



Welfare of Cultured and Experimental Fishes

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Message from the Guest Editors

Welfare is a complex, multidimensional concept that can be broadly described as the state of an animal as it copes with the environment. Rearing conditions of finfish aquaculture and experimentation can impair welfare of captive fishes through stress, negative emotional states, health problems, and even mortality. Chemical, physical, social and other variables in captive environments can initiate changes at different levels within the individual, especially due to the high complexity of the sensory world of fishes. Natural stressors tend to be brief and/or avoidable, while stressors of anthropogenic origin may be unavoidable and prolonged or repetitive. Under such circumstances, chronic or repeated activation of stress responses is not adaptive and can cause severe damage to the animal. Therefore, it is essential to use indicators of welfare that draw attention to early signs of problems related to captivity conditions and allow intervention before harmful states are reached. As welfare in captivity is affected in multiple dimensions, there are multiple possible indicators to assess the welfare state of captive individuals.

