The Devastating Impact of Man on the Asian Elephant's Physical and Social Welfare

For centuries, man has sought to dominate large and powerful animals. This is especially true in man's relationship with the Asian elephant, whom John Donne called "nature's great masterpiece […] the only harmless great thing." Like all elephants, Asian elephants display decidedly human characteristics, showing joy upon the return of a loved one and grief upon the death of a child. With the growth of the human population and the increasingly precious nature of ivory, man has essentially handed Asian elephants a death sentence. As local farmers decimate elephant habitats and poachers greedy for ivory kill big-tusked elephants, the intricate social structure of the Asian elephant herd has been devastated. Man's abuse of this beautiful and sensitive species must halt, or the Asian elephant will soon no longer roam the earth.

Asian elephants are highly social and live in herds that require enormous tracts of land. Once ranging across nine million square kilometers of land in Asia, only small, scattered populations of Asian elephants now exist in isolated areas of Sri Lanka, India, and Southeast Asia (Kasnoff, "Elephant"). Consuming up to 300 pounds of food in a single day, the elephants must range over large areas searching for food ("Asian Elephant"). Essential to the ecosystems in which they live, elephants benefit their animal and human neighbors as well as the landscape on which they survive. "Considered a keystone species" in their environments, Asian elephants forge openings in the trees and brush, construct watering holes, and create salt licks that aid other animals (Kasnoff, "Elephant"). Elephants often dig holes in dried riverbeds, producing watering holes that later fill with rainwater and are

essential to other animals (MacKenzie). Elephant manure returns to the earth about 80 percent of what the elephant consumes and is an excellent fertilizer (MacKenzie).

Asian elephants were added to the endangered species list in 1989 due to both human-elephant conflicts and illegal poaching. Their numbers dropped from 600,000 elephants in 1989 to around 40,000 elephants today (Kasnoff, "Elephant"). This rapid population decrease is especially disconcerting because elephants' 22-month pregnancy is longer than that of any other mammal, making bearing a baby elephant "a serious commitment" ("Asian Elephant"). The Asian elephants are endangered by habitat loss due to population growth, habitat fragmentation due to the agricultural endeavors that accompany population growth, and poaching for ivory ("Endangered").

As herbivores, unprovoked elephants do not present a physical danger to humans. However, because of their size, elephants are often falsely viewed as a dangerous species. Their enormous appetites, combined with habitat loss, often force elephants to raid farmers' fields in search of food. About 20 percent of the world's population "[lives] in or near the range of Asia's elephants" ("Elephant Conservation"). Exponentially increasing human populations, especially in Asia, create more demand for land and force elephants out of their natural habitats. Habitat fragmentation due to farming forces elephant populations to split up into herds which "are often too small to be viable" ("Elephant Conservation"). Elephant crop raids have pushed farmers to either kill the elephants themselves or to aid poachers' efforts. Farmers also often employ cruel techniques to deter elephants such as poisoning, lighting fires, and constructing electric fences, which result in the injury and death of hundreds of elephants ("Elephant Conservation").

Efforts have been made by governments to create protected areas for the elephants (Kasnoff, "Elephant"). These isolated areas are essentially inland islands, which make "the species that [live] on them […] very vulnerable to extinction" (Kasnoff, "Spotlight"). However, wildlife reserves can be successful if linkages between protected areas are established. Linkages allow both seasonal migration and the genetic variation essential to a species' survival. The creation of connected wildlife reserves by national governments, with park rangers to ensure that local farmers respect the boundaries of the reserves, would help maintain a habitat for Asian elephants while creating jobs for those who could not farm on the protected land. In areas where a protected wildlife reserve is not viable, other techniques to enable the coexistence of humans and elephants must be employed. The Wildlife Conservation Society is currently working with local Asian farmers to reduce occurrences of human-elephant conflict by doing field trials of "innovative crop protection measures" to deter elephants ("Asian Elephant Conservation"). For example, chilies have been used as a method of protecting crops from hungry, raiding elephants ("Asian Elephant Conservation"). One of the difficulties with such techniques is acclimatization of the elephants, which learn quickly. Combining or rotating several different deterrent methods could prove successful.

The ivory trade first became a significant threat to elephants in the 1970s, when, with the collapse of the world economy, ivory became more precious than gold (Kasnoff, "Elephant"). Prices rose to $100 per pound in the 1980s, and an international ban on ivory selling was imposed in 1989 (Taylor). To enforce compliance with the ban, the UN established the Convention on International Trade in Endangered Species (CITES) (Taylor).

Unfortunately, an illegal ivory market still exists, and the poachers' sophistication has only increased with the use of modern technology, including automatic weapons and motorized vehicles. Rebel governments, often in dire need of cash, use the ivory trade to finance their efforts (Kasnoff, "Elephant"). Recently, "booming illegal ivory prices in Vietnam," around $680 per pound, have renewed the threat for Asian elephants. Vietnam's laws allow stores to sell ivory that was legally in stock previous to a 1992 ban on the acquisition and sale of ivory. Shop owners sell illegal ivory, claiming that the ivory was obtained legally before 1992. Stores also mix ivory with other sale items of a similar appearance in an attempt to fool inspectors ("Asian elephants"). The high prices and loopholes in Vietnamese law have created a huge motivation to poach the area's Asian elephants. This increased incentive could "turn back the clock on decades of Asian elephant conservation," according to Crawford Allan, North America's regional director of TRAFFIC, the wildlife trade monitoring network ("Asian elephants").

The death toll caused by poaching has several detrimental affects on Asian elephants beyond the decrease in population. Female Asian elephants do not have tusks, leaving males as the sole targets of poachers ("Elephant Conservation"). Poaching decimates the social structure of the herds, as poachers often kill the largest adults in the group, "leaving young elephants without any adults to teach them migration routes, dry-season water sources, and other learned behavior" (Kasnoff, "Elephant"). Young elephants are left without a seasoned leader to show them how and where to find food and water, causing more elephants to resort to raiding farms for sustenance. Poaching results in a vicious cycle with only negative outcomes for the elephants. Also, the loss of the largest

male elephants, which are generally the healthiest, makes it even harder for the decreasing elephant population to be revitalized. As males without tusks now have the best chance of survival, the tusk-less gene is becoming more prevalent in surviving Asian elephants ("Elephant Conservation"). In other words, humans are forcing Asian elephants to evolve in a historically non-adaptive direction and change their genetic make-up to survive.

There are several possible remedies to the problem of the illegal ivory trade. Vietnam must comply with its responsibilities under CITES to report ivory seizures, and the Vietnamese government must tighten its laws regarding the sale of ivory. The only lasting solution to the current black market in Vietnam is a complete ban on the sale of ivory, regardless of the time of acquisition. Governments across the world, especially in China and other Asian countries, where the demand for ivory is highest, must follow suit in confiscating and destroying any ivory for sale in their countries. Destruction is the only sure way to remove ivory from the market and prevent traders from making the profits that encourage poaching. Vietnam and its neighbors should allocate funds to improve the training of wildlife law enforcement officers so that officers will better enforce restrictions on ivory trading. Continued and increased participation in the Association of Southeast Asian Nations Wildlife Enforcement Network (ASEAN-WEN), an "intergovernmental initiative" to "combat wildlife crime," will also help prevent poaching and illicit sales of ivory ("The ASEAN").

Ending poaching by strengthening and adapting individual governments' laws to comply with international guidelines would help to end the physical and social decimation of the Asian elephant population. Efforts to provide suitably connected wildlife reserves

for Asian elephants and to identify effective, yet safe, methods of keeping elephants out of crops would yield enormous steps towards improving the lives of these embattled creatures. Enormous, intelligent, and social, the Asian elephant needs our every effort to better its living conditions, improve its safety, preserve its habitat, and allow its traditional social dynamics to endure.

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