

Technical Briefing: Ecological and developmental impacts of proposed Srea Ampom to Kbal Damrei road and border crossing, Mondulkiri-Cambodia, Dak Lak-Vietnam

WWF urges the cancellation of the Srea Ampom-Kbal Damrei proposed road and border crossing. The limited potential developmental and economic benefits will not compensate for the extensive environmental, ecological, and natural capital damage the proposed road will cause. Mondulkiri Protected Forest is a globally significant protected area that supports some of the most threatened species in South-east Asia and provides Cambodia with substantial natural resources, environmental capital, and ecosystem services.

Since it was gazetted in 2002 the Royal Government of Cambodia and WWF Cambodia have invested more than US\$ 10,000,000 into Mondulkiri Protected Forest. This has supported protected area management, law enforcement, biological monitoring, and community outreach and alternative livelihoods. As a result the site is globally acknowledged as a conservation success, has been identified as the most suitable site in South-east Asia for Tiger *Panthera tigris* restoration, and is a candidate for UNESCO World Heritage Status.

Please find detailed below an analysis of potential impacts, and the cost and benefits, of the proposed road and border crossing.

Economic and Developmental Benefits

WWF Cambodia recognises the significant benefits that roads can bring to rural communities particularly through facilitating access to markets, education, and health facilities. However we do not believe that the potential economic, trade, or development benefits of the proposed road outweigh the substantial negative environmental impacts. Four Border Check Points currently exist along the approximately 210-km border between Cambodia and Vietnam in Mondulkiri province. These are at Keo Seima, Dakdam, Bousra-Namlyr, and Chimeat.

The nearest current Border Check Point (Bousra-Namlyr) is 54-km from the proposed Kbal Damrei Check Point. Bousra-Namlyr is 51-km from the provincial capital Sen Monorom and connected via existing infrastructure and roads. The proposed Kbal Damrei check point is 67-km from Sen Monorom. The existing Dakdam Bilateral Border Gate is only 21-km from Sen Monorom and within 40-km of the majority of the province's population of 60,000 individuals. The nearest villages to the Kbal Damrei Check Point (Pu Ropet and Lav Lomith) are 46-km, by existing roads, from the existing Bousra-Namlyr Border Check Point. The proposed road to the Kbal Damrei passes through 36-km of Mondulkiri Protected Forest with no villages within a 5-km buffer of the proposed road.

Therefore the positive additional value of a new road and proposed border crossing are negligible given the existing infrastructure, communication and transport network and the locations of human settlement in Mondilkiri Province. There is thus insufficient evidence that road will provide any net benefits to Cambodia when set against the potential damage to the ecosystem integrity of Mondulkiri Protected Forest.

In contrast the proposed road will increase pressures of deforestation, illegal logging, land encroachment, illegal hunting, and illegal wildlife and timber trade. This will affect the opportunity for the establishment of sustainable nature based tourism that would bring long-term return to local communities and provincial government.

Our assessment of the risks and impacts of the Srea Ampom to Kbal Damrei road and border crossing are detailed below:

Deforestation

Road building is one of the major drivers of deforestation in South-east Asia (Clements *et al.* 2014). The proposed road to Kbal Damrei passes through 36-km of Mondulkiri Protected Forest including 19-km within the Special Ecosystem Zone (based on draft Department of Wildlife and Biodiversity, Forestry Administration Zonation). The proposed road would likely cause significant deforestation within this area; 96.7% of the land within a 5-km buffer (348-km²) of the proposed road is

currently forested. Significantly this includes large areas of mixed deciduous (12,750 hectares; 37%) and semi-evergreen forest (2,500 hectares; 7%). These forest types are scarce within Mondulkiri Protected Forest (forming 10% of total forest cover) but are disproportionately important for Non Timber Forest Product harvesting by local communities (e.g. wild honey, *Dipterocarpus* resin with an estimated annual value of >10,000 US\$ to local communities) and biodiversity including Asian elephant *Elephas maximus*, gaur *Bos gaurus*, and banteng *Bos javanicus* (Gray 2012).

Biodiversity Impacts

Unsustainably designed roads have a significant impact on biodiversity through both driving deforestation and facilitating access for illegal hunting and timber harvesting (Laurance *et al.* 2009, Roger *et al.* 2011, Clements *et al.* 2014, Laurance *et al.* 2014). The Cambodia-Vietnam within Mondulkiri Protected Forest already experiences high levels of illegal hunting and timber harvesting. The Department of Wildlife and Biodiversity, Forest Administration and WWF Cambodia have strongly worked together to combat this through professionalising law enforcement and developing and implementing the SMART conservation software system (<http://www.smartconservationsoftware.org/>), for monitoring law enforcement effectiveness. In 2014 8,258-km was patrolled across border areas in Mondulkiri Protected Forest resulting in the detection of 256 snares and 394 trees illegally logged, representing 45% and 26% of the protected area's total detections respectively. A road improving access into this critical area for biodiversity would exponentially increase these threats; effective law enforcement to safeguard Cambodia's natural resources would be difficult

Additive direct threats of roads include impeding animal movements and migrations, disturbance, and road kills from traffic (Vidya & Thuppul 2010, Vanthomme *et al.* 2013). Studies have suggested these direct impacts (i.e. excluding hunting and poaching) extend more than 5-km from road edges (Benitez-Lopez *et al.* 2010). The proposed road would thus impact animal movements across close to 350-km² or 10% of Mondulkiri Protected Forest.

