## About CtrlAQUA

## Centre of Research-based Innovation in Closed-Containment Aquaculture

The Norwegian authorities will give the salmon industry opportunities to grow.

However, there are challenges that may hinder growth, such as sea lice, diseases, escapes, and the loss of fish through production.

Innovations in closed-containment aquaculture systems, where the salmon is separated from the outside environment by a tight barrier, can be important for further development of aquaculture.

CtrlAQUA is a centre for research-based innovation (SFI) that works on closed-containment systems. The main goal is to develop technological and biological innovations that will make closed systems a reliable and economically viable technology. Closed systems can be land-based where water is recycled, or sea-based, in which large floating tanks receive clean water from depth. In CtrlAQUA the research deals with both approaches.

Focus lies on the most sensitive phases for the salmon in the production cycle, such as the first seawater phase, the so-called post-smolt stage. The main innovation will be reliable and efficient production of post-smolts in closed systems on land or at sea. Thus, the industry can get a good realistic alternative or supplement to the current production technology with open cages.



The centre will also contribute to better production control, fish welfare and sustainability in closed-containment farms. This happens through development of new and reliable sensors, minimizing environmental impact through recycling of nutrients and reduce the risk of escape, and diseases transmission to wild stocks.

These innovations will be of value to the Norwegian society, since closed systems for strategic phases in salmon farming can help to make the vision of an eightfold growth in value creation from aquaculture possible, and lead to increased number of jobs and production of healthy seafood.

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The Research Council of Norway