

**EVALUATION OF RESOURCE SUITABILITY AND AREA CARRYING
CAPACITY FOR MANGROVE ECOTOURISM IN JANGKARAN VILLAGE,
TEMON SUB-DISTRICT, KULON PROGO REGENCY,
SPECIAL REGION OF YOGYAKARTA**

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ABSTRACT

Coastal areas are locations that have the potential for high waves, strong winds, and seawater intrusion, so mitigation efforts are needed. Mitigation efforts can be done by developing mangrove ecosystems, because the strong mangrove root system can reduce the impact of ocean waves and strong winds and can reduce seawater intrusion. Mangrove ecosystems have various benefits for the environment and living things so they need to be preserved. One of the efforts to conserve mangrove ecosystems is with mangrove ecotourism. The purpose of this research is to evaluate the suitability of resources and carrying capacity of the area for mangrove ecotourism in Jangkaran Village.

Data collection was carried out through surveys and mapping, in-situ measurements, and interviews. Vegetation condition parameters include frequency, dominance, importance value index, and diversity index. Water environment quality parameters include temperature, pH, Dissolved Oxygen, and salinity. Resource suitability parameters encompass mangrove thickness, density, mangrove species, biota species, tidal variations, accessibility, infrastructure, and acceptance. Area carrying capacity parameters include the number of tourist visits and correction factors such as rainfall and tides. Suitability analysis of resources was conducted by scoring each parameter to obtain the ecotourism suitability index. The results of the resource suitability and area carrying capacity evaluation were then used to determine appropriate management approaches based on the research location's conditions.

*The research results showed that the mangrove species with the highest Importance Value Index in all three locations were *Rhizophora apiculata* and *Avicennia marina*. The water environmental quality still met the standards according to the Minister of State for the Environment's Decree No. 51 of 2004 concerning Sea Water Quality Standards, with temperature ranging from 25.7 to 30.3°C; pH 7.2-7.7; salinity 25-34‰; and DO 6.5-6.7. The ecotourism suitability index in Wanatirta Mangrove Forest is 76.9230% (S1, Highly Suitable), in Jembatan Api-Api Mangrove Forest is 74.3590% (S2, Suitable), and in Pasir Kadilangu Mangrove Forest is 78.2051% (S1, Highly Suitable). The carrying capacity of the areas for Wanatirta Mangrove Forest, Jembatan Api-Api Mangrove Forest, and Pasir Kadilangu Mangrove Forest is 144 individuals/day, 362 individuals/day, and 374 individuals/day respectively. The real carrying capacity for these areas is 91 individuals/day, 228 individuals/day, and 237 individuals/day respectively. Recommended management approaches include spatial planning with silvofishery development, socio-economic considerations, and institutional approaches.*

Keywords: resource suitability, area carrying capacity, ecotourism, mangrove