

## Chapter 1

# **CASE STUDIES ON CONSERVING AND SUSTAINABLY USING BIODIVERSITY IN ARID AND SEMIARID REGIONS OF SOUTHERN NATIONS**

John Lemons<sup>1</sup> and Reginald Victor<sup>2</sup>

<sup>1</sup>*Department of Environmental Studies, University of New England, Biddeford, ME 04005, USA, email jlemons@une.edu;* <sup>2</sup>*Reginald Victor, Department of Biology and Centre for Environmental Studies and Research, Sultan Qaboos University, PC 123, Sultanate of Oman*

## **1. INTRODUCTION**

The book is a compilation of case studies focusing on the conservation and sustainable use of biodiversity of global significance in arid and semiarid regions of Southern nations. The case studies were developed as part of the GEF/UNEP funded project “Promoting Best Practices for Conservation and Sustainable Use of Biodiversity of Global Significance in Arid and Semiarid Zones” (project number GF/1300–99–03) implemented by the Third World Network of Scientific Organizations (TWNSO) in Trieste, Italy.

An overall goal of the project was to more widely disseminate the lessons learnt and other findings from already existing projects and relevant work conducted by institutions of excellence on the conservation and sustainable use of biodiversity in arid and semiarid areas. We hope that this dissemination will accomplish the following. One, increase the availability and access to information on best practices for the conservation and sustainable use of biodiversity. Two, increase participation of local people in decision making about the use and management of fragile ecosystems. Three, increase awareness of the values of the biodiversity of global significance in arid and semiarid ecosystems in accordance with the

Convention on Biological Diversity (CBD). Four, increase coordination between institutions working towards the conservation and sustainable use of biodiversity, resulting in turn, in more effective programming of scarce financial resources and lesser duplication of activities. And five, increase partnerships of institutions in the South and their capacity to develop and implement successful programs to protect biodiversity.

Here, we provide some contextual issues pertaining to conceptual clarity about biodiversity and sustainability; prospects and problems of case studies; examples of lessons learnt from the case studies; and recommendations from the case studies.

## **2. CONCEPTUAL CLARITY OF KEY TERMS AND CONCEPTS**

In literature and practice, concepts such as “biodiversity of global significance,” “sustainable development” and/or “sustainability” and even “biodiversity” itself are “fuzzy.” There are no commonly agreed-upon or a priori definitions that are sufficiently prescriptive or fully useable in scientific, public policy, or management. In this sense, the definitions are qualitative and stipulative and do not provide a firm foundation for precise decision making norms in science, public policy, or management. This might not be particularly troublesome because “fuzzy” concepts can provide convenient shorthand for discussing and analyzing complex phenomena and also can stimulate further discussion. However, if definitions are too fuzzy or if assumptions about them have not been sufficiently tested or critically analyzed this can limit problem formulation and solution and/or create conflicting formulations and solutions.

To our knowledge, the literature on biodiversity and/or sustainability contains few if any precise definitions for “biodiversity of global significance” or critical analyses of definitions. Proposed definitions of the term “sustainable development” include “the continued development as that which meets the needs of the present without comprising the ability of future generations to meet their own needs” (WCED 1987); “the continued satisfaction of basic human needs such as food, water, and shelter as well as higher-level social and cultural necessities such as security, freedom, education, employment, and recreation” (Johnson 1993); meeting the “...needs of the present as long as resources are renewed or, in other words, does not compromise the development of future generations” (Johnson 1993); to meanings that are so vague as to be ill-defined (Shearman 1990). Increasingly, the meanings of sustainable development have emphasized social and economic development (IISD 2003). Despite the fact that most