

We co-produce culturally relevant ocean forecasts by integrating Traditional Ecological Knowledge and scientific expertise, fostering meaningful relationships.

Qangyut*: Co-producing Ocean Forecasts to Inform Community and Management Decision Making

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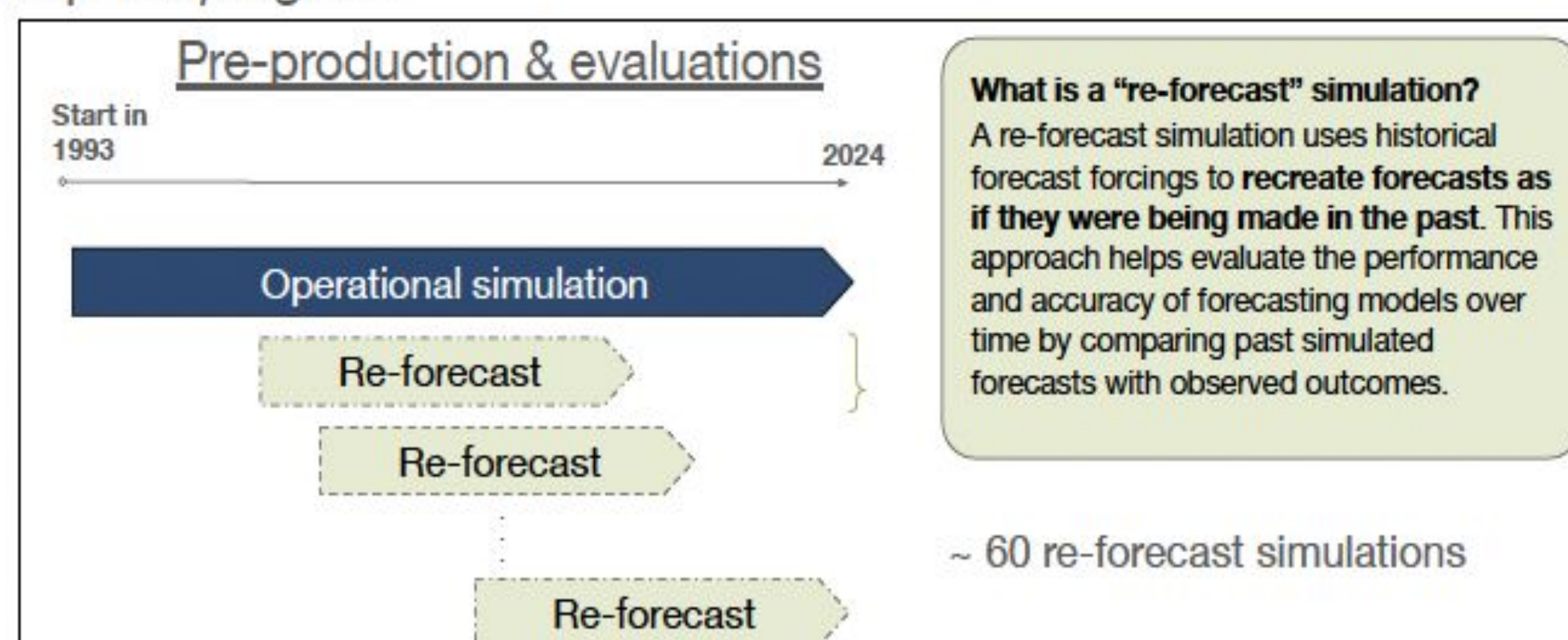


To support adaptation to climate and ocean change, effective decision support systems require ocean forecasts that focus on predictable physical and biogeochemical changes driving ecosystem responses. In collaboration with Chugach Tribes, NOAA, and AOOS, IARC will co-create and share ocean forecast products that prioritize clarity, relevance, and transparency about uncertainty. These tools are designed to support harvesters, address Tribal needs, and foster relationships, while also tailoring forecasts to NOAA's requirements and communicating the impacts of fisheries management decisions on Indigenous communities.

