragile ecosystem of the region. He argued that there were good as well as bad examples of developmental projects inside Protected Areas, and a transparent consideration and dispensation was required to ensure that the project would not have any adverse ecological impact, and that the revenue generated would benefit the local people.

Ms. Prerna Bindra mentioned that the Red Panda, the State Animal of Sikkim was found in the area and this project could have an impact on the species, and other rare wildlife of this biodiversity hotspot. The impact of the skywalk on the sanctuary would be much larger than the actual sanctuary area of 2.10 ha proposed for diversion as this project involves

tourism inside the PA. She also mentioned that understandably, permission had already been accorded by the FAC for allied activities quite close to the sanctuary area. She said that this was a multimillion project and that wildlife needed protected habitat and not money.

Dr Madhusudan, Nature Conservation Foundation opined that the ecological costs cannot be compensated by revenue generation.

Dr A.J.T. Johnsingh, Member, SC intimated that he had seen the project site, and would recommend the same as according to him the implementation and operationalization of the project was likely to have no adverse impact on the wildlife habitat of the Maenam Sanctuary. He was of the opinion that if the area was small and if there was very little impact on the wildlife, the Committee could consider recommending the project.

The Principal Chief Conservator of Forests and Secretary (Forests), Government of Sikkim, informed that the earlier proposal had envisaged diversion of an area of 7.2 ha which had been brought down to 2.10 ha in the revised project. The project was planned in a degraded strip of fringe area of the sanctuary having least impact on the wildlife therein.

The Chief Wildlife Warden, Sikkim informed the Committee that 81% of area of Sikkim was under forest cover, and 37% of which was under Protected Area coverage,

	<p><i>highest in the country. The project would not have any restrictions on the movement of wildlife and was intended to provide a clear and unobstructed view of the Kangchendzonga peak to the visitors. As far as the allied activities including cafeteria outside the sanctuary were concerned, these were existing on the private land. He also mentioned that even a University was functioning in the vicinity of the sanctuary since long.</i></p> <p><i>The Addl. Resident Commissioner, Sikkim House, New Delhi added that only tourism, tea and cardamom were the major revenue earners for Sikkim. He said that Sikkim received about 3,000 foreign visitors every year, and this project would be good revenue generator for the State. He further stated that 30% of the revenue generated from the project would be set aside for wildlife conservation activities, and remaining 70% would be provided to the local communities in the area.</i></p> <p><i>After detailed discussions, the Committee decided that Shri Kishore Rithe would conduct a site inspection and submit a report for consideration of the Committee in its next meeting."</i></p>	
12.	<p>4.1 (6): Proposal for repair of Rawatbhata-Jawahar Nagar Road (periphery road) with 20 MM PMC and seal coat under PMGSY (for 24 Km)</p> <p><i>Member Secretary informed the Committee that the proposal was for repair of the Rawatbhata-Jawahar Nagar Road and an area of</i></p>	<p>Shri Kishore Rithe, Satpuda Foundation mentioned that he along with Dr T. R. Shankar Raman of Nature Conservation Foundation had carried out site inspection of PMGSY Roads in Madhya Pradesh and had found that most of the roads were for expansion of existing roads. Similar proposals for a lot of roads within PAs are coming up before the Standing Committee (NBWL) from some of the states. Chief</p>

<p><i>15.60 ha of the Bhainsroadgarh Sanctuary was involved in this proposal. It was also informed that the road was badly damaged and required urgent repairing. He also informed that the proposal had been recommended by the SBWL and the CWLW, and that it did not entail any tree felling.</i></p> <p><i>The Chief Wildlife Warden, Rajasthan informed that the road was an existing one, and no additional diversion of sanctuary land was proposed. He also mentioned that the villagers of this area had created several kutchha paths through the PA which was disturbing the wildlife and its habitat, and that proposed repair of the road would reduce the disturbance from villages as the katcha paths crisscrossing the PA presently, would be closed after the repairs to the existing road are completed.</i></p> <p><i>Dr Divyabhanusinh Chavda mentioned that no black topping of road should be allowed if it was a gravel road. He also insisted that the materials for repairing the road should be brought from outside the sanctuary.</i></p> <p><i>Dr Madhusudan, Nature Conservation Foundation was of the opinion that only indigenous and ecologically suitable plantations should be encouraged alongside the road to avoid negative impact on wildlife.</i></p> <p><i>Shri Kishore Rithe, Satpuda Foundation mentioned that he along with Dr T. R. Shankar Raman of Nature Conservation Foundation</i></p>	<p>Wildlife Wardens need to explain to the project proponents the legal provisions of Wildlife Protection Act and orders of Hon'ble Supreme Court. They must give clear guidance on impact of roads on wildlife and protected habitats, and that wildlife do not read cement or concrete roads. The existing roads could be properly maintained.</p>
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had carried out site inspection of PMGSY Roads in Madhya Pradesh and had found that most of the roads were for expansion of existing roads. The Chief Wildlife Wardens should give clear guidance to the concerned authorities that while already existing roads could be maintained, no further expansion or black topping of roads across the PAs would be encouraged.

After discussions, the Committee decided to recommend the proposal subject to the conditions laid down by the Chief Wildlife Warden, Rajasthan, which are reproduced below:

- i. No night camping for the construction workers shall be allowed in the forest area during the construction of road, and the construction activity will be permitted only during day time.*
- ii. No construction material should be stored within the sanctuary boundary.*
- iii. No construction material, like stone, sand, etc shall be procured from the sanctuary or forest area.*
- iv. To check the speed of the vehicles, speed breakers will be constructed at an interval of 500 mt in sanctuary area by the user agency.*
- v. The underpass shall be constructed by user agency at an interval of 1 km along the road.*
- vi. The user agency will put and maintain signboards on both sides of the road mentioning that the road is passing through sanctuary.*

	<p>vii. <i>Plantations in three rows on both sides along the road shall be established and maintained by the user agency.</i></p> <p>viii. <i>No tree felling will be allowed.</i></p> <p>ix. <i>The user agency will not create barrow pit in sanctuary area for the construction of road.</i></p> <p>x. <i>User agency will clear all the debris left after construction activity.</i></p>	
13.	<p>4.1 (7): Proposal for covering of diversion channel from Kushalipura Nallah to Mansarovar Dam (length 2,010 m) from RD 210m to 2,220 m</p> <p><i>Member Secretary informed the Committee that the proposal was for construction of a diversion channel from Kushalipura Nallah to Mansarovar Dam so as to provide irrigation facilities to farmers by improving water storage capacity in Mansarovar Dam by diverting the water from Kushalipura Nallah presently flowing to Chambal River, to the Mansarovar Dam. He also intimated that the major portion of the channel was proposed to be covered, and that the proposal had been recommended by the SBWL, the CWLW with certain conditions, and the NTCA.</i></p> <p><i>Dr Divyabhanusinh Chavda mentioned that this proposal was considered earlier and rejected by the Standing Committee of NBWL after a site visit. He also mentioned that the Government had gone ahead with cutting of trees without the prior approval of the Standing Committee of NBWL which amounted to violation of law, and needed to be viewed very seriously.</i></p>	<p>Ms Purna Bindra mentioned that this channel would sever, and finish the corridor between the Ranthambhore National Park and Sawai Mansingh Sanctuary as mentioned in the site inspection report of the NTCA Board Member, Shri P. K. Sen. The same site report also states that while five or six villages will benefit from the canal, three villages on the southern side of the road will be left without water as new canal will draw water from the mouth of Kosali Darra and will be taken to Mansarovar Dam, and also as dumped material has totally choked the nallas. The report mentions that the beneficiary villagers told that it was not known to them whether the canal will draw enough water to fill up Mansarovar Dam to irrigate agricultural fields of those villages.</p> <p>She added that the Sawai Mansingh Sanctuary was of late seeing the signs of a breeding tigress after a long period but with the linkages broken, the tigers had a doubtful future. She said that there should be accountability for by-passing the NBWL in the matter, as mandated by law.</p>

Ms. Prerna Bindra mentioned that this channel would cut and sever the corridor between the Ranthambhore National Park and Sawai Mansingh Sanctuary as mentioned in the site inspection report of the NTCA Board Member, Shri P. K. Sen. She added that the Sawai Mansingh Sanctuary was of late seeing the signs of a breeding tigress after a long period. She said that the State Government stopped cutting of trees, and the construction only after intervention of the NBWL and the NTCA Members. She said that the reasons for by-passing the NBWL needed to be probed.

The Chief Wildlife Warden, Rajasthan stated that the proposal had received 'in principle' approval under the Forest (Conservation) Act, 1980 on 14.11.2005, and the final approval under the Act on 24.09.2008. The work had started in April 2011 and 598 trees out of 892 trees were felled and approx. 1.2 Km of channel had been dug by the Irrigation Department. The area fell within the Critical Tiger Habitat and was also a Reserved Forest. The existing Kushalipura Nallah flows through the Sawai Mansingh Sanctuary on the right side of the highway. He also informed that as soon as the information regarding cutting of trees was received by the Wildlife wing of the State Forest Department, the work was immediately stopped. Thereafter, approval of SBWL was obtained, and subsequently the proposal had now been submitted for consideration of the Standing Committee of NBWL. He also

informed that the proposed channel would be constructed as per following specifications:

- i. Chainage 60 m to 210 m: All along this part of the channel, there is a hill on one side and a road on the other. The user agency shall construct a masonry retaining wall having a height of 6` along the length of the channel towards the roadside.*
- ii. Chainage 210 m to 2,220 m: The diversion channel will be constructed underground and covered by an arch shape. The channel shall be covered by a layer of soil with a minimum depth of 60 cm to present a natural look. Moderately tapering slopes will be maintained on both side of the arch cover between 210 m to 870 m to facilitate easy movement of wild animals.*
- iii.Chainage 2,220 m to 2,700 m: The diversion channel will be an open channel with a side slope of 1:1.*

Member Secretary, NTCA informed that the area falls under the core area of Ranthambhore Critical Tiger Habitat. During 2004 and 2005, the Standing Committee of NBWL had rejected the proposal after a site inspection in which he was also one of the members of the inspecting team. He also mentioned that there were 4 critical areas of the 'Core Critical Tiger Habitat of Ranthambhore Tiger Reserve' which included the Ranthambhore National Park, Sawai Mansingh Sanctuary, Mansinghdeo Sanctuary

	<p><i>and the Keladevi Sanctuary. The proposed canal is designed all along the existing road. In 2008, the Ministry's Regional Office had granted 'in principle' approval for the project and the trees were cut. He said that although no approval was sought from the NTCA, there would be a lot of resentment from the local people if the project was stopped now.</i></p> <p><i>After discussion, the Hon'ble Chairperson said that it was needed to be seen as to why the work was given a start, before the proposal was brought for consideration of the Standing Committee of NBWL. She said she understood local sentiments and that it was of extreme importance, but at the same time it was not proper to present the members with a fait accompli.</i></p> <p><i>Based on the aforesaid discussions, the Committee decided that a detailed report on this matter should be sought from the Regional Office of the Ministry, and the same shall be placed before the Standing Committee for consideration in its next meeting.</i></p>	
14.	4.1 (9): Proposal for diversion of 0.204 ha of forest land from Gautala Atranghat Sanctuary, Maharashtra for laying water pipeline.	Ms. Prerna Bindra opined that when proposals were being forwarded for consideration of Standing Committee of NBWL, alternatives explored and possible should be indicated as was mandated.
15.	4.2(1): Proposal for diversion of 477.03 ha of forest land in Kondapuram RF of Paloncha Division for Kondapuram underground coal mine by Singareni Collieries Company Limited.	Ms Prerna Bindra pointed out that the website of Kinnerasani Wildlife Sanctuary records the presence of tigers. Also, on 24 th March 2009 a tiger skin case was reported from the nearby area of Kothagudem. The information received at the time indicated that the tiger was killed near Gangaram village of Warangal district. Give that the

		<p>amount of land to be diverted was considerable at 477.03 hectares it was necessary to first ascertain the corridor connectivity for tigers, and also to place the FAC findings before the Standing Committee of NBWL.</p>
<p>16.</p>	<p>4.2(2): Proposal for construction of 1,750 MW Demwe Lower Hydro Electric Project in Lohit District, Arunachal Pradesh located outside the boundaries of Kamlang Wildlife Sanctuary.</p> <p><i>Member Secretary informed the Committee that the 1,750 MW Demwe Lower Hydroelectric Project was planned to be executed in joint sector by M/s Demwe and the Government of Arunachal Pradesh. The Ministry of Power had scheduled the project for commissioning in the 12th Five Year Plan. The project would contribute green energy of about 6,322 million units (MU) per annum. After 40 years, the project would be handed over to the State Government. He further informed that this was a run-of-the-river project with daily impounding of water, and was ready to be implemented with all major statutory clearances in place. He also mentioned that the project involves felling of a large number of trees (43,000) but outside the Kamlang Wildlife Sanctuary. Environment Clearance had also been granted, and FAC also had cleared the project. He intimated that the proposal also stood recommended by the SBWL and the CWLW, Arunachal Pradesh with certain conditions.</i></p> <p><i>Dr Madhusudan, Nature Conservation Foundation,</i></p>	<p>Ms Prerna Bindra said that the distance from the site was misrepresented in the proposal. Though mentioned at a projected aerial distance of 8.5 Km from the Kamlang Sanctuary, this is only the distance from the dam and not the distance from the closest component of the project—the reservoir, which is only 50 meters from the sanctuary (as mentioned in the Forest Clearance application by the state government). She said that unlike what the state said, the development of the state surely was not dependent on this project alone, and that there were about 147 hydropower projects coming up in Arunachal Pradesh of which 13 were in the Lohit river basin. “It was, therefore, essential that a cumulative impact assessment study was conducted.”</p> <p>She also pointed out that the National Environmental Appellate Authority (NEAA) passed an interim order dated May 3, 2010 whereby it directed the MoEF to ask the NBWL Standing Committee to examine downstream impacts on river dolphins and Important Bird Areas, which was not mentioned in the proposal put before the committee.</p> <p>She also pointed out that it is erroneously stated that Forest Clearance has been granted for the proposed project. The FAC has only sought the opinion of the NBWL Standing Committee as per the letter dated March 2011. This proposal received environmental clearance during the tenure of the then MEF Shri Jairam Ramesh, wrote to the PM, and Ms Bindra quoted from the letter, “The 1750 MW Lohit Demwe hydel project on the Lohit River will have serious downstream impacts till Dibrugarh in Assam</p>

<p><i>mentioned that the impounding area was just adjoining the Kamlang Sanctuary, and birds were regularly seen in this area. He said that while impacts of the project will be downstream and much beyond the physical area of the project, the main impact would be dependent on the manner in which the release of impounded water in the river would be regulated. The water flows from Tibet and travels about 144 Km to reach Arunachal Pradesh. Due to flooding in monsoon period, there would not be any problem of water level fluctuation, but during the remaining 8 months, daily variations in the river flow fluctuating from as much as 35 cumecs during peak hours to 17-29 cumecs for the remaining hours everyday could have adverse impact on the riverine vegetation and fauna. Thus fishing, riverine agriculture, river transportation, and livestock rearing might get adversely impacted by the project.</i></p> <p><i>He also mentioned that the Ministry of Water Resources had carried out an EIA bringing out these huge flow variations as a result of the project execution. Additionally, he said, it would be desirable to have a detailed EIA on the impacts of the project downstream of the river.</i></p> <p><i>Dr Asad Rahmani pointed out the proposed dam would have significant negative impact on at least two important wildlife habitats: the 'chapories' of the Lohit River and the Dibru-Saikhowa National Park. He added that both of these were designated as Important Bird Areas, and also</i></p>	<p>and should not be given forest clearance, although environment clearance has already been given for the project..."</p> <p>Mr Kishor Rithe stressed that the matter was not limited to this one project, but given the huge number of projects i.e. over ten in the Lohit Basin itself, and 147 hydro-electric projects in the state, a cumulative impact study was necessary. He said the downstream impacts must be considered. He further said that the Hon'ble chairperson should personally call a separate meeting to discuss the project on this given the serious repercussions.</p>
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supported populations of some 'critically endangered' bird species, including the Bengal Florican, which was a Schedule I species under the WL Protection Act with about a surviving population of less than 500.

Ms. Prerna Bindra pointed out that the development of the State, as indicated by the State, did not rest on this project alone, and that there were 147 hydropower projects coming up in Arunachal Pradesh with Lohit Basin having at least 9 of these, and 7 being on the Lohit River itself. It was, therefore, essential that a cumulative impact assessment study was conducted. She also said that the projected aerial distance of 8.5 Km from the Kamlang Sanctuary was the distance from the proposed dam site, and that the distance of the reservoir created as part of the project would be just 50 mt from the sanctuary. She also mentioned the downstream impact on the Dibru-Saikhowa National Park.

The Principal Chief Conservator of Forests and Forest Secretary, Arunachal Pradesh, mentioned that in the State of Arunachal Pradesh, 82% of land was under forest cover and 20.12% under the Protected Area. He informed that an impact assessment study had been done by the State Wildlife Department on the downstream stretch of the Lohit River. The study found that there would be very minimal impact on the wild fauna downstream. He also mentioned that there were several hydroelectric projects in pipeline for consideration in Arunachal Pradesh

but not all the projects were likely to get clearance. He also mentioned that the minimum flow available subsequent to the operationalization of the hydroelectric project would be maintained at 20% level even during the lean season. He also mentioned that before and after entering Assam, the river is met by several tributaries adding to the river flow, and the project under consideration was unlikely to have an adverse impact on the water flow in Assam. He said that the Chief Minister of Arunachal Pradesh had also expressed his concern for having this important project operationalized early.

Hon'ble Minister and the Chairperson appreciated the concern of both- the non-official members of the SC as also the State Government officers, and underlined the strategic importance of such projects not only for the development of the State, but also in the larger national interest to make optimum usage of the water resource with due environmental safeguards to stake, assert and institutionalize our national claim on the transnational water resources. However, to get a clear and balanced picture of the possible impact on the aquatic and other fauna downstream of Lohit River, the Committee decided to constitute a team of Dr Asad Rahmani, Director, BNHS, and Dr Pratap Singh, CCF Wildlife, Arunachal Pradesh Forest Department, and depute the same to the project area to make a firsthand assessment of the possible impacts on wildlife in the project area as well as the area

	<p><i>downstream of the project likely to be impacted due to implementation of the project proposal, and submit a report to the Committee on the feasibility of the proposal. The SC would consider the proposal in its next meeting and take a view in the matter based on the findings and recommendations contained in the joint report of Dr Asad Rahmani and Dr Pratap Singh.</i></p> <p><i>The Chairperson desired to convene a separate meeting to discuss this important project proposal after the submission of the report by the two member team possibly in November 2011."</i></p>	
17.	<p>4.2(3): Proposal for mining 1240000 TPA high grade Magnesite deposit at Chipprian Hills and setting up of 30000 TPA Dead burnt Magnesia Plant at Panthal near Trikuta Sanctuary in Jammu and Kashmir</p> <p><i>Member Secretary gave a brief about the proposal, and stated that the proposal was for mining of 1.24 million TPA of magnesite deposit located about 3 Km away from Trikuta Wildlife Sanctuary, and for setting up of 30,000 TPA dead burnt magnesia plant about 4.5 Km away from the same sanctuary. He informed that mining was to be confined to non-forest private land under the ownership of Mata Vaishno Devi Shrine Board. Mining of magnesite would take place in only 17.92 ha out of a total mine lease area of 485.30 ha of private land. He also informed that the proposal had been recommended by the SBWL, and the CWLW, Jammu and Kashmir with certain conditions,</i></p>	<p>Ms. Prerna Bindra mentioned that in context of the Trikuta sanctuary, this had come up for denotification in the last meeting of the SC-NBWL. In this context, as per the decision taken at the last meeting of the Standing Committee of NBWL, the denotification of Trikuta Sanctuary was to be permitted only after area exceeding or equaling the proposed denotified area is first notified as a Wildlife Sanctuary or National Park.</p>

and it did not involve any tree felling. The project proposal was to be implemented by J&K Mineral Development Corporation Limited, a State Government PSU. He also mentioned that the Standing Committee in its last meeting had recommended for denotification of the Trikuta Sanctuary with certain conditions.

Ms. Prerna Bindra mentioned that as per the decision of the Standing Committee of NBWL, the denotification of Trikuta Sanctuary was to be done simultaneously while notifying equal or twice the denotified area as Sanctuary and that State Government should abide by this decision.

The Chief Wildlife Warden, Jammu and Kashmir informed that the State Government had already started the process of identification of areas to be notified as new sanctuary as per suggestion of, and in consultation with Dr M. K. Ranjitsinh, Member, Standing Committee.

The committee after discussions recommended the proposal with the conditions proposed by the SBWL/CWLW, Jammu and Kashmir. The conditions proposed by the Chief Wildlife Warden, Jammu and Kashmir in respect of the proposal are reproduced below:

- i. 3% project cost of the proposed mining in Eco-sensitive zone of Trikuta Wildlife Sanctuary shall be kept for the conservation of the Buffer Zone. The total project cost of the proposed*

	<p><i>mining is Rs.165 Crores and 3% of the project cost comes out to be Rs.4.95 Crores which accordingly may be kept for the wildlife conservation in buffer zone.</i></p> <p><i>ii. The progressive mine closure plan will be prepared and implemented by the user agency under the supervision of the State Wildlife Department.</i></p> <p><i>iii. The user agency while implementing the magnesite mining project will abide by the stipulations under Environment Protection Act, 1986 prescribed by the Ministry of Environment and Forests."</i></p>	
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Proposal for Nandhaur Wildlife Sanctuary



Sep, 2011

Amit Verma, IFS
DFO Haldwani

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1 Introduction to TAL

The Tarai-Bhabar region in the Shiwaliks is one of the world's most magnificent landscapes with amazing faunal and floral biodiversity. This large landscape, which is also known as Terai Arc Landscape or TAL and is flanked by River Yamuna in India towards the west to River Bhagmati in Nepal towards east, stretching 16,000 kilometers and covering an area of about 50,000 sq. km. in its vast expanse.

TAL is a representative of Tarai-Duar Savana Eco-region, flanking the Himalayas in the southern slopes. It is a last remnant of the above eco-region. The whole TAL areas is now recognized as an important center of biodiversity, both at national and global level, which has manifested in declaration of as much as 13 protected areas in the whole landscape. In Uttarakhand, starting at the western limit is Rajaji National Park, home to both tigers and elephants followed by Corbett National in the middle and no protected area in the eastern Uttarakhand.

TAL has two physiographic regions – Tarai and Bhabhar. Tarai can be described as flat land with fine soil having very shallow water table while Bhabhar can be described as hilly area with coarse soils and boulders making it extremely porous, and hence having a deeper water table. The bhabhar area in the western limits is dominated by Sal (*Shorea robusta*) forests while Tarai has characteristic tall grasslands and swampy forests interspersed with Sal forests.

Among the mega-fauna found in this region, the most important ones are tigers, elephants, one-horned rhinoceros, leopards, sloth bears, swamp deer and numerous herbivores. The diverse fauna of this area enjoys equally diverse floral diversity. The diversity can be estimated considering the fact that the area has twenty seven types and sub-types of Champion and Seth classified forests. Apart from very diverse mega-fauna and plenty of charismatic species, this biodiversity rich area is also home to over 3 million people, half of which are below poverty line.

