The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

Conservation Action Planning

Developing Strategies, Taking Action, and Measuring Success at Any Scale

Overview of Basic Practices

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Contents

This document contains a summary of The Nature Conservancy's Conservation Action Planning (CAP) Process – a powerful instrument for helping practitioners get to effective conservation results. The CAP Process encompasses three key steps of the Conservancy's *Conservation Approach* – developing strategies, taking action, and measuring success.

This document was prepared by the CAP Working Group and tested with hundreds of practitioners around the world. It has been revised in accordance with the new CAP Handbook materials.

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Please address comments to CAPfeedback@tnc.org. The latest version of this document, guidance materials for each step, examples, and much more is available at www.conservationgateway.org/cap.

Introduction

About This Document

This document is an overview of the basic practices for implementing The Nature Conservancy's *Conservation Action Planning (CAP)* process. These practices are meant to help conservation projects develop strategies, take action, and measure their success and then to adapt and learn over time. As shown in Figure 1, the CAP process covers the components of the Conservancy's Conservation Approach after global and ecoregional priorities have been set. It is the most recent incarnation and synthesis of what is a long legacy of project-level planning practices in the Conservancy, including Site Conservation Planning, Conservation Area Planning, and the 5-S Framework. The Conservation Action Planning methodology builds upon these previous practices using basic planning and adaptive management principles.

The purpose of this overview is to provide a comprehensive yet succinct introduction to the logic and fundamental steps and practices embodied in the CAP process. It has been written to be accessible to a broad audience of conservation practitioners, scientists, and project and program managers. This overview is not meant to be a how-to guide for implementing this process; comprehensive guidance material in the form of the CAP Handbook and an online toolbox is available at www.conservationgateway.org/cap .

This document outlines the CAP process in a series of ten steps, providing a brief description of the basic practices for each step and the expected outputs or outcomes for each practice (see Figure 1 and the Summary Table at the end of this document). Numbers denote steps, round bullets (•) denote practices, and square bullets (□) denote outputs. All technical terms are underlined the first time they are used and then defined in the glossary. Although the adaptive management process outlined in this document closely tracks the Conservancy's CAP Excel Workbook, it is not mandatory to use the workbook to go through this process.

Some Things to Keep in Mind

- **Don't worry** – The CAP process outlined in this document might appear to be complex and somewhat overwhelming. But, many of you may already be familiar with much of this material from previous experiences with the 5-S Framework. Furthermore, your project is not expected to produce flawless outputs the first time you go through each step in this process. Instead, this is meant to be an iterative cycle – the idea is to deliberately and yet rapidly go through the steps, develop a credible draft of the outputs, and then revise your work over time as your project changes and matures. Good planning and implementation is an ongoing series of successive approximations built on sound working hypotheses.

- **Adjust as necessary** – The basic practices described in this document should generally apply to all conservation projects, but will have to be adjusted to meet each project's needs. In particular, each project should go into a level of detail commensurate with their overall investment in their project. Also, some projects may find that certain practices don't work for them. It's expected that teams will change or adapt these basic practices as necessary.

- **Change the order –** The presentation of steps in this document imposes a linear sequence on what is fundamentally a non-linear process. To this end, your core project team should feel

comfortable changing the order of steps, splitting them, applying them simultaneously, or going back and revisiting earlier parts or outputs at any time**.**

