



# CS7



## Sweden

Marine aquaculture.  
Oysters.



Industry partner: Ostrea Aquaculture



Research partner: IVL



Stakeholder: Oyster aquaculture industry

## Challenge

Rising water temperatures are creating multiple challenges for oyster aquaculture in Sweden. Warmer water **accelerates the growth of fouling organisms** that attach to oyster shells, increasing cleaning workload and costs.

Extreme summer heat and fluctuating salinity also impose **physiological stress** on oysters, **lowering immune function** and raising the likelihood of mortality.

Warmer sea surface temperatures may also influence the growing season for oysters. While a longer season can offer **opportunities for growth**, stronger summer **stratification** can make surface waters more prone to extremes (higher temperatures, lower salinity, reduced phytoplankton availability) which can impact production.



*Ostrea edulis*, or  
European flat oyster

# Proposed solution

## S7: Oyster production deployment time, depth, and seed size optimized for conditions of rising temperature and fouling pressure



Test of **submerged culture**, where oysters will be lowered deeper in the water column to avoid extreme temperature, salinity changes, and take advantage of a reduced fouling pressure



**Two sizes** of oysters (3 mm and 5 mm) will be deployed at **three depths** (3 m, 5 m, and 10 m), at **four deployment times** (April, May, June, July) alongside **settlement plates** to measure fouling pressure



Using the results, determine the **optimal combination** that maximizes growth while minimizing fouling, required manpower, and time spent in hatchery



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OCCAM Project