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Government of India
Ministry of Environment, Forests and Climate Change
Wildlife Division

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New Delhi-110003

F. No. 6-62/2013 WL
Dated: 22nd December 2014

The Principal Secretary (Forests)
All States/Union Territory Governments.

Sub: Recommendation of the sub-committee on Guidelines for roads in Protected Areas.

Sir/Madam,

In pursuance to the decision taken by the Standing Committee of NBWL in its 28th meeting held on 20th March 2013, a sub-committee under the chairmanship of Dr. M.K. Ranjitsinh, member, NBWL was constituted. The sub-committee submitted their report to the Standing Committee in its meeting held on 4th September 2013. A copy of the report is enclosed herewith.

The Standing Committee agreed to adopt the guidelines and had requested the Chief Wildlife Wardens to submit their comments, if any, on the guidelines to the Ministry. The report of the sub-committee was circulated to the Chief Wildlife Wardens, all States/Union Territories vide letter of even no. dated 25th November 2013. Comments have been received from a few State/Union Territories. Subsequently, the matter was also considered in the 31st meeting of Standing Committee of NBWL held on 12-13 August 2014.

Based on the recommendations of the Standing Committee of National Board for Wildlife, in the last meeting dated 12th-13th August 2014, the undersigned is directed to convey the following clarifications regarding consideration of proposals for roads within Protected Areas:

i. The principles provided in the report of the sub-committee have been adopted as generic principle.
ii. New roads shall not be proposed inside National Parks and Sanctuaries.
iii. The cases of resurfacing and strengthening of existing Highways, not involving widening within Protected Areas will be possible without reference to Standing Committee of National Board for Wildlife.
iv. Cases of widening, of the existing roads, if unavoidable due to reasons of purpose and alignment, could be placed before the Standing Committee, which shall consider such cases keeping in view the feasibility of mitigation measures irrespective of cost.

Yours faithfully,

(M.L. Srivastava)
Deputy Inspector General of Forests (WL)

Encl: As above.

PCCF (WL) & CWW

Copy to:

1. The Joint Secretary, Ministry of Road Transport & Highways, Shipping, Government of India, transport Bhawan, New Delhi.
2. The Joint Secretary, I.A Division, MoEF&CC
3. The Inspector General of Forests (FC), MoEF&CC
4. The Principal Chief Conservator of Forests (WL), all States/Union Territories
5. The Chief Wildlife Warden, all States/Union Territories

(M.L. Srivastava)
Deputy Inspector General of Forests (WL)

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Recommendations of the Sub-Committee on Guidelines for Roads in Protected Areas.

In pursuance to the decision taken by the Standing Committee of the NBWL in its 28th Meeting held on 20th March 2013, a sub-committee under the chairmanship of Dr. M.K. Ranjitsinh, Member, National Board for Wildlife, was constituted by the Ministry of Environment and Forests vide O.M. No. 6-62/2013-WL dated 26th June 2013. The terms of reference of the sub-committee are as follows:

- To frame a comprehensive guideline for construction/repair or roads passing through PA in the country
- Design best practices for such roads passing through PAs so as to have better wildlife conservation

The 1st meeting of the sub-committee was convened on 2nd July, 2013.The second meeting of the sub-committee was convened on 6th August, 2013. The list of participants-who attended both the meetings are given in **Annexure-1.**

PREAMBLE

Background

Roads are an essential part of India's development, providing vital connectivity and transportation across the country. Yet, when they intersect natural areas (as opposed to being situated in already-modified human-dominated landscapes), roads have wide-ranging and complex impact on natural areas and wild species inhabiting these areas. Within India's Protected Areas, the extensive impact of roads remains poorly understood, except in the obvious and serious instance of wild animal mortality due to road accidents. Elsewhere, it was been well-established that roads have detrimental ecological effects in both terrestrial and aquatic natural ecosystems. Roads further fragment the already highly fragmented natural habitats. They break forest contiguity, impinge on forests and well-worn migratory paths of animals, break tree cover and canopy, slice vegetation—all of which gravely impact wildlife. Roads cause soil erosion and landslides. Crucially, roads are the first step to ancillary development and an increasing human footprint in the area, thus leading to

accelerated developmental, tourist and hunting pressures, increase in pollution, litter, and various disturbances. Unless great vigilance and checks are provided, roads provide conduits for illegal extraction of timber and forest produce and for poaching, particularly at night, from vehicles. It is very difficult to provide the requisite surveillance and it is well-established that PAs have suffered loss of vegetative cover and poaching after construction of roads. In PAs in the mountainous region , construction of roads and their widening has grave consequences, including landslides and erosion, as the debris from road cuts on hillsides is invariably tipped over the sides. A background paper on linear intrusions into natural areas, including roads, commissioned by the National Board for Wildlife in 2011, provides an exhaustive review of the current state of knowledge on this topic[1], and a companion document[2] provides detailed guidelines by which their negative impact on natural habitats and wild species, can be minimised.

