

Petition

**Before the United States Fish and Wildlife Service
United States Department of the Interior**

April 12, 2023

**Requesting Rulemaking to List the Long-Tailed Macaque (*Macaca fascicularis*) as a
Threatened or Endangered Species Under the Endangered Species Act**

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I. EXECUTIVE SUMMARY

Primatologists describe the long-tailed macaque, *Macaca fascicularis*, as “the most traded primate species, the most culled primate species, the most persecuted primate species and when looking at numbers of threats and population decline, possibly one of the most endangered primate species currently.”¹ Multiyear assessments of wild populations of long-tailed macaques, conducted by researchers throughout Southeast Asia, yielded alarming data on the increasing threat to these once plentiful monkeys. Based on the data, in 2022, the International Union for Conservation of Nature (IUCN) elevated the species’ status from “vulnerable” to “endangered” on the IUCN Red List of Threatened Species.² The IUCN anticipates that the current level of exploitation will cut the population at least in half over the next three macaque generations (36-39 years).³

The Endangered Species Act (ESA) requires the U.S. Fish and Wildlife Service (FWS or “Service”) to list long-tailed macaques as “endangered” or “threatened” if, throughout all or a significant part of their range, the species is in danger of extinction, or is likely to become endangered within the foreseeable future. A single threatening factor can be sufficient to trigger listing status. But, here, the long-tailed macaque is seriously threatened by multiple factors: (1) declining native habitats across Southeast Asia; (2) overutilization for scientific, commercial, and recreational purposes; (3) inadequate regulatory mechanisms; and (4) culling due to human-macaque conflicts.

Although long-tailed macaques have the constructive ability to “adapt to climate change, utilize degraded landscapes, and regenerate primary and secondary habitats through seed dispersal,”⁴ primatologists conclude that their flexible nature cannot withstand the destructive threats to their existence.⁵ Based on the petition herein, which summarizes, supplements, and incorporates by reference the IUCN’s detailed 2022 Assessment, the petitioners urge the Service to list the long-tailed macaque as an endangered or threatened species under the ESA.

II. INTRODUCTION

A. Petitioners

People for the Ethical Treatment of Animals (PETA) is a non-profit organization dedicated to protecting animals from abuse, neglect, and cruelty, and undertakes these efforts through public education, cruelty investigations, research, animal rescue, legislation, special events, celebrity

¹ M. F. Hansen et al., *Macaca fascicularis*, THE IUCN RED LIST OF THREATENED SPECIES 10 (2022), <https://dx.doi.org/10.2305/IUCN.UK.2022-2.RLTS.T12551A221666136.en> [hereinafter “IUCN 2022 Assessment”] (amended version of 2022 assessment) [Ex. 1].

² *Id.* at 3; see also *Common Long-Tailed Macaque*, IUCN RED LIST, <https://www.iucnredlist.org/species/195351957/221668305> (last visited Apr. 3, 2023) [Ex. 2].

³ See *The New IUCN Red List Assessment of the Long-Tailed Macaque and All Subspecies*, THE LONG-TAILED MACAQUE PROJECT 2 (July 21, 2022), <https://theltmproject.org/activities/> [hereinafter “LTM Project”] [Ex. 3].

⁴ *Id.*

⁵ See Malene F. Hansen et al., *Conservation of Long-Tailed Macaques: Implications of the Updated IUCN Status and the CoVID-19 Pandemic*, 35 PRIMATE CONSERVATION 7 (2021), https://www.researchgate.net/publication/349338354_Conservation_of_Long-tailed_Macaques_Implications_of_the_Updated_IUCN_Status_and_the_CoVID-19_Pandemic [hereinafter “Hansen et al. 2021”] [Ex. 4].

involvement, protest campaigns, and lawsuits to enforce laws enacted to protect animals. Beginning in 1981 with an investigation that uncovered primates—including long-tailed macaques—suffering in a Maryland research facility, PETA has spent decades exposing abusive and deadly experiments on primates and persistently champions ending the use of animals in experiments. For example, to further its work to end the importation of primates into the United States for experiments, PETA launched a campaign that persuaded major airlines to stop transporting primates—including long-tailed macaques—into the United States for use in experiments. And, when the biomedical research community petitioned the Department of Transportation to take enforcement action against the airlines, PETA submitted extensive comments in opposition. In November 2022, PETA filed a shareholder resolution calling for one of the largest importers of primates (mostly long-tailed macaques) into the United States to provide transparent reports describing the species, country of origin, and number of primates it imports into the United States, and measures it takes to mitigate its impact on wild populations.⁶

Primatologist **Lisa Jones-Engel, Ph.D.** has studied the interface between humans and long-tailed and pig-tailed macaques in Indonesia, Singapore, Cambodia, Thailand, Myanmar and Bangladesh as well as in the primate biomedical facilities of the United States since the 1980s. Her scientific career has included field studies, research in the laboratory setting (most recently, the Washington National Primate Research Center), and teaching assignments. She has authored over 100 peer-reviewed articles, covering the fields of primatology, virology, epidemiology, microbiology, and conservation, and co-authored the IUCN 2022 Assessment. Dr. Jones-Engel currently serves as senior science advisor on primate experimentation with PETA's Laboratory Investigations Department.

Primatologist **Birutė Mary Galdikas, Ph.D.** has committed five decades to the conservation and study of primates in Indonesia. She is the world's authority on orangutans. Her field site in Indonesia is home to wild populations of long-tailed and pig-tailed macaques who share the rainforest with the orangutans. The Orangutan Foundation International, founded by Dr. Galdikas, takes a holistic and comprehensive approach with multiple complementary strategies to combat the complex challenges of conserving and protecting the animals and forests.

Dr. Jane Goodall, DBE, founder of the Jane Goodall Institute and UN Messenger of Peace, has for decades been a global champion for animal welfare and conservation. She travels the world asking each of us to take action on behalf of all living things and the planet we share.

Action for Primates is a UK-based project that advocates globally on behalf of non-human primates. Action for Primates recognizes that all animals, not just non-human primates, deserve respect and protection from harm by people.

Born Free USA is a leading wildlife charity, working for decades to end the exploitation of macaques and to enhance the survival of threatened species in the wild and protect natural habitats while respecting the needs and safeguarding the welfare of individual animals. They

⁶ See Alka Chandna, *Illegally Captured Primates Used in Animal Testing Pose Health and Investor Risks*, PROXYPREVIEW (Mar. 21, 2023), <https://www.proxypreview.org/all-contributor-articles/illegally-captured-primates-used-in-animal-testing-pose-health-and-investor-risks> [Ex. 5].

seek to have a positive impact on animals in the wild and protect their ecosystems in perpetuity, for their own intrinsic value and for the critical roles they play within the natural world.

