

**Summary:**

The Archipelago Sea Hot Spot Road Map Project: bottlenecks of agricultural water protection

The Archipelago Sea Hot Spot Road Map Project investigates the possibilities to bring down the nitrogen and phosphorus emissions into waterways caused by agriculture and to remove the loading to the Archipelago Sea catchment area caused by agriculture from HELCOM's list of major polluters. In the first phase of the project, the fulfilment of the criteria for the hot spot removal with the current agricultural water protection measures was studied. This report describes the second phase of the project, which studies the bottlenecks of agricultural water protection in the Archipelago Sea catchment area.

The water protection bottlenecks experienced by farmers in the Archipelago Sea catchment area were investigated by a farmer survey, which was later supplemented by a discussion session. The survey was responded to by 235 crop farms and 66 livestock farms. Three farmers of the region took part in the farmer discussion. The views of the authorities on water protection bottlenecks were surveyed by interviewing two rural agents in the region. In addition, bottlenecks were identified through previous studies.

One of the most significant bottlenecks of agricultural water protection is the targeting of measures in areas where they can bring the greatest benefits in terms of water protection. In the Archipelago Sea catchment area, especially the vegetation cover should be targeted at areas where the risk of nutrient leaching is greatest. The region's highly concentrated livestock farming is also a major bottleneck. In order to ensure the efficient use of the nutrients contained in manure, cooperation between farms should be increased and the processing and transport of manure to plant production-dominated areas should be promoted. In addition to the targeting of measures and the utilisation of manure nutrients, phosphorus stored in the soil makes it more difficult to reduce nutrient loads. In order to reduce phosphorus reserves, soil fertility analyses must be taken into account in fertilisation more than before. In addition, soil improvers such as gypsum, wood fibres and structural lime can reduce nutrient leaching.

Unprofitability of agriculture is regarded to be one of the major bottlenecks. The lack of economic viability of the operations reduces the interest of farmers in implementing water protection measures. Therefore, the compensations under the farm subsidy system must be high enough to ensure that water protection measures do not result in loss of income. The complexity of the subsidy system makes it challenging for many farmers to find appropriate measures. Providing effective guidance and information could help to alleviate the complexity of the subsidy system. Targeting guidance to farmers most in need is therefore one of the bottlenecks of agricultural water protection. Guidance should also increase awareness of the importance of implementing the measures, as the results of water protection become slowly visible – which reduces motivation to implement them. Sometimes, the judgmental attitude of media towards agriculture also reduces farmers' interest in water protection. It is also important to ensure the continuity of water protection work, which is largely based on project work, and to encourage farmers to participate in water protection projects.