

In the framework of the LIFE TERRACESCAPE project, the re-cultivation of terraces on a large scale is expected to offer a Green Infrastructure, revitalizing the primary sector, rendering it multifunctional, economically and environmentally sustainable, and capable to sustain a more human local development in combination with tourism and culture.

Within this project:

- Traditional cultivation of terraces is revitalized using local crops of cereals and legumes, as well as other traditional agricultural products
- Climate-smart agricultural practices are implemented
- Terraces and dry stone walls, as well as other architectural elements on abandoned terraces are restored
- Preservation of native flowering – apicultural plant species within hedgerows and honeybee gardens is prioritized
- Uncultivated field margins are maintained
- Wildlife ponds are established
- Old stone-paved paths are restored and maintained

In order to ensure the operational function of the Green Infrastructures and their expansion to new terraced areas of Andros and other Aegean islands, a Land Stewardship Organization was established, for the first time in Greece, under the name “Aegean Farmers”. It is a collaboration between the Green Fund, the Municipality of Andros and the Social Cooperative Enterprise also named “Aegean Farmers”.



Life Terracescape

The project LIFE TERRACESCAPE aims to the functional restoration of terraces through re-cultivating them. The immediate objective of the project is to demonstrate the benefits of such an action on the spot, with the expectation that the effort will be multiplied by other locals. The ultimate objective is to create adaptive “Green Infrastructures” functioning as a barrier against the effects of climate change. The action takes place on the island of Andros, aiming to expand to other Aegean and Mediterranean islands.

The project, entitled “Employing Land Stewardship to transform terraced landscapes into Green Infrastructures to better adapt to climate change” (LIFE16 CCA/GR/000050) is implemented by the University of the Aegean for the period 2017-2022, in collaboration with the Municipality of Andros, the Green Fund, the National and Kapodistrian University of Athens, the Hellenic Agricultural Organization - DEMETER and the National Observatory of Athens.

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 LifeTERRACESCAPE

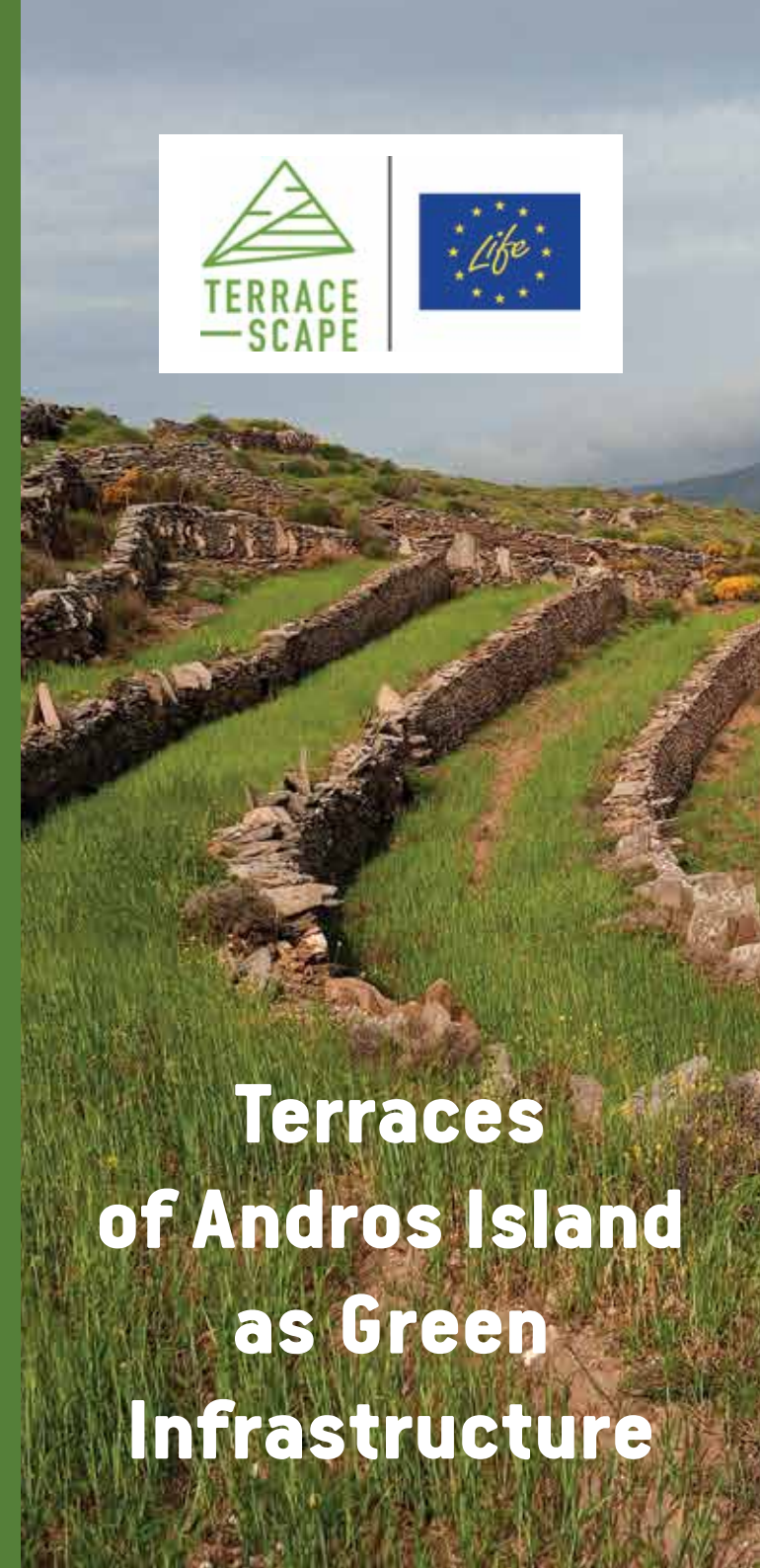
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Photos: NCC Archive



