

Use of state-of the-art Geosynthetics



German technology

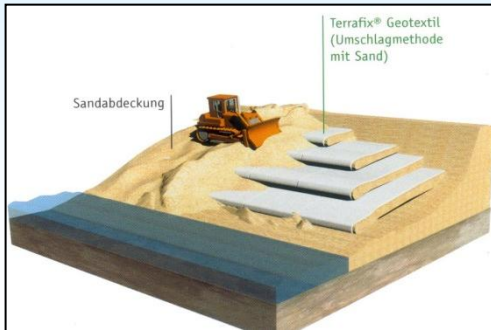
Hydraulic & Coastal Engineering with geosynthetics



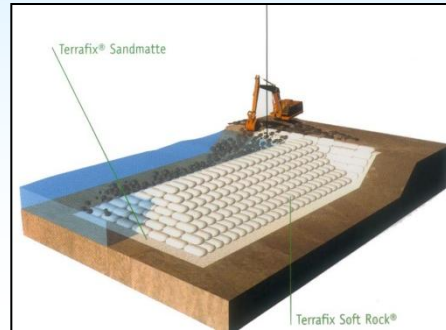
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Application of Geosynthetics in Coastal areas

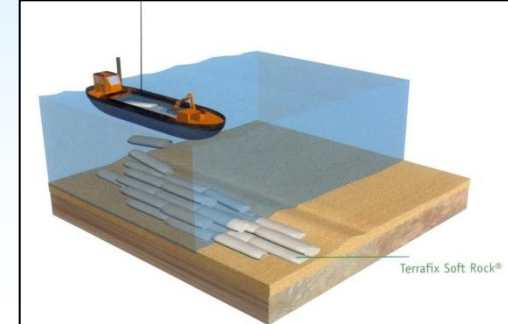
Beach and dune protection



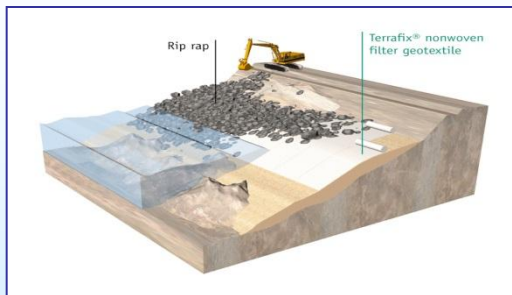
Groyne structures



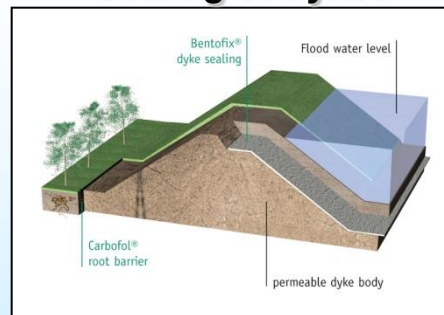
Artificial reefs



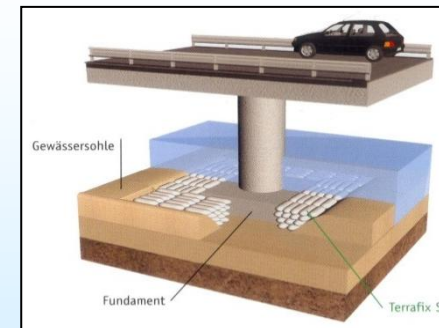
Revetment systems



Sealing of Dykes



Scour & bed stabilization



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**TYPICAL STRUCTURE FAILURES
in Coastal / shore areas**



**Scour & erosion will occur without
a proper & reliable design**

2005/7/9

Use of state-of the-art Geosynthetics



Erosion At Indramayu Beach, Cirebon



EXISTING PROJECTS IN INDONESIA WITH ENVIRONMENTALLY FRIENDLY SOLUTIONS

1. Save natural resources (rocks)
2. Cost effective
3. Could act as artificial reefs and create marine life
4. Save carbon emission by saving petrol and using conventional method (cement structures)

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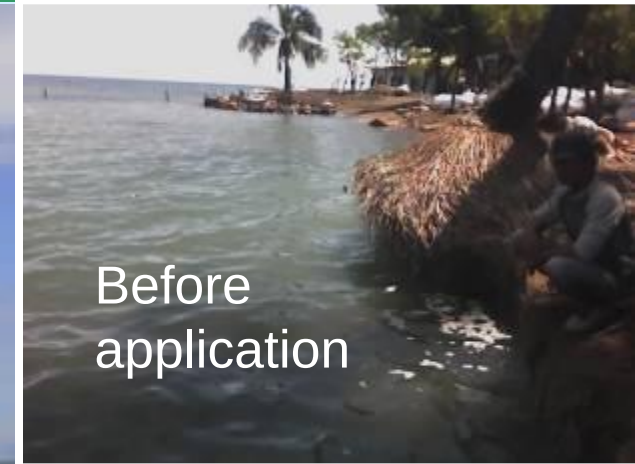
**Jetty Muara Karangsong
Indramayu - Cirebon**

