

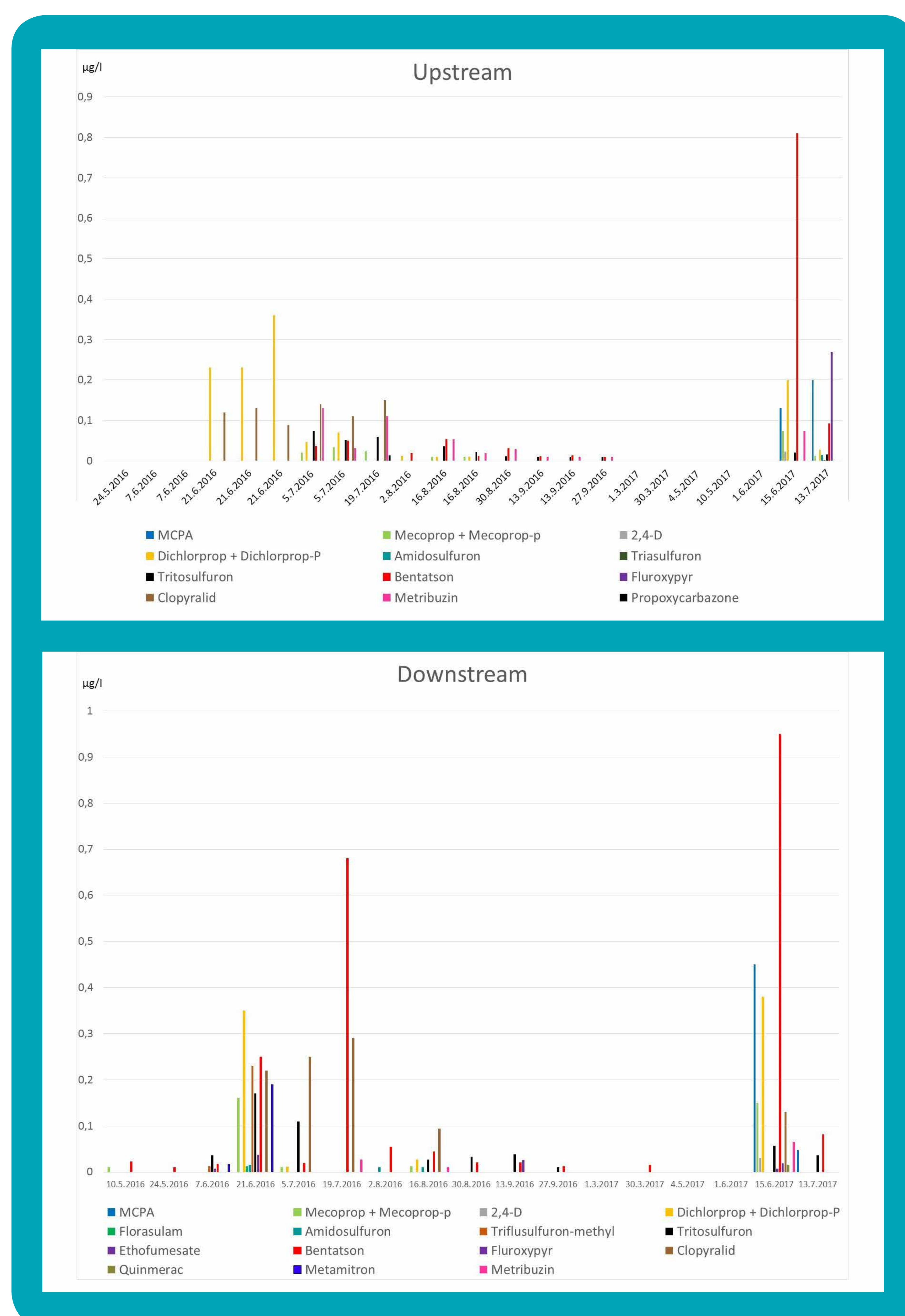
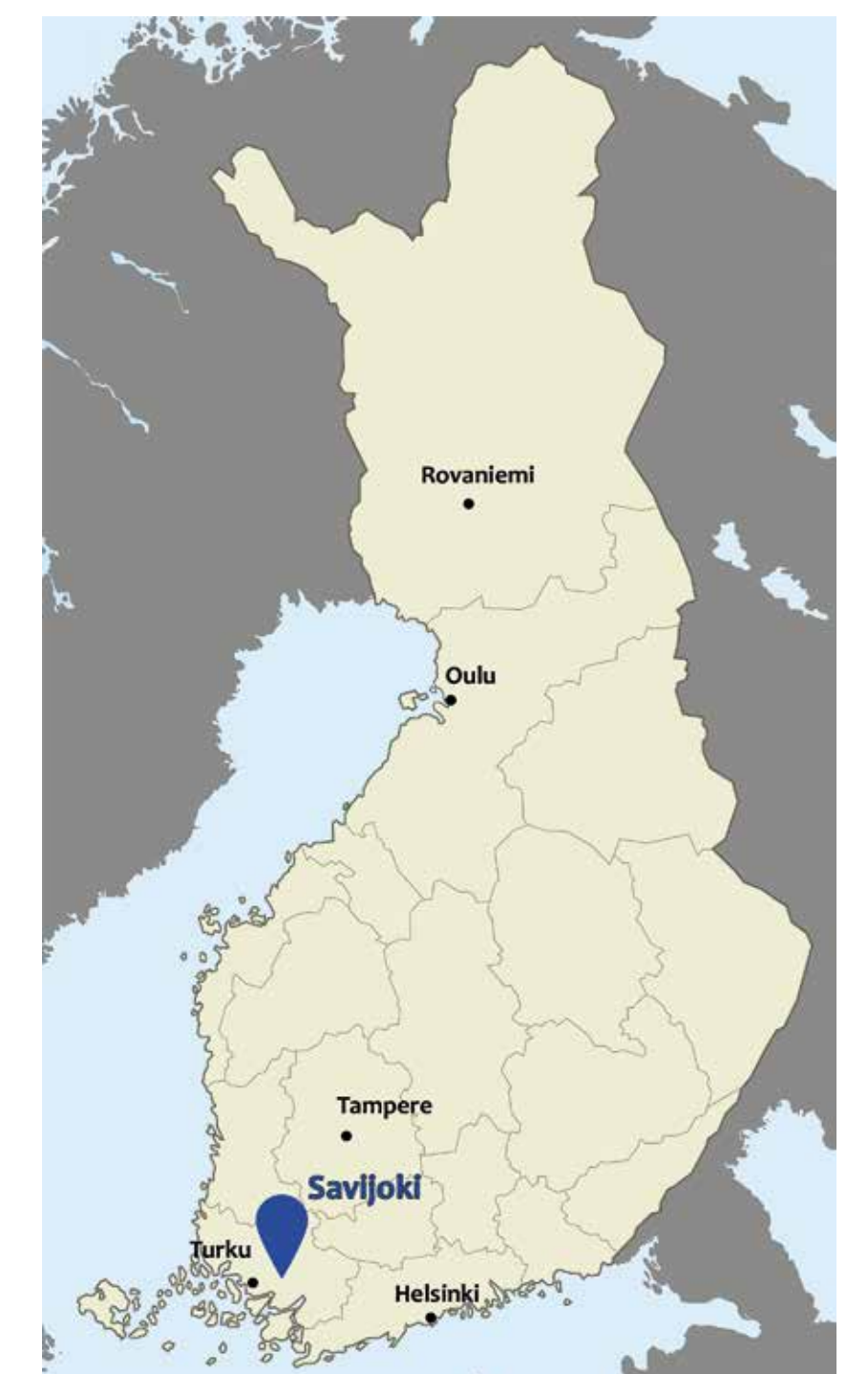
Risk mitigation options of plant protection products

