

sometimes large distances, although the animal is known to be able to traverse vast expanses of ocean. Human exploitation has led to extinction of the species in several archipelagoes, including Mascarene, Laccadive, the Maldives, Barren, Narcondam, Cocos (Keeling), and Christmas Islands around the rim of the Indian Ocean, and the Lesser Sunda Islands in Indonesia east of Java.

One of the smallest known dugong populations is found in the waters off the eastern coast of Okinawa, Japan. This population is thought to comprise about 50 individuals, which feed on the few remaining sea grass beds in that area. Ten animals were spotted in deep water in the area in a systematic aerial survey in 1998, and six were seen during an opportunistic helicopter survey in 1999. Subsurface feeding trails were confirmed in shallow sea grass beds at about the same time. The Okinawa dugong, like all dugong populations, is included in Appendix 1 of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES), and all international trade in dugong meat and products is therefore prohibited. In addition, all dugong populations are protected as endangered under the Endangered Species Act of 1973 and are listed by the World Conservation Union (IUCN) as vulnerable to extinction.

In August 2000 the Japanese Save the Dugong Foundation contacted the Marine Mammal Commission to inform it of plans by the government of Japan to relocate the U.S. Marine Corps Air Station Futenma to a new location on Okinawa because of problems with noise and the proximity of the current location to the human population. A primary location under consideration by the government of Japan was a site offshore from the city of Nago in eastern Okinawa where the dugongs and the seabeds they use for feeding and habitat are located. In its 26 August 2000 communication to the Commission, the Save the Dugong Foundation expressed concern that the planning, construction, and use of an air station in this area would adversely affect both dugongs and their habitat. In November 2000 a delegation from the foundation traveled to Washington, DC, to meet separately with Commission representatives and nongovernmental organizations.

In October 2000 at the IUCN World Conservation Congress in Amman, Jordan, the World Conservation

### **Dugongs in Okinawa** ***(Dugong dugon)***

The dugong inhabits the tropical and subtropical coastal and island waters in the Indo-Pacific from East Africa to Vanuatu, between 26°N and 26°S latitudes. It is a member of the order Sirenia, which also includes three species of manatees (see the previous section) and is the only member of the family Dugongidae. Although the dugong is an herbivorous animal like the manatee, it is strictly marine. Dugong stocks thought to be relict populations are often separated by

Union issued a resolution expressing its concern over the proposed relocation of the air station to the waters off eastern Okinawa and the effect the action might have on the resident dugong population. The resolution urged the government of Japan voluntarily to conduct an environmental impact assessment and to implement dugong conservation measures to stop further reduction of the population. It urged the United States to cooperate with the government of Japan on any such impact statement and to take the findings into account.

On 31 January 2001 the Commission wrote to the Departments of State and Defense addressing the proposed relocation. In its letter, the Commission noted that the dugong is listed as endangered under the Endangered Species Act, that the species is extremely susceptible to extirpation due to its low reproductive potential, that foraging areas for dugong are limited to only about 10 percent of the coastline, and that locating the new air station in the middle of this area would likely hasten habitat degradation. The Commission also noted that representatives of the U.S. government had gone on record at the IUCN World Conservation Congress as supporting the preparation of a “comprehensive and transparent” environmental impact statement on the proposal. The Commission suggested that, although the base is not located in U.S. territory, its operation would trigger U.S. environmental laws and that therefore an environmental impact statement should be prepared. The Commission urged the Department of Defense to coordinate with Japanese authorities on any such review being prepared.

In their 4 April 2001 response, the Departments of Defense and State informed the Commission that the government of Japan is overseeing all construction-related activities in accordance with relevant Japanese law and practice, including issues relating to the environment, and that the United States will operate the air station consistent with Japan’s environmental governing standards with the basic idea of selecting the more protective standards from relevant U.S. and Japanese laws and regulations. The letter also stated that the government of Japan has already conducted environmental surveys in connection with the relocation of the air station and that environmental issues will remain important considerations as the project continues.

On 25 May 2001 the Pacific Environment Advocacy Center of Portland, Oregon, informed the Commission by E-mail that it was working on behalf of the Japanese Environmental Lawyers Federation to develop a legal case against the Department of Defense under the Endangered Species Act to protect the Okinawa dugong and the population’s last remaining habitat from destruction. No case had been filed as of 31 December 2001.

On 27 December 2001 the government of Japan announced that agreement had been reached on a plan for the proposed construction of the facility on the reef off the coast of Nago. No additional information was available as of 31 December 2001.