Sarah Kite is co-founder of Action for Primates. She has spent decades working to bring awareness of the international trade and use of non-human primates, in particular macaques, for the global research and toxicity testing industries.

Dr Nedim Buyukmihci is Emeritus Professor of Veterinary Medicine at the School of Veterinary Medicine, University of California-Davis and co-founder of Action for Primates. His decades of non-human animal advocacy have included working on behalf of a wide range of species, in particular macaques and other non-human primates. He has many years of experience co-managing sanctuaries, including for farmed animals and non-human primates, and a wildlife refuge.

Angela Grimes is Chief Executive Officer of Born Free USA, a wildlife conservation and animal welfare organization. For the past decade Angela has campaigned to ensure that long-tailed and pig-tailed macaques caught up in the wildlife, pet or laboratory trade are provided with sanctuary.

Dr. Liz Tyler-Griffin has worked in animal protection and conservation, with a particular focus on primates, for twenty years. She currently works as Programs Director for Born Free USA and runs one of the largest long-tailed and pig-tailed macaque sanctuaries in the United States.

The Macaque Coalition (MACC) was initiated in 2020 and is a working group of the Asia for Animals Coalition. MACC aims to collate and share information on the many welfare issues faced by macaques, and to facilitate networking and collaboration geared towards promoting respectful coexistence, alleviating their suffering, and protecting them at both the individual level and the species level. MACC produced the 2022 Macaque Report: Indonesia's Unprotected Macaques.

Ecoflix is a not-for-profit media group that educates, inspires and supports meaningful actions which will deliver a tangible, measurable difference in saving animals and restoring the planet. Dr. Ian Redmond, Head of Conservation for Ecoflix has spent decades raising awareness, through advocacy and research, about the trade in wildlife, including long-tailed and pig-tailed macaques.

Wildlife biologist and conservationist, **Dr. Ian Redmond** has devoted decades to protecting and advocating for conservation. He is the founder and chairman of the Ape Alliance, a coalition of organizations and individuals dedicated to the conservation and welfare of apes and other primates. The Ape Alliance Primate Trade Working Group publicize cases of illegal trade, and support efforts to repatriate confiscated live animals to the nearest suitable sanctuary to the point of origin.

Since 1973, under the leadership of our founder, Dr. Shirley McGreal, **International Primate Protection League** has spent decades fighting to protect and save macaques around the world.

These significant efforts included fighting smugglers, exposing the fate of long-tailed and pig-tailed macaques in research labs, establishing a gibbon sanctuary and much more. For decades, **Wildlife Alliance** has worked with stakeholders around the globe to combat the illegal wildlife trade in long-tailed macaques and other species.

Through lobbying, publishing research, training scientists, and attending and conducting scientific meetings, the **Physicians Committee for Responsible Medicine** is dedicated to the goal of eliminating the exploitation and use of macaques in testing across the globe.

Dr. Michael Schillaci is a Professor of Anthropology, University of Toronto Scarborough. Dr. Schillaci has spent two decades studying macaque morphology, growth, hybridization and evolution, including *Macaca fascicularis*, in addition to other macaque species. He has also been involved in research examining the consequences of human macaque interactions in Southeast Asia.

One Voice has been involved in the fight against animal experiments since its foundation about 30 years ago. With regard to macaques in particular, OneVoice fights against the fact that they are still being captured in the wild and bred, transported, and experimented. One Voice investigates, petitions, goes to court, analyses data and advocates on their behalf. The organization is also a member of the macaque coalition at an international level, in Asia for Animals.

Abolición Vivisección is a Spanish NGO born in 2021. Their activities started exposing the terrible conditions of the macaques imported and held in Camarney (Spain), the largest macaque farm for experimentation in Europe. Currently, their work focuses on raising awareness about the trafficking of macaques, the suffering of animals, and the futility of vivisection as a valid scientific method.

Dr. Sam Shanee is a conservation biologist/conservationist who has worked in Asia and South America for over 20 years. Much of his work is centered on the illegal wildlife trade and human-wildlife conflict resolution, and as such he has observed first-hand the multiple threats faced by both long-tailed and pig-tailed macaques.

Gemunu de Silva is the co-founder of Tracks Investigations, an ethical investigations agency providing investigative content to the animal protection sector world-wide. He has been an advocate for animals for over 35 years and has worked on a variety of global projects and campaigns, most notably his work investigating the international trade of primates for research in Vietnam, Cambodia and Mauritius for which he was awarded the special investigation prize by the RSPCA.

Northwest Animal Rights Network (NARN) is an animal rights organization based in the Pacific Northwest (PNW). NARN monitors the use of macaques in the PNW, and campaigns for those used in research in facilities around the PNW.

Pam Mendosa has worked with many primate species in the US and Africa, specializing in research protocols and wildlife rehabilitation. She is active in campaigning and activism

and heads the current board of International Primate Protection League, supporting work to end the illegal pet trade and conserve primates in their native habitat.

Phoenix Zones Initiative (PZI) advocates for global and local policy changes that safeguard people, animals, and the environment against exploitation. PZI continues to promote dialogue about the importance of moving away from the use of long-tailed and pig-tailed macaques in biomedical research.

Dr. Hope Ferdowsian is a double-board certified internal medicine, preventive medicine, and public health physician, and co-founder and president of Phoenix Zones Initiative, a global nonprofit organization that advances the interdependent rights, health, and wellbeing of people, animals, and the planet through education, research, and advocacy. Over two decades, she has worked across six continents on policy to address human, animal, and environmental exploitation.

Dr. Nikhil Kulkarni is a board certified anesthesiologist and cofounder of Phoenix Zones Initiative, a global nonprofit organization that advances the interdependent rights, health, and wellbeing of people, animals, and the planet through education, research, and advocacy. Over the years, Dr. Kulkarni has worked with a number of organizations focused on the promotion of animal and environmental protection.

Neotropical Primate Conservation has been using primates as “flagship species” for community conservation projects for decades ensuring long term habitat protection for our flagship species and all wildlife that shares their habitats. Through this work they help local communities strengthen their stewardship of nature as well as protect their traditional and cultural identities, benefiting both humans and the environment.

