VI. Glossary

Applied goal: The numeric and geographic distribution goal for a target that is *actually used* to assemble the portfolio in an ecoregional assessment process. The applied goal may be the same as the *conservation* goal, or it may be a set of smaller quantities and/or geographic distribution based on practical considerations that prevent the application of the *conservation* goal (for example, the use of computer models that limit the applied goal to the quantity of target occurrences that are actually known and available for representation in the portfolio). The applied goal is expressed in the same unit of measure that is used to quantify occurrences of the target. See also ***conservation goal***.

Assessment area: The geographic area—usually having ecologically defined boundaries—that is the focus of an ecoregional assessment or plan. Assessment areas are usually ecoregions or watersheds, but may also be aggregations of ecoregions. See also ***ecoregional assessment area*** and ***ecoregion***.

Attribute: See also ***data attribute***. In a data set or data layer, an attribute is any of the categories of information that together constitute the structure of the data set. Attributes have a specific value for each record in the data set. For example, pH might be an attribute in a soils data layer; for a particular soil type in a particular area delineated by a polygon (one record in the soils data set), the pH attribute could have a value such as 6.3.

Biodiversity: The full variety of species, communities, and ecological systems or ecosystems found in a particular environment or habitat.

Centroid: The averaged center of an irregularly or regularly shaped polygon.

Coarse scale: The coarse geographic scale at which some conservation targets occur and function; coarse scale for species is roughly defined as 20,000 - 1,000,000 acres, 4th order and larger river networks, or >2,500-acre lakes. Coarse scale for terrestrial communities and ecological systems is 20,000 - 1,000,000 acres, and for aquatic systems 4th order and larger river networks, or >2,500 acre lakes. Coarse scale for marine communities and ecological systems is >100,000 acres. See also ***local scale***, ***intermediate scale***, and ***regional scale***.

Coastal Unfragmented Block (CUB): CUBs are at least 1,000 acres of unfragmented natural land cover identified in GIS. They are intended to represent the best remaining unfragmented natural land cover in the ecoregion and support and buffer other types of conservation targets.

Conservation area: A geographic area indicating the location of occurrence of conservation targets, resulting from an ecoregional assessment process; the area is *roughly* delineated to contain viable examples of conservation targets that are necessary to meet the conservation goals of those targets. Previously, The Nature Conservancy's preferred term was ***area of biodiversity significance*** (Groves et al. 2000). ***Site*** or ***conservation site*** were also used. The collection of conservation areas that results from a single ecoregional assessment is referred to as a ***portfolio***. Conservation area boundaries resulting from an ecoregional assessment are preliminary, first approximations that are intended to be refined within conservation project plans.

Conservation goal: In ecoregional plans or assessments, the ecologically based number (numeric goal) and geographic distribution of occurrences of a target species (distribution or stratification goal), community, or ecological system that are needed to maintain the long-term

viability of that target within an ecoregion; a conservation goal is a science-based, initial hypothesis of the minimum number and distribution of occurrences required, taking into account factors such as species distribution, metapopulation requirements, the consequences of catastrophic events, and the need to maintain environmental and genetic variability. See also ***applied goal***.

Conservation action plan: Formerly known in The Nature Conservancy as ***site conservation plan*** or ***conservation area plan***. An iterative, adaptive plan for one or more conservation areas or projects that identifies the area's conservation targets, their biological requirements, and their threats, and uses that foundation to develop two other components: (1) a series of strategies that will mitigate or abate the threats so that the viability of the targets is maintained or improved; and (2) a series of measures or indicators that determine whether the strategies were successful.

Conservation targets: Specific components of biodiversity (such as individual ecological systems, plant communities, species, or other ecological features) around which ecoregional portfolios are designed and conservation strategies developed and prioritized; see also ***target***.

Data attribute: See also ***attribute***. In a data set or data layer, an attribute is any of the categories of information that together constitute the structure of the data set. Attributes have a specific value for each record in the data set. For example, pH might be an attribute in a soils data layer; for a particular soil type in a particular area delineated by a polygon (one record in the soils data set), the pH attribute could have a value such as 6.3.

Eastern U.S. Conservation Region: A Nature Conservancy administrative region that includes states from Virginia to Maine.

Ecological integrity: See also ***integrity***. Ecological integrity is a term applied to communities and ecosystem targets. It is the capacity to support and maintain a functional and ecological system that has its full range of expected biotic elements and processes (Karr and Chu 1995). A target possessing integrity can withstand and recover from most natural and human perturbations.

Ecological Drainage Unit (EDU): EDUs delineate areas within a zoogeographic sub-region/freshwater ecoregion that correspond roughly with large watersheds ranging from 3,000–10,000 square miles. EDUs were developed by aggregating the watersheds of major tributaries (8 digit HUCs) that share a common zoogeographic history as well as local physiographic and climatic characteristics. Ecological drainage units are likely to have a distinct set of freshwater assemblages and habitats associated with them.

Ecological Land Unit (ELU): ELUs are unique combinations of: 1) elevation; 2) bedrock and surficial geology; and 3) landform classes. ELUs are generated using GIS at the 30 m pixel scale across the ecoregion, and the unique combination of within-block ELUs are classified using standard multivariate software. This allows the identification of unique forest landscape combinations that can be used as surrogates for natural community types that are not known on the ground.

Ecological system: A dynamic assemblage of native plant and/or animal communities that occur together on the landscape or in the water, and share ecological processes (e.g., fire, hydrology), underlying environmental features (e.g., soils, geology), or environmental gradients (e.g., elevation).

Ecoregion: A relatively large geographic area of land and water defined by similar ecological

characteristics, such as similar climate, geology, landforms, or other shared environmental characteristics. Ecoregions may be delineated as freshwater ecoregions, terrestrial ecoregions, or marine ecoregions.

Ecoregional assessment: Formerly referred to as an ***ecoregional plan***; known by some partners as a ***conservation blueprint***. A process of developing conservation priorities for an ecoregion using the following general steps: (1) identifying conservation targets that represent the full native biodiversity of the ecoregion; (2) setting conservation goals that specify the number and distribution of viable target occurrences needed to maintain the long-term viability of those targets in that ecoregion; (3) identifying viable occurrences of the targets; (4) assembling or selecting a portfolio of conservation areas that efficiently meets all targets' conservation goals using only viable occurrences; (5) further prioritizing within the portfolio, based on evaluations of threats to targets and other factors, to determine where conservation action should be taken in the short term.

Ecoregional assessment area: An ecoregion, watershed, or other relatively large geographic area of land and water delineated by climate, vegetation, geology and other ecological and environmental patterns on which an ecoregional assessment is focused. See also ***assessment area*** and ***ecoregion***.

Edition: Assessment teams may find it necessary to assemble more than one version of a portfolio of conservation areas, based on (1) various lists of conservation targets and target occurrences (iterations), and (2) various landscape suitability or target goals schemes (scenarios). The final portfolio—based on a single iteration/scenario combination—is referred to as an ***edition*** of an ecoregional assessment. See also ***iteration*** and ***scenario***.

Element occurrence: See also ***target occurrence***. ***Element occurrence*** is the term used by NatureServe and its member programs to describe the documented geographic location or area where a particular species, community, or other element of biodiversity was observed.

GAP: A scale of 1 to 4 to categorize the degree of maintenance of biodiversity for each distinct land unit. A status of "1" denotes the highest, most permanent level of maintenance, and "4" represents no biodiversity protection or areas of unknown status. The characteristics used to determine status are as follows: permanence of protection from conversion of natural land cover to unnatural (human-induced barren, arrested succession, cultivated exotic-dominated); amount of the tract protected, with 5% allowance for intensive human use; inclusiveness of the protection, (i.e., single feature such as wetland versus all biota and habitat); and type of management program and degree that it is mandated or institutionalized.

Heritage: A term used loosely to describe the network of natural heritage programs and conservation data centers of North and South America, or to describe the standardized methodologies used by these programs. These programs are members of NatureServe; see www.natureserve.org/visitLocal/index.jsp. See also ***NatureServe and its member programs***.

Integrity: Ecological integrity is a term applied to communities and ecosystem targets. It is the capacity to support and maintain a functional and ecological system that has its full range of expected biotic elements and processes (Karr and Chu 1995). A target possessing integrity can withstand and recover from most natural and human perturbations.

Intermediate scale: The intermediate geographic scale at which some conservation targets occur and function; intermediate scale for species is roughly defined as 1,000 - 50,000 acres, 1st - 3rd order stream networks, or 250 - 2,500-acre lakes. Intermediate scale for terrestrial communities and ecological systems is 1,000 - 50,000 acres, and for aquatic systems 1st - 3rd order stream networks, or 250 - 2,500- acre lakes. Intermediate scale for marine communities and ecological systems is 10,000 - 100,000 acres. See also ***local scale***, ***coarse scale***, and ***regional scale***.

Iteration: Assessment teams may find it helpful to assemble more than one version of a portfolio of conservation areas, based on varying lists of conservation targets and target occurrences. One ***iteration*** of an ecoregional assessment is defined by the complete set of targets data (without goals, target viability thresholds, or target selection criteria) and the complete set of occurrence records for these targets. One ***iteration*** may be assessed with multiple ***scenarios***, each producing a portfolio of conservation areas, or one ***edition*** of the ecoregional assessment. See also ***scenario*** and ***edition***.

Key ecological attribute: An ecological or biological characteristic of a species, community, or ecological system that is one of the primary determinants of its ecological and biological integrity, or health. Within The Nature Conservancy's conservation planning framework, key ecological attributes are grouped into one of three broad categories: size, condition, or landscape context.