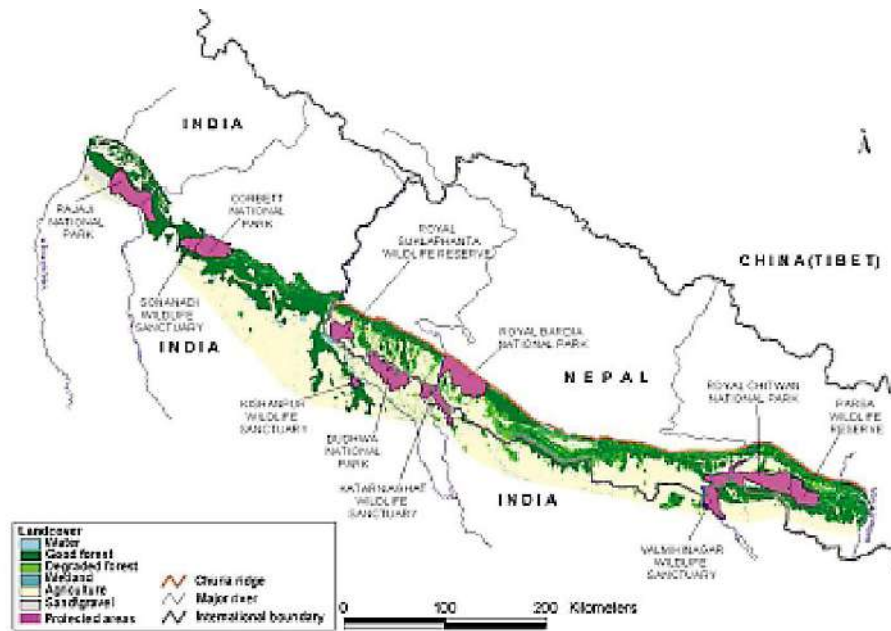


Figure 1: Map of Terai Arc Landscape (C) WWF India

The TAL in Uttarakhand can be roughly divided into three large landscapes as area between:

- 1) River Yamuna and River Ganga
- 2) River Ganga and River Gola
- 3) River Gola and River Sharda

The majority of Rajaji National Park lies in the first landscape mentioned above while part of Rajaji National Park and Corbett National Park lie in the second landscape. The Nandhaur landscape lies between River Gola and River Sharda.

1.1 Nandhaur landscape



Figure 2 Landhaur valley landscape on Google Earth map

The Nandhaur area is the sub-landscape flanked by River Gola in the west and River Sharda in the east and intersected by River Nandhaur which flows east to west in the northern area and then turn south to cut the landscape into two before disappearing in the tarai area. Though there are many rivers in this landscape, but Nandhaur is the most significant among them and also is the only one which is perennial with substantial water. It also has large swathes of undisturbed forests which have virtually no habitation. It is a critical link for the wildlife populations to move across the Tarai Arc Landscape and therefore makes Nandhaur landscape a strong candidate to be declared as a national park or wildlife sanctuary.

The majority of Nandhaur landscape lies in Haldwani Forest Division, whose five ranges namely Chakata, Nandhaur, Jaulasal, Danda and Sharda cover about 600 sq. km. area. In the north-eastern side, the Dogadi range of Champawat Forest Division forms an important part of this landscape and is flanked by the forests of of Kilpura, South Jaulasal and Ransali ranges of Tarai East Forest Division. The core of the Nandhaur Valley lies in parts of all ranges of Haldwani Forest Division and Dogadi range of Champawat Forest Division. The peripheral areas of the above ranges and the ranges of Tarai East Forest Division in the southern boundary provide an extension to the usage of forests by the animals and are very important for maintaining the connectivity of the forests with the other areas to the east and west.



Figure 3 MSS images showing the division boundary

The Nandhaur landscape houses a very healthy population of Asian elephants, leopards and sloth bears. It is also home to tigers but the population is low with a great potential of rebound. The total area of the Nandhaur landscape is around 850 sq. kms. which makes the area practically viable for sustaining a thriving population of variety of mega-fauna.

2 Aim

The creation of Nandhaur Wildlife Sanctuary is envisaged with the following aims:

- 1) To serve as a major habitat for tiger and support 35-40 tigers in the landscape
- 2) To keep the eastern and western corridors viable and functional
- 3) To improve the habitat by replacing teak with miscellaneous forests and eradication of weeds
- 4) To increase the protection of the area against poaching/habitat destruction by bringing it under the PA network
- 5) To provide better livelihood options for people dependent on the area through ecotourism, participation in management of the area, eco-development activities through increased funding and relocation to better areas where possible
- 6) To conserve the rivers for irrigated agriculture, which results in very significant economic benefit

3 Area Description

A brief description of the area has already been mentioned in the above sections. The distribution of the ranges which are included in the proposal are shown in the thematic map below.

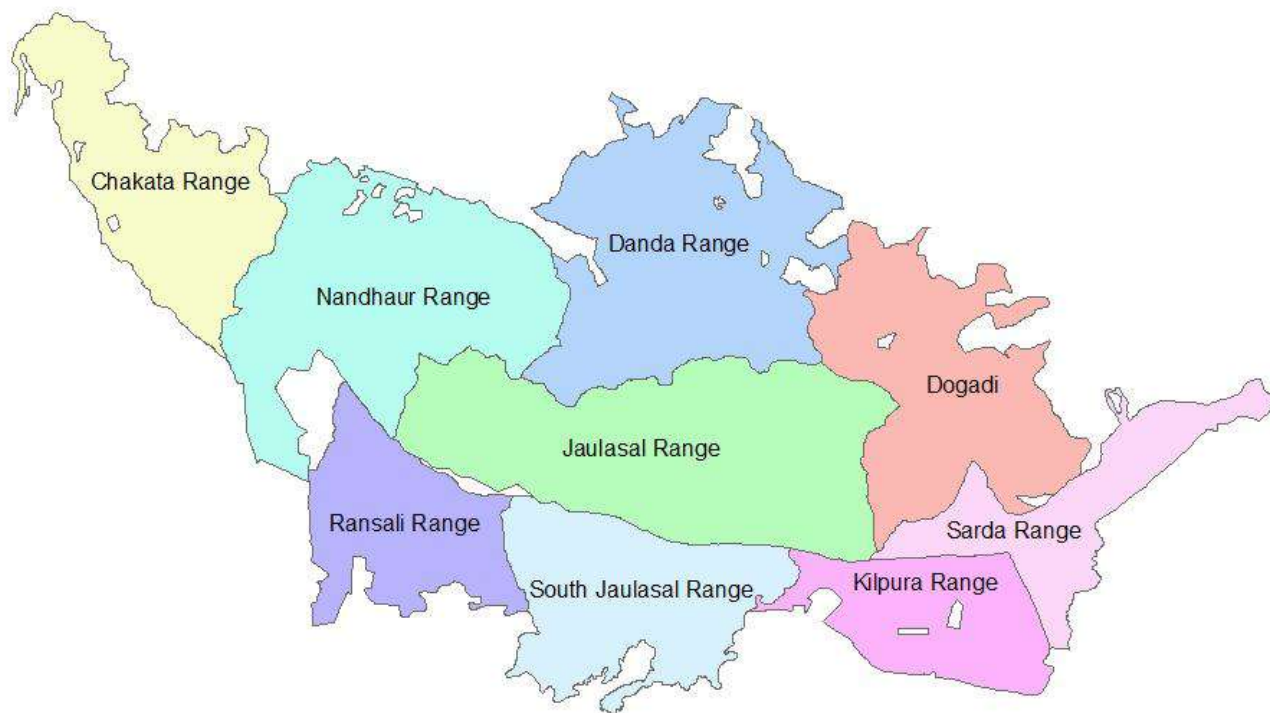


Figure 4 Ranges of core and buffer area of proposed Nandhaur Wildlife Sanctuary

The areas of the above ranges is given in the chart below.

S.No.	Division	Range Name	Area
1	Haldwani Forest Division	Chakata Range	84.62
2	Haldwani Forest Division	Danda Range	130.16
3	Haldwani Forest Division	Jaulasal Range	153.00
4	Haldwani Forest Division	Sarda Range	56.80
5	Haldwani Forest Division	Nandhaur Range	131.30
6	Champawat Forest Division	Dogadi Range	103.30
7	Tarai East Forest Division	Ransali Range	63.57
8	Tarai East Forest Division	Kulpura Range	56.16
9	Tarai East Forest Division	South Jaulasal Range	83.31
Total			862.23

(All areas are in sq. km., and are indicative only)

The area selection for the sanctuary has been done with the following considerations:

- 1) It is important to have a holistic approach and protect all parts of the landscape which are extensively used by mega-fauna
- 2) It should be possible to establish a viable breeding population of tigers
- 3) The areas near human habitations will be buffer area for the sanctuary

- 4) The areas having rights of villagers are not included in the sanctuary
- 5) The Nandhaur landscape is the only link between the eastern forests of TAL like Bramhadev and Sukhlaphata Wildlife Reserve of Nepal and western forests of Ramnagar and Tarai Central Forest Division. The area selection must be done with this fact in mind.
- 6) Natural boundaries are emphasized by selecting core and buffer areas along the existing beat/block boundaries

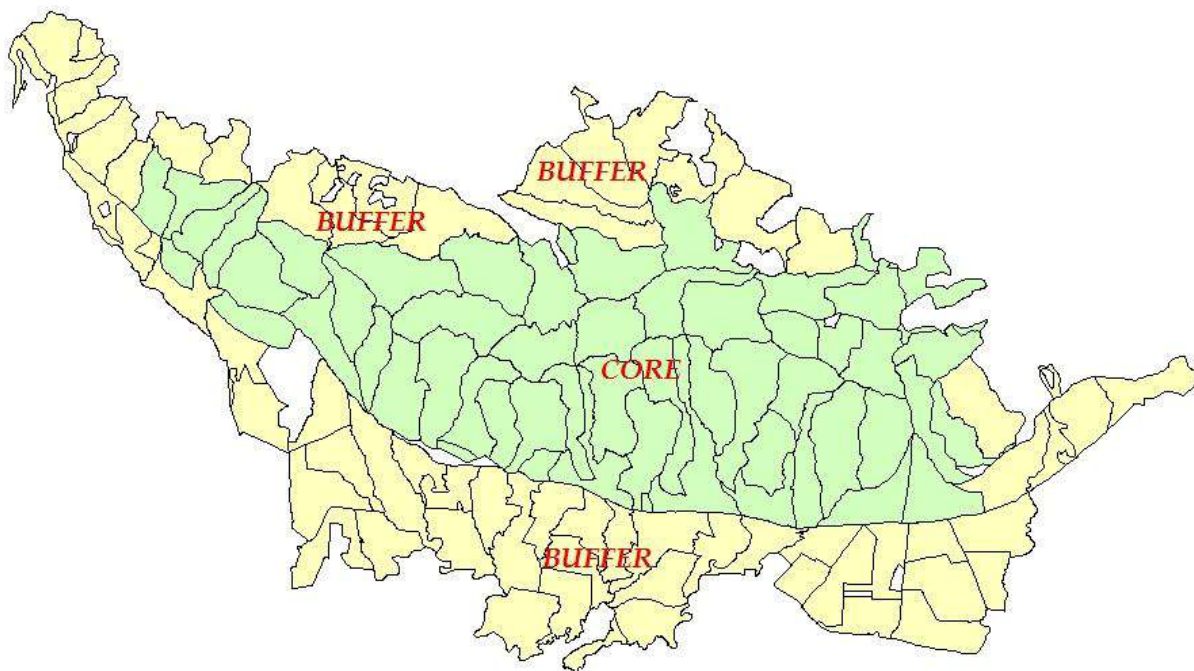


Figure 5: The core and buffer of the proposed Nandhaur Sanctuary

The distribution of beats between the core and buffer is as follows:

S.No.	Core/Buffer	No of Beats	Total Area
1.	Core	51	433.08
2.	Buffer	62	429.15
Total Area			862.23

The detailed list of names of beats in core/buffer is provided in appendix C.

The total area in the landscape is almost equally divided between the core and buffer area. The core area is proposed to be declared as a wildlife sanctuary while it is recommended that the buffer area may be declared as conservation reserve.

The area consists of mainly Shiwaliks and its importance has been recognized as an important wildlife habitat earlier by the state government by declaring it as Shiwalik Elephant Reserve. The notification for the above is given in Appendix E.

4 Biodiversity Description

The Nandhaur landscape is very rich area in terms of biodiversity. The area has more than 100 species of trees, 30 species of shrubs and 20 species of climbers and grasses. The area also has 27 different forest types and sub-types when classified according to the Champion and Seth forest classification. The area is predominately Sal forest covering about 70% of its area. Besides this, it also has Shisham, Bamboo, Teak, Chir Pine and riverine forest. Since the area lie in bhabhar belt, it is relatively dry and the composition of forest is affected by that. However, the Nandhaur river valley has water throughout the year and the best of the forests in the landscape are present along the river. The details of flora are given in appendix A.1.

The area is also home to about 25 species of mammals, 250 species of birds, 15 species of reptiles and 20 species of fishes. The major charismatic species of the area are Tiger, Leopard, Elephant, Sloth Bear, Mahaseer and Great Pied Hornbill. There have been constant threats to the area in terms of usage pressure, illegal poaching which can be curtailed by declaring the area as a wildlife sanctuary. The details of fauna are given in the appendix A.2

In an effort to document the biodiversity of the area, camera trapping was done in various ranges and some important species captured using camera traps have been listed below.



Photograph 1 The first Tiger photo captured in Nandhaur Valley through camera trapping



Photograph 2 Leopard



Photograph 3 Indian Palm Civet



Photograph 4 Wild boar feeding on Sambhar carcass



Photograph 5 Indian Porcupine

A systematic survey for finding out the biodiversity is usually done during the revision of working plan in the 10 year cycle. However, efforts are currently underway to do extensive camera trapping with the help of Wildlife Institute of India, Dehradun and World Wide Fund for Nature, India to find out the biodiversity of the area as well as conduct occupancy surveys for the large mammals using grid based methods, sign surveys and camera trapping. Besides this, elephant census is also being carried out by Line Transect (Indirect sighting) using Dung Decay Rate method under instructions from Chief Wildlife Warden, Uttarakhand.



Photograph 6 Sambhar



Photograph 7 Leopard



Photograph 8 Wild boar



Photograph 9 Sloth bear

5 Management of sanctuary

The management of the Nandhaur wildlife sanctuary will be done to achieve the aims stated in section 2. The overall guiding principle for the Director will be the management plan for the Nandhaur wildlife sanctuary, which will be made according to the Government of India guidelines. The preparation of the management plan will be participatory and the management plan will be written after taking suggestions of a committee comprising of local politicians, various stakeholders, prominent social & wildlife NGOs and scientists. The management plan shall also include the rehabilitation plan of any interested villages out of the remote area, major scientific work to be carried out in the area and protection & anti-poaching strategies.

The details of the staff required for the management of sanctuary is given in Appendix D. The day to day management of sanctuary will be done by Director of the sanctuary - a DCF level officer. The various Deputy Directors, entire field staff and office staff along with the special operation group will also be managed by the Director.

6 Economic benefits

There are tremendous economic benefits to the local people in declaring the area as a wildlife sanctuary. These are in the form of direct benefits like employment and jobs creation, indirect benefits like increased water availability, better value for real estate etc. The various economic benefits are discussed in subsequent sections.

6.1 Direct employment by forest department

The direct employment by the forest department will be for the following

a. Hiring for permanent posts

The forest department will hire in various positions like forest guard, battalion etc which will create many job opportunities for the youth. A core workforce of about 400 employees is suggested, whose details are given in the appendix D.

b. Hiring for temporary posts

The forest department will also be hiring for various temporary posts like security personnel, fire watchers, trackers, guides, room attendants, which will have maximum benefits for the local people.

c. Labour for carrying out departmental works

Once the area is declared as wildlife sanctuary, many civil works and other development activities like regular road maintenance, habitat improvement works, creating and maintenance of water holes, maintenance of chowkis and establishment of camps in remote areas etc. will be done in the area. The above will boost the labour opportunities for the upliftment of the poorest of the poor.

6.2 Indirect employment through ecotourism activities

a. Opportunities in guided tours

Once the area is declared as a wildlife sanctuary, the population rebound of mega-fauna inside the park will result in increased inflow of tourists. The tourists will visit the area on road or tracking paths. This will create plenty of employment opportunities for naturalists, trackers and vehicle drivers for taking the tourists inside the sanctuary.

It is expected that the area will become an important ecotourism destination as Haldwani area serves as a gateway to Kumaon and there is a huge inflow of tourists to Nainital and other hill destinations. Besides, with the increased awareness in public about nature, there is also a huge inflow of tourists to Corbett National Park which it is not able to cater to. A large number of such tourists can also be accommodated in the Nandhaur wildlife sanctuary ecotourism zone.

b. Local entrepreneurs

The local entrepreneurs will benefit immensely from the development of sanctuary and will have plenty of business opportunities to support the infrastructure required to cater to the tourists. This will include supply chain for food, contract works for construction of lodges, property business, photographers, local artifacts shops etc.

7 Settlement of rights

The people living near the forests have enjoyed certain rights over the forests. Great effort has been done while choosing the boundaries of the sanctuary that the existing rights are not affected by the declaration of the sanctuary. The final settlement will be done according to the procedure prescribed in sections 18-26(A) of Wildlife Protection Act, 1976 for declaration of sanctuary. It is strongly recommended that the using the section 26 – delegation of Collector’s powers, the state government may authorize the DFO, Haldwani to execute the provisions of section 18-25.

The buffer areas of the Nandhaur landscape may be also be declared as Conservation Reserve under section 36A-B of Wildlife Protection Act, 1976.

The details of the rights of the people in various ranges are given in the Appendix B. None of the rights given in the table will be curtailed as adequate buffer area has been given in the periphery of the sanctuary to give the prescribed quantity of wood and other traditional rights to the villagers.

Appendix A

Flora

The flora is listed below:

Trees

S.No.	Species	S.No.	Species
1	Cassia fistula , linn	61	Grewia elastica, Royala,Syn.G.
2	Ailanthus excelsa, Roxb	62	Woodfordia fruticosa, urz.
3	Mangifera indica, linn	63	Erythrina suberosa,Roxb.
4	Spondias pinnata, linn	64	Lagerstroemia parviflora, Roxb.
5	Emblca officinalis, gaertn Syn.	65	Azadirachta indica,A.Juss.
6	Wrightia tomentosa, Roem&Sch.	66	Stereospermum Suaveolens. D.C.
7	Tamarindus indica, Linn .	67	Bischoffia javanica,Blume.
8	Sterculia villosa, Roxb	68	Dalbergia lonceolaria, Linn.f.
9	Bauhinia variegata, Linn .	69	Ficus religiosa, Linn.
10	Flacourtia indica, Merr.	70	Kydia calycina,Linn.
11	Zizyphus xylopyra, Willd .	71	Broussonetia papyrifera, Vent.
12	Haplophragma adenophyllum (Wall)	72	Mitragyna parvifolia,Korth.
13	Myrica sapida] wall	73	Grewia hainesiana,Hole, Syn.

14	Buchanania lanzan, spreng Sym. Buchanania latifolia, Roxb.	74	Acacia nilotica,(Linn).Willd.
15	Gmelina arborea, Roxb	75	Terminalia bellerica, Roxb.
16	Albizzia odoratissima, Benth	76	Melia azedarach,Linn.
17	Acacia farnesiana, Willd.	77	Crataeva religiosa, Frost.
18	Careya arborea, Roxb	78	Ficus bengalensis, Linn.
19	Ficus cunia, buch &Ham.	79	Anogeissus latifolia, Wall.
20	Schleichera oleosa ,Lour. Syn	80	Pterocarpus marsupium, Roxb.
21	Holarrhena antidysenterica, Wall	81	Ficus scandens, Roxb.
22	Phoebe lanceolata, Nees.	82	Rhododendron arboreum,Smith.
23	Muchilus odoratissima, Nees	83	Qurcus leucotrichophora,
24	Terminalia chebula, Retz.	84	Aegle marmelos, Correa.
25	Holoptelea integrifolia Planch	85	Zizyphus mauratiana, limk.Syn.
26	Celtis tetrandra, Roxb	86	Zizyphus jujuba, Lamk.
27	Bauhinia malabarica, Roxb	87	Hymenodictyon excelsum, Wall.
28	Bridelia retusa, Spreng.	88	Semecarpus anacardium,(Linn) f.
29	Ficus infectoria, Roxb. Syn.	89	Grewia oppositifolia, Rodb.
30	Ficus rumphii Bl.	90	Madhuca indica,Gmel. Syn.
31	Sapium insigne, Benth.	91	Bassia latifolia Roxb.
32	Acacia catechu, Willd.	92	Zizyphus xylopyra, Willd.
33	Bauhinia purpurea, Linn.	93	Litsea glutinosa, C.B.Robinson
34	Trewia nudiflora Linn.	94	Randia dumetorum, Hook
35	Ficus racemosa, Linn. Var.	95	Eucalyptus hybrid L.Herth.
36	Boehmaria rugulosa, welld	96	Mallotus phillipensis, Mule Arg
37	Bridelia retusa	97	Cordia dichotoma, Forst.f.Sun.
38	Ehretia laevis, Roxb.	98	Cordia myxa, Linn.
39	Casearia elliptica, Willd.Syn.	99	Casearia graveolens, Dalz.
40	Wendlandia exserta, D.C.	100	Morus alba, Linn.
41	Diploknema butyracea (Roxb)	101	Dalbergia sissoo, Roxb.
42	Pinus roxburghi	102	Xylosma longifothum.Clos
43	Alstonia schelaris, Brown.	103	Shorea robusta, Gaerth,f.
44	Syzygium cumini, (Linn) &Keels	104	Ougeinia oojeinensis, Roxb.Syn.
45	Trema orientalis, Bl.	105	Tectona grandis, Linn.f.
46	Putranjiva roxburghii, Wall.	106	Albizzia chinensis, (Osbeck) Merr Syn.
47	Tamarix dioica, Roxb	107	Albizzia procera, Benth.
48	Lanea coromandelica, Hontt.	108	Moringa oleifera, Lamk.Syn.
49	Cinnamomum tamala, Nees.	109	Bombax ceiba, Linn . Syn.
50	Garuga pinnata, Roxb.	110	Terminalia alata, Heyne ex Reth.
51	Miliusa velutina, H.F. &Th.	111	Syn. Terminalia tomentosa, W. &A.
52	Butea monosperma	112	Nyctanthes arbortristis, Linn.

	(Lamk)Taub.Syn.		
53	Elaeodendron glaucum, Pers.	113	Adina cordifolia, (Roxb)Benth& Hook.F.
54	Sapium sebiferum, Roxb.		
55	Oroxylom indicum, (Linn) Vent.		
56	Cocculus laurifolius, D.C.		
57	Ficus roxburghii, Wall		
58	Toona ciliata, Roem . , Syn. Cedrela toona Roxb.		
59	Diospyros tomentosa, Roxb.		
60	Gardenia turgida, Roxb.		

Shrubs

S.No.	Species	S.No.	Species
1	Solanum verbascifolium, Linn.	21	Colebrookia oppositifolia, Smith.
2	Calotropis procera, R.Br.	22	Helicteres Isora, Linn.
3	Antidesma diandrum, Roth.	23	Cannabis sativa, Linn.
4	Helicteres isora, Linn.	24	Ardisia solonacea, (poir) Roxb.
5	Carissa spinarum, Linn.	25	Desmodium cephalotes, Wall.
6	Nerium indicum, Mill.	26	Clerodendrum viscosum, Vext.
7	Berberis spp. Linn.	27	Clerodendrum infortunatum, Gaertn.
8	Murraya koenigii, Spreng	28	Murraya paniculata, Linn Jack.
9	Cassia tora, Linn.	29	Mognania Spp. Roxb.
10	Crotalaria serica, Retz.	30	Lantana camara, Linn. Syn.
11	Achyranthes aspera, Linn.	31	Lantana aculeata, Linn.
12	Asparagus adscendens, Roxb.	32	Symplocos crataegoides, Buch-Ham.
13	Temarix dioica, Roxb.	33	Indigofera heterantha, WallSyn.
14	Phoenix acaulis, Buch, Ham.	34	Indigofera purpurascens, Roxb.
15	Callicarpa macrophylla Vahl	35	Asperagus racemosus, Willd.
16	Woodfordia fruticosa, Kurz	36	Vitex negundo, Linn.
17	Glycosmis pentaphylla, Corca.	37	Nyctanthes arnortrisatis, Linn
18	Grewia sapida, Roxb.	38	Rubus ellipricus, Smith
19	Adhatoda vasica, Nees Syn.		
20	Justicia adnatoda, Linn.		

