STEWARDSHIP AND MANAGEMENT OF PROTECTED NATURAL AREAS: THE INTERNATIONAL CONTEXT [1]

PATRICIA COSTA PELLIZZARO[2]
LETÍCIA PERET ANTUNES HARDT[3]
CARLOS HARDT[4]
MARLOS HARDT[5]
DYALA ASSEF SEHLI[6]

Introduction

Protected natural areas are an important tool for the conservation of biomes, ecosystems and species of fauna and flora. Their importance derives from the fact that they have clearly defined limits and regulate land use and occupancy according to local socioenvironmental characteristics and the stewardship and management aims defined to achieve the desired level of protection for each area (MEDEIROS, 2006; MILANO, 2001; RODRIGUES, 2005).

However, according to Quintão (1983), until the middle of the twentieth century there was no international standardization of criteria for defining the management nomenclature and objectives of protected natural areas; each country therefore adopted its own terminology, leading to conflicts when these areas were analyzed globally.

Araújo (2007) reports that the goals of the International Union of Nature Protection (IUNP), which was set up in 1948 and changed its name to the International Union for Conservation of Nature (IUCB) in 1955, include the establishment of internationally

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2. Architect and Urban Planner, Doctor, CNPq Scholarship in Technical Support Researcher on the Post-Graduate Program in Urban Management (PPGTU) at the Pontifical Catholic University of Paraná; (PUCPR); patricia.pellizzaro@gmail.com

3. Architect and Urban Planner, Doctor, CNPq Scholarship in Research Productivity and Researcher on the Postgraduate Program in Urban Management (PPGTU) at the Pontifical Catholic University of Paraná (PUCPR); l.hardt@pucpr.br

4. Architect and Urban Planner, Doctor, FA Scholarship in Research Productivity, Researcher and Coordinator on the Postgraduate Program in Urban Management (PPGTU) at the Pontifical Catholic University of Paraná (PUCPR); c.hardt@pucpr.br

5. Architect and Urban Planner, Master, Doctoral student on the Postgraduate Program in Urban Management (PPGTU) at the Pontifical Catholic University of Paraná (PUCPR); marlos@arquitetoeurbanista.com.br

6. Architect and Urban Planner, Master, Doctoral student on the Postgraduate Program in Urban Management (PPGTU) at the Pontifical Catholic University of Paraná (PUCPR); dy_assef@hotmail.com

recognized guidelines for the implementation, management and stewardship of protected natural areas.

After the 1970s, when these areas began to proliferate, discussions about conflicts between local populations and environmental protection intensified. As a result, the way in which these spaces were conceived began to evolve from an old preservationist view to the current conservationist one, in which there is greater integration between natural characteristics and sociospatial factors (BRITO, 2008).

In 1994 the IUCN defined a new international system for the classification of protected natural areas. However, although the institution currently has members in over 140 countries and efforts have been made to achieve integration at an international level, in many countries local standards do not correspond to those proposed in the IUCN system (HARDT *et al.*, 2011).

In light of this scenario, the main objective of this study was to analyze institutional compatibility between various countries and the guidelines proposed by the IUCN as an aid to future studies on protected natural areas. We studied data from countries on the five continents to ensure that conservation policies for protected natural areas in different biomes were adequately represented. Initially, the top ten countries in the Global Environment Facility Benefits Index (GEFBI) for each continent were selected (Table 1). This index defines the biodiversity potential of each country based on the following variables: local fauna and flora, threatened species and habitat diversity (PANDEY *et al.*, 2006[i] in WORLD BANK, 2014). In parallel, the total area of each of the countries with the best positions in this ranking was used to identify larger countries, as these were considered to be more likely to have larger ecosystems and, therefore, a greater potential for more efficient conservation of natural resources. In addition to the criteria based on the GEFBI and each country's total area, the structure of existing systems of protected natural areas was also taken into account, together with any particular aspects of note and experiences related to each system.

It should be noted that the two countries chosen in the Americas (Brazil and the United States) have the greatest diversity potential as well as significant differences between their biomes.

Brazil has the highest score in the GEFBI and has a wide variety of protected ecosystems in its very large territory. Another factor that weighed significantly in the choice of Brazil was that its legislative and institutional framework is compatible with the guidelines proposed by the IUCN, as discussed in Section 4: Relations between the international system and national systems.