BASIC PRINCIPLES

We wish to reiterate a point articulated clearly and emphatically in the **National Wildlife Action Plan – 2002-2016,** which states that the "*Ministry of Surface Transport... to plan roads, highways, expressways in such a manner that all national parks and sanctuaries are by-passed and integrity of the PA is maintained. Wildlife corridors also need to be avoided, or mitigative measures (such as restricting night traffic) need to be employed.*" This principle must serve as the cornerstone of any road plan that is being conceived in the vicinity of any wildlife or Protected Area, and envisages the Ministry of Surface Transport to work in coordination with the Ministry of Environment & Forests, and other relevant authorities and experts. Further, we believe that this principle must apply to all other roads being planned by any other agency at the national, state, or local levels. The implication of this action point articulated in the National Wildlife Action Plan (NWAP) is also that plans be made proactively by relevant agencies to realign existing roads passing through protected areas, in a way that PAs are bypassed and, subsequently, decommission roads that intersect PAs.

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[1] Raman, T. R. S. 2011. Framing ecologically sound policy on linear intrusions affecting wildlife habitats: Background paper for the National Board for Wildlife. Available from: envfor.nic.in/assets/Linear%20intrusions%20background%20paper.pdf

[2] NBWL. 2011. Draft guidelines for linear infrastructure intrusions in natural areas: roads and powerlines. Available from: http://envfor.nic.in/assets/FIRSTDraft%20guidelines%20roads%20and%20powerlines.pdf

If there are viable alternative alignments—as observed in a number of cases—to roads that otherwise intersect PAs, those within PAs must gradually be phased out and eventually decommissioned, while the alternate road should be improved. This must be done in active coordination with the relevant ministries, departments and authorities, as noted above.

In planning roads, within and in the vicinity (defined here as roads that are situated inside and within 1 km radial distance) of protected areas, we recommend that following fundamental principles must be followed in order of priority: Avoidance, Realignment, Restoration.

1. ***Principle of Avoidance***: The foremost option would be to altogether avoid areas that are within or in the vicinity of any Protected Area and to find alternatives that are socially and ecologically more appropriate.
2. ***Principle of Realignment:*** This follows as a corollary of the first principle. Road projects must investigate and demonstrate that they have considered other alternative routes that avoid natural areas of high ecological value. This must be an integral feature of a project proposal and implementation documents. Realignments must also be developed in a transparent manner through consultation with local communities affected by the routing and subject to ecological and wildlife considerations.

   User agencies seeking clearances for roads must demonstrate as to how they have taken these factors into account, before their proposals can be considered for approval by the SC-NBWL.
3. ***Principle of Restoration:*** In natural areas, existing roads that are in disuse (e.g., old logging roads), or evaluated to be inefficient or detrimental to their objects, shall be targeted for decommissioning and subsequent ecological restoration, as the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.

The Deputy Inspector General of Forests (WL) briefed the committee regarding the existing guidelines for roads within Protected Areas, viz.:

(i) Decision of the Standing Committee of IBWL, as per decision taken during the meeting held on 14.6.2000. This held that roads that have already been tarred should continue to be maintained and repaired properly, in the current form. No roads inside the National Parks and Sanctuaries should be widened or upgraded.

(ii) During the meeting of 14th October 2011, it indicated that "*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."

Recommendations

: The committee recommends the following:

1. The *status quo* of the roads passing through National Parks and Core Critical Tiger Habitats (CTH) shall remain the same. The roads could be maintained and repaired in the best manner possible in their current form and present width. No widening or upgradation is to be allowed. If it is an existing tarred road, it shall be maintained as such and no widening of the tarred surface or the widening of the road itself, may be done.
2. For Wildlife Sanctuaries and Conservation Reserves, the same norms as in the case of National Parks and Core, Critical Tiger habitats, shall apply. However, in case of Sanctuaries and Conservation Reserves, culverts and metalling in sections of roads that become impassable or 'all weather roads' for approach/connectivity to villages within the Protected Areas, can be considered for approval in the Standing Committee of NBWL. If necessary in such cases, required maintenance could be taken up by the Forest Dept. on the recommendation of the Standing Committee of NBWL. It may be stressed again, that the width and status of the existing roads shall remain the same and no upgradtion will be allowed. In considering such proposals, the method of such road construction/improvement such as blasting, borrow-pit digging, etc., the impact upon movement of animals from one habitat to another/wildlife corridors, access of water, etc. would be criteria for consideration.
3. Where roads approaching / passing by National Parks/Core-Critical Tiger Reserve/Wildlife Sanctuary are within a radius of 1 km thereof, or within the Eco-Sensitive Zone, whichever of the two is lesser, would be treated on same basis/guidelines as are applicable to the Protected Areas category that it is in proximity of.
4. Presently, as Community Reserves are outside the purview of Section 29 of Wildlife (Protection) Act, 1972, the committee decided not to delve into the matter of roads passing through such PAs.

