

Indicator 6: Changes in the indigenous species composition, fish



Figure: A male vimba bream jumping in the Vanhankaupunginlahti rapids. The population of vimba bream crashed in the Baltic region, mainly due to the damming of rivers and construction of hydroelectric power stations. Since the removal of dams and construction of fish ladders, the population has recovered. In 2010, the status of this species was raised to LC (Least Concern).¹

Status:

The waters of the Helsinki region contain both freshwater and marine fish species. Approximately 70% of the area governed by Helsinki is sea. The Baltic Sea is a body of brackish water, of which the species assemblage differs considerably from that of marine water bodies. The assemblage of the Baltic Sea has adapted to varying salt concentrations. The salt concentration off Helsinki generally remains low, as the salt pulses that enter the Baltic via the Strait of Denmark become diluted before reaching Helsinki and the Vantaanjoki River maintains a continuous influx of freshwater. It is characteristic of brackish waters that their species assemblages are poorer than those of both freshwater and marine waters. On the basis of survey fishing, Helsinki's freshwater habitats contain 23, and marine habitats 28, indigenous species². Some of the same species occur in both inland waters and the sea. When both marine and freshwater species are included, the total number of species is about 41. Some of the fish populations, such as trout, currently comprise mainly of stocked populations.

Also a number of introduced species have been stocked into Helsinki's water bodies. Some of these released species are indigenous species and others are alien species, from North America, for instance. Also a number of alien species that have escaped from fish-farms have been recorded from Helsinki's waters, of which some are considered to be harmful.³

Score:

This indicator has not been scored yet. The data collected now (42 species) will be used as the baseline for future assessments.

0 points: the number of species declines or remains the same.

1 point: 1 additional species.

2 points: 2 additional species.

¹ Information from the web site of the Natural Resources Institute Finland:
http://www.rkti.fi/kala/tietoa_kalalajeista/vimpa/

² Information on the species has been obtained from the reports described in source 3, via e-mail Jari-Pekka Pääkkönen (Helsinki Environment Centre, Senior Environmental Researcher) 26.3.2015, Katja Pellikka (Helsinki Environment Centre, streams) 6.3.2015 and Ari Saura (Natural Resources Institute Finland) 10.3.2015.

³ Haikkonen, A., Helminen J., Vatanen, S., Jaatinen K., Karppinen, P. and Kervinen, J: Helsingin ja Espoon edustan kalataloudellinen yhteistarkkailu vuosina 2012 ja 2013, (In English: General fishery survey of the coasts of Helsinki and Vantaa for the years 2012 and 2013) Kala- ja vesimonisteita nro 139, Kala- ja vesitutkimus Oy 2014

3 points: 3 additional species.
4 points: 4 additional species.

Monitoring:

This indicator is monitored on the basis of fish-stock monitoring. The annual fishery inventory comprises survey-fishing, spawn sampling and questionnaire surveys of both amateur and professional fishermen. This inventory is conducted by the Fish and Water Research Company (Kala- ja vesitutkimus Oy.). The fish stocks of Helsinki are also monitored by the Natural Resources Institute, Finland, which conducts some of these surveys itself and commissions the rest from a consultant.

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