### PETITION TO LIST THE Flores Hawk-eagle (*Spizaetus floris*) UNDER THE U.S. ENDANGERED SPECIES ACT



Photograph: © James Eaton, Birdtour Asia (used with permission)

# Petition Submitted to the U.S. Secretary of Interior Acting through the U.S. Fish and Wildlife Service

### Petitioner:

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#### Introduction

The Flores hawk-eagle (*Spizaetus floris*) is endemic to Indonesia, where it lives on the islands of Sumbawa, Flores, and Lombok, on the borders of Mount Rinjani National Park, as well as on the islands of Santonda, Sumbawa, Rinca, and Komodo (Raharjaningtrah and Rahman 2004). Only "an extremely small population" of Flores hawk-eagles remains and this population has declined precipitously over the past 10 years, or three generations (Raharjaningtrah and Rahman 2004).

The total population of Flores hawk-eagles is currently 100-200 individuals, and fewer than 100 pairs exist (Raharjaningtrah and Rahman 2004), leading the International Union for the Conservation of Nature (IUCN) to upgrade the hawk-eagle to "critically endangered" on its Red List 2009 (IUCN 2009a; IUCN 2009b). The IUCN believes the hawk-eagle is globally threatened with extinction (IUCN 2009b). BirdLife International estimates that the hawk-eagle population declined 50-79 percent over the past 10 years and will continue to decline an additional 50-79 percent over the next 10 years (BirdLife International 2009a).

Major threats to the Flores hawk-eagle include habitat loss and degradation, hunting and poaching for trade, and climate change. The monsoon forest where the hawk-eagle occurs is the "most sensitive and vulnerable forest in the tropical forest formation" and is easily destroyed (Raharjaningtrah and Rahman 2004). Of 108 million forested hectares in Indonesia, almost half is in poor condition (Departemen Kehutanan RI 2006). Land use changes, including forest burning for agricultural and forestry practices, continue to degrade an estimated 2 million hectares per year (FWI/GFW 2002). Researchers have not identified hawk-eagles living in extremely low-density forests or partially cultivated landscape, and thus assume the hawk-eagle is unable to survive in such environments (BirdLife International 2009a). Remaining habitat will not sustain this species if current forest degradation activities persist.

Human hunting and poaching for trade have also reduced the hawk-eagle population (Raharjaningtrah and Rahman 2004). Human persecution is related both to the hawk-eagle's habit of stealing chickens and to the caged bird trade (Raharjaningtrah and Rahman 2004, BirdLife International 2009a). The numbers of birds hunted or captured for the bird trade are currently unknown, as some officials in the Indonesian government "protect" and "support" these practices (RCS 2011).

Climate change, and the resulting current and future droughts, increased rainfall, sea level rise, and forest fires, threatens the entire range of the hawk-eagle. Deforestation, peatland degradation, and forest fires have placed Indonesia among the top three emitters of greenhouse gases in the world (PEACE 2007). Prolonged droughts, increased frequency of extreme weather events, and heavy rainfall that create large floods have a devastating effect on the archipelago (PEACE 2007). Climate change may have already adversely affected the Flores hawk-eagle. With only an estimated 100-200 hawk-eagles remaining, the synergistic effects of climate change and small population size make this species extremely vulnerable to extinction.

While some regulatory protections exist for this species, there is no evidence they are enforced or effective to prevent further population declines. All raptor species were placed under the protection of Indonesian Law (UU No 5) in 1990 (Ministry of Forestry of the Republic of

Indonesia 1990). Although these laws protect the hawk-eagle's habitat and prohibits take of individuals or eggs, they are not enforced and habitat destruction and the capture and shooting of individual hawk-eagles continues. The conservation area network in the Lesser Sundas is insufficient to sustain the species (Sujatnika et al. 1995, *cited in* Butchart et al. 1996). Indonesia has designated some protected areas within the hawk-eagle's range and Mount Rinjani National Park is making some effort to inform local residents of the importance of the hawk-eagle (Raharjaningtrah and Rahman 2004). However, these efforts are unlikely to ensure the hawk-eagle's long-term survival as some government officials "protect" activities such as hunting and illegal trade of the hawk-eagle (Raharjaningtrah and Rahman 2004, RCS 2011).

