



Photo: Jacintha Castora Photography

INTRODUCTION

Sustainability in Galapagos: the need for a shared vision and collaborative work for the good of the ecosystems and the human population

Washington Tapia¹, J. Gabriel López² and Fabián Zapata³

¹Galapagos National Park

²Charles Darwin Foundation

³Governing Council of Galapagos

Galapagos is recognized as a model of conservation. It is in fact a natural laboratory where evolutionary processes can be observed and where unique ecosystems have largely been preserved.

However, it is also true that for more than a century, since the first permanent human population was established, Galapagos has undergone continued, exponential growth and has become a social laboratory, with a human population with many different origins, and as one would expect, many distinct interests. The problem arises with the recognition that Galapagos is a geographically isolated oceanic archipelago with few business opportunities that are both profitable and environmentally-friendly.

There are those who believe that this is not a problem given that there are many natural resources in Galapagos that can be exploited. But what many do not realize is that these resources include both biotic and abiotic elements of unique ecosystems, which in the case of Galapagos are fragile and have developed in complete isolation. Moreover they are resources needed for our survival and for the survival of future generations.



Photo: Daniela Chalén

In the last 15 years, the archipelago has undergone uncontrolled economic and population growth resulting from continually increasing tourism, with corresponding increases in the generation of waste and demands for water and energy. This process has also been accompanied by a significant increase in the number of motorized vehicles and cargo ships, and the rapid expansion of a consumer lifestyle that is in direct conflict with the ecological reality of this fragile archipelago.

Humans have destroyed many of the geographic barriers described by Darwin to help explain the evolution of the Galapagos biota. The results are clear: increasing numbers of invasive species, new threats to the endemic flora and fauna, severe tension related to the provision of basic services, the arrival of pandemic viruses, and increasing social problems commonly found in rapidly changing societies throughout the world.

There is a simple lesson that should be learned from this. Galapagos is not a paradise separate from the rest of the world. It is a constellation of very fragile ecosystems that now requires special care and attention to ensure that the forces of globalization do not overcome its capacity to assimilate, adapt, and recuperate from natural and human-made disturbances.

At this critical juncture, we must ask ourselves important questions. How do we best share the mes-

sage regarding the limits to growth that exist in such a fragile and emblematic ecosystem? Are there alternatives to the scenarios of growth that have ultimately led to environmental degradation and the impoverishment of the populations in other fragile ecosystems around the world?

We ask ourselves these questions because Galapagos is at a crossroads with a narrow window of opportunity to act in a decisive manner to put the archipelago on a path to sustainability.

The development of a shared vision for the future of Galapagos is urgently needed. Arriving at this vision requires reflection on a number of questions that are both simple and complex. Can natural resources be exploited in Galapagos as they are in other parts of the world? What will happen to the human population if Galapagos loses the species and landscapes that attract visitors? Is it possible to develop profitable businesses that can guarantee the welfare of the local population? Is it possible to achieve human development without the conservation of nature and vice versa? There are many questions but only one response: a healthy and sustainable population and economy and a high quality of life for the population of Galapagos require healthy and resilient natural ecosystems.

In this sense it is clear that while urgent measures are needed to increase the resiliency of ecosystems

confronted by human activity and the erosion of geographic isolation, it is equally essential to understand and accept that the Galapagos social system requires a profound transformation in terms of its structure, without which policies and management models will be ineffective over the long term (Tapia *et al.*, 2009).

This transformation depends upon those who live in Galapagos, as well as those in continental Ecuador and throughout the world, who have an interest in conserving the archipelago and improving the quality of life of its human population. We must begin by recognizing that the only reason that Galapagos is at risk is that it continues to be an archipelago in an excellent state of conservation. The islands still have nearly all of the species and ecosystems that developed thousands or millions of years ago, before humans even knew the islands existed. It is critical that we learn to live in balance with the natural systems in Galapagos, even if this means that we must modify our way of life.

The Galapagos ecosystem is extremely fragile and complex with strong links and interconnections among ecological, social, and economic components. It is time to plan and implement whatever actions are needed to protect this system, however simple they may seem. We must all understand that resiliency is not an absolute and fixed property. On the contrary, resiliency is variable over time and dependent in a large part upon the actions of humans. The ancient Heraclitus stated, "There is nothing permanent except change." This statement gains greater validity in an increasingly globalized world when speaking of sustainability. The transformation of complex systems such as Galapagos is inevitable, especially when Ecuador and the entire region are undergoing a process of transformation and adaptation to change.

The biodiversity and ecosystems of Galapagos—properly managed—are capable of sustaining a quality life for local residents. However the economic model in Galapagos and lifestyle of the local population will determine whether or not this balance between humans and nature is met. Twelve years ago, the Special Law for Galapagos called for conservation and sustainable development in the province. Achieving these goals will require consideration of both the natural and socioeconomic systems in Galapagos at all levels of decision-making.

A new integrated vision of a sustainable and equitable society that lives in harmony with the natural resources of Galapagos could be the solution for the islands and at the same time serve as a model for

the world. But this vision must be built among all stakeholders, with a focus on both the short and long term. This is still possible in Galapagos. Galapagos residents understand the need for change. The current process to develop the new Special Law for Galapagos is forcing us to evaluate the situation and make decisions that will lead us to a better, more sustainable future. But time is short. Clear, direct, and well-founded decisions and actions are required.

The current situation in the islands requires the cooperation and goodwill of all institutions and individuals concerned about Galapagos and interested in building a future that will ensure both the long-term conservation of the unique ecosystems of the archipelago and the welfare of its inhabitants. The challenge is huge and time is short. The responsibility is ours. Future generations will judge whether or not we met the challenge.