

ECOSYSTEM-BASED DISASTER RISK REDUCTION AND ECOSYSTEM-BASED ADAPTATION

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ABSTRACT

The increasing effects of climate change reveal themselves in forms of natural disasters such as droughts, floods, landslides, heat waves, storms and tornados, hails and forest fires with increasing frequencies and intensities. The loss of lives caused by these disasters and economic losses are increasing day by day. Disasters caused by climate change negatively affect ecosystems in addition to loss of lives and properties. Many examples can be given to these disasters such as the drying of wetlands, forest fires in Greece and USA last year, erosions in pastures and agricultural lands caused by floods. On the other hand, the degradation of ecosystems increases the risk of such disasters. There are many examples where, for example, floods and torrents increase due to deforestation and water sources that are polluted or reduced. Ecosystem-based adaptation and ecosystem-based disaster risk reduction approaches have emerged as the protection of ecosystems contributes to the protection of people from the effects of climate change and disasters. The ecosystem-based adaptation of the UN Secretariat of Biodiversity Convention¹ is defined as the

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1 Secretariat of the Convention on Biological Diversity 2009. Connecting Biodiversity and Climate Change Mitigation and Adaptation: Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change. Montreal, Technical Series No. 41, 126 pages.

“Incorporates biodiversity and ecosystem services into an overall adaptation strategy to help people to adapt to the adverse effects of climate change”. Ecosystem-based disaster risk reduction is described by Estrella and Saalismaa (2013)² as sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim to achieve sustainable and resilient development”. While both approaches match up fundamentally, ecosystem-based adaptation focuses more on climate change impacts, while ecosystem-based disaster risk reduction includes measures to reduce vulnerability against other disaster risks. Ecosystem-based disaster risk reduction and ecosystem-based adaptation approaches are quite new and not known very much in Turkey. With this study, it is aimed to introduce these concepts.

Keywords: Ecosystem-based adaptation, ecosystem-based disaster risk reduction, ecosystem management, climate change

2 Estrella, M., Saalismaa, N., 2013. Ecosystem-based Disaster Risk Reduction (Eco-DRR): An Overview, In: Renaud, F., Sudmeier-Rieux, K. and M. Estrella (eds.) The role of ecosystem management in disaster risk reduction. Tokyo: UNU Press.