

# Health, Safety and Planning for Offshore Surveys

Jessica Ward, ERM



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- JHAs/HRAs (Job Hazard/Hazard Risk Assessments)
- HASP (Health & Safety Plan)
- TRA (Travel Risk Assessment) & Journey Management

## Dealing with Unforeseen Issues

- Preparedness
- Knowing and relying on your JHA and HASP
- Training
- Thinking on the fly



# Types of Offshore Surveys

Offshore surveys are conducted for a variety of needs and industry sectors:

- Oil & Gas Exploration
- Pipeline Routing
- Decommissioning
- Telecom Cable Routing
- Dredging
- Navigation Projects
- Coastal Construction and Infrastructure



# Types of Offshore Surveys

Common types of offshore surveys:

- EBS (Environmental Baseline Survey)
- G&G (Geophysical & Geotechnical)
- Benthic mapping/investigations
- Research/data gathering



# Types of Offshore Surveys

## Environmental Baseline Surveys (EBS)

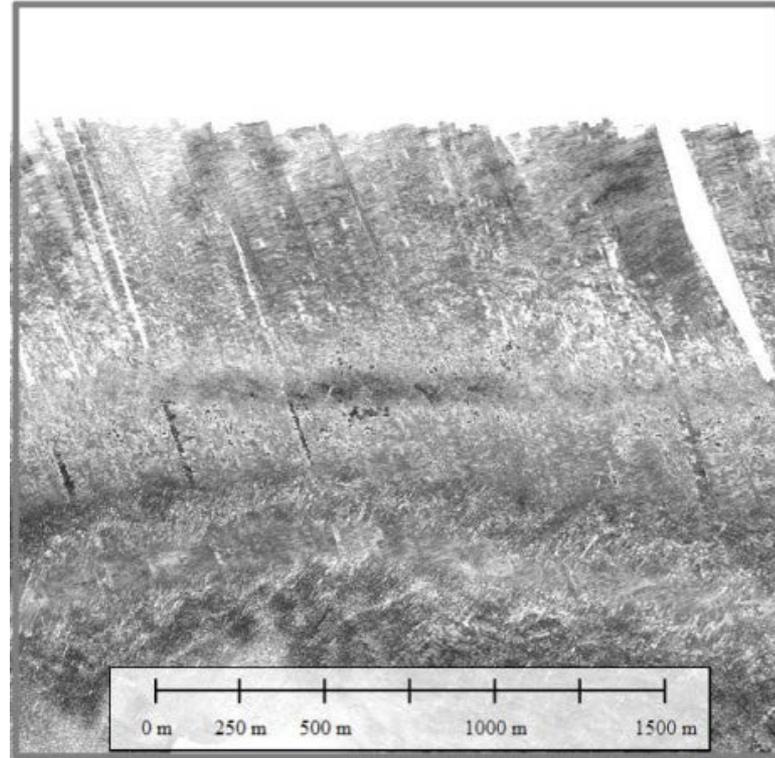
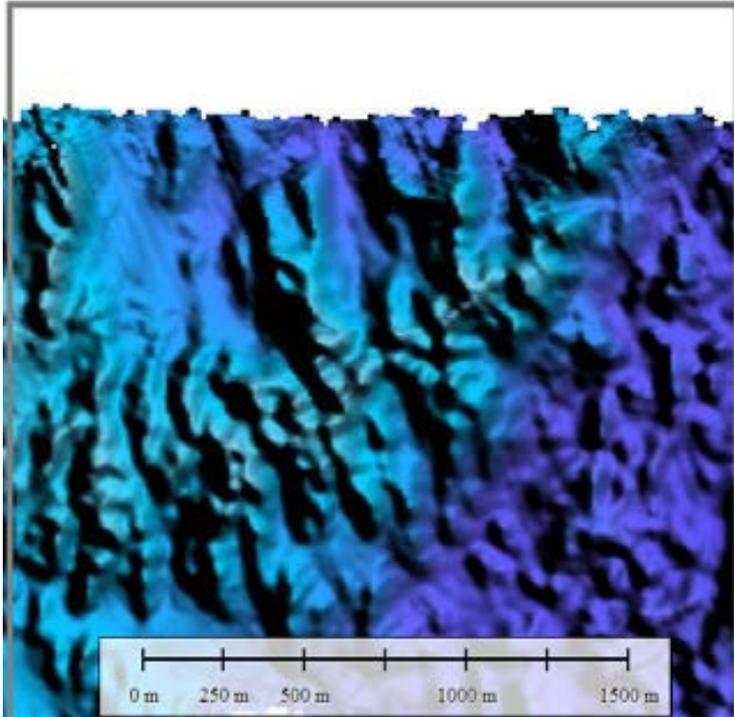
- Water sampling and profiling
- Sediment sampling
- ROV/AUV/Drop-video camera
- Placement of ADCPs
- Fisheries sampling