#### THE ENDANGERED SPECIES ACT AND IMPLEMENTING REGULATIONS

The Endangered Species Act of 1973 (ESA) protects plants and animals that are listed by the federal government as "endangered" or "threatened" (16 U.S.C. § 1531 et seq.). Any interested person may submit a written petition to the Secretary of the Interior requesting him to list a species as "endangered" or "threatened" under the ESA (50 C.F.R. § 424.14(a)). An "endangered species" is "any species that is in danger of extinction throughout all or a significant portion of its range" (16 U.S.C. § 1532(6)). A "threatened species" is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (16 U.S.C. § 1532(20)). "Species" includes subspecies and distinct population segments of sensitive taxa (16 U.S.C. § 1532(16)).

The ESA sets forth listing factors under which a species can qualify for protection (16 U.S.C. § 1533(a)(1)):

- A. The present or threatened destruction, modification, or curtailment of 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.

A taxon need only meet one of the listing criteria outlined in the ESA to qualify for federal listing.

#### CLASSIFICATION AND NOMENCLATURE

*Common name.* The common name for *Spizaetus floris* (Hartert 1898) is "Flores hawk-eagle." The species is also known as the "Sunda hawk-eagle" (Hull 2007). This petition refers to the species as the "Flores hawk-eagle" or "hawk-eagle."

**Taxonomy.** The taxonomic classification for *Spizaetus floris* is shown in Table 1.

	J 1 J
Phylum	Chordata
Class	Aves
Order	Falconiformes
Family	Accipitridae
Genus	Spizaetus
Species	Spizaetus floris

**Table 1**. Taxonomy of *Spizaetus floris*.

The Flores hawk-eagle was once regarded as a subspecies of *Nisaetus cirrhatus* until studies by Gjershaug et al. (2004) showed that *Spizaetus (Nisaetus) floris* is a separate species. Raharjaningtrah and Rahman (2004) stated that, as a distinct species, the Flores hawk-eagle is probably "the most threatened raptor in the world."

#### **SPECIES DESCRIPTION**

The Flores hawk-eagle's upper body is dark brown while its underside, including the underside of its wings, is white (Raharjaningtrah and Rahman 2004). The hawk-eagle's head is white in adults and juveniles, "sometimes with fine brownish streaks on the crown (Gjershaug et al. 2004). The tail is brown "with six dark bars, the outermost broader than the others" (Gjershaug et al. 2004) (*see* Figure 1).



**Figure 1.** Flores hawk-eagle. Photograph © Pierre de Chabannes, Photozoo.org (used with permission).

#### GEOGRAPHIC DISTRIBUTION

The Flores hawk-eagle occurs in Indonesia, where it lives on the islands of Sumbawa (where few records exist), Flores (where it appears to be uncommon), Santonda, and Rinca (Raharjaningtrah and Rahman 2004; Meyers and Bishop 2005; BirdLife International 2009a) (*see* Figure 2). Records from Poloe and Komodo have not been verified (BirdLife International 2009a). The hawk-eagle also resides on Lombok, where the species was first recorded in 2002 by Gjershaug and colleagues (2004):

On Lombok, we observed *floris* in Sesaot at the border of Mount Rinjani National Park on 18 September 2002. This is the first record from Lombok. The bird was identified by its white head and underside together with its diagnostic white patch on the upperside of the outer primaries, which distinguish it from immature *limnaeetus*. Later we observed the species at three other locations on the border of Mount Rinjani National Park (Senaru, Pidana and Pusuk). These observations are of particular importance since Lombok is just east of Bali, the easternmost extent of the distribution of *limnaeetus*.