The United States was chosen because it was ranked second worldwide in biological diversity (GEFBI = 94.22) and was the first country to establish protected natural areas. Consequently, the system for protecting these areas in the United States is not only one of the oldest but also highly complex, as at the federal level alone there are six subsystems, which were set up at the same time and are administered by four agencies (RODRIGUES, 2005). This is further justification for the choice of the United States despite its limited compliance with the international system.

Table 1: The ten countries on each continent with the greatest biodiversity according to the Global Environment Facility Benefits Index (GEFBI)

AMERICA	GEFBI	ÁFRICA	GEFBI	ASIA	GEFBI	EUROPE	GEFBI	OCEANIA	GEFBI
Brazil	**100.00**	Madagascar	29.22	Indonesia	80.96	Russia	34.13	**Australia**	**87.69**
United States	**94.22**	**South Africa**	**20.74**	**China**	**66.61**	Spain	6.84	Papua New Guinea	25.43
Mexico	68.68	Democratic Republic of Congo	19.95	India	39.93	Turkey	6.23	New Zealand	20.23
Colombia	51.51	Tanzania	14.76	Japan	35.96	Portugal	5.52	New Caledonia	8.55
Peru	33.36	Cameroon	12.51	Philippines	32.33	France	5.30	French Polynesia	4.57
Ecuador	29.34	Kenya	8.82	Malaysia	13.86	**Italy**	**3.85**	Solomon Islands	4.37
Venezuela	25.32	Ethiopia	8.38	Vietnam	12.05	United Kingdom	3.55	Fiji	3.86
Argentina	17.71	Angola	8.26	Myanmar	10.02	Greece	2.80	Federated States of Micronesia	2.61
Chile	15.32	Mozambique	7.18	Thailand	8.02	Norway	1.31	Northern Mariana Islands	2.24
Bolivia	12.55	Somalia	6.08	Sri Lanka	7.86	Bulgaria	0.81	Vanuatu	2.09

Source: Prepared using World Bank (2014).

NB: Countries in **bold** are those selected for the study (see Table 2).

South Africa was chosen because it has the second-highest biodiversity on the African continent (GEFBI = 20.74), because of its large size and because of the ease of access to information about the country's system of protected natural areas, particularly its environmental legislation. In this respect it compares favorably with the first country in the GEFBI list for the African continent (Madagascar).

In Asia, China was chosen despite its being in second place in the GEFBI ranking (66.61). The reasons for this were its vast territory and a system of protected natural areas that ensures that a significant proportion of its territory (15%) is conserved (SEHLI, 2011). Furthermore, it has a growing partnership with the IUCN, which provides technical advice on strengthening the country's environmental legislation.

In Europe, Russia and Turkey were eliminated because they are located on two continents and around 75% and 97%, respectively, of their territories are in Asia (EU-

ROPEAN COMMISSION, 2014), where their GEFBI values are well below that of the Asian country selected. Although Italy is ranked six in Europe according to the GEFBI criteria (or fourth once Russia and Turkey have been eliminated), it has a wide variety of biomes and is the European country with the highest species diversity (MATTM, 2014). However, the deciding factor in the choice was that Italy pioneered the implementation of an environmental management system (IMS) for protected areas known as *Parchi in Qualità* (ABREU, 2011) and thus ranked higher than Spain, France and Portugal when the various weighting factors were taken into account. It is worth noting that the agreement between Brazilian and Italian research institutions covering joint research into protected landscapes is particularly beneficial for the present study.

In Oceania, Australia was selected because of its greater ecosystem diversity (GEFBI score = 87.69) and because its covers a much larger area than the other countries in Oceania. Moreover, it is considered a pioneer in the management of protected areas in partnership with traditional local communities, as the first agreement of this kind dates from the 1980s. Table 2 summarizes the results after all the criteria had been applied.

Table 2: Classification of countries by continent according to the study selection criteria.