The **EMS Foundation** is a not for profit organization based in South Africa, we believe that there is a need to conserve and protect non-human primate populations that are living in the wild because of land transformation and persecution by humans and the resultant fragmentation of populations and decline in numbers. The existential crisis non-human primates find themselves in, whether they are taken from the wild or bred in captivity, is closely tied to the insatiable and ever-proliferating demand to own and kill rare and exotic wild animals.

Tim Ajax, Executive Director of the **Oklahoma Primate Sanctuary**, has spent the last three decades working with captive non-human primates including many species of macaques such as long-tailed and pig-tailed macaques. Whether retired from research or rehomed from the exotic pet trade, Tim has worked tirelessly to provide a high-quality level of care with a focus on large enclosures where these intelligent primates can engage in normal behaviors.

Rise for Animals is a national animal rights organization on a mission to end animal experimentation. Their efforts to expose cruelty in labs, rescue animals, mobilize support, get laws passed, and advocate for innovative, humane, and effective research will end an outdated industry and free animals from cruelty. Founded as New England Anti-Vivisection Society, Rise for Animals has been working to free macaques and other non-human primates from biomedical

research for decades. Ed Butler is the Executive Director at Rise for Animals. For more than twenty years he has worked on campaigns to save animals—including macaques.

Wildlife Friends Foundation Thailand is a registered foundation under Thai law. They campaign against all forms of animal abuse and exploitation in Thailand. WFFT actively seeks to combat the illegal wildlife trade in macaques and to rescue animals from poor conditions or exploitation from human entertainment.

The **Douc Langur Foundation**, headed by Dr. Lois Lippold, focuses on exposing and mitigating the poaching, trapping and illegal trade of primates from the forests of Southeast Asia.

Fundacion Entropika works closely with local stakeholders in South America in community-led projects, educational and social programs, capacity building and empowerment of civil society, enforcing environmental and primate welfare laws and cooperative research.

Dr. Angela Maldonado, Project Director of Fundacion Entropika, is a primatologist, ecologist and conservationist working for over 20 years in the Colombian Amazon. Her work focuses on fighting the illegal wildlife trade and in helping local communities. She has been the recipient of multiple awards in recognition of her dedication to conservation.

Animal Defenders International, headed by Jan Creamer, has worked for decades to expose the violence and death that is associated with the capture, transport and use of long-tailed and pigtailed macaques destined for use in experiments.

World Animal Protection and Lindsay Oliver, World Animal Protection’s Executive Director, fights to keep animals in the wild, where they belong.

Paula Pebsworth works in the area of human-primate coexistence and is currently the Head Scientist on a project run by the National Center for Wildlife in the Kingdom of Saudi Arabia to reduce human-baboon conflict. She has worked in India on projects to reduce human-macaque conflict.

Yuichi Hasegawa is the Executive Director of the **Japan Anti-Vivisection Association (JAVA)** which has been working for many years to eliminate the use of macaque monkeys, especially Japanese macaques, for animal experiments, entertainment, and culling.

The petitioners submit this petition with an interest in ensuring the protection of long-tailed macaques under the ESA.

B. Endangered Species Act

Congress enacted the ESA of 1973, 16 U.S.C. §§ 1531–1544, “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [and] to provide a program for the conservation of such endangered species and threatened species.” 16 U.S.C. § 1531(b). An “endangered species” means “any species which is in danger of extinction

throughout all or a significant portion of its range.” *Id.* § 1532(6). A “threatened species” is one “which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” *Id.* § 1532(20). Only those species listed as endangered or threatened receive the ESA’s protection. The FWS, through the authority delegated to it by the Secretary of the Interior (“Secretary”), must list a species if the species qualifies as endangered or threatened because of any one of the following factors:

- (A) the present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) overutilization for commercial, recreational, scientific, or educational purposes;
- (C) disease or predation;
- (D) the inadequacy of existing regulatory mechanisms; or
- (E) other natural or manmade factors affecting its continued existence.

50 C.F.R. § 424.11(c); *see* 16 U.S.C. § 1533(a)(1); 50 C.F.R. § 402.01(b).

To prevent the Secretary from implementing the ESA haphazardly (i.e., “on the basis of speculation or surmise”), *Bennett v. Spear*, 520 U.S. 154, 176 (1997), the statute requires the listing determination to be made “solely on the basis of the best available scientific and commercial information regarding the species’ status.” 16 U.S.C. § 1533(b)(1)(A); 50 C.F.R. § 424.11(b).

Within ninety days after receiving a petition to list a species, the Secretary must determine “whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted.” 16 U.S.C. § 1533(b)(3)(A). In other words, there must be “credible scientific or commercial information in support of the petition’s claims such that a reasonable person conducting an impartial scientific review would conclude that the action proposed in the petition may be warranted.” 50 C.F.R. § 424.14(h)(i).

The “reasonable person” standard is a “lesser standard”; a petition does not need to contain “conclusive evidence of a high probability of species extinction to warrant further consideration of listing that species.” *Ctr. for Biological Diversity v. Morgenwreck*, 351 F. Supp. 2d 1137, 1141 (D. Colo. 2004). Rather, a petitioner must “simply show that the substantial information in the Petition demonstrates that listing of the species *may* be warranted.” *Id.* (emphasis added). As described in 50 C.F.R. section 424.14(d), whether a particular listing petition provides “substantial” information depends on:

- (1) Information on current population status and trends and estimates of current population sizes and distributions, both in captivity and the wild, if available;
- (2) Identification of the factors under [16 U.S.C. § 1533(a)(1)] that may affect the species and where these factors are acting upon the species;
- (3) Whether and to what extent any or all of the factors alone or in combination identified in [16 U.S.C. § 1533(a)(1)] may cause the species to be an endangered species or threatened

species . . . and, if so, how high in magnitude and how imminent the threats to the species and its habitat are;

- (4) Information on adequacy of regulatory protections and effectiveness of conservation activities by States as well as other parties, that have been initiated or that are ongoing, that may protect the species or its habitat.

If the Secretary finds that substantial information exists then, within twelve months after receiving the petition, the Secretary must review the species status and determine whether the species should be listed. *See* 16 U.S.C. § 1533(b)(3)(B). If the finding demonstrates that the petition is not warranted, the listing process ends but the negative finding may be judicially reviewed. *See* 16 U.S.C. § 1533(b)(3)(C)(ii).

