Protection of a slope along a road in a semi-arid region

The challenge

- The road enlargement works in close proximity to residential areas particularly steep slopes.
- The local soil is composed of loess, materials with well-known characteristics in contact with water.
- A typical rainfall curve in those very dry areas, where the heavy rains, even rare, have resulted in very serious soil erosion.

About GeoGlobe® Europe

Being aware of the geological, ecological, economic and human challenges of our century, GeoGlobe® Europe designs and manufactures geosynthetic systems for soil stabilization and erosion control and puts its know-how and its experience in service of the Earth – Stabilization.

Being dynamic, GeoGlobe® Europe consists of a team of specialists with a permanent and consistent participation in the world of geosynthetic committees.

GeoGlobe® Europe continuously invests in research and development of technologies whose effectiveness is proven in long terms.

Based on many years of experience in studying and realization of geosynthetic solutions applied in the infrastructure projects and terrain stabilization, we focus on the feasibility and durability of the solutions.

GeoGlobe® Europe takes care to offer today’s customized solutions harmoniously combining the technical performance at the level of civil engineering with the human pledge including the socioeconomic socioeconomic development and the ecological engineering in respect to the environment for a more stable future.
The Solution
To protect the slope from erosion by GeoGlobe® taking into account the geological and climatic conditions.

The alternative method
The construction of retaining walls, built to reinforce the terrain was not cost-effective because of its excessive cost. The projection of the concrete (shotcrete) is too expensive and constitutes a real scar to the landscape.

GeoGlobe® method and its advantages
To cover the slope with GeoGlobe® filled with gravel and tree plantation in order to obtain maximum stability and control of the terrain erosion while ensuring the harmony with the landscape.

The technology – simple, fast, effective and economical
After the upgrade of the terrain, a nonwoven geotextile is installed above which the firmly anchored units of GeoGlobe® are expanded and filled with gravel. The plants are planted and an irrigation-watering system is installed.

The result
The slope is stable for more than 10 years and practically is covered by vegetation and gravel offering a natural landscape appearance. Moreover, the gravel has the property to "break the hydraulic energy of the rain", so the soil constituted from loess under the cover of the confinement system remains perfectly stable and does not suffer from erosion any more.