Climbers

S.No.	Species	S.No.	Species
1	Caesalpinia sepiaria, Roxb.	18	Themeda arundinacea, Cav.
2	Acacia gageana, Craib.	19	Saccharum spontaneum, Linn.

3	Acacia senegal, Willd.	20	Heteropogon contortus, Linn.
4	Cuscuta reflexa, Roxb.	21	Narenga porphyrocoma, Hana.Bor
5	Smilax Spp. Linn.	22	Syn.Chrysopogon montanus
6	Tinospora cordifolia, Miers.	23	Vetiveria zizanioides, Nash.
7	Discorea Spp. Linn.	24	Erianthus ravennae Linn P.B. eaur
8	Millettia auriculata, Baker.	25	imperata cylindrica, Linn.
9	Jasminum pubescens, Willd.	26	Cynodon dactylon, Pers.
10	Cryptolepis buechanani, Roem.	27	Arundo donax, Linn.
11	Vitis repanda W. & A.	28	Phragmites karka (Retz) Trin.
12	Calamus tenuis, Roxb.	29	Typha elephantina, Roxb.
13	Hiptage bengalensis, Kuiz.	30	Eulaliopsis binata, Retz. E.C.Hubb.
14	Celastrus paniculata, Willd.	31	Cymbopogon martinii, stapf.
15	Bauhinia vahlii, W. & A.	32	Erianthus munja, (Roxb)
16	Butea Parviflora, Roxb.	33	Themeda arundinacea, Ridl.
17	Capparis horrida, Linn.	34	Thysanolenia agrostis, Nees.

Fauna

The fauna of the area is as follows:

Mammals

S.No.	Common Name	Scientific Name
1	Rhesus Macaque	<i>Macaca mulatta</i>
2	Common Langur	<i>Presbytis entellus</i>
3	Panther or Leopard	<i>Panthera pardus</i>
4	Jungle Cat	<i>Felis chaus</i>
5	Tiger	<i>Panthera tigris</i>
6	Common Mongoose	<i>Herpestes edwardsi</i>
7	Small Indian Mongoose	<i>Herpestes auropunctatus</i>
8	Jackal	<i>Canis aureus</i>
9	Indian Fox	<i>Vulpes bengalensis</i>
10	Sloth Bear	<i>Melursus ursinus</i>
11	Small Indian Civet	<i>Viverricula indica</i>
12	Blue Bull	<i>Boselaphus tragocamelus</i>
13	Barking Deer	<i>Muntiacus muntjak</i>
14	Spotted Deer	<i>Axis axis</i>
15	Sambhar	<i>Cervus unicolor</i>
16	Indian Wild Boar	<i>Sus scrofa</i>

17	Fivestriped Palm Squirrel	<i>Funambulus pennanti</i>
18	Porcupine	<i>Hystrix indica</i>
19	The Grey Musk Shrew	<i>Suncus murinus</i>
20	Rufoustailed Hare	<i>Lepus nigricollis ruficaudatus</i>
21	Flying Fox	<i>Pteropus giganteus</i>
22	Fruitbat	<i>Rousettus leschenaulti</i>
23	Indian Pangolin	<i>Manis cresichodata</i>
24	Indian Elephant	<i>Elephas maximus</i>

Birds

S.No.	Common Name	Scientific Name
1	Black Partridge	<i>Francolinus francolinus</i>
2	Grey jungle fowl	<i>Gallus sonneratii</i>
3	Red jungle Fowl	<i>Gallus gallus</i>
4	Grey Partridge	<i>Francolinus pondicerianus</i>
5	Grey quail	<i>Coturnix coturnix</i>
6	Common peafowl	<i>Pavo cristatus linnaeus</i>
7	Jungle bush quail	<i>Perdicula asiatica</i>
8	Blue rock pigeon	<i>Columba livia</i>
9	Ring dove	<i>Streptopelia decaocto</i>
10	Common green pigeon	<i>Treron phoenicoptera</i>
11	Red turtle dove	<i>Streptopelia tranquebarica</i>
12	Spotted dove	<i>Streptopelia chinensis</i>
13	Little brown dove	<i>Streptopelia senegaleninsis</i>
14	Emerald dove	<i>Chalcophaps indica</i>
15	Little Grebe	<i>Tachybaptus ruficollis</i>
16	Little Cormorant	<i>Phalacrocorax niger</i>
17	Darter or Snake Bird	<i>Anhinga rufa</i>
18	Rosy or White Pelican	<i>Pelecanus onocrotalus</i>
19	Grey lag Goose	<i>Anser anser</i>
20	Bar headed Goose	<i>Anser indicus</i>
21	Brahminy Duck	<i>Tadorna ferruginea</i>
22	Nakta (comb duck)	<i>Sarkidiornis nelanotos</i>
23	Lesser whistling Teal	<i>Dendrocygna javanica</i>
24	Pintail	<i>Anas acuta</i>
25	Common Teal	<i>Anas crecca</i>
26	Mallard	<i>Anas platyrhynchos</i>
27	Gadwall	<i>Anas strepera</i>
28	Shoveller	<i>Anas clypeata</i>

29	Grey winged Teal	<i>Anas querquedula</i>
30	Red crested Pochard	<i>Netta rufina</i>
31	Common Pochard	<i>Aythya ferina</i>
32	Tufted Pochard	<i>Aythya fuligula</i>
33	Scaup Duck	<i>Aythya marila</i>
34	Goosander	<i>Mergus merganser</i>
35	Black winged stilt	<i>Himantopus himantopus</i>
36	Stone curlew	<i>Burhinus oedicephalus</i>
37	Yellow wattled lapwing	<i>Vanellus malabaricus</i>
38	Redwattled Lapwing	<i>Vanellus Indicus</i>
39	Redshank	<i>Tringa totanus</i>
40	Wood or spotted sandpiper	<i>Tringa glareola</i>
41	Common Sandpiper	<i>Tringa hypoleucos</i>
42	Indian Skimmer	<i>Rynchops albicollis</i>
43	Indian whiskered Tern	<i>Chlidonias hybrida</i>
44	Common Tern	<i>Sterna hirundo</i>
45	River Tern	<i>Sterna aurantia</i>
46	Large Egret	<i>Ardea alba</i>
47	Purple Heron	<i>Ardea purpurea</i>
48	Grey Heron	<i>Ardea cinerea</i>
49	Night Heron	<i>Nycticorax nycticorax</i>
50	Pond Heron	<i>Ardeola grayii</i>
51	Cattle Egret	<i>Bubulcus ibis</i>
52	Little Egret	<i>Egretta garzetta</i>
53	Chestnut Bittern	<i>Ixobrychus cinnamomeus</i>
54	Painted Stork	<i>Mycteria leucocephala</i>
55	Open bill Stork	<i>Anastomus oscitans</i>
56	White Stork	<i>Ciconia ciconia</i>
57	White necked Stork	<i>Ciconia episcopus</i>
58	Black necked Stork	<i>Ephippiorhynchus asiaticus</i>
59	White Ibis	<i>Threskiornis aethiopica</i>
60	Spoon Bill	<i>Platalea leucorodia</i>
61	Black winged Kite	<i>Elanus caeruleus</i>
62	Common Pariah Kite	<i>Milvus migrans</i>
63	Crested Goshawk	<i>Accipiter trivirgatus</i>
64	Shikra	<i>Accipiter badius</i>
65	Sparrow Hawk	<i>Nisus</i>
66	Buzzard	<i>Buteo buteo</i>
67	Lesser spotted Eagle	<i>Aquila pomarina</i>
68	Crested hawk Eagle	<i>Spizoctus cirrhatous</i>

69	Black Eagle	<i>Ictinactus malayensis</i>
70	Crested serpent Eagle	<i>Spilornis cheela</i>
71	Greyheaded fishing Eagle	<i>Icthyohpaga ichthyactus</i>
72	Marsh Harrier	<i>Cirrus acruuginosus</i>
73	Pale Harrier	<i>Circus macrourus</i>
74	Osprey	<i>Pandion haliactus</i>
75	Indian Longbilled Vulture	<i>Gyps indicus</i>
76	Whitebacked or Bengal Vulture	<i>Gyps bengalensis</i>
77	White scavenger Vulture	<i>Ncophron percnopterus</i>
78	Hobby	<i>Falco subbwto</i>
79	Peregrine Falcon	<i>Falco pcregrinus</i>
80	Kestrel	<i>Falco tinnunculus</i>
81	Cuckoo	<i>cuculus canorus</i>
82	Indian Cuckoo	<i>cuculus micropterus</i>
83	Common hawk Cuckoo	<i>cuculus varius</i>
84	Pied crested Cuckoo	<i>Clamator jacodinus</i>
85	Koel	<i>Eudynamys scolopacea</i>
86	Lesser Coucal	<i>Centropus toulous</i>
87	Coucal	<i>Centropus sinensis</i>
88	Grass Owl	<i>Tyto capensis</i>
89	Indian great horned Owl	<i>Bubo bubo</i>
90	Brown fish Owl	<i>Bubo zeylonensis</i>
91	Barred jungle Owlet	<i>Glaucidium radiatum</i>
92	Spotted Owlet	<i>Athene brama</i>
93	Jungle Nightjar	<i>Caprimulgus indicus</i>
94	Common Indian Nightjar	<i>Caprimulgus asiaticus</i>
95	Pied Kingfisher	<i>Ceryle rudis</i>
96	Small blue Kingfisher	<i>Alcedo atthis</i>
97	White breasted Kingfisher	<i>Halcyon smyrnensis</i>
98	Chestnut-headed Bee-eater	<i>Merpos leschenaulti</i>
99	Blue tailed Bee-eater	<i>Merpos philippinus</i>
100	Small green Bee-eater	<i>Merpos orientalis</i>
101	Roller or Blue Jay	<i>Coracias benghalensis</i>
102	Hoopoe	<i>Upupa epops</i>
103	Common Grey horn Bill	<i>Tockus birostris</i>
104	Indian Pied horn Bill	<i>Anthracoceros malabaricus</i>
105	Great Pied horn Bill	<i>Buceros bicornis</i>
106	Crimson breasted Barbet	<i>Megalaima haemacephala</i>
107	Little scaly bellied green wood Pecker	<i>Picus myrmecophoneus</i>
108	Lesser golden backed wood Pecker	<i>Dinopium benghalense</i>

109	Blue throated Barbet	<i>Magalaima asiatica</i>
110	Lineated Barbet	<i>Magalaima lineata</i>
111	Swallow	<i>Hirundo rustica</i>
112	Wire tailed Swallow	<i>Hirundo smithii</i>
113	Grey Shrike	<i>Lanius excubitor</i>
114	Bay backed Shrike	<i>Lanius vittatus</i>
115	Rufous backed Shrike	<i>Lanius schach</i>
116	Golden Oriole	<i>Oriolus oriolus</i>
117	Black headed Oriole	<i>Oriolus xanthornus</i>
118	Black Drongo	<i>Dicrurus adsimilis</i>
119	Racket tailed Drongo	<i>Dicrurus paradiseus</i>
120	Crow billed Drongo	<i>Dicrurus annectans</i>
121	Haircrested Drongo	<i>Dicrurus hottentottus</i>
122	Black headed Myna	<i>Sturnus pagodarum</i>
123	Indian Myna	<i>Acridotheres tristis</i>
124	Jungle Myna	<i>Acridotheres fuscus</i>
125	Bank Myna	<i>Acridotheres ginginianus</i>
126	Pied Myna	<i>Sturnus contra</i>
127	Tree Pie	<i>Dendrocitta vagabunda</i>
128	House Crow	<i>Corvus splendens</i>
129	Jungle Crow	<i>Corvus macrorhynchos</i>
130	Pied flycatcher Shrike	<i>Ceryle rudis</i>
131	Small Minivet	<i>Pericrocotus cinnamomeus</i>
132	Red whiskered Bulbul	<i>Pycnonotus jocosus</i>
133	Yellow breasted Bulbul	<i>Macronous gularis</i>
134	Common Babbler	<i>Turdoides caudatus</i>
135	Striated Babbler	<i>Turdoids earlei</i>
136	Large grey Babbler	<i>Turdoids malcolmi</i>
137	Jungle Babbler	<i>Turdoids striatos</i>
138	Brown Flycatcher	<i>Muscicapa latirostris</i>
139	Paradise Flycatcher	<i>Terpsiphone paradisi</i>
140	Verditer Flycatcher	<i>Muscicapa thalassina</i>
141	Grey headed Flycatcher	<i>Culicicapa ceylonensis</i>
142	Black headed blue Flycatcher	<i>Hypothymis azurea</i>
143	Streaked wren Warbler	<i>Prinia gracilis</i>
144	Ashy wren Warbler	<i>Prinia socialis</i>
145	Tailor Bird	<i>Orthotomus sutorius</i>
146	Striated marsh Warbler	<i>Megalurus palustris</i>
147	Paddy field Warbler	<i>Acrocephalus agricola</i>
148	Dull green leaf Warbler	<i>Phylloscopus trochiloides</i>

149	Blue Chat	<i>Erithacus brunneus</i>
150	Magpie Robin	<i>Copsychus saularis</i>
151	Shama	<i>Copsychus malabaricus</i>
152	Black Redstart	<i>Phoenicurus ochruros</i>
153	Brown rock Chat	<i>Cercomela fusca</i>
154	Pied bush Chat	<i>Saxicola caprata</i>
155	Blue rock Thrush	<i>Monticola solitarius</i>
156	Black Bird	<i>Turdus merula</i>
157	Chestnut bellied Nuthatch	<i>Sitta castanea</i>
158	Grey Wagtail	<i>Motacilla cinerea</i>
159	White Wagtail	<i>Motacilla alba</i>
160	Large pied Wagtail	<i>Motacilla maderaspatensis</i>
161	Yellow backed Sunbird	<i>Aethopyga siparaga</i>
162	Purple Sunbird	<i>Nectarinia asiatica</i>
163	White Eye	<i>Zosterops palpebrosa</i>
164	House Sparrow	<i>Passer donesticus</i>
165	Finn's Baya	<i>Ploceus megarhynchus</i>
166	Black headed Munia	<i>onchura Malacca</i>
167	White throated Munia	<i>Lonchura malabarica</i>
168	Rose Finch	<i>Carpodacus erythrinus</i>
169	Black headed Bunting	<i>Emberiza melanocephala</i>
170	Roseringed Parakeet	<i>Psittacula kraneri</i>
171	Alexandrine or Large Indian Parakeet	<i>Psittacula eupatria</i>
172	Himalayan slatyheaded Parakeet	<i>Psittacula himalayana</i>
173	Blossom headed Parakeet	<i>Psittacula cyanocephala</i>

Reptiles

S.No.	Common Name	Scientific Name
1	Indian tent Turtle	<i>Kachuga tentoria</i>
2	Shoft-shelled Turtle	<i>Trionyx spp.</i>
3	Elongated Tortoise	<i>Indotestudo elongata</i>
4	Monitor Lizard	<i>Varanus spp.</i>
5	Garden lizard	<i>Calotes spp.</i>
6	Common house Gecko	<i>Hemidactylis spp.</i>
7	Ratsnake	<i>Ptyas mucosus</i>
8	Sand boa	<i>Eryx conicus</i>
9	Common green whip snake	<i>Dryophis nasutus</i>
10	Indian python	<i>Python molurus</i>
11	Common krait	<i>Bangarus caeruleus</i>

12	King cobra	<i>Naja Hannah</i>
13	Himalayan pit viper	<i>Ancistrodon himalayanus</i>
14	Cobra	<i>Naja naja</i>
15	Russell's viper	<i>Vipera russelli</i>
16	Banded krait	<i>Bangarus fasciatus</i>

Appendix B – Rights/Concessions of Villagers

gY}kuh ou iHkx esgd&gdw iDr xkxdk jktokj foj.k

kte I Hkk dk uke	xtkx dk uke ftllga gd&gdw Lohdr gs	gd@ fj ; k ; kr	jat dk uke	xtV ukfVfQd's ku uEcj	xtV fokflr ds vuq kj ns izdk"B ?kOQw/ ea			
					df"k	Hkou	xkS kkyk	
1	2	3	4	5	6	7	8	
y[kue.Mh	y[kue.Mh	gd	uU/kkS jkft	424/XIV-62 Dt. 08.06.1932	82	395	640	
	eYyk i pku; k	gd		424/XIV-62 Dt. 08.06.1932	56	70	530	
	eYyk plj xfy; k	gd		424/XIV-62 Dt. 08.06.1932	114	70	1120	
	npsY cMk	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	16	9	30	
	; kx				268	544	2320	
u; kxk dVku	dVku	gd	uU/kkS jkft	424/XIV-62 Dt. 08.06.1932	118	175	1280	
	menij u0&1	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	40	21	80	
	rYyk i pku; k	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	60	36	130	
	cktij ijxbz	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	24	14	50	
	; kx				242	246	1540	
i ppk[kMk	plj xfy; k rYyk	gd	uU/kkS jkft	424/XIV-62 Dt. 08.06.1932	82	80	1050	
	i ppk[kMk	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	106	51	210	
	QjI jkeij	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	70	37	140	
	menij u0&2	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	40	21	80	
	thokctij	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	40	21	80	
	Xakij	fj ; k ; r		5063/XIV-B Dt. 18.01.1966	34	18	70	

	gjhij	fj; k; r		5063/XIV-B Dt. 18.01.1966	40	21	80
	/kjeij	fj; k; r		5063/XIV-B Dt. 18.01.1966	50	27	100
	nøij l uoky	fj; k; r		5063/XIV-B Dt. 18.01.1966	34	10	70
	/kjex<+	fj; k; r		5063/XIV-B Dt. 18.01.1966	46	23	90
	; ks				542	309	1970
Hkokuhi j	[kuoky dVku	fj; k; r	uU/ks jkft	5063/XIV-B Dt. 18.01.1966	106	53	210
	Hkokuhi j	fj; k; r		5063/XIV-B Dt. 18.01.1966	50	27	100
	t; ij	fj; k; r		5063/XIV-B Dt. 18.01.1966	66	36	130
	xksolnij	fj; k; r		5063/XIV-B Dt. 18.01.1966	86	44	170
	gfjfd'kuij	fj; k; r		5063/XIV-B Dt. 18.01.1966	56	31	110
	nøij nukbz	fj; k; r		5063/XIV-B Dt. 18.01.1966	66	36	130
	enuij	fj; k; r		5063/XIV-B Dt. 18.01.1966	50	27	100
	; ks				480	254	950
gjh'krky	vke	gd	uU/ks jkft	424/XIV-62 Dt. 08.06.1932	48	40	400
	; ks				48	40	400
ddkM+	ddkM+	gd	uU/ks jkft	424/XIV-62 Dt. 08.06.1932	92	40	530
	; ks				92	40	530
i Vjkuh	i Vjkuh	gd	uU/ks jkft	424/XIV-62 Dt. 08.06.1932	6	10	40
	; ks				6	10	40
1	2	3	4	5	6	7	8
[kM/k	[kM/k	gd	Ndkrk jkft	424/XIV-62 Dt. 08.06.1932	226	0	0
	; ks				226	0	0
cMf	cMf	gd	Ndkrk jkft	424/XIV-62 Dt. 08.06.1932	14	20	70
	; ks				14	20	70
vk[ky<kk	vk[ky<kk	gd	Ndkrk jkft	424/XIV-62 Dt. 08.06.1932	86	310	130
	fMUMj	gd		424/XIV-62 Dt. 08.06.1932	10	0	50
	fl j kM/h	gd		424/XIV-62 Dt. 08.06.1932	8	30	40
	[kekjh	gd		424/XIV-62 Dt. 08.06.1932	12	80	120
	; ks				116	420	340

dkØrk	dkØrk	gd		424/XIV-62 Dt. 08.06.1932	28	0	280
	; kx				28	0	280
i l ksyh	i l ksyh	gd	Ndkrk jkft	424/XIV-62 Dt. 08.06.1932	98	540	600
	; kx				98	540	600
L; Mlk	L; Mlk	gd	Ndkrk jkft	424/XIV-62 Dt. 08.06.1932	28	60	130
	; kx				28	60	130
i fu; kegrk	i fu; kegrk	gd	Ndkrk jkft	424/XIV-62 Dt. 08.06.1932	80	340	600
	; kx				80	340	600
xøkyxkø	xøkyxkø	gd		424/XIV-62 Dt. 08.06.1932	50	250	460
	; kx				50	250	460
jkš' ky	jkš' ky	gd	Ndkrk jkft	424/XIV-62 Dt. 08.06.1932	198	1170	386
	; kx				198	1170	380
dqMy	dqMy	gd	MkMk jkft	424/XIV-62 Dt. 08.06.1932	18	90	150
	; kx				18	90	150
YokM+	YokM+	gd	MkMk jkft	424/XIV-62 Dt. 08.06.1932	86	0	790
	; kx				86	0	790
xkš; kjks	xkš; kjks	gd	MkMk jkft	424/XIV-62 Dt. 08.06.1932	54	0	500
	; kx				54	0	500
ddubz	ddubz eYyh	gd	MkMk jkft	424/XIV-62 Dt. 08.06.1932	0	109	21
	ddubz rYyh	gd		424/XIV-62 Dt. 08.06.1932	26	0	260
	, jkl h l kšV	gd		424/XIV-62 Dt. 08.06.1932	6	50	10
	; kx				32	159	291
Mkš/k	Mkš/k rYyk	gd		424/XIV-62 Dt. 08.06.1932	30	0	300
	Mkš/k eYyk	gd		424/XIV-62 Dt. 08.06.1932	40	0	452
	; kx				70	0	752
vetM+	vetM+	gd	MkMk jkft	424/XIV-62 Dt. 08.06.1932	0	84	16
	; kx				0	84	16
Møjh	Møjh	gd	MkMk jkft	424/XIV-62 Dt. 08.06.1932	16	84	16
	; kx				16	84	16
l økdšV i kš[kjh	l økdšV i kš[kjh	gd	MkMk jkft	424/XIV-62 Dt. 08.06.1932	16	0	90
	l ydokj	gd		424/XIV-62 Dt. 08.06.1932	12	40	30

