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Humanity in the World Wild Web

Amidst our buzzing and vibrant life, we've seen unfolding tragedies of the environment caused by anthropogenic activities. There is always a lingering question about the status of Earth if humans don't exist or at least interfere with its foundations. Would Earth be better off without us? While humanity has the unique ability to pursue great endeavors such as art and science, our capacity to modify almost every aspect of the planet can ultimately lead to our own downfall. While surfing social media, I came across a montage of animals hanging on the brink of existence. These environmental news always reminds me on how dire the prospects for many species in this world really are. It's distressing to think that right before our eyes, they can just become snapshots in nature that can no longer be brought back.

All species are interconnected through our interactions in a web of life. Seemingly irrelevant species matter to keep a balanced and biodiverse ecosystem. Around 99% of all species that have ever lived have gone extinct over the course of five mass extinctions, largely due to natural causes such as volcano eruptions and asteroid impacts (9). However, human society is threatening our life-support system as we accelerate the trend of declining global biodiversity. Researchers have estimated that about one million of animal and plant species could die out within decades (1). One of the world's biodiversity hotspots with its diverse habitats and high rates of endemism is the Philippines. An animal species indigenous and impeccably adapted to the Philippine tropical forest and mountains but on the verge of extinction is the Philippine eagle (*Pithecophaga jefferyi*), the national bird of the Philippines and the world's largest eagle species (8).

The Philippine eagle thrives in dense foliage with its significantly broad wing span that allows itself to launch vertically and navigate with speed and precision. I can speak for every Filipino and environmentalist that having a close meeting with the iconic bird and catching it soaring above would be breathtakingly remarkable. But, despite being regarded as the national bird, it's one of the world's most critically endangered species (2). The species that was once found on nearly all of the notable islands of the Philippines are now completely removed from these areas. About 400 pairs of Philippine eagles are believed to currently exist in the wild. We are definitely facing a struggle in rebuilding upwards from the current population of the Philippine eagle (6).

Similar to other birds of prey around the world, one of the principal threats to the Philippine eagle is hunting. Considering its title as the country's national bird, it's seen as a trophy for ambitious hunters. When firearms became publicly available in the Philippines in the aftermath of World War One, populations of the Philippine eagle began to decline sharply. The species is considered a blight to domestic animals and competing predator for other humanly valued prey species (2).

As Philippine eagle is one of the species at the very top of the Philippines' food chain, it's affected by biomagnification, thus vulnerable to pollution (2). Garbage wastes we produce are unquestionably toxic and even lethal to animals and the environment. When an eagle consumes preys that ingested pollution-related chemicals, the chemical toxins biomagnifies. If the toxins don't cause death immediately, the bioaccumulated substances are stored in animal tissues and their concentration increases with age. An animal species that dies due to exposure to a pollutant can cause food to become scarce to another species. A non-biodegradable pollutant can remain in

the ecosystem for decades (4). With this, I always observe the habit of pocketing my garbage if wastebaskets aren't in sight.

The most substantial prevailing threat to the Philippine eagle and other living species is habitat loss. Nearly 80% of the Philippines' tropical rainforest has been deforested to make way for commercial, residential, and agricultural development (2). We've traded lowland habitats of the species to support our increasing population. Consequently, they were inevitably driven and restricted to mountain slopes, mainly to dipterocarp forests (3). Their survival has become tenuous as human population and burgeoning follow the birds in elevation.

There's no single answer for the cause of species vulnerability, but a common factor to these threats is the involvement of humans. From hunting and killing every last member of a species by polluting or destroying their habitats to introducing invasive species and disease, we are mainly responsible for eliminating hundreds of unique and astonishing animals globally. Even with forest rangers and task forces assigned to secure protected areas, illegal actions are still committed by various sectors (2).

The protection of our forests is the most significant way to help save the vanishing Philippine eagle species. Scientific research and methods cannot be left out in forming conservation programs. Regular monitoring and enforcement in the forests are needed. It's important that the public and government support organizations such as the Philippine Eagle Foundation (PEF) that are formed to carry out the advocacy of ensuring the survival of the Philippine eagle and even managing their ecosystems. PEF conducts programs on conservation research, education, breeding and development to give the Philippine eagle a fighting chance to survive and thrive (6). The government, as policymakers, has a part in resolving conflicts and articulating a noble vision for the preservation of our flora and fauna. In the Philippines, one of

the laws mandated is the Republic Act No, 9147, also known as the Wildlife Resources Conservation and Protection Act, that aims to bolster the government's campaign to conserve and protect wildlife resources and their habitats (5).

In order to create a holistic approach, science is combined with cultural knowledge and practices. Conservation funds can be rechanneled to occupations for indigenous peoples (IPs). IPs can be employed as forest guards and be provided with sustainable livelihood opportunities. They can be perfect stewards of the eagle and the forest as they have intimate and practical knowledge on wildlife. As an IP myself, I'm a witness that local and indigenous peoples are closely intertwined to the forests spiritually, socially, economically, and politically (7).

As of now, nearby volunteer organizations are not available but I've tried performing deeds even with my limited access to resources. Small acts can make meaningful differences. As an aspiring scientist and researcher, curiosity is essential. The first step in protecting endangered species is awareness of their value and importance. It's necessary that we are educated on the significance of not only the Philippine eagle but also other species and the need to preserve their habitats. In this technological age, social media is a powerful tool to spread knowledge and consciousness. I try to share and promote solidarity movements in different platforms. Joining green programs in the community as simple as pick-up-litter projects is already a huge help. Visiting national wildlife refuges and trying to be involved in their programs or by supporting their local businesses can help aid in environmental sustainability. We should avoid illegal markets with products made from extermination of threatened or endangered species. Preventing pollution by recycling and buying sustainable products should always be observed in everyday living. I try to minimize the use of products that are pervasively made from the destruction of our valuable trees.

Conservation efforts are not only applied to the Philippine eagle, but to other vulnerable animal species as well. Saving the Philippine eagle signifies protecting foundations of nature and the next generation of Filipinos. The fate of the eagle is inextricably linked to various aspects of human lives. The rare and majestic bird species is a precious biological heritage and national pride that is found nowhere else but in the Philippines. The Philippine eagle is engraved in oral and written histories, and other cultural artifacts. Securing the safety of the species through biodiversity-friendly initiatives can result to provision of additional sources of income for marginalized communities such as the IPs. The Philippine eagle also has a crucial role in upholding the balance of the ecosystem by naturally regulating other species population (6). Disruptions to our natural world architecture can have significant, cascading effects globally.

By using the Philippine eagle as the focal point of conservation, we are in the process of saving the Earth's biota. Even without the threat of total extinction, plenty of animals from household pets to exotic animals face dangers of illegal poaching, breeding, harassment, and various types of animal cruelty (10). Wildlife should be treated as lifelines to our society as we understand why all animals deserve respect and protection. We must remember that everything in nature is connected in some way to everything else. Along with animal welfare being addressed, environmental management should also be tackled. The Earth is a home for millions of species but it's us humans who dominate it. Our integrity and empathy extend to wildlife. Let us speak and act for these species who can't help themselves in order for us to anticipate a future with the marvels that we see today.

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