



ROLE OF FAO, CATIE AND IUCN IN THE EXPANSION OF LATIN AMERICA'S PROTECTED AREAS IN THE 1960S–1980s

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ABSTRACT

From the 1960s to 1980s there was an enormous increase in the number, area and management quality of protected areas throughout Latin America. In 1960, there were only 122 protected areas, covering 6.5 million hectares in the region, while nine countries, including Colombia, Paraguay and Peru, had none. By 1989, this had increased to 797, covering 116.9 million hectares. This growth was 3.8 times higher than the growth of protected areas worldwide in the same period. In 1990, the region represented 16.5 per cent of the total world protected area. The catalysts for this sudden increase in conserving representative samples of natural ecosystems in Latin America are explored. It is concluded that, to a large extent, it was due to the combined influence, on one side, of the United Nations' Food and Agriculture Organization (FAO) and the Tropical Agricultural Research and Higher Education Center (CATIE) of Turrialba (Costa Rica) by promoting the education and training of professionals and, on the other side, of the IUCN and WCPA, that provided awareness, a sense of urgency and facilitated horizontal cooperation to promote the establishment of protected areas as well as support for the professional teams of each country. Of the several personalities who contributed directly to this progress, Gerardo Budowski from Venezuela and Kenton R. Miller from the USA clearly stand out, working over three decades on behalf of the institutions above.

Key words: Nature conservation, international institutions, local actors.

INTRODUCTION

Until 1960, the theory and practice of conserving biological diversity through protected natural areas had extremely limited application throughout Latin America. There was only some progress in the largest countries, such as Argentina, Brazil, Mexico and Chile. The most common management category was that of national parks and their establishment usually did not meet the requirements of ecological representativeness.

However, several of the parks in those countries are among the oldest in the world. Mexico's El Chico National Park, established in 1898 as a forest reserve, is reputed to be the first in the region. Argentina established its first park in 1903, which became the famous Nahuel Huapi National Park in 1934. Chile had already created the Vicente Pérez Rosales National Park (1926) and Ecuador established the Galapagos Islands

National Park in 1934.¹ Brazil and Venezuela also established their first national parks, Itatiaia and Henri Pittier, respectively, in 1937. These promising beginnings were followed by a slowdown in the growth of the number of protected areas and their area. In 1960, nine countries in the region still did not have any park or nature reserve.

This situation changed rapidly in the 1960s. Latin America initiated a vertiginous and sustained increase in the number, extension, ecological representativeness and management quality of protected areas. Thirty years later, this movement positioned the region at the same level as others, including in terms of policies, legislation and institutional setting. This article identifies and discusses the causes of these trends and cites its main actors at the international level and, as much as possible, in each country.

Evolution of protected natural areas in Latin America between 1960 and 1990

In 1929, the region had only five protected areas, increasing to 46 by 1949 (Dourojeanni, 1980). In 1960, there were only 124 protected areas in the region, covering 6.5 million hectares (IUCN, 1990) and the situation regarding protected areas in each country was highly variable. Argentina, Brazil, Mexico, Venezuela and Chile had several national parks and equivalent reserves. These protected areas covered almost two million hectares in Argentina, a million or more in Brazil and Chile, and more than half a million in Mexico and Venezuela. Ecuador had the Galapagos Island National Marine Park which extended over almost 800,000 hectares, but it had none on its mainland. Bolivia established its Sajama National Park in 1939 but management was not established at that time. Meanwhile, other South American countries of great size and economic importance, such as Colombia² and Peru, in addition to Paraguay, did not have any protected areas and this was also the case of other countries, mostly Central American. Costa Rica was a relative exception as it established the Irazu 'National Park' in 1955 as an IUCN Category IV but no management was in place (IUCN, 1990).



