The Greater Caribbean contains some of the richest, and most threatened, biodiversity areas on earth. Estimates suggest that over 40% of the plant life and terrestrial vertebrates in the Caribbean can be found only in this region. Island-level endemism is very high with approximately half of the flora restricted to single islands or archipelagos. Marine diversity and endemism is equally spectacular including about 60 species of corals and over 1,500 species of fishes, of which approximately 23% are Caribbean endemics. In addition, the Caribbean seas are home to six of the world’s seven sea turtle species.

The human landscape is equally complex and variable. The region encompasses over 30 different countries each with unique cultural, social and economic settings. Human pressure on biodiversity is intense, with less than 10% of the original vegetation remaining intact.

In order to systematically address these threats and conserve the rich biological heritage of the Caribbean basin, the Nature Conservancy is leading an Ecoregional Plan for the Greater Caribbean Basin. Our goal is to collectively illuminate a vision of conservation success amongst all stakeholders and to provide the technical framework, methods, data and tools to develop this collective vision.

Objective and Basic Process

Steps for Ecoregional Planning

The objective of ecoregional planning is to identify the set of areas of biodiversity significance which, if
conserved, would ensure the persistence of that ecoregion’s biodiversity. The entire process, which culminates in the identification of a set of areas of biodiversity significance and associated strategies for conserving those areas, is as follows:

- Step One: Identify and map conservation targets
- Step Two: Set conservation goals
- Step Three: Assess the viability of conservation targets
- Step Four: Design a portfolio—select and design a network of conservation areas
- Step Five: Assess threats, and develop strategies for conserving the portfolio (portfolio).

It is important to recognize that these regional planning steps are not always linear or sequential, but in general occur in the order presented above. The portfolio of areas of biodiversity significance should be regarded as the ultimate vision for the set of areas on the ground that require conservation attention.

Although we plan to adopt methods developed and tested primarily in the continental US, the Conservancy modified its approach to best fit the needs of the Caribbean and address the multiple challenges involved with conservation planning in this region.

Some of the technical challenges faced are the difficulty associated with mapping large areas and account for high levels of endemism at the same time. These difficulties are exacerbated by a general lack of biological data with regional coverage. In addition, the complexity of the human landscape has to be incorporated by determining the human activities on the landscape and seascape that are degrading the viability of biodiversity. This analysis derives a statistical association between given target viabilities and human activities potentially affecting the target. This model will be used to predict how human activities on the landscape may affect the viability of a given target.

The following pages outline some of the modifications and innovations to the ecoregional planning approach that this project is developing.