# Addressing the Current Fettle of Bioaccumulation of Microplastics on the Subsequent Perspective of the Aquatic Ecosystem and Health Implications of Commercial Species: A Review

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**Abstract**

Evidencing Bioaccumulation of microplastic globally raises significant risks to aquatic animal health as well as the environmental health and blue economy. Microplastics, particles of plastic smaller than 5 mm, come from various sources, including the breakdown of larger plastic trash and microbeads found in personal care products and synthetic fibres from clothing. As animals consume these particles, they accumulate in an organism's tissues, potentially transferring via the food chain to higher trophic levels. According to studies, microplastic exposure can cause **chemical and physical stress**, and **endocrine disruption**, leading to the **inability to grow**, **reduced feeding and** predatory performance by *Pomatoschistus microps* (juvenile) by 50% and 65% respectively, **energy depletion**, **reproductive crux** and **survival**. The combination of physical harm, chemical toxicity, and the facilitation of pathogen transfer makes microplastics a serious threat to animal health, necessitating urgent research and regulatory actions to mitigate their impact.

**Keywords:** Microplastic, Bioaccumulation, Ecosystem Health, Aquatic organisms, Blue Economy

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