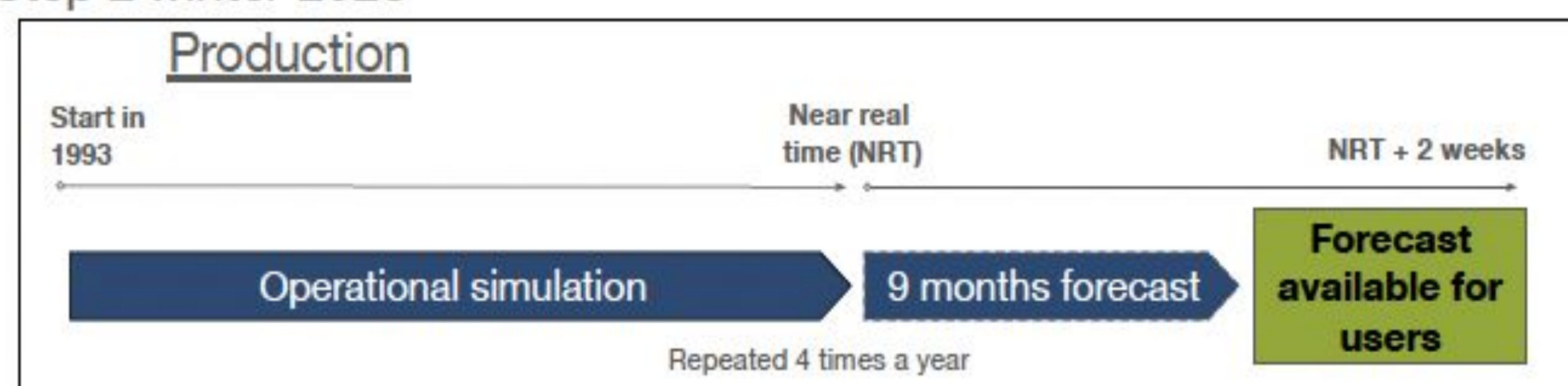
GOALS. Develop culturally relevant ocean forecasts to enhance decision-making and support adaptation to changing conditions. Co-developing these tools with Tribal members and stakeholders ensures they address diverse needs, including subsistence security and ecosystem stewardship. By integrating Traditional Ecological Knowledge with scientific data, the forecasts refine NOAA's outputs to meet community priorities, inform fisheries management, and strengthen trust and collaboration between Indigenous and scientific communities.

