DUNEX FAQs

Given the name, is this experiment truly "nearshore"? Or what is the focus? What is preferred? Open ocean, Estuarine? Full barrier island?

- DUNEX was originally conceived (in 2016) as an experiment to study coastal impacts during extreme storms with a focus on collision regime (or more severe) open coast dune erosion (hence the name). However, as questions were refined, the community expanded the focus to include additional environments and the myriad of impacts that can occur during extreme coastal storms, with a particular emphasis on feedbacks between relevant processes including: ocean, morphology, hydrogeology, meteorology, and ecology. We encourage participants to take a broad definition of nearshore, "the region of the coast close to shore where waves impact the seabed", which could be in open-coast or inland shorelines.

How do I participate in DUNEX?

- For the main DUNEX experiment, submit a logistics survey at https://arcg.is/0eHeSG by December 31, 2019. Pilot DUNEX participants should fill out this updated survey for the main experiment.

If funding is not secured yet, is it still valuable to fill out a logistics survey?

- Yes, one of the first questions on the Logistics survey relates to funding. The logistics coordinators need to know about interest and tentative plans, even if funding is not secured. We understand funding decisions may not be known yet, but ask that participants describe their plans, and provide updates when funding decisions become known. Logistics surveys for the full experiment may be updated any time prior to Dec 31 2019.

Is funding available for DUNEX?

- Some USCRP funding has been awarded. Principle investigators are encouraged to pursue other funding sources that may be applicable for DUNEX.

Is logistical support available for DUNEX?

- Agencies are optimistic that they will be able to provide some logistical support to facilitate data collection on the Outer Banks and cooperation amongst different research teams. This support will likely be limited to marine operations and/or heavy equipment i.e. providing resources and assistance beyond the capabilities of most visiting research teams.

Can you characterize likelihood for storms in the Outer Banks? E.g. August vs. later in the Fall?

- Typically each year the Outer Banks are impacted by one or two category 1 or 2 hurricanes in August – November. Offshore wave heights over 4 m near high tide do impact the dune toe.
- The October – March wave climate often includes several extra-tropical systems with wave heights exceeding 4 m that may impact the dune toe near high tide
- Please see https://frfdataportal.erdc.dren.mil/ or https://chlthredds.erdc.dren.mil/thredds/catalog/frf/catalog.html for historical USACE Field

Research Facility wave data or NOAA's historical hurricane track viewer: https://coast.noaa.gov/hurricanes/

What if there are no storms during the time of DUNEX?

- The northern Outer Banks was selected as the DUNEX field site due to the prevalence of tropical and extra tropical storms that impact the region each year. While no one can guarantee that a storm will occur, it is extremely likely. We encourage PIs to design experiments that can adapt to changing environmental conditions and can be in place for multiple weeks to "wait" for a storm to occur.

How long is a typical post-storm recovery period for a typical nor'easter on the Outer Banks?

- There is no easy answer to this question. Sometimes the beach begins to recover during the storm while wave heights are still large. Sometimes the beach and dunes can take weeks to many months (or even years) to fully recover, depending upon the severity of the storm.

Will there be opportunities to discuss specific research sites between PIs?

- The DUNEX Leadership team has developed a forum to help facilitate discussion amongst PIs who have submitted logistics surveys. There also will be virtual coffee hours leading up to the experiment for participants to present and share ideas.

Can I get more involved in the DUNEX's science/management/logistics?

- The DUNEX logistics and science management structure was tested during the pilot stage of the experiment and will be adjusted/updated as necessary moving forward, ideally involving representation from different research teams. Please reach out to the DUNEX management team via <Alexander.D.Renaud@usace.army.mil> if you would like to get more involved. Please also stay tuned for more information in case you would like to volunteer to support different research teams or be part of the effort from afar.

How will data be shared amongst PIs?

- The DUNEX Data Management Team is coordinating data sharing amongst participating PIs.

Is there a requirement to be a US Citizen?

- While US Citizenship is not required to be on-site at the FRF, additional information will need to be provided (e.g. copy of passport, etc) and access will be restricted (as non U.S. citizens must be accompanied by a federal government employee at all times). Participation in field-work at the FRF will be reviewed on a case-by-case basis, with an effort to reasonably accommodate different circumstances. Please contact Alex Renaud, Alexander.D.Renaud@usace.army.mil, for more information.

Is there a way to participate as student if you're not physically there?

- USCRP will identify a number of opportunities for participation, which will be posted on the USCRP website (assisting in planning, coordination, etc). In addition, we will work with the training team to identify training sessions that can be broadcast over webinar.

Does the fall experiment involve Unmanned Aircraft Systems (UAS)?

- If you have a UAS and would like to fly it as part of DUNEX you will need to adhere to your agency or university's flying regulations. If you would like to fly it at the Field Research Facility, you will need to contact the FRF's Aviation Lead, Nicholas.J.Spore@usace.army.mil for more information regarding specific DoD regulations. If you would like to fly UAS within the NPS Cape Hatteras National Seashore or the USFWS Pea Island National Wildlife Preserve, additional permits will be required, which generally require a large lead time.
- The FRF and other agencies (e.g. USGS) have a number of UAS that could be flown in support of DUNEX, depending on needs and level of support. The logistics committee would help determine if the requirement for imagery is a group or individual need. Group needs may be covered under agency support data; individual needs would have to be covered by individual PIs.

Is the DUNEX logistics team submitting permits for the rest of the Outer Banks?

- No. Teams conducting research beyond the FRF must submit their own permits for areas such as the NPS Cape Hatteras National Seashore or the USFWS Pea Island National Wildlife Preserve. Make sure to consider these permit submissions early rather than later. The DUNEX management team has collected permit submission guidance and POCs for these areas (as well as local municipalities) to support permit submission and will share with DUNEX participants.

Could a researcher construct a rubble-mound structure or similar on the FRF property? Or plant various plant species?

- The logistics committee will work with the FRF to evaluate the needs of individual experiments on a case-by-case basis and work through any potential conflicts of interest (needs of the group's scientific questions). While permits are not required for experiments at the FRF, it would need to be determined if the construction of such features would adversely affect the outcome of the group's research goals. Ultimately, the decision will be up to the FRF Branch Chief, Dr. Jeffrey Waters.

Can researchers propose new model developments, either independent or coupled to preexisting models?

- If the model development relates to the scientific goals of DUNEX and you secure funding to pursue this!