	;ks				28	40	120
'kkjnk	ekguig	fj;k;r	'kkjnk	6778/XIVB Dt. 06.12.1965	&	&	&
	dy ;ks				2820	4700	13245

uk/& ou l j {kd}if'peh oRr uShrky ds i=k d 1564@43&2 fn0 23 vi&y 207 ds vuq kj xtV ds vuq kj
nş mDr ek=k dk 42 ifr'kr gh nş gA

xtV ea ek=k nf'kr ugha gSorZku ea 20 ?kOeh0 iRFkj o jrk fn;k tk jgk gA

Appendix C - List of beats in core/buffer

S.No.	DIVISION	RANGE	BEAT	CORE/BUFFER	Area
1	Champawat	Dogadi	Chela	Core	5.62
2	Champawat	Dogadi	Dulagad East	Core	10.08
3	Champawat	Dogadi	Dulagad West	Core	12.55
4	Champawat	Dogadi	Kalaunia East-1	Core	6.88
5	Champawat	Dogadi	Kalaunia East-2	Core	7.00
6	Champawat	Dogadi	Kalaunia West	Core	7.41
7	Champawat	Dogadi	Kathaul	Core	4.54
8	Champawat	Dogadi	Mathiabanj	Core	9.05
9	Champawat	Dogadi	Sarra East	Core	7.86
10	Champawat	Dogadi	Sarra South	Core	4.93
11	Champawat	Dogadi	Sarra West	Core	8.63
12	Haldwani	Chakata	East Patrani Beat	Core	5.52
13	Haldwani	Chakata	Jampokhra-I Beat	Core	5.57
14	Haldwani	Chakata	Jampokhra-II Beat	Core	6.37
15	Haldwani	Chakata	North Dholpokhra Beat	Core	2.86
16	Haldwani	Chakata	West Patrani Beat	Core	5.74
17	Haldwani	Danda	Bethlar Beat	Core	11.49
18	Haldwani	Danda	Chila Beat	Core	8.11
19	Haldwani	Danda	Durgapipal Beat	Core	8.78
20	Haldwani	Danda	Gauniarao Beat	Core	10.48
21	Haldwani	Danda	North Kholgarh Beat	Core	11.75
22	Haldwani	Danda	Sarra Beat	Core	11.76
23	Haldwani	Danda	South Kholgarh Beat	Core	9.10
24	Haldwani	Jaulasal	Bhargot-I Beat	Core	10.31
25	Haldwani	Jaulasal	Bhargot-II Beat	Core	9.82
26	Haldwani	Jaulasal	Birgot Beat	Core	10.47
27	Haldwani	Jaulasal	East Chamuadhunga Beat	Core	7.70
28	Haldwani	Jaulasal	East Chugad Beat	Core	11.43
29	Haldwani	Jaulasal	East Jaulasal Beat	Core	8.09
30	Haldwani	Jaulasal	East Labar Beat	Core	13.40

31	Haldwani	Jaulasal	Hanspur Beat	Core	7.07
32	Haldwani	Jaulasal	Hatgadh Beat	Core	7.93
33	Haldwani	Jaulasal	Jubliganj-I Beat	Core	6.10
34	Haldwani	Jaulasal	Jubliganj-II Beat	Core	7.26
35	Haldwani	Jaulasal	Kumia-I Beat	Core	7.39
36	Haldwani	Jaulasal	Kumia-II Beat	Core	6.75
37	Haldwani	Jaulasal	West Chamuadhunga Beat	Core	9.35
38	Haldwani	Jaulasal	West Chugad Beat	Core	9.68
39	Haldwani	Jaulasal	West Labar-I Beat	Core	11.67
40	Haldwani	Jaulasal	West Labar-II Beat	Core	8.58
41	Haldwani	Nandhaur	Asni Beat	Core	10.17
42	Haldwani	Nandhaur	Bhalseni Beat	Core	11.83
43	Haldwani	Nandhaur	Karakot-I Beat	Core	5.45
44	Haldwani	Nandhaur	Karakot-II Beat	Core	7.37
45	Haldwani	Nandhaur	Khonani Parao Beat	Core	12.22
46	Haldwani	Nandhaur	Nandhaur Beat	Core	7.90
47	Haldwani	Nandhaur	Selani Beat	Core	12.92
48	Haldwani	Nandhaur	Sumanthapla Beat	Core	5.77
49	Haldwani	Nandhaur	Sunkheri Beat	Core	7.73
50	Haldwani	Sarda	Chela Beat	Core	8.90
51	Haldwani	Sarda	Jubliganj Beat	Core	7.74
Total					433.08
1	Tarai East	Kilpura	Dogaddi-I Beat	Buffer	5.64
2	Tarai East	Kilpura	Dogaddi-II Beat	Buffer	3.85
3	Tarai East	Kilpura	Dogaddi-III Beat	Buffer	4.80
4	Tarai East	Kilpura	East Kilpura-I Beat	Buffer	8.27
5	Tarai East	Kilpura	East Kilpura-II Beat	Buffer	9.46
6	Tarai East	Kilpura	East Kilpura-III Beat	Buffer	4.80
7	Tarai East	Kilpura	West Kilpura-I Beat	Buffer	5.93
8	Tarai East	Kilpura	West Kilpura-II Beat	Buffer	5.47
9	Tarai East	Kilpura	West Kilpura-III Beat	Buffer	7.94
10	Tarai East	Ransali	Hanspur-A Beat	Buffer	7.74
11	Tarai East	Ransali	Hanspur-B Beat	Buffer	4.30
12	Tarai East	Ransali	Kailash-I Beat	Buffer	6.80
13	Tarai East	Ransali	Kailash-II Beat	Buffer	9.26
14	Tarai East	Ransali	Kalega-I Beat	Buffer	11.36
15	Tarai East	Ransali	Kalega-II Beat	Buffer	4.25
16	Tarai East	Ransali	Nandhaur Beat	Buffer	6.59
17	Tarai East	Ransali	Ransali-I Beat	Buffer	6.67
18	Tarai East	Ransali	Ransali-II Beat	Buffer	6.60

19	Tarai East	South Jaulasal	Baira Beat	Buffer	4.51
20	Tarai East	South Jaulasal	Central-East Jaulasal Beat	Buffer	5.38
21	Tarai East	South Jaulasal	Devipura Beat	Buffer	2.17
22	Tarai East	South Jaulasal	East Jaulasal(North) Beat	Buffer	5.59
23	Tarai East	South Jaulasal	Jaulasal East Beat	Buffer	6.61
24	Tarai East	South Jaulasal	South-East Jaulasal Beat	Buffer	9.02
25	Tarai East	South Jaulasal	South-West Jaulasal Beat	Buffer	8.97
26	Tarai East	South Jaulasal	Sudlimath Central Beat	Buffer	6.48
27	Tarai East	South Jaulasal	Sudlimath South Beat	Buffer	6.54
28	Tarai East	South Jaulasal	Sudlimath-I Beat	Buffer	9.27
29	Tarai East	South Jaulasal	Sudlimath-II Beat	Buffer	6.30
30	Tarai East	South Jaulasal	West Jaulasal Beat	Buffer	6.57
31	Tarai East	South Jaulasal	West-Central Jaulasal Beat	Buffer	5.89
32	Champawat	Dogadi	Chhini Beat	Buffer	10.65
33	Champawat	Dogadi	Dandakathauti	Buffer	8.10
34	Haldwani	Chakata	East Shimlia Beat	Buffer	5.21
35	Haldwani	Chakata	Garkharak-I Beat	Buffer	6.91
36	Haldwani	Chakata	Garkharak-II Beat	Buffer	4.86
37	Haldwani	Chakata	Kalukhera-I Beat	Buffer	5.20
38	Haldwani	Chakata	Kalukhera-II Beat	Buffer	4.41
39	Haldwani	Chakata	North Khera Beat	Buffer	6.22
40	Haldwani	Chakata	Ratighat Beat	Buffer	7.66
41	Haldwani	Chakata	South Dholpokhra Beat	Buffer	5.70
42	Haldwani	Chakata	South Khera Beat	Buffer	3.91
43	Haldwani	Chakata	Sultannagri Beat	Buffer	2.58
44	Haldwani	Chakata	West Shimlia Beat	Buffer	5.91
45	Haldwani	Danda	Aligadh-I Beat	Buffer	8.77
46	Haldwani	Danda	Aligadh-II Beat	Buffer	8.14
47	Haldwani	Danda	Deota Beat	Buffer	12.01
48	Haldwani	Danda	Kundal Beat	Buffer	11.39
49	Haldwani	Danda	North Lowaranala Beat	Buffer	9.86
50	Haldwani	Danda	South Lowaranala Beat	Buffer	8.50
51	Haldwani	Nandhaur	Ballot Kakod Beat	Buffer	6.88
52	Haldwani	Nandhaur	Ballot Patrani Beat	Buffer	10.02
53	Haldwani	Nandhaur	Ratarao Aam Beat	Buffer	8.21
54	Haldwani	Nandhaur	Ratarao Beat	Buffer	11.74
55	Haldwani	Nandhaur	Sela-I Beat	Buffer	5.87
56	Haldwani	Nandhaur	Sela-II Beat	Buffer	7.21
57	Haldwani	Sarda	Duan Beat	Buffer	8.71
58	Haldwani	Sarda	Karrali-I Beat	Buffer	4.01

59	Haldwani	Sarda	Karrali-II Beat	Buffer	7.88
60	Haldwani	Sarda	Nadhan Beat	Buffer	6.75
61	Haldwani	Sarda	North Gulapani Beat	Buffer	8.48
62	Haldwani	Sarda	South Gulapani Beat	Buffer	4.34
Total					429.15

Appendix D – Staff requirements

S.No.	Position Name	Headquater	Number	Total
1	Director (DCF)	Chorgalia	1	1
2	Deputy Director (ACF)	Chorgalia	1	2
		Tanakpur	1	
3	Range Officer	Chakata	1	6
		Nandhaur	1	
		Jaulasal	1	
		Dogadi	1	
		Sharda	1	
		Danda	1	
4	Deputy Range Officer	Chakata	1	6
		Nandhaur	1	
		Jaulasal	1	
		Dogadi	1	
		Sharda	1	
		Danda	1	
5	Section Officer	Forester level staff to be posted in various capacities	50	50
6	Beat Officer	Forest Guards to be posted beats, gates, patrolling units etc.	250	250
7	Rapid action anti-poaching force	1 Battalion	50	50
8	Office staff	Director's office	19	29
		Deputy Director Chorgalia	5	
		Deputy Director Tanakpur	5	
Total				400

Appendix E – Notification of Elephant Corridor

उत्तरांचल शासन
वन एवं पर्यावरण अनुभाग-2

अधिसूचना

28 अक्टूबर, 2002 ई0

संख्या 1777/1(2)/व0ग्रा0वि0/2002-19(9)/2002-भारत सरकार, पर्यावरण एवं वन मंत्रालय, नई दिल्ली के पत्र संख्या-7-2/00(पीई), दिनांक 14-02-2002, द्वारा प्रदत्त अनुमोदन के क्रम में निम्नलिखित अनुसूची में वर्णित क्षेत्र को श्री राज्यपाल 'शिवालिक एलिफेण्ट रिजर्व' क्षेत्र घोषित करने की सहर्ष स्वीकृति प्रदान करते हैं :-

अनुसूची

(क) क्षेत्रफल व जनपद : क्षेत्रफल-5405.07 वर्ग किमी0
जनपद-देहरादून, हरिद्वार, गढ़वाल, नैनीताल, ऊधमसिंह नगर एवं चम्पावत

जिला	वन प्रभाग का नाम	वनों का क्षेत्रफल (वर्ग किमी0 में)
देहरादून	कालसी भूमि संरक्षण वन प्रभाग	99.07
	देहरादून वन प्रभाग	369.52
	राजाजी राष्ट्रीय पार्क	236.40
हरिद्वार	हरिद्वार वन प्रभाग	159.38
	राजाजी राष्ट्रीय पार्क	333.62
गढ़वाल	राजाजी राष्ट्रीय पार्क	250.40
	लैन्साडौन वन प्रभाग	376.42
	कालागढ़ टाइगर रिजर्व प्रभाग (कॉर्बेट टाइगर रिजर्व)	606.60
नैनीताल	रामनगर टाइगर रिजर्व प्रभाग (कॉर्बेट टाइगर रिजर्व)	350.40
	रामनगर टाइगर रिजर्व प्रभाग (कॉर्बेट टाइगर रिजर्व)	311.00
	तराई पूर्वी वन प्रभाग	187.26
	रामनगर वन प्रभाग	292.54
अल्मोड़ा	तराई केन्द्रीय वन प्रभाग	192.38
	हल्द्वानी वन प्रभाग	674.01
	कालागढ़ टाइगर रिजर्व प्रभाग (कॉर्बेट टाइगर रिजर्व)	20.00
ऊधमसिंह नगर	तराई पश्चिमी वन प्रभाग	105.29
	तराई पूर्वी वन प्रभाग	288.33
	तराई केन्द्रीय वन प्रभाग	209.35
टिहरी	नरेन्द्रनगर वन प्रभाग	194.32
चम्पावत	चम्पावत वन प्रभाग	148.78
योग :		5405.07
कुल क्षेत्रफल का विवरण	-	5405.07 वर्ग किमी0
गैर वन भूमि का विवरण	-	रिक्त
वन भूमि का क्षेत्रफल	-	5405.07 वर्ग किमी0

(2)

(ख) सीमाओं का विवरण :

1. कोर क्षेत्र : इसके अन्तर्गत राजाजी राष्ट्रीय पार्क, कॉर्बेट राष्ट्रीय पार्क एवं सोना नदी वन्य जीव विहार के सम्पूर्ण क्षेत्र सम्मिलित होंगे।
2. बफर क्षेत्र : इसके अन्तर्गत निम्न क्षेत्र सम्मिलित होंगे :

वृत्त/प्रभाग का नाम	वन राजि
कालसी भूमि संरक्षण प्रभाग	तिमली
देहरादून वन प्रभाग	आसारोड़ी, मल्हान, थानो, लच्छीवाला, बड़कोट व ऋषिकेश
हरिद्वार वन प्रभाग	श्यामपुर व चिड़ियापुर
लैन्सडौन वन प्रभाग	लालढांग, कोटद्वार, कोटरी व दुगड़डा
तराई पश्चिमी वन प्रभाग	उत्तरी जसपुर व दक्षिणी जसपुर
तराई पूर्वी वन प्रभाग	गौला, किशनपुर, रन्साली, दक्षिणी जौलासाल, किलपुरा डौली
रामनगर वन प्रभाग	कोसी, कोटा, देवौरी, कालादुंगी, फतेहपुर
तराई केन्द्रीय वन प्रभाग	गदगदिया, भाखड़ा, टाँडा, पीपलपड़ाव, हल्द्वाना, बरहनी
हल्द्वानी वन प्रभाग	छकाता, नन्धौर, डान्डा, जौलासाल, शारदा
चम्पावत वन प्रभाग	बूम व दोगाड़ी
नरेन्द्रनगर वन प्रभाग	शिवपुरी
कॉर्बेट टाइगर रिजर्व	कॉर्बेट राष्ट्रीय पार्क व सोनानदी वन्य जीव विहार की सीमाओं के अतिरिक्त अन्य आरक्षित वन क्षेत्र।

आज्ञा से,
(केशव देसिराजु)
सचिव।

FORESTS & ENVIRONMENT SECTION-2

NOTIFICATION

October 28, 2002

No. 1777/1(2) Va. Gra. Vi./2002-19(9)/2002--In pursuance of the approval given by the Ministry of Environment & Forests, Govt. of India vide letter no. 7-2/00(PE), dated 14-02-2002, the Governor is pleased to declare the areas scheduled below to be 'Shivalik Elephant Reserve';

Schedule

(A) Area and Districts	Area -- 5405.07 km ²	
	Districts -- Dehradun, Haridwar, Garhwal, Nainital, Udham Singh Nagar and Champawat	
District	Forest Division	Forest Area (km ²)
Dehradun	Kalsi Forest Division	99.07
	Dehradun Forest Division	369.52
	Rajaji National Park	236.40
Haridwar	Haridwar Forest Division	159.38
	Rajaji National Park	333.62
Garhwal	Rajaji National Park	250.40
	Lansdowne Forest Division	376.42
	Kalagarh Tiger Reserve Division (Corbett Tiger Reserve)	606.60
	Ramnagar Tiger Reserve Division (Corbett Tiger Reserve)	350.40

(3)

17/5/03

Nainital	Ramnagar Tiger Reserve Division (Corbett Tiger Reserve)	311.00
	Tarai East Forest Division	187.26
	Ramnagar Forest Division	292.54
	Tarai Central Forest Division	192.38
	Haldwani Forest Division	674.01
Almora	Kalagarh Tiger Reserve Division (Corbett Tiger Reserve)	20.00
Udhamsingh Nagar	Tarai West Forest Division	105.29
	Tarai East Forest Division	288.33
	Tarai Central Forest Division	209.35
Tehri	Narendra Nagar Forest Division	194.32
Champawat	Champawat Forest Division	148.78
Total :		5405.07
Total Area	-	5405.07 km ²
Non Forest Area	-	Nil
Forest Area	-	5405.07 km ²

(B) Description of Boundaries :

1. **Core Area** : This will include Rajaji National Park, Corbett National Park and Sonanadi Wildlife Sanctuary.
2. **Buffer Area** : This will include the following areas :

Circle/Division

Forest Ranges

Kalsi Soil Conservation Division	Timil
Dehradun Forest Division	Asarodhi, Malhan, Thano, Lachhiwala, Barkot & Rishikesh
Hardwar Forest Division	Shyampur & Chiriyapur
Lansdowne Forest Division	Laldhang, Kotdwar, Kotari & Dugadda
Tarai West Forest Division	North Jaspur & South Jaspur
Tarai East Forest Division	Gaula, Kishanpur, Ransali, South Jaulasal, Kilpura, Dauli
Ramnagar Forest Division	Kosi, Kota, Dechori, Kaladhungi, Fatehpur
Tarai Central Forest Division	Gadgedia, Bhakhara, Tanda, Pipal Parao, Haldwani, Barhani
Haldwani Forest Division	Chakata, Nandhaur, Danda, Jaulasal, Sharda
Champawat Forest Division	Boom and Dogari
Narendra Nagar Forest Division	Shivpuri
Corbett Tiger Reserve	Other Reserved Forest except the boundaries of Corbett National Park & Sonanadi Wildlife Sanctuary.

By Order,

(KESHAV DESIRAJU)

Secretary.

दिप्यणी-राजपत्र, दिनांक 30-11-2002, भाग 1 में प्रकाशित।

[प्रतिलिपि सूचनार्थ प्रेषित-]

पी०एस०यू० (आर०ई०) ०७ वन एवं पर्यावरण/७२७-१७-०१-२००३-५०० (कम्प्यूटर/रीजियो)।

मानविकार
कोर केन्द्र केन्द्र केन्द्र

MINIMISING DISTURBANCE TO WILDLIFE IN ANAMALAI TIGER RESERVE DUE TO CONTOUR CANAL REPAIR AND CREATION OF WILDLIFE CROSSINGS

Main facts and requested action by Standing Committee NBWL

Facts:

Major renovation work of the 49.3 km long Contour Canal is underway in Anamalai Tiger Reserve.

- The State Govt. has sanctioned Rs 185 crore for repair works and the Chief Minister inaugurated the repair works during February 2010.
- **The State PWD has commenced repair works on 1 March 2011. It is reported that the work will be taken up for 6 months in a year and is set to be completed in 3 years time.**
- On road parallel to the canal there is movement of vehicles and materials, including heavy machinery.

Primary concern:

Where the steep-sided canal passes through ATR, many animals get drowned/washed away and wildlife crossing is hindered due to unsuitable design and very few structures to allow animal crossings.

Details of the canal:

As part of Parambikulam – Aliyar project, conceived during 1962 to cater the irrigation needs of farmers in Coimbatore district, the 49.3 km long contour canal was commissioned in 1965. This canal has cut through some of the finest wildlife habitats along the northern boundary of the present Anamalai Tiger Reserve (ATR) and continuous to be a threat as wildlife often gets washed away in the canal due to its steep sides.

- The canal begins near Sarkarpathy powerhouse, in the Pollachi range of ATR and ends at Thirumurthy reservoir located in the fringes of the Udumalpet range of ATR.
- Near Thirumurthy reservoir, the canal extends outside the Tiger Reserve for about 8 km. The rest of the length of the canal is within the Tiger Reserve.
- The canal is steep and the forest is precipitous near the bank where animals are vulnerable to fall into the canal and cannot swim back safely due to its slippery cement banks. The banks are un-scalable.

Main pros and cons:

Benefits: The canal provides for irrigation in adjoining district and acts as a mechanism to deliver a crucial ecosystem service (water) of the Anamalai Tiger Reserve to the people.

Conservation threats: Several of large mammals and countless smaller species are reported to have washed away in this canal since its commissioning. Most mammals including animals such as civets, loris, and pangolins, and deer are unable to cross the canal due to its structure and location and the canal has a fragmenting effect on their populations.

- Dr. R. Sukumar made a mention of this canal and reported even a tiger getting washed away in this canal (*Ref: Elephant days and nights, 1991*). Incidents of elephants getting washed away are known.
- Wildlife scientists working in the region have pointed out the need for mitigation in the past and important locations for animal safety and crossing. Forest Department authorities are aware of the need to make the canal wildlife-friendly. There are no structures such as steps to facilitate animals to drink from the canal when water gets scarce during hot months.

Request to Standing Committee National Board for Wildlife (SC-NBWL):

Commission site assessment by Member SC-NBWL along with ATR and PWD officers to review and identify:

- (a) permissions and conditions for undertaking such repair work,
- (b) design considerations and wildlife crossing structures where canal runs within ATR,
- (c) initiate an awareness campaign on watershed and ecosystem service benefits of ATR and on minimising negative effects of canal on forests and wildlife in ATR.

Photographs of Contour Canal in Anamalai Tiger Reserve and ongoing work



Movements of heavy machinery along Contour Canal in Anamalai Tiger Reserve



Photograph showing steep sides of Contour Canal that poses hazards to wildlife



NEWS ITEM

From *The Hindu* dated 13 May 2011

<http://www.hindu.com/2011/05/13/stories/2011051353240500.htm>

PAP contour canal renovation work in progress

Special Correspondent



Fast pace: Work under way for renovating the 49.3 km long contour canal from Sircarpathy to Thirumurthy dam of the Parambikulam - Aliyar Project.

POLLACHI: Works for the renovation of the 49.3 km long contour canal from Sircarpathy to Thirumurthy dam is progressing at a fast pace in three phases. Currently, work is being carried out at Sircarpathy, Navamalai and Nallaru.

The renovation was sanctioned in the budget with an allocation of nearly Rs 185 crore. The canal is considered an engineering marvel and has nine tunnels for a length of nearly 30 km with one of them being five km long. The works began on March 1. The work tender was awarded in three phases and will be completed in three working seasons with a six-month time gap in between during the South-West and North-East monsoons for flow of water to the reservoirs to wet the ayacut irrigation lands.

The work is being executed under the supervision of Chief Engineer P. Sivasankaran, Superintending Engineer S. Ranganathan, Sub-Divisional Engineer M. Kulandaisamy, Assistant Executive Engineer Sivalingam and Assistant Engineer S. Subramanian.

PAP Thirumurthy Farmers Project Committee chairman 'Medical' K. Paramasivam, talking to reporters at the work site, said that the canal had, since 1965, undergone only repairs whenever there was a damage or breach. Owing to the vagaries of nature, including rolling down of boulders from the hills and roots of trees damaging the concrete surface, the canal was damaged to a great extent.

As against the expected realisation of 18 to 23 tmcft of water at Thirumurthy depending on the rainfall, there was considerable loss of water owing to seepage and percolation. For example, of the 1,100 cusecs released from Sircarpathy, only around 700 cusecs reached Thirumurthy, thus accounting for a loss of 400 cusecs. The scheme was intended to provide water for irrigating over 3.77 lakh acres spread over four zones.

After 45 years, a complete and comprehensive renovation of the canal has commenced now after the expert committee on completion of inspection confirmed to the Government the need for renovating the canal.

Mr. Paramasivam said that authorities have planned to renovate and stop work when the South West monsoon sets in to enable the water reach the agricultural lands. The work will resume after the exit of North East monsoon and will go on till May end. To enable the halting of work to allow flow of water, the authorities are demolishing the existing canal structure for a length of 500 m i.e. only to the extent where they can take up and complete the renovation works before the monsoon sets in.