Gerardo Budowski (1925–2014)

Excepting Argentina, which already had appropriate legislation and an administrative capacity proportional to the task, the management of existing protected areas was in its infancy in this period. Their ecological representativeness was poor. In Argentina, as is

well known, a geopolitical criterion prevailed as promoted by Perito Moreno, the historic founder of the Argentine national parks system, placing several of the largest of 25 new areas along international boundaries, especially along the Chilean border. Chile also established its first park along its border with Argentina. In Mexico most of the 25 areas created before 1960 were very small. On the other hand, many of those established in that period responded more to ethical and aesthetic considerations rather than ecological ones in terms of localisation, size, design and management categories. In other words, their value as reservoirs of representative and durable examples of the biological diversity of the countries or the region was limited.

In short, in 1960 the region lagged far behind the rest of the world, representing only 5.4 per cent of the world's

protected area. A large part of its biomes and ecosystems were unprotected and, with the relative exception of the countries mentioned, the public had no knowledge of or interest in conservation. Most countries had no policies, legislation or public institutions responsible for overseeing species and ecosystems conservation, even though practically all countries in the region had signed and ratified the Convention for the Protection of the Flora and Fauna and the Scenic Beauties of America, approved in Washington on 12 October 1940.³ Despite the efforts of conservationists like Gilbert Pearson, a prominent member of the Audubon Society, who in the early 1940s visited South American countries promoting the establishment of local institutions to stimulate the application of the Convention (Cushman, 2013), most countries did not apply it or pursue its goals until the 1960s (Urban, 1998; Dourojeanni, 2009, 2022).

However, by coincidence, in 1961 a great symbolic change was marked by the creation of the first national parks in Colombia and Peru (Cueva de los Guacharos and Cutervo, respectively) and by a series of new and important Brazilian parks, based on better scientific criteria, all established in 1961, including Brasilia, Emas, Chapada dos Veadeiros, Monte Pascoal, São Joaquim, Sete Cidades and Tijuca (Pádua & Coimbra Filho, 1977; IUCN, 1990).

In 1990, the region had 797 protected areas covering 116.9 million hectares (16.5 per cent of the world total). That is an extension 18 times greater than in 1960. In that year at the global level there were 651.5 million hectares protected, with this number having grown only a little more than five times, including the expansion of protected areas in Latin America itself and the inclusion of the gigantic Northeast Greenland National Park (1974) that distorted the statistics with its 70 million hectares (IUCN, 1990).

Colombia, Peru, Costa Rica, Paraguay and Panama, among others, went from practically not having any protected areas to having dozens of them covering millions of hectares. Countries that already had reasonable numbers of parks and reserves managed to increase the total area protected more than tenfold. In 1990, there was no longer any country in the region that did not have some reasonably managed protected areas, in addition to specialised public agencies responsible for their administration.

There is no doubt that this rapid progress would not have been possible without the presence in each Latin American country of a new generation of professionals, who were highly motivated, aware of the importance of the subject and well trained, unlike previous generations

that emphasised the ethical aspects of nature protection but did not put their proposals into practice (Dourojeanni, 2009, 2022). This generation was mostly formed in the late 1950s through the 1980s. Many of them assumed leading positions in forestry and other sectors responsible for natural heritage in the 1970s and 1980s. The academic training and motivation of this new generation of Latin American environmentalists was not spontaneous. As will be seen, several international organisations had a critical role in their education and training.

Education has been a key factor. However, it is also evident that especially in the 1970s and 1980s, the incipient but growing global interest in the environment influenced the vocations of young Latin Americans. The international concern for the environment became clearer at the United Nations Conference on the Human Environment (Stockholm, 5–16 June 1972). One of the consequences was the 1977 establishment in Venezuela of the region's first ministry of the environment. Also noteworthy were the initiatives of the Photographic Hunting Institute (INCAFO) and the Iberic-American Cooperation Center of Spain that, in the late 1970s and early 1980s, produced the luxurious and widespread collection 'Nature in Iberic-America' that contributed significantly to the awareness of the ruling classes in the region. Luis Blas Aritio, its director, facilitated each country to produce a splendid, illustrated book describing its parks and other protected areas (Padua and Coimbra-Filho, 1977; Dourojeanni and Ponce, 1979). INCAFO also published Kenton Miller's book 'Planificación de Parques Nacionales para el Ecodesarrollo de América Latina' (1980) that became the reference for protected areas planning in the region. No less important, and also in 1980, the IUCN published its influential 'World Conservation Strategy' (IUCN, WWF & UNEP, 1980) which spelled the end of traditional protectionism and highlighted the vital importance of well-planned protected areas for development.

