

## Strategy of blue carbon management for climate change Mmtigation (Mangrove Ecosystem in Nusa Lembongan, Bali) = Strategi pengelolaan blue carbon untuk mitigasi perubahan iklim (Ekosistem Mangrove di Nusa Lembongan, Bali)

Cindy Clara Pricillia, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20518206&lokasi=lokal>

---

### Abstrak

Mangrove ecosystems can sequester carbon in their system. The problem of this research was the lack of optimization of blue carbon management in the protected forest of mangrove Nusa Lembongan. The study objective was to build a concept of blue carbon management in Nusa Lembongan. The method used in data collection was a survey, and the analytical methods used were multiple regression, spatial, and Soft System Methodology (SSM). The result of this study found that mangrove forest Nusa Lembongan stored  $68,10 \pm 20,92$  Mg C ha<sup>-1</sup>. Local wisdom and community perception that mangrove forest is a tourism icon played an essential role in protecting mangrove forests. However, it is necessary to control leachate water pollution and waste from the landfill located directly adjacent to the mangrove forest, improve rehabilitation methods to increase survival rates, and monitor mangrove health conditions and carbon stock. The strategy of blue carbon management needs to be supported by adequate local capacity through socialization, training, and assistance. This study concluded that is the strategy of blue carbon management by involving the local community can avoid the release of CO<sub>2</sub> emissions into the atmosphere and increase carbon sequestration. ....Ekosistem mangrove dapat menyerap dan menyimpan karbon. Masalah pada riset ini adalah kurang optimalnya pengelolaan blue carbon di hutan mangrove yang berada di kawasan hutan lindung, seperti di Nusa Lembongan. Tujuan riset ini yaitu menyusun strategi pengelolaan blue carbon di hutan mangrove Nusa Lembongan. Metode yang digunakan pada pengumpulan data adalah survei dan metode analisis yang digunakan adalah regresi berganda, spasial, dan Soft System Methodology (SSM). Hasil riset ini yaitu total stok karbon di Nusa Lembongan sebesar  $68,10 \pm 20,92$  Mg C ha<sup>-1</sup>. Kearifan lokal dan persepsi masyarakat bahwa hutan mangrove adalah ikon pariwisata, berperan penting dalam perlindungan hutan mangrove. Akan tetapi, diperlukan pengendalian terhadap pencemaran air lindi dan sampah dari TPA yang berlokasi di sisi hutan mangrove, perbaikan pada metode rehabilitasi untuk meningkatkan survival rate, dan pemantauan terhadap kondisi kesehatan dan stok karbon mangrove. Strategi pengelolaan blue carbon tersebut perlu didukung dengan kapasitas masyarakat yang memadai melalui sosialisasi, pelatihan, dan pendampingan. Kesimpulan riset ini adalah strategi pengelolaan blue carbon dengan melibatkan masyarakat dapat menghindari terlepasnya emisi CO<sub>2</sub> ke atmosfer dan meningkatkan serapan karbon.