

Project #: B51

Title: BSIERP: Data Management

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Lead Author of Report: Kenneth Coyle

Proposed timeline and milestones within report period: Update data templates as new information arrives, add data to the data portal as it arrives, implement the security layer required to provide password protection from public access to BSIERP data as agreed upon in the work agreement, integrate BSIERP data into the AMIS system.

Project Summary: The goal of data management is to provide PIs and eventually the public, with a web-based data access system which they can use to download or view data collected by the BEST-BSIERP project. The data system will be set up so the data can be integrated into the Alaska Marine Information System (AMIS), under development by the Alaska Ocean Observing System (AOOS). After the project is done, the data will be delivered to a national data archive.

Progress Summary: Six projects have delivered data so far. Data sets in native format provided by the PIs have been posted on the password-protected Data Portal on the data management web site. The data portal also includes links to the BEST Healy data. Delivery dates for data to the data management group have been posted on the web site and are listed in the table below.

Update on data delivery and template:

The data template page has been redesigned to facilitate presentation of the status of data delivery. The project number and PI responsible for the data delivery are listed in the template table in addition to the PI responsible for collecting the data; data delivery dates are also posted. Data delivery dates have been updated on the data template web page.

We have received data from the following projects:

- 1) V. Byrd, colony studies.
- 2) N. Friday, baleen whale distribution.
- 3) F. Mueter, retrospective data (updated March 30)
- 4) D. Stoecker, microzooplankton data.
- 5) P. Stabeno, physical oceanography, mooring data.
- 6) A. Hollowed, N. Cokolet, oceanography data.

The following PIs and projects have contacted us concerning data delivery:

- 1) Kathy Kuletz (B64) seabird distribution (was due November 2009) is currently being checked for quality. Once they have verified the accuracy of their data, it will be delivered to data management, possibly by the end of April.
- 2) We received an email from Kelly Benoit-Bird that their acoustic data (B67) would not be delivered on the due date due to formatting problems and time requirements for preparations for the next field season, but that their data will be delivered before the next PI meeting in the fall.
- 3) We received an email from Rosanna that data on seabirds (Dave Irons, project B63) will be delayed due to difficulties with the metadata and hiring for the next field season, but that they expect to deliver the data by May.
- 4) We received email from Chadwick Jay that the lipid and telemetry data (B67) will be delivered in April (2009).
- 5) Sandra Parker-Stetter sent an email reporting that the data for project B59 (acoustic data, John Horn) will be delivered in July 2009 instead of March 2009.
- 6) The fur seal forage data (Trites, B67) was uploaded to an NPRB ftp site. We were unable to recover the data from the site and will make arrangements to have it loaded to our data management ftp site when the PI returns from the field.
- 7) Huntington (LTK, project B69) sent out emails in February requesting that his coPIs provide delivery dates for the harvest data. We have received dates so far for only Savoonga. Determination of specific time lines may be complicated by village council constraints. I received an email from Sarah Kruse that a data template file may be ready from Savoonga (provided by Eric Trigg). The data delivery date for Savoonga processed data is now August 2009.

The following projects have not yet provided information:

- 1) Project B56, POC export studies, B. Moran.
- 2) Project B57, Epibenthic videos, J. Grebmeier (Lee Cooper told me at the Alaska Marine Science Symposium (AMSS) that material would be sent in the fall).
- 3) Project B60, Fish distribution, Ciannelli, (We were told at the March PI phone conference that material would be forthcoming but we have not yet received anything).

Modeling data:

We have not received data delivery dates or templates from the modeling components. They will provide us with material once the model is running. Our understanding is that modeling has been delayed by technical difficulties in getting the system to run reliably.

Progress on the Alaska Marine Information system:

AMIS (the Alaska Marine Information System) is currently up and running. We set up a booth at the Alaska Marine Science Symposium to introduce potential users to the system. In addition, we gave a presentation at the PI meeting of the AMSS introducing the AMIS system and demonstrating the features of our data management web page. We are currently working on getting the security protocols for BSIERP data set up so that the data can be uploaded to the AMIS system while retaining the password protection required for the BSIERP project. We anticipate having the BSIERP data incorporated into the AMIS system by the end of August 2009.

Lessons learned and project adjustments: It is critical to bring up any problems that may compromise delivery of data or modeling products within the stated time lines at the PI meetings. We have found that problems or requests which can remain unaddressed for weeks or months are usually rapidly resolved when brought up in the PI meetings. In addition, program managers and PIs in BEST-BSIERP who may require data or model products for their ongoing research will be made aware of potential delays, the causes and the solutions being undertaken. Openness in the PI meetings to potential problems and their solutions is critical to the overall integration of the BEST-BSIERP program.

Implementation of the security software required for integration of BSIERP data into the Alaska Marine Information System (AMIS) has taken longer than anticipated. We feel that the security of the PI's data is important and the security software needs to be completely developed and thoroughly tested before loading BSIERP data into AMIS. These steps help insure against unauthorized use of BSIERP data resulting from a software failure. The following revised time line is now in place.

Project adjustment:

May 2009: Initial security feature implemented for a few test datasets in AMIS for project searching and data download.

June/July 2009: Systematic integration of BSIERP datasets in AMIS using the new security protocol. Datasets cannot be integrated before security is in place. Integrating datasets prior to added security will allow datasets to be accessed publically. This is not desired by the BSIERP PIs.

August 2009: Begin testing the secure AMIS data access with BSIERP PIs. Once the AMIS system is deployed, a fresh task list will be generated from feedback from stakeholders and users.

