

Safeguarding the livelihood of rural communities and the environment in the Mediterranean through Nature-based Solutions



Mara-Mediterra gears up for the third series of roundtables

The fifth progress meeting which took place in Izmir, Turkey on 24 and 25 September 2024 foremost created the opportunity to prepare for the upcoming third series of roundtables jointly. The scope of this final series of roundtables will be to assess the degree of transferability of the Nature-based Solutions that have been trialled and validated by the project's Living Labs in 'mirror' hotspots, i.e. hotspots that share the same soil and water degradation challenges. The diagram below (Fig. 1), brings an overview of our 5 hotspots which served as case studies, and their shared problems with the identified 'mirror' hotspots. It is especially noteworthy that this selection of 'mirror' hotspots implies that the validated Nature-based Solutions will be presented for feedback in a different partner country, thus enabling feedback on the across-border robustness of the Nature-based Solutions.




Case Study	Algeria 	Egypt 	Greece 	Lebanon 	Turkey 
Degradation hotspot	Djelfa gateway to Sahara	Coastal area of Nile Delta	Agri-ecosystems on Lesvos Island	Mountainous Akkar al-Atika area	Marmara lake habitats
Shared problematic	Desertification	Water and soil salinization	Rural landscape desertification	Water and soil quality degradation	Natural ecosystem degradation
'Mirror' hotspot	Akkar Plain 	Mitidja plain, east of Algiers 	Manisa-Akselendi plain 	El-Hamoul area of Kafr El-Sheikh Governorate 	Lake Koroneia 

Figure 1 Mara-Mediterra's 5 hotspots of environmental degradation and their associated 'mirror' hotspots

As an example, the micro-ecosystem based afforestation protocol devised by the Living Lab set up by AMENHDYD in Djelfa, known as the gateway to the Sahara, in Algeria, will be presented in the roundtable that will be organized by the research team at the Lebanese University in the Akkar plain in North Lebanon. The Akkar plain shares the same problems, i.e. of desertification. As illustrated in Fig. 2, a road traversing the Akkar plain is fast becoming a desert road.



Figure 2 The Akkar plain In North Lebanon

At each workshop, participants in the 'mirror' hotspots will be shown the proposed action plan of Nature-based Solutions and the associated policy recommendations as drawn up by the Living Labs in the respective case studies of environmental degradation.

Devising Nature-based Solutions to restore Lake Marmara in Turkey

Our hosts during the fifth progress meeting, the research team at the Dokuz Eylül University (DEU-DESUM) were excited to share the array of Nature-based Solutions (NbSs) they devised with a view to restoring Lake Marmara. The lake, a wetland of international importance due to its rich biodiversity, in particular in terms of bird species, dried out due to a sequence of ill-conceived interventions, which included the construction of the Gördes dam. The agricultural area around the lake is well-known for its production of sultanas, i.e. dried white grapes, which are exported worldwide. Our first stop during the field excursion on 26 September 2024, is the Ahmetli weir, the largest weir on the Gediz River constructed back in the 1970s with an aggregate command area of 60,000 ha of agricultural land. The drying out of the lake caused the river flow to become very low. This severely disrupted the rotation that was previously applied by means of the weir to provide all the agricultural areas with the required irrigation water.



Figure 3 Ahmetli weir on the Gediz River

At the Gördes dam, we witness the very shallow depth of the water stored behind the dam, while its downstream part had silted up and formed large sand banks.



Figure 4 Gördes dam: shallow reservoir level (left) and siltation downstream of the dam (right)

Our final stop is at the 'port' of the lake, where fishermen used to bring their catch, as evidenced by the many boats that now lay stranded on the land.



Figure 5 Lake Marmara: stranded fishing boats in the dried-up lake (left), plaque showing original extent of the lake (red contour line), (right)

Dr. Cem Polat Cetinkaya, DEU-DESUM's Teamleader, explained how conflicting interests proved an obstacle to organize a meeting with all stakeholders already since the start-up phase of Mara-Mediterra. With the support of the Chairman of the Agricultural Chamber, Erdal Ziyen, 89 farmers joined the roundtable organized by DEU-DESUM in Gölarmarmara to mark World Water Day in 2023 to 'make their voices heard'. The farmers foremost pointed out that having to rely on the pumping of groundwater for their irrigation needs, not only the groundwater levels were falling rapidly, but also the groundwater quality was deteriorating at an alarming rate, thus presenting a huge challenge to safeguard their livelihood. It is especially noteworthy that the roundtable discussions revealed that no less than 7 NbSs were already being implemented by the farmers in an effort that was primarily aimed at reducing their irrigation needs and increasing the nutrients in the soil. A Living Lab was launched to trial and validate further agro-ecological practices such as mulching using equipment provided to the farmers through PRIMA funding (see Fig. 6).



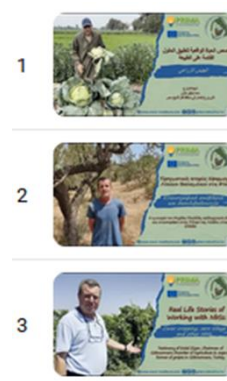
Figure 6 PRIMA funded mulching equipment supplied to Living Lab

The Living Lab members also joined in the Participatory GIS Practice sessions organized by DEU-DESUM with the purpose of mapping the agricultural field plots in which NbSs were already being applied and delineating the plots where additional practices are foreseen to be implemented. The latter comprises three distinct NbSs: agroforestry around the Gördes dam through the cultivation of olive trees in combination with a frost-resistant fig species which produces figs with a high market value; maintaining a minimum ecological flow to restore the lake once the water levels behind the Gördes dam will have risen, and the re-introduction of plant species, including seaweed, in the restored lake which will act as a natural treatment process to preserve the quality of the groundwater.

Access [this link](#) to watch the video clip 'Devising Nature-based Solutions to restore Lake Marmarma in Turkey' which brings snippets from the field excursion and the participatory stakeholder engagement process that was deployed by DEU-DESUM. A video clip with snippets from the fifth progress meeting can be accessed from [this link](#).

Well-received testimonial video clips from Living Labs

An aggregate total of 11 testimonial clips on the Nature-based Solutions that were trialed and validated in each of the Case Studies have been produced. Accessible through [the video section](#) of the project website, the testimonials were launched over the period from November 2024 through January 2025. These were clearly well-received as evidenced by a more than doubling of the views (from 2K to 5K) and the sharply increased watch time (from 49 hours to 120 hours). Each of the testimonial clips can be viewed with subtitles in Arabic, English, French, Greek, or Turkish. It is noteworthy that the testimonial clip on the use of agricultural gypsum in the Nile Delta with subtitles in Arabic tops the rankings, followed by the clip on the use of manure and silvopastoral system of agroforestry on the Island of Lesbos with subtitles in Greek, and the clip on cover cropping, zero tillage and other NbSs by Erdal Ziyen in Turkey currently in third spot.



Upcoming Activities and Events

February 2025: Organization of the Third and Final Series of Roundtables in 'mirror' hotspots of soil and water degradation in Algeria, Egypt, Greece, Lebanon, and Turkey, investigating the degree of transferability of the Nature-based Solutions tested and validated by the project's Living Labs.

March 2025: Organization of the project's Final Conference in Cairo, hosted by the Egyptian Chinese University (ECU).

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