

Science, Service, Stewardship



Overview of 2013 Data Program Review at the PIFSC

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FISHERIES
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General Data Management Suggestions

- PIFSC fishery programs need dedicated analytical support to regularly examine and evaluate results of fishery monitoring and sampling programs with respect to their purpose and utility. The required expertise must extend beyond data processing, to understanding of the fisheries and the uses of the fisheries data. These new staff should operate across the user programs and with our centralized information and data management services to provide the maximum use of new and existing data collected by PIFSC.
- A centralized database administrator's office is necessary and all data request should be handled through this portal/office to ensure consistency.
- This office requires redundant staff (at least 2 FTE's) to develop/oversee/implement all business procedures.

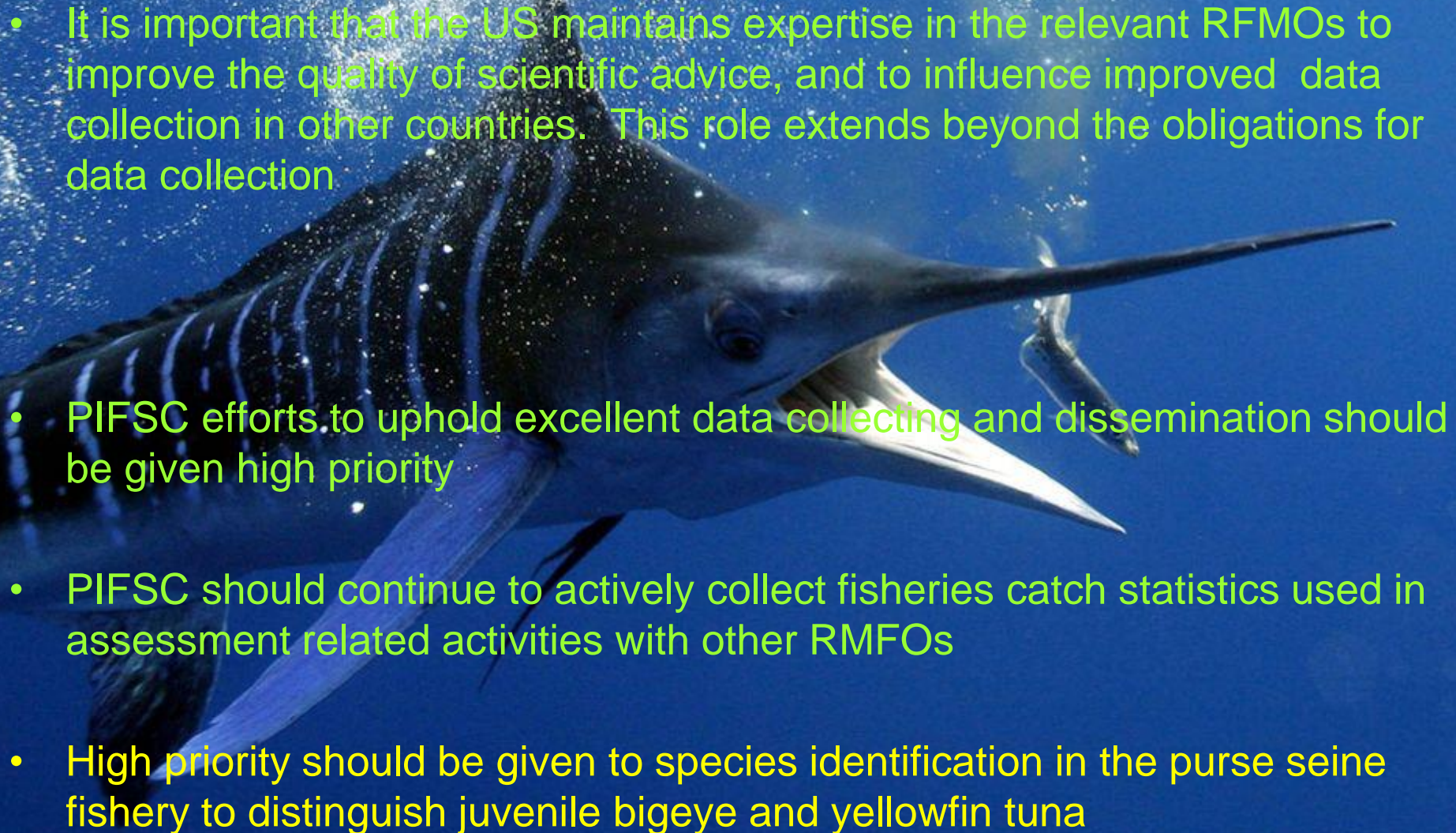
General Data Management Suggestions

- PIFSC should do a better job of integrating our fishery monitoring and information programs, and integrating those programs with our fishery assessment and analysis programs.
- All data should be stored in a centralized Oracle system with integration as a core feature.
- There should be only one official dated version of a data set for a given time-frame (i.e. one annual update, more frequent versions only for in-year management applications). For consistency among reports, data should generally be extracted from the annual update.

