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### Valuating Mangrove Ecosystems as Coastal Protection in Post-Tsunami South Asia

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#### ABSTRACT:

Mangrove forests provide an important ecosystem service of safeguarding human societies from natural disasters along tropical coastal zones. With recent major coastal disasters, including the South Asian tsunami in 2004 and the observed protection buffer that mangroves have provided, valuating mangrove ecosystems for protecting coastal areas from natural disasters is a necessity for appropriate conservation planning of ecosystem services. In this article, I assess the avoidance and replacement costs of mangrove ecosystems in South Asia, in reference to the South Asian tsunami of 2004. The findings demonstrate that the coastal protection value of mangroves exceeds direct-use values of mangroves, such as forest harvesting and mariculture, by over 97%. Mangrove ecosystems are highly valuable for protection against natural coastal disasters, and their conservation and restoration are needed to maintain national and global natural capital.

**Keywords:** avoidance costs, coastal protection, ecosystem services, mangrove forest, natural capital, replacement costs, south Asia, tsunami

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