Multi-Site Peer Learning: A Tool to Improve Strategy and Management Effectiveness

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Abstract

In 1997, The Nature Conservancy adopted *Conservation by Design*: *A Framework for Mission Success*, which established the Conservancy's long-term conservation goal, and ecoregional approach for achieving the goal – the long-term survival of all viable native species and communities through the design and conservation of portfolios of sites within ecoregions. To implement this approach, the Conservancy has developed and applied more sophisticated methods for site-based conservation, and for measuring progress towards our conservation goal. The Nature Conservancy originally developed the planning approach presented here for the "bioreserve" initiative and called it the "Five S's": systems, stresses, sources, strategies, and success. The process begins with identifying important species, communities, and systems (targets), and then assigns an integrity ranking to each target; identifies threats to those systems; develops strategies to abate critical threats, and identifies measures of success. Planning activities are characterized by heavy stakeholder input and prioritization/ranking exercises. The end result is a list of strategic conservation actions, which guide site-based conservation and management efforts to abate critical threats to biodiversity.

The Five-S approach has been the basis for the Conservancy's landscape-scale, community-based conservation workshops presented through the Efroymson Fellowship Program. The purpose of the Efroymson Fellowship Program is to help develop effective strategies for conserving functional landscapes. It is a highly participatory process involving practitioners from varied project areas and disciplines. Typically, 4 to 6 multi-disciplinary project teams participate in an Efroymson "series", with groups organized by themes such as *islands*, *marine systems*, *salt marshes*, *grasslands*, etc. Workshops are lead by conservation planning experts and specifically designed to allow TNC staff and partners to share their experiences, as well as solicit ideas and suggestions. Participants in the workshops, benefit greatly from the collective thinking of site managers and TNC staff engaged in similar work. Workshop leaders share new approaches used for landscape-scale, community-based conservation. In addition to providing a structured, iterative approach to conservation planning and evaluation, the process is an excellent vehicle for engaging partners in conserving portfolio areas.

TNC has recently completed a series of Efroymson workshops that brought together marine site staff from Loreto National Park in Mexico, the Meso-American Reef in Belize, Rock Islands & Southern Lagoon in Palau, Peconic Estuary in New York, and the Marine and Coastal System of the Virgin Islands. Although the sites ranged from tropical Pacific to temperate Atlantic systems, practitioners benefited from lively discussions and constructive criticisms related to site conservation and management. Groups were challenged to revisit their conservation targets, threats to those targets, and develop more strategic action plans. Working groups were challenged to rewrite site objectives with refined goals and milestones. This emphasis on revisiting previous work and strategies allows working groups to question the integrity of their approaches, and modify management strategies accordingly. Participants report that the process is

extremely helpful in revising plans and developing new strategies. Additionally, participants found the process to be invaluable for partners with whom TNC is working to build institutional capacity. Given that many MPA sites are geographically isolated, this process provides project teams a rich and rare opportunity to give and receive critical inquiry, as well as to share ideas and lessons learned among a diverse assemblage of practitioners.

I. Conservation By Design[1]

In the early 1970s, the Conservancy hired its first scientist—Dr. Robert Jenkins—who successfully created the first biological inventory programs, the Natural Heritage programs, to help guide our land acquisition work. The use of Heritage program information led to a second conservation approach in the 1970s and early 80s referred to as "identification, protection, and stewardship." By the mid to late 1980s, we recognized the important role that ecological processes play in sustaining biodiversity, and greatly expanded our ideas on conservation in what has been dubbed "the bioreserve era." The need to work at increasingly larger scales, and measure our progress against the mission, led to our fourth and current conservation approach, outlined in *Conservation by Design*. This approach places emphasis on the conservation of all communities and ecosystems (not just the rare ones), emphasizes conservation at multiple spatial scales and levels of biological organization, and recognizes the value of comprehensive biodiversity planning on ecoregional rather than geopolitical lines.