AMERICA	GEFBI +LA+ SF	AFRICA	GEFBI +LA+ SF	ASIA	GEFBI +LA+ SF	EUROPE	GEFBI +LA+ SF	OCEANIA	GEFBI +LA+ SF
Brazil	**Y+Y+Y**	**Madagascar**	**Y+N+N**	**Indonesia**	**Y+N+N**	**Russia**	**-**	**Australia**	**Y+Y+Y**
United States	**N+Y+Y**	**South Africa**	**N+Y+Y**	**China**	**N+Y+Y**	**Spain**	**Y+N+N**		
						Turkey	**-**		
						Portugal	**N+N+N**		
						France	**N+Y+N**		
						Italy	**N+N+Y**		

Source: Table 1 and references consulted.
NB: GEFBI = Global Environment Facility Benefits Index
LA = large area
SF = special features of the system of protected natural areas
Y = yes, i.e., best match for the criterion specified above
N = no, i.e., not the best match for the criterion specified above
\- = countries eliminated from the selection process because of specific criteria
Countries in **bold** are those selected for the study.

The basic methodological procedure involved a comparative analysis of the institutional and legislative frameworks in the chosen countries. This consisted of a literature- and document-based assessment of the standards and procedures adopted in each country and comparison of these with the guidelines established in the international system for protected natural areas proposed by the IUCN.

Historical overview of the evolution of protected natural areas

The creation of Yellowstone National Park in 1872 in the United States was a major landmark in the development of the current concept of protected natural areas. The approach adopted in the case of Yellowstone National Park was a preservationist one, in which the establishment of parks was the main means by which the environment in those areas could be protected from the harmful effects of urban and industrial development (VALLEJO, 2002).

This experiment was repeated in various countries, most notably Canada in 1885; New Zealand in 1894; Australia, South Africa and Mexico in 1898; and Argentina in 1903 (ARAÚJO, 2007).

Nevertheless, it was only in 1916 that the conceptual foundations for the creation and management of national parks were laid. According to Miller (1980[iii] in ARAÚJO, 2007), these were:

a) something for public benefit and enjoyment that protects natural resources for future generations;
b) a space with natural and historical resources;
c) a management process geared toward the conservation of natural heritage.

In 1940, the Inter-American Convention for the Protection of Flora, Fauna and Natural Scenic Beauties took place in Washington, USA. Among the subjects discussed were the results of an earlier convention on the protection of fauna and flora in their natural state, held in London, England, in 1933. Four categories of protected natural areas were defined at the Washington conference: National Park, National Reserve, Nature Monument and Strict Wilderness Reserve (ARAÚJO, 2007).

For Brito (2008), it was in these meetings that the concept of total protection of natural resources — a focus of conflict between local populations and the public authorities — took form. With a view to reducing such conflicts, the Fontainebleau Conference, in France, was organized by UNESCO (the United Nations Educational, Scientific and Cultural Organization). This was attended by 33 countries and saw the establishment of the International Union of Nature Protection (IUNP, or IUCN as it is now known) (ARAÚJO, 2007; BRITO, 2008).

In 1960 the Commission on National Parks and Protected Areas (CNPPA) was established as part of the IUCN with the aim of promoting and monitoring these spaces, as well as guiding management of them (ARAÚJO, 2007; BRITO, 2008).

In 1962, the management of protected areas was discussed at the 1st World Conference on National Parks in Seattle, USA, and included the possibility of economic exploitation of these areas.

In the following years, three conferences took place at which the first concepts of ecodevelopment — later known as sustainable development — emerged: the Biosphere Conference (Paris, France, 1968), the Convention on Internationally Important Wetlands (Rasmar, Iran, 1971) and the United Nations Conference on the Human Environment (Stockholm, Sweden, 1972). In 1972, in Banff, Canada, at the 11th General Assembly of the IUCN, the exploitation of natural resources in national parks and occupation by humans based on zoning within each park were considered for the first time.

In 1975, work began on the definition of an international system for the classification of protected areas. This was published in 1978 and was based on the following ten management categories, which are divided into three groups:

Group A, composed of the categories of greatest interest to the CNPPA: Scientific Reserve (I), National Park (II), Natural Monument/National Landmark (III), Nature Conservation Reserve (IV) and Protected Landscape (V);

Group B, composed of categories of importance to the IUCN but not exclusively the responsibility of the CNPPA: Resource Reserve (VI), Anthropological Reserve (VII) and Multiple Use Management Area (VIII);

Group C, made up of the following categories of international protection systems: Biosphere Reserve (IX) and World Natural Heritage Site (X) (ARAÚJO, 2007; IUCN, 2004).

