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DEGRADATION OF FIELD TERRACES IN THE MALTESE ISLANDS - REASONS, PROCESSES AND EFFECTS

ABSTRACT: CYFFKA B. & BOCK M., *Degradation of Field Terraces in the Maltese Islands - Reasons, Processes, and Effects*. (IT ISSN 0391-9838, 2008).

There are several reasons for severe land and terrace degradation in the Maltese Islands. The main reason is the land abandonment which took place from the 1960s. Cultivated fields have constant protection against soil erosion by the crops and the farmer's care for both the field itself and the field terraces, as well as the rubble walls which are part of the cultural heritage in the Maltese Islands.

Once a rubble wall is broken down, intensive soil erosion starts because then the tracks for the erosion processes are pre-determined.

Usually the natural vegetation is able to reclaim abandoned land in a short period, but the dry, hot, and windy climate in the Maltese Islands creates unfavourable conditions.

Meanwhile it is proven that global climate change is producing heavier rainfall than in previous decades.

Starting in autumn every year rainstorms occur and cover the mainly unprotected land with flash floods.

With the help of old aerial photographs (1957) and high resolution satellite images (Ikonos, 2004) the percentage of abandoned land in the Gnejna Valley in Malta was determined. A Digital Elevation Model gave, via relief analysis, the possibility to assess the possible erosion tracks on an island which has no perennial streams. Field research gave major insight to the composition of the vegetation cover on the abandoned field terraces and other parts of the valley. The results are a forerunner to a solution to the problem in the entire Maltese Islands as well as, probably, other Mediterranean Islands with a dry climate.

KEY WORDS: Land-use change, Land degradation, Field terraces, Erosion, Tourism, Malta.

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