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Quality Parameters of Soil Chemical Physics and Water Ecosystem in Indonesia

Abdul Haris Sambu ⁽¹⁾, Burhanuddin Burhanuddin ⁽²⁾, - Amruddin ⁽³⁾

(1) Universitas Muhammadiyah Makassar Indonesia

(2) Universitas Muhammadiyah Makassar Indonesia

(3) Universitas Muhammadiyah Makassar Indonesia

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How to cite (IJASEIT) :

Sambu, Abdul Haris, et al. "Quality Parameters of Soil Chemical Physics and Water Ecosystem in Indonesia". *International Journal on Advanced Science, Engineering and Information Technology*, vol. 13, no. 5, Oct. 2023, pp. 1781-7, doi:10.18517/ijaseit.13.5.18729.

Citation Format :

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This research aimed to analyze the characteristics of coastal waters as well as the water and soil quality parameters using direct field observations or measurements and laboratory analysis. The results showed that the characteristics of the coastal waters include a 2.5 km coastline length in Tongke-Tongke Village, 1.2 average high tides, and 0-5 beach floor slope elevation degrees. The soil quality parameters include an average soil pH of 5.53, organic matter of 7.83 ppm, nitrogen of 0.19 ppm, phosphorus of 70.56 ppm, potassium of 220.80 ppm, the iron of 0.21 ppm, and soil texture of sandy mud with 45% dominated by watersheds, 40% by tides and waves, and 15% clay. Similarly, the water quality parameters include average water temperature at 29.780, 6.97pH, 30.40 ppt salinity, 4.06 ppm oxygen, 30.60 cm turbidity, and 0.87 ppm ammonia. The measurements and analysis of soil and water quality parameters were dynamic based on seasonal conditions. Therefore, the coastal waters of Tongke-Tongke Village were suitable as a research location due to the diverse flora and fauna. Meanwhile, for tourism, the sedimentation volume from the watershed and the sea should be minimized through tides and waves. Floating net cages and other marine cultivation also need further development as tourist attractions.