



# A-CORE Program Overview and University Goals

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# The Arctic is of high national and international interest

- Receding ice levels in the Arctic Ocean could potentially open up:
  - an area measuring 900,000 *unregulated square miles* to commercial fishing
  - Shipping lanes for transport and tourism
- 25% of the world's undiscovered oil and gas resources are within the Arctic Circle with the U.S. Outer Continental Shelf holding the highest oil potential (Gautier et al. 2009)



# The Arctic Challenge

- Geology
- Physical geography
- Ecosystems and rate of ecosystem change
- Culture
- Infrastructure and access
- Climate and weather
- Data - depth, breadth, and length of record

UAF has significant expertise and experience in many of these areas

# *Deepwater Horizon: 20 April 2010*

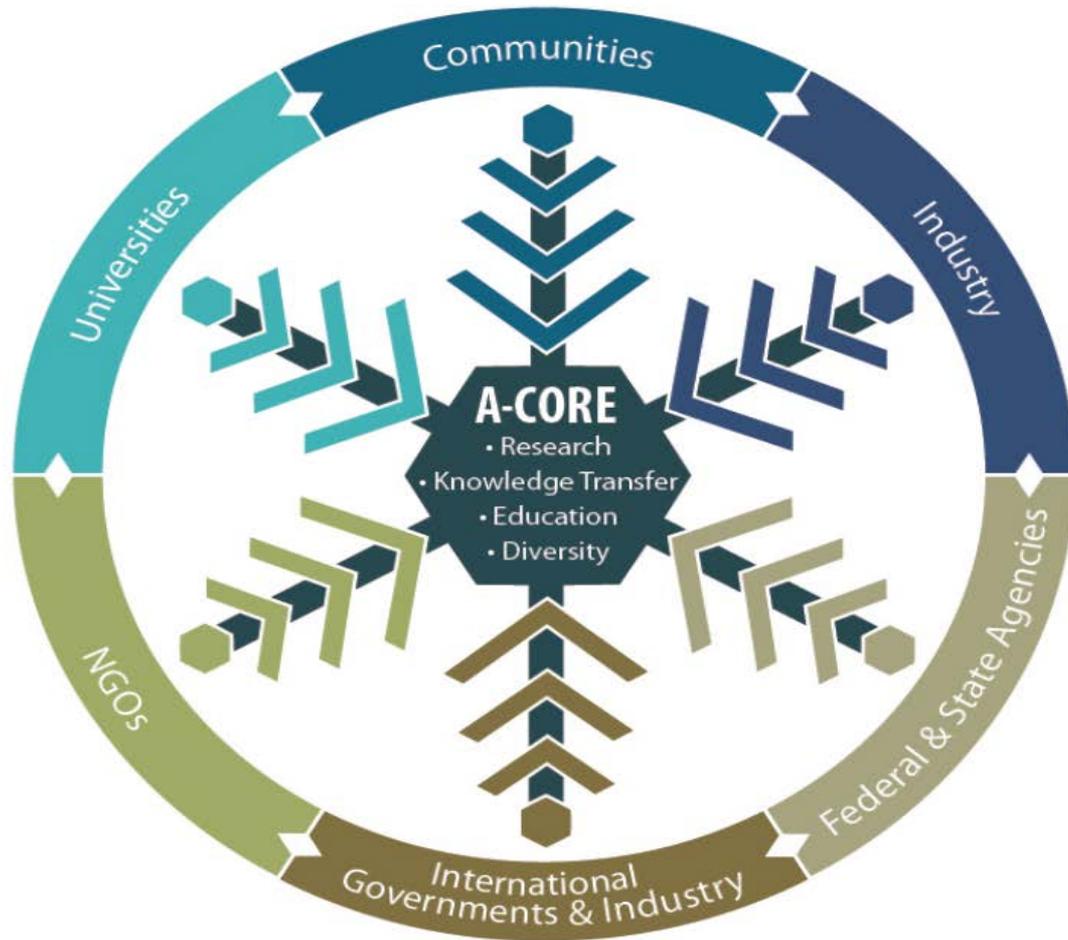


- *Deepwater Horizon* exploded and sank in the Gulf of Mexico with 11 souls on board
- The resulting well gusher flowed for nearly 4 months
- Resulted in one of the largest man-made oil spills ever on Earth

# What happens if a similar incident occurs in the Arctic?

- *Deepwater Horizon* incident occurred in relatively warm, accessible waters
- If something similar was to occur today in ice-infested waters, complications due to difficulties in oil spill detection, monitoring, and recovery would be multiplied

*By creating a Center focused on Arctic oil spills, UAF can play an active and appropriate role in the prevention, mitigation, and recovery of oil spills, regardless of their origin*



A-CORE will support wise decision-making concerning Arctic oil spill prevention and response

# A-CORE Purpose

The Center will focus on research and education relevant to enhancing the preparedness, prevention, response, monitoring, and mitigation of oil spills in the Arctic

- identify knowledge gaps
- sponsor fundamental and applied research
  - joint funding from industry
  - state and federal agencies
- administer fellowships and grants related to education in Arctic science and technology
- transfer knowledge gained via many communication avenues
- create feedback mechanisms to continuously identify knowledge gaps and evaluate efficacy of results

# UAF Goals for A-CORE

Build a center-based approach to performing the necessary research and development to prepare for potential spills in the Arctic:

- Explore new techniques for detecting, tracking, and monitoring the movement and fate of oil
- Conduct basic research to create an ecosystem baseline
- Build the expertise base and strategic partnerships required to address such a large-scale, complex issue

# UAF Steps Taken

- Relevant and ground-breaking legacy datasets from the past 40+ years of Arctic research
- Current research projects probe aspects of the relevant science questions
- Several collaborative proposals inspired by the A-CORE concept have been submitted to Federal agencies
- Seeking State Funding through the UA Board of Regents and the State Legislature

# Way Forward

- Coalesce the existing Arctic research projects relevant to Arctic oil spills
- Secure funding for supporting future collaborations across disciplines
- Enhance communications with local communities, state & federal agencies, and industry concerning what UAF has to contribute

