

 **FACTSHEET | DEMO8 CENTRAL IZMIR, TURKEY**

INDIGENOUS PRODUCTION LANDSCAPES IN IZMIR



The DEMO8

Presents a comprehensive restoration plan for a coastal wetland in Izmir, Turkey, utilizing a range of nature-based solutions (NbS) to address both environmental and social challenges. The DEMO starts by establishing riparian buffer zones to enhance ecosystem health and water quality, while also serving as natural filters for wastewater effluent through vegetation. Freshwater diversion channels are constructed to lower salinity, which helps improve wetland habitats and counteracts the impacts of climate change and upstream water use. Green corridors are established to enhance ecological connectivity, while pilot wetland restoration is applied to improve habitat conditions and increase biodiversity.

The plan also includes controlling invasive species and reintroducing native fauna, such as buffaloes, to boost biodiversity and restore ecological balance. Sustainable grazing practices are introduced to maintain ecosystem health and prevent overuse of pasture areas. These actions collectively aim to revitalize the coastal wetland, conserve its rich biodiversity, and ensure the long-term sustainability of the ecosystem and the livelihoods of local communities who depend on these natural resources. By implementing these integrated NbS interventions, this demo contributes to climate adaptation, habitat restoration, and the resilience of both nature and people in the Izmir region.



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What is being done at DEMO?

Introduces a comprehensive plan for coastal wetland restoration, utilizing a variety of Nature-based Solutions (NbS) to tackle both environmental and social challenges. The initiative begins with the creation of riparian buffer areas, which help diversify habitats and enhance native vegetation, while also providing additional water quality protection beyond the existing standards of the Çiğli wastewater treatment plant.

The DEMO then constructs diversion channels to bring freshwater into the wetlands, aiming to lower salinity and support healthier conditions for native plants and animals. Green corridors within these channels further improve ecological connectivity, while targeted control of invasive alien species and the installation of fauna refuges and artificial nesting sites help restore native biodiversity and resilience.

The reintroduction of native fauna, such as buffaloes, and the promotion of sustainable communal grazing practices are designed to balance ecosystem pressures and improve habitat quality. Supportive infrastructure—including solar panels, biogas units, walking and cycling paths, bird-watching towers, and informational signage—enhances the project's sustainability and accessibility. Advanced monitoring tools like water quality sensors and camera traps are also used to evaluate the effectiveness of the NbS interventions.

Spanning 60 km² of public land in rural and periurban areas, this NbS system aims to revitalize coastal wetlands, conserve biodiversity, and secure the long-term sustainability of the delta ecosystem.



Identified Nature-based Solutions



The identified Nature-based Solutions are those mentioned above, specifically:

- Riparian buffer
- Techniques for fauna refuge and nesting
- Diversion channels
- Restoring native vegetation
- Green corridors
- Reintroduction of native fauna
- Invasive alien species control
- Sustainable communal grazing

Co-benefits

Integrating Nature-based Solutions across diverse landscapes delivers a wide range of interconnected benefits. Enhanced biodiversity and improved water quality go hand in hand with reduced erosion and better soil health, supporting both carbon sequestration and ecosystem connectivity. These efforts not only help conserve biodiversity but also promote water resource management, soil salinity control, and pollution filtration, leading to cleaner air and water. By stabilizing soils and mitigating floods, these solutions reduce land degradation and increase drought resistance, ensuring the maintenance of vital habitats. Ultimately, such initiatives contribute to community livelihoods, food security, and the cultural and social value of natural areas, creating more resilient and sustainable environments for both people and wildlife.

Sustainable Development Goals



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