1. The committee recommended that, no change of current ownership and maintenance of roads passing through the Protected Areas should be permitted. However, in specific cases where such a transfer is required to better manage

roads so as to cause minimal impacts on wildlife, as in the case of transfer of certain PWD /other roads which pass through PAs, back to the concerned Forest Dept. such transfers could be considered.

5. Roads being managed by the Forest Department for the purpose of patrolling and tourism, were of equal concern like other roads inside Protected Areas. It was noted that there was a large network of such roads in several National Parks/Tiger Reserves/Wildlife Sanctuaries. No new roads should be constructed by the concerned Forest Departments and if so required to be constructed, the approval of the National Tiger Conservation Authority (in case of Tiger Reserves) and concerned State Boards for Wildlife in case of non-Tiger Reserve for other PAs., must be obtained. The concerned authority should be able to demonstrate and justify the grounds for construction of the new roads within PAs, in the conservation interest of the concerned PA.

6. The committee also agreed that the Wildlife Institute of India should formulate guidelines - for making roads by the Forest Departments, for protection purposes, in Protected Areas, Critical Wildlife Habitats and designated corridors.

Management of roads within PAs:

Mitigation: For existing roads, repairs and maintenance of existing roads, and for repairing roads that are impassable during monsoon/all-weather roads as described in the recommendations above, it is imperative that mitigation measures are included in the project planning, design, budget, implementation, and monitoring stages. This requires measures to minimise detrimental effects of roads on ecology, wildlife, local communities and users. This shall be considered only for existing structures and for new cases, where the options given earlier have been comprehensively considered and overruled, with adequate justification. These are also subject to requisite approvals from the state authorities and boards, the Ministry of Environment and Forests and its statutory bodies, such as the National Board for Wildlife, Forest Advisory Committee, and the National Tiger Conservation Authority, as relevant to each case.

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An exhaustive set of management measures have been recommended in the NBWL's draft guideline document mentioned above (pages 8-13, and 17-21). While fully endorsing these recommended management measures, for ready reference, some of the key management considerations applicable for already existing roads, are herewith highlighted:

- Ban on night traffic (dusk to dawn) is essential to save animals from disturbance from the constant flow of traffic, and thus allow them passage. It is recommended that night traffic bans should be initiated and applied in Core Critical Tiger Habitats, National Parks and Sanctuaries. There are such existing bans in various Tiger Reserves and NPs. Night passes may be provided for villagers/communities living within the PAs.
- Strong regulations controlling timing and traffic volumes need to be built in for all roads through Protected Areas and critical habitats.
- Speed reduction is a must to reduce wild animal mortality, and can be achieved through imposed speed limits and speed breakers.
- Vehicles should not be allowed to stop within PAs.
- No use of horns within the PA, and no littering.
- Speed restrictions and other guidelines that spell out rules and avoidance of disturbance to wildlife and habitats along roads in PAs, must be prominently conveyed through well-designed signboards, at entry and exit points and all other relevant locations.
- Establishment of check posts by the forest department, at both entry and exit points.
- Wherever possible, natural animal crossings existing across roads should be retained or encouraged. For instance, overlapping tree canopy in closed canopy evergreen/semi evergreen forests is an essential attribute for the movement of arboreal species. Passage to waterholes and daily movements of animals must also be safeguarded.
- Underpasses: well-designed tunnels, culverts, pipes, and other structures can function as underpasses below roads and bridges, for a wide-range of terrestrial and aquatic species. Underpasses can also be deployed below railway lines/highways for passage of large bodied animals, viz elephants, tigers.
- During maintenance works on existing roads, the underlying principle should be that work must be carried on in a speedy manner, with minimal disturbance to wildlife and with adherence to all rules and regulations that govern wildlife and PAs.
- No work should be allowed between 6 pm to 8 am(just before dusk to just after dawn)
- The labour force required for road maintenance must have their camps outside, the concerned PA
- No firewood cutting or fuel collection from within the PA
- Waste/debris should not be dumped in the PA/or adjoining rivers/nullas/waterbodies
- No taking of any material like sand, gravel etc from the PA. All materials for construction, road maintenance etc should be brought from outside
- No vegetation/tree should be cut or damaged/ during the maintenance.