The IIIrd World Parks Congress, held in Bali, Indonesia, in 1982, was considered to represent an important change in direction as questions related to protected natural areas and regional development, as well as the importance of involving local communities and indigenous peoples, were discussed jointly at the congress. With the drawing up of the Bali Action Plan, these populations were considered actors involved in the management of natural resources rather than merely users, a factor of particular importance in the establishment of legally defined protected areas occupied by humans (ARAÚJO, 2007; BRITO, 2008).

In 1992, at the IVth World Parks Congress, in Caracas, Venezuela, changes to this system were discussed, and in 1994, at the XIXth General Assembly of the IUCN in Buenos Aires, Argentina, the new classification system for protected natural areas was defined. This consisted of six management categories, as discussed below.

At the conference *Protected Areas in the 21st Century: From Islands to Networks*, held by the CNPPA in 1997 in Albany, Australia, the following main challenges facing protected natural areas were defined:

a) to move from an island to a network view of protected natural areas;
b) the need to manage for local communities with their support;
c) the need to raise management standards and provide training to face the challenges identified (IUCN, 2008).

The economic, social and environmental importance of protected areas in modern society was also discussed at the Albany conference (ARAÚJO, 2007; BRITO, 2008).

Rodrigues (2005, p.33) includes in this scenario, in addition to environmental factors, those related to cities and society, defining protected areas as territorial spaces with "important natural, urbanistic and cultural characteristics situated in an urban or rural environment and legally established by the public authorities."

It can be seen that the emergence of an international agenda for the discussion of issues related to the protection of natural areas led to the evolution of concepts associated with these areas and the process of planning, management and stewardship, allowing a global system to be established.

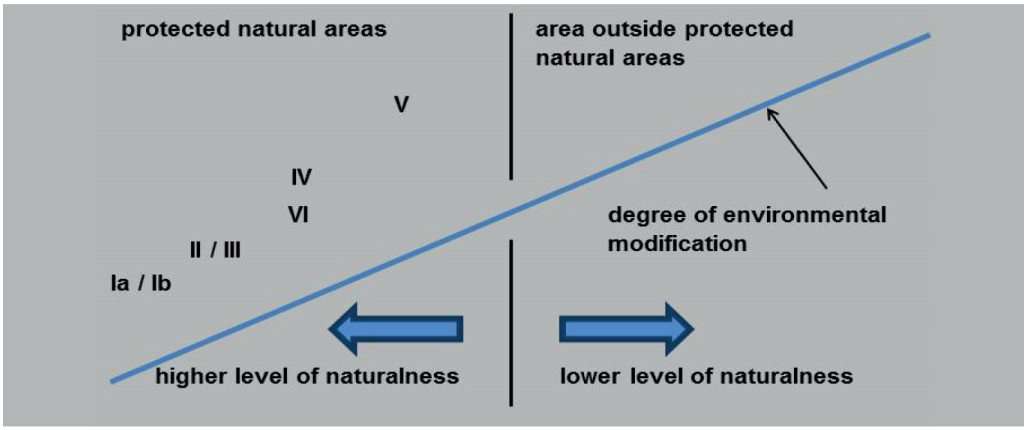
International system of protected natural areas

Currently, protected natural areas are clearly defined geographical spaces, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN, 2008). They include the following multiple objectives:

a) to conserve the composition, structure, function and evolutionary potential of biodiversity;
b) to contribute to regional conservation strategies;
c) to maintain diversity of landscape or habitats;
d) to be of sufficient size to ensure the integrity and long-term maintenance of the specific conservation goals or be capable of being increased to achieve this end;
e) to maintain their values in perpetuity;
f) to operate under a management plan and a monitoring and evaluation program that supports adaptive management;
g) to possess a clear and equitable governance system (IUCN, 2008, p.6).

The international system of protected natural areas defined by the IUCN in 1994 consists of the following management categories, which take into account the level of intervention and the naturalness of the environments (Figure 1): Strict Nature Reserve (Ia), Wilderness Area (Ib), National Park (II), Natural Monument (III), Habitat Species Management Area (IV), Protected Landscape/Seascape (V) and Managed Resource Protected Area (VI) (IUCN, 2008).

