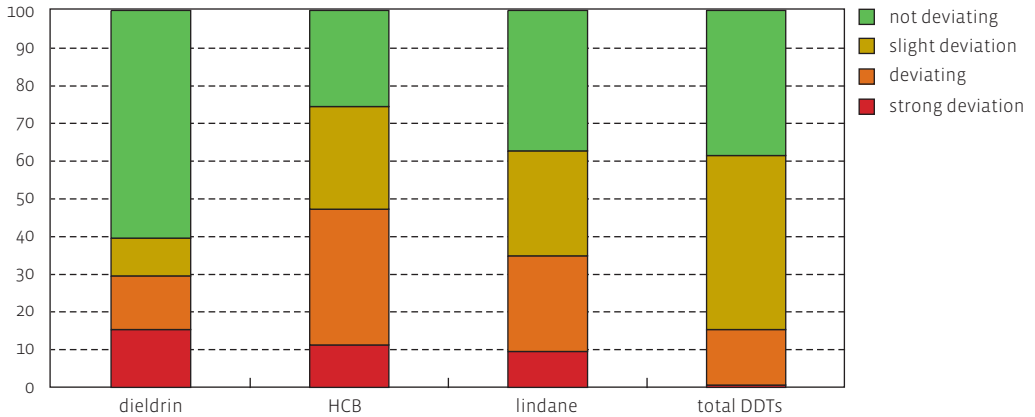




measurement points (%)

2001 - 2007



Source: INBO

Eel as a bio-indicator for pesticides in fresh water

A number of pesticides are inclined to accumulate in the food chain. Their presence in the muscle tissue of eel has been monitored for some time by INBO. Eel are also a very suitable bio-indicator because of their high fat content, their place at the top of the aquatic food pyramid, their long location-tied way of life on the river bottom and their wide distribution. Reference values are used for evaluating the concentrations found.

Dieldrin (insecticide), HCB (fungicide) and lindane (insecticide) deviated strongly in the period 2001-2007 at (almost) 10 to 15 % of the locations in Flanders from their reference value. HCB concentrations at nearly half of the locations in Flanders are judged to be 'deviating' to 'strongly deviating'. For the total of DDTs (insecticide) and its derivatives this has dropped to approximately 15 %.

When the results from the measurement points that have already been sampled several times are compared, a clear improvement appears, especially for dieldrin and lindane. This improvement had also been expected because since 2002 there has been a prohibition on the use of lindane in agriculture and horticulture. Dieldrin has been prohibited for longer. The use of DDT and derivatives has been prohibited since 1974. Nevertheless these substances are still found in rather high concentrations in the Belgian environment. This indicates the extreme persistence of these pesticides (the half-life of DDT and some of its metabolites can be more than 50 years) and/or the fact that illegal supplies are used.