NAME
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TITLE OF PRESENTATION
Ocean circulation & fish recruitment – is there a risk of collapse if currents change?

ABSTRACT OF PRESENTATION
Recruitment is commonly defined as the number of new individuals reaching the stage or size where they contribute to the mature or fishable stock. Understanding recruitment variability has been and still is the occupancy of many scientists and recruitment hypothesis are numerous. In general, survival of early life stages of fish decays near exponentially with age and therefore small changes in M at early stages results in large differences of the number of recruits. If the recruitment fails several years in a row the stock may collapse. A collapse is commonly defined to be when the catch falls below 10% percent of the maximum catch and there is a long recovery time after a minimum is reached. Processes affecting survival of fish at early stages (eggs, larvae and juveniles) are related to both their physical and biological environment and vary in time and space. Typical processed studied in relation to recruitment variability are dispersal of the offspring, growth, predation and maternal effects. A circulation change directly affects the transport of the offspring from spawning grounds to favorable nursery grounds, but also indirectly through the availability of prey. Here, selected studies of recruitment variability of Northeast Atlantic blue whiting and Norwegian Spring Spawning herring in relation to ocean circulation are presented. The potential for utilizing numerical tools for predictions will be emphasized.

BIOGRAPHICAL NOTE
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My main professional interests are; i) general ocean circulation models and the simulation of past, present, and future climate; ii) individual-based models of growth, survival, and dispersion of early life stages of fish, and the coupling with regional ocean models; iii) physical processes affecting coastal circulation and cross-shelf transport.