

DIVERSIFICATION OF PLANT SPECIES FOR THE REHABILITATION OF THE GREEN DAM IN ALGERIA

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The Algerian Green Dam project, initiated in the 1970s, spans a width of 20 km and a length of 1,500 km from the East to the West border, covering an area of 3.7 million hectares between isohyets of 200 mm in the south and 300 mm in the north. However, it faces significant challenges jeopardizing its sustainability, including a lack of local adaptation, monoculture of *Pinus halepensis* Mill stands, management gaps, and the ever worsening negative effects of climate change. Rehabilitating the Green Dam involves species diversification for resilient ecosystems and local economic promotion. The methodology is based on a holistic approach that integrates knowledge from experiments, arboretums, and autoecological observations. Field surveys, phytoecological assessments, and analyses of monitoring plots are essential to determine which species can adapt to each zone of the Green Dam. Autoecological approach and typology of forest stations guide the targeted diversification of species. Field investigations and the utilization of arboretum records have enabled the selection of around thirty potential species for the rehabilitation of the Green Dam. The results indicate a significant improvement in biological diversity, the establishment of more resilient ecosystems, and the development of local economic opportunities through non-timber forest products. The species planting database contributes to advancing knowledge in the diversification of forest species. The observations presented above may also provide repatriation results in the drying habitat conditions of Hungary, where special attention will need to be paid to the invasiveness and frost tolerance of these tree species.