

A strategy to improve tiger viability in India

The biggest success of Project Tiger, which marks 50 years, is the presence of tigers in all habitat types. But serious issues persist, including the urgent need for new approaches beyond the protected areas. Address these so that India can host 10,000 tigers one day

On April 1, India will celebrate 50 years of her iconic conservation project: Project Tiger. This is an appropriate time to reflect on and learn from the project's successes and failures and devise a system to take tiger conservation forward.

In line with the resolution taken at the 10th General Assembly of the International Union for Conservation of Nature in 1969, India banned tiger hunting in 1970. The tiger was placed in the red data book for endangered species after everyone was shocked to hear that less than 3,000 tigers remained in India.

Fifty years on, in 2018, this shock had changed to celebration when the census estimate of 2,967 tigers was announced. Same number, different response. Today, most of these tigers live within heavily protected tiger habitats, which include tiger reserves

(54), national parks, and wildlife sanctuaries. The new tiger census will be released this April, but the 2018 report indicated that nearly 50% of the tiger reserves were underperforming: Four tiger reserves had no tigers, and 14 others had tigers at extremely low densities (<1 tiger/100 sq km). If all tiger reserves perform to their full potential, we could have 4,000-5,000 tigers in our reserves. India also has tiger habitats in national parks and wildlife sanctuaries that are not categorised as tiger reserves. In addition, extensive tiger areas exist outside this protected area. Taking all these into consideration, many tiger biologists believe India can have 10,000-15,000 tigers.

For us, it is not the number of tigers that is Project Tiger's success: Its most significant achievement is that we have tigers in almost all different habitat types, as we did in 1973. Where we failed is in not planning for conservation successes. If the project had planned appropriately, after 50 years of strong political will, money, a legal framework, and with all the expertise available, we could be celebrating more than 10,000 tigers today.

Three serious conservation issues plague tiger populations: Range contraction, individual population viability (small population size) and connectivity with neighbouring populations (isolated populations and viable corridors). We need conservation

approaches that can tackle these. To address these three threats, we need to look beyond the boundaries of protected areas because exclusive, protected area-based conservation models cannot address these challenges.

Tiger populations in most protected areas suffer from scale mismatch – where the space to create a viable tiger population is smaller than required. This means our conservation planning must find spaces outside protected areas.

Instead of looking for a single large population, we can achieve better viability for a tiger population by creating a network of small satellite populations around our protected areas. This can help reverse the range decline, build viable local meta-populations, and, with strategically located satellite habitats, provide a bridge between two existing protected tiger populations.

This conservation model is based on science and opens the door for an inclusive approach that can benefit local communities sharing tiger forests. This nested meta-population approach builds on the present system and works as an additional effort to complement existing conservation efforts.

Tourism can catalyse these changes when designed and promoted on clear conservation tourism principles. In 2017 we conducted a



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study in Madhya Pradesh that showed that approximately ₹6,50,000 is generated from every square kilometre of tiger forest open to tourism. Many countries earn handsomely from wildlife tourism even when they don't have iconic species such as tigers, elephants, lions and rhinos. Scotland, for example, earns more than £65 million annually from wildlife tourism. In South Africa, nature tourism contributes approximately 3% to the real Gross Domestic Product and 4.3% of total employment. In India, wildlife tourism is centred around a few tiger reserves.

The nested meta-population approach can achieve tiger conservation goals and generate economic benefits and community welfare through joint ventures of non-consumptive use (such as tourism) outside our protected area network. Thus, a more extensive landscape can be brought under active conservation efforts and uplift rural welfare. Such a model addresses all three conservation issues that science identifies; it also creates a platform for communities, investors, outside experts, and philanthropic investors to participate

in protection and restoration.

Instead of 10 to 15 places where one can see tigers, India could have innumerable destinations away from the present critical tiger habitats and crowded conservation centres. For example, huge tiger forests with much wildlife value and great potential lie between the tiger reserves of Panna and Ratapani (proposed), both in Madhya Pradesh (MP). A nested meta-population approach can help connect Panna and Ratapani and the newly established Nauradehi (also in MP), thus ensuring better survival of all three tiger populations.

After 50 years of tiger conservation, we have learnt a few things: We must plan for our successes and build upon what we have managed to secure. In the next two decades, we hope India will proudly host over 10,000 tigers in the wild, in harmony with local communities, and to their benefit.

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