

## CLOSING

Since the end of the tripartite research initiative, there has been an increase in the scientific infrastructure of the Northwestern Hawaiian Islands (NWHI). This includes routine research cruises, establishment of field stations, and annual support of remote field camps. Exploration and baseline assessments continue to be a large part of the research, but more effort has been committed to establishing and maintaining physical and biological time series. Many of these time series were instigated to monitor specific fishery and protected species but have since become invaluable data sets to address emerging ecosystem science objectives. Time-series data paired with current mapping efforts provide an unprecedented database to use with rapidly advancing analytical software. In particular, the synoptic nature of satellite remote sensing has revealed the structure and changing nature of the north Pacific water mass in and around the NWHI. Understanding the implications of oceanographic changes to the NWHI ecosystem is a primary challenge for future scientific research. Scientists should frame their research questions within an archipelagic context using the NWHI in comparative designs to help manage and restore natural resources in the Main Hawaiian Islands. More insight can be achieved if this type of research is coordinated across agencies where projects are directed and prioritized by emerging ecosystem principles. A commitment to this multiagency approach and having periodic symposia to review and reflect on research findings would assist in the implementation of ecosystem-based management. The remote location, spatial structure, and documented history of the Hawaiian Archipelago make it an important case study to advance ecosystem science – an international priority.

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