General Data Management Actions

- PIFSC is reorganizing Center-level data management to allow greater focus by key fishery programs on their data integration requirements.
- All fishery databases at PIFSC have now been entered into the Oracle system.
- A Fishery Data Coordinator is being recruited with expertise in local fisheries, fishery data management, coordination between programs and data summarization and analysis, to oversee the integration of diverse data sets, control procedures, establish data versions, and direct and document access and use of established data versions.
- The Division prioritized the backfill of a key fishery monitoring position and is currently reviewing applicants.
- A fishery data analyst is being recruited under the Territorial Initiative to regularly examine and evaluate results of territorial fishery monitoring and sampling programs with respect to their purpose and utility.

Highly Migratory Data Suggestions

- It is important that the US maintains expertise in the relevant RFMOs to improve the quality of scientific advice, and to influence improved data collection in other countries. This role extends beyond the obligations for data collection
 - PIFSC efforts to uphold excellent data collecting and dissemination should be given high priority
 - PIFSC should continue to actively collect fisheries catch statistics used in assessment related activities with other RMFOs
 - High priority should be given to species identification in the purse seine fishery to distinguish juvenile bigeye and yellowfin tuna
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- A large blue marlin is shown swimming in the ocean, viewed from a low angle. The marlin has a long, pointed snout and a dark body with light-colored stripes. A smaller fish is visible in the background, swimming away from the marlin. The water is a deep blue color.

Insular Fishery Data Suggestions

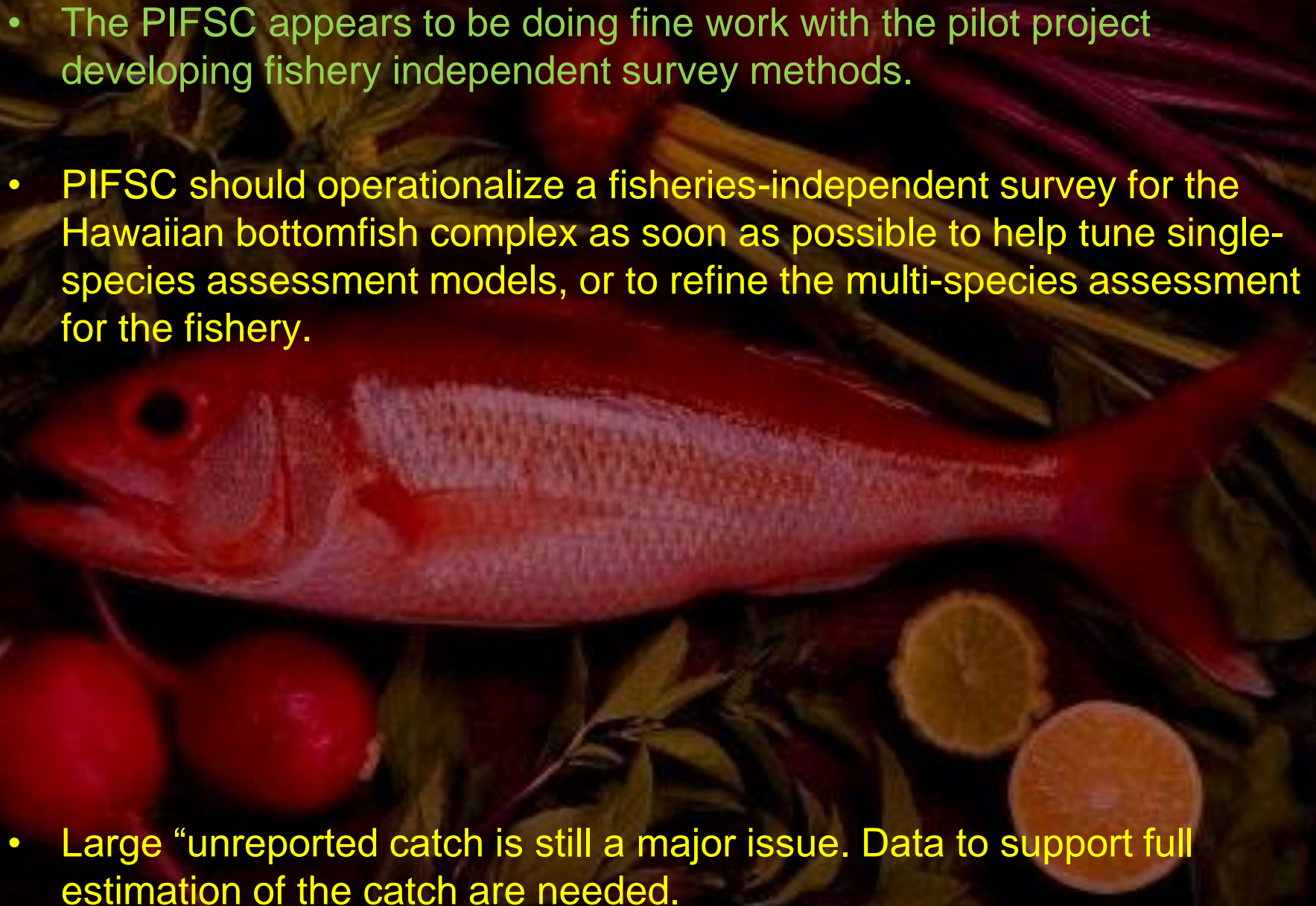
- The PIFSC/WPacFIN should be commended for developing the creel fishery surveys in the territories. The difficulty with reporting accuracy and compliance from log books means that in many cases statistical surveys are the only reliable methods to obtain catch estimates and representative size samples.