Terraces of Andros Island as Green Infrastructure



Green Infrastructures

Human life and activity benefit significantly from the smooth functioning of natural ecosystems. The latter provide goods (e.g. food) and services (e.g. water and air purification, material recycling), as well as recreational opportunities, all of vital importance for humans, albeit undervalued by them. Most probably because they are taken for granted. The “tragedy of the commons”!

The importance of ecosystem services has been acknowledged worldwide; the same holds true for man-inability to substitute these services whenever they are significantly reduced or lost. This is why their conservation is considered imperative, recently even at institutional level, e.g. in the framework of spatial planning. Such a process involves the maintenance and expansion of nature through “Green Infrastructures”: *networks of natural and semi-natural areas with other environmental features designed to deliver essential ecosystem services which underpin human well-being and quality of life* (EC, 2013). That is to say, natural solutions have been proved not only more effective and economical compared to technical ones, but also sustainable.



Terraces as Green Infrastructure

The diachronic importance of terraces for agriculture has been recognized worldwide and especially within the Mediterranean Basin. It is therefore fortunate for the Aegean islands that we have realized this early enough, while this infrastructure is still standing, although in a variety of conservation states. Besides being productive, as in the old times, this infrastructure could further act as Green Infrastructure, with multiple benefits towards the adaptation of island ecosystems to climate change. Such benefits may include:

- Reduction of floods and landslides following heavy rainfall
- Enrichment of ground water potential by increasing soil permeability
- Avoidance of soil erosion, because cultivated crops on terraces contribute further to the containment of soil-resources not only mechanically, but also through the root systems of the cultivated plants
- Creation of soil, especially in eroded and steep areas
- Preservation of local crop varieties, adapted to local soil and climatic properties, should they be cultivated on abandoned terraces
- Increase of green surfaces also contributing to the aesthetic, morphological and recreational improvement of the island landscape
- Provision of “oases” of cultivated lands in steep areas, increasing ecosystem heterogeneity to the benefit of plant, invertebrate, reptile, mammal and bird biodiversity



- 1 Supportive dry stone walls:** soil preservation, water runoff decrease
- 2 Hedgerows and non-cultivated field margins:** enhancement of landscape heterogeneity, and thus diversity, prevention of erosion, lessening of flood risk
- 3 Stone-paved paths:** facilitation of human and animal movement through the landscape, function as firebreaks
- 4 Supportive dry stone wall:** creation of microclimates and microhabitats for the benefit of animal and plant diversity
- 5 Traditional crops:** local crop varieties that have been adapted to local soil and climate conditions
- 6 Landscape mosaic:** soil and water preservation, wild fire prevention, biodiversity support
- 7 Terrace cultivation:** water percolation enhancement, aquifer enrichment, function as Green Infrastructure, contribution in halting greenhouse effects
- 8 Crop residues application:** increase of green manure (reduction of chemical fertilizers), organic matter content enhancement
- 9 Farming with perennials:** ground cover provision all year-round, organic matter and water retention in situ, reduction of CO₂ emissions
- 10 Climate-friendly livestock:** rotational grazing systems, natural fertilization