Furthermore, the political situation prevalent in the 1960s and 1970s in several countries helped to promote protected areas. These countries were ruled by regimes that, demonstrably in the case of Peru (Dourojeanni, 2020) and Brazil (Padua, 2015), were particularly receptive to the issue of natural heritage conservation. Finally, as will be seen, the activities of IUCN and of what is now called the World Commission on Protected Areas (WCPA) had a great influence in the region and offered support that effectively stimulated a productive friendly competition between those responsible for protected areas in each country in the region.

The professionalising role of FAO and CATIE

In the late 1950s and 1960s, most of the countries began the phase of preparing professionals for the establishment and management of protected areas. At this stage and continuing into the 1970s and 1980s, the universities where conservation professionals were being trained also played a fundamental role in the planning of the national systems of protected areas. These were adopted and applied by public institutions, mostly the forest services or their equivalent. The role of the faculties of science or forestry engineering was decisive, since they were the only ones that at that time created chairs in the administration of protected areas and wildlife management and, as early as the 1980s, established specialised postgraduate degrees. While Argentina has been a pioneer in the training of park rangers since 1928, most other countries began to train rangers only in the 1960s.



Gerardo Budowski and Lee Talbot, former IUCN executive directors, in Peru in 1967.

The Food and Agricultural Organization of the United Nations (FAO) played a crucial role in this phase, promoting and supporting the creation of faculties and schools of forest engineering in several Latin American countries. In 1968, there were 17 university forestry faculties or schools in nine countries of the region (Shirley & Prats, 1969), almost all of which included the academic topics required to establish and manage natural protected areas. Of these, ten were created between 1958 and 1963. Several were assisted by projects implemented with FAO cooperation and financing from the United Nations Development Programme (UNDP). FAO experts in wildlife management and protected areas administration were included among the staff of these projects (Dourojeanni, 2009, 2022).

On the other hand, the Tropical Agricultural Research and Higher Education Center (CATIE), created by the Inter-American Institute for Cooperation on Agriculture (IICA) of the Organization of American States, moved to



Paracas National Reserve, Peru, established in 1975 © Marc Dourojeanni

Turrialba in 1960. From its inception, it had the conservation of biological diversity as one of the goals of its forestry programme. For a long time, this area was overseen by the Venezuelan forester and professor, Gerardo Budowski (IUCN, 2014). From the early sixties, Budowski both personally and through his staff at CATIE trained several dozens of Latin Americans in conservation forestry, including protected areas management. Among them was the Costa Rican team led by Mario Boza, who after his graduation from CATIE became the founding director of the Costa Rican National Park Service and oversaw the creation and management of its first functioning national parks. It has been estimated that up to 1993, CATIE trained around a thousand professionals from all over Latin America, especially from Central America, including an estimated 40 individuals that had obtained their master's degree through its own programme (Barzetti, 1993). To carry out this mission, Budowski made alliances with other organisations and obtained sufficient international financing. The forester Kenton Miller (Miller, 2011; UNESCO, 2011), who worked for several years with Budowski in Turrialba, actively participated in this task. Arne Dalfelt, Craig McFarland, Roger Morales and James Barborak, among others, entered the programme.

From the 1970s to 1990s, FAO was also active in protected areas through several field forestry projects in the region that involved wildlife and protected areas experts including Gary Wetterberg (Brazil), Paul Pierret and Rudolf Hofmann (Peru) and Kyran Thelen (Chile). Similarly, Kenton Miller, while collaborating with FAO in Chile and with the help of the UNDP-Rockefeller Brothers, established the Latin American Program on Wildland Management in 1970, which was expanded with the support of the US National Parks Service and the University of Michigan, where Miller also taught. Compact practical trainings were offered that included visits to protected areas in the US and Canada, as well as mobile seminars, international courses, workshops and practical in-service training. This programme contributed to the training and encouragement of a hundred or more mid and high-level active staff of the public agencies responsible for protected areas, and young university professors in this field.

