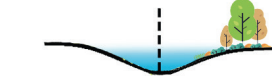


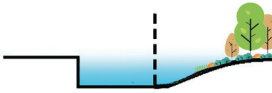
Nature-Based Solutions In Stream And Lake Ecosystems



The water cycle is a natural and dynamic process. Hydrological systems are intercorrelated. Well-functioning stream ecosystems have functions of regulating water movement and preventing overflowing and flood. Flood is a natural function of stream ecosystems. Each stream ecosystem has a flood plain. The most appropriate scale in water supplies management is the basin scale, which describes natural hydrological systems.



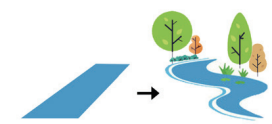
Restoration of coastal water vegetation



Renaturation of stream beds

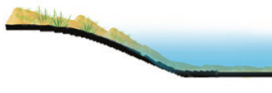


Expanding flood plains for the purpose of flood control

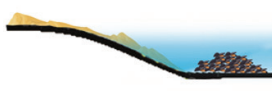


Restoration of wetlands, lakes and ponds
Reconstruction of meanders, restoration of stream corridor

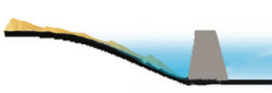
Nature-based solutions in coastal and marine ecosystems



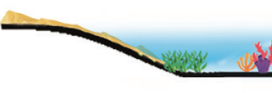
It reduces the risk of storm surge and coastal flood caused by extreme winds and storms. Coastal ecosystems (e.g. coral reefs, seagrass and mangrove forests, wetlands) protect coasts against strong impacts of wave erosion and storms, by slowing the energy of waves. Wetlands and seagrass hold large amounts of carbon. Conservation and restoration of living coastal ecosystems increases the climate resilience of coasts.



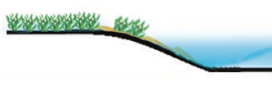
Beach improvement, regeneration of dune ecosystems



Conservation and restoration of oyster beds. Construction of seawalls



Conservation and restoration of seagrass meadows and see reefs



Restoration of coastal wetland ecosystems



Nature-based solutions in urban areas



Creation of rain gardens and rain swales



Formation of green roofs and vertical gardens, Increasing permeable surfaces



Creation of urban green areas, Increasing tree crown cover



Construction of leakage strips



Creation of temporary water holding areas, delay and accumulation ponds, restoration of lakes and ponds



Restoration of streams taken in concrete channels



This project is co-funded by the European Union and Republic of Turkey.

CLIMATE ADAPTATION IN TERMS OF ECOSYSTEM SERVICES

Climate change poses hazards on natural and urban systems and it causes various environmental and social problems. Health of all living things depends on the benefits provided by ecosystems, which are named as ecosystem services.



Terrestrial and aquatic ecosystems act as a natural barrier against climatic impacts with their ability to reduce the negative effects of climate change (exposure) and to prevent disasters.

Nature and natural ecosystems are our biggest supporters in our struggle against climate change.

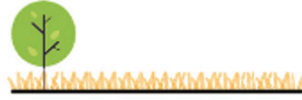
Nature-based solutions that use nature as a tool aim to protect ecosystems and biodiversity, manage them in a sustainable way, rehabilitate damaged ecosystems, thus ensuring the continuity of ecosystem services and increasing the resilience of ecosystems. Nature-based solutions can be developed in all sectors.

Ecosystem/nature-based solutions support climate change mitigation and adaptation strategies and contribute to achieving the Sustainable Development Goals by providing ecological, social, and economic benefits.

Nature-based solutions in agricultural ecosystems



Creation of ecological corridors and fences



Planting trees on farmland



Creation of herbaceous plant strips in agricultural lands, adoption of biological control methods



Construction of filter strips around water sources



Terracing for water harvesting and creation of ponds, increasing the organic matter content and water holding capacity of the soil with green fertilization



Growing drought-resistant crops, promotion of crop diversity (polyculture) instead of one type of crop (monoculture)



Conservation of undecomposed, integrity-preserving forest ecosystems



Restoration of damaged forest ecosystems



Creation of ecological corridors and ecological gateways



Rehabilitation of areas with high risk of erosion



Sustainable forest management, Holistic forest fire management



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