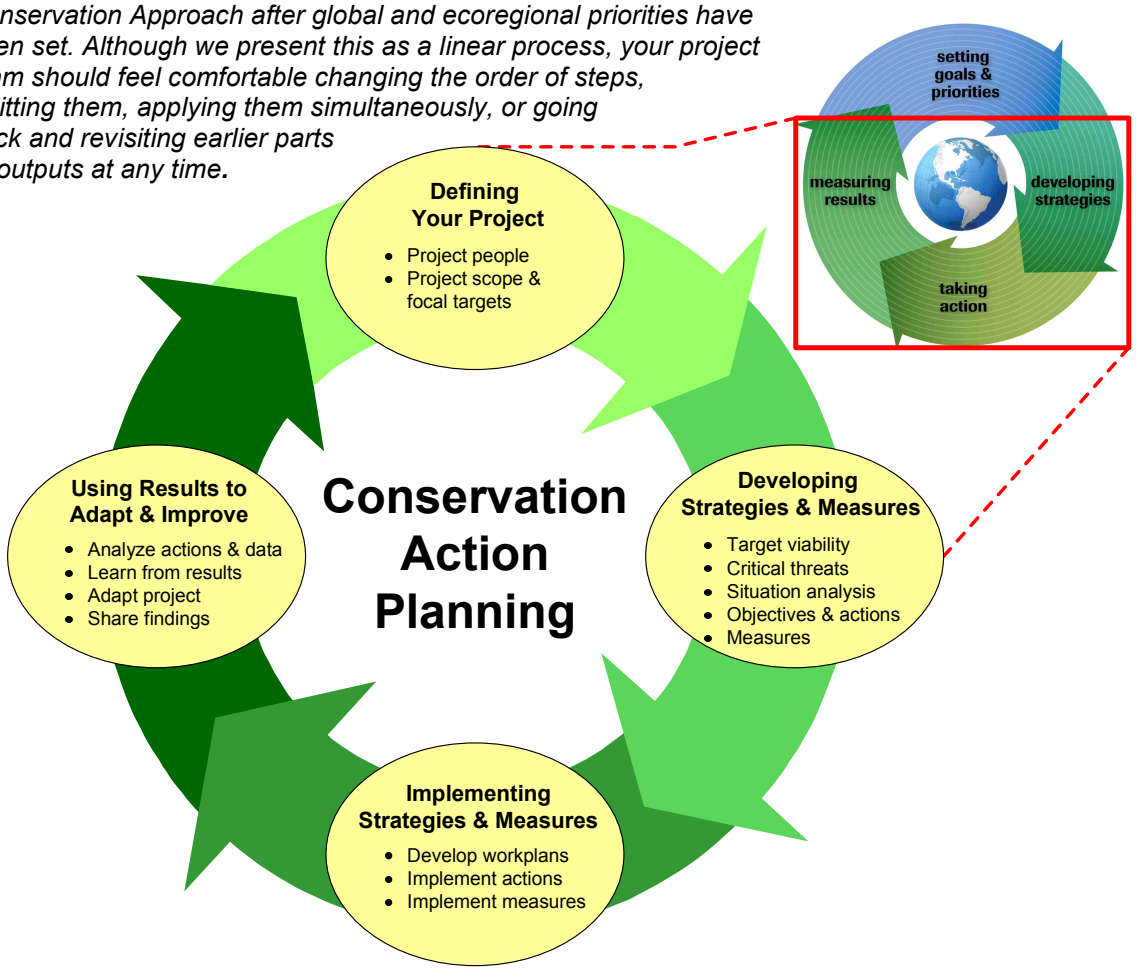
- **Make use of existing information** – Chances are, your current project is not the first conservation effort to have been tried in the place where you are working. Take the time at the front end to review the materials available and consider the experience of other practitioners – both historical and current. Consider not only biological information, but social, economic, and institutional information as well.

- **Don't be afraid of uncertainty –** When you encounter data gaps, don't be paralyzed – state your hypotheses, move forward with the best available information, and be sure to record any assumptions you are making.

- **Capturing your thinking** – The 5-S Framework, at its essence, is a way of thinking strategically to focus actions where you are likely to have the most impact and to allow you to learn and grow with experience. The primary outputs from this process are the thinking that your team does and the decisions that you make. However, as you go through each step in the process, it is important to keep at least rough written notes about how your team arrived at decisions and the assumptions you made. These notes, either in the CAP Workbook or on paper, will be important reference points for your own learning as well as for future team members and practitioners in other projects. It is also important to analyze and record information spatially on project maps wherever possible.

Figure 1. The Conservation Action Planning (CAP) Process

The CAP Process covers the components of the Conservancy's Conservation Approach after global and ecoregional priorities have been set. Although we present this as a linear process, your project team should feel comfortable changing the order of steps, splitting them, applying them simultaneously, or going back and revisiting earlier parts or outputs at any time.



A. Defining Your Project

1. Identify People Involved In Your Project

This step asks you to identify your most valuable resource – the people who will be involved in designing and implementing your project. Specific questions that this step answers include:

"Who will design our project?
"Who will be responsible for ensuring the plan goes forward?"
"Who can give us advice?"
"Who will help us through this process?"

- **Develop your core project team –** Your core project team should be composed of a specific group of individuals who are ultimately responsible for the overall design, implementation and documentation of your project. A core team is ideally composed of between 3 and 8 people, representing varied disciplines, differing perspectives, and in many cases, partner organizations. Core team members collectively need to have knowledge of the area (both its ecology and human context), ample conservation experience, and an ability to think strategically. In addition to the core project team, it may be useful to identify other planning team members or advisors to whom your project team members can turn for counsel. In particular, select your core team and advisors keeping in mind the key stakeholder groups at your project site. Expected outputs include:
  - □ Selection of core project team members and assignment of roles.
  - □ Identification of other planning team members and advisors as needed.

- **Identify a good process leader** – Teams benefit a great deal if this process (especially Steps 2 through 6) is facilitated by a person who understands the key elements of the process, who can ask probing questions, bring a neutral perspective, be flexible in the application of the process, and keep your team from getting too bogged down in any one part. This leader does not need to be a "professional" facilitator. Expected outputs include:
  - □ Identification of a process leader.

2. Define Project Scope & Focal Conservation Targets (5S = Systems)

With this step you define the extent of your project and select the specific species and natural systems that your project will focus on as being representative of the overall biodiversity of the project area. This step helps your project team come to consensus on the overall aim and scale of the project and your ultimate measures of success. Specific questions that this step answers include:

"Where is our project?"
"What are we trying to conserve or restore?"

