

AARHUS UNIVERSITY
EXTERNAL SEMINAR
DEPARTMENT OF ENVIRONMENTAL SCIENCE

Frederiksborgvej 399, 4000 Roskilde

10 May 2019, 11:00 –12:00

Venue: Aarhus University, Risø Campus, Roskilde, the Pavilion

Title: Energy use in aquaculture, the case of Norwegian salmon

Speaker: Johan Berg Pettersen, Associate Professor / Førsteamanuensis,
Industrial Ecology Programme // Department of Energy and Process Engineering
Norwegian University of Science and Technology / www.ntnu.no,
Adj Assoc Prof University of Agder (UiA)

Abstract: Life cycle assessment studies for salmon aquaculture show that feed production and product logistics are major causes of climate change emissions from aquaculture. However, significant energy is used in breeding, farm operations and live salmon transports. As a major Norwegian industry, salmon aquaculture needs to align their carbon footprint with the national climate goal of 40 % reduction by 2030. The current trend in salmon farming in Norway is increasing the energy use in operations, by vessels and technology used in fish lice treatment, breeding of larger fish in recirculation aquaculture systems (RAS) before moving to net pens, and in pen systems becoming larger, closed or semi-closed, and moved further offshore. Strategies to reduce the carbon footprint of energy use in salmon farming operations include energy efficiency and electrification. The lecture presents ongoing work looking at modelling energy use in RAS, and energy efficiency and electrification of marine operations in Norwegian salmon farming.

Host: Marianne Thomsen, Professor, Head of research group EcoIndustrial Systems Analysis / Coordinator of interdisciplinary research area Resource flows in a Circular Economy, **Department of Environmental Science, Aarhus University**

External Guests interested in attending the presentation should e-mail Department Secretary Christel Ege-Johansen, cej@envs.au.dk

