

< Committee on Resources

Witness Testimony

**Testimony before the
House Subcommittee on Fisheries Conservation, Wildlife and Oceans
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Front Royal, VA 22630, USA
in regard to
H.R. 1787, The Asian Elephant Conservation Act

Subcommittee's Questions

I was asked by the Subcommittee to answer the following questions:

"..., whether the authorization level is appropriate, what type of conservation projects are likely to seek Federal support, and what other steps could be taken to help this magnificent species." ,p> Before proceeding with my testimony, I would like to make it clear to the Subcommittee that I am testifying as an individual scientist who is currently working with Asian elephants. Although I am presently a Research Associate of the Smithsonian Institution's Conservation and Research Center, the Institution has not formulated, adopted, or endorsed a formal policy concerning the conservation of the Asian elephant at this time.

Overall, I am supportive of the proposed bill. I especially endorse its suggested funding mechanism of competitively peer-reviewing applications, submitted by elephant range country individuals and organizations who actually work in the field and thus are likely to know the most urgent research and management needs.

Some Institutional Background on Elephant Research

The Smithsonian's National Zoological Park and Conservation & Research Center have been conducting research on Asian elephants for decades. During this time period, data were collected in many elephant range countries, including India, Indonesia, Malaysia, Myanmar, Nepal, Sri Lanka, and Thailand. Research covered wild and domesticated populations and included topics like "behavior and ecology of the Asian elephant", "population genetics of domesticated elephant populations", and "evaluation of elephant translocations as a management tool to solve conflict situations". This latest project on elephant translocations is a collaboration with the Government of Malaysia, additional information can be found at our web site: <http://www.si.edu/elephant>. Findings of all of the above studies were published in scientific journals, popular magazines, reports, and video documentaries.

Status Quo of the Asian Elephant

Instead of repeating what many are likely to write about this topic for the hearing's public record, I would like to refer to the discussion paper "Overview: Asian Elephant Conservation Initiative" which I helped to compile (Appendix 1).

Question: Is the authorization level appropriate?

The authorization request asks for five million USD annually. If that sum is indeed ever reached, and if the funds are spent wisely, the authorization level appears to be high enough to have a major impact on Asian elephant conservation. "Wise spending" would include funding guidelines which ask for a highly competitive process for proposal applications, which favor applications from organizations and institutions in range countries, which avoid awarding large administrative overheads, which avoid duplication of efforts and rather seek wide and instantaneous dissemination of results, and which include strong mechanisms for project evaluation and review throughout its lifetime. "Wise" handling of the new funding instrument "Asian Elephant Trust Fund" might include intensive fund-raising efforts for the Trust Fund in the commercial and private sector, to match or exceed the funds set aside by the US Government.

Question: What type of conservation projects are likely to seek Federal support?

Two issues clearly stand out in Asian elephant conservation today:

1. The ever increasing conflict between man and elephant over the same stretches of land, which is probably the main reason for the decline of wild elephant populations throughout its range;
2. The vast gene pool domesticated Asian elephants represent (ca. 25% of the world's total Asian elephant population), and the fact that there is very little reproduction among this part of the population. At least this one fourth of the Asian elephant population is therefore not contributing to the general gene pool.

I would assume that projects addressing the conflict issue will be most prominent among those seeking Federal support. Conflict situations occur throughout the Asian elephant's range, a question of stake holders and their interests in the land. While the human stakeholders and their interests can vary between locations, the basic scenario is usually the same: Elephants have used a certain area for many years without major interaction with people. Latter were few with no or only little interest in the land. Then more people decide to develop that area for agriculture, for industrial or housing projects, etc. With that decision they take a financial stake in the land. As a result, they start protecting it. Much of the protective effort is directed towards elephants, who readily destroy crops and other property. Thus a new conflict area is created. But how can the conflict be solved? Many solutions have been tried, some are generally applicable, others are site-specific, few if any have been entirely successful. This is the frontier at which I believe, the Asian Elephant Conservation Act could have its biggest impact. Major topics for projects to be funded by the Trust Fund may include:

- Identifying ranges where elephants "can be allowed" to have a destructive impact;
- Influencing local legislation to set aside those ranges;
- Identifying and testing of technologies which protected human investments from elephant impact at the border of those ranges;
- Rapid dissemination and implementation of successful techniques to interested individuals, organizations, and agencies throughout the elephant range;
- Financial aid to poor regions to implement those techniques;
- Development and implementation of awareness campaigns which promote the cultural value of elephants and their co-existence with humans.

Within the range countries of the Asian elephant, human cultural values are extremely diverse and human responses to elephant impacts vary dramatically. Consequently, I believe that to be effective, conservation efforts for elephants should concentrate on site-specific rather than regional or national efforts. This will

only be possible if local initiatives by individuals and organizations can secure adequate funding to explore and test alternative methodologies. The single most important task might just be to work directly with the people on-site "who take the heat" day after day, night after night.