Tahun 2004 - 2007



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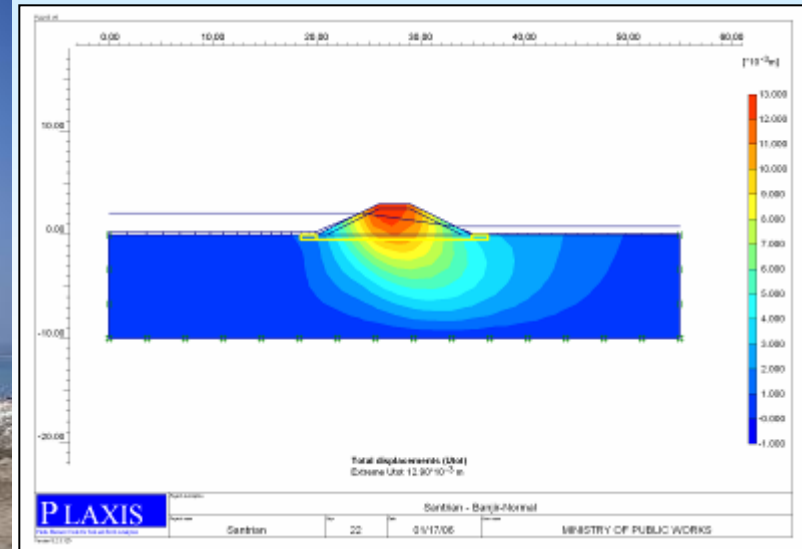
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Use of state-of the-art Geosynthetics

SANTRIAN GROUYNE (SANUR - BALI)



SoftRock® function as a
groyne core



Use of state-of the-art Geosynthetics



Stockpile Project Mertasari - Sanur - Bali



Use of state-of the-art Geosynthetics

Softrock®

Environmentally friendly
coastal protection and
stock-pile solution



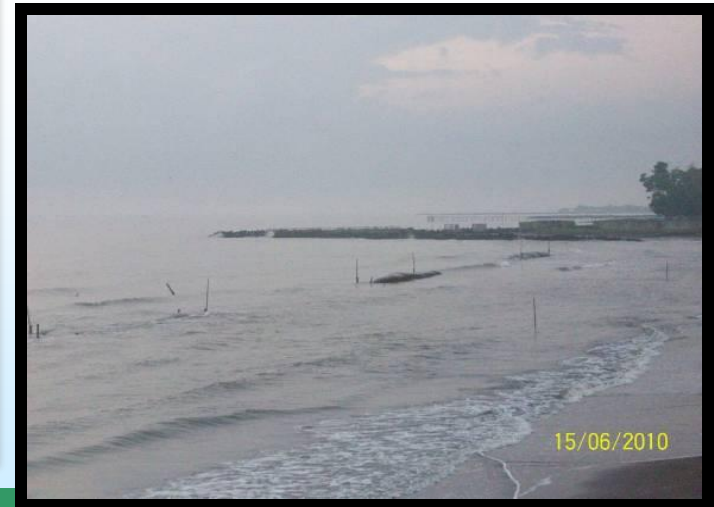
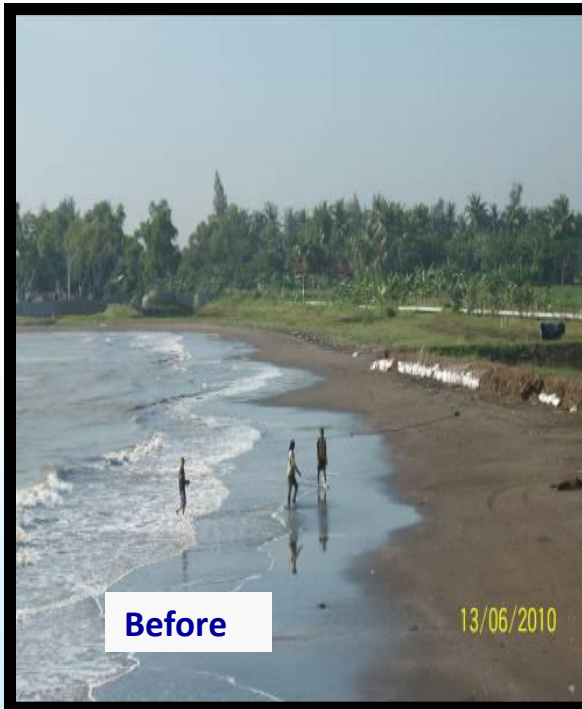
Mertasari – Stock pile – Sanur - Bali

Use of state-of the-art Geosynthetics

Break Water Lombang Beach,

Indramayu, Jawa Barat 2010

Using geotextile Mega Sand container : Geotube



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Muara Kamal Beach Mangrove Protection, North Jakarta 2010

Using geotextile Mega Sand container : Geotube



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Donggala Break Water, Central Sulawesi 2011

Using geotextile sand container : Soft Rock 1,2 m3



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Tanjung Kait Break Water Beach, Serang - Banten, 2010

Using geotextile Mega Sand container : Geotube



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Coastal Protection and Breakwater in Pusong Island - Aceh



Use of state-of the-art Geosynthetics

Geotechnik mit Geokunststoffen
geotechnics with geosynthetics

Thank you for your kind attention !



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