ARCTIC FLUX

Security through Science

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It’s a different world ...
It’s a changing world ...
Flux: 1. Change 2. Flow

Arctic security

Arctic Science & Technology
Security Challenges ... Environment
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The environment … what if?

Conceptual Model of Arctic Oil Spill Exposure and Injuries

- **Top Predators**
  - Marine mammal and bird populations are of global significance.
  - **OIL IMPACT**
    - Oil can produce health effects and degrade food web.

- **Ice Habitat**
  - Seasonally important source of production, habitat for marine mammals.
  - **OIL IMPACT**
    - Sensitivity to oiling is poorly studied.

- **Wetlands, low coastal tundra, lagoons:**
  - Provide refuge, nesting, and spawning areas.
  - Highly productive.
  - **OIL IMPACT**
    - Oiled, degraded or eroding habitat reduces productivity.

- **Pelagic Zone**
  - Productive area for food web.
  - **OIL IMPACT**
    - Surface and dispersed oil affects food web.
    - Fish eggs and larvae are especially sensitive.

- **Benthos**
  - Can be highly productive, important in cycling nutrients.
  - **OIL IMPACT**
    - Oil in sediments reduces productivity and affects food web.

Impacts of an Arctic oil spill will vary due to environmental conditions, spill severity and response capacity.

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Security Challenges ... Safety
Science & Technology Solutions

Forecast?

911?

How deep?
National Security Challenges
Home field advantage ... at the away games
Do we need Arctic ships?
We need Arctic ships!
Science builds “-ships”!

Study at The University Centre in Svalbard?

Application deadline summer/autumn courses 2014: 15 April

For more information: www.unis.no
Science builds “-ships”!
ARCTIC FLUX

Science → Security → Success