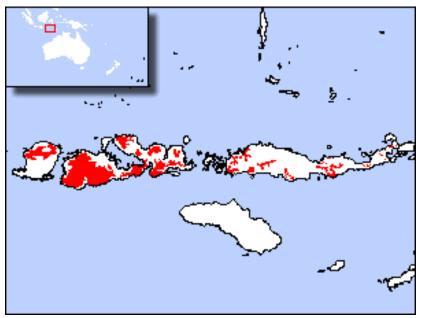


Figure 2. Range of the Flores hawk-eagle. (BirdLife International 2009a)

The hawk-eagle is distributed evenly across all portions of the islands, however, "they were not contacted at several observation points in between" (Raharjaningtrah and Rahman 2004). They were found from Mount Rinjani National Park on Lombok Island to Mount Egon Illimudu Protection Forest at Larantuka, Flores (Raharjaningtrah and Rahman 2004).

#### **HABITAT REQUIREMENTS**

The Flores hawk-eagle lives in forested areas, particularly in lowland habitat, which makes it an indicator of lowland forest condition (Raharjaningtrah and Rahman 2004). It was seen in submontane and montane forests at the Ruteng area on Flores Island at altitudes of up to 1,600 meters (Raharjaningtrah and Rahman 2004). While researchers have occasionally noted a hawk-

eagle in cultivated areas, the birds are always near forested areas (BirdLife International 2009a; BirdLife International 2009b). However, these occasional flights outside of core habitat indicate that the hawk-eagle may be capable of travel between islands (BirdLife International 2009b). Accordingly, subpopulations on various Indonesian islands may be mixed (IUCN 2009a).

Sumbawa and East Flores are "widespread grasslands and scrub with a low tree density...and most of the forest [is] semi-deciduous monsoon forest" (Raharjaningtrah and Rahman 2004). Generations of local people have burned the forest for hunting and shifting cultivation (Raharjaningtrah and Rahman 2004). Population growth and the rise of commercial agriculture and forestry have exacerbated the destruction of forested areas, leading to the hawk-eagle's decline (Raharjaningtrah and Rahman 2004).

On many Indonesian islands, "forested habitat is restricted to areas designated as national parks" (Simay et al. 2009). This is generally true for the Lesser Sundas, as "only tiny forests confined to protected areas which are not always well managed have survived" (Simay et al. 2009) and "protected areas in the species' range are presently too small for its long-term survival" (Gjershaug et al. 2004). In Flores some high quality forested areas are found outside national park areas (Simay et al. 2009). However, with the current rate of habitat degradation and deforestation outside of park boundaries, habitat quality for the hawk-eagle is disappearing.

#### **LIFE HISTORY**

Little is known about the life history of many Indonesian species as there is a paucity of data between the early 1900s and 1990s (Raharjaningtrah and Rahman 2004).

*Diet.* The diet of the Flores hawk-eagle consists primarily of birds, lizards, snakes and mammals (BirdLife International 2009a).

Reproduction and dispersal. The Flores hawk-eagle typically breeds during the dry season, or June through September (BirdLife International 2009a). Display flight and copulation have been observed on Flores in June and July (BirdLife International 2009a). The hawk-eagle requires a territory of 40 km² per pair and is dispersed over a range of 10,000 km² (BirdLife International 2009b). This species has been observed over cultivated fields, but always stays close to forested areas, and "these records may relate to dispersing, immature or floater individuals rather than breeding adults" (BirdLife International 2009a). In addition, records of birds outside of core habitat suggest the species may be able to disperse between islands and mixing between island subpopulations is inferred (IUCN 2009a).