# Types of Offshore Surveys

## Geophysical & Geotechnical (G&G) Surveys

- Sidescan sonar
- Swath Bathymetry
- Seismic profiling





# Equipment, Hazards and Risks

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Types of Hazards, Risks and other Considerations:

- Environmental
- Operational
- Geographical



# Equipment, Hazards and Risks

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## Environmental Considerations:

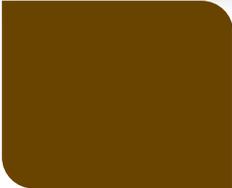
- Weather
- Currents
- Obstacles
- Depth
- Visibility



# Equipment, Hazards and Risks

## Operational:

- Loading/Unloading
- Equipment operating (cameras, ROVs, seismic fish, box cores, winch, cables, overhead loads, etc.)
- Proximity to infrastructure



# Equipment, Hazards and Risks

## Geographical (Security):

- Some locations pose security risk
- Ex: piracy risk off the coast of Nigeria



Map showing piracy and armed robbery reports to IMB Piracy Reporting Center, 2011 (USCG)

# ERM's HSE Planning

## Assessment of Hazards and Risks, Mitigations, and Planning:

- WARN (Work Activity Risk Assessment)
- JHA/HRA (Job Hazard/Hazard Risk Assessment)
- TRA (Travel Risk Assessment)
- Health & Safety Plan (HASP)
- Journey Management

*“ERM is committed to maintaining a working environment that will protect and promote the physical and mental health of everyone who works for the company, and other people affected by our activities.”*



# ERM's HSE Planning

The necessary foundations of ERM's H&S Program:

- Common standards of performance
- Systems for reporting and investigating incidents
- Documented risk assessment process
- Implementation of risk management programs
- Self-assessment and improvement
- Technical and program management training



# ERM's HSE Planning

## W ork A ctivity R isk Assessme N t

### *“W.A.R.N.”*

- A cornerstone of our HSE program
- Every work task involves some degree of risk
- By formally reviewing and managing risk we try to reduce potential for incidents



### *The W.A.R.N. Process:*

- Involves a series of reviews, checks and plans associated with:
  - Office Work
  - International travel
  - Working in undeveloped, remote or inactive sites
  - Working in active facilities
  - Coastal and Offshore work
  - Intrusive investigative work
  - Remediation Projects

# ERM's HSE Planning

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## Work Activity Risk Assessment

### *For Coastal and Offshore Work:*

- Coastal and Offshore Checklist
- Job Hazard/Hazard Risk Analysis Sheet (JHA/HRA)
- Health and Safety Plan (HASP)
- Travel Risk Assessment (TRA), if required
- Journey Management Plan



# ERM's HSE Planning

## Job Hazard Identification/Hazard Risk Assessment

- Identify Risks and Hazards
- Rate the significance of the hazard
- Apply mitigations to lower significance (e.g., PPE, safety procedures, required training, etc.)

