

Executive Summary

Tigers are the religious and cultural icons of Asia, serve as the national animal in some countries and figure prominently on the flags of others. Their charismatic appeal is used to sell everything from gasoline to sporting goods and confectionary. Yet, paradoxically, wild tigers are on the brink of extinction. Tigers are an umbrella species and symbolize the plight of wildlife across Asia. Poised as they are at the top of the ecosystem, loss of tigers indicates ecosystems under stress.

Within a century wild tiger numbers have plummeted from over 100,000 to below 4,000 animals. The existing wild populations inhabit fragmented and isolated patches of land constituting a meager 7 percent of their historic range. If current trends persist, tigers are likely to be the first species of large predator to vanish in historic times. Tiger subspecies and populations have already disappeared from Java, Bali, and Central Asia and throughout much of China. The only region in which populations have recovered is the Russian Far East, where habitats are secure and poaching pressures are modest.

The suite of pressures on tigers includes depletion of their prey, degradation of habitats, fragmentation and conversion of habitats, and poaching of tigers. Habitat degradation and prey poaching is largely driven by the subsistence needs of resource-dependent communities in the densely populated landscapes of South and East Asia. On the other hand, habitat fragmentation is typically a consequence of expanding economies that have converted forests to plantations, arable land, and mine sites, often along roads that become progressively wider.

It is tiger poaching, however, that has emerged as the most urgent and immediate threat to tigers in the past five years. Tigers are killed for the flourishing illegal trade in tiger organs for traditional oriental medicines. The international trade in tiger products has been banned since 1975 through the

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The illegal international trade in wild tigers remains highly profitable, well structured and has close links to other organized crime. The World Chinese Medicine Society has declared that tiger parts are not necessary in traditional medicines. Legitimate traditional medicine practitioners no longer use tiger products, but there remains a persistent and growing illegal market. Poaching has become so intense that entire tiger populations have been eliminated from what were once deemed to be secure reserves throughout Asia.

The challenges of conserving tigers are daunting. Protected areas, the stronghold of tiger conservation efforts in South and East Asia, are rarely large enough to ensure their survival, and the animals must also be protected from poaching. Not only is it necessary for tigers and their prey to disperse between small reserves, but conservation efforts must seek to expand tiger and prey populations in all core areas and encourage breeding between tiger populations through habitat recovery.

With the multiple pressures of poaching, prey depletion, forest degradation, and habitat loss, tigers have become an enforcement-dependent species. To secure their future in the wild, they must be given protection from poaching and adequate land with sufficient prey. This requires financial and material resources and a strong policy commitment to conservation.

To save the tiger, it must be turned from an economic liability into a living wild asset. With large and permeable forest boundaries, an exclusive reliance on punitive approaches and planning will not suffice. The evidence suggests that a conservation model that resists development and growth will be overwhelmed and undermined by the forces it opposes. A new paradigm for conservation must recognize that those who live with the tiger determine its fate.

Learning how this can be achieved remains a formidable challenge.

The good news is that there still remain blocks of habitat that could sustain wild tigers. These are the seventy-six Tiger Conservation Landscapes (TCLs) that have been identified by scientists, in 13 tiger-range countries. The challenge is that many of these areas are in densely populated countries with vast infrastructure needs and where the conversion of forests to plantations and agricultural lands has accelerated over the last decade.

Most tiger-range countries have introduced legislation aimed at protecting tigers and other biodiversity, but there is an enforcement deficit. The prescribed penalties for poaching tigers are typically harsh and often punitive. But in practice enforcement is weak, and poachers and traders are seldom brought to justice. Wildlife agencies frequently lack the very basic resources needed for effective management — personnel, communication equipment, and transport — while the legal institutions needed to convict offenders are often overstretched and under resourced. Economic pressures have overwhelmed the virtuous intent of policy. Despite the designation of “reserve status” to forests the erosion and fragmentation of habitats continues due to encroachments and intrusive development.

There is an accompanying resource deficit. Conservation of endangered species vulnerable to poaching is an especially costly exercise. As a point of comparison, in the United States the federal budget for conservation is approximately \$20 per hectare. In contrast, expenditure on protection in Indonesia is as low as \$1 per hectare and about \$2 to \$3 per hectare in India. Conservation of biodiversity is a global public good and hence calls for international support and cooperation to finance the costs of protecting endangered species. Greater funding through existing overseas development-aid channels would be desirable but may not be forthcoming, given the many competing demands on these resources. It is necessary to look to alternative and novel avenues for generating resources for safeguarding biodiversity.

The inconvenient truth is that under current management systems, wild tigers are silently slipping away. Well-intentioned international, national, and regional support for tiger conservation over the last decade has not reversed the decline in tiger populations. In many of the tiger-range countries, the political will to address these concerns is limited, and conservation remains under funded and a low policy-priority.

The immediate and most urgent priority is to improve protection on the ground to address the poaching crisis. This will require considerable strengthening of human resources and surveillance, enhanced intelligence, and improved incentives and accountability of forest staff. Enhanced enforcement is essential and can help win isolated battles, but it may not win the war against extinction. Addressing the threats against tigers calls for new and innovative interventions that tackle the root causes of the problem — the incentives to convert and destroy habitats and to poach tigers.

