

Geotextile sand bags protect holidays in southeast Asia

Coastal protection and beach extension with geotextile sand bags and sand containers Secutex® Soft Rock in Pattaya, Thailand

Coastal erosion processes often threaten buildings, infrastructure elements, and the viability of shoreline recreation areas. Countermeasures, using geosynthetics, are utilized to protect these spaces and structures.



The seaside resort of Pattaya on the Gulf of Thailand, south of Bangkok, provides an exemplary case. There, geotextile sand containers (Secutex® Soft Rock RS 801a) were used as ballast and a geotextile filter (Secutex®) was installed on the subsoil near the waterline. **This revetment solution, subsequently covered by a sand protection layer, was engineered to maintain the beach surface area and enable expansion.**

In total, 2.7km of beach was protected and the beach was extended to a width of 35m. For an internationally known holiday destination - one heavily dependent on tourism - it was an ideal solution.



The **Secutex® Soft Rock RS 801 geotextile sandbags** and sand containers were supplied with a beige color. This enabled the 28,000 containers to blend in with the surrounding beach. Each container used a filling volume of 1m³ and were filled with sand from the project site itself, which provided considerable savings for the project owners and greatly reduced material transportation needs to the site.

To further protect the site, a 45° sloped embankment was constructed on the water side of the installation. This embankment also was built using geotextile containers. A final cover (sand protection layer) was added to guard against potential mechanical damage, vandalism, and weathering to the beach protection system.





Mr. Ekarat Khantaro, Regional Director of the Pattaya Regional Harbor Office, said the successful works utilizing geotextile containers presented a model solution to be replicated on other beaches. The ability not just to protect the integrity of the beachfront but extend it was also highly prized, as it enhanced the tourism potential for the area. In short, both local officials and guests have reason to relax.