#### POPULATION STATUS AND TRENDS

The hawk-eagle has "an extremely small population" that has continued to rapidly decline over three generations, or the past 10 years (BirdLife International 2009a). This decline is primarily due to habitat loss (BirdLife International 2009a; BirdLife International 2009b). The total population of Flores hawk-eagles is currently 100-200, fewer than 100 pairs, and fewer than 200 mature individuals (BirdLife International 2009a) leading the International Union for the Conservation of Nature (IUCN) to designate the species as "critically endangered" on its Red

List, an upgrade from its "endangered" listing in 2005 (IUCN 2009a). BirdLife International estimates that the hawk-eagle population declined between 50-79 percent over the past 10 years and will continue to decline an additional 50-79 percent over the next 10 years (BirdLife International 2009b). Although concrete population estimates are not available for the species, the paucity of records obtained during fieldwork within its range suggests it occurs at low densities, supporting this population estimate and rates of decline (IUCN 2009a).

#### IDENTIFIED THREATS TO THE PETITIONED SPECIES: CRITERIA FOR LISTING

The Flores hawk-eagle meets at least four of the criteria for listing under ESA Section 4 (16 U.S.C. § 1533(a)(1)) (in bold). It needs to meet only one of these criteria to qualify for federal listing:

- A. Present and threatened destruction, modification, and curtailment of habitat and range:
- B. Overutilization for commercial and recreational purposes;
- C. Disease or predation;
- D. The inadequacy of existing regulatory mechanisms; and
- E. Other natural or manmade factors affecting its continued existence.

(Factor A) Present and Threatened Destruction, Modification, and Curtailment of Habitat and Range

Habitat loss and degradation are the greatest threats to the Flores hawk-eagle. BirdLife International (2009a, 2009b) characterizes the fragmentation of their range as "severe." Out of 108 million forested hectares in Indonesia, almost half is in poor condition (Departemen Kehutanan RI 2006). Land use changes, including deforestation, continue to degrade an estimated 2 million hectares per year (FWI/GFW 2002). This trend increased as the human population increased and with the advent of commercial agriculture and forestry (Raharjaningtrah and Rahman 2004, *citing* Monk et al. 1997).

The Lesser Sunda Islands are primarily comprised of grassland and scrub habitat (62 percent land coverage; Monk et al. 1997) with low tree density. Most of the forests are semi-deciduous monsoon forest (lowland rainforest 19 percent, submontane forest 5.5 percent; Monk et al. 1997; Raharjaningtrah and Rahman 2004, *citing* Coates et al. 1997). The monsoon forest is the "most sensitive and vulnerable forest in the tropical forest formation" and is easily destroyed (Raharjaningtrah and Rahman 2004). The natural monsoon forests on these islands have shifted to savanna grasslands as a result of human burning and cultivation, especially on the islands of Sumbawa and Flores (Raharjaningtrah and Rahman 2004). By 1995, only 18 percent of the Lesser Sundas was forested and the human population had reached 7.39 million people with a growth rate of 2.3 percent per year (Butchart et al. 1996, *citing* Sujatnika et al. 1995). In Lombok, the human population was estimated at 4.3 million people in 2005, a 500 percent increase from the mid-1800s (Meyers and Bishop 2005). We are unaware of the current rate of habitat loss on the Lesser Sundas, however in 1997 only 24.5 percent of the land was considered suitable hawk-eagle habitat, and forest burning for agriculture and forestry has continued to

affect remaining habitat. The same practices also occur on Java and Bali (Raharjaningtrah and Rahman 2004), which might otherwise offer suitable habitat for the hawk-eagle.

Compounding these problems, forest clearing and burning is usually done in the dry season when the hawk-eagle is breeding and more susceptible to human disturbance (Butchart et al. 1996; BirdLife International 2009a). Researchers have not identified hawk-eagles living in extremely low-density forests or partially cultivated landscape, and thus assume the hawk-eagle is unable to survive in such environments (BirdLife International 2009a).

## (Factor B) Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Human hunting and poaching for trade have reduced the hawk-eagle population (Raharjaningtrah and Rahman 2004). Human persecution is related both to the hawk-eagle's habit of stealing chickens and to the caged bird trade (Raharjaningtrah and Rahman 2004; BirdLife International 2009a):

People hunted birds including raptors for local trade...they also shipped it to Bali. Two stuffed birds were also sold in Ruteng. We found [a Flores hawk-eagle] wing hanging on the house wall in Melo village, it was captured and killed 2 weeks before we arrived because they found it hunting for chicken. The Flores [hawk-eagle] was also found at Lombok local bird market for sale, according to the seller, the [hawk-eagle] origin was from Sumbawa.

Hunting is not usually conducted by local people: others from Java and Bali come to hunt the hawk-eagle and capture them for the caged bird trade (Raharjaningtrah and Rahman 2004). The number of birds hunted or captured for the bird trade is currently unknown, as some officials in the Indonesian government "protect" and "support" these practices (RCS 2011).

#### (Factor D) Inadequacy of Existing Regulatory Mechanisms

All raptor species were placed under the protection of Indonesian Law (UU No 5) in 1990 (Ministry of Forestry of the Republic of Indonesia 1990). Although these laws protect the hawkeagle's habitat and prohibit take of individuals or eggs, they are not enforced, and habitat destruction, capture and shooting of individual hawk-eagles continues.

The conservation area network in the Lesser Sundas is insufficient to sustain the Flores hawkeagle (Butchart et al. 1996, *cited in* Sujatnika et al. 2005). Indonesia contains some protected areas within the hawk-eagle's range and Mount Rinjani National Park is making some effort to inform local people of the importance of the hawk-eagle (Raharjaningtrah and Rahman 2004). However, these efforts are insufficient to ensure the hawk-eagle's long-term survival as some government officials "protect" activities such as hunting and illegal trade of the hawk-eagle (Raharjaningtrah and Rahman 2004, RCS 2011).

The UNDP/FAO National Conservation Plan for Indonesia identified five areas of conservation potential on Lombok, including Mount Rinjani National Park (UNDP/FAO 1982, *cited in* 

Meyers and Bishop 2005). The plan also proposed a 150 km² wildlife sanctuary covering Batu Gendang on the southwestern peninsula of Lombok to protect extensive lowland forest and cliffs where seabirds breed. Monk et al. (1997, *cited in* Raharjaningtrah and Rahman 2004) noted that this was one of the few remaining areas of primary lowland forest in Nusa Tenggara Barat, and RePPProt (1989, *cited in* Meyers and Bishop 2005) identified it as a priority conservation area. Meyers and Bishop (2005) stated that "[c]learly, this one national park on Lombok is of paramount importance for conservation of the island's birds. However, many of the species of conservation priority are reliant to various extents on habitat that lies outside the national park, and this requires protection too." This is true for the Flores hawk-eagle, as was confirmed by a study conducted by the Raptor Conservation Society (2011) (*see* Figure 3), in which preliminary surveys identified the hawk-eagle in production forests (Senaru and Santong Points) and nature reserves (Sembalung, Aikmel, Sesoat, and Pusuk Points), in addition to Mount Rinjani National Park (Stiling Point; RCS 2011).

There appear to be no areas that adequately protect forest bird species of conservation importance on Flores and Sumbawa (Butchart et al. 1996). Taman Nasional Komodo, an 1,817 square kilometer park located between the two islands, is the only protected park in the area and it does not contain suitable habitat for most forest bird species, including the Flores hawk-eagle (Butchart et al. 1996).

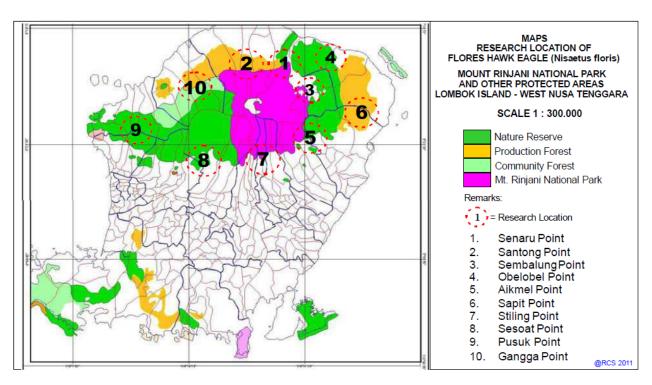


Figure 3. Protected Areas on Lombok Island. (RCS 2011)

#### (Factor E) Other Natural or Manmade Factors

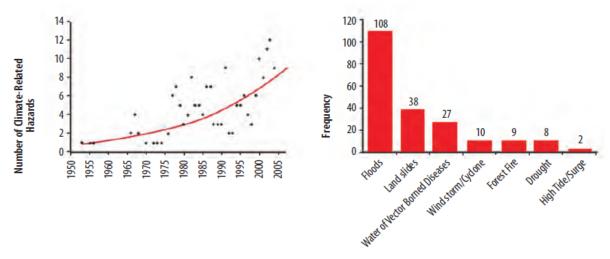
**Small Population Size.** With such as small population, the Flores hawk-eagles may be particularly vulnerable to stochastic events (such as fire, storms, floods, etc.) could destroy their remaining habitat, causing local extirpation and ultimately extinction. In addition, climate change

will likely increase the chances of stochastic events, making suitable habitat even more vulnerable to destruction. "Population size matters; small populations are more likely to go extinct as a result of chance effects (known as the small population paradigm)" (Brook et al. 2008). FWS has often recognized small population size as a threat to species' persistence.<sup>1</sup>

*Climate Change.* The entire range of the hawk-eagle is threatened by current and future drought, increased rainfall, sea level rise, and forest fires driven by climate change. As noted by the Ministry of Environment of the Republic of Indonesia (2010), the first climate-related hazards began occurring in the early 1950s, and have exponentially increased in the decades that followed (see Figure 4). Deforestation, degradation of peatland, and forest fires have placed Indonesia among the top three emitters of greenhouse gases in the world (PEACE 2007). Prolonged droughts, increased frequency of extreme weather events, and heavy rainfall have resulted in large floods that have had devastating effects on the archipelago (PEACE 2007). Since 1990, the annual mean temperature in Indonesia has increased by 0.20 - 0.30°C in all seasons of the year (Ministry of Environment of the Republic of Indonesia 2010, citing Naylor et al. 2007). In 2020, it is projected the mean temperature will increase between 0.37 and 0.46 °C as compared to 2000 (PEACE 2007). Climate change is predicted to increase the rate of precipitation by 2-3 percent per year (PEACE 2007, citing Susandi 2007). The increase in rainfall is expected to shorten the rainy season, which will increase the risk of flooding (PEACE 2007). Sea level rise is predicted to increase up to 0.57 cm per year due to climate change (PEACE 2007), totaling perhaps 25 to 50 cm by 2050 and 2100, respectively (Ministry of Environment of the Republic on Indonesia 2010). Rising sea levels could impact remaining coastline hawk-eagle habitat and the hawk-eagles' prey base. More frequent forest fires resulting from climate-change-induced drought will have significant impacts on forest wildlife and biodiversity in the coming century (WWF 2008, citing Applegate et al. 2002). Climate change may have already adversely affected the Flores hawk-eagle.

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<sup>&</sup>lt;sup>1</sup> See, for examples, candidate assessment forms for *Porzana tabuensis* (spotless crake, April 2010), *Eumops floridanus* (Florida bonneted bat, March 2010), *Vagrans egistina* (Mariana wandering butterfly, April 2010), *Gallicolumba stairi* (friendly ground-dove, March 2010), *Eremophila alpestris strigata* (streaked horned lark, April 2010), and *Hyla wrightorum* (Arizona treefrog, April 2010) (Available at http://ecos.fws.gov/tess\_public/pub/SpeciesReport.do?listingType=C&mapstatus=1).



**Figure 4.** Number of climate-related hazards by type (left) and by year (right). Based on data from OFDA/CRED International Disaster Database as presented in Ministry of Environment of the Republic of Indonesia (2010).

