A tale of two seagrasses: Comparing the science and management of Zostera marina and Zostera japonica in the Pacific Northwest

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On the Pacific coast of North America, at least two congeners of Zostera occur: native Z. marina, and introduced, Z. japonica. Z. marina is protected by State and Federal laws as essential fish habitat. Z. japonica is considered "invasive" and therefore, ecologically and economically harmful by some, while others consider it benign or perhaps beneficial. Z. japonica does not appear on the Federal or the Oregon invasive species or noxious weed lists. However, California lists it as both an invasive and noxious weed and Washington recently listed it as a noxious weed. We describe the management dynamics in North America with respect to these congener species and highlight the science and policies behind these decisions. In recent years, management strategies at the state level have ranged from protection of Z. japonica as a priority habitat in Washington to eradication in California. In 2011, Washington State reversed its long standing policy to protect Z. japonica and is developing permits for chemical control of this plant. The policy of Z. japonica removal contradicts efforts to conserve and protect seagrass in other regions of the US and around the world. We recommend research actions to assist in the assessment of Z. japonica ecology and the immediate and long-term effects of management actions.