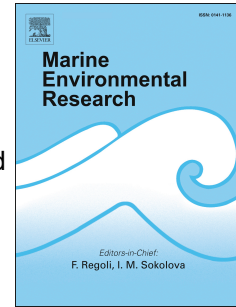


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Consumption of particulate wastes derived from cage fish farming by aggregated wild fish. An experimental approach

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1 **Consumption of particulate wastes derived from cage fish farming by aggregated wild fish.**

2 **An experimental approach.**

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10 **Keywords:** aquaculture; biofiltration; cage fish farming; digestibility; environmental impact;
11 mitigation; waste consumption; wild fish.

12 **Abstract**

13 Particulate wastes derived from cage fish farming are a trophic resource used by wild fish. This
14 study assesses waste consumption by wild fish and the impact on the final balance of wastes.
15 Consumption was determined according to the difference between the particulate matter
16 exiting the cages and that reaching 5m away at three different depths, in the presence and
17 absence of wild fish. Wild fish around the experimental cages were counted during feeding and
18 non-feeding periods. A weighted abundance of 1057 fish 1000 m⁻³ consumed 17.75% of the
19 particulate wastes exiting the cages, on average. Consumption was higher below the cages,
20 where waste outflow was greater. However, waste removal by wild fish was noteworthy along
21 the shallow and deep sides of the cages. Wild fish diminished the net particulate wastes by
22 about 14%, transforming them into more easily dispersible and less harmful wastes. This study
23 demonstrates the mitigating potential of wild fish in reducing environmental impact.

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