Several of the FAO experts assigned to the region made important contributions to the planning, establishment and management of protected areas as well as training local staff. Gary Wetterberg participated in the expansion of protected areas in the Brazilian Amazon (Wetterberg, 2017; Pádua, 2015, 2020). Paul Pierret helped design the

first Peruvian system of protected areas, including the Manu National Park, and launched the Vicuna Management Program that was continued by Rudolf Hofmann (Dourojeanni, 2009, 2022). FAO hired several other valuable experts, including Kyran Thelen, Allen Putney, William Deshler and John Moreley, who also worked in the Chilean based Regional Wildland project. Likewise, other experts worked either as FAO consultants or as US National Parks Service advisors, such as Curtis Freese, William Wendt, Craig McFarland, Alan Moore, Bernardo Zentilli and James Barborak. All these experts had great personal knowledge of the region and excellent command of Spanish. While not directly working for protected areas, many distinguished scientists, often associated to the IUCN Survival Service Commission, also played a significant role in designing the national systems. Mention must be made of John Terborgh, Jean Dorst, Ian Grimwood, George Schaller, Ghillean Prance, Archie Carr, Russell Mittermeier and Nicole Duplaix.

The IUCN and the WCPA



Mario Boza, Costa Rica.
Deceased in 2021.

The International Union for Conservation of Nature (IUCN) was created in 1948 with the support of UNESCO, at a time when, despite the fact that government institutions for environment and nature conservation already existed in developed countries, there was none at the international level.

The only entity that preceded IUCN was the Council for the Preservation of Birds (now BirdLife International). The IUCN, despite not being a typical governmental international organisation, filled the global gap for decades, steadily and increasingly assuming the role of a world environmental governing body. This task was facilitated by the creation of the World Wildlife Fund (today the World Wide Fund for Nature), that initially had financing IUCN as its predominant role (Holdgate, 1999).

The IUCN was originally based on two lines of work, which for decades were its two main commissions: the conservation of species (Species Survival Commission, SSC) and natural protected areas (World Commission on Protected Areas, WCPA). IUCN grew and acquired enormous global relevance given the existing vacuum which lasted until the creation of the United Nations Environment Programme (UNEP) in 1972, with which IUCN collaborated directly on protected areas, species conservation and environmental law.

As Holdgate (1999) recalls, until the beginning of the 1970s when Budowski became IUCN's Director General, it had little activity in Latin America. Its interest was focused on Europe and North America, from where all its authorities and officials came. Due to the rapid decolonisation process, Europeans also turned their attention to Africa and, to a lesser extent, to Asia. This was justified because, on one hand, environmentalists from Europe wanted to consolidate the protected areas they had established before independence and, on the other hand, they were racing to save samples of ecosystems not yet protected. Meanwhile, Latin America received much less attention although some of its members, as well as a few from WWF, showed some concern for the region. Among these were the Swiss Lukas Hoffmann who was World Vice President in both institutions and the Belgian Jean Paul Harroy, a founder of the IUCN who, despite his involvement in Africa, showed special appreciation for South America. Both were instrumental in providing support for several conservation actions. However, as in the case of the Galapagos National Park, these were exceptions and, especially at the staff level, until the 1970s IUCN did not demonstrate much interest in Latin America.

Budowski changed that situation and opened IUCN's doors to a new wave of Latin Americans, in the Council, the Commissions and even among the staff. Several of his former CATIE students, already in government or academic positions, were invited to join IUCN governing bodies, and the voice of the region was better heard. During the 1970s and 1980s, several of those who had established Latin-American protected areas joined the IUCN Council, such as Mario Boza and Roger Morales (Costa Rica), Paulo Nogueira Neto, Maria Tereza Jorge Padua and Jose Pedro Costa (Brazil), Marc Dourojeanni (Peru) and Cecilia Blohm (Venezuela). Particularly in the Commissions, the number of representatives of the



The author and Kenton Miller in
Brazil, in 1982.

region increased significantly. At the staff level, some Latin-American professionals were appointed, the Chilean Bernardo Zentilli among others. But this reached a peak when, in 1975, Kenton Miller, with enthusiastic support of Latin Americans, was elected president of the WCPA. Later, in 1982, he was

appointed Director General of the IUCN, a position he held until 1988.

