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Two stage seawater desalination for Bali tourism destination on the island southern karst region powered by ocean current generator and other renewable energy sources.

Section 1: General Information	
Summary	The third activity of the Bali Bersih Lestari Program is tailored to address the challenge of clean water availability in high-density tourism development areas such as Nusa Dua, Jimbaran, Kuta, Benoa, Seminyak, and Canggu village. These areas face a scarcity of natural water sources due to their karst porous soil conditions. Currently, the municipal water company serving these regions relies on clean water sourced from the Tabanan Regency in the northwest, disrupting the Tabanan's Subak water management system. Empirical studies indicate a concerning decline in yearly rice production, as farmers can only cultivate paddy twice a year due to freshwater shortages. The proposed solution entails the construction of a significant water storage system consisting of two stages of seawater desalination, powered entirely by ocean current generators. This innovative approach aims to achieve a net-zero solution, addressing the crucial water-energy nexus while meeting the urgent need for water sustainability in these tourism-centric areas and alleviating the adverse effects on agricultural practices in Tabanan. The first phase involves the construction of a massive clean water storage facility beneath the Udayana University Stadium. The final clean water storage unit will be constructed underground at the Gua Gong Hill, the highest point in the Southern Bali region. Seawater intake will occur by pumping seawater from a location 5 kilometers west of the Ngurah Rai Airport, where the 5 x 2 MW ocean current power generator is permanently stationed.
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Region	Bali Island

Section 2: Commitment	
Linkages to SDG 6	Rapid development of a tourism destination area with their luxurious villas and hotels with large swimming pools should not sacrifice the neighboring region agricultural water need. Replacing the current clean water supply with a more abundant sources such as seawater is the only fair option. Although it cost more to produce clean water supply, tourist still could
Target	This project involves various interconnected components and intricate schedules, posing a challenge to complete within a three-year timeframe. Therefore, strong local government leadership is crucial from the outset to facilitate well-coordinated construction schedules and navigate through layers of permitting processes. However, once fully operational, it has the potential to address a significant water injustice issue in Bali.
Linkages to other SDG	Not identified yet

Section 3: Actions and Outcomes to Achieve Targets		
Relevant Sub-Theme	The incorporation of cutting-edge seawater desalination technology, innovative ocean power technology, advanced electric water pump systems, and the use of laminated bamboo material for high-pressure water pipe distribution systems represents a novel approach to addressing water scarcity. The comprehensive integration of these new technologies presents a valuable source of knowledge that can be studied by water authorities worldwide. This pioneering solution offers insights and lessons that can inform and inspire similar initiatives in various parts of the world facing similar challenges with fresh water scarcity.	
Actions and Outcomes	Just do it	
Implementation Period	Start Date	*January 2025*
	End Date	*December 2028*