<input checked="" type="checkbox"/> Hazards not listed 1. Long exposure to sunlight <a href="#">Add Hazard Entry</a>	<b>Severity</b> <input checked="" type="checkbox"/> Slightly harmful <input type="checkbox"/> Harmful <input type="checkbox"/> Extremely harmful  <b>Likelihood</b> <input checked="" type="checkbox"/> Likely <input type="checkbox"/> Probable <input type="checkbox"/> Unlikely <input type="checkbox"/> Highly unlikely  <b>Risk Level</b> Moderate	<b>List of Hazard Controls:</b> Wear sunglasses and sun-hat apply sunscreen of SPF 50, work/rest regime	<b>Severity</b> <input checked="" type="checkbox"/> Slightly harmful <input type="checkbox"/> Harmful <input type="checkbox"/> Extremely harmful  <b>Likelihood</b> <input type="checkbox"/> Likely <input checked="" type="checkbox"/> Probable <input type="checkbox"/> Unlikely <input type="checkbox"/> Highly unlikely  <b>Risk Level</b> Minor
2. Tropical Storm Threat or Adverse Weather	<b>Severity</b> <input type="checkbox"/> Slightly harmful <input type="checkbox"/> Harmful <input checked="" type="checkbox"/> Extremely harmful  <b>Likelihood</b> <input type="checkbox"/> Likely <input checked="" type="checkbox"/> Probable <input type="checkbox"/> Unlikely <input type="checkbox"/> Highly unlikely  <b>Risk Level</b> Substantial	<b>List of Hazard Controls:</b> 1. Regulation forecasts received for early detection of tropical storms and pre-planning based on forecast. 2. Go to inshore area away from open sea when tropical storm threat is anticipated or when sea conditions warrant. 3. Squalls - if a rain squall is imminent, retrieve camera and temporarily stop work until squall has passed.	<b>Severity</b> <input type="checkbox"/> Slightly harmful <input checked="" type="checkbox"/> Harmful <input type="checkbox"/> Extremely harmful  <b>Likelihood</b> <input type="checkbox"/> Likely <input type="checkbox"/> Probable <input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Highly unlikely  <b>Risk Level</b> Minor
3. Open back deck	<b>Severity</b> <input type="checkbox"/> Slightly harmful <input type="checkbox"/> Harmful <input checked="" type="checkbox"/> Extremely harmful  <b>Likelihood</b> <input type="checkbox"/> Likely <input checked="" type="checkbox"/> Probable <input type="checkbox"/> Unlikely <input type="checkbox"/> Highly unlikely  <b>Risk Level</b> Substantial	<b>List of Hazard Controls:</b> 1. Skipper informed 2. All on deck wear PFD 3. Direct communication with bridge 4. Line of sight with winch operator and all on back deck 5. Harness/tether when working over open transom	<b>Severity</b> <input type="checkbox"/> Slightly harmful <input type="checkbox"/> Harmful <input checked="" type="checkbox"/> Extremely harmful  <b>Likelihood</b> <input type="checkbox"/> Likely <input type="checkbox"/> Probable <input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Highly unlikely  <b>Risk Level</b> Moderate