The second issue (2.) mentioned above, the gene pool of the domesticated elephant population, seems to be rather overlooked in most discussions about Asian elephant conservation. With one fourth of the world's Asian elephants directly controlled by man, this part of the population's contribution to the species' gene pool might be an issue that the Trust Fund should look at, both in regard to basic research as well as implementation of its results. I am not talking about domesticated elephants held in zoos or circuses. There are too few, under too restricted conditions, in too expensive locations to have a major impact on the population in general. I am talking about elephants held by man in range countries for commercial, ceremonial, or other purposes. Few of them are breeding, thus not contributing to the species' gene pool. Many elephants are still recruited for timber operations every year through captures from the wild (e.g. Myanmar). Others are simply captured and kept in camps to reduce the wild population in conflict areas (e.g. Indonesia). In all cases, few of the captured elephants will ever breed again, thus resulting in a further depletion of the species' gene pool. In addition, a new but related phenomenon is occurring in Thailand. The steady decline of the Thai timber industry as most of the country's cash timber has been harvested, is leading to an increasing number of un-employed work elephants. These elephants have become an economic burden to their owners. Some are now begging for foods in the streets of Bangkok, some are performing in shows, some are slaughtered for meat, and others yet are simply let loose vandalizing farmers' fields. Re-introducing unemployed work elephants to the wild or relocating them to active timber harvest areas in other countries could possibly provide significant conservation benefits by directly increasing wild populations or by reducing the exploitation of wild populations, respectively. The Trust Fund may want to carefully consider such activities for funding.

Question: What other steps could be taken to help this magnificent species?

Fundraising - adding the commercial and the private sector. A concerted effort to generate additional contributions to the trust fund from the commercial and private sector could be greatly beneficial to the conservation of the Asian elephant. It would funnel more "elephant" funds into the same pool, administered by the same agency, which could thus function as a major elephant conservation coordination center by avoiding work duplication and ensuring proper coordination of projects and dissemination of the results. An annual newsletter published by the Trust Fund on its activities might help achieve this objective.

Point of View - who benefits from conserving the elephant? But money can't solve everything. For the Asian elephant to survive in sustainable populations, there has to be a conviction among the range countries' people and governments that there should be a "place for elephants". But the human populations in many of these countries are increasing rapidly and space is needed. Why sacrifice space for elephants when it is needed for humans? What we may call a "magnificent species" here in the West, does not appear quite that magnificent to a small land owner whose crop is destroyed season after season. Sure, elephants are pretty impressive creatures, but would we want them in our backyards in the capitol's suburbs? The Asian Elephant Trust Fund might reach its goals and objectives faster, if everyone associated with it tries to avoid pushing our values onto people and governments in the range countries, but rather looks at the situation with the eyes of the directly effected. And their point of view in many areas is likely to be: "What economic benefit is there for me to have elephants around?"

Elephants and Mine Fields - can these issues be combined? It is just a thought, but maybe worth contemplating for a while. Little is known, but there are likely to be several major elephant populations in

the border region of Vietnam, Cambodia, and Laos. They need to be protected. Huge areas in the region are still contaminated with landmines. As people are moving back into these areas eager to plow their fields again, many die or are crippled in the process. They need to be protected. Is it at all conceivable that mined elephant land could be leased from its owners and set aside as protected areas for elephants in return. Could people use the money from the lease to settle elsewhere? Could the conservation and the mine removal communities work together on this?

Appendix I

DISCUSSION PAPER OVERVIEW : ASIAN ELEPHANT CONSERVATION INITIATIVE

The Asian elephant has been and is increasingly in grave danger of extinction. The surviving populations in the wild number between 35,000 and 45,000. It is currently listed as endangered in the IUCN Red List of Mammals, and in Appendix I under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

IMPORTANCE OF THIS FLAGSHIP SPECIES

The unique relationship between man and elephants in Asia dates back to almost 5,000 years, when it was first captured and trained for use in religious ceremonies, war and as a draught animal. Its cultural contributions have been noteworthy and regarded with high esteem. No other animal has had such a close relationship with people while still remaining effectively wild. Ancient Hindu scriptures frequently refer to elephants and the god Ganesh is revered throughout India; the white elephant has special religious significance for the Buddhists throughout Asia. In Chinese culture too elephants have had a special significance throughout the years in folklore, games, pageantry and medicine.

Until recently Asian elephants were extremely important in an economic sense, especially in the timber industry. Timber extraction using elephants, as opposed to mechanical forms, in selective logging operations is the least damaging method in tropical forests. Today this is the case only in Burma where wild elephants are still captured from the wild; elsewhere domestic elephants are still used for transportation, tourism and ceremonial purposes. This provides an important source of income to numerous local communities who have traditionally caught and domesticated elephants from the wild.

