Stabilised Base With Soil-cement, For Unpaved Roads "ruta Del Cacao"
Guayas-ecuador

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During the past decades, the use of soil-cement has been a constructive method that has contributed to the stabilisation of bases. Since the soil is mixed with cement, it provides an improvement in the physical and mechanical characteristics of roads. It can also be applied to any type of soil. By means of this constructive methodology (soil-cement), the road system supports a greater load due to the fact that they transmit lower amount of efforts to the ground, likewise the uniform distribution that it generates on the road prevents very high forces from reaching the subgrade that provides a longer useful life. The cement dosage required for the stabilisation of this study depended on the existing material in the road, for which the soil was classified using the AASHTO methodology, to obtain the required cement range. The present study seeks to obtain the least amount of cement necessary to carry out the construction process using the same material in situ, which is a friendly practice with the environment, since it avoids the exploitation and transport of material from other sources. To achieve cement optimisation, tests were carried out where the mixture was performed with a lower dosage than what is stipulated by ACI-230 1R - 09. Two different types of materials were used, which were found in the study path, being the amount of 4% and 6% of cement adhered to the sample that yielded values greater than 18 which is the minimum resistance parameter by Compressive strength requirement.