- **Describe project area(s) and your overall project vision –** The scope of most conservation projects will focus on a defined geographic project area that contains the biodiversity that is of interest. In some cases, a conservation project may not focus on biodiversity in a specific area, but instead will have a project scope that focuses on a population of wide-ranging

animals such as migratory birds, or on addressing a widespread threat that may require high-level policy interventions. A project's vision is a summary of the desired state or ultimate condition that you are working to achieve. Expected outputs include:

- A brief text description of your project area or scope.
- A basic map of your project area(s) using a computer-based GIS program, existing base map, or hand sketch.
- A statement of the overall vision of your project.

- **Select a minimum set of focal conservation targets** – Focal conservation targets are a limited suite of species, communities, and ecological systems that are chosen to represent and encompass the biodiversity found in your project area. They are the basis for setting goals, carrying out conservation actions, and measuring conservation effectiveness. In theory – and hopefully in practice – conservation of the focal targets will ensure the conservation of all native biodiversity within functional landscapes. Focal conservation targets are often informed by ecoregional targets. Most projects can be reasonably well defined by eight or fewer well chosen focal targets. Expected outputs include:
  - Up to eight ecological systems, ecological communities and/or species that you assume represent the biodiversity of the area for which you are planning.
  - An explanation of why these conservation targets were chosen by the team and, if applicable, the nested targets they represent.

B. Developing Your Conservation Strategies and Measures

3. Assess Viability of Focal Conservation Targets (5S = Systems)

This step asks you to look at each of your focal targets carefully to determine how to measure its "health" over time. And then to identify how the target is doing today and what a "healthy state" might look like. This step is the key to knowing which of your targets are most in need of immediate attention, and for measuring success over time. Specific questions that this step answers include:

"How do we define 'health' (viability) for each of our targets?"
"What is the current status of each of our targets?"
"What is our desired status for each of our targets?"

- **Select key ecological attributes and associated indicators** – Each focal conservation target has certain characteristics or key ecological attributes (KEAs) that can be used to help define and assess its ecological viability or integrity. These attributes are critical aspects of the target's biology or ecology that, if missing or altered, would lead to the loss of that target over time. The broad categories of size, condition, and landscape context can be used to inform the selection of specific key ecological attributes. Each key ecological attribute can either be measured directly, or will have an associated indicator that can be measured to represent its status (see Box 1 for an example). Expected outputs include:
  - □ At least one key ecological attribute for each focal target.
  - □ A measurable indicator for each key ecological attribute (in some cases, the indicator may be the same as the attribute itself).

- **Determine acceptable variation for each attribute** – Most attributes vary naturally over time, but we can define an acceptable range of variation. This is the range of variation for each attribute (or technically its indicators) that would allow the target to persist over time – a range in which we would say the attribute has good or very good status (again, see Box 1 for an example). If the attribute drops below or rises above this acceptable range, it is a degraded attribute. Your challenge is to specify, as best you can, your assumption as to what would constitute an acceptable range of variation. Expected outputs include:
  - □ Your assumption – to the best of your current knowledge – as to what constitutes an acceptable range of variation for each attribute.

- **Determine current and desired status of each attribute** – Once you have determined a limited set of attributes and indicators for each focal conservation target, the next task is to assess the current status and set the desired status of the attributes. The current status reflects where your key ecological attribute is today; the desired status represents where you want to be in the future. You should consider the appropriate spatial extent and time frame for achieving the desired status; some changes may require long time periods (50-100 years). Expected outputs include:
  - □ Current status of each attribute.
  - □ Desired status of each attribute.

- **Document the sources of your information** – Often little is known about the things we are trying to conserve. Consequently, for many, if not most of your targets, you are likely to have to make some informed guesses about their status and what constitutes viability. For this reason, you may find it useful to develop an ecological model of your system and to record your information sources, rationale, and key questions that come up in your discussion. Capturing these questions may help to articulate useful collaborative projects for possible research partnerships in the future. Expected outputs include:
    - □ Brief documentation of how you arrived at your viability assessments including references, experts consulted, assumptions, and suggested research needs.

Box 1. Example of Viability Assessment

A project has selected a grassland habitat and a population of migratory fish as two of its focal conservation targets. The team decides that a key attribute of the grassland is the frequency of fires. The indicator here is merely the years between fires (basically the attribute itself). After consulting local experts, the team makes an assumption that a healthy frequency is to have fires every 5-10 years. If fires happen more or less often then that, then the grassland will lose integrity over time, leading to serious degradation of the system.

Likewise, the team decides that a key attribute of the migratory fish is population size. An indicator here is a sample of adults observed going over a fish ladder during the peak of the spring spawning season. The team currently has no idea what constitutes a viable population, but makes an initial assumption that at least 10 adults per hour are required. They hope to refine this estimate over time and add in specific ranges for each rating category.

			Indicator Ratings						
Target	**Key Attribute**	**Indicator**	**Poor**	**Fair**	**Good**	**Very Good**	**Current Status**	**Current Rating**	**Desired Rating**
Grassland	Fire regime (frequency)	Years between fires		> 10 or < 5	5-10		8	Good	Good
Migratory fish	Population size	Spawning adults observed per hour		< 10	>10		< 2	Poor ?	Good

Note: See the CAP Excel Workbook for more info and guidance on doing viability assessments.

