

## SLOPE STABILIZATION PROCESS OF THE FOREST ROADS

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**Extended Abstract:** *One of the most important issues during the construction and performance of forest roads is the process of slope stabilization and therefore, many kinds of methodologies have been developed (Eskioglou et al., 2006).*

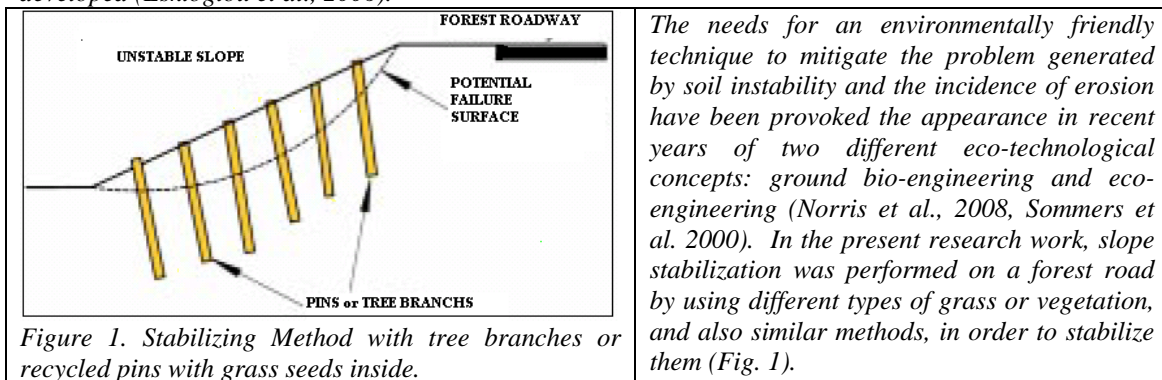


Figure 1. Stabilizing Method with tree branches or recycled pins with grass seeds inside.

*The needs for an environmentally friendly technique to mitigate the problem generated by soil instability and the incidence of erosion have been provoked the appearance in recent years of two different eco-technological concepts: ground bio-engineering and eco-engineering (Norris et al., 2008, Sommers et al. 2000). In the present research work, slope stabilization was performed on a forest road by using different types of grass or vegetation, and also similar methods, in order to stabilize them (Fig. 1).*

*From the simplest methods such as seeding, mulching or planting, to the most complex ones that integrate different engineering techniques using very different materials (live crib walls, vegetated gabions, etc.), we describe the uses of vegetation for increasing slope stability and restoring and preserving degraded land. The use of eco-engineering techniques against rock fall in mountainous areas has also been considered (Stokes et al., 2004). Finally, the possibilities of combining both eco- and bio-engineering techniques are described. This application results not only stabilize the slope from the road cut but also accept the environmental aspect that we must follow in constructions of forest roads type B' and A'.*

### References

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