The proposed road passes through 19-km of the Special Ecosystem Zone and will come to within 2-km of the Special Ecosystem Zone - Core Zone and Tiger Inviolable Source Site as proposed within the draft zonation plans of the Department of Wildlife and Biodiversity, Forestry Administration.

Recent surveys have confirmed the global significance of these zones for threatened species including giant ibis *Thaumatibis gigantea*, national bird of Cambodia, Asian elephant *Elephas maximus*, Siamese crocodile *Crocodylus siamensis*, and the world's largest population of banteng (Gray *et al.* 2012). Survey work by the Forestry Administration and WWF have indicated that the Banteng population is stable, as a result of successful conservation and law enforcement activities initiated by the Department of Wildlife and Biodiversity, Forestry Administration. The estimated population of Banteng within the Special Ecosystem Zone is 1,000. The Special Ecosystem Zone also supports the largest population of Leopard *Panthera pardus* in Cambodia (up to 100 individuals; Gray & Prum 2012) and more than 230 bird species including 9 listed by the International Union for the Conservation of Nature as Globally Threatened (Gray *et al.* 2015). There are also recent records of Asian elephant, part of a landscape population of more than 150 individuals the largest in Cambodia (Gray *et al.* 2014), moving across the route of the proposed road as part of their annual migrations.

The evidence that the Department of Wildlife and Biodiversity and WWF have gathered therefore demonstrates the unquestionable world-class status of the Special Ecosystem Zone, Mondul Kiri Protected Forest for biodiversity and species conservation. Preserving this unique natural heritage of Cambodia is incompatible with the proposed road development.

Tiger Restoration

Due to the threats detailed above the proposed road development would be completely incompatible to the ambition of the Royal Government of Cambodia to restore tiger populations within Cambodia. Tiger restoration is a prestigious project for Cambodia and a unique opportunity for the Royal Government of Cambodia to become global leaders in effective species conservation.

The Eastern Plains Landscape of Cambodia has been identified as the most suitable site for tiger restoration in South-east Asia (Lynham 2010) with Mondulkiri Protected Forest the First Priority Site within the Cambodia Tiger Action Plan of the Department of Wildlife and Biodiversity, Forestry Administration. This is reflected in the draft zonation of Mondulkiri Protected Forest, by the Department of Wildlife and Biodiversity, which has approximately 300-km² identified as Special Ecosystem Zone - Core Zone and Tiger Inviolate Source Site.

Tiger restoration will make Cambodia world leaders in species and large carnivore conservation and make the country synonymous with successful conservation and enhance the country's reputation globally. Tigers are a significant eco-tourism attraction. It is estimated that a single female tiger in an Indian tiger reserve generates >50 million USD over the course of her lifetime through benefits associated with tourism. The growing number of Asian and domestic eco-tourists means many Indian tiger reserves are now at full capacity for tourist numbers. The world needs a new tiger viewing destination and the development of world class ecotourism in, and around, Mondulkiri Protected Forest would match the vision of the Royal Government of Cambodia to be global leaders in Green and Sustainable tourism.

Tigers are also significant leverages for financing protected area management. A successful tiger restoration project in Mondulkiri Protected Forest would allow the Royal Government of Cambodia to access significant additional funding (e.g. IUCN KfW Tiger Conservation Fund) for effective protected area management and law enforcement.

The proposed road would undermine all of these potential benefits and present a missed opportunity preventing Cambodia meeting its global obligations for tiger restoration.

Timber and Wildlife Trafficking

Expansion of roads within forested landscapes is known to facilitate illegal trade (Clements *et al.* 2014). The proposed road would therefore significantly increase the ease with which illegal timber and wildlife products could be trafficked between Cambodia and Vietnam. Illegal wildlife trade is recognised as the fourth biggest illicit transnational activity worldwide after trafficking of drugs, counterfeited goods, and humans. Illegal wildlife and timber trafficking threatens peace, security, and rule of law globally whilst the organised nature of criminal syndicates involved in wildlife crime undermines economic, social and political development. The proposed road would thus reduce Cambodia's natural capital and the Royal Government of Cambodia's tax revenues and potential ecotourism earnings. Effective law enforcement to mitigate the suite of threats identified will be prohibitively expensive

Impacts on Ecosystem Services and Natural Capital

Mondulkiri Protected Forest has high natural capital and resources and plays a critical role in ecosystems servicing and natural resource provisioning. On-going collaboration between the Mondulkiri Provincial Government and WWF Cambodia, for province-wide mapping, have demonstrated the critical role of intact forest within the Special Ecosystem Zone of Mondulkiri Protected Forest for provision of natural resources for communities and water provisions within the province. Unsustainable road expansion, and predicted associated deforestation, will irreversibly impact the protected area's unique conservation and ecosystem services values.

References

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