

Case Studies



Consultation for the Marine Corps Build-Up on Guam

- Overview
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Case Studies



Overview

- Initiated in response to moving Marine Corps infrastructure and training from Okinawa, Japan to Guam
- 8 endangered and 2 threatened species with the potential to occur on Guam.
- No Critical Habitat (CH) designated on military lands on Guam
- CH is present on USFWS property – 376 acres at Ritidian Point
- An overlay refuge exists on Navy and Air Force property
 - Established after a proposal to designate CH on Navy and AF land

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Overview Cont...

- Consulted on 10 species (8 endangered and 2 threatened):
 - Guam Micronesian Kingfisher
 - Guam rail
 - Mariana crow
 - Mariana fruit bat
 - Green and Hawksbill sea turtle
 - *Serianthes nelsonii*



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Overview Cont...

- In 1991, the USFWS first issued a proposal for critical habitat for the Mariana fruit bat, Mariana crow, and Guam Micronesian kingfisher.
- In 1993, the desire to create the Guam National Wildlife Refuge (NWR) was established by a Memorandum of Understanding with the USFWS, Navy, Air Force, and GovGuam. In 1994, Cooperative Agreements were signed between the Navy, Air Force, and USFWS to establish the Overlay Refuge.
- The Navy/Air Force agree that lands included in the Overlay Refuge shall be managed and administered to provide for consultation with the Service for actions that may impact habitat or endangered or threatened species even if those species are extirpated from the affected area.
- The Navy/Air Force may withdraw any or all land from the Guam National Wildlife Refuge boundaries when necessary for national emergency or national defense requirements, as determined by the Secretary of Navy, or higher authority.



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Overview Cont...

- The Brown Tree Snake (BTS) was accidentally transported to Guam from its native range in eastern and northern coastal Australia, Papua Ne Guinea, and a large number of islands in NW Melanesia:
 - As a result of abnormally abundant prey resources on Guam and the absence of natural predators and other population controls, the brown tree snake populations reached unprecedented numbers
 - Estimates of up to 40 BTS/hectare on the island
- Typically, consultation would consist of only the T&E species found on the island, however, this case dealt with a species (BTS) that could affect T&E species found on other islands



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Definitions/Terms of Use

- Essential habitat – important lands for species initially identified in the 1991 CH proposal (not a regulatory term)
- Recovery habitat – habitat necessary for the recovery of the species as identified by the USFWS (not a term defined in the Endangered Species Act)



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Definitions/Terms of Use Cont...

- Jeopardy threshold - occurs when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival **and** recovery in the wild is appreciably reduced (ESA definition)



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Issues

- USFWS raised concerns that relocating some 8,000 Okinawa-based Marines to Guam and developing training facilities on and around the island would pose potential threats to the native species on the island
- The BTS has caused the extirpation of most of the native forest vertebrate species
 - 75% of birds are extinct because of the snake
 - It eats the eggs, young, and adults as well as bats



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Issues Cont...

- Since Guam is a major transportation hub in the Pacific, there is a risk of accidentally introducing the BTS to other Pacific islands. These snakes act as passive stowaways in ship and air cargo, and pose a particular threat to ecosystems found in Hawaii and the Marshall Islands.





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Consultation – Part 1

- Following the initiation of consultation, the USFWS began to focus on the effects to the recovery habitat of the kingfisher, as it was thought to be most likely to trigger a jeopardy determination
 - BA focused on essential habitat and impacts to the Overlay Refuge
- Two weeks after consultation began, the USFWS changed their analysis to focus on recovery habitat instead of essential habitat
- New threshold for jeopardy: impacts to recovery habitat



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Consultation – Part 1 Cont...

- Jeopardy is triggered when there are affects to both survival and recovery of a species
 - The kingfisher was already extinct in the wild which made the jeopardy standard unattainable
- USFWS continued to identify recovery habitat for the Mariana fruit bat, the Mariana crow, the Guam rail, and *Serianthes*
- Navy developed in-depth conservation measures that applied a holistic approach to species and habitat improvements on Guam.

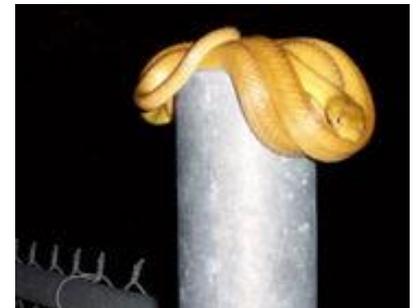


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Consultation – Part 2

- Potential for a jeopardy opinion based on 3 issues:
 - Reintroduction of species
 - Habitat restoration
 - BTS interdiction at the commercial ports
- Primary concern became the inadvertent transport of BTS off Guam and potential effects to listed species on other islands (Hawaii)
- Navy agreed to fund the increase BTS interdiction needs related to the build-up.
 - There have been cases of finding brown tree snakes during transport to other islands
 - The snakes hide in planes and wheel wells
 - Pregnant snakes are a huge threat



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Consultation – Part 2 Cont...

- DoN is providing funding for research and suppression to help suppress and/or eradicate BTS – additional funding will support research to determine the best method for killing the snake:
 - Difficult because the BTS is nocturnal, arboreal, mildly venomous, and a year-round breeder
 - Previous efforts to kill the snake include paying for a bounty on the snakes and releasing dead mice containing Tylenol



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Consultation – Part 2 Cont...

- Navy agreed to consider reintroduction of T&E species on Guam once the BTS is controlled and no longer considered a threat to the other species on the island
 - USFWS predicts it will be 30 years before the T&E species can be reintroduced



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Questions?