Figure 1. Schematic representation of the different degrees of conservation and the management categories of protected natural areas proposed by the International Union for Conservation of Nature (IUCN).



Source: Prepared using IUCN (2008).
NB: Ia = Strict Nature Reserve
Ib = Wilderness Area
II = National Park
III = Natural Monument
IV = Habitat Species Management Area
V = Protected Landscape/Seascape
VI = Managed Resource Protected Area

Table 3 shows the main objectives of each management category. The planned activities are shown for the different management categories, which reflect the level of naturalness of the protected areas. Examination of the table shows the importance of integration between the protection of natural attributes and the protection of cultural attributes, concerns that are reflected in protected natural areas as they are currently conceived, as the protection or maintenance of cultural characteristics are mentioned in all but two of the seven management categories (Strict Nature Reserve and Wilderness Area). Another important issue addressed in the system proposed in 1994 is the sustainable use of natural resources in protected areas, which is an objective in all categories except for Strict Nature Reserve (Ia) and Natural Monument (III).

Table 3: Main objectives of the management categories of protected natural areas proposed by the International Union for Conservation of Nature (IUCN).

MANAGEMENT CATEGORY / OBJECTIVE	Ia	Ib	II	III	IV	V	VI
Scientific research	1	3	2	2	2	2	3
Wilderness protection	2	1	2	3	3	-	2
Preservation of species and genetic diversity	1	2	1	1	1	2	1
Maintenance of environmental services	2	1	1	-	1	2	1
Protection of specific natural and cultural characteristics	-	-	2	1	3	1	3
Tourism and recreation	-	2	1	1	3	1	3
Environmental education	-	-	2	2	2	2	3
Sustainable use	-	3	3	-	2	2	1
Maintenance of cultural attributes	-	-	-	-	-	1	2

Source: Prepared using IUCN (2003).
NB:
Ia = Strict Nature Reserve
Ib = Wilderness Area
II = National Park
III = Natural Monument
IV = Habitat Species Management Area
V = Protected Landscape/Seascape
VI = Managed Resource Protected Area
■ = main objective
■ = secondary objective
■ = tertiary objective
- = objective incompatible with the category

According to the IUCN (2004), this system is intended to allow a clearer dialog between the different national systems and to minimize the adoption of different terms for management categories by establishing standards that allow comparisons to be made between national systems and protected natural areas to be quantified and monitored.

However, although the IUCN has developed clearly defined concepts and principles and works with environmental agencies in various countries, the proposed system is not compulsory. Each country can therefore choose whether to incorporate the guidelines in its legislation governing protected natural areas, making it difficult for the IUCN's goals to be achieved given the great variety of positions adopted by many countries.

Relations between the international system and national systems

A survey carried out by the IUCN in 126 countries in 2004 (ten years after the international system had been created) found that fewer than 10% of the countries surveyed had incorporated the guidelines it had proposed into their environmental legislation. Only two countries, Australia and Georgia (1.6% of all the countries surveyed), had fully adopted the proposals. In eleven (Australia, Brazil, Bulgaria, Cambodia, Cuba, Slovenia, Hungary, Kuwait, Mexico, Niger and Vietnam, corresponding to 8.7% of the countries surveyed), the IUCN proposals were found to have had a significant influence; in 37.5% the legislation incorporated some of the concepts proposed by the IUCN, but with some variations in nomenclature; and in 54% the legislation was incompatible with the proposals (IUCN, 2004).

As already mentioned, North America, specifically the United States, pioneered the setting up of protected natural areas with a view to protecting these from the harmful effects of industrialization and urban expansion. At that time the very strict concept of preservation was adopted, i.e., the total inhibition of anthropic activities in these areas (HARDT *et al*., 2011; SEHLI, 2011; SELLARS, 1997). However, this approach changed over time; visits to these areas were later allowed, and other types of management categories for protected natural areas were established.

Currently, there a number of inconsistencies between the model used in the USA and the international model, mainly in relation to the National Parks system, which has sixteen different categories. Some of these have functions and objectives that are compatible with IUCN category II; others, in contrast, fit category V (Protected Landscape/Seascape), are incompatible with the principles advocated by the IUCN because they allow hunting (e.g., the National Preserves) or are intended primarily to protect historic and cultural heritage (e.g., National Cemeteries and National Memorials, SEHLI, 2011).