III. NATURAL HISTORY⁷

A. Common Name

The common names for *Macaca fascicularis* are Long-tailed Macaque, Crab-eating Macaque, and Cynomolgus Macaque.⁸ Throughout this petition, the species is referred to as “long-tailed macaque.”

B. Taxonomy

Table 1 identifies the taxonomic classification for the petitioned species, *Macaca fascicularis*.

Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Primates
Family	Cercopithecidae
Genus	<i>Macaca</i>
Species	<i>fascicularis</i>

Table 1. Taxonomy of *Macaca fascicularis*.⁹

C. Description

Named for their remarkably long tails, which measure approximately 19–23.5 inches and extend beyond their 15–18.5-inch head and body length, long-tailed macaques are physically smaller members of the genus.¹⁰ Females weigh approximately 6.5–8.5 pounds and have beards; males

⁷ Refer to the IUCN 2022 Assessment [Ex. 1], pages 1–2, 8, for detailed notes on the species’ natural history.

⁸ IUCN 2022 Assessment, *supra* note 1, at 1; *Macaca fascicularis*, INTEGRATED TAXONOMIC INFO. SYS., https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=180098#null (last visited Apr. 3, 2023) [hereinafter “ITIS Report”] [Ex. 6].

⁹ ITIS Report, *supra* note 8.

¹⁰ IUCN 2022 Assessment, *supra* note 1, at 1; Jennifer Botting, *Long-Tailed Macaque*, NEW ENGLAND PRIMATE CONSERVANCY (July 2022), <https://neprimateconservancy.org/long-tailed-macaque/> [Ex. 7].

weigh approximately 10.5–15.5 pounds and have mustaches.¹¹ The pelage color ranges from brown to grey, but underbellies are whitish.¹² Their faces are pink, eyes are yellow-brown, and ears are large and square.¹³ Lifestyles vary across their range, but their days consist mainly of moving, resting, and feeding.¹⁴ Fruits, flowers, young leaves, and invertebrates comprise their natural diet.¹⁵

D. Habitat

Long-tailed macaques have adapted to living in a diverse range of habitats (e.g., coasts, mountains, forests)¹⁶ and, while they most commonly can be found in riverine habitats (e.g., mangroves and swamp forests), they are also regularly found in human-altered habitats, such as roadsides, temples, and rural/urban settlements.¹⁷

IV. GEOGRAPHIC RANGE¹⁸

Long-tailed macaques are distributed across Southeast Asia, and the Nicobar Islands in South Asia, in a patchy, non-continuous distribution.¹⁹ Table 2 summarizes the geographic range described in greater detail in the IUCN 2022 Assessment.²⁰

Description	Country of Occurrence
Native, Extant (resident)	Brunei Darussalam; Cambodia; India (Nicobar Islands); Indonesia; Malaysia; Myanmar; Philippines; Singapore; Thailand; Timor-Leste; Vietnam
Native, Extinct	Bangladesh
Native, Presence Uncertain	Lao People’s Democratic Republic (PDR)
Extant and Introduced (resident)	Mauritius; Palau; Papua New Guinea

Table 2. Countries of long-tailed macaque occurrence.²¹

¹¹ Botting, *supra* note 10.

¹² IUCN 2022 Assessment, *supra* note 1, at 1.

¹³ Botting, *supra* note 10.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ See IUCN 2022 Assessment, *supra* note 1, at 8 (citing Fooden 1995 [Ex. 8]).

¹⁷ See *id.* (citing Gumert 2011).

¹⁸ Refer to the IUCN 2022 Assessment [Ex. 1], pages 4-6, for detailed notes on the species’ geographic range.

¹⁹ IUCN 2022 Assessment, *supra* note 1, at 4 (citing Fooden 1995 [Ex. 8], Gumert 2011, Eudey 2008 [Ex. 9]).

²⁰ *Id.* at 4–5.

²¹ *Id.* at 5.



Figure 1. Long-tailed macaque distribution map.²²

V. POPULATION STATUS AND TRENDS²³

The IUCN documents a decreasing population trend.²⁴ Although “very few habitat countries have authoritative estimates of their entire *M. fascicularis* populations,”²⁵ primateologist Jack Fooden estimated that the long-tailed macaque population in the 1980s totaled approximately five million.²⁶ A conservative population estimate from the early 2000s records the population at approximately three million (i.e., a forty-percent reduction).²⁷ Based on historical figures, the

²² *Distribution Map*, IUCN (2022), https://www.iucnredlist.org/api/v4/assessments/221666136/distribution_map/jpg [Ex. 10].

²³ Refer to the IUCN 2022 Assessment [Ex. 1], pages 7–8, for detailed notes on the species’ population status and trends.

²⁴ *Common Long-Tailed Macaque*, *supra* note 2; IUCN 2022 Assessment, *supra* note 1, at 8.

²⁵ IUCN 2022 Assessment, *supra* note 1, at 3.

²⁶ *Id.* at 7 (citing Fooden (1995, p. 54) [Ex. 8]).

²⁷ *Id.* (citing Fooden (2006, p. 5) [Ex. 11]) (noting the tendency to overestimate population size based on the species’ visibility in anthropogenic landscapes).

IUCN suspects that, in the last forty years (or three generations), the population declined forty percent and, because the threats fueling the decrease (e.g., environmental impacts and removal) have increased over time, the population decline is “likely to increase to surpass 50% in the coming three generations.”²⁸ The long-tailed macaque’s IUCN Red List status, based on historical assessments, shows an ominous population trajectory: Lower Risk/Near Threatened (1996, 2000), Least Concern (2008), Vulnerable (2020, 2021), and Endangered (2022).²⁹

VI. THREATS³⁰

All of the statutory listing factors described in 16 U.S.C. § 1533(a)(1) threaten the species. While many of the factors are threats independent of other factors (e.g., overutilization), the severity is exacerbated when the factors work in combination (e.g., overutilization and inadequate regulatory mechanisms).

A. Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range

Deforestation, habitat fragmentation, and increased contact with humans (i.e., extensive overlap with anthropogenic habitats) are major threats to the species.³¹ “Ongoing habitat destruction and conversion [of natural habitats to other land uses] are decimating wild populations of long-tailed macaques.”³² In general, Southeast Asia’s changing landscape has resulted in decreased available undisturbed habitat and increased human-species contact.³³ Between 1990 and 2010, the region’s forest cover decreased by 32 million hectares (from 268 million hectares to 236 million hectares).³⁴ In 2004, Southeast Asia reportedly had the “highest relative rate of deforestation of any major tropical region.”³⁵ Between 2005 and 2015, Southeast Asia lost roughly 80 million hectares of forest, with Indonesia accounting for a 62% share, Malaysia accounting for a 16.6% share, Myanmar accounting for a 5.3% share, and Cambodia accounting for a 5.0% share.³⁶ In 2019, Southeast Asia remained a “deforestation hotspot” as forest clearance, driven by anthropogenic factors (e.g., logging, clear-cutting for food production, agriculture, and cash crops), resulted in habitat loss estimated to be “among the highest and most severe in terms of biodiversity loss.”³⁷ In 2022, Cambodia reported deforestation as the main threat to long-tailed macaques.³⁸

As a result of deforestation, conversion, development of infrastructure, and widespread encroachment, the long-tailed macaque’s “natural habitats are being increasingly fragmented,

²⁸ *Id.*

²⁹ *Id.* at 3–4.

³⁰ Refer to the IUCN 2022 Assessment [Ex. 1], pages 8-10, for detailed notes on threats to the species.

³¹ IUCN 2022 Assessment, *supra* note 1, at 9 (citing Sodhi et al. 2004 [Ex. 12], Gumert 2011).

³² LTM Project, *supra* note 3, at 2.

³³ IUCN 2022 Assessment, *supra* note 1, at 9 (citing Gumert et al. 2011).

³⁴ Ronald C. Estoque et al., *The Future of Southeast Asia’s Forests*, NATURE COMMUNICATIONS 2 (2019), <https://www.nature.com/articles/s41467-019-09646-4> [Ex. 13].

³⁵ Navjot S. Sodhi et al., *Southeast Asian Biodiversity: An Impending Disaster*, 19 Trends in Ecology & Evolution 654, 654 (2004) [Ex. 12].

³⁶ Estoque et al., *supra* note 34, at 2.

³⁷ *Id.*

³⁸ See IUCN 2022 Assessment, *supra* note 1, at 10.

degraded, and changed by human activity[,] . . . isolat[ing them] from each other and [increasing] the risk of inbreeding and/or outbreeding depression.”³⁹ Long-tailed macaques are increasingly found near human settlements due to anthropogenic habitat alteration.⁴⁰ Increased interface between humans and long-tailed macaques has been linked to heightened health risks from bi-directional pathogen transfer, negative perceptions of the species as “pests” and “weed species,” and culling activities to address human-macaque conflicts.⁴¹

B. Overutilization

The long-tailed macaque is considered to be the “most highly traded species of primate.”⁴² As detailed in the IUCN 2022 Assessment and summarized below, overutilization for scientific, commercial, and recreational purposes threatens the species.

Long-tailed macaques are “heavily demanded for biomedical and toxicology research.”⁴³ As the “predominant species in the international trade in live primates for research,”⁴⁴ the species accounts for “10% of the annual revenue of all animals exported globally.”⁴⁵ Large numbers of long-tailed macaques are exported from Cambodia, Mauritius, Viet Nam, Indonesia, and Philippines, with international demand coming from the United States (the leading importer in the live long-tailed macaque trade),⁴⁶ Japan, China, and the European Union.⁴⁷

From 2008–2019, at least 450,000 live long-tailed macaques (captive and wild-caught), and over 700,000 specimens (a broad-ranging term that can include tissue or blood samples, body parts or hair) from an unknown number of long-tailed macaques were part of this trade, with over 50,000 identified as wild-caught (specimens and live).⁴⁸

³⁹ Suchinda Malaivijitnond et al., *Human Impact on Long-Tailed Macaques in Thailand*, in *MONKEYS ON THE EDGE: ECOLOGY AND MANAGEMENT OF LONG-TAILED MACAQUES AND THEIR INTERFACE WITH HUMANS* 118, 118 (Michael D. Gumert et al. eds., Cambridge Univ. Press, 2011).

⁴⁰ *Id.*

⁴¹ Hansen et al. 2021, *supra* note 5, at 5.

⁴² IUCN 2022 Assessment, *supra* note 1, at 8 (citing Hansen et al. 2022 [Ex. 14]).

⁴³ *Id.* (citing, e.g., Eudey 2008 [Ex. 9], Hansen et al. 2021 [Ex. 4]).

⁴⁴ Hansen et al. 2021, *supra* note 5, at 4.

⁴⁵ Regina Kate Warne et al., *Is Biomedical Research Demand Driving a Monkey Business*, 16 *ONE HEALTH* 1 (2023), <https://www.sciencedirect.com/science/article/pii/S235277142300040X?via%3Dihub> [Ex. 15].

⁴⁶ See *CITES Trade Database*, CITES (2022), <https://trade.cites.org/> (last visited Apr. 3, 2023) (comparing gross exports of live *Macaca fascicularis* from 2015-2021 for “all countries”); *Lab Pauses Monkey Imports*, *SCIENCE* (Mar. 2, 2023), <https://www.science.org/content/article/news-glance-monkey-shipments-controversial-visa-and-support-geoengineering-research> [Ex. 16] (reporting that long-tailed macaques “accounted for 96% of the nearly 33,000 nonhuman primates the [United States] imported in 2022”).

⁴⁷ IUCN 2022 Assessment, *supra* note 1, at 8 (citing Foley and Shepherd 2011, Hansen et al. 2021 [Ex. 4], Hansen et al. 2022 [Ex. 14]); see also *CITES Trade Database*, *supra* note 46 (comparing gross imports of live *Macaca fascicularis* from 2015-2021 for “all countries”); Dan Robitzski, *What Happens to Science When Model Organisms Become Endangered*, *THE SCIENTIST* (Oct. 13, 2022), <https://www.the-scientist.com/news-opinion/what-happens-to-science-when-model-organisms-become-endangered-70619> [Ex. 17] (noting that the CITES database shows that exports to the United States represented the vast majority of reported live macaque trade in 2020).

⁴⁸ Hansen et al. 2021, *supra* note 5, at 5 [Ex. 4] (citing CITES Trade Database 2021).