Most important of all, the Asian elephant is a flagship for the conservation of tropical forest habitats which is home of numerous other species which are found there. In order to conserve elephants large tracts of forest habitats have to be protected and managed and in doing so other species such as the tiger, rhinoceros, Asiatic wild dogs.....and other biodiversity. In Asia the role of elephants in the maintenance of forest structure is also an important function.

THREATS TO ASIAN ELEPHANTS

Habitat loss and population fragmentation

Unlike the African elephant whose recent decline in numbers has been the dramatic large- scale poaching for ivory, the Asian elephant is faced with more intractable threats. Asian elephants are found in areas with the world's densest human populations, some of which are the poorest nations in the world and others with some of the highest economic growth. The ever increasing pressures due to this exponential growth of human populations, eg Vietnam, India and Indonesia, and its corresponding pressure on natural habitats in

the form of encroachment of mobile human populations, forest clearance for large-scale agricultural crops, eg Peninsular Malaysia for oil palm, has resulted in a dramatic loss of forest cover. This in turn has meant that elephants and people are in direct competition for same resources (see below).

Asian elephant populations are highly fragmented, due to loss and degradation of habitat, with fewer than ten comprising more than 1000 individuals in any one contiguous area, and more than half of these are found in south Asia (put in foot note here with revised population estimates). Fragmentation is more severe in the south-east Asian region with no more than three populations having more than a 1000 elephants, primarily in Burma. These drastic fragmentations greatly increase the chances of geographic extinctions, eg Vietnam, Peninsular Malaysia and Cambodia, and greatly decreases long-term viability.

Human-elephant conflict

The reverence people have for elephants in Asia has historically promoted its peaceful coexistence even to the extent of tolerance for occasional incidents of conflict in the form of crop-raiding. But this inherent tolerance has almost disappeared with the increasing and severe consequences of human-elephant conflict, which is a direct result of drastic loss of habitat and competition for resources. Every year thousands of hectares of agricultural crops are destroyed by elephants looking for food, in addition to the destruction of human homes and lives.

In countries where governments are concerned with this ever increasing problem, measures taken are drastic or are very expensive, eg Malaysia - large-scale of shooting of crop-raiding elephants in the late 1960s to constructing electric fences and translocating problem elephants to protected areas. Other countries like Indonesia are taking short-term measures by capturing large numbers for domestication; however, they have found no long-term use for these elephants because there has been no tradition of using elephants in the forestry sector.

Where no immediate solutions are provided by governments or local authorities because of the lack of financial resources, eg Vietnam, Cambodia, Laos, people are increasingly taking the law into their own hands and shooting the offenders.

Poaching

Poaching of Asian elephants of ivory, although far less significant than with African elephants, has played a role in reduction of numbers in past in south Asia, and is still a problem in parts of southeast Asia, eg. Cambodia, Vietnam, Burma, Laos. In south Asia poaching has drastically damaged the sex ratio in some areas and generated concern about the genetic threats to the population. Skewed sex ratios increase genetic drift which leads to inbreeding, high juvenile mortality and low overall reproductive success. Limiting local gene pools also significantly increases the chances of herd-threatening epidemics.

Asian elephants of both sexes are increasingly being poached for meat, hide, bones and teeth. Hide is turned into bags and shoes, eg Thailand, China; and bones, teeth and other body parts are used in traditional Chinese medicine to cure various ailments. In some countries such poaching is a threat to even the remaining domestic elephants that are allowed to free-range in forests, eg. Vietnam.

Capture for domestication

Capture of elephants for domestication is a threat to wild populations where numbers are already greatly

reduced, eg Burma, Indonesia, Vietnam. Capture operations inevitably result in mortalities. In Burma it makes economic sense to capture adults and train them for use in the timber industry, because captive breeding would mean an adult female working elephant is in effect unavailable for the industry for a 3-4 year period (gestation and nurturing of young). Elephants born in captivity then have to be nurtured for a full 10 years before they are of use to the industry.

THE CHALLENGE AHEAD

The threat of extinction looms high for the Asian elephant. Conservation efforts, spearheaded by range state governments and international conservation groups, aimed at Asian elephants and their habitat have been in place since 1976. Unfortunately, the economic situation has made it practically impossible for the countries with elephants to manage their resources or to enforce laws effectively. Thus the species finds itself in the very precarious situation it is in today. If the Asian elephant is to survive in perpetuity, the challenges that need to be met head-on are :

- protection of the remaining elephant populations and their habitat against further loss and degradation by designing and managing special protected areas.
- promotion of co-existence between people and elephants in and around these protected areas by developing and implementing sound management practices that would prevent or reduce conflict.
- promotion of effective law enforcement through participation of local communities.
- restoration of the congenial relationship that previously existed between people and elephants through education and awareness programmes.

The single largest impediment to implementation of sustainable conservation measures for the Asian elephant is financial support, and many activities are not being carried out due to insufficient funding.

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