

The project

The harbour porpoise is seriously threatened in the Baltic Sea, and if we want to keep them here actions are needed. The Swedish Board of Fisheries ("Fiskeriverket") has started a project to gain more knowledge about the porpoise in the Baltic. A part of this project is the new PCL or "Porpoise Click Logger". The PCL detects the clicks emitted from the porpoise, and through this we hope to find out where along the Swedish Baltic coast the porpoise can be found.

My thesis, "Evaluation of a new device for static acoustic monitoring of harbour porpoises in the wild", is a part in this project where I have tested the function of the PCL. This was done through a validation study in an area where porpoises are common, and a pilot project in the Baltic Sea in cooperation with fishermen. It is important to know for example the detection range and the detection proportion of the PCL before using it in the wild.



The porpoise

The harbour porpoise is a small whale common in northern seas. It is about 1.5 m long and weighs about 50 kg. The favourite food is different kinds of fish which it often hunts close to coasts.

The porpoise has become more and more rare during the last 50 years. The main reason for this is that so many are entangled in fish nets. Because the porpoise breaths air like you and me, this leads to a terrible death through drowning.

In the Baltic Sea, only a fraction now remains of the earlier great numbers of porpoises.



The PCL

The PCL consists of the main unit and the hydrophone. The hydrophone is an underwater microphone, especially designed to detect the clicks from the porpoise. Our is moulded in black rubber.

Inside the main unit, there is a data chip. The data chip processes the sounds detected by the hydrophone, and determines if the sounds should be saved in the memory as porpoise clicks. The criteria are the length of the click, the time between two clicks and the amplitude and frequency composition of the click.

