NOAA Transitions: FY20 Quarter 4

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Presentation to the NOAA Science Council

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PURPOSE

The purpose of this presentation is to

Update NOAA transitions from
July 1 – September 30, 2020 (FY20 Q4)

BACKGROUND

- Transition of NOAA R&D to operations, applications, commercialization, and other uses (R2X) is key to delivering continually improved products and services

- In April 2020, the NOAA Research Council requested quarterly transition updates from the Line Office Transition Managers Committee (LOTMC)

- FY20 Q4 updates is the second transition update from the LOTMC

IMPROVEMENTS FROM PREVIOUS UPDATES

- The LOTMs sent a tasker to collect transition data
  - Focused on projects that transitioned from July 1 – September 30, 2020
  - Added NOAA Science & Technology focus areas to the data collection
  - Overview of FY20 Q4 transitions in the update document
  - Future transition data requests will include information about funding source(s)

RESULTS

- 16 transitioned projects were identified for FY20 Q4, as reported in the summary document that was distributed virtually to the Council in December
- Transitioned projects included enhancement on weather and climate forecasts, improvements on ocean monitoring, and environmental assessments on the Arctic
- Organizations that were adopters for transitioned projects included NWS, OAR, NMFS, National Data Buoy Center (NDBC), Public Domains, and the Taiwan Central Weather Bureau
- The full list of projects can be found in this spreadsheet

Transition Highlight – Uncrewed Systems

Using USVs to maintain NOAA's ability to survey the nation's largest fishery during an unprecedented pandemic

NOAA NMFS AFSC transitioned into operations an USV acoustic survey in the Eastern Bering Sea (Web Story).

- Echosounders, low-power sonar instruments, were integrated on Uncrewed Surface Vehicles (USVs) to establish the abundance of walleye pollock in the Eastern Bering Sea (By volume, largest commercial fishery in the U.S.).
- This project substituted for the acoustic-trawl 2020 survey conducted by the *Oscar Dyson* ship (ship-based survey cancelled due to the Covid-19 pandemic).
- Stock assessment scientists use survey data together with other data collected from commercial fishing vessels to estimate fish population size each year.

Transition Highlight – Artificial Intelligence

First Guess for the Excessive Rainfall Outlook (ERO) - via Machine Learning

NOAA NWS and Colorado State University developed a machine learning technique to improve the forecast process of excessive rainfall (ERO webpage).

- This novel machine learning technique enhances excessive rainfall forecast by providing a first guess at most likely location(s) to experience extreme precipitation.
- This technique is now integrated with NWS operational forecasters for the Excessive Rainfall Outlook.

Transition Highlight – Data*

Assessments and Work Products for the Arctic Monitoring and Assessment Programme (AMAP)

NOAA OAR CPO contributed to six assessments for final release to the public in FY20 Q4 (AMAP Publications).

- The principal foci of the assessments and of AMAP are the impacts of climate change and pollutants on the Arctic environment.
- The role of AMAP is to provide scientific data and advice to member nations of the Arctic Council to guide policy and decision making.

*Note that two other projects from FY20 Q4 identified data as a relevant S&T Focus Area. Those project titles are “Bayesian Processor of Ensemble (BPE)” and “FV3GFS-GSD Chem model code”. More information on these projects can be found in the spreadsheet.

Thank You!