- The study of the utility of survey data for estimating catch, and to determine if improvements can be made should continue. If the surveys are considered useful, sufficient funds should be provided to support the surveys.

Insular Fishery Data Actions

- The contracted statistical evaluation of the creel surveys have indicated some species groups, such as HMS and bottomfish, are sampled with enough frequency to have useful confidence in mean values and trends. **This is not so for creel survey data on coral reef fish.** The final report is in review.
- The Insular monitoring program is evaluating how to improve the surveys and to leverage additional information for some fisheries from biosampling and from increased voluntary reporting by fish vendors.
- A territorial initiative was funded that has brought resources for additional staff and capacity building in the territories.

Bottomfish Data Suggestions

- The PIFSC appears to be doing fine work with the pilot project developing fishery independent survey methods.
 - PIFSC should operationalize a fisheries-independent survey for the Hawaiian bottomfish complex as soon as possible to help tune single-species assessment models, or to refine the multi-species assessment for the fishery.
 - Large “unreported catch is still a major issue. Data to support full estimation of the catch are needed.
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Bottomfish Data Actions

- New information about extent of recreational fishing and revised inputs to Main Hawaiian Islands bottomfish stock assessment coming up in June 2014
- Progress towards operationalizing fishery independent survey to be described on day four by Ben Richards



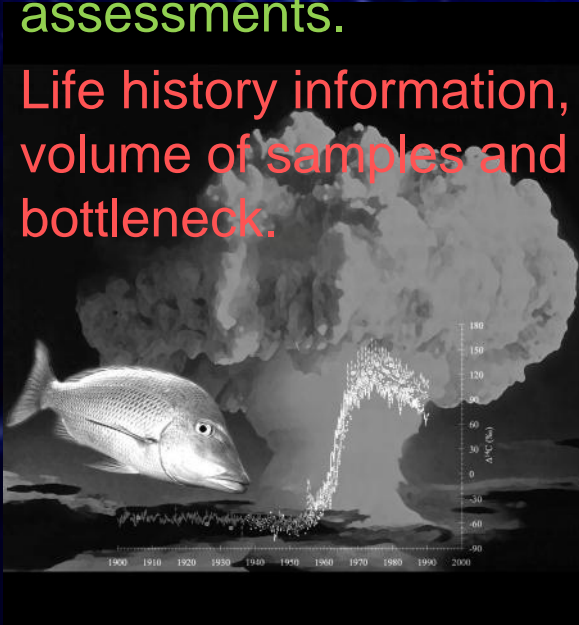
Coral Reef Fishery Data Suggestions

- PIFSC is setting an example for the world in fishery independent data collection by the Coral Reef Divisions RAMP Program.
- The enhancement of the coral reef survey work to have a greater focus on monitoring fisheries, and to provide actual abundance estimates is needed, and may entail increased sampling
- There is an opportunity to integrate information from the RAMP program, from size-based (including bio-sampling-based) assessments, and from catch-MSY methods into a single integrated approach (e.g., use the density estimates from pristine locations to formulate informative priors for carrying capacity in catch-MSY models).