As a priority, very badly damaged stretches are being taken up now where wastage of water is found to be high, official sources said.

Agenda items for discussion in the Standing Committee meeting

1. Denotification of GIB sanctuary in Maharashtra

The Maharashtra state Board for Wildlife has decided to denotify 8496.44 km² GIB sanctuary in Solapur district of Maharashtra state and maintain the area of 1222.61 km² under this sanctuary. Due to this decision, there would be drastic decrease in the area under the protected area (PA) network in the Maharashtra state, from 4.97% to 2.6% i.e. from 15,332.49 km² to 8,058.66 km² -a sharp drop by 60.55%.

The Committee on Rationalization of Boundaries of National Parks and Sanctuaries of Ministry of Environment and Forest while recommending denotification of two sanctuaries (including GIB sanctuary) in Maharashtra had noted the condition of declaration of six new sanctuaries in the state, which is not sufficient to maintain the required PA network in the state.

This committee had suggested the state to declare Mansinghdeo (182.29 km²), Rajmachi (122.96 km²), Sudhagarh Tamni, Western Ghats (220.18 km²), Tipagarh (52.4 km²), Kopela-Kolamarkha (90.93 km²) and Isapur Bird Sanctuary (121.55 km²). The state has notified Mansinghdeo sanctuary. However six areas recommended by this committee does not help to maintain the required PA cover of Maharashtra state.

The area recommended for Kopela-Kolarkha sanctuary is too small for survival of wild buffalo. However W. A. Rodgers & H. S. Panwar of Wildlife Institute of India had prepared a report for MOEF and suggested following list of wildlife potential areas from Maharashtra (in March 1998) which can be upgraded or newly created (notified). Other NGOs also have demanded several areas to be declared as PAs in this state.

Sr.No.	Name of proposed PA	Area km ² .	District	Circle
01	Mansinghdev	182.29	Nagpur	Nagpur
02	Mahendri	69. 17	Amravati	Amravati
03	Malkhed	144.16	Amravati	Amravati
04	Kopela-Kolamarka	300	Gadchiroli	South Chanda
05	Navegaon expansion	81.12	Gondiya	Nagpur

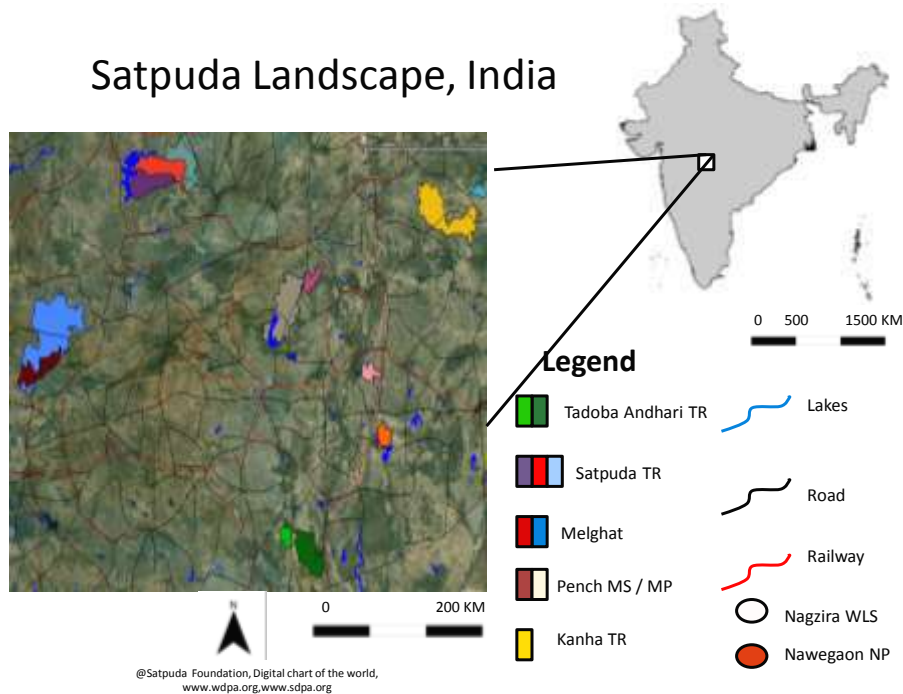
06	Tipagarh WLS (134) Itiadhoh –Rajoli WLS (388)	522	Gondia	Nagpur
07	Nagzira expansion	235.48	Gondiya	Nagpur
08	Darekasa	100	Gondiya	Nagpur
09	Akola Grassland	100	Akola	Amravati
10	Rajmachi (Fr. Santapau)	122.96	----	Kolhapur
11	Mahabaleshwar	50	Satara	Kolhapur
12	Kolhapur	50	Kolhapur	Kolhapur
13	Lalling Dhulia	30	Dhule	Dhule
14	Isapur	122.04	Yawatmal	Yawatmal
15	Ujani	100		
16	Tamhani Sudhagad	220.18		Mumbai
17	Bhimgad	?	Sindhudurg	Kolhapur
18	Melghat	526.90	Amravati	Melghat
19	Irai	16.03	Chandrapur	Chandrapur
20	Indapur	10	Pune	Mumbai
21	Dasgaon	05		
22	Mayni Lake	04	Solapur	
23	Vikroli	07	Mumbai	
24	Mula-Mutha	01	Pune	
	Total	2999.33		

NBWL had discussed the issue earlier and had expressed the opinion that while accepting this denotification proposal, an equivalent area should be brought under PA network. State Government should inform the standing committee of NBWL about their plans to maintain the required PA network in the state. The Standing Committee may resolve to request MoEF to pursue with the State Govt. of Maharashtra to get equivalent area notified as PAs **before granting denotification.**

2) The vital corridors of Satpuda landscape in central India are threatened:

The corridors of Satpuda landscape in central India is listed as one of the priority tiger conservation areas in India. It incorporates Tiger Reserves (TR), including the Kanha,

Pench Satpuda, Melghat, Pench (Maharashtra), Nagzira-Nawegaon (newly accepted TR) and Tadoba-Andhari Tiger Reserve (map below).



The corridors between the tiger reserves are important for the genetic exchange among the meta-populations and thereby long term survival of tigers and other carnivores. However there are many projects which are either under consideration or being discussed due to violation of FC act 1980 as the agencies were simply pushing the projects without getting necessary permissions under FC Act 1980 and EP Act 1986.

The corridor between Pench Tiger Reserve (PTR), newly accepted Nagzira-Nawegaon and Tadoba-Andhari Tiger Reserve (TATR) is said to be the most important for the connectivity of the central Indian (Satpuda) and the south Indian tiger meta-population. National Highway Authority of India (NHAI) found pushing widening of national highway (NH-6) by violating provisions of FC Act 1980. No action in this case has helped to build the morale of the agency as they have now declined to even accept the mitigation measures suggested by wildlife department of Maharashtra.

The corridor between Pench MP and Kanha TR, and Pench Maharashtra- Nagzira-Nawegaon and Tadoba-Andhari Tiger Reserve is threatened by proposed widening of national highway (NH-7) again by the same NHAI. They ignored the instructions of NTCA and also pushed the work even when the matter was being discussed in the CEC.

Several mining and irrigation / canal project proposals are under consideration with the MoEF. Standing Committee may request MoEF to pursue with the forest departments of State Government of Maharashtra as well as Madhya Pradesh to work jointly on preparing Satpuda landscape tiger conservation plan and clearly demarcate the tiger corridors in consultation with NTCA, WII, Satpuda Foundation and other expert agencies. They should also suggest the mechanism to standing committee of NBWL to keep such proposals on hold till they complete this task.

3) Implementation of FRA 2006 for declaration of Critical Wildlife Habitats (CWH).

Maharashtra state has designed a public consultative process to declare the CWH and the state has made very good progress in declaring CWH along with very few other states. However after MoEF's instructions even these processes are halted. Now Ministry has designed an Implementation Protocol and an expert committee to study them. The said protocols should be implemented only after being discussed them in the Standing Committee of the National Board for Wildlife and after seeking its approval.


nature conservation foundation
science for conservation

3076/5, 4th cross, gokulam park, mysore 570002, india

t: 91. 821. 251 5601 • f: 91. 821. 251 3822 • www.ncf-india.org

6 October 2011

Dr. Jagdish Kishwan, IFS

Member Secretary, Standing Committee, National Board of Wildlife
 Additional Director General and Director, Wildlife Preservation
 Ministry of Environment and Forests, Government of India
 Paryavaran Bhavan, CGO Complex, Lodi Road,
 New Delhi 110 003.

Dear Dr Kishwan,

Subject: *Key points for discussion under agenda item on functioning of the Standing Committee of the National Board for Wildlife (SC-NBWL) during the upcoming SC-NBWL meeting on 14-October-2011*

This is in continuation of agenda items that have been proposed by non-official members of the SC-NBWL for the upcoming meeting on 14th October 2011. Going further, we wish to offer some very specific, constructive suggestions for improvement of the functioning of the SC-NBWL, an agenda item that has already been proposed by Ms. Purna Bindra. **We request that the points raised below are tabled in the meeting and discussed under this priority agenda item at the forthcoming meeting of the SC-NBWL on 14 October as this matter affects all other issues that have been listed for consideration before the committee.**

We focus on the meetings of the SC-NBWL and on procedures related to screening of documents, preparation of minutes, availability of information to the public, etc. Our specific suggestions are below:

1. **Agenda 15 days in advance:** We request that the agenda of the meetings are in hand with the members at least 15 days in advance as per the notification of the Standing Committee. This basic requirement has not been implemented in our earlier meetings. But for the rescheduling of the forthcoming meeting, this may have been the case of the 23rd meeting on 14 October 2011 as well.
2. **Agenda on website:** The agenda should also simultaneously (i.e., at least 15 days in advance) be put up on the website of the MoEF. Although agenda of the 23rd meeting has been circulated to members, it is yet to be placed on the Ministry website at the time of writing this letter. Presently the website also does not carry agendas of some of the earlier meetings (see #11 below).
3. **Agenda items from non-official members:** Agenda items submitted by members of the SC-NBWL should also be included in the website as early as possible. If a system is created whereby members are informed at least one week prior to compilation of the agenda, there will be time for members to submit agenda items for inclusion in the agenda prepared by the Ministry. Presently, agenda items from members arrive at different times and there is a risk of omission of documents and annexures provided.
4. **Member's signatures on minutes of meetings:** We wish to stress that *the minutes of meetings are not complete unless signed individually by each member*. In our experience, and as communicated in our recent email correspondence with the member-secretary, the minutes or summary records often do not include key discussion points or written/emailed corrections. Such problems and those of communication and coordination can be avoided if minutes are circulated to members and their signatures and written submissions included.

5. **Minutes of meetings placed on website:** The minutes of the meetings including submissions should also be placed on the Ministry website within 24 hours after signatures of all members are obtained.
6. **Recording individual member's submissions:** During the meeting, in the event of serious differences, views of individual members, whether for or against specific projects, should be recorded with reasons.
7. **Relevant files and documents available for non-official members' scrutiny:** Prior to a meeting of the SC-NBWL and once the agenda are finalised, all files relevant to each project or agenda item should be available at the Ministry, as is the case with the FAC and EAC for non-official members to inspect at the office. These files should also be available at the meeting itself in case of any query or clarifications.
8. **Responsibility and liability of Chief Wildlife Wardens and PCCFs for information in proposals forwarded to SC-NBWL:** It is also imperative that a fact sheet of details is available regarding each item with each sheet signed and attested by the relevant Chief Wildlife Wardens and Principal Chief Conservators of Forests for the facts recorded. It is important that in case of any misrepresentation of facts provided to the SC-NBWL, that enquiry may be initiated and responsible individuals are held liable.
9. **Maps of up-to-date and high standards are imperative.** Maps provided with project proposals are often inaccurate or poorly represent the ground situation. In today's context, and given India's excellent geo-spatial resources, we request that there be included detailed maps of project sites, including those obtained from the Forest Survey of India, PA boundaries, and maps of Tiger Reserves, Elephant Reserves, and Wetlands. These maps are available with relevant government institutions and it should be simple to get these projected and the relevant features highlighted.
10. **Important to include wildlife expert assessments:** Project details may need further validation and verification, and the SC-NBWL will benefit if a list of experts is empaneled to assist members in project scrutiny, site assessments, or technical consultation. The Forest Advisory Committee (FAC) has already submitted a list of 160 such experts, which may be considered as an interim list that may be augmented with other wildlife experts suggested by members.
11. **Site assessment and expert reports should be placed on website:** When site assessments are carried out by the SC-NBWL members or experts/institutions at the request of the Standing Committee, these reports must be made public and placed on the Ministry website. This is currently not standard practice.
12. **New website for the National Board for Wildlife:** There is a serious inadequacy in the information for the general public as well as to NBWL members on the Ministry website regarding NBWL functioning, projects, and decisions. What information is available is poorly organised and highly limited (mostly in a single page: <http://moef.nic.in/modules/others/?f=wildlife>). This hinders citizen awareness and indicates lack of transparency in NBWL functioning. To improve this situation, we strongly urge that
 - a) The NBWL and its Standing Committee should have a separate website that lists all related business, rules, orders and agenda items (including of forthcoming meetings, and minutes going back to the very first meeting). There could also be a page describing the history of the NBWL and its predecessor, the Indian Board for Wildlife, and the many illustrious past members and their contributions.
 - b) To assist more rational and knowledge-based decision, we urgently need an accurate and up-to-date database of all the protected areas (PA) of India, with a linked a compendium of all the projects that are considered, rejected, or approved by SC-NBWL. Projects should be listed PA-wise in an appropriate database structure in the website so that a citizen can select a PA of interest and have a drop-down list of all projects approved, pending, or under consideration at any stage and all related site / impact assessment reports by SC-NBWL members after site visit or others.

- c) A separate section of the website with a secure login may be provided to current members of NBWL and SC-NBWL to record their observations and comments on each project, which will considerably ease the procedures for preparation and revision of minutes substantially, while eliminating inclusion or exclusion errors.
13. **Secretariat / additional administrative support for the NBWL at the Ministry:** The NBWL and the SC-NBWL need a designated secretariat to support its effective functioning at the MoEF with at least one additional officer to assist the DIG-WL. They should have the resources for timely preparation of agenda and minutes, processing of projects and project documents, coordination with duly-appointed State Boards for Wildlife (SBWL) ensuring that the matters are not *sub judice*, that they follow prescribed formats, and include all relevant documentation. As a matter of policy, no project should be placed before the SC-NBWL until it has been properly screened thus and certified to have secured the approval/ comments of the State Boards of Wildlife and Chief Wildlife Wardens.

We feel that unless these changes are considered and initiated immediately, the credibility of the entire NBWL, its Standing Committee and indeed, the effectiveness of the Wildlife (Protection) Act enacted the visionary leadership of Prime Minister Mrs. Indira Gandhi will be seriously compromised.

The Standing Committee NBWL has come under increasing criticism that it has become an automatic clearance mechanism for projects, and is unable to play the reasoned check-and-balance role that it ought to have. Such a situation is doubly unfortunate as we today possess the knowledge base and the scientific and technical capability to come up with better assessments and informed decision-making. The information we are often presented to evaluate projects now have does not meet high standards or provide adequate basis for logical and sound assessments. Unless this quality of work can be improved, it defeats our very purpose.

In our opinion, the SC-NBWL is most emphatically not a committee whose purpose is simply to clear—or thwart—projects. We look upon it as a serious forum where the reasoned, intelligent and professional debate is the means to determine the advisability of such proposals placed before it from the perspectives of wildlife conservation, ecological value and environmental impact.

We believe, however, that positive change can be achieved and some modifications as highlighted above can help begin to address the problem and begin a process of constant learning and improvement. Inaction and complacency is inexcusable. The time to act is now.

With kind regards,

Yours sincerely,



M. D. Madhusudan, PhD, on behalf of Drs. Rohan Arthur, Yash Veer Bhatnagar, Aparajita Datta, Charudutt Mishra, Divya Mudappa, TR Shankar Raman & Anindya Sinha

Senior Scientists

Nature Conservation Foundation, www.conservation.in
Member, Standing Committee of the National Board for Wildlife

cc:

Ms Jayanthi Natarajan, Chairperson, Standing Committee – National Board for Wildlife
Ms Prakriti Srivastava, Deputy Inspector General of Forests (Wildlife)

To,

Smt. Jayanthi Natarajan,
The Minister of State (Independent Charge),
Ministry of Environment and Forests,
Government of India

Date: 25th September, 2011

Hon'ble Minister,

Re: National Board of Wildlife

We, the non-official members of the National Board of Wildlife would like to begin by congratulating you on assuming charge of the Ministry.

As you are aware the Standing Committee of the National Board of Wildlife (NBWL), under your chairmanship, is an important statutory body under the Wild Life (Protection) Act, 1972, for the purpose of conservation of wildlife in the country. Section 5C of the Act provides that it shall be the duty of the NBWL to promote the conservation and development of wildlife and forests by such measures as it thinks fit. Since the powers and functions of NBWL have been delegated to the Standing Committee, for all practical purposes, the Standing Committee has, therefore, been entrusted with the powers and duties of the NBWL.

As Chair of the Standing Committee, we would respectfully like to draw your attention to some serious concerns regarding the mandate and functioning of the board:

Standing Committee decision making is flawed:

Protected Areas are the last refuges of many endangered and endemic species, and of our biodiversity, and as we well know they are already stressed and fragmented. Many of the proposals require clearances that adversely impact these habitats, thereby further endangering wildlife. Yet, the usual practice is to place a large number of proposals - including large projects like dams, highways, mines - in a single meeting of the Standing Committee, and its members are expected to decide their fate in the space of just an hour or two.

Unfortunately, during the recent past, the role of the Standing Committee has been merely limited to that of a clearing-house. The last meeting of the Committee held on 25th April 2011 is a striking example of this, where 59 proposals for diversion from PAs or areas adjoining PAs were considered and most of them, barring a few, were cleared in just a short span of two hours. This has caused immense concern amongst the non-official members and invited criticism, even from the media.

Yet another fact of the same meeting was that 39 clearance proposals were received only two days prior to the meeting leaving very little time, and no working day, for the

members to even glance through the proposals. Even more so, the information provided by the states was incomplete, misleading and attuned for fast track clearances.

Such practices make a mockery of the role of the Standing Committee of the NBWL. Clearing or rejecting such a large number of proposals in such a short time span also signifies a lack of proper consideration and can lead to legal complications in case any decisions of the Standing Committee are challenged in courts.

While the Standing Committee of NBWL cannot do away with discussing the various developmental projects seeking diversion of Protected Areas, there should always be adequate time devoted during every meeting of the Standing Committee for discussing wildlife conservation issues and policy matters that require urgent attention. It has been seen in the last few meetings that the prime focus is on clearances within and around PAs, while conservation issues and agenda items of the members get short shift as they are always deferred for 'next time'.

Late, incomplete information, and misinformation:

The agenda items are usually sent to the members late, sometimes just a day or two before the meeting. As pointed out in a previous communication, the notification of the Standing Committee states that, "The Member-Secretary shall prepare agenda items for the meeting, obtain approval of the Chairman and circulate it to all members *at least fifteen days prior to the date of such meeting.*"

The information given is rudimentary, poorly drafted and the maps of poor quality. Many times the information given is deliberately incomplete and the Committee is also misinformed. To cite just three examples:

1. Proposal for setting up a captive thermal power plant (4x60MW) with 1 MTPA cement grinding unit and 1 MTPA coal washery unit within 1.5 kms from the boundary of Kaimur Wildlife Sanctuary, Uttar Pradesh in the 21st meeting of the Standing Committee, January 24th, 2011: it came to our notice that the state government deliberately misled the Standing Committee of the NBWL by not informing that the matter was subjudice before the Honourable Supreme Court. The state and the MoEF failed to mention the fact that gross violations of the Forest Conservation Act, 1980 had taken place, which in fact was pointed out by the regional office (northern region) of the MoEF. Also, the fact that the matter was sub judice and that construction had already begun in full swing, even though the clearance was yet to be obtained, was withheld from the NBWL. Responsibility has to be fixed both on state/MOEF officials in order to prevent its recurrence.

2. Proposal for diversion of 124.054 ha of forestland from Majathal Wildlife Sanctuary for construction of Kol Dam Project, Himachal Pradesh, in the 20th meeting of the Standing committee on October 13th, 2010: The Chief Wildlife Warden had stated *that no trees* would be felled in the execution of the project. But this was wrong information. The CEC letter dated 04.10.2006 to the Chief Secretary, Government of HP had sought clarification on the number of trees to be felled, and the state government in its reply had stated that about 51,262 trees would be under the

submergence area. Responsibility has to be fixed both on state/MOEF officials in order to prevent its recurrence.

3. Proposal for diversion of 16.09 ha of forest land from Keladevi Wildlife Sanctuary for Dohari Minor Irrigation Project by Water Resource Department, Distt. Karauli, Rajasthan, brought up in the 22nd meeting of the Standing Committee held on April 25th, 2011: The state government withheld the critical fact that this is part of the Ranthambhore Tiger Reserve and even denied the same in the course of the April 25th meeting. Responsibility has to be fixed both on state/MOEF officials in order to prevent its recurrence.

In spite of repeated requests, the agenda is not circulated to all National Board of Wildlife Members or put up on the website (this was discussed in the 21st meeting and approved by the Chair) to avail of the expertise of the wider conservation and scientific community.

In view of such facts, we suggest the following:

- **The agenda should reach us at least two weeks before the meeting as mandated by the notification of the Standing Committee**, and should be copied to all members of the NBWL. This should include maps, surveys, Google maps etc. At present, we usually receive the complete agenda (with detailed information including maps, etc) just a day or so before the meeting as if that factual information provided should be substantial enough for rational decision-making. It is also suggested that the proforma of the Forest Advisory Committee be made applicable to the proforma for Standing Committee meetings.
- **Each project proposal/plea for clearance must be presented to the Standing Committee with the Environmental Impact Analysis Report, the Forest Clearance details and the Project Report.** The documents should be accompanied by the minutes of the meeting of the Environmental Appraisal Committee / Forest Advisory Committee concerning the project, together with any letter of clearance given.
- **Full compliance with the Right to Information Act, 2005**, particularly section 4 (1) (c) since the MOEF is not disclosing the relevant background material under which decisions were taken for clearing projects in/and around PAs. They also have to disclose the names of the officers who took part in the decision making process. This will ensure full transparency and accountability since the public as well as project proponents would know the reasons why a particular project was cleared or rejected and who decided this.
- **Agenda items once rejected by the Standing Committee should not be brought back for discussion and clearance** unless there is a court order to the contrary. This wastes the time of the Committee and undermines the authority of the Committee's decisions.

- There should be a **proper mechanism for monitoring the conditions** imposed while recommending the project proposals. An independent monitoring committee may be set up under each regional office of the MOEF.

As per the notification, the committee's mandate calls for promotion and conservation of wildlife, advising state governments on conservation, effective control of wildlife trade, recommendations in setting up PAs, advising on and control of activities in PAs. Most of us are doing this in an individual capacity but as a collective body our role frankly is minimal. The role of the NBWL is even less so, given that meetings are held about once a year, if that. The last full meeting of the NBWL was held in March, 2010 and more than a year has elapsed.

We are sorry to say that in the current scenario, the Standing Committee of the NBWL has been reduced to a clearing house. Project clearances are *part of* the mandate of the Standing Committee, one of the duties and functions, certainly not the objective, nor its *raison d'être*.

We request you to please take note of our concerns and issue appropriate directions to ensure that the NBWL can fulfill its mandate properly and effectively.

