

## **Reference Supplement 4: A Framework for Evaluation of Citizen Science**

### **Impacts Using Criteria Grounded in Environmental Health Literacy**

Another possible framework for evaluation of the impacts of Citizen Science participation uses criteria grounded in Environmental Health (or Science)

Literacy concepts. These measurements may include:

- (1) duration of involvement by participants
- (2) improved understanding of science content associated with project
- (3) better understanding of the process of doing science
- (4) changes in attitudes toward science
- (5) improved skills for performing scientific tasks
- (6) increased interest in science as a career.

This framework recommends the use of pre / post testing, focus groups and interviews to assess change but GC-HARMS CODC personnel preferred a less formal observational approach that preserved their relationship with participating fishermen. Based on direct observation and personal interaction with the fisher teams from each community hub, we documented the following non-quantitative results in each category:

- (1) All designated community hubs remained engaged with the sampling process for the full duration (December 2011 – January 2014). Twenty-two fishermen participated for that entire period.
- (2) and 4) Knowledge of content, and changes in attitude toward science showed more elaboration (increase in scope and understanding

of content) and some increase in positive regard toward science (attitude) as beneficial to the fishery and their own personal situations.

- (3) Nearly all of the fishermen continued to show some impatience with the time frame of the laboratory process because of the delay in getting results regardless of how well they understood the technical difficulties of the laboratory analysis.
- (5) Skills in performing sampling per protocols and providing accurate data on field reports and chain of custody showed the greatest positive change.
- (6) None of the fishermen evinced any interest in changing careers and becoming scientists, but that was not a goal of the project.