15th November 2018: Challenges and actions taken to improve fish welfare in Nordic aquaculture Seminar Program:

Time	Tentative title	Speaker	Affiliation	Country
09:30-	Welcome and practical	Cecilie Mejdell	NVI	Norway
09:35	information			
09:35-	Sentience in fish: pain and the	Janicke Nordgren	NMBU	Norway
09:55	role of consciousness	Pekka Hyvärinen, Sarah		
	Brief overview: aquaculture in	Vallin, Brit Tørud, David		
	the Nordic&Baltics	Arney,		
19:55-	Cognition in fish: How smart	Tore Kristiansen/	MRI	Norway
10:15	are fish?	Cecilie Mejdell		
10:15-	Fish farming in the	Pekka Hyvärinen, Brit	Many	Many
10:45	Nordic&Baltic area – a brief	Tørud, Sara Vallin, David		
	overview	Arney, Per Hjelmstedt,		
	Coffee & strech legs			
11:05-	Measuring welfare – welfare	Stine Gismervik	NVI	Norway
11:20	indicators			,
11.20-	Enriching the captive	Pekka Hyvärinen	Luke	Finland
11:40	environment of fish – why and	·		
	how			
11:40-	Practical work with fish health	David Persson	AVF	Norway/
12:00	– the fish health service			Sweden
12:00-	A non-invasive method for fish	Ilka Nousiainen/	Estonian	Estonia
12:20	health control: e-DNA	David Arney	University	
	Lunch			
13:10-	Cleaner fish - welfare concerns	Trygve Poppe	NMBU	Norway
13:30				
13:30-	Future farming technologies in	Leif Magne Sunde	Sintef	Norway
13:50	large scale fish farming -			
	prospectives			
13:50-	New technology - same old	Bjørn Olav Rosseland	NMBU	Norway
14:10	problems?			
	Short break			
14:30-	Gene technology/CRISPR -	Hilde Mellegård	Bioteknologi-	Norway
14:50	welfare and ethics implications		rådet	
14.50-	Fish slaughter: Is there a	Albin Gräns	SLU	Sweden
15:20	humane way to harvest and			
	slaughter farmed fish?			
15.20-	Welfare actions in fisheries	Hanne Digre	Sintef	Norway
15.50				
15.50-	Concluding remarks, end of	Lotta Berg	SLU	Sweden
16:00	seminar			

Poster: Evaluation of marking methods in farmed salmonids for tracing purposes – Impacts on fish welfare (Norwegian Scientific Committee, Dean Basic)

Poster: Cleaner fish in aquaculture – Risks of infectious disease spread to farmed salmon (Norwegian Scientific Committee, Dean Basic)