Potential master projects on marine mammals 2025:

Project title	Short description	Contact person/supervisor	Field work	Required skills/interests
Sustainability of harbour porpoise bycatches in Norwegian waters (model based)	Use simple models and simulations to evaluate the sustainability of bycatches	André Moan, John André, Martin Biuw, Ulf Lindstrøm.	No	Experience with R and/or Matlab; run simulations
Building AIS-based fishery models to aid in estimating fishing effort	Use AIS data from fishing vessels and data on fishing gears to train machine learning models that can 1) classify vessel activities based on AIS data alone, and 2) generate gillnets as GIS linestrings with defined timestamps for setting and hauling from those data. This is intended to aid efforts to understand interactions between marine mammal and fisheries.	André Moan, John André, Martin Biuw, Ulf Lindstrøm	No	Experience with R, experience with GIS, basic statistics and programming
Harbour porpoise prey preference	Use gastro-intestinal from 2016 and prey data to estimate prey preference	Ulf Lindstrøm, André Moan, John André, Martin Biuw	No	Some R experience and basic statistical experience (including bootstrap analysis)
Life history and growth of male hooded seals	Estimate growth and age at maturity using data collected	Stine Frie	No	
Bycatch of marine mammals in Norwegian coastal waters	Estimate bycatch of marine mammals and scaling up estimates by using fishery effort data based on AIS data	André Moan, John André Henden, Martin Biuw, Ulf Lindstrøm	Perhaps	R-skills is an advantage
Estimating local abundance and residency of humpback whales in fjord systems in Northern Norway	Estimating local abundance and residency of humpback whales in fjord systems in Northern Norway, using mark recapture models (e.g. MARK)	Martin Biuw, John André Henden, Andé Moan, Ulf Lindstrøm	No	Some R experience and basic statistical experience (including bootstrap analysis)
Abundance estimation of harbour porpoise in a Norwegian fjord using distance sampling	Abundance estimation of harbour porpoise in a Norwegian fjord using Distance and density surface models	Martin Biuw, Ulf Lindstrøm, John André Henden, Andé Moan, Marie-Anne Blanchard	No	Some R experience and basic statistical experience
Habitat use of harbour seals in space and time*	Analysis of harbour seals habitat use in space and time by analysing sattelitte tracking data and environmental data	Martin Biuw, John André Henden, Andé Moan, Ulf Lindstrøm	Yes	Experience with R, experience with GIS, basic statistics and programming
Characterising habitat use of harbour seals in contrasting coastal systems in Norwegian waters	Using existing sattelite tracking data from three coastal areas (Porsangerfjorden, Vesterålen and Oslofjorden) to characterise habitat use by harbour seals	John André Henden, Andre Moan, Martin Biuw, Ulf Lindstrøm	No	Experience with R, experience with GIS, basic statistics and programming
Temporal variation in haulout dynamics of harbour seal	Analyse the temporal variation in haulout behaviour in harbour seals using wildlife cameras	John André Henden, Andre Moan, Martin Biuw, Ulf Lindstrøm	Yes	Some R experience and basic statistical experience (including bootstrap analysis)
Past and present ringed seal diets in Greenland waters	Analyse stomach contents of ringed seals sampled in Greenland waters in the 1980s and present and relate to changes in environmental conditions	Ulf Lindstrøm, Martin Biuw	No	R-skills is an advantage
Harbour porpoise presence/absence/habitat use in coastal ecosystems	Analyse temporal and spatial variation in harbour porpoise presence based on acoustic (FPOD) data in light of other key biotic and abiotic factors	André Moan, John André, Martin Biuw, Ulf Lindstrøm. Data readiness: Partial	Yes	Acoustic analysis, Experience with R, basic statistics
Estimation of spatio-temporal effects for non-uniformly sampled spatial data	To estimate spatio-temporal effect, statistical smoothing approaches have been developed.	Hiroko Kato Solvang	No	Experience with R and basic statistics
Investigation for the relationship among minke whales, the prey species and environmental factor	Investigation for the current ecological status of minke whales: comprehensive information on prey distribution and oceanography	Hiroko Kato Solvang, Ulf Lindstrøm	No	Experience with R and basic statistics

Alle oppgavene er med lærested HI-Tromsø. Hovedkontaktperson: Ulf Lindstrøm, ulf.lindstroem@hi.no