Gulf of Alaska ROMS-Cobalt Forecasting model

Step 1 in progress



Step 2 winter 2025



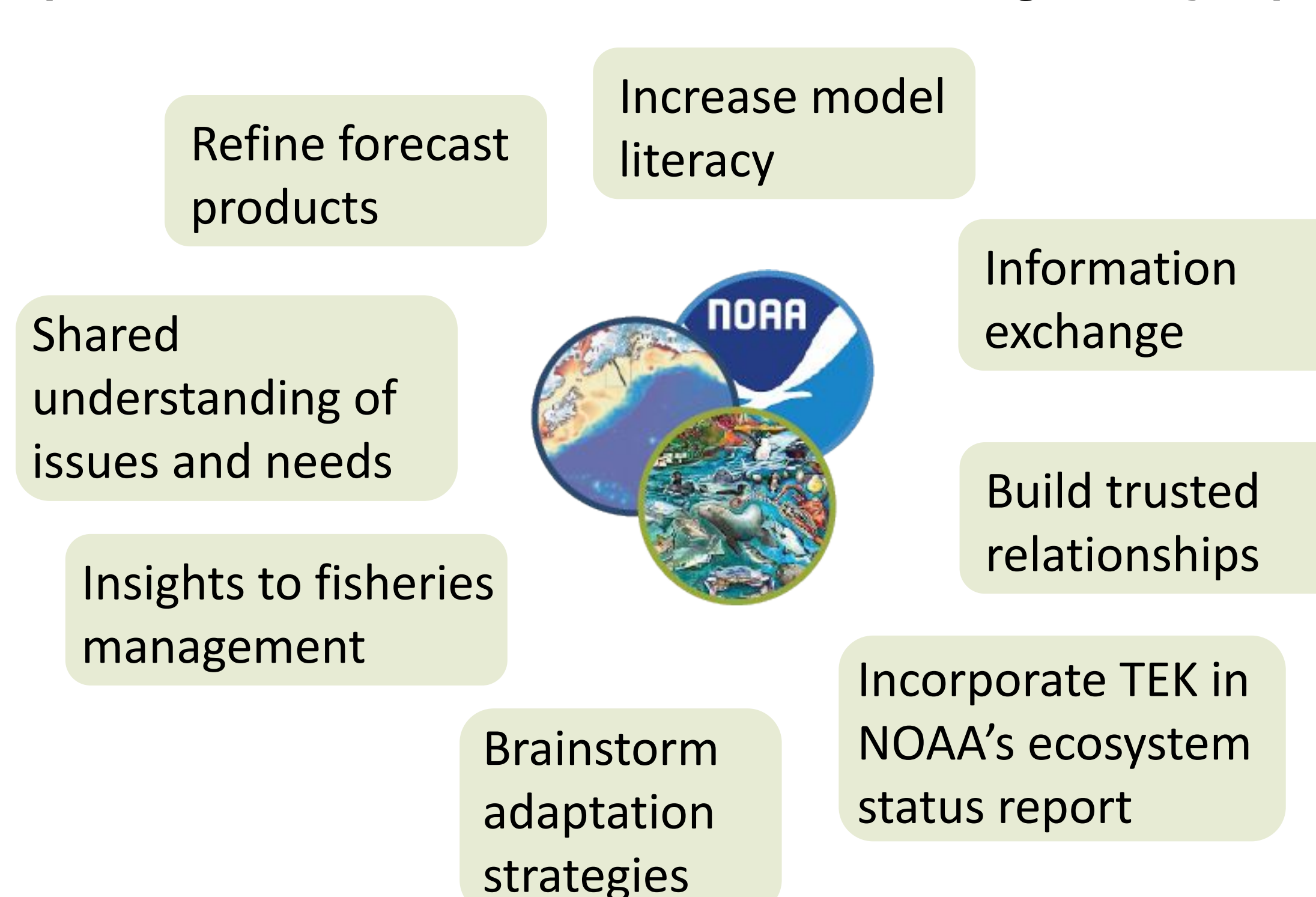
We use output from the Global Climate Forecast System (National Center for Environmental Prediction) and our regional ocean model (ROMS-COBALT) to downscale seasonal forecasts. Reforecasts are used to carefully evaluate the skill of this newly developed forecasting system. Goal is to deliver four 9 months forecasts of physical and biogeochemical conditions between summer 2026 and 2027.

Co-Production process: Inclusion of TEK and western science

The process of co-producing ocean forecast products combines fisheries data, Traditional Ecological Knowledge, and modeled oceanic conditions, refined through collaboration with Tribal members to foster trust and improve understanding of fisheries management and models.



Knowledge exchanges with Tribal members (Qutekcak Native Tribe and Native Village of Eyak)



Link to learn more:
Ocean extreme events
in the Gulf of Alaska



SCAN ME

The Chugach Regional Resource Commission proudly serves the people of the Tribal villages of Caniqaq (Chenega), LiyaaGdaad (Cordova), Nanwalek, Paluwik (Port Graham), Qutalleq (Seward), Taatiillaaq (Tatitlek), and Valdez, as well as the communities of Whittier and Nuchek. The University of Alaska Fairbanks operates on the unceded Native lands of the Lower Tanana Dena.

We express our deep gratitude to the Indigenous communities who have maintained profound connections to their lands and waters for generations and time immemorial, demonstrating exemplary stewardship of their environment. We also acknowledge the historical and ongoing impacts of colonialism and affirm our commitment to advancing equity in our lives and the scientific institutions we engage with.



Ask me a question

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