

An Example of Biodiversity Conservation Measures
 in Construction of Overhead Power Transmission Line in Japan

1. Introduction

With the growing concern for conservation of the natural environment in Japan and abroad, it has become an important issue to consider the habitat of raptors when planning overhead power transmission line projects. This paper introduces the example of raptor habitat surveys conducted to ensure biodiversity for raptors in construction of overhead power transmission line.

2. How to proceed with raptor surveys

Raptors have a large habitat necessary for survival and breeding, and are susceptible to environmental changes caused by development. In order to protect raptors, The following steps should be taken to conduct the survey.

- (1) Information on rare species inhabiting the proposed project site will be collected.
- (2) The area to be surveyed in the proposed project site is to be determined (about 4 km to 6 km wide).
- (3) The survey period and frequency will be considered in light of the habitat conditions. Establish multiple survey fixed-points so that the survey area can be visually observed.
- (4) Fixed-point surveys will be conducted to confirm the habitat conditions of the species to be surveyed and to observe their behavior, including the presence or absence of reproductive behavior. Nesting sites will be identified and breeding conditions will be surveyed by field surveys.
- (5) Estimation of core areas and nesting center areas. Core areas that are used frequently by pairs of raptors within their range of activity, include important foraging areas and routes. Nesting center areas that include nesting trees and adjacent areas for surveillance, roosting perches, food processing. during the breeding season. These areas vary among raptor species.
- (6) Assuming that existing and planned tower locations and candidate helicopter base sites are influenced areas, we predict the impact of construction on raptors in consideration of logging areas, installation of temporary facilities, construction-related noise, helicopter operations, and visibility by raptors.

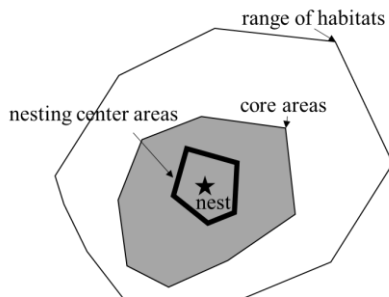


Fig.2.1 Overview of core areas and nesting center areas.

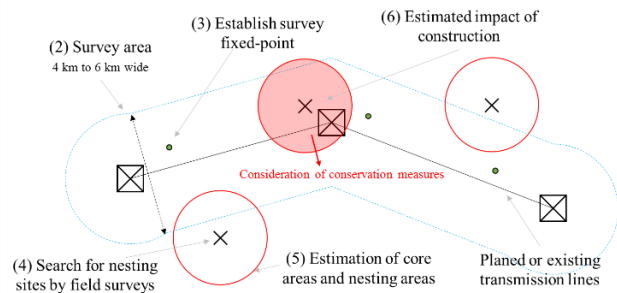


Fig. 2.2 How to proceed with raptor surveys.

3. Consideration of conservation measures and implementation of biodiversity conservation measures

Table 3.1 shows specific methods of conservation measures. In addition, monitoring surveys will be conducted to confirm the effectiveness of the measures.

Table 3.1 Methods of conservation measures.

Priority	Conservation measure	Specific Methods	Notes
I	Avoidance measure	-Cancellation of business plan - Reroute power transmission routes away from the core area. -Change the tower location and helicopter base from the nesting center area.	-complete impact avoidance is difficult to achieve in many cases
II	Reduction measure	- Minimizing the area of logging - Construction avoided during breeding season - Use of low noise and vibration machines - Conducting acclimation work	-the most practical and most frequently implemented measure - Conducting acclimation work is an unavoidable measure
III	Compensatory measure	-Set up alternative nests -Maintenance of foraging environment	-this case is rarely adopted in construction of overhead power transmission line