

New Network Tackles Turtle Strandings in Bali, Indonesia

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A dead sea turtle on Kuta Beach, Bali, Indonesia, that was killed by a boat propeller. A new network in Bali aims to collect, centralize, and share data on dead stranded turtles. © Wolfgang

Strandings of sea turtles have been an enduring concern in Bali, Indonesia, where three species regularly occur offshore: green, hawksbill, and olive ridley. Although strandings of live turtles are addressed by a well-established rescue and recovery network consisting of government and nongovernment representatives, the same cannot be said for strandings of dead turtles, which often go unrecorded. However, such strandings can provide valuable insights into the threats that sea turtles face.

Recognizing the importance of this issue, Yayasan Bali Bersih established a network in January 2021 to facilitate collecting and reporting data about stranded dead turtles. The network was established in collaboration with daily beach-cleaning authorities (traditionally responsible for burying stranded turtles), local communities, and prominent social media platforms. Additionally, the network's marine team proactively monitors social media hashtags to identify instances of turtle strandings. This initiative aims to centralize data that will identify stranding hotspots, educate the general public, and improve policies for recording such strandings throughout Bali.

The network has already begun to yield intriguing data. In 2021, 38 dead turtles were reported, mostly on South Bali beaches (see map). That number dropped to just 7 in 2022, and only 10 strandings were reported through October 2023. The stranded turtles have been primarily greens (24) and olive ridleys (20), plus a few hawksbills (6). Six other animals were too decayed to be identified. The year-by-year drop in numbers could be a positive sign, but it is too soon to tell. With a longer-term dataset, such fluctuations could help pinpoint causes of mortality or verify the success of conservation measures.

Unfortunately, necropsies could only be performed on a few carcasses because of their poor condition, meaning that the causes of death remain largely unknown. The occurrence of stranded turtles appears to increase during the extreme weather associated with the rainy season. During that time of year there is also an influx of marine debris, including wood and plastic waste, and in some cases, plastic waste has been found in the mouths or digestive systems of turtles during necropsies and may be a cause of mortality.

As a strategy to improve the effectiveness of the stranding network's efforts to document, reduce, and respond, the following actions have been suggested:

- Expand Bali's stranding reporting network by partnering with local communities, governmental organizations, and nongovernmental organizations for better awareness and faster reporting.
- In stranding hotspots, create rapid response teams composed of trained individuals with necessary resources for rescuing live turtles and recovering deceased ones.
- Perform comprehensive necropsies on examinable turtles using standardized data collection for species, size, location, and stranding causes.
- Collaborate with research institutions to improve understanding of ecological factors contributing to strandings, and conduct scientific research on sea turtle health and behavior.

- Implement educational programs and outreach in stranding hotspots to encourage community involvement in rescue efforts and promote responsibility and empathy. Strengthen efforts to reduce marine pollution in Bali's waters, including community cleanup initiatives and stricter waste disposal regulations.

By implementing those measures, we can foster a more sustainable coexistence between humans and these magnificent marine creatures in Bali. At the same time, we can also contribute to the broader scientific understanding of sea turtle threats and provide a call to action for conservation efforts in the region. For more details, please visit www.westerlakenfoundation.org/publications and www.westerlakenfoundation.org/turtle-stranding-database.



Map showing locations (red dots) and species of stranded turtles recorded in Bali, Indonesia, from 2021 to 2023. White borders indicate regency boundaries. Source: Yayasan Bali Bersih