Among the systems for the protection of natural areas in the USA, two stand out: the National Wilderness Preservation System, which covers areas with a high level of ecological integrity, and the National Wildlife Refuge System, whose main purpose is to protect threatened species. Leisure, recreation and environmental education activities are allowed in protected areas in both categories, making them compatible with category Ib (Wilderness Area) and reinforcing the view taken by Marcello (2002) that public parks should be used by the public for educational leisure activities.

The problem of multiple nomenclature was also identified in Europe, as according to Gambino, Talamo and Thomasset (2008), more than 100 different categories of protected natural areas are defined in the national legislation of European countries. Furthermore, the fact that many national parks (the term used for IUCN category II) are managed according to the guidelines for category V (Protected Landscape/Seascape) is yet another factor complicating the adoption of a common language.

According to Gambino (2008), only 14% of protected areas in Europe can be classified in IUCN category II (National Parks), while 52% correspond to category V (Protected Landscape/Seascape) and are generally close to urban or productive areas or even form "natural islands" inside the urban ecosystem.

The Italian system of protected natural areas was set up in 1991, before the new IUCN guidelines were proposed. It has three main management categories: *Parco Nacionale* (National Park); *Parco Naturale Regionale* (Regional Nature Park) and *Riserva Naturale* (Nature Reserve).

The categories in the Italian system do not include any corresponding to categories Ib (Wilderness Area) or VI (Managed Resource Protected Area). Category III (Natural Monument) is of little importance given the size of the protected areas. Analysis of the management objectives reveals that most of the protected areas (24% of National Parks and 37% of Regional Nature Parks) are compatible with category V (Protected Landscape/Seascape). This can be explained mainly by the level of integration between natural and anthropic factors, particularly those related to local history and culture. The remainder of the National Parks, Regional Parks and Regional Reserves correspond to category II (THOMASSET; SALIZZONI, 2008).

It is worth noting that the predominance in Italy and elsewhere in Europe of protected areas compatible with category V (Protected Landscape/Seascape) is a result of the major changes in natural biomes caused by human action, particularly the steady growth in urbanization since the Middle Ages. This explains the low biological diversity compared with Brazil, the United States and Australia and is reflected in the GEFBI values (see Table 1); for Italy the GEFBI figure is 3.85, while Brazil, the United States and Australia all score over 87.

In Oceania, Australia complies more closely with the system proposed by the IUCN, as environmental legislation introduced in 1999 (the Environmental Protection and Biodiversity Conservation Act) stipulates that areas defined as Commonwealth Reserves must be classified and managed in accordance with the recommendations for the seven IUCN management categories (AUSTRALIAN GOVERNMENT, 2011).

On the African continent, studies of South Africa show that the system of protected natural areas is made up of National Parks, Natural Reserves, Wilderness Areas, Protected Environments, World Heritage Sites, Specially Protected Forest Areas, Forest Nature Reserves, Forest Wilderness Areas and Mountain Catchment Areas (HARDT *et al*., 2011; SEHLI, 2011). Of the seven categories identified, only three can be directly related to the IUCN system: National Park (category II), Natural Reserve (subcategory Ia) and Wilderness Area (subcategory Ib). The remaining four would require further, more detailed study of their objectives to establish a relation with the system proposed by the IUCN.

In the case of Asia, the comparison was more difficult, particularly because of cultural differences. The Chinese system has sixteen management categories, ranging from National Park (category II) and Nature Reserve (generally compatible with category I) to conservation areas for domestic animal genetic resources (SEHLI, 2011). Although the Chinese system is different from the proposed international system, the IUCN has acted in an advisory capacity to the Chinese government to help introduce suitable environmental legislation for the protection of natural areas.

The differences in nomenclature adopted by Central American, Caribbean and South American countries were also the subject of a IUCN study carried out in 2003

that identified seventy-six different names for management categories. Table 4 shows the varying degrees of correspondence between the national systems in these three regions and the six management categories in the international classification. It can be seen that the only IUCN category that corresponds directly to the national systems studied is National Park. The category with the next closest correspondence is Natural Monument (category III), which was identified — either directly or indirectly — in all countries but Peru. Category V (Protected Landscape/Seascape) has the greatest variation in nomenclature, with eighteen different names, followed by category VI (Managed Resource Protected Area), with seventeen, and category IV (Habitat Species Management Area), with ten.