A considerable number of events, meetings and reciprocal assistance missions between countries in the region were carried out in the 1970s and 1980s, including the World Parks Congresses in Yellowstone (USA, 1972), Bali (Indonesia, 1982) and Caracas (Venezuela, 1992), which had growing Latin American participation. Miller assisted Jeff McNeely to organise the Bali (1974) and Caracas (1984) congresses. In addition, WCPA regional meetings were held in Peru in 1977 and 1991 (IUCN, 1991) and in Argentina (IUCN, 1986). Bali and Caracas World Park Congresses had significant influence on the regional movement in favour of protected areas. These were opportunities to present achievements and to receive international support and, in particular, they provided valuable directions for the future. Also important has been the opportunities these events provided to coordinate technical and financial assistance. Several other minor subregional events took place in different countries, such as Central American regional meetings on protected areas led by Miller and Budowski in 1974 in Costa Rica and another led by CATIE which Miller attended in 1987 in Guatemala, as well as the global IUCN Congress, with a strong focus on protected areas, in Costa Rica in 1988.



Kenton Miller (1939-2011)

The combination of the early efforts of Miller and Budowski for the training and motivation of Latin American professionals in the 1960s and 1970s, mostly before assuming their respective roles in IUCN, contributed to IUCN and WCPA working with

professionals from the region, and played an undoubtedly important role regarding the sharp increase in new protected areas in the region. The professionals who participated in the training and events organised by Miller's Regional Wildland Management Project and later by IUCN added up to two hundred. Especially beginning in the 1970s and continuing well into the 1980s, these efforts created a significant horizontal cooperation among protected areas' staff in each country and stimulated healthy competition. During that period, key individuals who became environmental leaders in each country were identified and stimulated. Several of them exchanged high-level positions between universities, public administration and non-governmental organisations that proliferated all over the region in the

1980s. IUCN's assistance was technical, but especially appreciated was its help to channel resources from international organisations such as the WWF, especially through Russel Mittermeier and Thomas Lovejoy, young professionals deeply involved in Latin America, and The Nature Conservancy (TNC), as well as from bilateral sources, such as the USA, Germany, New Zealand, Belgium, Canada and Switzerland, or from multilateral sources, mainly UNDP and FAO, that were decisive for the establishment and management of protected areas in several countries. A special mention should be made of the US Peace Corps in the late 1960s and early 1970s as several of its recruits became the international experts mentioned previously, for example, Gary Wetterberg. He served as Peace Corp volunteer in the parks of Chile and Colombia before becoming FAO officer in Brazil. At that time, despite being young and unexperienced, several of them were instrumental in establishing and managing protected areas (Wetterberg, 2017; Dourojeanni, 2022).

The Latin American results and actors



Jorge Hernandez, Colombia (1935-2001)

The results were as rapid in countries that did not have protected areas as in those that were already relatively advanced. Among the first, the case of Costa Rica stands out. Two young Budowski disciples, Mario Boza and Álvaro Ugalde, were the architects of the creation of 28 protected areas by 1989 and, in addition, they gained

strong support from national society and policymakers. They have been pioneering examples for the entire region, demonstrating that conservation leaders, just like park rangers, can get their hands dirty in the field (Rueda, 2021; Vaughan, 2022). Another outstanding case has been that of Colombia, which went from having no protected areas to, three decades later, having 42 protected areas covering 9.3 million hectares. Many people participated in this task, but it is known that much of the scientific planning for the endeavour was conducted by Jorge Hernandez-Camacho⁴, a prominent natural scientist who inspired many in Colombia and in other countries. Among others that contributed during this period, are Simon Max Franky, Fernando Ruan, Manuel Rodriguez and Heliodoro Sanchez.

