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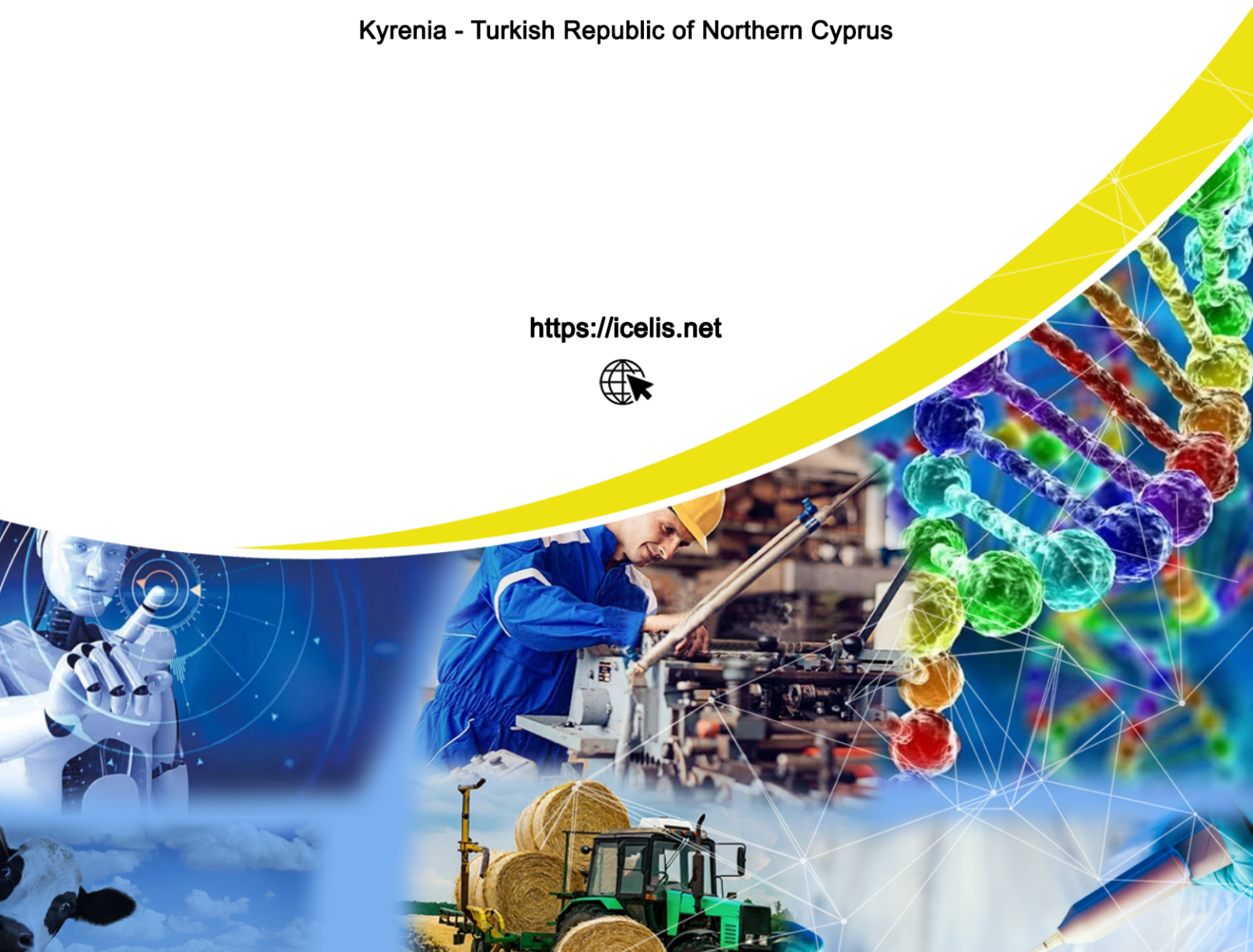
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POSTER PRESENTATION

Artificial Reefs in Türkiye: A Look Back and a Look Forward

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Abstract

For more than 40 years, Türkiye has used artificial reefs for a variety of purposes, including improving fisheries, protecting biodiversity, managing the shoreline, and promoting marine tourist. The first experiments happened in 1983, when small concrete pipe structures were put in Urla Bay (İzmir). In the years that followed, many new ideas were put into practice. For example, in 1989, obsolete trolleybuses were sunk in İzmir Bay, and in 1991, planned concrete block reefs were built near Hekim Island. Ege University and Dokuz Eylül University worked together on scientific projects in the 1990s that increased reef research and monitoring, especially in Foça and Çeşme. In the 2000s, environmental concerns became more important. From 2006 to 2008, specifically made "octo-blocks" were put in place to give common octopus (Octopus vulgaris) places to live. The Ministry of Agriculture and Forestry then started a big pilot project in Edremit Bay (2009–2012) with more than 6,000 reef units to safeguard fishing resources and stop illegal trawling. More recently, artificial reefs have been linked to tourism that lasts and new ideas. An Airbus A300 was sunk off the coast of Kuşadası in 2016 to attract divers. In 2021 and 2022, the first 3D-printed reef modules were put in place in Mersin, along with new ones in Burhaniye (Balıkesir). The most recent milestone was the Marmara Islands Artificial Reef Project in 2024, when 280 structures were put on the seabed. Of these, 160 were made using 3D printing. After one year of monitoring, 33 marine species were found, including the endangered pen shell (*Pinna nobilis*) and commercially valuable fish like *Diplodus* spp. and *Sciaena umbra.* The history of artificial reef applications in Türkiye shows a change from modest, experimental projects to larger, more integrated ones that incorporate marine tourism, conservation, and fisheries management. Future perspectives stress the importance of adaptive management, long-term ecological monitoring, and using more eco-friendly materials, including 3D-printed reef modules.

Keywords: Artificial Reefs, Türkiye, Fisheries Enhancement, Biodiversity, Marine Conservation, 3D-Printed Reefs.