This would pose severe challenges—not illustratable using today’s models—for our ability to manage and adapt.

Acknowledgments

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References

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Meetings

Investigating Arctic Ocean History: From Speculation to Reality

A Workshop to Prepare for Arctic Ocean Scientific Drilling; Bremerhaven, Germany, 3–5 November 2008

The modern Arctic Ocean appears to be changing faster than any other region. To understand the potential extent of high-latitude climate change, it is necessary to sample the history stored in the sediments below the ice-free waters of the Yermak Plateau to the north of Svalbard (Ocean Drilling Program [ODP] Leg 151); and the process of developing proposals for IODP. The next day and a half was spent in breakout groups discussing the questions to be addressed by drilling and targets for Arctic scientific drilling.

On the final day, the participants committed to submitting new IODP preproposals for Arctic Ocean drilling. On the basis of this discussion at this meeting, approximately six new preproposals may be submitted to IODP by the 1 April deadline. In addition, a community-wide (United States, Europe, Japan, and others), multidisciplinary, and international conference—IODP New Ventures in Exploring Scientific Targets (INVEST)—is planned for September 2009 to discuss directions of scientific ocean drilling beyond 2013.

The IODP drilling proposals discussed at the recent workshop will be submitted at a critical time for both the future of Arctic Ocean science and the future of scientific ocean drilling. Only in the past few years, through dedicated efforts of a number of research groups, have there been sufficient data to propose testable hypotheses and to select drill sites on most of the significant bathymetric features. Meeting conveners hope these preproposals will direct future scientific ocean drilling north toward these critical priorities, and that the results of the recent workshop will contribute to developing new scientific objectives.

Many of the workshop’s talks, documents generated by the breakout groups, and contact information for the IODP preproposals are available through the meeting Web site (http://www.oceanleadership.org/ussp/workshops/arctic). More information on the upcoming INVEST conference can be found at http://www.iodp.org.

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