Peru underwent a similar evolution in the same period, managing to establish 24 protected areas covering 5.5 million hectares, including the Manu National Park with 1.7 million hectares. This task began at La Molina

University, where in the 1960s the system of protected areas was designed and then applied in the 1970s and 1980s, especially by Marc Dourojeanni, who also led the forestry sector. He benefitted from the help of Carlos Ponce and later Antonio Brack in government and Augusto Tovar and Manuel Ríos in the university (Dourojeanni, 2009, 2022). Paraguay, which was without protected areas until 1960, managed to establish 12 covering 1.2 million hectares, including the large Defensores del Chaco National Park. Rosa Villamayor played a significant role in this process in Paraguay. Other countries without protected areas in 1960 and that added several by the end of 1989 were Panama, Honduras, the Dominican Republic, Nicaragua and El Salvador. Other countries, such as Guatemala, Uruguay and Cuba, that had just a few parks previously, also established several more. The names of Edgardo Sevilla and Hugo Francisco Morales (Guatemala), Dario Tovar (Panama) and Edgardo Sevilla (Honduras) must be mentioned. From Uruguay the work of Gabriel Caldevilla and Alvaro Larrobla is noted. Suriname and Guyana, that already had a few protected areas in 1960, also increased their number and area, but not as significantly as other regional countries. The activities of Ivor Jackson and Bal Ramdial in support of Caribbean protected areas were also considerable.

Progress was similarly rapid in countries that by 1960 already had systems of parks and reserves. Argentina, the nation that was the most advanced in the region in nature conservation, went from having 25 protected areas in 1960 to 113 in 1989, with 12.6 million hectares, a sixfold increase in coverage. In this case there were many important actors from the public administration, such as Italo Constantino, Jorge Morello and Jorge Barroso, but also others from civil society such as Maria Buchinger and Francisco Erize⁵ and from academia such as Ricardo Luti. Antonio Torrejón, a great promoter of tourism in nature (Marín & Pérez, 2020), also played an important role during this period, and later, Obdulio Menghi and Pedro Tarak participated as well. In 1960, Bolivia had only two relatively small, not managed parks, but by 1989 it had 23 covering 6.8 million hectares. It is difficult to attribute merits for this achievement, but José Imaña and Armando Cardozo stood out among others. Brazil, which already had 18 protected areas before 1960, increased its protected area system to 162 areas covering 20.5 million hectares by 1989. Although many actors contributed to this achievement, two closely linked to the IUCN played a fundamental role in this period: Maria Tereza Jorge Pádua and Paulo Nogueira Neto.⁶ The former was largely responsible for the creation of 15 parks and reserves including over 8 million hectares, mainly in the Amazon (Padua, 2015). The latter is well



Maria Tereza Jorge Pádua
(Brazil)



Bernardo Zentilli, Chile.
Deceased in 2021

known for the establishment of a network of ecological stations (Nogueira Neto, 2010). Jose Candido de Melo Carvalho, Alceo Magnanini and Admiral Ibsen de Gusmão Câmara⁷ (Urban, 1998; Mittermeier et al., 2005) were also important actors during this period. Several others also played significant roles such as Angela Tresinari, José Pedro Costa and Sonia Wiederman. Chile is another notable case. Indeed, between 1960 and 1989, it progressed from 21 protected areas to 65, enlarging the protected area system thirteenfold, reaching 12.6 million hectares. Several names are associated with this success, including Fernando Hartwig, Bernardo Zentilli⁸, César Ormazabal, Alejandro Gutierrez, Edmundo Fahrenkrog, Juan V. Oltremari and Hernán Torres, who came from government, academia and civil society. Before 1960, Ecuador had only Galapagos National Park, but by 1989 it had created 14 areas covering 10.7 million hectares, an impressive achievement for a country of modest size. Among those with important roles were Misael Acosta Solís and, especially, Juan Black (Arcos, 1997), who is well known for his exceptional work in Galapagos. Pablo Rosero and Angel Lovato must also be mentioned. Mexico that had already made good progress in conserving nature, continued to improve its system of protected areas, going from 25 generally small areas to 61 covering 9.4 million hectares in this period. Among those with significant roles is Gonzalo Halffter⁹, to whom the promotion of biosphere reserves is attributed. Finally, the case of Venezuela is mentioned, which in 1960 had 0.6 million protected hectares, but jumped to 74 parks and reserves covering 20.3 million hectares in 1989. Gerardo Budowski was Venezuelan and, without a doubt, had an influence on that progress, but it was accomplished essentially due to the enthusiasm and dedication of its officials, academics and civil society. During this period, Arnoldo Gabaldon, Rafael García¹⁰, José Ramón Orta, Cecilia Blohm, Edgardo Mondolfi, Pedro José Salinas and, more recently, Rafael Delgado stood out.



