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## Unstructured Mesh Modeling in the Coastal Waters of British Columbia, Canada

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With a complex coastline comprised of narrow inlets, fjords, islands, and headlands; and a continental shelf sprinkled with canyons, shallow banks, and inland seas; the coastal waters of British Columbia provide a perfect setting for unstructured grid modeling. In this presentation, we will describe results from several regional ocean models that were primarily developed to better understand the environmental impact of aquaculture facilities and resource development. Most of the modeling has been done with FVCOM, the Finite Volume Community Ocean Model, but other approaches like RiCOM, TIDE3D, SELFE and ELCIRC have also been explored. Simulation results showing for example, the dispersion of disease and parasites among salmon farms and to the native wild fish population will be described. Comparisons between observations and model fields will also be shown to illustrate the successes and short-comings of the modeling techniques and hopefully to engage the audience in further discussion.