

CONSERVATION STRATEGY FOR THE MADAGASCAR FISH EAGLE

Haliaeetus vociferoides

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CEPF/Tany Meva Small Grant

The Madagascar fish eagle (*Haliaeetus vociferoides*) is a species endemic to Madagascar and classified as Critically Endangered (CR) by the IUCN. Since 1992 The Peregrine Fund (TPF) has conducted research on this species in the west of Madagascar. In light of the threats facing this species, a funding request was submitted to CEPF/Tany Meva in order to share TPF's experience with other protected area managers located along the eastern coast of Madagascar which overlaps to a great extent with the range of the Madagascar fish eagle.

This project began in July 2016 and focused on four protected areas managed by Madagascar National Parks (MNP): the Nosy Hara National Park and the Sahamalaza National Park in the north, and the Ankarafantsika National Park and the Baie de Baly National Park in the northwest.

Once the funding was granted, we drafted a collaboration protocol with MNP to document the purpose and expected results of the project. Then, TPF biologists went out into the field to provide training on the biology, ecology and threats facing this species.

The training included theoretical and practical elements. Park officers as well as members of local community groups participated in the localization of pairs or nests of Madagascar fish eagles and the TPF staff provided information on the biology, ecology as well as the threats facing this species.

During the month of October 2017, I carried out an evaluation mission with one of our technicians in three sites, including the Baie de Baly National Park, the Ankarafantsika National Park and the Sahamalaza National Park.

First, a meeting was held with the MNP team members based in Solala to explain the purpose of the mission. After a long discussion in the MNP office, we went out into the field the next day to provide training that also benefited the local population. Very early the next morning, we went to Lake Sariaka, which is home to a population of Madagascar fish eagles and to many species of water birds, as well as a species of freshwater turtle, the Madagascar big-headed turtle (*Erymnochelis madagascariensis*), a Critically Endangered (CR) species. In addition to the MNP officials, two representatives of the local population participated in this visit. During the visit, I took the opportunity to test their knowledge about the abundance of the Madagascar fish eagle at time zero (the moment when the training took place), the activities they implemented and their feedback about the training that they received. During the visit, we observed six adult Madagascar fish eagles and found two occupied nests while at time zero officials and villagers had only spotted two adult individuals. The MNP team and the local population found new territories occupied by the Madagascar fish eagle, an encouraging result after the training they received.

After Soalala, we continued our mission at Ankarafantsika. A Q&A session was held with park staff including the director. As in Soalala, I listened to what officers had to say about the benefits of the training and about the current status of the Madagascar fish eagle population in this area. During this discussion, they mentioned the failure to breed of a permanent pair established on the banks of the Ravelobe Lake located within the protected area. After listening to their explanations, I explained to them the biology and ecology of this species. I pointed out that the failure to breed that they observed was due to habitat issues. Lake Ravelobe is used as a water reservoir for agricultural areas downstream, specifically in the district of Marovoay. For this purpose, the

regional agriculture department leaves the water outflow valve open at all times. This resulted in a very significant drop in the lake water level, down to a depth of 20 cm (about 8 in.). In addition, only about 1/8th of the lake's surface was still covered in water. The Madagascar fish eagle requires bodies of water of a sufficient surface area and of sufficient depth in order to find food, which consists mainly of fish. This significant change in lake habitat has forced adult Madagascar fish eagles to travel long distances to find food. These prolonged absences do not allow adult Madagascar fish eagles to protect the eggs during the incubation period and results in egg infertility. These same prolonged absences - should there be chicks in the nest - creates a predation risk. These two reasons explain the failure to breed of the Madagascar fish eagle in the Ankarafantsika National Park. After these technical explanations, the park director decided to take measures to stop the use of lake water for agriculture for a week so that the pair of Madagascar fish eagles could live under good conditions. This decision was taken after a discussion with the regional agriculture department in Mahajanga.

Finally, we visited the Sahamalaza National Park in northern Madagascar. It is partly composed of mangrove areas which create a site with a strong potential for the presence of the Madagascar fish eagle. As in the first two sites, a meeting was organized with park officers and members of a local community group. They explained what they had learned from the training in which they participated and showed us the results obtained, namely the localization of ten nests. The next day, we visited the site with them during which two additional nests were found, bringing the total number of nests to 12.

At all three sites, we found the results to be encouraging. The motivation shown by park officials and by representatives of the local population for the conservation of the Madagascar fish eagle is very encouraging. They even decided to put this species on the list of conservation targets. This decision is important for the long-term survival of this species as well as for the increase of the remaining population in the "Big Island".

During our June 2018 visit, the water level at Lake Ravelobe in Ankarafantsika was high and the lake occupied its maximum surface area, which shows that the park manager took into account the technical explanation shared with him in October 2017.