

## APPLICATIONS OF “DO-NOU” TECHNOLOGY

The “Do-nou” technology, which can be said to be one of the most convenient geotextiles in rural areas of developing countries, is adopted by the *Masai* - a tribe that lives with its livestock at the bottom of the Great Rift Valley. The seasonal river sometimes floods their living area during the rainy season. They reinforced the flooded part of the embankment using “Do-nou” technology. To protect the maintained dam from being trampled down by their cattle, the dam is covered with branches of *Acacia* growing near the area (Figure 16). Because of the thorns of *Acacia*, the cattle do not approach the dam. This represents the integration of traditional technology of the *Masai* and geotechnical engineering.



Figure 16. The dam's embankment built with “Do-nou” covered with the branches of *Acacia*

In Kenya, it is estimated that forests currently only compose 2% of the total land, a substantial decline from the previous estimate of nearly 30%. The government of Kenya obliges farmers to keep at least 10% area of their farms for planting trees for forest revival. A farmers' group used water, stored in a dam built using “Do-nou” technology (Figure 17), to grow a tree nursery reinforced by “Do-nou” (Figure 18). The nursery of trees was purchased by local authorities and other farmers' groups in compliance with the government regulations. The maintenance of the rural infrastructure generates new sources of income for farmers.



Figure 17. The dam to store water built with "Do-nou" (Kenya)



Figure 18. A terrace reinforced with "Do-nou" for the tree nursery