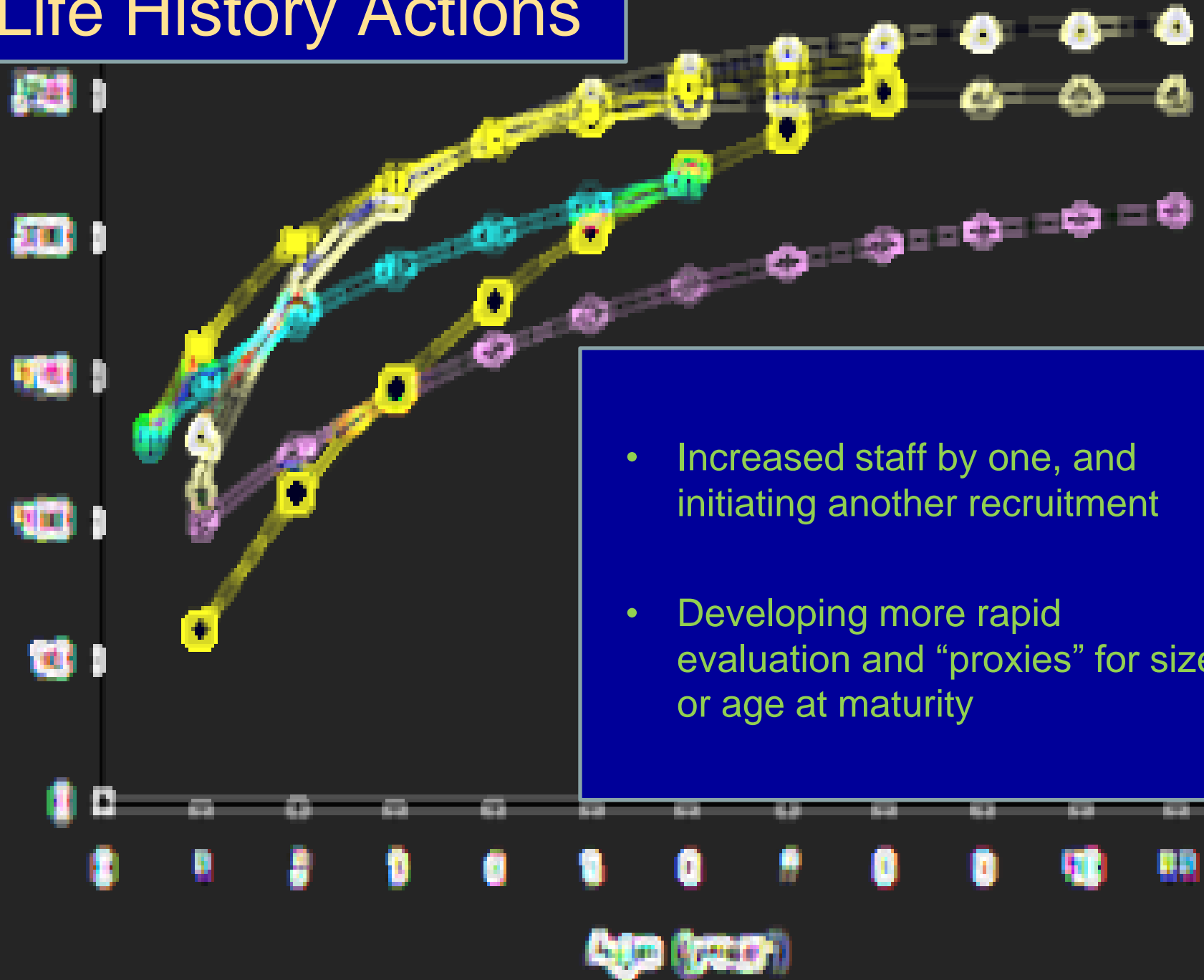
General Life History Suggestions

- The life history group is developing essential information for stock assessments.
- Life history information, being provided by few staff working with a high volume of samples and under high demand for results, was seen as a bottleneck.



- Maturity determination and perhaps aging of some species could be executed in a more production oriented mode. This will likely require additional staff. Consider rapidly developing the average size at maturity, to provide additional guidance as to the species to focus on.

Life History Actions



Overall Suggestions and Comments

- The PIFSC has developed considerable scientific expertise and supporting data collection. This review confirmed the benefit of those activities by the demonstrated ability of the PIFSC to respond to Congressional mandates and international obligations.
- With data poor stocks there is a need for adaptive, robust management strategies that can respond relatively quickly to new data or misinterpretation of previous data. This in turns implies the need for Management Strategy Evaluation (MSEs). This requires operational models that depict the current understanding of a population or an ecosystem which can be tested against alternative hypotheses how the system works, and operational models of how management can respond, and with what effect, given the scientific uncertainties and limitations of management.