2003 United Nations List of Protected Areas

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WCPA WORLD COMMISSION ON PROTECTED AREAS

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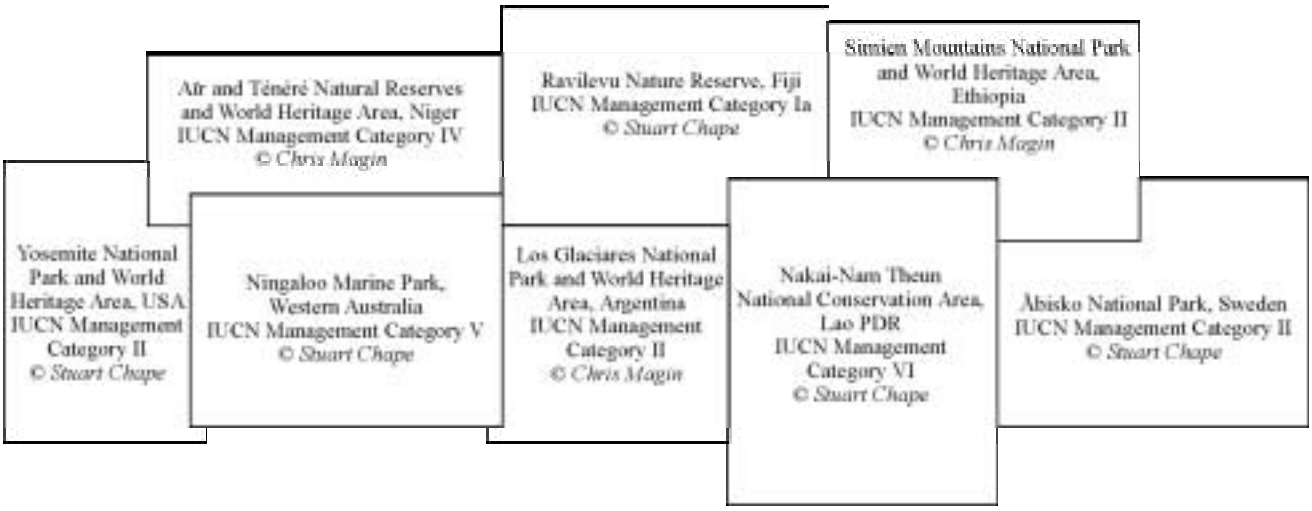

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IUCN – The World Conservation Union
UNEP World Conservation Monitoring Centre
2003

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Foreword

The United Nations Environment Programme and IUCN – The World Conservation Union are pleased to present the *2003 United Nations List of Protected Areas*. This is the thirteenth report to be produced since 1962 that records the global community's endeavour to conserve the Earth's natural places. The growth in area and extent of the conservation estate in the 20th century, especially in the last quarter of the century, reflects an increasing political commitment to conserving the Earth's remaining biological diversity. The growth in the global protected areas network, with diverse management objectives, also reflects the high social and cultural values that societies place on them. The *2003 UN List* is an essential reference document for all who want to understand the progress made in responding to the challenges of biodiversity loss and other environmental threats around the world.

As we enter the new millennium there is compelling statistical evidence presented in the *2003 UN List* that concrete action has been taken by governments, organisations and individuals to set aside not only discrete areas for protection but also protected area systems and networks. These are essential if we are to implement the ecosystem approach to the way we manage the planet's resources. Of course, statistics are only part of the story. Protected areas in most countries urgently need technical and financial resources to ensure that they are effectively managed to achieve their objectives.

The *2003 UN List* is the first version to attempt a comprehensive presentation of all the world's known protected areas. The global conservation estate has grown enormously since the first UN List was published in 1962 with just over 1,000 protected areas. This edition lists 102,102 sites covering 18.8 million km^2. Significant progress has been made in conserving representative areas of the world's terrestrial biomes, although some biomes, including Lake Systems and Temperate Grasslands, remain poorly represented. Of the total area protected it is estimated that 17.1 million km^2 constitute terrestrial protected areas, or 11.5% of the global land surface. Unfortunately, marine areas are significantly under-represented in the global protected area system. Approximately 1.64 million km^2 comprise marine protected areas – an estimated 0.5% of the world's oceans and less than one-tenth of the overall extent of protected areas worldwide.

An important aspect of the UN List process is that it is produced through a partnership between IUCN, the IUCN World Commission on Protected Areas (WCPA), UNEP and the UNEP-World Conservation Monitoring Centre. The UN, IUCN and the Commission have been working in partnership for the past 44 years. It is also pleasing to see the valuable contributory role of more recent partners in the UN List process, including the European Environment Agency, the ASEAN Regional Centre for Biodiversity Conservation, and the numerous organisations comprising the World Database on Protected Areas Consortium.

The work of WCPA in developing and refining international protected area definitions and management objectives has been central to the development of the UN List. This is the second edition to use the six IUCN management categories adopted in 1994. It provides an excellent internationally understood framework within which countries can structure their protected area systems. Already, there is considerable diversity evident in the application of the system throughout the world, reflected in the regional analyses presented in this edition. For example, the growing application of Category VI (Managed Resource Protected Areas), in many countries suggests an increasingly close link between protection and sustainable use.