This work is best described through the four-part conservation process:

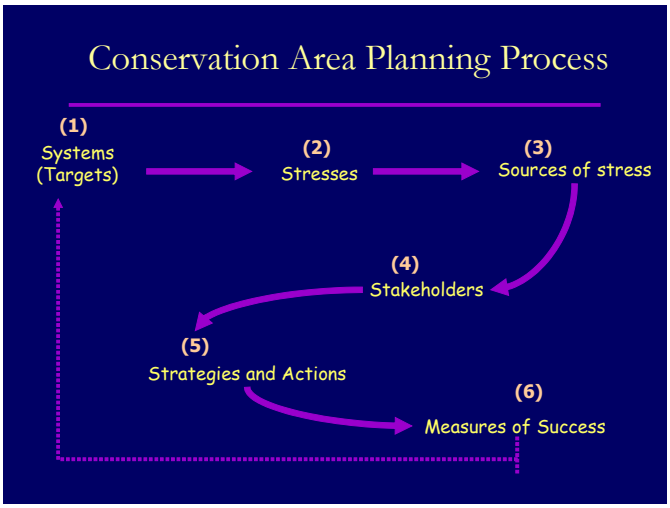
• **Ecoregional Planning--**Selecting and designing networks of conservation sites that will conserve the diversity of species, communities, and ecological systems in each ecoregion.
• **Site Planning**--Applying the Five-S Framework to priority conservation sites identified through ecoregional planning to develop strategies to abate threats to conservation targets
• **Taking Conservation Action**--Implementing any number of different strategies to abate threats and conserve targets at conservation sites
• **Measuring Success**--Using the Biodiversity Health and Threat Status Measures to assess efficacy of conservation strategies and actions.

[1] The Nature Conservancy. 2000. Designing a Geography of Hope: A Practitioner's Handbook to Ecoregional Conservation Planning.

II. Site Conservation Planning: The Five S Approach[2]

For developing strategies at conservation areas where the Conservancy takes action directly or through partnerships, we use the Conservation Area Planning methodology. Conservation Area Planning (CAP) is a method developed by The Nature Conservancy to analyze the biodiversity of a site, and to design conservation strategies to efficiently protect that biodiversity. It is an analytical process that builds a logical connection between conservation strategies and the fundamental ecological processes, states, and gradients required to maintain biodiversity at a site. This methodology provides a well-tested conceptual model to develop effective strategies, and provides priority and direction for cost effective conservation action that achieves tangible conservation results.

- **Systems**
- **Stresses**
- **Sources of Stress**
- **Stakeholders**
- **Strategies**
- **Success Measures**



Systems are the conservation targets and supporting ecological processes that will be the focus for site conservation planning and measuring conservation success. Targets include *species* (imperiled, endangered, declining, rare or of special concern), *major groupings of species* (e.g. globally significant species aggregations), *ecological communities* (groupings of co-occurring species), and *ecological systems*. Ecological systems are assemblages of communities occurring together on the landscape, linked by environmental processes, and which form a robust, cohesive, and distinguishable unit on the ground.

Once targets are identified, viability of each target occurrence is assessed according to three criteria: *size, condition*, and *landscape context*. Size reflects the area or abundance of the occurrence. Condition is a measure that integrates composition, structure and biotic interactions of a particular target. Landscape context is an integrated measure of the dominant environmental regimes (e.g. fire, flood) and the availability of the habitats and resources necessary for long-term sustainability of the conservation target.

[2] The Nature Conservancy. 2000. The Five-S Framework for Site Conservation: A Practitioners Handbook for Site Conservation Planning and Measuring Conservation Success.

Stresses are the types of destruction or degradation affecting conservation targets, thus reducing their viability. The damage may occur directly to a target, or indirectly to an ecological process important to sustaining the target.

Sources of stress are the causes or agents of destruction or degradation. These are the human activities, typically uses of land, water or other natural resources, which cause stresses. Each stress has at least one source, and stresses often have multiple sources. The Conservancy's approach focuses upon those proximate sources of stress that can be abated with practical strategies. Some sources of stress are on-going or "active"; others may be historical. Some stress can persist even in the absence of an active source, such as disruptions to a wetland's hydrology persisting long after the dumping of fill has ceased.

The assessment of systems, stresses, and sources of stress leads to a listing of critical threats for a conservation area. Threats are a combination of a source and the stress it causes to a system. Critical threats are those with the greatest impact upon the targets at a conservation area.

Based on the identified critical threats, site-planning teams develop conservation **strategies**. Strategies are the broad action paths necessary to abate critical threats, and enhance the viability of conservation targets.

