Wild Tiger Health Centre Information Sheet

Disease threat: Traffic collision – road/rail

Hazard description: Increasing habitat encroachment and road/rail developments all increase the likelihood of tiger deaths/injuries in association with traffic (road or rail) collisions. Carter *et al* (2020) calculated that the construction of nearly 24,000 kilometres of new roads are currently planned in tiger conservation landscapes across all tiger range countries within the next 30 years. Such development is likely to be seriously detrimental to tiger recovery plans. Even where road and rail developments are planned outside protected areas ecological corridor connectivity is likely to be negatively impacted.

Host species: All tigers.

Pathogenesis: Trauma.

Diagnosis: Post-mortem and/or clinical examination consistent with trauma.

Vaccination: Not applicable.

Free-ranging tiger occurrence: In their analysis of 145 tiger mortalities in India between 2011 and 2015, Nigam *et al* (2016) attributed 3 deaths to collisions with train and 3 to collisions with road vehicles. There are also anecdotal reports of train/railway related tiger deaths from a number of locations in India. In one such report from Madhya Pradesh, excess train speed was cited as the direct cause (Anon 2017). In June 2007, an adult male Bengal tiger was found dead 12m from the railway tracks in Baro Salmari (a village in North Bengal) 16km from the nearest tiger reserve, Jaldapara (TelegraphIndia, 2007). Some body parts were missing, but the rest of the carcase was intact, consistent with it not being a primary poaching death. In December, 2016, a two-year old tigress was found dead in Budhni town, Sehore District (about 50km from Bhopal), following another fatal tiger casualty in 2015. The train tracks cut through the Ratapani Sanctuary, suggesting this particular area may be a crossing point for tigers (India Today 2016).

In Russia, Goodrich *et al* (2008) found that 8% of 53 radio-tracked tigers on or near the Sikhote-Alin Biosphere Zapovednik were killed in collisions with vehicles between 1976 and 2001. A suspected case of death caused by collision with a train in the Russian Far East was reported in by the Phoenix Fund (2017).

Distribution: All tiger range states potentially.

Assumptions: None.

Limitations: Specific diagnosis can be challenging. As in the case in northern India, there is debate as to the actual cause of death – poaching or train-associated trauma.