A hard copy of this letter is being sent separately.

Yours sincerely,

1. Mr. Biswajit Mohanty, Wildlife Society of Orissa
2. Dr. Asad Rahmani, Bombay Natural History Society
3. Mr. Kishore Rithe, Satpuda Foundation
4. Mr. T.R. Shankar Raman, Nature Conservation Foundation
5. Dr. Bivabh Talukdar, Aranyaak
6. Dr. M.K. Ranjit Singh
7. Dr. Divyabhanu Singh Chavda
8. Mr. Brijendra Singh
9. Mr. Valmik Thapar
10. Ms. Perna Bindra
11. Mr. Bittu Sehgal
12. Ms. Mitali Kakkar

13. Dr. Uma Ramakrishnan

ADDITIONAL REPORT OF THE EXPERT COMMITTEE ON ELEPHANT CORRIDOR, IN COMPLIANCE OF THE ORDERS OF THE HON'BLE HIGH COURT, MADRAS DATED 04.11.09 IN W.P.NO.10098/08, W.P.NOS.2762 AND 2839 OF 2009, ALONG WITH THE MAP, DULY FURNISHING THE BOUNDARIES AND SURVEY NUMBERS OF THE ELEPHANT CORRIDOR

1) Writ Petition:

The W.P.No.10098/08 was filed by Thiru.Elephant G.Rajendran with prayer to direct the respondents to keep the Corridor of the Animal without any encroachment and any other disturbances for the free movement of Elephants and other Animals. The Principal Chief Conservator of Forests, District Forest Officer, Ooty, District Collector, Ooty and Divisional Engineer Tamil Nadu Electricity Board, Ooty have been impleaded as respondents.

2) Counter Affidavit:

The Principal Chief Conservator of Forests has filed counter affidavit on 20.08.08 furnishing the details of action taken by the Government of Tamil Nadu for the conservation of the elephant and other habitats. The case was taken up for hearing on 26.08.08, on which, the Hon'ble High Court, Madras was pleased to implead the Government of India as a party in this Writ Petition and directed the respondents to file Additional Reply Affidavit clearly giving the particulars regarding proposal to acquire further lands for creating and maintaining elephant

corridors in better manner. In compliance of the orders of the Court, an Additional Counter Affidavit has been filed on 08.09.09.

3) COURT ORDERS:

The Hon'ble High Court, Madras in the interim order dated 30.09.08 in W.P.No.10098/08 and M.P.Nos.1&2 of 2008, issued certain directions and also directed the District Collector, Nilgiris to remove all encroachments from the revenue land, which has been identified for development of elephant corridor. The Hon'ble High Court, Madras in the interim order dated 10.09.09 in W.P.No.10098/08 and M.P.Nos.1&2 of 2008 and W.P.Nos.2762 & 2839 of 2009 in M.P.Nos.1&1 of 2009, also issued directions on the elephant corridor and posted the matter for orders on 17.09.09. The case was not taken up for hearing on 17.09.09.

4) District Collector Affidavit:

The District Collector, Udthagamandalam filed a report in the Hon'ble High Court, Madras dated 16.09.09. As per the directions of the High Court dated 08.04.09, the District Collector has informed the following on the basis of identification made by a committee:-

Encroachments by way of houses and cultivation:

	Total Encroachers		Houses		Cultivation	
	Nos.	Extent Hect.	Nos.	Extent Hect.	Nos.	Extent Hect.
Tribals	41	19.02.90	14	0.08.90	41	18.94.0
Others	293	170.81.14	145	1.04.74	280	169.76.40
Total	334	189.84.04	159	1.13.64	321	188.70.40

Details of identified Government and patta lands which falls under Singara-Moyar elephant corridor area:

Sl. No	Village	Government lands		Forest lands		Forest lands		Total	
		No.of fields	Extent Hect	No.of fields	Extent Hect.	No.of fields	Extent Hect.	No.of fields	Extent Hect.
1.	Masinagudi	80	967.59.0	253	1303.02.0	27	11048.20.0	360	13318.81.0
2.	Sholur	64	204.58.0	126	315.36.50	12	261.95.5	202	781.90.0
3.	Hullathi	4	13.41.50	11	54.91.50	4	74.73.0	19	143.06.0
4.	Kadanadu	--	--	7	19.04.0	1	10241.05.5	8	10260.09.5
5.	Grand Total	148	1185.58.5	397	1692.34.0	44	21625.94.0	589	24503.86.5

5) The Hon'ble High Court, Madras in the hearing dated 13.10.09 has directed that the Principal Secretary to Government, Environment and Forests Department, Chennai -9 and Principal Chief Conservator of Forests to appear and apprise the details of elephant corridor, along with the details of areas, details of buildings used for commercial purpose, solar energized fencing and other suggestions. The subject matter was discussed with experts, local people, Field Forest Officers, Principal Chief Conservator of Forests and Chief Wildlife Warden and studied in depth.

6) In pursuance to the directions of the Hon'ble High Court, Madras dated 13.10.09, the secretary to Government, Environment and Forests Department, Chennai – 9, Principal Chief Conservator of

Forests and Principal Chief Conservator of Forests and Chief Wild Life Warden, have appeared before the Hon'ble Division Bench on 22.10.09 and apprised the details of the elephant corridor along with the details of areas, details of buildings used for commercial purpose, solar energized fencing and other suggestions. A report was also filed in the Hon'ble Court. The Hon'ble Division Bench, after hearing all the parties was pleased to direct to constitute an Expert Committee, headed by the Principal Secretary to Government, Environment and Forests Department, Chennai -9, with Principal Chief Conservator of Forests and Principal Chief Conservator of Forests and Chief Wild Life Warden, to examine the following books and study reports and also other authenticated / specialized books and documents relating to elephant corridor, identify the elephant corridor and prepare a detailed report to be submitted to the Hon'ble High Court, Madras:-

S. No.	Title & Year	Author / Agency
1.	Ecology of the Asian Elephant. (1987 - 1992).	Bombay Natural History Society.
2.	The Asian Elephant in Southern India. (October 1998)	Asian Elephant Research & Conservation Centre, Indian Institute of Science, Bangalore.
3.	A brief documentation of Elephant Corridors in South India (December 2000)	Dr N.Sivaganesan, Salim Ali Centre for Ornithology and Natural History, Coimbatore and R.Sukumar, Asian Elephant Research and Conservation Centre, Indian Institute of

		Science, Bangalore.
4.	Acquisition / Transfer of sensitive areas for restoring/maintaining the sanctity of the Moyar Valley Elephant Corridor. (2001)	Mr.S.Sankaramurthy, I.F.S, For World Wide Fund for Nature - India.
5.	Evaluation of the status, Land use pattern and Habitat Utilization of Elephants in Corridors between Western and Eastern Ghats through Mudumalai Wildlife Sanctuary and National Park and Nilgiris, Tamil Nadu. (2004)	K. Ramkumar & R.Arumugam Centre for Ecological Sciences, Indian Institute of Science Research Station, Masinagudi, The Nilgiris in collaboration with the Tamil Nadu Forest Department (Wildlife Wing), Nilgiris Wildlife & Environment Association.

7) This Hon'ble Court was also pleased to observe to constitute an Expert Committee to,

- (1) examine the above books and study reports and also other authenticated / specialized books and documents relating to elephant corridor, identify the elephant corridor,
- (2) The books, reports and other particulars referred in the Expert Committee Report shall be specifically referenced with page numbers.
- (3) Enquire Forest officers, local people, tribal and also avail opinion from the experts, etc., regarding the elephant corridor in the Nilgiris area and specify the results in the report.
- (4) Any other points / suggestions relating to elephant corridor.

8) In pursuance to the directions issued by the Hon'ble Division Bench of High Court, Madras, an Expert Committee has been constituted with the following members to conduct detailed enquiry as directed by the Hon'ble High Court, Madras and submit report:-

1.	Principal Chief Conservator of Forests and Chief Wildlife warden, Chennai.	Chairman
2.	Chief Conservator of Forests (Tamil Nadu Afforestation Project) and Regional Chief Conservator of Forests for Nilgiris District, O/o. Principal Chief Conservator of Forests, Chennai.	Member
3.	Conservator of Forests, Coimbatore Circle, Coimbatore.	Member
4.	Conservator of Forests and Field Director, Mudumalai Tiger Reserve, Udthagamandalam.	Member
5.	District Forest Officer, Nilgiris North Division, Udthagamandalam..	Member Secretary

9) The said Expert Committee visited the elephant corridor area on 28.10.09 and 29.10.09, intensively enquired the Field Officers, Tribal People and Local People of the area and obtained opinion from the following Experts, Scientists and Senior Forest Officers about the elephant corridor in the Moyar Valley of Nilgiris:-

SENIOR FOREST OFFICERS:

1. Thiru.S. John Joseph, I.F.S.,
Former Principal Chief Conservator of Forests and Chairman,
Society for Social Forestry Research and Development,
Tamil Nadu.
2. Thiru. S. Sankaramurthy, I.F.S.,
Former Principal Chief Conservator of Forests.
World Wide Fund for Nature – India
Tamil Nadu State Office,
No.297, TTK Road, Alwarpet, Chennai – 600 018.

EXPERTS AND SCIENTISTS:

3. Thiru. R. Sukumar,
Professor and Chairman, Centre for Ecological Sciences,
Indian Institute of Science, Bangalore.
4. Thiru.Ajay A. Desai,
Wild Life consultant.
5. Dr. Thiru. N.Sivaganesan,
Principal Consultant, Wild Life and Forests,
No.40, Kavarai Street, Koranad, Mayiladuthurai,
Nagapattinum District.
6. Thiru. B.Ramakrishanan,
Field Officer,
Wild Life Trust of India
No.10, Sandal Wood Depot Road,
Northpet, Sathyamangalam – 638 401,
Erode District.
7. Thiru. R.Arumugam,
Wild Life Biologist,
Wild Life Trust of India,
149/13, Sumangali Nagar,
Suleeswaranpatti, Pollachi,
Coimbatore.

NGOs:

8. Thiru. A.C.Soundarrajan,
Member – The Nilgiris Wild Life and Environment Association
Member – State Wild Life Advisory Board.
Member – Governing Council Mudumalai Tiger Reserve.
"Aaditya", 129- Avalanchi Road, Fern Hill Post,
Ootacamund – 643 001.
9. Thiru. Krupakar and Senani,
Wild Life Film Maker,
Nilgiris South Biosphere Reserve,
Mysore

10. Thiru. N.Mohanraj,
WWF-India
Western Ghats Landscape Office,
5/2, Second cross, chinthamani Nagar,
K.K.Pudur post, Coimbatore 643 038.
11. Thiru. S.Jayachandran,
Joint Secretary,
The Nilgiris and Environment Association,
C/o. District Forest Office (North) Mount Stuart Hill,
Udhagamandalam, Nilgiris.
12. Thiru. Ramesh Bellie,
Secretary,
Nilgiri Potato and Vegetable, Growers Association,
Geetha Lodge Complex,
Ooty.

10) The expert committee has given its report on 04.11.09. The Committee, while stating various factors in detail, has given the following conclusion on the elephant corridor:-

Committees' conclusion

- (1) The northern slopes of the Nilgiri Plateau in Kallahati Slopes Reserved Forest and Singara Reserved Forest are steep and elephant find it difficult to negotiate such slopes. We have seen several accident in the Nilgiris where elephants have been killed while climbing the steep slopes. Elephants may use such areas because they are forced to use them but these cannot be considered as normal slopes supporting elephants. Steep stream beds and rocky stream beds are making crossing at the higher altitudes difficult and dangerous especially for elephant

families with calves. This forces them to move up and down close to human beings in order to find better crossing points. So parallel movement along the slopes is very difficult and dangerous for elephants. Therefore a boundary limiting the altitude which can be said to be normally usable and safe for elephants has been identified along the slopes.

(2) Any human use beyond viable corridor level that can have adverse or stressful impact on elephants and their movement now or in the future should also be included in the corridor or managed in a manner that is not disturbing to wildlife or violating any laws.

(3) For determining minimum width of the corridor, the following criteria have been considered:-

(a) The corridor has to function as a long-term corridor for forage, movement and exchange of gene between populations.

(b) Human impacts and disturbance are found to range well beyond the village boundaries, therefore the corridor will have to have a buffer area so as to isolate at least a part of it from degradation due to human pressures and disturbances.

(c) These corridors will also have to facilitate the movement and use of habitat by other more sensitive species such as tigers, sloth bears, gaur, etc. so the corridor has to take into account other species also.

(d) Attention to critical micro-habitats and perennial/semi-perennial streams that give water, shelter and food for elephants in these areas considered as corridors and also as foraging areas would need to be taken into account. This is a water deficient area in most parts because it is very dry, so securing water sources where access is free, safe and undisturbed for elephants throughout the day is important for inclusion in the corridor. So that elephants can move and feed freely when using these corridors. This is also very important for other sensitive wildlife.

Taking the above factors into consideration a minimum width of 1km for each corridor is required for the movement and long-run survival of elephants and other free ranging species in this landscape.

11) The Committee identified 5 corridors in this area after detailed study of the research reports, views expressed by the tribals, people from Sholur village, opinion given by the NGOs and Retired and serving forest officials and are furnished in the maps.

12) The said Expert Committee in their report has given the following future strategies for the conservation of elephant corridor in the Moyar valley of Nilgiris: -

Future strategies for conservation of corridors:

Short term Strategies:

- (1) Demarcation of the lands that are falling in elephant corridors should be carried out with Survey Nos. and all other details.
- (2) All Revenue lands within the elephant corridor area should be handed over to the forest department. Details are furnished in the Annexure "C" of the report of the Expert Committee. The existing human dwelling places in the revenue lands around town area of Masinagudi village and Mavanahallah and vazhathottam villages will not be disturbed.
- (3) The Legal status of private land in Elephant corridor area, as on date should be maintained and there should not be transfer of title / sale / grant of any fresh rights, etc in the Elephant corridor area by way of registration or otherwise.
- (4) All development activities in the survey numbers mentioned in the elephant corridors areas should be stopped forthwith.
- (5) All development activities in the private/patta land for establishment of resorts, cultivation of crops, clearing & felling of

trees and small scale cottage industry which are carried out in contravention of the relevant Acts and Rules in force should be stopped and the revenue administration should examine the extent and nature of violation and take effective action for restoration of the original status of land. However this ban of raising agriculture crops is not applicable to tribals and Adikannadikas living in the elephant corridor area. They will be allowed to cultivate agricultural crops as were done by them earlier. The details of resorts constructed are furnished in Annexure "D" of the report of the Expert Committee.

- (6) Eco-tourism can be permitted under the guidance of National Tiger Conservation Authority (NTCA) Ministry of Environment & Forests, Government of India and with the approval of the Forest officer not below the Rank of District Forests Officer having territorial jurisdiction over the area.
- (7) All barriers including energized solar fencing erected, across the migratory path way of elephants by the resort owners for the purpose of fencing in the private / patta lands should be removed and free movement of animals and elephants should be ensured for elephant corridor areas. The details of solar fences erected is furnished in Annexure "D" of the report of the Expert Committee.

- (8) The disturbance caused to wild animals by use of flood lights and high voltage beam search lights, using fire crackers, baits in corridor areas should be stopped.
- (9) The development of artificial water bodies, saltlicks, providing forage and animal baits within resorts for attracting wild animals to entertain visitors in the resorts and in any area in the elephant corridors should be stopped.
- (10) Opening of any school, college or any small scale industries or any commercial activity in the elephant corridor area should be banned.
- (11) New road construction which will further fragment the habitats and pave way to create corridors all along the Singara – Sigur – Moyar valley corridors should not be promoted.
- (12) No new electricity connection, water connection shall be given without specific approval of the District committee constituted under the provisions of Tamil Nadu Preservation of Private Forest Act, 1949.
- (13) No power and water connection shall be given to houses built by encroachers in the Revenue / Forest lands in the Corridor area.
- (14) The power and water connection given to encroachers in the elephant corridor area should be disconnected by the concerned authorities.

- (15) Grazing of livestock, collection of Non-timber forest produce, restricted in corridor areas during the dry season when resources are scarce to wild herbivores.
- (16) The seven strategies mentioned in item no.9, 10, 11, 12, 13, 14 and 15 above are not applicable to the Scheduled Tribes living in the Tribal settlement areas.
- (17) Conservation Education programme may be organized often for various stakeholders: (local communities, school children, line department agencies) regarding the importance of maintenance of animal corridors and the importance of wildlife and their habitat conservation programme.
- (18) Suitable, viable, alternate, livelihood schemes may be promoted for the traditional firewood remover, graziers and Non-timber forest produce collectors, to wean away the people's dependence on corridors. Various line agencies may be coordinated to bring in a viable incentive schemes for the forest dependent stakeholders.
- (19) Eco Development Committee to be formed for tribal and other communities for protecting corridors with the participation of local communities for developing their livelihood in a sustainable manner. It is possible to protect the corridors, through People's Participatory Approach and such a mechanism could evolve a

strong and mutual understanding among forest authorities, local communities and other government agencies in achieving the goals.

- (20) All house holders (other than the Scheduled Tribes) hotels, schools, other institutions, commercial or non-commercial shall use only LPG for their fuel consumption. Use of any kind of wood for fuel consumption shall be banned in the elephant corridor area, as already degradation has set in, due to human and cattle pressure in the Mudumalai Tiger Reserve and elephant corridor area.
- (21) The District Authorities should ban vehicle traffic in corridor high way areas after 9 PM to morning 9 AM to ensure free movement of animals between forest areas.
- (22) Periodic testing of domestic livestock droppings from corridors to be carried out by the Veterinary Unit to prevent spread of epidemic in corridor sites of importance. In many occasions, animals die with unknown disease in this reserve. Besides periodical immunization for all live stock should be carried out by Animal Husbandry Department.
- (23) Perennial water resources may be improved within the corridor areas for passage species (tigers, elephants, leopard) Avian and reptile population by appropriate projects and schemes.

- (24) Preventive measures such as speed barriers in animal crossing areas with speed limit and ban to use horns may be enforced strictly in the elephant corridor areas (Moyar-Masinagudi Road: Masingudi-Singara Road: Masinagudi-Sirur, Ooty-Masinagudi via Kallahatti road). Co-ordination with Transport Department (Gudalur and Ooty).
- (25) Development activities along with the flume channel between Maravakandy dam and Moyar village should not be allowed by Tamil Nadu Electricity Board. Widening the canal, construction of cement embankment and deepening of flume channel will affect elephant movement through this migratory route.
- (26) The buildings, quarters and other infrastructures built by Tamil Nadu Electricity Board, which are not required for the production and management of electricity in the area shall be dismantled and the area shall be restored to the original natural status for free movement of elephant and other animals.
- (27) The staff members of Electricity Board, who are not concerned directly with the activities of production of power, in the elephant corridor area shall be relocated to other area.
- (28) The staff of Tamil Nadu Electricity Board residing the Elephant corridor area shall not rear any domestic animal including cattle's, which is causing degradation of the forest area.

(29) The labourers and contractors, who have been engaged for construction in the PUSHEP Project and living unauthorisedly in the area leased out to Tamil Nadu Electricity Board, shall be evicted by the Tamil Nadu Electricity Board and area handed over to Forest Department.

Long term conservation Measures - Corridor Management:

- (1) Acquiring the private Land including the Estate land falling in the corridor for maintaining contiguity of the elephant habitat. Details are furnished in the Annexure "B" of the report of the Expert Committee.
- (2) The surplus lands under the control of Tamil Nadu Electricity Board are returned to the Forest Department along with vacant buildings as the status of the leased land is Reserved Forests.
- (3) All the Revenue land to be transferred to the Forest Department shall be notified as Reserved Forests under the provision of Tamil Nadu Forest Act, 1882. Details of survey no. are furnished in Annexure "C" of the report of the Expert Committee.
- (4) All the private land and estate land shall also be notified as Reserved Forests, as soon as such areas are acquired by the Government. Details are furnished in the Annexure "B" of the report of the Expert Committee.

- (5) Master Plan for the Masinagudi Township should be prepared by the Town & Country planning Department in order to conserve the nature resources and prevent unplanned development.
- (6) Forestry and Land use plan at Landscape level should be prepared for optimal resource Management by the Forest Department covering the entire Nilgiris Biosphere Reserve. A separate Corridor Management Cell to be formulated with Collector of Nilgiris, District Forest Officers of Nilgiris, Assistant Director, Mudumalai Tiger Reserve along with officers of the line departments of the District including research personnel to protect the corridors from various human induced pressures under the Chairmanship of Collector of Nilgiris. This committee should periodically meet and decide various management packages to conserve the corridor in the long run for an effective dispersal of elephants, tigers and other endangered mammals including small mammals, reptiles and bird communities.
- (7) Research studies on the ecology, behavior of elephant, restoring the habitat study on wildlife ecology and biology in the corridor area.

13) A report was filed in the Hon'ble High Court, Madras on 04.11.09 along with the expert committee report, along with the said

conclusion and strategies. The Hon'ble High Court, Madras in the order dated 04.11.09 in W.P.No.10098/08 and in other Writ Petitions was pleased to issue certain directions and the operative portion reads as follows:-

...."The Expert Committee has submitted a report along with the field staff reports. Though certain maps have been enclosed showing the 'Elephant Corridor', no demarcation of the Elephant Corridor has been made therein.

2. The Secretary of the Environment and Forests Department, the Principal Chief Conservator of Forests and Chief Wild Life Warden, Chennai (Chairman of the Expert Committee), the Conservator of Forests, Ooty and the District Forest Officer, Nilgiris North Division, Ooty, who were present in court, submit that a detailed map will be produced on the next date, showing the boundaries of the Elephant Corridor, as suggested by the Expert Committee. In the said map the details of survey numbers, which may fall within the Elephant Corridor, shall be given. We accordingly allow two weeks' time for the Expert Committee to file such map showing the boundaries of the Elephant Corridor.

3. The Secretary to Environment and Forests Department, will in the meantime, place a copy of the report before the state Government along with the map, which will be prepared and produced on the next date. The State Government may file an affidavit and state as to whether they intend to accept the report in its totality or with modification.

4. During the pendency of the Writ Petitions, the respondents will ensure that no illegal construction is made in

the area shown as Elephant Corridor in the report of the Expert Committee. Further, they should not allow any new construction in the area without prior intimation to the Court.

5. No person should be allowed to put a fresh solar/electrical facing within the area as proposed to be Elephant Corridor by the Expert Committee."

14) In pursuance to the said directions of this Hon'ble Court order dated 04.11.09, the Principal Chief Conservator of Forests and Chief Wild Life Warden, has met the Additional Director, Survey and Land Records and sought his assistance in demarcating the corridors on cadastral maps for four villages along with survey number and other essential details. The Principal Chief Conservator of Forests and Chief Wild Life Warden has also instructed the Conservator of Forests, Coimbatore and Nilgiris North Division to collect the following particulars-

- (a) List the survey numbers in the corridor zone of influence keeping the minimum width as discussed from the cadastral map of the village.
- (b) Individual FMB map of the survey numbers.

15) As per the direction of Hon'ble High court on dated 4.11.2009 which has ordered, that the corridor 1 to 5 identified by the committee, have to be marked in a cadastral map and all the survey numbers falling in the length of width of the corridor should be enumerated subsequently Chairman of the Committee directed the

committee members to identify the area which was used by the elephant in the earlier years before construction and after developmental activities further place and verify the fact in the field with the help of revenue officials and surveyor before the deadline given by the Hon'ble High court. Due to the recent natural calamity in the Nilgiris, work could not be completed in time.

