

Secutex® Soft Rock - Trial Riverbank Protection at Mekong Delta - Vietnam

Riverbank Protection

- **Project Name**
Trial Riverbank Protection at Mekong Delta, Hau Giang Province, Vietnam
- **Owner**
Department of Agriculture & Rural Development
- **Contractor**
AT & T Company Ltd.
- **Product**
Secutex® Soft Rock R 601
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The Mekong Delta is the region in southwest Vietnam where the Mekong River flows into the sea through a network of distributaries with over 40,500 km². It encompasses a large portion of south- western Vietnam and is the world's 3rd largest delta. The Mekong Delta is known as „biological treasure trove“ with over 1,000 animal species. It is by far Vietnam's most productive region in agriculture and aquaculture.

Challenge

The Cai Doi navigational canal in Nga Sau town, Hau Giang province, has been used heavily by locals for transportation with hundreds of trips by boats and barges travelling back & forth each day. With the seasonal flow velocity changed by dam construction at upstream, climate changes and waves induced by passing ships, the erosion process along the canal is accelerated and enlarged in scale. The erosion phenomenon is more critical, especially at the bend where hydraulic action is amplified.

Solution

A trial for a riverbank erosion protection system with Secutex® Soft Rock for the 50m long section at Coi Doi canal has been proposed together with a local distributor. The chosen test section is located at the canal bend, where hydraulic action is the highest. Secutex® Soft Rock made from filter stable needle-punched nonwovens provides robust, flexible construction elements that have a better impact absorption capability and a more natural appearance as compared to conventional hard structures. Due to the limitation of access, Secutex® Soft Rock was installed from barge using lightweight machinery. The local consultant checked the stability of the embankment slope. Timber piles with 4m & 7m lengths also have been introduced to reinforce the embankment further. Approximately 400 pieces of Secutex® Soft Rock have been installed at the water transmission zone and above.

Significant silt has been retained at the container's surface enabling vegetation growth. The vegetation cover also prevented the degradation of the sand containers due to UV rays. The system avoids erosion problems and is not only functional but also attractive due to its natural look.