Landscape Context or Landscape Context Index (LCI): Landscape context is a viability assessment measure that refers to the relative amount of development, agriculture, roads or other fragmenting features within an area directly surrounding a specific occurrence. It provides an estimate of the isolation of an occurrence as well as estimates of future encroachments on the occurrence. To assess landscape context a landscape context index (LCI) was developed based on these features within a 1 kilometer radius surrounding the occurrence. Base data layers included roads, high intensity developed lands, low intensity developed lands, agriculture, quarries, and natural cover. An LCI below 20 indicates that the occurrence is primarily surrounded by natural cover. Higher LCIs indicate increasing amounts of roads, development, and agriculture. LCIs above 50 are usually rejected as critical occurrences unless expert review suggested that the occurrence was still viable.

Local scale: The fine geographic scale at which some conservation targets occur and function; local scale for species is roughly defined as <2,000 acres, <10 river miles, or <250-acre lakes. Local scale for terrestrial communities and ecological systems is <2,000 acres, and for aquatic systems <10 river miles, or <250-acre lakes. Local scale for marine communities and ecological systems is <10,000 acres. See also ***intermediate scale***, ***coarse scale***, and ***regional scale***.

Matrix block: A conservation target of natural forest communities that cover the majority of the landscape and serve as the dominant supporting habitat for embedded terrestrial and aquatic conservation targets. In NAC they are least 10,000 acres and are defined by large fragmenting features such as roads, powerlines, railroad lines, and large coasts or shorelines. This size is set to ensure resilience from natural disturbances (e.g. hurricanes or fire) and support viable populations of interior nesting bird species.

Natural community: An assemblage of species that repeatedly occurs under similar habitat conditions and environmental regimes. Also referred to as a ***community*** or an ***ecological community***.

NatureServe: A non-profit conservation organization that provides the scientific information and tools needed to help guide effective conservation action. NatureServe and its network of natural heritage programs are the leading source for information about rare and endangered species and threatened ecosystems. See www.natureserve.org.

NatureServe and its member programs: The network of NatureServe and individual member programs, including natural heritage programs or conservation data centers throughout the Americas. See also ***Heritage***.

Portfolio: The suite of conservation areas within an ecoregion selected to represent and conserve the conservation targets and their genetic and ecological variation.

Regional scale: The regional geographic scale at which some conservation target species occur and function; regional scale for species is roughly defined as >1,000,000 acres and/or migrating long distances. The classifications used by The Nature Conservancy for terrestrial, freshwater, and marine ecological systems and communities do not define these systems at a regional scale. See also ***local scale***, ***intermediate scale***, and ***coarse scale***.

Scenario: Assessment teams may find it helpful to assemble more than one version of a portfolio of conservation areas, based on varying assessments of landscape suitability or target goal schemes, which constitute a unique scenario. A scenario is a unique combination of (1) goals set for targets, (2) viability thresholds set for targets, (3) criteria for selection set for targets, (4) landscape suitability scheme applied to the ecoregional assessment unit, and (5) other modeling parameters, applied to an ***iteration*** of targets and occurrences to model the selection of conservation areas. Multiple assessment ***scenarios*** may be applied to one ***iteration***. See also ***iteration*** and ***edition***.

Stratification unit: A geographic subset of an ecoregion or other assessment area; typically, stratification units are delineated as nested, progressively smaller geographic units within the larger ecoregion (e.g., Keys et al. 1995). Spatial stratification is used to represent variation in each target's genetic and ecological expression across its geographic range within the ecoregion, and to ensure long-term viability of the target by buffering against degradation in subsets of its range.

Subregion: The largest unit of division within an **ecoregion** that indicates distinctive sections within the ecoregion that are unique in climate, soils, bedrock geology, vegetation zones and landform settings. Subsections were used to set distribution goals for **ecological system targets** to ensure that ecosystems will be conserved across ecoregional gradients reflecting the above variation. NAC is divided into four subregions.

Subsection: The smallest unit of division within an **ecoregion** that indicates distinctive sections within the ecoregion that are unique in climate, soils, bedrock geology, vegetation zones and landform settings. Subsections were used to set distribution goals for **species targets** to ensure that independent populations will be conserved across ecoregional gradients reflecting the above variation. NAC is divided into 11 subsections.

Targets: Specific elements or components of biodiversity (such as individual ecological systems, plant communities, species, or other ecological features) around which ecoregional portfolios are designed and conservation strategies developed and prioritized; see also ***conservation targets***. *Primary targets* need more conservation action because its habitat requirements are unlikely to be adequately addressed via a coarse filter approach of conservation of representative ecosystems.

Secondary targets will usually be adequately protected by protecting habitat where the target occurs.

Target occurrence: See also ***Element occurrence***. The mapped location where a particular species, community, ecological system, or other element of biodiversity that is a target in an ecoregional assessment was observed or modeled.

Viability: The ability of a conservation target to persist for many generations or over long time periods. A population's ability to maintain its vigor and its potential for evolutionary adaptation (Soule 1987). Population viability analyses (models) help determine the likelihood that a population will persist for a given amount of time.

Viability Screening: Obtaining an estimate of long term viability for a population or occurrence by assessing a conservation target occurrence against criteria for size, condition and landscape context.