4. Identify Critical Threats (5S = Stresses & Sources)

This step helps you to identify the various factors that immediately affect your project's focal targets and then rank them so that you can concentrate your conservation actions where they are most needed. Specific questions that this step answers include:

"What threats are affecting our targets?"
"Which threats are more of a problem?"

- **Identify and rate the stresses affecting each target** – Stresses are impaired aspects of conservation targets that are likely to destroy or seriously degrade your targets and that result directly or indirectly from human sources (e.g., low population size, reduced extent of forest system; reduced river flows; increased sedimentation; lowered groundwater table level). Most of the stresses acting on your targets can be identified by looking at which key ecological attributes are currently degraded or have a high potential to become degraded within the planning horizon of your project (e.g., the next 10 years). Each stress is then rated, in terms of its likely scope and severity of impact on the target within the project planning horizon. Expected outputs include:
  - □ A list of stresses for each focal conservation target.
  - □ Ratings of the scope and severity of each stress.

- **Identify and rate the sources of stress affecting each target** – Sources of stress (also known as direct threats) are the proximate causes of the stresses to your targets. To identify sources, you need to ask a series of questions to determine what factors you think might be directly responsible for causing each stress. Then rate each source in terms of its contribution to the stress and its irreversibility. Expected outputs include:
  - □ A list of sources of stress for each focal conservation target.
  - □ Ratings of the contribution and reversibility for each source.

- **Combine the stress and source ratings to determine critical threats** – Combining the ratings of the stresses and sources of stress produces an overall ranking of the sources of stress affecting your focal conservation targets (if you are using the CAP Excel Workbook, it automatically does these calculations). The sources of stress that are highest ranked (often your "very high" and "high" rated threats) are your critical threats. Expected outputs include:
  - □ A ranking of the sources of stress affecting each focal target and a determination of the critical threats affecting your overall project.

5. Complete Situation Analysis (5S = Strategies)

This step asks you to describe your current understanding of your project situation – both the biological issues and the human context in which your project occurs. This step is not meant to be an unbounded analysis, but instead probes the root causes of your critical threats and degraded targets to bring explicit attention/consideration to contributing factors – the indirect threats, key actors, and opportunities for successful action. Specific questions that this step answers include:

"What factors positively & negatively affect our targets?"
"Who are the key stakeholders linked to each of these factors?"

- **Assess the situation** – To achieve conservation we ultimately have to abate critical threats and restore degraded targets. To do this effectively, we must understand the system or situation that drives these problems and also identify promising conditions that may lead to solutions. This means understanding the biological, political, economic, and socio-cultural context within which our targets exist – in particular, the indirect threats behind each critical threat or degraded target and the opportunities upon which to build. This assessment of these contributing factors can be accomplished by asking probing questions and capturing the results in text descriptions and/or box-and-arrow diagrams. Either way, the point is to make explicit your assumptions as to what specific factors are behind each critical threat and degraded target so as to provide insights and prompt discovery of effective points of entry or courses of action. Expected outputs include:
    - □ A situation analysis that includes indirect threats and opportunities behind all critical threats and degraded targets. In particular, a "picture" – either in narrative form or a simple diagram – of your hypothesized linkages between indirect threats and opportunities, critical threats, and targets.

- **Identify key stakeholders –** Each indirect threat or opportunity can be linked to one or more stakeholders, those people or institutions who have a hand in creating or abating threats and/or are likely to gain or lose something if conditions change. Identification of relevant stakeholders, their motivations and their connection to the targets and threats helps uncover actions likely to have the most focused impacts. Expected outputs include:
    - □ Identification of key stakeholders in the context of your situation analysis

6. Develop Strategies: Objectives and Actions (5S = Strategies)

This step asks you to specifically and measurably describe what success looks like and to develop the specific actions you and your partners will undertake to achieve it. In particular, you want to try to find the actions that will enable you to get the most impact for the resources you have. Specific questions that this step answers include:

"What do we need to accomplish?"
"What is the most effective way to achieve these results?"

- **Set objectives that describe "success"** – Objectives are specific and measurable statements of what you hope to achieve. They represent your assumption as to what you need to accomplish and as such, become the measuring stick against which you will gauge the progress of your project. Objectives can be set for and linked to the abatement of threats, restoration of degraded key ecological attributes, and/or the outcomes of specific conservation actions (see Box 3 for an example). A good objective meets the criteria of being: specific, measurable, achievable, relevant, and time limited. Expected outputs include:
    - □ At a minimum, good objectives for all threats and degraded key ecological attributes that your project will take action to address.

- If useful, good objectives for other factors relevant to project success.

- **Identify strategic actions you and/or your partners will undertake** – Strategic actions are sets of interventions that you and your partners will undertake to achieve your stated objectives. Your challenge is to identify the high leverage actions that will enable you to get the most impact for the resources you have. There is no set formula for developing good actions other than using your situation analysis, asking probing questions to surface potential actions, evaluating the options, and then selecting for implementation those actions that are most promising and cost effective. Expected outputs include:
  - One or more strategic actions for each conservation objective.

