

An Introduction to the Five-S Framework for Site Conservation

The Nature Conservancy has established a goal to take direct action to conserve 600 functional landscapes and deploy high leverage strategies to ensure the conservation of at least 2500 other functional conservation areas by 2010.

To achieve its goals, The Nature Conservancy employs an integrated conservation process comprised of four fundamental components:

1. **Setting priorities through ecoregional planning;**
2. **Developing strategies to conserve conservation areas through site conservation planning;**
3. **Taking direct conservation action; and**
4. **Measuring conservation success**

The Conservancy's Conservation Process

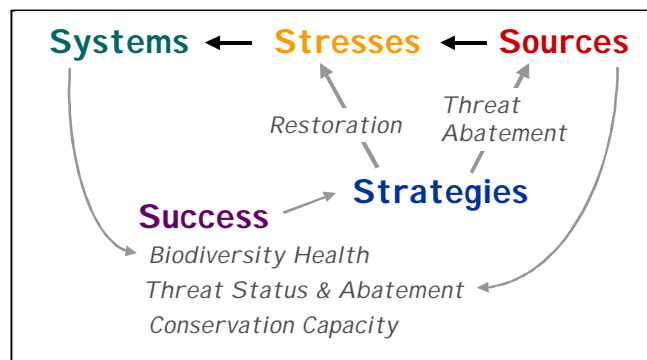


For developing strategies at conservation areas where the Conservancy takes action directly or through partnerships, we use the 5-S Framework of site conservation planning. This methodology provides a well-tested conceptual model to develop effective strategies that achieve tangible conservation results.

The 5-S approach focuses upon the following components:

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

The 5-S Framework



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 that occur together on the landscape, are linked by environmental processes, and 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.

Stresses, the second “S”, are the types of destruction or degradation affecting conservation targets and 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 is to focus 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 that persist 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. Strategies have two broad objectives:

- **Threat abatement:** eliminate active sources of stress (subsequent reduction in stress and increase in viability)
- **Ecological Management and Restoration:** directly eliminate stress and enhance viability.

The Nature Conservancy defines conservation success at a conservation area as the long-term abatement of critical threats and the 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 the 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 that reflect the institutional **capacity** to effect the conservation strategies developed through the site conservation planning process.

The five-S framework, and guidelines for its application, are described in more detail in the handbook entitled *The Five-S Framework for Site Conservation*. The handbook is accompanied by a set of appendices and an automated Microsoft Excel workbook. The handbook and workbook, as well as information about The Nature Conservancy’s Site Conservation Program, are available at www.consci.org/scp.