

Name of sampling schema: **Methodology for fishery independent sampling on L. Vörtsjärv using fyke nets**

1. The aim of sampling

The aim of survey sampling using fyke nets is to collect fishery independent data on the eel stock, feeding objects and infection with parasites in L. Vörtsjärv.

2. Primary sampling unit

The primary sampling unit is CPUE (kg per fishing night, *catch per unit effort*).

3. Sampling frame

The whole fish population of L. Vörtsjärv.

4. Sampling frequency and spatial coverage

Sampling is carried out in the ice free period from April –October for at least 150 fishing nights. Sampling is done by at least one fyke net which meets the requirements of Fisheries regulation. The sampling spot(s) are chosen in the vicinity of the lakes deepest area which characterizes 90% of the lake (Nöges et al, 2016). The fyke nets are controlled at least 2 times a week.

5. Choosing samples

All caught eels and other commercially important species (pikeperch, pike, bream, tench, burbot, perch) are analyzed. The total weight of commercially unimportant and undersized commercially important species is estimated in the catch and these fish are released back into the lake. Once a month the species composition of commercially unimportant and commercially important undersized species is done. Commercially unimportant species are roach, rudd, white bream, ruffe, bleak, bream with total length smaller than TL=34 cm, crucian carp with total length smaller than TL=27 cm and perch with total length smaller than TL=16 cm.

6. Size and composition of samples

All caught specimens are analyzed.

7. Collected data and measuring precision

The first 200 caught eels are sampled for:

- Total length (1 mm)
- Total weight (0.1 g)
- Silvering stage according to Durif *et al*, 2009
- Sex according to morphological characteristics (visual identification of gonads)
- Otoliths
- Possible infection with swim-bladder parasite *Anguillicoloides crassus* and the intensity of infection
- Visual examination of stomach content
- Sampling date, location and gear
- After reaching 200 specimens, only total length, weight and silvering stage are registered

Pikeperch and pike are sampled for:

- Standard length (1 mm)
- Total weight (0.1g)
- Sex according to morphological characteristics (visual identification of gonads)
- Bony structures are obtained for age reading on 100 collected specimens (operculum, cleithrum or otoliths)
- Visual examination of stomach content
- Sampling date, location and gear

Bream, perch, burbot, tench, crucian carp, ide, asp, chub are sampled for:

- Standard length (1 mm)
- Total weight (0.1g)
- Sampling date, location and gear

8. Data storage

Collected data is stored in the database for unlimited time in Estonian University of Life Sciences Chair for Hydrobiology and Fisheries Google drive account.