



## 2010 State of the Birds Report Highlights Need for Action in Hawaii

*A brief summary of the report by the North American Bird Conservation Initiative, U.S. Committee, 2010. United States of America, U.S. Department of the Interior: Washington D.C.*

In March the U.S. Fish & Wildlife Service released the new 2010 State of the Birds Report summarizing bird status in the United States. Where the 2009 report examined the current declining condition of bird species around the country, the 2010 report looks ahead to the greatest environmental challenge of our time, global climate change. The report calls attention to the collective efforts needed to protect birds and bird habitats.

Changes in bird viability reflect changing environmental conditions and foretell future shifts in ecosystems. This report presents a systematic analysis of impacts to bird populations in each major biome in the United States. It warns that “some bird species will adapt and succeed, others will struggle and decline, and some will disappear.”

For this report, each bird species was assessed based on five biological aspects of sensitivity to climate change, along with exposure of that species habitat to climate change in the near future. Species were then categorized as high, medium or low vulnerability. The findings resulted in two high vulnerability biome areas of interest to Hawaii joint venture partners: the Ocean & the Hawaiian Islands.

Big changes are in store for oceanic birds with all oceanic birds falling within the medium and high vulnerability categories. All 67 species of ocean birds are vulnerable due to low reproductive potential, use of islands for nests, and reliance on changing marine environments for food. Key protection steps focus on reducing existing stressors and proactive protection in the areas of human overharvesting of fish, fisheries by-catch of birds, marine pollution, removal of invasive predators and plants at nesting colonies, and securing higher island colonies.

The Hawaiian Islands biome showed the highest number of species in the high vulnerability category (~70%). Combined with those that ranked medium (~23%), it was identified that 93% of Hawaiian species are in danger. Overall Hawaiian birds are severely threatened by climate change. The report states that, “among the 42 native and endemic species of the Hawaiian Islands, only one is not considered of conservation concern.” The key contributing vulnerability attributes are single-island endemism, reduced dispersal ability, and limitations to habitat change such as high-elevation mountain forests.

Pacific Island birds also showed medium or high vulnerability with 62% of the species potentially affected. Temperatures in the Pacific Islands have already risen by 0.5° F and are expected to rise by another 4° F by 2090. These increased temperatures and rising sea levels will reduce natural habitats. On islands, where birds have restricted habitat ranges already, there will be a limited ability to respond to change. Sea level rise will greatly reduce the area of low-lying islands.

Sea level rise has the potential to significantly affect coastal lowland wetlands. Losses of habitat and food sources are the highest concern for coastal birds. The report states that for waterfowl the loss of shallow wetland habitats may contribute to population declines. In Hawaii, coastal wetlands (home to endemic waterfowl) are already limited and compromised by invasive plant and animal species. Key steps for wetlands and waterfowl will be to consider the uncertainties of climate impacts during conservation actions. For Hawaii, that translates into immediate aggressive management of invasive plants and animals. Also, protected areas need to be large and numerous. For those species most in danger of extinction, it is critically important to focus on advancing species recovery efforts immediately in preparation for future stress.

Avian malaria and pox are a significant threat to Hawaiian birds. The malaria parasite will not completely develop at temperatures below 55°F, currently present at higher elevations. Rises in temperature risk the spread of disease to higher mountain elevations with more birds endangered by disease.

Reducing the impact of climate change on birds and their habitats will require managing natural resources in a way that responds rapidly and effectively to changing conditions. Predictive modeling of climate change effects on ecosystems in conjunction with monitoring these systems on the ground will be essential to succeed in adaptive management actions that are timely and appropriate. Along with helping species adapt to a changing environment, slowing climate change by reducing greenhouse gases and sequestering atmospheric carbon are key.

To access the full report go to: [www.stateofthebirds.org/](http://www.stateofthebirds.org/)