There is no “one-size-fits-all” solution to tiger conservation. The precise mix and type of policies necessary will vary across countries, reflecting local opportunities and pressures. The conservation model appropriate in the sparsely populated landscapes of the Russian Far East would not suit the densely populated and accelerating economies of East and South Asia. To address the root causes of the decline in tiger populations, the approaches taken would need to blend incentives for conservation (carrots) with deterrence and enforcement (sticks). While this report cannot provide a detailed solution for each country, it does suggest the broad contours of a new conservation paradigm that could be tailored to local conditions. Global experience suggests that the chosen instruments could include some combination of the following options:

- **Cash Transfers for Conservation.** Many natural habitats provide global services far more valuable than their commercial uses, but continue to be destroyed because of the lack of incentives for conservation. Environmental service payment schemes are often used to address this problem. They provide transfers for the

preservation of habitats, to encourage changes in land-use practices, or to protect a particular species. Although seldom used in tiger-range countries, these transfers have the potential to become valuable instruments for promoting conservation, creating a local constituency for tigers and simultaneously addressing poverty problems. Environmental service payments will not be appropriate across the entire tiger landscape. They are most suitable when the profits from unsustainable activities are relatively low (as in many low productivity landscapes in the Terai) or where the value of the environmental service provided is high (often the case with watershed benefits or for addressing climate change, if the market for carbon sequestration develops further).

- ***Ecotourism in the tiger-range states is largely underdeveloped and under managed.*** Ecotourism is among the fastest growing industries in the world and has been widely used to generate resources for conservation and to share benefits with local inhabitants. It remains largely underdeveloped in tiger-range states partly because of the remoteness of many tiger landscapes and the difficulties of seeing tigers in dense tropical rain forest, the primary tiger habitat in South East Asia. But where opportunities exist, ecotourism should provide a valuable source of revenue and an opportunity to generate and share benefits directly linked to the presence of tigers. The most successful models for tiger tourism are found in Nepal, where a community-based tourism model has been developed that strongly emphasizes benefit sharing, turning poachers into tour guides and allowing the regeneration of degraded forests. Ecotourism potential varies considerably across tiger-range countries. In the remote Russian Far East, where tiger densities are low (often less than one tiger per 100 square kilometers), tiger tourism is unlikely to be viable; in other countries the potential is either unrealized or has been inadequately managed, often leading to overcrowding and environmental damage.

- ***Joint management approaches allow agencies to play to their comparative advantages.*** Where institutions are weak or under-resourced, joint management between the government and other actors can improve cost-effective conservation efforts. Joint approaches are widely used in other areas of government enterprise (public-private partnerships in health, education, and infrastructure, for example). These arrangements recognize that ultimate sovereignty over resources rests with governments but that other agencies can contribute skills that may not be readily available in government institutions. In the tiger-range states, few attempts have been made to enlist the support of non-governmental actors, but such management agreements are not uncommon in Latin America and parts of Southern and Eastern Africa. South Africa is where the strongest and most successful conservation models have emerged. An advantage of these arrangements is that they can address the many obstacles that constrain government management of protected areas, such as the difficulties of investing in protection, sharpening incentives, and providing adequate salaries.

- ***Biodiversity-sensitive development and infrastructure must be part of the solution.*** The tiger-range countries have vast infrastructure needs that continue to overlap with tiger habitats. There are numerous examples of good infrastructure projects that minimize the negative footprint through sound design and improve environmental outcomes by providing resources for conservation. These need to be documented and scaled up.

- ***Tackling the illegal trade in tiger parts calls for a global approach.*** The trade in tiger parts transcends countries and cannot be resolved by unilateral national actions. Despite the immense scale of the illegal trade, there is only scant understanding of either the complex underground web of suppliers or the factors driving the demand for wild tiger products. Responses that tackle both the demand

and the supply side of the illegal market are needed. On the supply side, immediate actions are needed to break the supply chain by preventing poaching, and, through global efforts to control cross-border trafficking. Interventions on the supply side need to be accompanied by vigorous efforts to tackle the root cause of the problem — the demand for tiger products. History has shown that laws do not and cannot alter desires and demands. This is especially true for products with a demand rooted in history. Consequently, trade bans and supply-side interventions can only have a limited impact. Mechanisms to reduce demand are clearly needed, but appropriate approaches have yet to be defined on a broad scale because little is known about the demographics and motivations of users and the associated retail dynamics.

The Role of the World Bank

The World Bank has a broad mandate that includes the stewardship of global public goods. The Bank's growing engagement in environmental protection is consistent with its wider historical evolution and commitment to sustainable development. The Bank has a considerable investment in environmental protection, including in tiger and biodiversity conservation. The outcomes of most tiger projects have been mixed. The greatest accomplishments have been in the Russian Far East. But success elsewhere has often been elusive, undermined by poaching and the unrelenting erosion of habitats driven by poverty and other economic pressures.

- **With its broad experience in development and conservation the World Bank is well placed to learn lessons from the past.** With its global reach, the World Bank is among the few organizations that can respond at the scale needed to help address the illegal trade in tiger parts. Its presence in most tiger-range countries can allow it to facilitate partnerships among international NGOs, governments, and the scientific community to assist countries in developing sustainable conservation solutions — regardless of whether these lead to specific projects. Actions by the World Bank or any country in isolation will not be adequate to save tigers and a genuine commitment and partnership is needed to achieve this objective. To implement this vision of tiger conservation, the Bank proposes to facilitate a global alliance to develop more effective conservation strategies in consultation with country experts and governments, and tackle problems that transcend national boundaries.

Conclusion

The challenge of saving wild tigers has become a global one and calls for a global solution and commitment. The successful conservation of wild tigers and the natural capital that sustains them are among the key indicators of sustainable development and require greater global resources and attention.