In order to design and implement effective strategies, site planning teams first look closely at **stakeholders** linked to critical threats. This stakeholder analysis, via stakeholder-situation diagrams, examines relationships between the critical threat, stakeholders, their activities, and forces that drive their behavior. With this information, specific targeted strategies can be designed. Most strategies have two broad objectives:

- **Threat abatement**: elimination of active sources of stress (subsequent reduction in stress and increase in viability)
- **Ecological Management and Restoration**: direct elimination of stress and enhancement of viability.

The Nature Conservancy defines conservation success as the long-term abatement of critical threats, and sustained maintenance or enhancement of biodiversity health. The Conservancy has developed **success measures** to monitor biodiversity health and threat level. The *Biodiversity Health* measure of success is derived from the overall viability of conservation targets at a conservation area. The *Threat Status* measure of success is based on the magnitude of critical threats. Collectively, these two measures of success seek to quantify conservation impact—the contribution of the Conservancy and our partners to conserving biodiversity.

Because there is often a lag-time between the implementation of conservation strategies and the abatement of critical threats, or enhancement of target viability, we also employ a set of short-term indicators reflecting institutional **capacity** to effect conservation strategies developed through site conservation planning processes.

III. Efroymson Fellowship Program Overview

The Efroymson Fellowship program helps develop effective strategies for conserving functional landscapes. Fundamental to this process is recognition that conservation planning and management is an iterative process. Political situations, conservation status, and community support are continuously changing and evolving, and conservation planning must adapt to effectively meet these changes. The Efroymson program provides opportunity for planners and managers to take a brief "time-out" and evaluate current work and future plans. Workshops allow staff and partners to share experiences, solicit ideas, offer suggestions, and benefit from the collective thinking of others engaged in similar work. This highly participatory process involves practitioners from varied project areas and disciplines. It provides project teams opportunities to give and receive critical inquiry, as well as to share ideas and lessons learned. To date, over 150 landscape/seascape project teams have participated, including teams from Australia, Belize, Canada, Ecuador, Guatemala, Jamaica, Mexico, Palau, Papua New Guinea, the Virgin Islands, and 49 states in the U.S.

The Efroymson Fellowship program is based on the core elements of the Five-S site planning approach, and requires project teams to:

- determine the conservation targets at each project area and assess their ecological integrity
- determine the most critical threats at each area
- develop effective, high-impact strategies to abate critical threats, and enhance the health of conservation targets at each area
- develop a baseline set of conservation measures of success for each area
- assess the key capacity factors for achieving lasting conservation results.

IV. Workshop Fundamentals

The workshops are characterized by four basic components that include multiple disciplines, structure, peer review, and expert guidance. These components are described below.

Multi-disciplinary Project Teams

Each participating project involves a multi-disciplinary team, usually 3 to 5 participants, including a staff member with lead responsibility for the project, a conservation scientist, and others familiar with the area. Partners from varied public and private organizations often join as participants on a project team. Typically, 4 to 6 projects participate as a group in an Efroymson workshop. Classes are organized within or across states, countries, or conservation regions. They involve conservation areas with similar ecological systems and threats; or areas that are very different. They focus on projects in TNC action areas, or on projects being led by partners. This differentiated approach to workshop design stimulates dialogue and debate, and offers a rich learning experience.

Structured and Iterative Approach
All participants are requested to do some modest preparation prior to each session. They come prepared to discuss their project with their colleagues, and to give and receive feedback about issues that arise in the discussions.

Typically, two or three separate workshops are planned. Each workshop runs approximately 2½ days, and, if feasible, is held at one of the participating sites, thereby allowing participants to see some of the conservation challenges and opportunities first-hand. All participants are requested to participate in each of the sessions.

The project teams use a custom-programmed Microsoft Excel workbook throughout the workshops as a tool for analyzing conservation targets, threats, and strategies. This user-friendly software has been developed and tested extensively by the Conservancy over the past three years, for use in conservation area planning and measuring conservation success.

Peer Review and Learning
The Efroymson workshops are designed to allow staff and partners to share experiences, as well as solicit ideas, suggestions, and benefit from the collective thinking of others engaged in similar work. The environment of the workshop is characterized by open sharing, "tough love" critiques, and creative solutions. Participants are encouraged to go outside their comfort zone and reconsider what often represents years of hard work and thinking. During this process, participants are encouraged to share successes and failures in terms of approach, and learn from the work of others.