Synergistic Effects. Any or all of the aforementioned threats could work synergistically to cause the extinction of the hawk-eagle. "Like interactions within species assemblages, synergies among stressors form self-reinforcing mechanisms that hasten the dynamics of extinction. Ongoing habitat destruction and fragmentation are the primary drivers of contemporary extinctions, particularly in the tropical realm, but synergistic interactions with hunting, fire, invasive species and climate change are being revealed with increasing frequency" (Brook et al. 2008).

The combined effects of threats of habitat loss, human persecution, and climate change on the hawk-eagle could cause a greater reduction in the hawk-eagle population than would be expected from simply the additive impacts of the threats. "[H]abitat loss can cause some extinctions directly by removing all individuals over a short period of time, but it can also be indirectly responsible for lagged extinctions by facilitating invasions, improving hunter access, eliminating prey, altering biophysical conditions and increasing inbreeding depression. Together, these interacting and self-reinforcing systematic and stochastic processes play a dominant role in driving the dynamics of population trajectories as extinction is approached" (Brook et al. 2008).

The hawk-eagle is already at risk due to its small population and is especially vulnerable to the synergistic impacts of other threats. "Traits such as ecological specialization and low population density act synergistically to elevate extinction risk above that expected from their additive contributions, because rarity itself imparts higher risk and specialization reduces the capacity of a species to adapt to habitat loss by shifting range or changing diet. Similarly, interactions between environmental factors and intrinsic characteristics make large-bodied, long-generation and low-fecundity species particularly predisposed to anthropogenic threats given their lower replacement rates" (Brook et al. 2008).

[O]nly by treating extinction as a synergistic process will predictions of risk for most species approximate reality, and conservation efforts therefore be effective. However challenging it is, policy to mitigate biodiversity loss must accept the need to manage

multiple threatening processes simultaneously over longer terms. Habitat preservation, restoring degraded landscapes, maintaining or creating connectivity, avoiding overharvest, reducing fire risk and cutting carbon emissions have to be planned in unison. Otherwise, conservation actions which only tackle individual threats risk becoming half-measures which end in failure, due to uncontrolled cascading effects.

(Brook et al. 2008).

#### IMPORTANCE OF LISTING

On November 3, 2009, the FWS proposed to list the Indonesian salmon-crested cockatoo as "threatened" under the ESA (FWS 2009). In its news release, FWS stated that adding the cockatoo, a foreign species, to the list of threatened and endangered species would serve the purpose of 1) restricting imports of the animal or its parts, and 2) raising awareness of "the importance of conserving the species among foreign governments, conservation organizations and the public" (FWS 2009). These purposes also apply to the Flores hawk-eagle. Like the cockatoo, the Flores hawk-eagle lives only in Indonesia, in biodiverse areas that are "priority areas for global conservation" (FWS 2009).

The FWS should be even more concerned about the Flores hawk-eagle than the cockatoo. Both of these birds are unique species often targeted for their beauty (BirdLife International 2009c). However, while an estimated 62,000 salmon-crested cockatoos remain in Indonesia, fewer than 200 Flores hawk-eagles remain there. Further, while the IUCN places the cockatoo in the "vulnerable" category of its Red List, the Flores hawk-eagle is ranked as "critically endangered," one level away from extinction (BirdLife International 2009c).

#### CONCLUSION AND REQUESTED DESIGNATION

WildEarth Guardians petitions the U.S. Fish and Wildlife Service to list the Flores hawk-eagle (*Spizaetus floris*) as an "endangered" or "threatened" species under the Endangered Species Act. This action is warranted given the numerous threats this species faces, as well as the small number of individuals left in the wild. Multiple organizations have recognized this species is in danger of extinction. As the number of breeding pairs decline, habitat is lost, and the effects of climate change increase, it is important that FWS list the Flores hawk-eagle under the ESA as soon as possible.

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