

The next step in the Decision Framework calls for identifying appropriate performance metrics and setting expectations for progress.

Remember, there are three types of metrics that should appear in the adaptive management process:

1. metrics that show strategy actions are being accomplished
2. metrics that indicate progress toward the desired outcome
3. metrics that assess accuracy of assumptions made in developing strategies

The easiest metrics to develop are the ones that show progress in implementing strategies (#1). Basically, every action identified in a workplan should have a simple metric for monitoring progress and a rate of accomplishment. The metric is how much of whatever you planned to do will be accomplished in the next one, two, three, ...years. In addition to the rate at which you plan to accomplish the action, you should also be able to identify the minimum accomplishment that would indicate the action and strategy are still on track. Failure to meet this expectation would be grounds for the GIT/workgroup asking if the effort should be continued.

The more difficult metrics are the ones that indicate progress toward the desired outcome (#2). Frankly, these are the metrics of greatest importance to the Management Board in its role of evaluating overall program performance. It doesn't matter how much is being accomplished in implementing actions, if there is no success in changing the factors the workgroup has identified as critical to accomplishing the outcome.

Groups have taken different approaches to thinking about factors influencing their ability to achieve the target outcomes. As a result, building a metric for every factor identified in workplans would be burdensome and not particularly useful in evaluating progress. This is a case when simpler is definitely better.

In reviewing the current workplans, groups have generally identified factors that fall into three broad categories:

- **Knowledge/information:** these are things like improved understanding of environmental and genetic factors affecting brook trout habitat, or better understanding of how to succeed in restoring SAV, or synthesis of information on Bay fish habitats.
  - Where groups have identified these kinds of factors, success is not simply generation of the new knowledge or information, it is evidence the new information is being used to accomplish the target outcome. These are metrics that demonstrate a change in conditions necessary to achieve the overall outcome. They provide evidence that the action – in this case generation of new information – is actually having a positive effect. For example:
    - Success in generating improved understanding of SAV restoration requirements might be the proportion of restoration decisions improved by the new information.
    - Success in developing improved understanding of brook trout habitat would be the proportion of stream restoration efforts improved by use of the new information.

- Success in collecting and synthesizing information on Bay fish habitats would be evidence of improved habitat restoration and management that was informed by the synthesis.
- **Skills/methods:** these are things like new decision guidance integrating consideration of stream health with TMDL focused BMPs, tools for prioritizing wetland protection/restoration for black duck habitat, planning and design guidance for brook trout habitat restoration, authority to implement new protections for SAV.
  - Where groups have identified these as critical factors for achieving their outcomes the metric of success is again not simply creation of the new tool or method, it is evidence that use of the item or approach is having a positive effect on achievement of the outcome. For example:
    - success in developing integrated guidance for stream restoration/management would be the number of BMP installations that have used the guidance and improved stream IBIs while also reducing nutrient and sediment loads
    - success in lobbying for new protective regulations for SAV would be the amount of SAV increase resulting from the new protections
    - success in developing decision tools for black duck habitat protection/restoration would be the increasing proportion of wetland management efforts that reflect effective use of the tools
- **ability/capacity:** these are basically resource issues dealing with adequate funding, sufficient personnel, and sustained support from stakeholders, and generally the workplans call for developing communication products, lobbying for funding, and motivating stakeholder engagement
  - where groups have identified these as critical factors, success is not simply the increase in resources or outreach, it is evidence that those changes have resulted in accelerated progress toward the outcome. For example:
    - success in engaging stakeholders in stream restoration to improve fish habitat is the proportion of stream restoration efforts that have actually incorporated available information on fish habitat requirements
    - success in engaging stakeholders in a stream restoration permit committee would be evidence of accelerated stream restoration across the watershed due to streamlined permitting processes

The logic behind the Decision Framework is that we use the best available understanding of the system to decide what factors need to be changed in order to achieve a desired outcome, then we undertake to generate those changes, and we continually assess the correctness of our understanding. To do this effectively, we must have metrics which do not simply measure the change in factors, but the degree to which those changes are producing the effects we needed and expected to achieve the desired outcome. That is the data which informs decisions to continue, alter, or halt our original strategy.

So, in addition to the action-based metrics that each workgroup can easily develop, it is important to develop metrics around the efforts to alter:

- the information available to inform management;
- the tools and methods available to undertake management; and/or
- the resources available to implement management.