Chapada dos Veadeiros National Park, Brazil established in 1961 © Marc Dourojeanni

Focusing on the countries that in 1960 already had protected areas, their advances were impressive. Venezuela increased its protected area 34 times, Cuba 27 times, Bolivia 22 times, Brazil and Chile 17 times, and Mexico and Ecuador 14 times.

The personalities highlighted here are obviously not all those in each country who contributed to that success. But they are the ones that, as far as is known, were central actors in their countries. During those three decades, they attended many of the conferences and meetings, participated in directories, commissions and committees as well as in joint missions and field visits, among other events that established the fundamentals of a core group of leaders who demonstrated unified, strong, proactive and productive international camaraderie.

This is not intended to imply that the fast growth of protected areas over these three decades was a result of the support of the FAO and CATIE or of IUCN and its WCPA. In fact, during that time there were also other international sources of technical and financial assistance for biodiversity conservation, several have already been mentioned. But it is undeniable that without the external contributions of these individuals the process would have been much slower. At the same time, there is no doubt that

this success in improving the ecological representativeness of protected areas in Latin America and particularly their protection and management on the ground was fundamentally the result of efforts of citizens of the countries profiled, including a still growing cadre of professional staff and rangers, national processes and political will.

CONCLUSIONS

This review demonstrates that technical assistance that meets high quality standards and is sustained over time may enable the achievement of important conservation goals. The assistance provided by FAO, IICA and IUCN was long-term, well designed and applied by professionals who, in addition to their technical capacity, had a deep knowledge of the Latin American realities and cultures, its deficiencies and peculiarities and who, therefore, knew how to do what was necessary to motivate local staff to break through the inertia. On the other hand, these three institutions provided a constant and sustained stimulus during the thirty years of the development of protected areas in the region.

The fact that, in those three decades, Latin America made an unparalleled effort at the world level in terms of the conservation of natural ecosystems and biodiversity is

little known and less recognised. What was achieved between 1960 and 1990 was just the beginning of a long process. Since then, the region has continued with more, new and better qualified professionals, to improve its system of protected areas in terms of quantity and efficiency of management as well as of ecological representativeness, despite the obstacles of underdevelopment, and especially the prevailing informality that, in these countries, makes it so difficult to apply and enforce environmental legislation.

Finally, this text is offered as a posthumous tribute to all the individuals mentioned and who, unfortunately, have left us. They were great fighters for a better future for all, based on the building of harmony between people and the natural environment. In closing, the gratitude that the region will eternally owe to Gerardo Budowski and Kenton Miller is reiterated.

ENDNOTES

¹ However, other sources indicate this park was actually established in 1959, with IUCN assistance. (https://www.galapagos.org/about_galapagos/history/)

² Some references mention La Macarena National Park as established in 1948. However, this park is listed as created in 1989 in the UN List of National Parks and Protected Areas.