Katri Saari

The regulation of plant protection products (PPP) has been under major modifications during past years. In Finland, this is done towards more **liberal recommendations, rather than strict regulations**. However, farmers are obligated to follow restrictions given in the labels of products. The aim of the study is to assess the effectiveness of risk mitigation options in reducing the amounts of pesticides in rivers of Finland.

Water samples were taken from three rivers located in areas where plant protection products are widely

used. From each water sample there were analyzed ca. 300 pesticides by using solid-phase extraction. This monitoring data was then compared to the previous water sample results from the past years done by the Finnish Environment Institute SYKE. Furthermore, local farmers were asked to report their uses of plant protection products in the study areas during past three years. Two farmers also took part in an interview, considering their use of plant protection products and especially their opinion about the risk mitigation measures of herbicides.



The study focused on **low-dose herbicides** and **phenoxy acid herbicides**. These groups of pesticides are widely used in Finland, with 13.3 tons of sulfonyl ureas and 339.8 tons of phenoxy acids in 2015.

Compared to the previous years, the amount of PPPs found in water systems near field-areas is not decreasing (see figures). Even though, there has not been reported as little as none misdemeanors of PPP uses in the area according to the Finnish surveillance authorities.

Most of the analyzed active substances are water-soluble. Summer 2017 was rainier than the previous ones, thus causing more environmental load in river waters than in 2016. It should be considered, should the policy makers consider noting more weather conditions in the mitigation-models of pesticides.

However, simultaneously farmers find the restrictions perplexing, yet they understand the importance of water protection. Farmers try to follow the restrictions given in the labels, although consider those complex.



More detailed and unambiguous guidelines and monitoring are needed to reduce the amounts of pesticide residues in water systems.

Find out more:

