



# UNOLS

## Pre Cruise Considerations for Successful Dredging Operations

This checklist is intended to aid in planning successful dredging cruises. Please go through each item on the list with the PI, deck lead, and captain participating in the cruise as early as possible, and in person when feasible. It is important to cover not only who will be responsible for providing and using each item on the list but their status, proper operation and contingency plans.

### Considerations

#### Equipment

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- Style of dredges
- Source of dredges
- Style of weak links
- Basket preparation
- Acoustic accessories and their positioning

#### Sampling

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- Rock processing equipment, e.g. tables, lights, saws
- Subsampling protocols
- Labeling and repositories
- Sample storage

#### Vessel specifics

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- Geometry of the overboarding equipment
- Role of dynamic positioning and navigation during operations
- Mobility of the vessel with a dredge on the seafloor and sea/wind limitations
- Available tension displays, cctv or other monitoring methods
- Communication systems between all parties

#### Wire

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- Type of wire
- Length available
- Recent break tests and plans for additional break tests
- Factor of safety for operation, depth limit
- Availability of spare wire drums
- Has the wire been deployed under load to the anticipated dredging depth
- Condition of the level wind, recent operation performance or concerns
- Winch handling during operation

#### Dredge Targets

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- Location
- Number, depth, topography and sediment type
- Optimal orientation of approach, start and stop locations
- Locations and distance/travel time between sites



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### Roles and Responsibilities during operation

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- Timeline and considerations for planning each site
- Identify individuals authorized to approve navigational decisions
- Define non-operating conditions
- Role of science party, technician and deck crew during operation
- Equipment preparation for each site

### Procedures and contingency plans

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- Participants and timing of pre-operation planning meetings
- PI, technician and deck crew roles during deployment and recovery
- Step by step process for deployment and recovery
- Abnormal wire tension and mitigating options
- Contingency plans for:
  - Snagged wire
  - Winch or level-wind failure
  - Navigational failure
  - Worsening sea conditions
- Increased deck safety measures