Sea buckthorn in Ladakh: navigating the path from traditional use to global prominence

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Ladakh covers 80–85% of the total sea buckthorn area in India which grows wild and that too luxuriantly. It contributed to the traditional medicine system for ages without any true economic benefit. After decades of recognizing its immense value in the international market, researchers across the country have recently begun to explore its niches and exploit the crop in ways never seen before. The prominence of the crop is underscored by significant government projects and missions, highlighting its increasing importance. Multinational corporations worldwide view Ladakh as a potential source of inexpensive raw materials, though government regulations and policies currently limit accessibility. Commercial exploitation of the crop has recently commenced on a modest scale, yielding substantial profits for stakeholders. While cultivation for commercial purposes remains an aspiration, Ladakh can look forward to an economic revolution with the proper technological and political support.

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its wide array of benefits, has attracted considerable attention from researchers and environmentalists alike[1]. The significance of sea buckthorn spans across ecological, economic and health-related domains, making it a focal point for sustainable development in harsh environments[2]. Ecologically, sea buckthorn plays a pivotal role in soil conservation and biodiversity maintenance. Its extensive root system prevents soil erosion, a critical concern in mountainous landscapes while offering habitat and nourishment to various species[3]. Economically, the plant provides substantial prospects for local communities through the commercialization of its berries, leaves and seeds, which are used to produce nutritional supplements, skincare products and traditional medicines[4]. Health-wise, the nutritional profile of sea buckthorn, which is rich in vitamins, minerals and fatty acids, positions it as a superfood with potential therapeutic benefits, ranging from cardiovascular protection to skin health enhancement[5].

Despite its significant benefits, the full potential of sea buckthorn in Ladakh remains underexplored due to challenges in cultivation, processing and market integration[6]. The present review article aims to consolidate existing research on sea buckthorn, focusing on its ecological, economic and