16) Action has been pursued immediately on the orders of this Hon'ble Court dated 04.11.09. During 9th and 10th of November 2009 Nilgiris District received unprecedented rains, causing floods, land slides and death of several people when the committee was engaged in survey work. The entire administration of Nilgiris District was brought to grinding halt due to landslides followed by blockade on all roads. Therefore the entire Government, machinery have been geared up to restore normalcy. Hence, the work to identify the survey numbers after ground truth verifications could not be done as planned.

17) Due to natural calamity, certain time has been taken to collect the particulars and identify the survey stones and boundaries of each survey numbers of the area falling in the corridor. This detailed report on the extent of land under private holdings, extent of area falling within the Revenue lands, area under encroachment and number of house holds occupying the Government land have been prepared. Now, the team has completed the ground truth verification

for all villages. The Principal Chief Conservator of Forests and Chief Wild Life Warden has discussed the matter with the Members of the Expert Committee on 17.11.09, 18.11.09 and 19.11.09. and prepared the map with the helps of surveyors of Ooty Taulk and officials from Commissioner of Survey and Settlement.

18) Out of the 5 corridors proposed in the earlier report submitted to the Hon'ble High Court by the committee and as per the suggestion of the Hon'ble High court, all the 5 corridors except one have been consolidated into one thereby bringing the corridor size to a width of between 1 and 1.5 km. However one of the corridors reported in the previous committee report runs through a narrow strip of forests between two tribal settlements namely Chemmanatham and Mavinhalla and this has been shown an offshoot of main proposed corridor by suggesting acquiring of Certain Patta lands in Chemmanatham settlements to facilitate the easy movement of elephants.

The corridor which has been referred to as Masinagudi – Moyar Corridor in the previous report submitted by the committee, runs within the Tiger Reserve and Forest area by crossing the flume channel erected by TNEB. Therefore this corridor is not shown in the map except indicating arrow mark on the movement of elephants.

19) After the field work and examination by the expert committee, the committee has prepared a corridor map, duly marking the predominant elephant corridor in a single lane, after ground truth verification, with a width varying from 1km. to 1.5 km, considering reasonable movement, water source, forage and shelter for elephants in mind and further making the corridor viable to ensure their future generation to move reasonably from one reserve forest to another. The base line of corridor on the southern boundary was drawn at 1000mt contour line bearing in mind that elephants move with little difficulty in the plateau at this contour level. The size of the above said corridor was determined taking in to consideration the existence of dense Forests on either side of the proposed corridor and farm lands of Dodda linge tribal settlements which stretches to a distance of 1 km measuring about 22ha, across the proposed corridor.

20) The most disturbed or critical corridor that needs to be secured first – is to the south of Bokkapuram along the Nilgiris northern slopes which is the most disturbed and is on the verge of being broken completely. This corridor to the south of Bokkapuram is the one where the greatest amount of habitat loss has taken place and where animal movement have become highly restricted.

Methodology adopted for drawing the corridor boundary

21) The cadastral map of the Revenue villages - Masinagudi, Sholour, Hullathy, Kadanar was geo-registered to survey map of India 58 A 10, using Arc GIS 9. the 1000m contour line was digitized and then using this line a buffer was generated for a width of 1 to 1.5 kms.

22) The corridor width shows abnormally wide along the Sigur river mainly due to the over lapping of the buffer lines, which is due to the 1000m contour line running very close on either side of the Sigur river.

23) The following details are furnished in the map.

- (1) Details of Boundaries in the elephant corridor
- (2) Details of Field Survey numbers of the land and its classification namely Forests, Revenue land, Forests of Joint Ownership (Forest Department and Revenue Department) Private estates, Private individual holdings showing Tribal Settlements etc., Superimposed on the combined Cadastral Village map for four villages using different colours.

Boundary descriptions of elephant Corridor

24) Boundary description of the Elephant Corridors proposed in the Sigur Plateau and adjoining areas of the Mudumalai Tiger Reserve, are as follows:-

(1) South

The southern boundary of the elephant corridor starts at 1000m contour line at the foot hill of the Nilgiris Mountains, near eastern boundary of Dodda Moyar Estate on which the tributary of Moyar rising from mountain directly runs towards north. The southern boundary of elephant corridor runs parallel along at 1000m contour line entering southern boundary of Leigh Wood, Northern Hey Estates before it meets the Karimara Hole River and Singara Estate. From then onwards the boundary runs towards south at 1000m contour line till it reaches main gate of the Singara power house of Tamil Nadu Electricity Board. The boundary after crossing Flume channel (Kalhalla) the boundary runs towards north for few hundred meters then again turns east and thereafter runs towards south all along the 1000m contour line to reach the Sholur village near Bokkapuram Revenue Land (S. No.201). From then onwards the boundary runs all along Northern boundary of Revenue Land (S. No.203, and northern boundary S. No. 132, 129, 126 of Patta & Revenue lands) which have got high density bamboo growth and runs crisscross along the foot hills of Sholur village before it enters the southern tip of the Westbury Estate. From then onwards the boundary runs along the Westbury Estate towards east and runs along the Kalhatti Reserve Forest foot Hills parallel towards east and again towards south to reach the

southern end of the Karuveppilai estate of Hulathi Revenue village and reaches the bison view point and boundary runs along the Ooty – Masinagudy highway till it reaches above 1st hair pin bed. The boundary runs all along the foot hills at 1000m contour line to reach Kadanad Revenue Village boundary at the crossing point of Kedar Halla River. Finally the boundary line runs into the Reserve Forest of the Sigur Plateau towards east.

(2) North

24) The northern boundary of the corridor from the western side starts from eastern boundary of the Doddamoyar Estate and runs parallelly towards east for a distance of 1km from the foot hills at 1000m contour line covering part of reserve forest cutting across Bidharhalla River where the tributary from Nilgiris Survey. No. 170 joins at the Bidharhalla River and runs towards east covering northern boundary of Leigh wood and Northern Hey Estates till it goes to Kalmalai Reserve Forest and takes turn on towards northern side perpendicularly to cover the S. No. 169 being a part of Revenue land and takes turn towards eastern side and running along the northern boundary of forest under Joint control of Forest & Revenue Department and Singara Estate. After crossing the flume channel runs across the forest towards east and runs along the northern boundary of cut across the S. No. 185 & 186 of Revenue Land to meet the northern

boundary of S. NO. 540 & 538 owned jointly by Forest Department and Revenue Department. From then onwards an offshoot of main corridor to a width of about 1.5 km cuts across the Bokkapuram road before passing through the Avarahalla RF by cutting across Masinagudi – Ooty Highway to Sigur Reserved Forests through a narrow strip between Chemmanatham and Mavinahalla tribal settlements.

(ii) The northern boundary of the main corridor from the eastern boundary offshoot at Kurumbar Pallam land holdings turn towards east, runs along the northern boundary of the Westberry estate and Southern boundary of the S. No. 379, 380, 363 and 374 of Masinagudi village before crossing the forest and finally cutting across a Patta Land in the S. No. 391 and 399 to reach the Sigur halla at Chokkanahalli. The boundary from the Sigur halla point takes right direction south of the Chokkanahalli tribal settlements towards east passing through S. No. 345 of Kadanad Village. Finally the northern boundary runs parallel to the southern boundary in the Sigur R.F.

25) In the combined Cadastral map, the Committee had marked explicitly a corridor for the free movement of elephants from the Leighwood estate to Kadanadu Village near Chocknahalli tribal settlements along the foot hills to a distance of 22.64 km with a width varying from 1 km to 1½ km, covering the lands which include Forest,

Revenue land individual patta and large holding of Private estates of Masinagudi, Sholur, Hullathi, and Kadanad villages.

26) The large Private Estates owned by few individuals which are used by elephants regularly falling in the proposed corridor area are Leigh wood, Northern hey, Singara, Westbury, Glencaren, and Karuveppilai esates. The total extent private estate comes to 1115.27 ha.

27) The field survey numbers assigned for private estates, individual private holdings, and Revenue lands falling in the proposed corridor are superimposed in the combined cadastral Village map and authenticated by Tahsildhar of Ooty Taulk on 23-11-09. Field survey numbers for forests lands have been provided where these lands are interspaced with Revenue and Patta Lands. The total number of people who are pursuing various avocations namely, operating tourist resorts, practicing agricultural farming, working as laborers, tourist guides, drivers, small traders, etc., would be about 570 based on counting the number of houses out of, which some of them have encroached lands under joint registry. Most of the people, who are going to be directly affected on account of acquisition of proposed corridor area, are from outside the Sigur plateau who are operating illegal tourism thereby causing man-animal conflict besides creating environmental degradation.

28) The direct and indirect environment impact according to the study on "Status Assessment of Tourism on the Sigur plateau" made by W.W.F during 2008 on account of tourist resorts are as follows.

(a) "About 73000 tourist both India and Foreigners stay at tourist resorts annually", which is about 40% of total no of tourists visit Mudumalai Tiger Reserve annually. This is beyond the carrying capacity of the area bringing more stress on the Forests and other natural resources.

(b) 91% of resort owners have fenced their holding with barbed wire and energized electric fencing in the corridor area, as against none in the tourist houses owned by Government Department and Tourism Department.

(c) Unregulated and unauthorized, trekking, Jeep safaris both on the main road and into the Reserve Forests are being offered to guests directly by the 57% of the resorts.

(d) In addition 60% of the resorts take their guests to tribal settlements and some of the resorts arrange for tribal people to come to resorts to perform traditional dances by exploiting their ignorance.

(e) "Non agriculture exotic species of plants are grown on over 60% of tourist facilities". There is a possibility of escape of such exotics in to the Forest area and become invasive alien species.

Another possibility is that occurrence of hybridization between native and exotic species of same genus.

(f) "About 60% of resorts have lights on their path way, open areas surroundings the buildings as well as in the core area", as against minimum lights fixed in the Government owned tourist Rest Houses.

(g) Some of the resorts pump or divert water from the streams / rivers or natural springs.

(h) Water heating facilities using wood accounts for 13% while 15% of resorts use wood for cooking. This is in addition to designated campfire facilities in 85% of private tourists, whereas Government facilities do not have campfire. It is pertinent to note that 65% of fire wood consumption comes from Forests.

(i) Majority of resorts throw bio-degradable wastes in to open dump /pit, most of the toilet water (black water) is disposed off via by septic tank and finally such water will be discharged in to the surroundings.

(j) Responsible tourism is important within the natural areas, that the integrity of the environment and local community is not comprised. However what we have seen on the current status of tourism on the Sigur Plateau in Tamil Nadu is not benefiting the environment or communities but rather in having negative impacts.

Given the increasing trends in unregulated tourism in this plateau this is likely to result in degradation of Forests and further negative impacts on environment, and deterioration in the conservation of large mammal if these things are not reversed.

Hence it is suggested that any new resorts / major developments of commercial activities denuding the characteristic of land coming around the corridor area in the Sigur Plateau in future will have to get clearance from the Principal Chief Conservator of Forests and Chief Wildlife Warden, Chennai.

29) Thousands of House holders of families including Masinagudi Town Panchayat, Moyar and people including tribal/Non-tribals living around Masinagudi township area to a radius of about 1.5km, distance are not coming under the corridor. Hence they are not disturbed. While implementing the corridor area, it is further brought to the notice of Hon'ble High Court that tribals living in settlement of Bokkapuram, Doddalingi, Chokkanahalli, Takkal, Kurumbarpallam, Koilpatti, Mavinahallah, Chemmanatham, Vazhaithottam, Siriyur and Anaikatti are not proposed to be shifted from their settlements falling in the corridor area as they are original inhabitant of the area among human population and their lively hood activities are akin to the natural ecosystem and any way did not alter the natural Wildlife habitat. That apart some of the people (non-tribal) who are living near the

Mavinhallah and Vazhaithottam tribal settlements are also not going to be disturbed and such area does not come under the proposed corridor.

30. Justification for acquire/manage some of the lands, which are abutting the corridor

Joint Registry Land

Lands which are marked in the cadastral map as joint registry is the land containing forest cover declared under Section 26 of the Tamilnadu Forest Act, 1882 and handed over to the forest department. However this land is yet to be notified as Reserve Forest under Section 16 of Tamilnadu Forest Act 1882. The total extent of such lands, which need to be notified under the provisions of Tamilnadu Forest Act 1882, for better protection of the area from encroachment, is 1514 Ha. The few encroachments in this area need to be evicted at the earliest.

TNEB LAND

The lands, measuring 20.42 Ha., which are leased to the Tamilnadu Electricity Board but not utilized by them, but falling in the elephant corridor or there is a movement of elephants, have to be handed over to the forest department for notification. The details are furnished in the Annexure.

Revenue Lands

All the revenue lands that are used by the elephants and having good habitat for elephants should be handed over to the forest department. All revenue lands including encroachments in the revenue lands situated between two tribal settlements (Mavinahalla and Chemmanatham) having devoid of vegetation, where agriculture is in practice should not be given any title or their occupation shall not be regularized by way of patta or otherwise. The occupants in that revenue lands shall not be permitted to erect fencing or any physical barriers.

Exemption

The existing schools, places of worship and health care facilities, which are coming under the Elephant corridor may be allowed to continue with in the present occupied area. There should not be any further developments.

31) The following particulars are also furnished in the annexures:-

- (1) Details of revenue land to be transferred
- (2) Details of private lands including estates to be acquired in a phased manner.

32) The approximate land value for all patta lands including private estates measuring **1626.27 ha.** covering all the four villages per the guideline value fixed by the Government per acre is Rs. 105.00 Crores.

32) The Government Revenue lands measuring 195.44.65 Ha. falling with in the elephant corridor area may be immediately transferred to the control of Forests Department.

33) To avoid such worsening catastrophic situations in future as happened in the recent flood in Nilgiris the committee is of the opinion that all the strategies suggested for conservation of Sigur plateau (short terms and long terms) may be considered by the Hon'ble High Court in the interest of preserving Ecology of this area.

34) The expert committee on Elephant Corridor furnishes (1) the details of Abstract Class Wise Extent of Land falling within the Elephant Corridor Area, (2) The details of land with extent, Survey No., Guidelines value and land use pattern in Annexure – II and (3) A Map indicating the boundaries, Survey No. etc., in Annexure – III.

Annexure – I

Class Wise Details of Extent of Land falling within the Elephant Corridor Area.

(in Ha.)

ABSTRACT

SI No	Name of Revenue village	EB	Combined Registry	Govt land	Patta lands (extent in Ha)	Estate	Total	Govt guidelines value
1	Sholur	13.38.00	249.14.0	67.97.00	329.84.90	197.61.00	970.29.94	328442938
2	Masinagudi	7.04.00	1265.57.0	115.04.65	102.305.00	889.92.88	2411.12.50	661253860
3	Kadanadu		0	0	71.16.00	0	71.16.00	41471200
4	Hullathy		0	12.43.00	7.65.00	27.74.00	116.95.00	18681639
	TOTAL	20.42.00	1514.71.00	195.44.65	511.00.94	1115.27.00	3569.53.44	1049849637

Total Government Land 1730.57.65

Total Private Land 1626.27.94

Total Guidelines Value of Private Lands Rs. 1049849637

Annexure – II

LIST OF SURVEY NUMBERS, EXTENT, OWNERSHIP AND VALUATION
OF LANDS ETC., FALLING WITHIN THE ELEPHANT CORRIDOR
MARKED ON THE VILLAGE CADASTAL MAP

SHOLUR REVENUE VILLAGE

Sl. No.	S.No.	Extent	Classification		Rate per Ha	Value	Remarks
			Patta	Government			
1	107/1	74.10.0		Govt	0		RF
2	107/2	13.38.0		Govt	324000	4335120	EB, Trees
3	107/3	4.04.0		Govt	0		Combined registry
4	108/1	6.60.0	Patta		324000	2138400	West bury
5	108/2	4.16.0		Govt	0		Nilapatina kotai
6	109/1A2	115.10.0	Patta		324000	37292400	Westbury
7	109/1A3	2.75.5	Patta		324000	892620	Westbury
8	109/1A4						
9	109/1B						
10	109/1C	2.75.5	Patta		324000	892620	Westbury
11	109/1D	4.66.5	Patta		324000	1511460	Westbury
12	109/2	2.23.0	Patta		324000	722520	Westbury
13	110/1	25.74.0	Patta		324000	8339760	Westbury
14	110/2	0.38.5	Patta		324000	124740	Westbury
15	111	18.84.0	Patta		324000	6104160	Westbury
16	112	10.40.0	Patta		220/M2	22880000	Westbury
17	113/1	2.16.0	Patta		220/M2	4752000	Westbury
18	113/2	0.77.5		Govt			Odai

19	113/3	12.58.0	Patta		324000	4075920	Westbury
20	115/3	63.25.0		Govt			VGG
21	116	5.88.0	Patta		324000	1905120	Silver oak trees
22	117	2.52.0	Patta		618000	1557360	Silver oak trees
23	118	4.44.0	Patta		220/M2	9768000	Silver oak trees
24	119	4.68.0	Patta		324000	1516320	Silver oak trees and building
25	120/1	1.45.5	Patta		324000	471420	Forest hill resort
26	120/2	0.20.5	Patta		324000	66420	Vacant
27	121	1.75.0	Patta		324000	567000	Vacant
28	122	2.36.0	Patta		324000	764640	Resort
29	123	2.94.0	Patta		324000	952560	Resort
30	124/1	0.98.0	Patta		324000	317520	Residence Mohanraj
31	124/2	0.25.5		Govt			Odai
32	124/3	6.44.0	Patta		324000	2086520	Temple residence building
33	125	0.19.0		Govt			Tharisu
34	126	1.06.0	Patta		220/M2	2332000	Jungle
35	127/1	0.03.5	Patta		324000	11340	Jungle
36	127/2	0.28.5	Patta				Odai
37	127/3	0.58.0	Patta		324000	187920	Jungle
38	128/1A	1.92.0	Patta		324000	622080	Vacant
39	128/1B	1.92.0	Patta		220/M2	4224000	Vacant
40	128/2	0.01.5		Govt			Odai
41	129	2.90.0		Govt			Tharisu
42	130	3.63.0		Govt			Tharisu
43	131	3.02.5		Govt			Tharisu
44	132	3.24.0		Govt			Tharisu
45	133	3.78.0	Patta		324000	1224720	Jungle Trees
46	134	0.71.5	Patta		324000	231660	Jungle trees
47	135	0.34.0	Patta		324000	110160	Jungle trees

48	136	2.64.0	Patta		324000	855360	Jungle trees
49	137	1.16.0	Patta		618000	716880	Jungle
50	138	3.96.0	Patta		324000	1283040	Jungle
51	139	1.22.0	Patta		324000	395280	Cultivation
52	140	27.52.0		Govt			Odai
53	141/1	0.16.5	Patta		165/M2	272250	Resort
54	141/2	1.01.5	Patta		165/M2	1674750	Resort
55	141/3	1.22.0	patta		165/M2	2013000	Resort
56	142	0.41.0		Govt			Poromboke
57	143	1.16.0		Govt			Revenue Forest
58	144/1	2.38.5	Patta			5247000	Buildings
59	144/1A	0.06.90	Patta		220/M2	151800	vacant
60	144/1B	1.57.45	Patta		220/M2	3463900	Road
61	144/1C	0.03.0	Patta		220/M2	66000	Building
62	144/1D	0.71.15	Patta		220/M2	1565300	Vacant
63	144/2A	1.69.0	Patta		618000	1044420	Buildings
64	144/2B	1.06.0	Patta		618000	655080	Buildings
65	144/3A1	6.55.0	Patta		324000	2122200	Building cultivation
66	144/3A2	2.07.5	Patta		618000	1282350	Casadeep resort
67	144/3B	1.42.5	Patta		324000	461700	Cultivation building
68	144/4	0.18.5		Govt			Govt path
69	144/5	0.20.5	Patta		220/M2	451000	Vacant
70	144/6	0.15.80	Patta		220/M2	347600	Building
71	144/7	1.70.30	Patta		220/M2	3746600	Safari Resort
72	144/8	0.85.90	Patta		220/M2	1889800	Vacant
73	145	14.60.0	Patta		220/M2	32120000	Vacant
74	146	1.83.5	Patta		324000	594540	Resort
75	147/1	0.11.0	Patta		324000	35640	Vacant
76	147/2	0.11.0		Govt			Govt. Road
77	147/3	3.92.0	Patta		220/M2	8624000	Building
78	148/1	0.67.0	Patta		324000	217080	Vacant
79	148/3	0.08.0	Patta		324000	25920	Vacant
80	148/4	0.06.0	Patta		324000	19440	Vacant
81	148/5	0.50.0	Patta		324000	162000	Vacant

82	148/6	0.06.0	Patta		444000	26640	Vacant
83	148/7	0.46.0	Patta		444000	204420	Vacant
84	148/8	1.09.0	Patta		444000	483960	Building
85	149/1A1	0.64.0	Patta		618000	395520	Cultivation
86	149/1A2	0.20.5	Patta		618000	126690	Cultivation
87	149/1A3	0.07.5	Patta		618000	46350	Vacant
88	149/1A4	0.33.5	Patta		618000	207030	Cultivation
89	149/1A5	0.32.0	Patta		618000	197760	Cultivation
90	149/1B	0.04.5	Patta		444000	19980	Vacant
91	149/2	0.52.0	Patta		618000	321360	Vacant
92	149/3	0.32.0	Patta		618000	197760	Vacant
93	149/4	1.08.0	Patta		618000	667440	Vacant
94	150	3.38.0	Patta		324000	1095120	Jungle hut resort
95	151	2.24.0	Patta		324000	725760	Jungle hut resort
96	152	2.46.0	Patta		444000	1092240	Resort
97	153	4.28.5		Govt			Govt unreserved kadu
98	154	4.69.5		Govt			Unreserve kadu
99	155/1	7.08.5		Govt			RF and Odai
100	155/2	0.08.0		Govt			Govt Road
101	155/3	0.14.0		Govt			Govt RF Odai
102	152/6	0.04.85	Patta		444000	21534	Vacant
103	152/7	0.08.09	Patta		444000	35920	Buildings
104	156/2	8.38.0	Patta		1791500	15012770	Blue valley resort
105	156/4	0.48.0	Patta		865000	415200	Vacant
106	156/5	0.28.0	Patta		1483000	415240	Vacant
107	158/1	1.13.0	Patta		618000	698340	Resort
108	158/2	0.59.0	Patta		324000	191160	Resort
109	159	3.07.0		Govt			Tharisu
110	160	1.76.0	Patta		324000	570240	Cultivation
111	161/1	1.65.5	Patta		324000	536220	Cultivation
112	161/2	2.29.5	Patta		324000	743580	Cultivation
113	161/3	1.97.5	Patta		324000	639900	Cultivation
114	162	2.73.5	Patta			6017000	Cultivation
115	163	4.34.0	Patta		324000	1406160	Cultivation

