



Alaska Climate Change Strategy

Photo: J. Haden

Other Economic Activities (EA) Technical Working Group

ADAPTATION ADVISORY GROUP MEETING
November 7, 2008

Governor's Climate Change Sub-Cabinet
Center for Climate Strategies

Overview of EA TWG

- **Focus:** Impacts of climate change on aspects of the economy that are not directly dependent on living ecosystems
- **Scope:** Oil & gas, mining, ocean transportation, rural non-road transportation, tourism and recreation, boundaries and ownership, evolving AK's jobs and economy
- **Membership:** Representatives of AK mining, oil & gas, fishing, tourist and consulting industries; not-for-profits and universities; natives; and state agencies

Example Climate Change Impacts and Economic Vulnerabilities and Opportunities

CLIMATE CHANGE IMPACT	VULNERABILITY OR OPPORTUNITY
Shorter winters/longer summers	<ul style="list-style-type: none">• New tourism possibilities
Thawing permafrost	<ul style="list-style-type: none">• Pipeline design and integrity• Reduced operation windows for gas and oil exploration• Tailings storage facility design and integrity
Coastal change (sea level/erosion)	<ul style="list-style-type: none">• Waste pits breached
Retreating sea ice	<ul style="list-style-type: none">• New shipping lanes• Navigation issues• Economic activities curtailed due to polar bear denning on land
Unpredictability of climate effects	<ul style="list-style-type: none">• Lack of data and knowledge, opportunity to make accessible new information

EA TWG Process for Identifying Priorities

- Approximately 65 initial options in 10 categories (primarily different sectors)
- First round balloting identified approximately 25 “high” priorities
- Discussion of criteria and follow-up ranking (with more discussion) resulted in 6 EA TWG options (including one for the Research Needs Work Group)
- Catalog of options shows details of balloting and prioritization

Criteria for Option Prioritization

(not mutually exclusive)

- **Significance:** Importance to the state's economy, other intangible issues (e.g., social justice, viability of small or rural communities, historical ways of life, biodiversity)
- **Benefits and effectiveness:** Compares vulnerability of not carrying out the option to vulnerability if the option is implemented. Short vs long-term impact. No regrets?
- **Costs:** Expensive or inexpensive. (initial and maintenance costs)
- **Feasibility:** Realistic to implement? (e.g., within state authority or is it federal or business sector?) Do legal, administrative, financial, technical, and other resources exist? Timeliness?
- **Timing of Impact:** When is action needed?
- **Adaptive capacity:** Does action address issue where adaptive capacity is limited? (e.g., able to deal naturally or within reason with effects of climate change)

EA TWG Priority Options

1. Increase Arctic Ocean Activities
2. Explore Economic Activity Opportunities Offered by Climate Change
3. Develop Scenarios of the Alaskan Economy
4. Participate in National and International Forums on Arctic Issues
5. Improve Availability of Mapping, Surveying, Charting, and Imagery Data
6. Develop Higher Resolution Climate Modeling and Monitoring Data (FOR RESEARCH NEEDS WORK GROUP)

#1 - Increase Arctic Ocean Activities

- In the Arctic Ocean, increase/improve federal and state
 - search and rescue
 - responses
 - navigation safety
 - inspection, prevention, and enforcement
 - icebreaking capabilities
- Notes
 - Based on less ice - expectation is that more ports, infrastructure, and other facilities will be developed. These increases will create job opportunities and require investments to ensure safety and environmental protections.
 - This option will require that the EA TWG coordinate with the Public Infrastructure (PI) TWG on recommendations for shipping and Arctic Ocean infrastructure development.

#2 - Explore Economic Activity Opportunities Offered by Climate Change

- Explore the economic opportunities that may result from climate change, such as:
 - carbon management
 - renewable energy (tidal, wind, hydroelectricity)
 - energy efficiency
 - sustainable infrastructure development, etc.
- Economic opportunities may exist because
 - Unique Alaska environment
 - Early experiences in dealing with climate impacts will require expertise and strategies that may be useful elsewhere

#3 - Develop Scenarios of the Alaskan Economy

- Establish means to conduct scenario analyses
 - examine possible alternative futures based on known, probable, and possible trends
 - assess the potential rise or decline of major aspects of the Alaskan economy likely to be affected by a changing climate (e.g. oil and gas, mining, tourism, shipping, ocean transportation, commercial fishing, climate adaptive activities)
 - Consider social, economic, and cultural variables (rather than physical variables as in climate change scenarios) such as population changes, infrastructure changes and requirements, sector job growth, sector effects on state revenues, projections of the state economy, emerging businesses, etc.

#4 - Participate in National and International Forums on Arctic Issues

- Coordinate and encourage participation in national and international forums dealing with Arctic issues on topics such as:
 - Resource management,
 - Boundaries,
 - Shipping and navigation,
 - Health
- Prepare U.S. delegations on desires, needs and interests of Alaska and its native populations
- Foster means to make information from the forums more accessible to scientists, practitioners, and policy makers. (e.g., “Center of Excellence” or “Networks of Excellence”)

#5 – Improve Availability of Mapping, Surveying, Charting, and Imagery Data

- Improve the availability of real-time mapping, surveying, charting, digital elevation models (DEM), and imagery data to provide means to better track and understand economic impacts of and opportunities to address climate change.
- Consider management of these spatial data within a GIS to improve access to and promote use of the data.
- Develop a more robust information infrastructure to plan and adapt to climate change.

#6 – EA TWG Recommendation to the Research Needs Work Group

- Develop Higher Resolution Climate Modeling and Monitoring Data
 - Finer scale
 - More timely
 - More monitoring
 - Better modeling

**Thanks to dedicated EA TWG
members for their input!!**

Next EA TWG Meeting: TBD

Questions?

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