

onservation biologists study the human impact on the extinction process of biological diversity. Extinction is an evolutionary process that happens to all species and over 99.9% of all species that ever lived on Earth had gone extinct, mostly prior to the appearance of ${\it Homo\ sapiens}$. Extinction of a species usually involves a series of events starting from net loss of individuals in a given population, net loss of distinctive sub-populations and subspecies, and finally loss of all individuals in the entire range of the species. The extinction rate of biodiversity world-wide is faster in our lifetime than at any other time in the

short history of modern man (300,000 years), and than average extinction rates in the evolutionary history of the life on Earth (3.5 billion years). For example, the tiger is only about 1 million years old while the average lifespan of all species is 10 million years. In other words, humans are currently causing mass extinction of life on Earth.

Malaysia's biodiversity is especially at risk of rapid decline due to its initial richness inherent to tropical rainforests, many endemic taxa, geographical insularity, high deforestation rate, unsustainable development and lack of conservation resources, which includes conservation biologists to study the extinction process and make scientifically sound management recommendations. While the world has lost some 97% of the original tiger population in the past century, Malaysia, since its independence in 1957, has lost 90%. The rate of loss is un-proportionate to the official forest coverage – 38% of Peninsular Malaysia – because many forests are becoming empty of commercially valuable animals such as tigers.

Like house cats, tigers are prolific animals that can breed and reproduce easily. Biologically, it is possible for the population of 300 Malayan tigers to bounce back to 500 and eventually to 1,000. Malaysia has enough forests to support up to 1,500 tigers. Socially, however, it will take miracles to recover the 90% loss. One such miracle would be the integration of biodiversity conservation into the State Governments' decision-making processes regarding resource extraction, especially forestry.

PREDICTION

I predict that in the next decade, extinction rates will accelerate worldwide and the health of Earth will further deteriorate. In Malaysia, this process will not be documented scientifically except for a very few high profile species, but the effects of degradation, destruction and fragmentation of the forests will be visible and felt in the lives of Malaysians. The tiger worldwide will not be extinct yet. Population recovery will continue to occur in some pockets of forest that receive long-term commitment and adequate resources like those in India, Nepal, Russia, Thailand and Endau-Rompin in Malaysia.

While biodiversity in general will decline due to the loss of natural forests in Malaysia, commercially valuable species like the tiger will be specifically targeted. More poachers from Indochina will flood Malaysia's fragmented forests, free for all, and compete with local poachers. Only 15% of the tiger habitats are in protected areas, which means most tigers in the rest of the forests will be gone. It will become too costly to monitor and protect the few that remain, even if someone would want to do so. In essence, tigers will survive only in the three isolated priority areas (Belum-Temengor, Taman Negara and Endau-Rompin).

While political commitment to nature conservation will remain weak and the state Forestry Departments will not protect biodiversity beyond the monetary value of timber, I predict that MYCAT and the Wildlife Department will be galvanising more resources to protect and monitor tigers in these three areas. If we fail to do this in the next decade, then the loss of the Malayan tiger will be irreversible in the foreseeable future.

A landscape approach to biodiversity conservation is a popular concept and is viable in some wealthy countries. This was what local conservationists envisioned in 2006 when we met to develop a national strategy to double the tiger numbers in Malaysia by 2020. Among the tiger range countries, Malaysia is a rich country, but its high GDP growth is irrelevant to human capital and resources for biodiversity protection. Although Malaysia has relatively good conservation policies and laws, the enabling conditions for effective implementation are lagging behind.

In the next decade, the Malaysian public and the government will not be ready for the radical changes required for effective biodiversity conservation. I cannot even objectively foresee these changes coming in my lifetime. The progress will be gradual, yet extinction will come much more rapidly.

NEEDS

We have learned that conservation resources are pitifully small, and time is running out for the tiger. The full-time manpower to adequately protect Taman Negara, for example, is currently less than 10% of what is needed. We should not spread the resources so thinly over the vast

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forested landscape at the risk of losing everything. We need to focus on the priority areas. We need to have armed enforcement and military personnel protecting the forest interiors, and flood the edges and easily accessible areas with citizen conservationists and tourists.

Wildlife can live with tourists, but not with poachers. We should know about every individual tiger that lives in these priority areas, and protect and monitor them diligently.

Tiger conservation needs to be adequately financed so that conservation professionals can do conservation instead of raising funds full-time.

If we can protect these three source populations in the next decade, I will consider our effort a success. When the enabling conditions for effective biodiversity conservation using a landscape approach are prevalent in the distant future, tigers can re-colonise the rest of the forested landscape.

Biodiversity is essential for human survival. Saving tigers from imminent extinction requires healthy forests, sustainable development, strong governance, and educated and caring people who are ready to take action. Losing tigers signifies the lack of these conditions. If Malaysia fails to safeguard the future of its tigers by failing to preserve them in the protected areas over the next decade, life in this country will not be safe for me and for my child. Every tiger deserved to be saved, but Malaysians will not have deserved my dedication.