Since the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) does not track domestic trade within a given country, the number of long-tailed macaques taken from the wild and used in local research is not counted in the above totals.⁴⁹ A significant discrepancy exists between declared exports and imports by countries of live long-tailed macaques on the CITES Trade Database, likely the result of importers failing to report to CITES.⁵⁰ Therefore, a precise account of the global trade (and trade to the United States) is not possible.⁵¹ Additionally, the above numbers do not factor in long-tailed macaques traded without valid CITES export permits (i.e., illegally traded)—which may add twenty-eight percent to trading totals.⁵² In November 2022, United States federal prosecutors charged eight people, including two Cambodian Forestry Administration officials, in an alleged international smuggling ring that spanned from 2017 to 2022 and involved the export of thousands of wild-caught long-tailed macaques into the United States.⁵³ A press release reported:

In order to make up for a shortage of suitable monkeys at the putative breeding facilities in Cambodia, the co-conspirators enlisted the assistance of the CITES authority in Cambodia and the Ministry of Agriculture, Forestry and Fisheries (MAFF) to deliver wild-caught macaques taken from national parks and protected areas in Cambodia. These macaques were taken to breeding facilities and provided false CITES export permits. A collection quota of 3,000 “unofficial” monkeys was allowed for which MAFF officials received cash payments.⁵⁴

And, as recently as March 2023, police and officers from the Mauritius Ministry of Agro-Industry seized 440 captive long-tailed macaques held in the country, suspecting that the wild-caught monkeys were part of an illegal trafficking network presumably destined for animal experimentation laboratories.⁵⁵ Following the raid, police arrested the director of the operation for alleged illegally possession and trafficking of the primates.⁵⁶

⁴⁹ IUCN 2022 Assessment, *supra* note 1, at 8; *see also* Robitzski, *supra* note 47 [Ex. 17] (“[T]he Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which monitors international animal exports, doesn’t track domestic trade in a given country, so macaques taken from the wild and used in local research or to establish or replenish breeding farms are not tracked internationally—and within-country data collection can be patchy.”).

⁵⁰ Warne et al., *supra* note 45, at 3 (explaining that a large discrepancy in reported macaque trade observed in 2019 and 2020 was likely attributed to a lack of reporting to CITES by importers).

⁵¹ *See id.*

⁵² IUCN 2022 Assessment, *supra* note 1, at 8 (citing Tittensor et al. 2020 [Ex. 18]).

⁵³ *Cambodian Officials and Six Co-Conspirators Indicted for Taking Part in Primate Smuggling Scheme*, IRS (Nov. 16, 2022), <https://www.irs.gov/compliance/criminal-investigation/cambodian-officials-and-six-co-conspirators-indicted-for-taking-part-in-primare-smuggling-scheme> [Ex. 19].

⁵⁴ *Id.*

⁵⁵ Narain Jasodanand, *Traffic in Jin Fei: Monkeys Kept in Barbaric Conditions*, LEXPRESS.MU (Mar. 20, 2023), <https://lexpress.mu/article/420389/trafic-jin-fei-singes-maintenus-dans-conditions-barbares> [Ex. 20]; *Primate Breeding – Radhakrishna Veerapa: “Monkeys Are On Hold, Pending Decision,”* LEMAURICIEN.COM (Apr. 3, 2023), https://www.lemauricien.com/actualites/societe/elevage-de-primates-radhakrishna-veerapa-les-singes-sont-on-hold-pending-decision/547772/?fbclid=IwAR3IdbSSRcyA__rwmqW9qROFjSbDbagDVA79cuwLDv4ym-WUIhw8Q-sAGiI [Ex. 21].

⁵⁶ Jasodanand, *supra* note 55.

From 2010 to 2019, international trade in long-tailed macaques totaled approximately \$1.25 billion.⁵⁷ The COVID-19 pandemic seriously intensified the demand.⁵⁸ The average price internationally of an individual macaque quadrupled from 2019 to 2022,⁵⁹ possibly incentivizing both legal and illegal trade in this species. Currently, “an individual macaque can be sold for between \$20,000 and \$24,000.”⁶⁰ Between 2017 and 2022, the U.S. imported an estimated 165,000 long-tailed macaques; the number of imports has increased year-over-year since 2020.⁶¹ The need for vaccines and treatment is anticipated to sustain the demand.⁶²

Increased export quotas also fuel the overutilization threat. For example, in 2022, the export quota in Lao People’s Democratic Republic doubled from 3,000 to 6,000 live captive-bred specimens.⁶³ Since export data have not yet been reported to CITES, the numbers are not recorded in the CITES Trade Database.⁶⁴

Domestic trade for pets and entertainment (e.g., street performances), and the influence of social media platforms (e.g., trading on Facebook), further threaten the species.⁶⁵ The effect particular practices have had on wild macaques is not always known “but it is likely that it either added to their capture in the wild or added to the demand for them in local animal markets, or both.”⁶⁶ Indonesian, Philippines, and Vietnamese organizations currently report capture for pets and research as the main threat to the long-tailed macaque population.⁶⁷

C. Disease or Predation

Disease, associated with keeping the species as pets and as a consequence of the decline in natural habitat, has been recognized as a threatening factor. For example, in Viet Nam, where it is common to keep the species as pets, “[c]onfiscated long-tailed macaques are often released without proper procedure, contributing to negative human-macaque interactions and possible disease and parasite introduction in the release area.”⁶⁸ Furthermore, as long-tailed macaques are increasingly found

⁵⁷ IUCN 2022 Assessment, *supra* note 1, at 9 (citing Hansen et al. 2022 [Ex. 14]).

⁵⁸ *Id.* at 8 (citing Hansen et al. 2022 [Ex. 14]).

⁵⁹ *Id.* at 9 (citing Hansen et al. 2022 [Ex. 14]).

⁶⁰ Warne et al., *supra* note 45, at 3.

⁶¹ The number of long-tailed macaques imported into the U.S. between 2017 and 2021, according to Centers for Disease Control and Prevention (CDC) records released to PETA in July 2022, totaled 133,777: 20,110 (FY2017), 25,700 (FY 2018), 32,439 (FY2019), 24,879 (FY2020), 30,649 (FY2021). Steve Schapiro, Ph.D. (a former president of the American Society of Primatologists) reportedly received the total number imported in 2022 (31,522) from the CDC.

⁶² See Hansen et al. 2021, *supra* note 5, at 6.

⁶³ See *CITES Export Quotas*, CITES, <https://cites.org/eng/resources/quotas/index.php> (last visited Apr. 5, 2023).

⁶⁴ See *CITES Trade Database*, *supra* note 46.

⁶⁵ IUCN 2022 Assessment, *supra* note 1, at 9 (citing Hansen et al. 2021 [Ex. 14]).

⁶⁶ Hansen et al. 2021, *supra* note 5, at 4.

⁶⁷ IUCN 2022 Assessment, *supra* note 1, at 10.

