The Enhanced 5-S Project Management Process

Over the past decade, The Nature Conservancy (TNC) has developed and deployed the 5-S Framework for Conservation Area Planning, which is used to design and measure the effectiveness of conservation strategies.[1]

The five S's include:

- **Systems**: the biodiversity targets occurring at a site, and the natural processes that maintain them, that will be the focus of planning.
- **Stresses**: the types of degradation and impairment afflicting key attributes of the system(s).
- **Sources**: the agents generating the stresses.
- **Strategies**: the types of conservation actions deployed to abate sources of stress (threat abatement) and altered attributes of the systems (restoration).
- **Success**: measures of system viability and threat abatement.

The logic underlying the Five-S framework is simple. The implicit conservation goal is to maintain viable occurrences of the systems. By definition, viable occurrences are not significantly stressed. Therefore, the stresses must be abated to ensure viable systems. There are two fundamental approaches to lessen the stress and enhance or maintain the viability of the systems. The first is to abate the sources that are causing the stresses, under the assumption that the stress will subside if the source is removed. The second is to directly abate the stresses that may persist once the source is removed. Thus, conservation strategies are developed and implemented to (1) abate the critical sources of stress (i.e., threat abatement); and (2) directly restore altered key attributes of the systems (i.e., restoration). The measures of conservation success assess the effectiveness of our strategies at accomplishing these outcomes, and provide the feedback for revising strategies, as warranted.

The 5-S Framework has a number of strengths but also some significant shortcomings. For example, the current 5-S system does not have explicit tools for rigorously measuring viability of systems, conducting a situation analysis, setting explicit goals and objectives, monitoring indicators related to key assumptions, or using the information to then adapt and learn. Developing effective conservation strategies and truly measuring their effectiveness requires an enhanced version of the 5-S Framework that incorporates and emphasizes all the elements of an adaptive management approach.

To this end, TNC's 5-S Framework for Conservation Area Planning was integrated with a compatible adaptive management framework called Measures of Success[2] to produce the Enhanced 5-S Project Management Process. A conservation project can be defined as a set of strategies taken by a defined group of practitioners working to achieve a defined set of goals and objectives within a specified geographic area. TNC has traditionally thought of conservation

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[1] **Source:** *5-S Framework for Site Conservation: A Practitioner's Handbook for Site Conservation Planning and Measuring Conservation Success.* The Nature Conservancy (2000). Available at www.conserveonline.org.

[2] **Source:** *Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects,* by Richard Margoluis and Nick Salafsky. Island Press (1998).

areas as its "projects" (thus, the term Conservation Area Planning), but in recent years has begun to take action at larger scales including multiple conservation areas, ecoregions, and states, countries, and other political units.

The Enhanced 5-S Project Management Process involves a seven-step process summarized below. The components of the original 5-S process are referenced in italics within the title of each of the seven steps. Recommended standards are shown as bold, bulleted entries.

STEP A. DEFINE PROJECT SCOPE AND TARGETS *(SYSTEMS)*

The first step involves defining the basic project scope and selecting the specific conservation targets that the project will focus on. This step helps the project team define what they will be working on and to set up the ultimate measures of success.

- ***Describe project area(s) and project goal***—Provide a brief text description and furnish a basic map of the project area(s) using a computer-based GIS program, existing base map, or hand sketch.
- ***Identify project team and resources***—List the project team members and their roles and complete the resource measures template.
- ***Select minimum set of focal conservation targets***—Choose a small number of focal targets (no more than eight), explain the rationale for their selection, and show the focal target area on a spatial map.
- ***Identify key ecological attributes—***Determine at least one key ecological attribute for each focal conservation target and define the acceptable level of variation of the attributes that can be used to assess the overall health of the target.

STEP B. CONDUCT SITUATION ANALYSIS *(STRESSES & SOURCES)*

The second step involves developing an understanding of the various factors that can affect the project's focal conservation targets. This step helps the team identify high leverage points for taking action and understand the situation so that they can measure the impact of their actions.

- ***List direct threats affecting targets—***Identify the direct threats affecting the focal conservation targets and identify the highest priority critical threats.
- ***Identify factors behind critical threats—***Outline the factors (underlying causes and opportunities) behind each of the critical threats.
- ***Link targets, threats, and other factors in a chain-of-causation and/or conceptual model —***Showing the hypothesized linkage between the factors and targets that have been identified in narrative text, diagrammatic, or symbolic logic forms.

STEP C. DEVELOP ACTION PLAN (*STRATEGIES*)

The third step involves deciding on what actions the project team will take to change the situation. This step helps the project team establish goals and objectives against which it will measure its performance.

- ***Develop strategies***—Decide on specific strategies including both objectives and strategic actions and describe why these specific strategies were selected.
- ***Compile overall action plan including responsibilities, budget, and timeline—***Assign specific responsibilities to individuals and develop a budget and timeline.
- ***Add objectives to chain of causation or conceptual model***—Show how strategies will affect project situation.

STEP D. DEVELOP MONITORING PLAN (*SUCCESS*)

The fourth step involves deciding what indicators the project team will measure and how it will measure them. This step helps the project team see whether its strategies are working as planned.

- ***Identify indicators—***Develop indicators for project goals, key ecological factors, objectives, and other information needs.
- ***Select methods for data collection***—Specify one or more methods for collecting data for each indicator.
- ***Compile overall monitoring plan***—Assign specific responsibilities and develop a budget and timeline.
- ***Add indicators to chain of causation or conceptual model***—Show how indicators will map onto the project situation.

STEP E. IMPLEMENT ACTION AND MONITORING PLANS *(STRATEGIES & SUCCESS)*

The fifth step involves implementing the project's plans. This step is obviously the most important one in the process. Knowing if the proposed actions and monitoring efforts were implemented is critical from a learning perspective.

- ***Ensure action plan and monitoring plans are implemented***—Complete a brief checklist regarding the ongoing status of plans.
- ***Record any major deviations*** —Briefly record changes in plans.

STEP F. ANALYZE AND COMMUNICATE *(SUCCESS)*

The sixth step involves analyzing the collected data and then communicating the results to TNC leaders, managers, and external audiences.

- ***Analyze data from monitoring efforts***—Summarize the results and document completed analyses.
- ***Communicate information to key people in the project***—Document how information has been shared with key members of the project team.
- ***Share lessons with other people***—Identify key audiences and briefly document how they have shared information with them.

STEP G. USE INFORMATION TO ADAPT AND LEARN *(SUCCESS)*

The final step involves using the information to change the project, add to organizational knowledge, and ultimately, change the practice of conservation. This step ensures that we learn from our experiences and avoid repeating our mistakes.

- ***Use results to adapt action and monitoring plans***—Document changes made over time.
- ***Improve our collective knowledge***—Contribute findings to the institution in order to help develop the knowledge and capacity of the organization and the overall discipline of conservation.