TENAX Kunststoffe GmbH • Schloßstraße 13 • 88131 Lindau - Deutschland
Tel (+49) 08382-93040 • Fax (+49) 08382-930430 • E-mail: **info@tenax-net.de**

CASE HISTORY

Embankments construction of reinforced soil with TENAX TT mono-oriented geogrids and control erosion protection with TENAX MULTIMAT 100 geomats at the Marine installation of Huatulco, Oaxaca in Mexico

PRODUCT	TENAX TT 060 SAMP TENAX TT 090 SAMP TENAX TT 120 SAMP TENAX TT 160 SAMP TENAX MULTIMAT 100
LOCATION	Huatulco Oaxaca (Mexico) 1999
OWNER	Marine Ministery of Mexico
PROJECT	Marine Ministery of Mexico
CONTRACTOR	Gutiérrez de Velasco SA de CV

PROBLEM

In the Development Program of the tourist destiny of Huatulco, Oaxaca in Mexico, the construction of an Army and Marine installation was considered, offering with it National Security to the area. Since land has a high importance and value in this tourist zone, the property assigned to the Army and the Marine was placed in an irregular topographic site, with a low potential to be to be operated and with little tourist attraction. In the case of the Marine's space, which was situated in a cliff with a very difficult access that required to be levelled, cuts sections and fills were needed.

SOLUTION

The original solution to the problem of the embankment, consisted in the construction of conventional retaining walls. The disadvantage of this solution was the ecological impact of the construction, considering that it was situated in a tourist area, and that the final aspect of the slopes and walls was disagreeable for the place. The alternative to the retaining walls, was the construction of slopes reinforced with TENAX TT mono oriented geogrids. The installation of MULTIMAT 100 geomats, permitted the development of vegetation as an erosion control protection at the faces of the embankments and cuts which in some cases were almost vertical. The three reinforced slopes, with heights of 4, 6 and 13 meters, and inclined average angle of 80º, had a length of a 20, 100 and 100 meters. The total area protected against the erosion was 7,260 square meters of slopes.

CONCLUSIONS

Thanks to the use of TENAX Geosynthetics in the solution for the cuts and embankments, the following benefits were obtained:

- Ecological solution
- Better aspect of the construction
- Lower impact for a tourist development
- Lower costs
- Fast construction compared with standard solutions