⁶⁸ See *id.* (citing Aldrich and Neale 2021 [Ex. 22]); see also Hansen et al. 2021, *supra* note 5, at 3–4 (describing “diseases from introduced macaques” as a threatening factor).

near human settlements due to anthropogenic habitat alteration,⁶⁹ interface between humans and long-tailed macaques heightens health risks from bi-directional pathogen transfer.⁷⁰

Both anecdotal and documented hunting monitoring reports confirm that subsistence hunting is a threat to the species.⁷¹ In particular, this is a significant threat in Myanmar,⁷² where hunting for village-scale consumption and restaurant cuisine creates pressure on the long-tailed macaque population.⁷³

D. Inadequacy of Existing Regulatory Mechanisms

The IUCN 2022 Assessment describes a “notable lack of legal protection and malaise of enforcement for any laws that do apply to protecting long-tailed macaques,”⁷⁴ while acknowledging the protections already conferred. Specifically, the IUCN observes that the species is:

- included in Appendix II of CITES and thus is monitored and requires permits for international trade of live specimens and its parts;⁷⁵
- a normally protected species in Cambodia and the Philippines;
- assessed to be “vulnerable” in Myanmar, but legally is still a normally protected species;
- a protected species on Appendix 2B on Decree 84/2021/ND-CP in Viet Nam;
- not listed as a protected species in Indonesia,⁷⁶ but is subject to a national wild-capture quota system;⁷⁷
- not specifically listed on the Wild Animal Preservation and Protection Act, B.E. 2535 (1992), in Thailand, but is given the normal protection of wildlife, which restricts hunting and capture in all protected areas and forest lands;

⁶⁹ Malaivijitnond et al., *supra* note 39.

⁷⁰ Hansen et al. 2021, *supra* note 5, at 4. Researchers have determined that trade in long-tailed macaques and rhesus macaques carries the greatest potential for zoonotic disease. See Stefan Borsky et al., *CITES and the Zoonotic Disease Content in International Wildlife Trade*, 76 ENV'T & RES. ECON. 1001, 1008 (2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7399621/pdf/10640_2020_Article_456.pdf [Ex. 23]; see also Amanda L. Johnson et al., *Common and Not So Common Pathologic Findings of the Gastrointestinal Tract of Rhesus and Cynomolgus Macaques*, 50 TOXICOL PATHOL. 1 (2022), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9308647/pdf/nihms-1781619.pdf> [Ex. 24] (acknowledging that recent importations of long-tailed macaques have been associated with “increased exposure to naturally-occurring pathogens,” all of which are zoonotic).

⁷¹ IUCN 2022 Assessment, *supra* note 1, at 8, 10 (citing Ibbett et al. [Ex. 25]).

⁷² *Id.* at 8 (citing San and Hamada 2011).

⁷³ Aye Mi San & Yuzuru Hamada, *Distribution and Current Status of Long-Tailed Macaques (Macaca fascicularis aurea) in Myanmar*, in *Monkeys on the Edge: Ecology and Management of Long-Tailed Macaques and their Interface with Humans*, 60, 63 (Michael D. Gumert & Lisa Jones-Engel eds., Cambridge Univ. Press, 2011).

⁷⁴ IUCN 2022 Assessment, *supra* note 1, at 10.

⁷⁵ Only an export permit or re-export certificate is required; an import permit is not needed unless required by national law. *How CITES Works*, CITES, <https://cites.org/eng/disc/how.php> (last visited Apr. 3, 2023) [Ex. 26].

⁷⁶ IUCN 2022 Assessment, *supra* note 1, at 10 (citing MOEF 2018 [Ex. 27]).

⁷⁷ The annual capture/export quotas for Indonesia were published in January 2023; no quotas were set for long-tailed macaques. See Kementerian Lingkungan Hidup dan Kehutanan, Keputusan Direktur Jenderal, Konservasi Sumber Daya Alam dan Ekosistem, Nomor: SK. 1/KSDAE/KKHSG/KSA.2/1/2023 Tentang Kuota Pengambilan Tumbuhan Alam dan Penangkapan Satwa Liar Periode Tahun 2023 [Ex. 28].

- protected under Singapore’s Wild Animals & Bird Act, which restricts all wildlife from being captured, held as pets, or traded without permission;
- protected according to the Wildlife Conservation Act of 2010 in Malaysia;
- listed on Schedule I, Part I, Indian Wildlife (Protection Act) of 1972, in India, and is considered an endangered species due to the species’ limited range.⁷⁸

Yet, although the long-tailed macaque has been listed in CITES Appendix II since 1977,⁷⁹ the population has declined and is now considered endangered by the IUCN based on the levels of exploitation driven, in part, by trade.⁸⁰ CITES’ regulations have not adequately controlled the species trade. For example, Indonesia reported exporting 1,600 long-tailed macaques in 2021 for commercial (“T”) purpose (see Table 3).⁸¹

Year	App.	Taxon	Class	Order	Family	Genus	Importer	Exporter	Origin	Importer reported quantity	Exporter reported quantity	Term	Unit	Purpose	Source
2021	II	<i>Macaca fascicularis</i>	Mammalia	Primates	Cercopithecidae	Macaca	CN	ID			1000	live		T	F
2021	II	<i>Macaca fascicularis</i>	Mammalia	Primates	Cercopithecidae	Macaca	US	ID			240	live		T	F
2021	II	<i>Macaca fascicularis</i>	Mammalia	Primates	Cercopithecidae	Macaca	US	ID			360	live		T	W

Table 3. Live long-tailed macaques exported from Indonesia in 2021.

Although CITES requires a Non-Detrimental Finding (NDF)—“a science-based study that assesses whether any trade will have a negative (or detrimental) effect on the survival of that species”—to be carried out before any permit for trade can be issued, Indonesia reportedly exported these hundreds of long-tailed macaques without a NDF.⁸²

Additionally, as noted in the IUCN 2022 Assessment,

[t]he trade issue is compounded by a deficiency in the scrutiny by wildlife managers to ensure that such cropping from the wild population is managed sustainably, or where not sustainable, that it is ceased. One significant problem arising around the *M. fascicularis* trade is the capturing of wild caught macaques to bring into the so-called breeding facilities found in the eastern nations of Southeast

⁷⁸ IUCN 2022 Assessment, *supra* note 1, at 10; *see also* *Macaca fascicularis*, CITES, <https://cites.org/eng/taxonomy/term/1132> (last visited Apr. 3, 2023) [Ex. 29].