Of the nineteen countries analyzed in Central America, the Caribbean and South America, only five (Brazil, Cuba, Guatemala, Nicaragua and Panama) have categories that match all those defined by the IUCN; Uruguay is the least compliant with the international system and has only three matching categories.

Of the categories proposed by the IUCN, category II (National Park) was used in the greatest number of national systems (all the countries analyzed), and was followed by category III (National Monument), which is not provided for in only the Peruvian system. Categories Ia (Strict Nature Reserve) and V (Protected Landscape/Seascape) are the least adopted in Latin American countries.

In Brazil, the National System of Nature Conservation Units (SNUC), regulated by federal law 9.985, dated July 18th, 2000, (BRASIL, 2000), established criteria and standards for the creation, implementation and management of these protected areas. A conservation unit was defined in this legal instrument as:

> territorial space and its environmental resources (including jurisdictional waters) with important natural characteristics legally established by the State with defined conservation objectives and boundaries under a special administrative regime to which adequate protection guarantees are applied (BRASIL, 2000, Article 2, Subsection I).

The same legal instrument divides Brazilian conservation units into two classes: complete protection and sustainable use. The purpose of conservation units in the first class is to prevent ecosystems suffering any changes as a result of human interference; natural resources in these conservation units may only be used indirectly. The categories in this class are Ecological Station (subcategory Ia), Biological Reserve (subcategory Ia), National Park (category II), Natural Monument (category III) and Wildlife Refuge (category II) (BRASIL, 2000; IBAMA, 2008).

In units classified as being for sustainable use, socially equitable and economically viable exploitation of the environment is permitted, i.e., a greater level of human intervention is allowed (BRASIL, 2000; RYLANDS; BRANDON, 2005). The categories in this class are: Environmental Protection Area (category V), Area of Significant Ecological Interest (category V), National Forest (category IV), Extractivist Reserve, Fauna Reserve (category IV), Sustainable Development Reserve (category VI) and Private Natural Heritage Reserve (category VI).

Table 4: Correspondence between protected natural areas management categories in national systems in Central America, the Caribbean and South America and the categories proposed by the International Union for Conservation of Nature (IUCN).

MANAGEMENT CATEGORY / COUNTRY	Ia	Ib	II	III	IV	V	VI
Central America							
Costa Rica	X		X	X	X	-	X
El Salvador	-		X	X	X	X	X
Guatemala	X		X	X	X	X	X
Honduras	X		X	X	X	-	X
Mexico	X		X	X	X	-	X
Nicaragua	X		X	X	X	X	X
Panama	X		X	X	X	X	X
Caribbean							
Cuba	X		X	X	X	X	X
Dominican Republic	-		X	X	X	X	X
South America							
Argentina	X		X	X	-	-	X
Bolivia	X		X	X	-	-	X
Brazil	X		X	X	X	X	X
Colombia	X		X	X	-	-	-
Chile	X		X	X	X	X	-
Ecuador	-		X	X	X	X	X
Paraguay	-		X	X	X	-	-
Peru	-		X	-	X	X	X
Uruguay	-		X	X	-	X	-
Venezuela	-		X	X	X	X	X

Source: Prepared using IUCN (2003).
NB: Ia = Strict Nature Reserve
Ib = Wilderness Area
II = National Park
III = Natural Monument
IV = Habitat Species Management Area
V = Protected Landscape/Seascape
VI = Managed Resource Protected Area

Although the SNUC does not include category Ib (Wilderness Area), conservation unit management categories in Brazil are generally aligned with those proposed internationally. While the categories do not correspond exactly with the IUCN nomenclature, this is a common feature of Latin American, Caribbean and South American countries.

Based on the examples described, it can be seen that a common language for protected areas systems has not yet been adopted internationally since, as mentioned earlier, only category II (National Park) is common to all the systems studied here.

Final considerations

Only two of the countries studied (Australia and Georgia) have adopted the IUCN proposals in their entirety. Others have adapted their legislation to the international guidelines, the system in Brazil being an example of this. Nevertheless, shortcomings were observed even in countries that based their laws on the international recommendations, such as the absence of subcategory Ib and the variety of names used, which, in the case of Brazil, is most apparent for category VI (Managed Resource Protected Area).

