First Passive Acoustic Monitoring Strategic Initiative Workshop Report

La Jolla, California

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# Citation

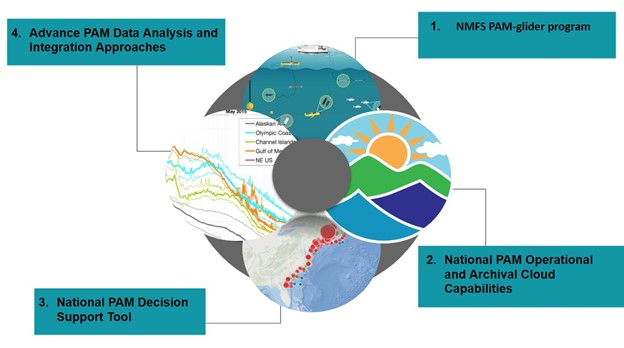
PAM-SI Meeting Repository

# 1.

Introduction

NMFS’ Passive Acoustic Monitoring (PAM) programs focus on collecting underwater sound recordings of the marine environment. Identification of the sounds produced by protected marine mammal species, fishes, or humans allows for an understanding of marine soundscapes. PAM data collection provides information on changes in species distribution, behavior and/or density, in addition to assessing impacts of man made noise. The technological revolution in PAM over the past decade has allowed both acoustic recorders and analytical approaches to increasingly become an integral part of NMFS’s core science mission. PAM’s capacity for creating long term time series makes it an ideal approach for evaluating changes in species stocks, ecosystem interactions and climate change. There currently are 7 NMFS PAM programs including each NMFS Science Center and the S&T’s Ocean Acoustic Program. PAM data can be archival (recorder needs to be recovered at sea before data can be accessed) or real time (data is transmitted via cable or satellite as it is collected). Currently, NMFS PAM programs use all available acoustic platforms from stationary bottom mounted to mobile towed, drifting, or UxS platforms. However, each program varies in the level of technological development and operational capacity. Over the next 4 years we aim to work to resolve the core roadblocks that hold back PAM’s ability to be fully operational across NMFS.

The PAM SI projects focus on; 1) establishing a Pacific region glider program to mirror that in the Atlantic, 2) developing National PAM Cloud capabilities to cope with exponential growth in data and processing needs, 3) expand the existing PACM decision support tool to a National level tool, and 4) streamlining analytical and data integration to remove redundancy and increase across FMC efficiencies.



# 2. PAM Github

## 2.1 Target Outcome

One sentence description of the goal for this project

## 2.2 Project Team

| Shannon Rankin | Rebecca VanHoeck |  |
| --- | --- | --- |
| Name of Project Team Member | Name of Project Team Member | Name of Project Team Member |
| Name of Project Team Member | Name of Project Team Member |  |
|  |  |  |

## 2.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

## 2.4 Action Items

1. **Short Name for Action Item:** Description of Action Item in text with as much detail as needed (but no more than needed!). *Deadline: Month, Year.*
2. **Short Name for Action Item:** Description of Action Item in text with as much detail as needed (but no more than needed!). *Deadline: Month, Year.*
3. **Short Name for Action Item:** Description of Action Item in text with as much detail as needed (but no more than needed!). *Deadline: Month, Year.*

# 3. NCEI Archiving

## 3.1 Target Outcome

One sentence description of the goal for this project

## 3.2 Project Team

| Carrie Wall-Bell | Jason Gedamke |  |
| --- | --- | --- |
| Name of Project Team Member | Name of Project Team Member | Name of Project Team Member |
| Name of Project Team Member | Name of Project Team Member |  |
|  |  |  |

## 3.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

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List of PAM Projects to be provided to NCEI

| FMC | **Project/Data Sets** | **Year of Delivery** | Data Type | Data Size | Data Location |
| --- | --- | --- | --- | --- | --- |
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# 4. Cloud Computing and EDA/IT Needs

List of Potential Tools/Software/Detectors to Consider for Cloud Computing

| Tool/Software/Detector | Dataset | FMC |
| --- | --- | --- |
| LFDCS - Baleen whales |  | NEFSC |
| PAM Guard - Sperm whales |  | NEFSC |
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## 4.1 Target Outcome

One sentence description of the goal for this project

## 4.2 Project Team

| Name of Lead | Name of Lead |  |
| --- | --- | --- |
| Sofie Van Parijs | Name of Project Team Member | Name of Project Team Member |
| Daniel Woodrich | Name of Project Team Member |  |
|  |  |  |

## 4.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

## 4.4 Action Items

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# 5. Acoustic Detection Software

## 5.1 Target Outcome

One sentence description of the goal for this project

## 5.2 Project Team

| Taiki Sakai | Annamaria DeAngelis |  |
| --- | --- | --- |
| Name of Project Team Member | Name of Project Team Member | Name of Project Team Member |
| Name of Project Team Member | Name of Project Team Member |  |
|  |  |  |

## 5.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

## 5.4 Action Items

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# 6. Soundscape Tools, Metrics, Analyses

List of data types needed to expand sound metric research questions

| Data Type | Additional Questions | Data Availability |
| --- | --- | --- |
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## 6.1 Target Outcome

One sentence description of the goal for this project

## 6.2 Project Team

| Name of Lead | Name of Lead |  |
| --- | --- | --- |
| Marla | Megan | Samara |
| Name of Project Team Member | Name of Project Team Member |  |
|  |  |  |

## 6.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

## 6.4 Action Items

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3. **Short Name for Action Item:** Description of Action Item in text with as much detail as needed (but no more than needed!). *Deadline: Month, Year.*

# 7. Climate and Long Term Data Trends

## 7.1 Target Outcome

One sentence description of the goal for this project

## 7.2 Project Team

| Name of Lead | Name of Lead |  |
| --- | --- | --- |
| Name of Project Team Member | Name of Project Team Member | Name of Project Team Member |
| Name of Project Team Member | Name of Project Team Member |  |

## 7.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

## 7.4 Action Items

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# 8. PAM Data Integration for Stock Assessments

## 8.1 Target Outcome

One sentence description of the goal for this project

## 8.2 Project Team

| Name of Lead | Name of Lead |  |
| --- | --- | --- |
| Erin Oleson | Name of Project Team Member | Name of Project Team Member |
| Megan McKena | Name of Project Team Member |  |
|  |  |  |

## 8.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

## 8.4 Action Items

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3. **Short Name for Action Item:** Description of Action Item in text with as much detail as needed (but no more than needed!). *Deadline: Month, Year.*

# 9. Management Outcomes and Tools

## 9.1 Target Outcome

One sentence description of the goal for this project

## 9.2 Project Team

| Name of Lead | Name of Lead |  |
| --- | --- | --- |
| Sofie Van Parijs | Name of Project Team Member | Name of Project Team Member |
| Name of Project Team Member | Name of Project Team Member |  |
|  |  |  |

## 9.3 Summary

One paragraph summary of (1) what work will be done, (2) how it fills a research or operational need, and (3) how it supports one or more of the PAM SI Objectives.

## 9.4 Action Items

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3. **Short Name for Action Item:** Description of Action Item in text with as much detail as needed (but no more than needed!). *Deadline: Month, Year.*

# 10. List of Attendees

List of Attendees

| Names | Affiliation | Email |
| --- | --- | --- |
| Manolo Castellote | AFSC |  |
| Carrie Wall Bell | NCEI |  |
| Genevieve Davis | NEFSC |  |
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# 11. Acknowledgements

List of all participants here.

# References