Box 2. Example of Setting Objectives

The project team in the previous example has identified *overfishing* and a *downstream dam* as two critical threats facing the fish population in their project area. As they probe the situation, the team decides that fishing is driven by both commercial fishing and by sport fishing, but that the commercial fishers represent most of the problem. As a result, there is an opportunity to use the sport fishers as an ally to help reduce the amount of commercial fishing in the estuary.

Objective 1. By 2009, commercial fishing take has been reduced to 50% of 2004 levels.

Strategic Action: Develop alliance with sport fishing representatives.

Strategic Action: Work with alliance to lobby for lower commercial fish catches.

Regarding the dam, the team decides there is now growing community support to remove the dam.

Objective 2. Remove the downstream dam by 2007.

Strategic Action: Work with local governments to get funds and permits to remove dam.

7. Establish Measures (5S = Success)

This step involves deciding how your project team will measure your results. This step is needed to help your team see whether its strategies are working as planned and thus whether adjustments will be needed. It is also needed to keep an eye on those targets and threats that you are not acting on at the moment, but may need to consider in the future. Specific questions that this step answers include:

"What do we need to measure to see if we are making progress towards our objectives and whether our actions are making a difference?"
"Are there other targets or threats that we need to pay attention to?"

- **Select a limited set of indicators to measure** – An indicator is a measure of a key ecological attribute, critical threat, objective, or other factor. At this point, you have likely identified indicators for at least some of your key attributes. The objectives you have identified will provide good direction for selection of additional meaningful indicators tied to threats and the actions being taken. Your challenge is to select the *fewest* number of indicators required to measure both the effectiveness of the strategies you are implementing

toward your objectives, and the status of important targets and threats that you are not working on, but need to keep an eye on (e.g., a low-ranked threat that might become a major problem). Expected outputs include:

- A realistic list of the indicators your project will measure to track the effectiveness of each conservation action.
- If necessary, a list of the indicators your project will measure to assess the status of selected targets and threats that you are not currently working on.

- **Develop methods to track each indicator –** A method is a specific technique used to collect data to measure one or more indicators. Your challenge is to select the most cost effective method that will give you information reliable enough to meet your management needs. Expected outputs include:
  - Briefly describe the method(s) for collecting each indicator.

Box 3. Example of Establishing Measures

In developing its measures, the project team first considers how to track progress towards meeting stated objectives from Step 5. This will often include indicators informing critical threats as well as indicators for key attributes developed during Step 3. Next, they consider the need for status indicators not directly tied to ongoing actions. For example, the migratory fish target requires adequate water quality for successful recruitment. The team does not currently believe water quality is compromised but they periodically want to confirm this assumption. They also identify the need to track the introduction of invasive fish species as an early warning of a possible new threat that may warrant action in the future.

As the team develops each indicator, it also decides on the specific method they will use to track it. Most of these methods are very simple and where possible, make use of data already being collected by other people.

Information Need and Type		Indicator	Method
Objectives			
O1. Reduce commercial fishing	Threat	Commercial fishing take	Download government records
	Threat	Boats in watershed	Download government records
	KEA	Spawning adults observed/hr* (*Also informs next objective)	Direct observations by volunteers each spring
O2. Remove dam	Threat	Presence of dam	Direct observation
Other Status (early warning) Measures			
- Water quality	KEA & Threat	Concentration of specific toxic chemicals	State water quality records
- Exotic fish species	Threat	Presence of invasive species in watershed	Interview fish & wildlife reps and track news stories

C. Implementing Your Conservation Strategies and Measures

8. Develop Work Plans

This step asks you to take your strategic actions and measures and develop specific plans for doing this work as your project goes forward. Specific questions that this step answers include:

"What do we specifically need to do?"
"Who will be responsible for each task?"
"What resources do we need?"

- **Identify action steps and monitoring tasks –** Each strategic action can be broken down into a series of tasks or action steps that your project team and partners will undertake. Likewise, monitoring your indicators will require a series of monitoring tasks. It is important to identify which individual(s) will be responsible for these steps or tasks, when they will do them, where they will do them (especially if you have a large project area) and what resources they will need. Expected outputs include:
    - □ Lists of major action steps and monitoring tasks, especially those needing to take place in the near future.
    - □ Assignments for specific individual(s) and a rough implementation timeline.
    - □ A rough project budget.

- **Assess project resources and address critical needs –** Elements of your project's capacity include project leadership and staff availability, funding, community support, an enabling legal framework, and other resources such as partner capacity and buy in from leaders. As you develop your work plan, it is important to consider how the current capacity in the project area matches up with the resources required to achieve this plan. If there is a rough balance, then you are okay. However, if you have greater needs than your current capacity, you may have to invest in developing new resources and/or scale back your plans. Expected outputs include:
    - □ A brief summary of project capacity (the project resources scorecard in the CAP Excel workbook is one tool to help with this summary).
    - □ If needed, objectives and strategic actions for enhancing project resources.

9. Implement

Ok, so now you have your action and monitoring plans. They won't do any good sitting on the shelf – your challenge here is to trust the hard work you have done and implement your plans to the best of your ability. Implementation is the most important step in this entire process; however, given the diversity of project needs and situations, the only requirement is:

- **Put your plans into action –** Do the work that you have set out for yourself. Expected outputs include:
    - □ Action.
    - □ Measures.

D. Using Results to Adapt & Improve

10. Analyze, Learn, Adapt, & Share

This step first asks you to systematically take the time to evaluate the actions you have implemented, to update and refine your knowledge of your targets, and to review the results available from your monitoring data. This reflection will provide insight on how your actions are working, what may need to change, and what to emphasize next. This step then asks you to document what you have learned and to share it with other people so they can benefit from your successes and failures. Specific questions that this step answers include:

"What are our monitoring data telling us about our project?"
"What should we be doing differently?"
"How will we capture what we have learned?"
"How can we make sure other people benefit from what we have learned?"

- **Analyze actions and data from monitoring efforts –** An annual review of the actions accomplished and results observed by the core project team and select advisors will provide continuity and facilitate learning. Your challenge is to regularly use your data to enrich your understanding of your project and inform future work. Depending on what type of data you have and what your needs are, analysis can range from formal statistical studies to simple qualitative assessments. Expected outputs include:
    - □ Appropriate and scheduled analyses of your data.

- **Use results to adapt action and monitoring plans –**. Your challenge is to use what you have learned from your analyses to modify your project. Expected outputs include:
    - □ Updated viability and threat assessments, as warranted.
    - □ Modifications to your objectives, strategic actions, and work and monitoring plans, as warranted.

- **Update project documents –** It is critical to formally record updates to your project documents on a regular (at least annual) basis to capture new knowledge and changes in plans. Not only will this aid your original team, but it will protect against a loss of institutional knowledge in the case of staff transitions. If you are using the CAP Excel Workbook, this spreadsheet is designed to be flexible and easy to update with new information. Whatever the recording tool, expected outputs include:
    - □ Regular updates of project documents.
    - □ Summaries of what you have learned, focusing on both process and results.

- **Share your results with key audiences** – Many other practitioners can benefit from your experience. Share with them what you have found. The key is to communicate your results in an appropriate way to each audience. Conservancy practitioners are urged, at a minimum, to share their CAP Excel Workbooks and other key findings through the Efroymson Coaches Network. Also, do not underestimate the value of sharing your experiences with partners and other practitioners outside the organization. Expected outputs include:
    - □ Appropriate communication outputs for each key audience.
    - □ Project's completed CAP Excel Workbook (if available).

Glossary

Acceptable Range of Variation – Key ecological attributes of focal targets naturally vary over time. The acceptable range defines the limits of this variation which constitute the minimum conditions for persistence of the target (note that persistence may still require human management interventions). This concept of an acceptable range of variation establishes the minimum criteria for identifying a conservation target as "conserved" or not. If the attribute lies outside this acceptable range, it is a degraded attribute.

Adaptive Management – A process originally developed to manage natural resources in large scale ecosystems by deliberate experimentation and systematic monitoring of the results. More broadly, it is the incorporation of a formal learning process into conservation action. Specifically, it is the integration of design, management, and monitoring to systematically test assumptions in order to learn and adapt.

Action Steps – Specific tasks required to advance and make progress toward a strategic action.

CAP – Shorthand for Conservation Action Planning.

CAP Excel Workbook – An Excel-based software program developed by The Nature Conservancy to facilitate the CAP process, automate the roll-up of summary results, and serve as a consistent repository for CAP information. Can be downloaded at http://conserveonline.org/workspaces/cbdgateway/cbdmain/cap/resources/3/CAP_v5a.xls/download.

Conservation Action Planning (CAP) – The Nature Conservancy's process for helping conservation practitioners develop strategies, take action, measure success, and adapt and learn over time

Conservation Approach – A key part of the Nature Conservancy's *Conservation by Design Framework*. It is an integrated conservation process comprised of four fundamental components: 1) Setting priorities through ecoregional planning and global habitat assessments; 2) Developing strategies at multiple scales to address these priorities; 3) Taking direct conservation action; and 4) Measuring conservation success. The CAP process outlined in this document covers components 2-4.

Conservation Project – A set of strategies taken by a defined group of practitioners working to achieve specific conservation goals and objectives for a set of conservation targets. A project can range in scale from managing a small site over a few weeks to an entire region over many years.

Contribution – One of the criteria used to rate the impact of a source of stress. The degree to which a source of stress, acting alone, is likely to be responsible for the full expression of a stress within the project area within 10 years. See also reversibility.

Core Project Team – A specific group of practitioners who are responsible for designing, implementing, and monitoring a project. This group can include managers, stakeholders, researchers, and other key implementers.

Critical Threats – Sources of stress (direct threats) that are most problematic. Most often, "very high" and "high" rated threats based on the Conservancy's threat rating criteria of their impact on the focal targets.

Current Status – An assessment of the current "health" of a target as expressed through the most recent measurement or rating of an indicator for a key ecological attribute. Compare to desired status.

Degraded Attribute – A key ecological attribute that is outside its acceptable range of variation.

Desired Status – A measurement or rating of an indicator for a key ecological attribute that describes the level of viability/integrity that the project intends to achieve. Generally equivalent to a project goal.

Direct Threats – Used as a synonym for sources of stress. Agents or factors that directly degrade targets. A project's highest ranked direct threats are its critical threats. For example, "logging" or "fishing."

Ecoregional Targets – Ecoregions are relatively large geographic areas of land and water delineated by climate, vegetation, geology and other ecological and environmental patterns. Ecoregional targets are the species, ecological communities, and ecological systems within a given ecoregion used to set conservation priorities. See also focal conservation targets.

Effectiveness Measures – Shorthand for strategy effectiveness measures. Information used to answer the question: Are the conservation actions we are taking achieving their desired results? Compare to status assessment measures.

Efroymson Coaches Network – Individuals throughout the Conservancy who are trained in the application of the CAP practice, responsible for helping projects and practitioners go through the CAP Process in a structured peer-review format, and committed to sharing their experience across the organization. The name "Efroymson" refers to the family that has provided critical support to the Conservancy in our efforts to teach and apply the methodology since 1998.

Focal Conservation Targets – A limited suite of species, communities, and ecological systems that are chosen to represent and encompass the full array of biodiversity found in a project area. They are the basis for setting goals, carrying out conservation actions, and measuring conservation effectiveness. In theory, conservation of the focal targets will ensure the conservation of all native biodiversity within functional landscapes. Often referred to as Focal Targets.

Goal – The desired summary status of a focal conservation target. Generally will be a "good" or "very good" viability rating for the target.

Indicators – Measurable entities related to a specific information need (for example, the status of a key ecological attribute, change in a threat, or progress towards an objective). A good indicator meets the criteria of being: measurable, precise, consistent, and sensitive.

Indirect Threats – Contributing factors identified in an analysis of the project situation that are drivers of direct threats. Often an entry point for conservation actions. For example, "logging policies" or "demand for fish."

Integrity – The status or "health" of an ecological community or system. Integrity indicates the ability of a community or system target to withstand or recover from most natural or anthropogenic disturbances and thus to persist for many generations or over long time periods. See also viability for species.

Irreversibility – One of the criteria used to rate the impact of a source of stress. The degree to which the effects of a source of stress can be restored or recovered. Typically includes an assessment of both the technical difficulty and the economic and/or social cost of restoration. See also contribution.

KEA – Short for Key Ecological Attribute.

Key Ecological Attributes (also Key Attributes, or KEAs) – Aspects of a target's biology or ecology that, if missing or altered, would lead to the loss of that target over time. As such, KEAs define the target's viability or integrity. More technically, the most critical components of biological composition, structure, interactions and processes, environmental regimes, and landscape configuration that sustain a target's viability or ecological integrity over space and time. The word "attribute" is sometimes used as shorthand for KEA in this document.

Methods – Specific techniques used to collect data to measure an indicator. Methods vary in their accuracy and reliability, cost-effectiveness, feasibility, and appropriateness.

Monitoring Tasks – Specific activities required to measure each indicator.

Nested Targets – Species, ecological communities, or ecological system targets whose conservation needs are subsumed in one or more focal conservation targets. Often includes targets identified as ecoregional targets.

Objectives – Specific statements detailing the desired accomplishments or outcomes of a particular set of activities within a project. A typical project will have multiple objectives. Objectives are typically set for abatement of critical threats and for restoration of degraded key ecological attributes. They can also be set, however, for the outcomes of specific conservation actions, or the acquisition of project resources. If the project is well conceptualized and designed, realization of all the project's objectives should lead to the fulfillment of the project's vision. A good objective meets the criteria of being: specific, measurable, achievable, relevant, and time limited.

Opportunities – Contributing factors identified in an analysis of the project situation that potentially have a positive effect on targets, either directly or indirectly. Often an entry point for conservation actions. For example, "demand for sustainably harvested timber."

Project – Short for conservation project. A set of strategies taken by a defined group of practitioners working to achieve specific conservation goals and objectives for a set of

conservation targets. Can range in scale from managing a small site over a few weeks to an entire region over many years.

Project Area or Project Scope – The place where the biodiversity of interest to the project is located. It can include one or more "conservation areas" or "areas of biodiversity significance" as identified through ecoregional assessments. Note that in some cases, project actions may take place outside of the defined project area. In a few cases, a conservation project may not focus on biodiversity in a specific area but instead will have a project scope that focuses on a population of wide-ranging animals, such as migratory birds.

Project Capacity – A project team's ability to accomplish its work. Elements include project leadership and staff availability, funding, community support, an enabling legal framework, and other resources..

Project Team – Shorthand for core project team. A specific group of practitioners who are responsible for designing, implementing, and monitoring a project. This group can include managers, stakeholders, researchers, and other key implementers.

Scope (in the context of a threat assessment) – One of the measurements used to rate the impact of a stress. Most commonly defined spatially as the proportion of the overall area of a project site or target occurrence likely to be affected by a threat within 10 years. See also severity.

Scope (in the context of defining a project) – Short for project scope.

Severity – One of the criteria used to rate the impact of a stress. The level of damage to the conservation target that can reasonably be expected within 10 years under current circumstances (i.e., given the continuation of the existing situation). See also scope.

Sources of Stress – The proximate activities or processes that directly have caused, are causing, or may cause stresses and thus the destruction, degradation and/or impairment of focal conservation targets. Synonymous with direct threats.

Stakeholders – Individuals, groups, or institutions who have a vested interest in the natural resources of the project area and/or who potentially will be affected by project activities and have something to gain or lose if conditions change or stay the same.

Status Assessment Measures – Information used to answer the questions: "How is the biodiversity we care about doing?", "How are threats to biodiversity changing?", or "How is the conservation management status changing?" Answers to these questions, even when no actions are occurring, are important to determine if actions are needed. Compare to strategy effectiveness measures.

Strategic Actions – Interventions undertaken by project staff and/or partners designed to reach the project's objectives. A good action meets the criteria of being: linked to objectives, focused, strategic, feasible, and appropriate.

Strategies – Broad courses of action that include one or more objectives, the strategic actions required to accomplish each objective, and the specific action steps required to complete each strategic action.

Strategy Effectiveness Measures – Information used to answer the question: Are the conservation actions we are taking achieving their desired results? Compare to status assessment measures.

Stresses – Impaired aspects of conservation targets that result directly or indirectly from human activities (e.g., low population size, reduced extent of forest system; reduced river flows; increased sedimentation; lowered groundwater table level). Generally equivalent to degraded key ecological attributes (e.g., habitat loss).

Targets – Elements of biodiversity which can include species, ecological communities, and ecological systems. Strictly speaking, refers to all biodiversity elements at a project site, but sometimes is used as shorthand for focal conservation targets.

Threats – Agents or factors that directly or indirectly degrade targets. See also direct threat, indirect threat, and critical threat.

Viability – The status or "health" of a population of a specific plant or animal species. More generally, viability indicates the ability of a conservation target to withstand or recover from most natural or anthropogenic disturbances and thus to persist for many generations or over long time periods. Technically, the term "integrity" should be used for ecological communities and ecological systems with "viability" being reserved for populations and species. In the interest of simplicity, however, we use viability as the generic term for all targets.

Vision – A general summary of the desired state or ultimate condition of the project area or scope that a project is working to achieve. A good vision statement meets the criteria of being relatively general, visionary and brief. For most biodiversity conservation projects, the vision will describe the desired state of the biodiversity of the project area.

Summary of the Conservation Action Planning Process

A. Defining Your Project

1. Identify People Involved in Your Project

- ☐ Selection of core project team members and assignment of roles
- ☐ Identification of other planning team members and advisors as needed
- ☐ Identification of a process leader

2. Define Project Scope & Focal Conservation Targets *(5S = Systems)*

- ☐ A brief text description and basic map of your project area or scope
- ☐ A statement of the overall vision of your project
- ☐ Selection of no more than 8 focal conservation targets and explanation of why they were chosen

B. Developing Your Conservation Strategies and Measures

3. Assess Viability of Focal Conservation Targets *(5S = Systems)*

- ☐ Selection of at least one key ecological attribute and measurable indicator for each focal target
- ☐ Your assumption as to what constitutes an acceptable range of variation for each attribute
- ☐ Determination of current and desired status of each attribute
- ☐ Brief documentation of viability assessments and any potential research needs

4. Identify Critical Threats *(5S = Stresses & Sources)*

- ☐ Identification and rating of stresses affecting each focal target
- ☐ Identification and rating of sources of stress for each focal target
- ☐ Determination of critical threats

5. Complete Situation Analysis *(5S = Strategies)*

- ☐ A situation analysis that includes indirect threats/opportunities and associated stakeholders behind all critical threats and degraded attributes
- ☐ A "picture" – either in narrative form or a simple diagram – of your hypothesized linkages between indirect threats and opportunities, critical threats, and focal targets

6. Develop Strategies: Objectives & Actions *(5S = Strategies)*

- ☐ At a minimum, good objectives for all critical threats and degraded key ecological attributes that your project is taking action to address and if useful, for other factors related to project success
- ☐ One or more strategic actions for each conservation objective

7. Establish Measures *(5S = Success)*

- ☐ A realistic list of indicators and methods to track the effectiveness of each conservation action
- ☐ A realistic list of indicators and methods to assess status of selected targets and threats you are not currently working on

C. Implementing Your Conservation Strategies and Measures

8. Develop Work Plans

- ☐ Lists of major action steps and monitoring tasks
- ☐ Assignments of steps and tasks to specific individual(s) and rough timeline
- ☐ Brief summary of project capacity and a rough project budget
- ☐ If necessary, objectives and strategic actions for obtaining sufficient project resources

9. Implement

- ☐ Action.
- ☐ Measures.

D. Using Your Results to Adapt and Improve

10. Analyze, Learn, Adapt, & Share

- ☐ Appropriate and scheduled analyses of your data
- ☐ Updated viability and threat assessments
- ☐ Modifications to objectives, strategic actions, and work plans, as warranted
- ☐ Regular updates of project documents
- ☐ Identification of key audiences and appropriate communication products for each