Of the categories proposed by the IUNC, the only one found in all the countries studied is category II (National Park); however, even this varied between countries, as in many cases, particularly in Europe but also in the United States, a large number of areas are managed according to criteria defined for category V (Protected Landscape/ Seascape) although they are classified as National Parks.

Another important issue is the wide variety of names adopted, which makes it difficult to identify and classify the various protected natural areas using the criteria adopted in the international system.

In conclusion, although the IUCN has been involved, either directly or indirectly, in defining some of the national systems of protected natural areas analyzed here, almost two decades after it was first proposed the IUCN system has yet to be adopted internationally. Consequently, there is no common language, something that is extremely important if systems are to be integrated with a view to monitoring protected areas at a global level and exchanging experiences in order to ensure that natural heritage is preserved and valued.

Notes

i For further information see:
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STEWARDSHIP AND MANAGEMENT OF PROTECTED NATURAL AREAS: THE INTERNATIONAL CONTEXT

PATRICIA COSTA PELLIZZARO
LETÍCIA PERET ANTUNES HARDT
CARLOS HARDT
MARLOS HARDT
DYALA ASSEF SEHLI

***Abstract*:** The international system for the classification of protected natural areas developed by the International Union for Conservation of Nature (IUCN) is intended to provide a common language for the management of these areas. The main objective of this study is to examine the institutional compatibility between different countries and the guidelines proposed by the IUCN. The method used consisted of a comparative analysis of the institutional and legal frameworks in South Africa, Australia, Brazil, China, the United States and Italy. The findings indicate that few countries have adopted the IUCN proposals in their entirety. Some have adapted their laws to the international guidelines, although with various changes, such as differences in the nomenclature used for management categories, while in other countries the legislation diverges substantially from these guidelines. In conclusion, these divergences and incompatibilities make it difficult to exchange experiences at an international level and adopt common strategies for the conservation of natural heritage.

***Keywords*:** protected natural areas, conservation units, international context, management.

***Resumo*:** O sistema internacional de classificação de áreas naturais protegidas, estruturado pela International Union for Conservation of Nature (IUCN) visa à proposição de linguagem comum para gestão desses espaços. Nesse contexto, o objetivo principal da pesquisa consiste em analisar a compatibilidade institucional entre países e as diretrizes propostas pela IUCN. Como método, adotou-se a análise comparativa dos quadros institucionais e legislativos entre África do Sul, Austrália, Brasil, China, Estados Unidos e Itália. Como resultados, diagnostica-se que poucas nações adotaram integralmente as proposições da IUCN. Outras adaptaram suas leis às diretrizes internacionais, porém com algumas incongruências, como diferenças quanto à nomenclatura das categorias de manejo. Outras,

ainda, apresentam distanciamentos significativos em relação àquelas diretrizes. Conclui-se, portanto, que esses fatores dificultam a troca de experiências em nível mundial e a adoção de estratégias comuns de preservação do patrimônio natural.

***Palavras-chave*:** áreas naturais protegidas, unidades de conservação, contexto internacional, manejo

***Resumen*:** El sistema de clasificación internacional de las áreas naturales protegidas organizado por la International Union for Conservation of Nature (IUCN) tiene como objetivo proponer un lenguaje común para la gestión de estos espacios. En este contexto, el objetivo de la investigación es examinar la compatibilidad entre los países y las directrices propuestas por la IUCN. Como método, se adoptó el análisis comparativo de los marcos institucionales y legislativos entre Australia, Brasil, China, Estados Unidos, Italia y Sudáfrica. Como resultados, se diagnosticó que pocos países han adoptado plenamente las propuestas de la IUCN. Algunos han adaptado sus leyes a las normas internacionales, pero con algunas inconsistencias, como las diferencias en la nomenclatura de las categorías de manejo. Otros muestran distancias significativas en relación con aquellas directrices. Tanto concluye que estos factores complican el intercambio de experiencias en el mundo y la adopción de estrategias comunes para la conservación del patrimonio natural.

***Palabras claves*:** área natural protegida, unidad de conservación, contexto internacional, manejo