

Research Set Aside Workshop - July 15, 2021
SSC Economic WorkGroup One-Pager Briefing on:

Topic 4. Consistency with Stated Council Plans/Objectives & Linkages to Management Goals;
Topic 6. Application of Benefit/Cost Principles in Proposal Evaluation

The purpose of this one-pager is to highlight the major challenges faced by the previous RSA program in the selection of fisheries/prioritization of research projects with regard to consistency with stated Council plans/objectives, especially linkages to management goals. The SSC Economic Workgroup's primary recommendation is the broader application of benefit/cost principles in future RSA program implementation.

1) The issue:

The Council's long-term role is to obtain the greatest benefits to the nation from the living marine resources under its legal stewardship. In some cases, these management goals and objectives are compromised by uncertainty in the science and subsequent application of policy. Research is paid for and conducted by many entities to fill knowledge gaps with the intent to improve management outcomes. Getting the most "bang-for-that-buck" is critically important.

The Council historically created Research Set-Asides taking a 3-percent share of annual quota to generate revenue to support research. Acting rationally, the Council implicitly assumed that the value of the resultant research met or exceeded what the quota would have been valued at by the fishermen in the subsequent sale of quota. No economic data exist to support this conclusion. Because the species value varies widely across fishery management plans, the absolute amount of funding for research projects by species differed widely, affecting the quantity and type of research projects solicited. This had a direct impact on the return on investment of the proposed research on the Council's management objectives.

2) Past RSA experience:

The objectives of the Council's original RSA program were not purposely aligned with economic performance, efficiency, or revenue outcomes. Rather, as the initial Environmental Assessment stated, the RSA Program was originally established to regain the public trust:

"One of the original objectives of the RSA Program was to foster collaboration between the scientific community (from both government and academia), the fishing community, and the general public. "

The Council was not trying to maximize the amount of research for a given dollar; its objective was to engage fishermen directly in the conduct of research because many had no faith in the science being conducted by NOAA or the states, and this lack of confidence was creating management and enforcement issues. This was, and could still be, a legitimate Council goal.

Notwithstanding the efficiency intention, however, what was the relationship of RSA research to improving management outcomes? A large number of past RSA research priorities focused on stock assessment improvements. The SSC Economic Working Group found frequent references in the public record criticizing the "quality" of the resulting science, but in fact all but two of the 44 projects passed NOAA scientific peer review. However, there was little basis available to evaluate the marginal improvements in a stock assessment relative to the research funding being spent. The problem was the absence of specific performance metrics: how the research specifically tied into or affected the current assessment or management program. Without performance metrics it has been difficult to compare the relative impacts of past projects.

3) Pros and cons of options the Council could consider:

What fisheries should be given priority in implementing research projects? The Research Steering Committee (RSC) already has stated certain kinds of research it wants the new RSA to focus on (e.g., more applied; management focused; short term outcomes). In addition, the Council has endorsed a new 5-year Research Plan in October 2020 relative to seven strategic research themes, including species-specific priorities. The topic of assessment priorities has also recently been linked to the Research Track Assessments, so there is ample raw material to form a consensus of research criteria to sit alongside the stated management goals (State and federal) for each managed stock. Ultimately a new Council process would endorse such a consensus of criteria for a new RSA program. These are all reasonable objectives.

But how should factors such as uncertainty in stock assessment models (i.e., larger OFL CVs) and the likelihood of a constraining ABC help to identify fisheries where the biggest economic gains from investment in science are expected?

Economists look to the value of a research project to point us in the right direction using benefit-cost analyses, and this is where the past RSA program critics conflated "quality" with "usefulness" of the science. Some of the RSA research may have been statistically well-designed and analytically correct, but did not address a relevant scientific question or timely resolve an assessment dilemma or management impediment, i.e., it lacked value/benefit or relevance. The lesson learned is to ensure a strong linkage/collaboration/partnership between the RSA researcher and the intended consumer of the research results to make sure the research product will be relevant, useful, and, at a minimum, applied directly to fishery science or management, at the right time. For example, at the proposal stage does a research proposal identify a specific client or entity by name and when they will be using or applying the research results? Future proposals lacking such linkages would be down-rated.

Despite the challenges of linking research outcomes with their consequences for management, measures of performance are essential for the Council's investment of RSA funds. RSA funds are a financial asset, and like any financial asset invested by a bank, credit union or mortgage broker, the investor (i.e., the Council for RSAs) has a responsibility to collect sufficient economic and financial data to measure the return on its investment. RSA economic and financial data were not routinely collected in the past so performance and return on this research investment could not be monitored. For example, the Council cannot answer whether the fishery would have been better off leaving the 3-percent quota set aside with the original TAL. The SSC Economic WorkGroup

recommends a suite of economic and financial data be collected in association with every RSA project.

The allied performance metrics that research proposals should be asked to address are those related to the impacts of the research products relative to proposed reductions in model uncertainty, potential impacts on ABC, relaxation of gear and other fishing restrictions, etc. Tools and analyses, such as Management Strategy Evaluations, that could be useful to measure such changes, should be incorporated where feasible into the projects such that the Council can begin to adequately evaluate the consequences of its investments.