

Introduction

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The aim of this publication, result of a joint idea of the Secretariat of the Convention on Biological Diversity, Insula and UN-SIDS (Small Island Developing States Unit of the Division for Sustainable Development of the United Nations Department of Economic and Social Affairs), is to offer reference elements and a meditation framework before one of the most important challenges that the island world is facing at present: conservation, use, and exploitation of islands' natural and biological heritage. Islands make up a real world that it is not sufficiently recognised yet, which hosts more than 500 million inhabitants and exercises a direct influence on an important share of our planet. In fact, although islands and Small Island States are, individually considered, small territories, they jointly exercise their jurisdiction on more than one sixth of Earth's total area.

Islands have always been seen as remote or exotic places, or products of myth. The origin of emblematic islands such as the Cyclades, for example, was attributed to a violent dispute between the divinities of the Olympus. Forgotten by time, the odyssey of Crete's inhabitants who protected and hid Zeus' birth, avoiding that his father Cronos ate him. Probably fruit of this ancient idea, islands are starting to claim their own time, emerging from centuries of oblivion and colonization.

Chapter 17 of Agenda 21 recognizes that islands constitute a special case, both from the environmental and the development points of view, with very specific problems for their sustainable development planning. They are ecologically fragile areas, and as a consequence of geographic isolation they have developed exceptional species of flora and fauna, hosting therefore a high share of world's biological diversity. But Agenda 21 also recognizes that this universe made up by thousands of territories trapped between the sea and the sky, hosts an extraordinary field of rich and diverse cultures especially adapted to the island environment. And we nowadays know that these two components constitute our main capital to face the future.

Islands rank at present amongst the best places on earth for high levels of biodiversity. Due to their distance from the continents and the existence of different microclimates, an interesting diversity of habitats has been produced on many islands, which in turn has contributed to the generation of an endemic population of flora and fauna. This has facilitated the development of great levels of biodiversity through phenomena such as evolution and radiation where species originating in the continent colonise the new habitat. Island ecological diversity also extends to marine ecosystems, fine examples of which include the magnificent coral reefs that surround many tropical islands and the high number of marine life oceanic sanctuaries.

However, that same level of richness finds its counterpart in its own fragility. In no other place biodiversity is per se so fragile - before human actions are taken into consideration. This is due to the fact that species which have evolved on islands, have done so in competition with a relatively low number of other species. Populations also tend to be quite small in proportion to the size of most island territories and species often become concentrated in specific small areas. The greatest evidence of this phenomenon is the fact that many of the biodiversity hot spots of the planet, those areas where large quantities of endangered endemic species are found, are islands such as the Philippines, New Caledonia, Madagascar or the Hawaii and Canary archipelagos.

Nowadays, there are two greatest threats to biodiversity in island habitats: firstly, the colonisation of invasive species and secondly, the loss or fragmentation of habitats. The introduction of exotic species onto islands is particularly dangerous, as it may initially go unnoticed given that the process of destruction appears slower and less acute than the destruction of a virgin area. Throughout history human exploitation has led to great losses in biodiversity. The migratory pigeon of North America is often the paradigm of extinction mentioned with regard to continents: the corresponding list to those from island territories is painstakingly long.

The truth comes out analysing the register of species that became extinct over the past three centuries. The numbers speak for themselves: practically the same number of species have been lost on the islands and on the continents. Given that an estimated 75% of animal species that have become extinct since the 17th century are insular, it is true to say that island flora and fauna have paid a very high price. In the case of birds, 90% of species lost in recorded history belong to island populations, made more serious by the fact that these populations alone represent 20% of the bird species worldwide. Furthermore, 23% of island species are at present considered to be endangered, whereas the corresponding figure for the rest of the world is 11%.

The other great threat to island biodiversity is the loss or fragmentation of habitats. In the past, this was brought about when forests were cleared for agriculture and grazing. Nowadays the threat generally comes from tourist development, as the economies of the large majority of islands with warm climates are dependent on this sector. In fact islands, as a whole, are today the second tourist destination in the world. Within this framework it is essential to maintain and strengthen the binomial cultural identity - biological diversity to guarantee our singular presence in this global business. We cannot forget that archipelagos such as Balearics, Canaries or Hawaii, have each a tourist flow bigger than Brazil.

But, despite the discouraging outlook provided by data on biodiversity and alteration of island habitats of world importance, it must be acknowledged that it is in these same islands that most is being done to find new alternatives in the management of natural resources. Indeed, it is fair to say that many of the results of researches carried out on islands over the past twenty five years have laid the foundations to design guidelines and strategies for the management of protected areas on the mainland. The idea that islands constitute authentic models of reference was widely diffused by the IUCN in their framework of recommendations on the nature conservation, which was published in the eighties. Indeed, more recently, experiences in complex and important island territories are helping to generate true working hypotheses on this global challenge we call sustainable development.

An array of possible situations and implications arises from the variety existing in the island microcosm. This is why, for more than two decades the UNESCO Man and Biosphere Programme has dedicated a large portion of its work to island territories, considering these areas as excellent laboratories for conservation and management of biological diversity. And these laboratories are now starting to extend into the sea, where several islands are pioneer in the creation of marine reserves and in the safeguard of fishing resources, turning themselves into the big guardians of the oceans.

This introduction only tries to give an idea of the complexity and intensity of the tasks set out for islanders when designing biological diversity conservation and sustainable development strategies in accordance with the infinity of particular circumstances of each island. I therefore thank on behalf of INSULA the big effort and enthusiasm of the authors and collaborating institutions in bringing ideas and key references that allow us paving new roads for the use and conservation of a heritage that is essential to build our future.

Finally, I hope that this work carried out with the decided support and orientation of the Secretariat of the Convention on Biological Diversity, would allow recognizing the fragility of these mythical territories and their unique circumstances, implying that the international community should share with the islanders the responsibility to conserve this common heritage taking into account its real importance to the Earth's life.