NOTE: all data which we have received is currently available to all PIs through the BSIERP data portal on the data management website.

Integration activity: Coyle has been attending the telephone PI conferences and the modeling meetings. This interaction should help us insure that the data required to integrate the modeling and field efforts can be made available to the PIs in accordance

with the stated time lines in the PI work plans and aid in identifying and correcting any problems which may compromise the deadlines.

Education and Outreach: We have been working with Carolyn Rosner to insure that our web site is integrated into the NPRB BSIERP web site and that our web page provides easy access to the data.

Next year's Work plan: We are continuing software development to integrate BSIERP data into the AMIS system. We are currently expecting to have the BSIERP data into the AMIS system with the required security layer by late August 2009. After the BSIERP data are in the AMIS system, we can begin development of supplemental visualization and downloading tools for BSIERP PIs. Note that we will set up a web page at the Data Management site to list our priorities for tools to complete for data management and estimated completion dates. These priorities will be based on consensus by the PIs at the PI meetings. This should permit all PIs to be aware of priorities for setting up data postings, visualization and access tools, and should aid the PIs in participating in setting the priorities.

Ongoing work for the lifetime of the project will include:

- Systematic integration of BEST-BSIERP datasets and metadata from PIs into the AMIS data management system.
- Enhancements to the AMIS system with feedback from BSIERP PIs to facilitate data queries, data access and visualizations.

The time lines for data delivery are listed below:

<i>What</i>	<i>Who</i>	<i>Data Delivery Date</i>	<i>Comments</i>
Generation of the data templates.	BSIERP PIs	Dec 2007	End March 2008; Templates have been updated
Template for Metadata	Data Management	March 31	Currently available on website
BSIERP projects on AMIS	Data Management	August 2009	Currently working on security layer
Posting Fish stomach data	Aydin	2-6 months after cruise (Sept – Jan, 2008) Changed to April 2009	Data will come from Aydin, B61
Patch dynamic acoustic data will be posted	Benoit-Bird	June, 2009 (Changed to before next PI meeting)	Data from Benoit, B67

Bird colony vital rates will be posted	Byrd	October 2008 (Data Delivered)	From Byrd, B65
Fish distribution data (not sure we will get anything)	Chianelli	No date given (Heard at March PI meeting that information will be coming shortly)	Lorenzo, B60
Oceanography data	Cokelet/Hollowed	Now to Sept 2008 (Data Delivered)	Data delivered by Cokelet, B62
Local and traditional knowledge	Huntington	No date given for sending data; timing may depend on release by village councils	Data from Fall, B69
Post Baleen Whale distributions	Friday	Jan 15, 2009 (Data Delivered)	Data delivered by Friday, B66
Epibenthic video data	Grebmeier (Cooper)	By fall	B57; Cooper said he would deliver data by fall
Ground fish bioenergetics	Heintz	March-June 2009	Data from Heintz, B54
Microzooplankton	Stoecker	April 2009	B55; Rate data delivered, abundance and biomass data in preparation
Ichthyoplankton survey	Hillgruber	August 2009 for fish data, May 2009 for chlorophyll	Hillgruber, B53
Forage fish trawl data	Hollowed	January 2009	Data from Hollowed, B62
Forage fish acoustic data	Hollowed	August 2009	Data from Hollowed, B62
Forage fish biophysical data	Hollowed	June 2009	Data from Hollowed, B62
Acoustic data	Horne	July 2009	Delivery of data under discussion, possible formats suggested, Horn, B59
TLK data	Huntington	After community approval (Savoonga data by	See Huntington timeline, B69

		August 2009)	
Seabird telemetry	Irons	January 2009 (Changed to May 2009)	Data from Irons, B63
Benthic patch data	Trites (Jay)	November 2008 (Changed to April 2009)	Data from Jay, B67
Bird Diet	Trites (Kitaysky)	March 2009 (Changed to April 2009)	Data from Kitaysky, B67
Bird Behavior	Trites (Kitaysky)	November 2008 (Changed to April 2009)	Data from Kitaysky, B67
Bird Physiology	Trites (Kitaysky)	January 2009 (Changed to April 2009)	Data from Kitaysky, B67
Bird CTD data	Trites (Kitaysky)	December 2008 (Changed to April 2009)	Data from Kitaysky, B67
Seabird distribution	Kuletz	November 2008 to March 2009 (Delivery date changed to May 2009)	Data undergoing quality assurance by Kuletz, B64
POC Export	Bradley	July 2009	Data from Bradley, B56
Fish, Bird, Mammal Retrospective	Mueter	May 2008 (Data Delivered and updated)	Data delivered by Mueter, B68
Local & Traditional Knowledge (TLK data)	Huntington	After community approval	Data from Sepez, B69
Bird & mammal forage	Sigler	June 2011	Data from Sigler, B92
Biophysical mooring, physics	Stabeno	January 2009	Data delivered by Stabeno, B52
Biophysical mooring, chlorophyll	Stabeno	March 2009	Data delivered by Stabeno, B52
Biophysical mooring, zooplankton acoustics	Stabeno (Napp)	September 2009	Data from Stabeno, B52
Biophysical mooring, zooplankton samples	Stabeno (Napp)	September 2010	Data from Stabeno, B52
Fur seal forage	Trites	April 2009	Data was sent to wrong site, will arrange to have it resent
Management strategy	Punt	After Aydin	Data from Punt,

evaluation model		submits data, Aydin will provide templates	B73
Integrated economic- ecological models of pollock and cod	Aydin	Requires coordination with Aydin modeling	Data template received.