Expert Guidance
Experienced workshop facilitators are essential to the evaluation process. Generally, facilitators have extensive experience with conservation planning and management. To compliment this conservation expertise, relevant scientific authorities or experts are also involved in the process, to provide feedback and challenge participants to incorporate rigorous standards in conservation plans and strategies. Workshop leaders also share lessons learned from other areas, and new approaches and tools being used for landscape-scale, community-based conservation.

V. Efroymson Marine Sites Experience

The first marine-focused Efroymson workshop series was conducted during the fall of 2002 and spring of 2003. The sites chosen included Loreto National Park in Mexico, the Meso-American Reef in Belize, Rock Islands & Southern Lagoon in Palau, Peconic Estuary in New York, and the Marine and Coastal System of the Virgin Islands. Each site team included TNC staff and local partners, working together on a variety of Marine Protected Areas. Although these sites ranged from temperate Atlantic to tropical Pacific, site staff found many common issues, and were able to provide constructive feedback on various conservation plans and activities at each site.

The Benefits

Workshop teams reported that the process was highly beneficial, with results including revised conservation targets, new & improved viability assessments, refined objectives, new strategies, updated plans, and increased partner capacity. Characteristics discussed below were highlighted as critical to the value of the process.

Peer Pressure

Because project groups were given specific tasks and tight deadlines, groups were compelled to meet larger group expectations and ensure completion of their activities. Participants observed that it is often challenging to revisit old plans, and even more so in a formally mandated situation. This approach required groups to prepare in advance and do their homework, but did not require major management overhauls.

Learning from Failure

Participants acknowledged that sharing project or methodological failures with peers is essential, and that there is a general lack of willingness for practitioners to do so. This process recognized the reality of successes and failures, as well as the pressures associated with them and encouraged participants to openly discuss challenges they have faced in managing their MPAs.

Integrating New Thinking

The Efroymson process was a catalyst for project groups to refine and update their thinking, and gently forced them to incorporate new thinking into their plans. Several participants reported that they found themselves providing criticism to other sites when looking at situations objectively, and then realized that they were doing the same thing at their own site. They found this process to be different from typical self-analysis, which can often be better characterized as self-congratulation. Others reported that comments and criticisms made during the workshops were taken seriously, and in many cases resulted in changes or improvements to the site plan.

Experts on Call

Participants found workshop facilitators fill many valuable roles. Experts kept the group on task, provided expert opinion and guidance, provided regional and global perspectives on site activities, and challenged the group to be innovative thinkers. Having immediate access to such expertise was essential for projects based in remote areas. The facilitators encouraged lively discussions and friendly debate among sites and individuals.

Networking

In many cases, MPA managers are geographically isolated, with few opportunities to connect with other practitioners, to share and learn as well as see their efforts in a regional or global context. Participants found that the workshops brought a variety of organizations more closely together into a conservation vision. Additionally, participants noted the value of site exchanges by keeping the work personal and meaningful. They also noted the value of bringing sites together that share similar characteristics. Participants found that “marine” was too broad a term, in this case. Some suggestions for

future workshops included MPAs that were specifically intended to protect coral reefs, mangrove/seagrass/reef complexes, temperate estuaries, and small island systems.

Partner Participation

Participants found the inclusion of partners and other relevant stakeholders vital to the process for both increased understanding of the planning process, as well as increasing the level of commitment to the partnership. One site noted that partners thanked them profusely for helping bring people together, sharing information and technical references. Project groups strengthened existing partnerships, initiated new partnerships, and ultimately helped to ensure the success of management activities and conservation endeavors.

VI. Conclusions

Marine conservation practitioners and managers are faced with the tremendous responsibility of protecting vast areas of ocean. The challenge of this endeavor requires that they be provided sufficient time to evaluate their progress. By building close associations with those facing similar responsibilities, they can avoid falling behind on best practices, approaches and methods. Failure to engage in this inter-disciplinary process can create situation where they will find themselves isolated in struggling to understand the complexities of the task, and risk losing perspective. Providing and seeking opportunities to interact with peers in a structured manner, to improve upon plans, and to learn new techniques, is critical for adaptive management of MPAs. The Efroymson process is an example of how some managers are addressing this need. It is simple, inexpensive, and produces meaningful and practical results.