# ERM's HSE Planning

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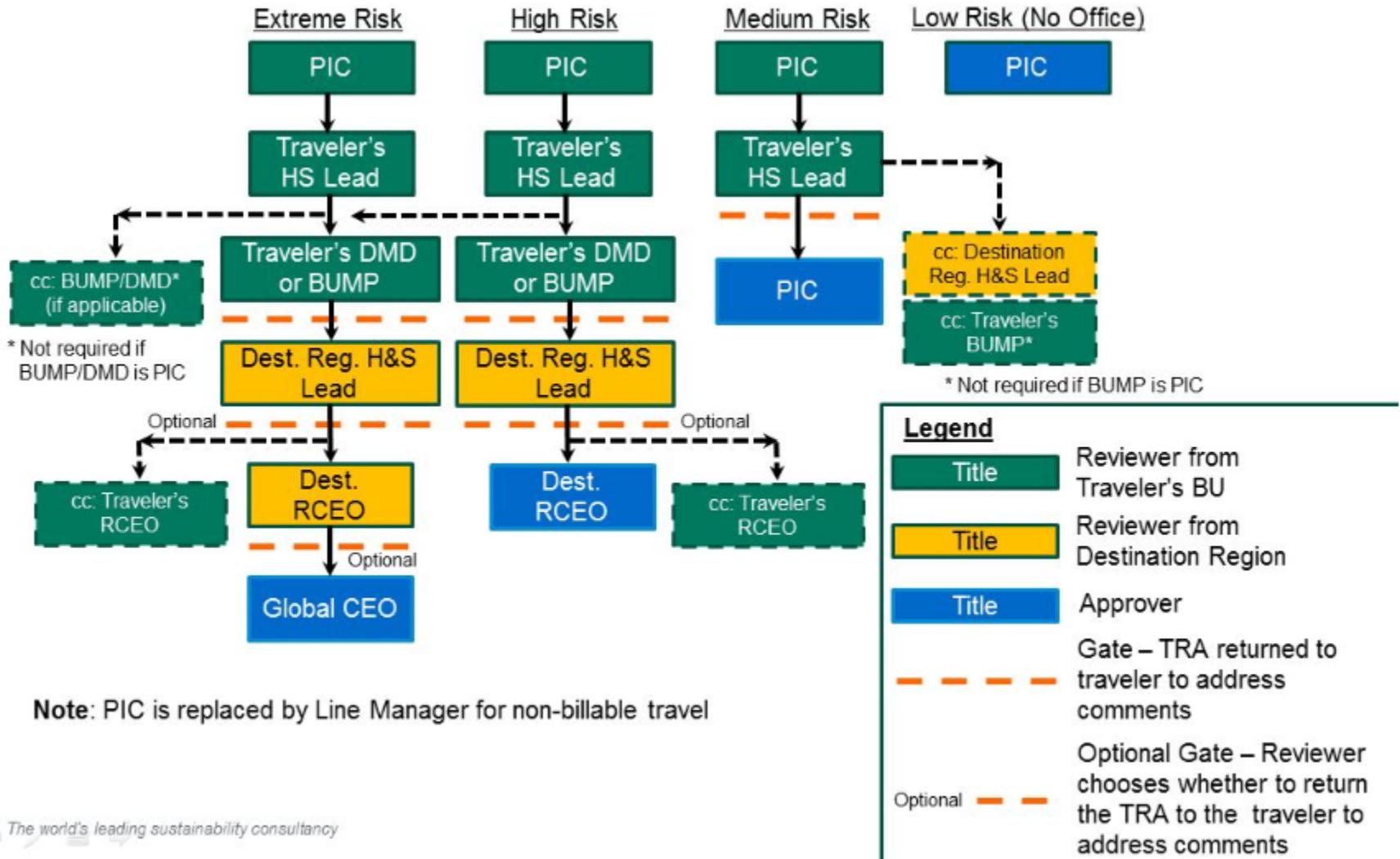
## Health & Safety Plan

- Incorporates:
  - Team contact information
  - Important health & safety information such as directions to nearest hospital
  - Travel plans
  - JHA/HRA, safety procedures, mitigations and PPE required
  - Detail driven by type of activity and significance of hazards, as well as client requirements

## Travel Risk Assessment (TRA) and Journey Management

- Type of form, level of detail and authorization dictated by risk rating for location
- ERM aided by subscription to Control Risks and International SOS
- Interactive TRA tool

# ERM's HSE Planning



# Dealing with Unforeseen Risk

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BOTTOM LINE: you prepare but you can't always predict all hazards and risks

Tools to help deal with unforeseen risks:

- Preparedness
- Solid survey plan including HASP, JHA and other elements described above
- Training (BOSIET, etc.)
- Experience and being able to think on the fly
- KEEP CALM!



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# Any Questions?

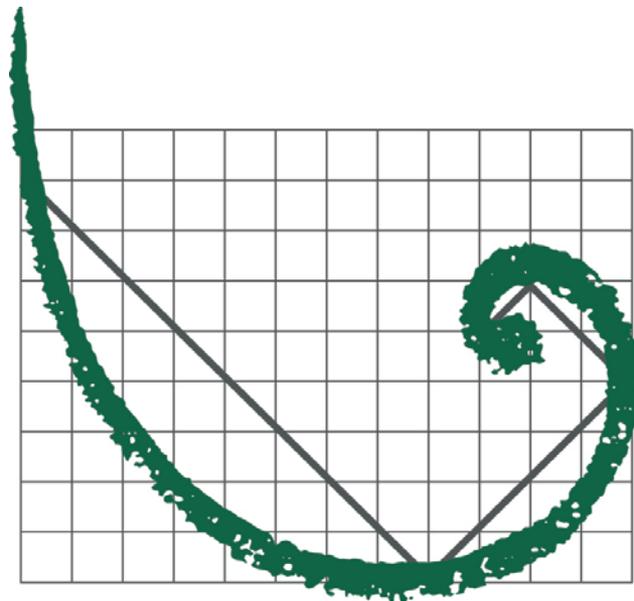
# Contact Information

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Jessica Ward

[Jessica.ward@erm.com](mailto:Jessica.ward@erm.com)

(310)496-5790



# ERM

[www.erm.com](http://www.erm.com)