⁷⁹ *Review of Significant Trade in Specimens of Appendix-II Species*, AC27 Doc. 12.4 (Rev. 1), CITES 6 (Apr. 28, 2014), <https://cites.org/sites/default/files/eng/com/ac/27/E-AC27-12-04.pdf> [Ex. 30].

⁸⁰ IUCN 2022 Assessment, *supra* note 1, at 2–3.

⁸¹ *Comparative Tabulation Report*, CITES, <https://trade.cites.org> (last visited Apr. 5, 2023) [Ex. 31]; *see A Guide to Using the CITES Trade Database*, CITES 19 (Sept. 2022), https://trade.cites.org/cites_trade_guidelines/en-CITES_Trade_Database_Guide.pdf [Ex. 32]. The sources of the species were either animals born in captivity (“F”) or specimens taken from the wild (“W”); the importing countries included China (“CN”) and the United States (“US”).

⁸² *What’s An NDF and Why Is It Important*, CITES (Oct. 28, 2022), <https://cites.org/eng/news/whats-ndf-important> [Ex. 33]; *see* Amelia Rahima Sari, *Long-Tailed Monkey Coalition: Wild Monkeys in Indonesia are Captured and Exported without NDF*, TEMPO.CO (Apr. 2, 2023), <https://bisnis.tempo.co/read/1710233/koalisi-monyet-ekor-panjang-monyet-liar-di-indonesia-ditangkap-dan-diekspor-tanpa-ndf> [Ex. 34]; *Comparative Tabulation Report*, *supra* note 81.

Asia – Cambodia, Laos and Viet Nam, (Lee 2011, Hamada et al. 2011). These captured macaques are subsequently traded as captive born and bred, which masks the true level of impact on the wild population (Foley and Shepherd 2011). These high levels of trade and uncertainty on their population-level effects leaves *M. fascicularis* highly vulnerable to significant declines in the near future.⁸³

E. Other Factors

Both “formal and informal population control measures, such as out-right killing, culling and sterilization” have led to “widespread persecution toward the species.”⁸⁴ Across the range, culling is a reoccurring practice.⁸⁵ Between 2011 and 2021, “Malaysia and Singapore initiated substantive culling actions against macaques, with Singapore culling approximately one-third of their population in 2013 and 2015.”⁸⁶ In Malaysia, the Department of Wildlife and National Parks (PERHILITAN) Peninsular Malaysia culled over 345,000 long-tailed macaques, between 2015 and 2020, as part of human-conflict management. *See* Table 4.

Year	# Culled by PERHILITAN
2020	58,069
2019	46,594
2018	53,687
2017	62,845
2016	61,231
2015	62,706
TOTAL	345,132

Table 4. Culled long-tailed macaque totals in Malaysia.⁸⁷

The IUCN 2022 Assessment also highlights current removal activities in the Philippines and Malaysia,⁸⁸ and recognizes the practice “has contributed to known localised declines and extinctions, and will likely contribute to many more in the future.”⁸⁹

⁸³ IUCN 2022 Assessment, *supra* note 1, at 8 (citing Lee 2011, Hamada et al. 2011, Foley and Shepherd 2011).

⁸⁴ *Id.* at 9 (citing, e.g., Eudey 1994 [Ex. 35], Gumert 2004, Sha et al. 2009 [Ex. 36], Feng 2015 [Ex. 37], Boonkong and O’Connor 2019 [Ex. 38], Beech 2020 [Ex. 39]).

⁸⁵ Hansen et al. 2021, *supra* note 5, at 4.

⁸⁶ *Id.*

⁸⁷ 2020 Annual Report, PERHILITAN 154 (2020), <https://www.wildlife.gov.my/images/document/penerbitan/laporantahunan/LT2020.pdf> [Ex. 40]; 2019 Annual Report, PERHILITAN 122 (2019), <https://www.wildlife.gov.my/images/document/penerbitan/laporantahunan/LT2019.pdf> [Ex. 41]; 2018 Annual Report, PERHILITAN 84 (2018), <https://www.wildlife.gov.my/images/document/penerbitan/laporantahunan/LT2018.pdf> [Ex. 42]; 2017 Annual Report, PERHILITAN 82 (2017), <https://www.wildlife.gov.my/images/document/penerbitan/laporantahunan/LT2017.pdf> [Ex. 43]; 2016 Annual Report, PERHILITAN 86 (2016), <https://www.wildlife.gov.my/images/document/penerbitan/laporantahunan/LP2016%20-%202020022018.pdf> [Ex. 44]; 2015 Annual Report, PERHILITAN 93 (2015), https://www.wildlife.gov.my/images/stories/penerbitan/laporan_tahunan/%5BSOFTCOPY%5DPERHILITAN-annual-report-2015.pdf [Ex. 45].

⁸⁸ IUCN 2022 Assessment, *supra* note 1, at 10 (citing GMA News 2022 [Ex. 46], The Star 2022).

⁸⁹ *Id.*

VII. CONCLUSION

The petitioners urge the Service to list the long-tailed macaque (*Macaca fascicularis*) as an “endangered” or “threatened” species under the ESA. The long-tailed macaque has experienced catastrophic population decline for decades and is projected to experience at least a fifty percent decline in the next forty years. Threatened by the destruction of their natural habitat, the current levels of trade (legal and illegal, international and domestic) for scientific, commercial, and recreational purposes, culling, and a general lack of protection (despite the laws in several habitat countries), the long-tailed macaque is being pushed to the brink of extinction. As the leading importer in the live long-tailed macaque trade, year-over-year the United States adds its weight to that push. The FWS has the authority and obligation to act swiftly and add long-tailed macaques to the list of animals protected under the ESA.

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X. APPENDIX – Petitioners’ Contact Information and Signatures



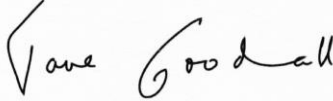
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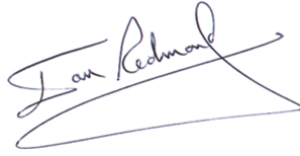


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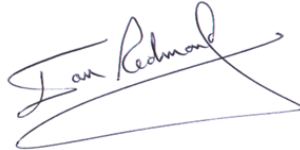


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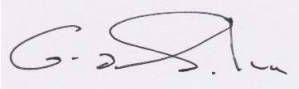


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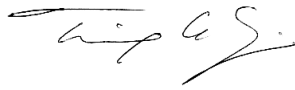


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