³ <https://ecohis.jmarcano.com/areas-prottegidas/antecedentes/washington/convencion/>

⁴ https://es.wikipedia.org/wiki/Jorge_Hern%C3%A1ndez_Camacho

⁵ https://es.wikipedia.org/wiki/Francisco_Erize

⁶ https://www.wwf.org.br/wwf_brasil/historia_wwf_brasil/paulo_nogueira_neto/; https://pt.wikipedia.org/wiki/Paulo_Nogueira_Neto

⁷ <https://www.oeco.org.br/wp-content/uploads/wp-post-to-pdf-enhanced-cache/1/27829-almirante-ibsen-uma-vida-dedicada-ao-meio-ambiente.pdf>

⁸ <https://laderasur.com/articulo/la-huella-de-bernardo-zentilli-fallece-el-visionario-ingeniero-forestal-que-fue-parte-de-la-fundacion-del-parque-nacional-conguillio/>

⁹ <https://www.unesco.org/en/articles/gonzalo-halffter-salas-driving-force-behind-biosphere-reserves-mexico-passed-away>

¹⁰ <https://www.ecopoliticavenezuela.org/2020/04/28/jose-rafael-garcia-una-vida-dedicada-a-los-parques-naturales-en-venezuela/>

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RESUMEN

Del comienzo del año 1960 al final de los años 1980 se produjo en América Latina un salto enorme en el número, área y calidad del manejo de las áreas naturales protegidas. En 1960 en esa región sólo existían 122 áreas protegidas cubriendo 6,5 millones de hectáreas, pero en 1989 ya había 797 áreas protegidas, cubriendo 116,9 millones de hectáreas. Este crecimiento fue 3,8 veces mayor que el crecimiento del área natural protegida a nivel mundial en el mismo lapso. En 1960 nueve países no tenían ninguna área protegida, entre ellos Colombia, Paraguay y Perú, pero en 1990 ya reunían docenas de ellas abarcando millones de hectáreas. Se exploran las causales que desencadenaron este aumento súbito del interés y de la acción para conservar muestras representativas de los ecosistemas naturales en América Latina. Se concluye que, en gran medida, se debe, por un lado, a la influencia combinada de la Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO) y del Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) que contribuyeron eficazmente a la formación de profesionales especializados y debidamente capacitados y, por otro lado, a la Unión Internacional para la Conservación de la Naturaleza (UICN) y a su Comisión Mundial de Áreas Protegidas (CMAP), que crearon conciencia sobre la necesidad y urgencia de establecer esas áreas, incentivaron la cooperación horizontal y apoyaron a los equipos profesionales de cada país para hacer realidad las propuestas. De las varias personalidades que aportaron directamente a ese cambio, a partir de las instituciones citadas y durante todo el periodo, destacan nítidamente el venezolano Gerardo Budowski y el estadounidense Kenton R. Miller.

RÉSUMÉ

Entre les années 1960 et 1980, le nombre, la superficie et la qualité de gestion les aires protégées ont considérablement augmenté dans toute l'Amérique latine. En 1960, la région ne comptait que 122 les aires protégées, couvrant 6,5 millions d'hectares, et neuf pays, dont la Colombie, le Paraguay et le Pérou, n'en possédaient aucune. En 1989, ce nombre était passé à 797, couvrant 116,9 millions d'hectares. Cette croissance était 3,8 fois supérieure à la croissance des zones protégées dans le monde au cours de la même période. En 1990, la région représentait 16,5 % de l'ensemble les aires protégées dans le monde. Les catalyseurs de cette augmentation soudaine de la conservation d'échantillons représentatifs d'écosystèmes naturels en Amérique latine sont étudiés. Il est conclu que, dans une large mesure, elle est due à l'influence combinée, d'une part, de l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO) et du Centre de recherche agricole tropicale et d'enseignement supérieur (CATIE) de Turrialba (Costa Rica), qui ont encouragé l'éducation et la formation des professionnels, et, d'autre part, de l'UICN et de la CMAP, qui ont fait prendre conscience de l'urgence de la situation et facilité la coopération horizontale pour promouvoir la création les aires protégées ainsi que le soutien aux équipes de professionnels de chaque pays. Parmi les personnalités qui ont contribué directement à ce progrès, Gerardo Budowski du Venezuela et Kenton R. Miller des États-Unis se distinguent clairement, en travaillant pendant plus de trois décennies au nom des institutions susmentionnées."