116	164/1	0.17.0	Patta		324000	55080	Cultivation
117	164/2	0.77.0		Govt			Govt odai
118	164/3	1.41.5	Patta		324000	458460	Cultivation
119	165	3.44.0	Patta		220/M2	7568000	Cultivation
120	166/1	0.80.0	Patta		324000	259200	Cultivation
121	166/2	1.68.0	Patta		324000	544320	Cultivation
122	167/1	2.48.0	Patta		324000	803520	Cultivation
123	167/2	0.29.0		Govt			Govt odai
124	167/3	0.54.0	Patta		324000	174960	Building cultivation
125	168	0.59.5	Patta		324000	192780	Cultivation
126	169/1	0.23.5		Govt			Govt odai
127	169/2	1.55.5	Patta		324000	503820	Building
128	170	2.30.0	Patta		324000	745200	Vacant
129	171	1.68.0		Govt			Tharisu
130	172/1	1.03.5	Patta		220/M2	2277000	Cultivation
131	172/2	0.84.0	Patta		220/M2	1848000	Cultivation
132	173	0.99.0	Patta		220/M2	2178000	Building and cultivation
133	174	0.86.0		Govt			Odai
134	175/1	1.49.0	Patta		324000	482720	Vacant
135	175/2	0.02.5		Govt			Govt odai
136	175/3	0.67.0	Patta		324000	217080	Vacant
137	175/4	0.67.0	Patta		324000	217080	Vacant
138	176	1.76.0	Patta		220/M2	3872000	Resort
139	177	0.84.0		Govt			Govt odai
140	178/1	0.92.0	Patta		324000	298080	Resort
141	178/2	4.68.0	Patta		324000	1516320	Resort
142	179/1A	2.73.0	Patta		324000	8840520	Building
143	179/IB	0.81.0	Patta		324000	262440	Building
144	179/2	0.76.0	Patta		324000	246240	Building
145	179/3	0.50.0	Patta		324000	162000	Building
146	180/1	2.26.5	Patta		324000	733860	Building
147	180/2	0.49.5	Patta		220/M2	1089000	Building
148	181/1	1.80.0	Patta		324000	583200	Vacant
149	181/2	1.54.0	Patta		324000	498960	Vacant
150	182/1	2.54.0	Patta		324000	822960	Rajbhavan resort
151	182/2	0.21.0	Patta		324000	68040	Vacant
152	183/1	0.04.5		Govt			Odai
153	183/2	1.40.0	Patta		324000	453600	Vacant

154	183/3	1.74.0	Patta		324000	563760	Resort
155	184/1	0.06.0	Patta		324000	19440	Vacant
156	184/2	0.18.5		Govt			Odai
157	184/3	0.58.0	Patta		220/M2	3476000	Resort Rohan Mathai
158	185/1	2.84.0	Patta		324000	920160	Vacant
159	185/2	0.43.5		Govt			Govt odai
160	186	3.16.0	Patta		324000	1023840	Vacant
161	187	0.60.0	Patta		324000	194400	Vacant
162	188	3.04.0	Patta		324000	984960	Vacant
163	189	5.60.0	Patta		220/M2	12320000	Building cultivation
164	190	1.72.0	Patta		220/M2	3784000	Building
165	192/1	2.22.0	Patta		440249	977360	Building
166	192/2	0.12.0		Govt			Govt Bridle path
167	192/3	0.04.0	Patta		324000	12960	Vacant
168	193	2.07.0		Govt			Poromboke
169	194	1.88.0	Patta		324000	609120	Pilgin silver oak trees cultivation
170	195	7.14.0	Patta		220/M2	19278000	Cultivation
171	196/1	0.02.5	Patta		324000	8100	Building Cultivation
172	196/2	0.10.0	Patta		324000	32400	Cultivation
173	196/3	0.19.0		Govt			Odai
174	196/4	0.04.0	Patta		324000	12960	Pilgin cultivation
175	196/5	0.56.0	Patta		324000	181440	Pilgin Building cultivation
176	197/1	0.63.5		Govt			Govt Reserve odai
177	197/2	7.14.0	Patta		324000	2313360	Building silver oak
178	198/1	6.21.0	Patta		324000	2012040	KV prasath building
179	198/2	1.47.0		Govt			Govt reserve odai

180	198/3A	11.78.22	Patta		324000	3817744	Monark resort
181	198/3B	3.73.89	Patta		324000	1211404	Vacant
182	198/3C	0.59.95	Patta		324000	194238	Vacant
183	198/3D	0.59.95	Patta		220/M2	1318900	Building
184	198/3E	6.93.99	Patta		324000	2248528	Vacant
185	199/1	4.12.0	Patta		324000	1334880	Building silver oak cultivation
186	199/2	0.28.0	Patta		220/M2	616000	Vacant
187	200/1	0.84.0	Patta		324000	272160	Cultivation
188	200/2	1.82.0	Patta		324000	589680	Cultivation
189	200/3	3.46.0	Patta		324000	1121040	Pilgin Cultivation
190	538	38.25.0		Govt			RF
191	540/1	237.87.5		Govt			Combined registry
192	540/2	0.50.0		Govt			Tharisu
193	540/3	0.06.0		Govt			Road
194	540/5	0.03.5		Govt			Road
195	540/6	0.07.5		Govt			Road
196	540/7	0.04.0		Govt			Road
197	540/8	0.15.0		Govt			Road
198	540/4	0.07.5		Govt			Road
199	540/9	0.15.0		Govt			Road

Government	-	67.97.00
RF	-	112.35.00
Combined Registry	-	249.14.00
EB	-	13.38.00
Westbury Estate	-	197.61.00
Patta	-	329.84.94
Total	-	970.29.94
Land Value	-	Rs. 328442938/-

MASINAGUDI VILLAGE

Sl No	Survey Nos	Extent	Classification		Rate per Ha/Sqmtr	Value	Remarks
			Patta	Govt			
1	241/4	21.99.5	Patta		518000	11393410	Leewood Estate Coffee
2	242	0.92.0		Govt			RF
3	243	115.35.0	Patta		518000	59751300	Northern Hey Estate Coffee
4	244	5.20.0	Patta		518000	2693600	Northern Hey Estate Coffee
5	245/1	26.25.5	Patta		518000	13600090	Northern Hey Estate Coffee
6	245/2	7.90.5	Patta		518000	4094790	Northern Hey Estate Coffee
7	245/3	4.96.50	Patta		518000	2571870	Northern Hey Estate
8	246/1	10.71.0	Patta		518000	5547780	Northern Hey Estate Coffee
9	246/2	10.91.0	Patta		518000	5651380	Northern Hey Estate Coffee
10	246/3	15.12.0	Patta		518000	7832160	Northern Hey Estate Coffee
11	246/4	8.72.0	Patta		518000	4516960	Northern Hey Estate Coffee
12	247/1	12.30.5	Patta		518000	6373990	Northern Hey Estate Coffee
13	247/2	4.20.0	Patta		518000	2175600	Northern Hey Estate Coffee
14	247/3	14.29.5	Patta		518000	7404810	Northern Hey Estate Coffee
15	247/4	2.93.5	Patta		518000	1520330	Northern Hey Estate Coffee
16	247/5	23.01.5	Patta		518000	2709917	Northern Hey Estate Coffee
17	252/1	40.49.0	Patta		518000	20973820	Singara Estate

							Coffee
18	252/2	12.15.0	Patta		518000	6293700	Singara Estate Coffee
19	252/3	17.92.0	Patta		518000	9282560	Singara Estate Coffee
20	252/4	62.59.0	Patta		518000	32421620	Singara Estate Trees
21	252/5	18.47.5	Patta		518000	9570050	Singara Estate Trees
22	253 318/1	6.04.0		Govt			Anadheenam
23	318/2	0.20.0		-do-			Govt. well
24	319	0.42.5		-do-			Govt. Road
25	320	1.94.0		-do-			Govt Tharisu
26	322	0.38.0		-do-			Tharisu
27	324/1	2.42.5	Patta		519000	1258575	Resort
	324/2	0.40.5	Patta		519000	210195	vacant
28	325	0.06.5	Patta		519000	33735	Patta road
29	326/1	0.59.5	Patta		519000	308805	Vacant
30	326/2	0.60.0	Patta		519000	311400	Vacant
31	327	7.89.5	Patta		519000	4097505	Vacant
32	328	4.07.0	Patta		518000	2108260	Building vacant
33	329	1.49.5		Govt			Anadheenam
34	332	1.27.5	Patta		518000	660450	Building vacant
35	333	4.44.0		Govt			Anadheenam
36	169	3.96.0		Govt			Tharisu
37	185/1	5.04.0		Govt			Singara RF
38	185/2	3.68.0		Govt			Tharisu
39	186	7.82.0		Govt			Tharisu
40	241/1	3.30.0	Patta		518000	1709400	Leewood Estate Trees
41	241/2	21.10.5	Patta		518000	10932390	Leewood Estate Coffee, trees
42	241/3	7.18.0		Govt	0	0	Govt Tharisu
43	255	0.21.5		Govt	518000	111370	EB
44	256	0.12.0		Govt	518000	62160	EB
45	257	0.19.5		Govt	518000	101010	EB
46	258	0.39.5		Govt	518000	204610	EB

47	309	0.20.0		Govt			Road
48	311/1	0.02.5		Govt	519000	12975	EB
49	311/2	0.11.0		Govt			Road
50	311/3	0.03.0		Govt	519000	15570	EB
51	313/1	0.03.0		Govt	519000	15570	EB
52	313/2	0.12.0		Govt			Road
53	313/3	0.03.5		Govt	519000	18165	EB
54	314	0.28.5		Govt			Road
55	315/1	0.15.5		Govt			Road
	315/2	0.03.0		Govt			EB
56	379/1	1.33.0	Patta		519000	6902700	Church
57	379/2	0.63.0		Govt			Odai
58	379/3	3.75.0	Patta		519000	1946250	Building
59	379/4	0.97.0		Govt			Odai
60	379/5	7.27.0	Patta		519000	3773130	Building
61	379/6	0.23.0		Govt	519000	119370	odai
62	388	0.27.5		Govt			Road
63	384	2.19.5		Govt			Natham
64	391/1	14.19.5	Patta			76653000	GRG land
65	391/2	8.68.0	patta		519000	4504920	GRG School Building
66	391/3A	9.58.5	Patta		519000	4974615	Vacant
67	391/3B	1.95.5	Patta		519000	1014645	Vacant
68	391/3C	0.95.0	Patta		519000	493050	Vacant
69	391/4	0.46.0		Govt			Anadheenam
70	391/5	4.08.0		Govt			Tharisu
71	396/1	2.75.5		Govt			Anadheenam Aavin
72	396/2	0.41.5		Govt			Cultivation road
73	397	1.10.0		Govt			Tharisu
74	398/1	164.44.0		Govt			Combined registry
75	398/2	3.24.0		Govt			Tharisu
76	400/1	5.18.5	Patta		1828540	9480950	
77	400/2	0.28.5		Govt			Odai
78	401	8.03.0		Govt			Odai
79	387	11.09.0		Govt			Anadheenam
80	388	0.27.5		Govt			Road

81	229	7.28.0		Govt	0		Anadheenam
82	230	0.29.0		Govt	0		Road
83	233/1	0.03.0		Govt	0		RF
84	233/2	4.02.0		Govt	0		RF
85	242	0.92.0		Govt	0		RF
86	250	11.04.5		Govt	0		Sarkar Tharisu
87	251	4.61.5		Govt	519000	2395185	Singara EB
88	253	7.51.0		Govt	0		Sarkar Tharisu
89	280	161.88.0		Govt	0		Combined registry
90	281	0.11.0		Govt	0		RF Road
91	282	0.11.5		Govt	0		RF Road
92	283	0.12.0		Govt	0		RF Road
93	284	0.16.0		Govt	0		RF Road
94	285	0.16.0		Govt	0		RF Road
95	286	0.19.0		Govt	0		RF Road
96	287	0.26.0		Govt	0		RF Road
97	288	0.17.5		Govt	0		RF Road
98	289	0.21.0		Govt	0		RF Road
99	290	0.17.0		Govt	0		RF Road
100	291	0.11.0		Govt	0		RF Road
101	292	254.13.0		Govt	0		Combined registry
102	295	0.42.0		Govt	0		Combined registry
103	297	0.27.5		Govt	0		Combined registry
104	304	0.56.5		Govt	0		Sarkar odai
105	307	0.44.5		Govt	0		Sarkar odai
106	317	684.42.5		Govt	0		Combined registry
107	330	1.46.0	Patta		518000	756280	House vacant
108	331	0.18.5	Patta		519000	96015	Patta road
109	334	3.36.0		Govt	0		RF
110	349	11.62.5		Govt	0		Anadheenam
	350						
	351						
111	379	3.24.0	Patta		518000	1678320	Quitcornor, Cultivation
	380/1						
112	380/2A	0.12.5	Patta		518000	64750	Patta road
113	380/2B	0.50.5	Patta		518000	261590	Cultivation, Building
114	380/2C	0.60.0	Patta		519000	311400	Cultivation, Building

115	380/2D	0.60.0	Patta		519000	311400	Cultivation, Building
116	380/3	1.60.0	Patta		519000	830400	Vacant
117	380/4	0.29.0	Patta		518000	150220	Building
118	380/5	0.16.0	Patta		519000	83040	Road
119	381	11.23.0		Govt	0	0	RF
120	382/1	1.33.0	Patta		519000	690270	Jungle trees
121	382/2	0.75.0		Govt	0	0	Footpath
122	382/3A	5.06.77	Patta		519000	2630136	Resorts
123	382/3B	0.40.50	Patta		519000	210195	Building and vacant
124	382/3c	0.20.23	Patta		519000	104994	Building and vacant
125	383/1	3.19.5	Patta		518000	16550510	Building trees
126	383/2	4.59.5	Patta		519000	2384805	Building trees
127	385	1.68.0	Patta		518000	870240	Resorts
128	386	4.85.5		Govt	0	0	RF
129	389	0.40.5		Govt	0	0	Road
130	390	3.76.5	Patta		519000	1954035	Vacant
131	392/1	2.36.5	Patta		518000	1225070	Jainresorts
132	392/2	2.40.0	Patta		518000	1243200	Jainresorts
133	392/3	0.84.0	Patta		410/M2	3444000	Jainresorts
134	392/4A	0.41.0	Patta		518000	212380	Building
135	392/4B	0.20.0	Patta		518000	103600	Vacant
136	392/4C	0.20.0	Patta		518000	103600	Vacant
137	392/5	0.41.0	Patta		410/M2	1681000	Aavin
138	393/1A	4.15.0	Patta		519000	2153850	Building
139	393/1B	0.81.0	Patta		519000	420390	Building
140	393/2	1.03.0	Patta		519000	534570	Building
141	393/3	0.61.0	Patta		519000	316590	Building
142	394	0.29.0		Govt	0	0	Anadheenam
143	395	0.34.5		Govt	0	0	Anadheenam
144	399/1	3.60.0	Patta		1828540	6582744	cultivation
145	399/2	0.63.0	Patta		911799	574433	Road
146	399/3	0.70.0	Patta		519000	36330	cultivation
147	399/4A1	32.38.0	Patta		1828540	59208125	cultivation & resorts
148	399/4A2	0.12.30	Patta		1828540	224910	Building
149	399/4A3	0.22.70	Patta		1828540	415079	Building GRG
150	399/4B	0.18.5	Patta		1828540	337440	Building
151	249	9.11.0	Patta		518000	4750060	Singara Estate

152	251/1	40.49.0	Patta		518000	20973820	Singara Estate
153	252/2	12.15.0	Patta		518000	6293700	Singara Estate
154	252/3	17.92.0	Patta		518000	9282560	Singara Estate
155	252/4	62.59.0	Patta		518000	32421620	Singara Estate
156	252/5	18.47.5	Patta		518000	9570050	Singara Estate
157	254/1	7.78.0	Patta		518000	4030040	Singara Estate
158	254/2	7.20.0	Patta		518000	3729600	Singara Estate
159	254/3	9.54.0	Patta		518000	4941720	Singara Estate
160	254/4	0.96.0	Patta		518000	497280	Singara Estate
161	254/5	0.55.0	Patta		518000	284900	Singara Estate
162	254/6	1.32.0	Patta		518000	683760	Singara Estate
163	254/7	30.54.5	Patta		518000	15822310	Singara Estate
164	263/1	0.03.0	Patta		518000	15540	Singara Estate
165	265/1	0.09.5	Patta		518000	49210	Singara Estate
166	266/1	0.06.5	Patta		518000	33670	Singara Estate
167	267/1	0.02.5	Patta		518000	12950	Singara Estate
168	267/3	0.02.0	Patta		540/M2	10360	Singara Estate
169	268/2	0.02.5	Patta		518000	12950	Singara Estate
170	269/1	0.01.0	Patta		518000	5180	Singara Estate
171	270/1	0.00.5	Patta		518000	2595	Singara Estate
172	271/1	0.01.0	Patta		518000	5190	Singara Estate
173	272	4.20.0	Patta		518000	2175600	Singara Estate
174	273/2	0.94.0	Patta		518000	486920	Singara Estate
175	274/1	18.19.0	Patta		518000	9422420	Singara Estate
176	274/3	3.92.5	Patta		518000	2033150	Singara Estate
177	275	25.12.0	"		518000	13037280	Singara Estate
178	276/2	1.88.5	"		518000	976430	Singara Estate
179	277	14.83.5	"		518000	7684530	Singara Estate
180	278	35.34.0	"		518000	18306120	Singara Estate
181	293	2.30.0	"		518000	1191400	Singara Estate
182	294	31.72.0	"		518000	16430960	Singara Estate
183	296	3.06.0	"		1660512	5081167	Singara Estate
184	302	2.50.0	"		518000	1295000	Singara Estate
185	302	4.57.0	"		518000	2367260	Singara Estate
186	305	2.00.0	"		518000	1036000	Singara Estate
187	308	10.78.0	"		518000	5584040	Singara Estate
188	310/1	1.27.0	"		518000	657860	Singara Estate

189	310/2	0.03.5	"		519000	18165	Singara Estate
190	316	0.91.5	"		519000	474885	Singara Estate

Govt	115.04.65
RF	31.23.5
Combined Registry	1265.57.0
EB	7.04.0
Singara Estate	551.94.35
Leewood Estate	76.10.0
Northern Hey Estate	261.88.5
Patta	102.305.0
Total Extent	2411.12.5
Total patta land cost	661253860

KADANADU VILLAGE

Sl No	Survey No	Extent	Classification		Rate per Ha	Value	Remarks
			Patta	Govt			
1	1/1	55.00.0	Patta		235000	12925000	Vacant jungle trees
2	1/2	3.00.0	Patta		235000	705000	Vacant jungle trees
3	2/2	3.24.0	Patta		270/Sqmtr	8748000	Vacant
4	3	3.12.0	Patta		235000	733200	Building vacant
5	4/1	3.22.0	Patta		270/Sqmtr	8694000	Building resorts vacant
6	4/2	3.58.0	Patta		270/Sqmtr	9666000	Vacant

Poromboke	Nil
Patta	71.16.0
Total Extent	71.16.0
Total patta land cost	41471200/-

HULLATHY VILLAGE

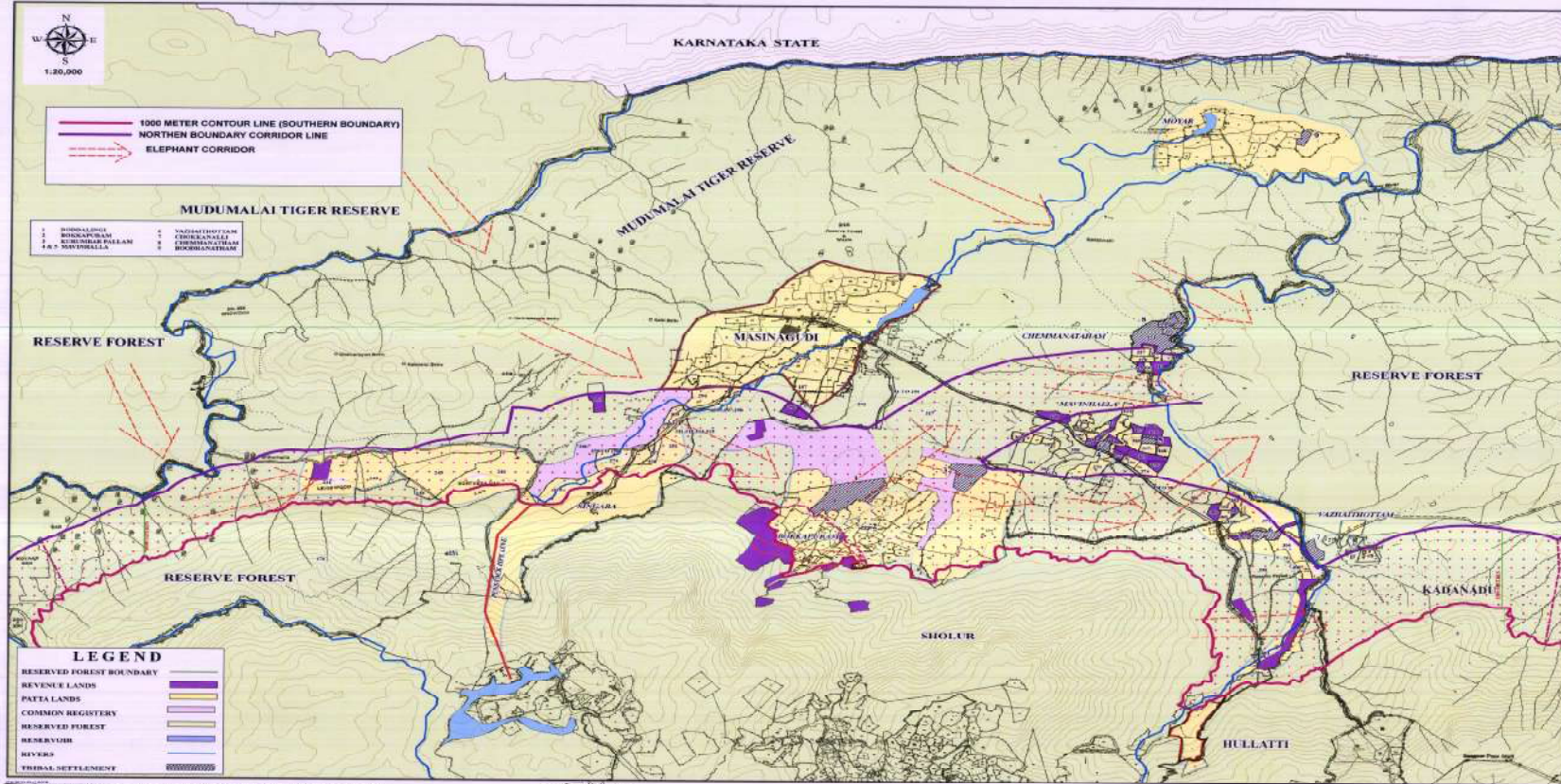
Sl No	Survey Nos	Extent	Classification		Rate per Ha	Value	Remarks
			Patta	Govt			
1	1	7.06.0	Patta		564900	3988194	Glencairn estate (Resorts Glenton manor)
2	2	34.88.0		Sarkar reserve forests			
3	3	9.88.0	Patta		526500	5201820	Karuvepi lai Estate
4	4/1	0.90.0	Patta		279500	251550	Karuvepi lai Estate
5	4/2	0.46.0		Road			
6	4/3	6.80.0	Patta		526500	3580200	Karuvepi lai Estate
7	4/4	0.72.0		Odai			
8	4/5	3.10.0	Patta		526500	1632150	Karuvepi lai Estate
9	5	34.25.0		RF			
10	33/1	7.65.0	Patta		526500	4027725	Jungle trees
11	33/2	11.25.0		Govt			Boodhan land

Poromboke land	12.43.0
Other patta land	7.65.0
Glencairn Estate	7.06.0
Karuvepilai Estate	20.68.0
RF	69.13.0
Total Extent	116.95.0
Total land cost	18681639/-

**Principal Chief Conservator of Forest
and Chief Wildlife Warden.**

Annexure - III

MAP SHOWING THE SIGUR PLATEAU - ELEPHANT CORRIDOR IN NILGIRIS DISTRICT



DECLARATION

I hereby declare that all the survey, measure and map work done in accordance with the provisions of the Forest Act, 1927 and the Forest Rules, 1927, in the above mentioned area, are correct and true.

Dated: _____

Survey Year: _____

Signature: _____

Signature: _____

Signature: _____

Signature: _____

Signature: _____

Signature: _____

Signature: _____