Finally, publication of the *2003 UN List* coincides with the Vth World Parks Congress to be held in Durban, South Africa. The UN List will provide invaluable input to the deliberations of the Congress. However, the relevance of the UN List is dependent upon the review of its information and continuing input by those who plan, establish and manage the world's protected areas – our key partners – to ensure that information is up-to-date. We therefore urge you to review this document and the accompanying data critically and provide UNEP-WCMC with new or updated information.

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Kenton Miller
Chair, IUCN World Commission on Protected Areas

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The generous assistance provided by national and international agencies to the *2003 United Nations List of Protected Areas* process is gratefully acknowledged. Many professionals from protected areas management agencies around the world and other experts have provided the information used in updating the World Database on Protected Areas, which underpins the *2003 United Nations List of Protected Areas*. Without their invaluable input, this edition of the UN List could not have been completed.

The support of Kenton Miller, Chair of the IUCN World Commission on Protected Areas, and Commission Vice Chairs and members has once again been an essential component of the UN List process. Similarly, the support and guidance of David Sheppard, Pedro Rosabal and Peter Shadie have contributed substantially to the success of the process.

The European Environment Agency and the European Topic Centre on Nature Protection & Biodiversity (ETC/NPB) undertook the survey of European countries, with the generous assistance of Marc Roekaerts, Lauri Klein and Ulla Pinborg. The ASEAN Regional Centre for Biodiversity Conservation provided updated information for the ASEAN countries of Southeast Asia, with the generous support of John MacKinnon and Lewie Dekker.

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1. Introduction

The *2003 United Nations List of Protected Areas* presents data on 102,102 protected areas covering 18.8 million km^2. Within this total figure, there are 68,066 protected areas with IUCN Management Categories. In addition, there are 4,633 internationally designated sites. Although there has been an increase in the range of data presented in the *2003 UN List*, compared to previous editions, it is clear that there has been a substantial increase in the extent of the world's terrestrial conservation estate in the past seven years. However, marine areas still make up a very small component – 1.64 million km^2 or 8.7% of the total area protected.

This is the thirteenth edition in a series that was initiated by the United Nations more than 40 years ago. The last edition published data collected in 1997. Of the previous 12 UN Lists published, five (1982–1997) have been prepared jointly by UNEP-WCMC and IUCN. As well as changes in the format and content of the *2003 UN List*, the process involved to gather and review the data reflected the widening of partnership arrangements instituted in 2002 to manage the World Database on Protected Areas (WDPA) that underpins the UN List. This partnership includes other organisations through the WDPA Consortium, as well as agreements with intergovernmental organisations, such as the European Environment Agency and the ASEAN Regional Centre for Biodiversity Conservation. This is also the first UN List prepared since the World Conservation Monitoring Centre became part of UNEP.

Format and content of the *2003 UN List of Protected Areas*

The format and content of the *2003 UN List* is a significant departure from the previous editions that have been produced. As discussed below, production of the UN List has been an evolving process since its inception in 1962, moving from the iconic national park "role of honour" concept that characterised the earlier UN Lists to one that reflects the range of protected area objectives and values relevant to the late 20th and early 21st century. Although criteria and definitions for inclusion have changed, both the *1997* and *2003 UN Lists* use the IUCN Protected Areas Category System as the basis for analysis. Globally the numbers of protected areas have increased substantially, and their conservation values and role in the provision of ecosystem services and sustainable development have broadened considerably. The recent (relative to the time period of the *UN List*) emphasis on ecosystem approaches, ecological corridors and the function of protected areas as "core" sites within wider landscape conservation frameworks calls for a more inclusive approach to presenting protected areas in the UN List.

The *1997 UN List* recorded 12,754 sites with IUCN categories published as a report with more than 400 pages. Clearly, to provide comprehensive information in the *2003 UN List* on the 68,066 protected areas with IUCN categories alone would require a hard copy publication of 4–5 volumes. A decision has therefore been made to present the data on CD-ROM, included with this report. The use of this format has also provided an opportunity to provide information not previously distributed with the UN List.

In all previous editions of the UN List, criteria for inclusion have focused on specific definitions of protected areas, a minimum size and, since the 1982 edition, the UN List has only included those sites with IUCN management categories. With respect to these criteria, it has been decided in this edition to include *all* protected areas that meet the IUCN definition of

a protected area, regardless of size and whether or not they have been assigned an IUCN category.

IUCN defines a protected area as:

> *An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.*

This decision is based on:

- Not all protected area agencies or other organisations have assigned IUCN categories to their sites. However, the 34,036 protected areas without IUCN categories cover 3.6 million km^2 and therefore represent a significant proportion of the global conservation estate. Their omission would significantly under-represent the efforts that have been made by many countries to establish protected areas. It should be noted, however, that their inclusion in no way diminishes the importance placed by IUCN, UNEP, IUCN's World Commission on Protected Areas (WCPA) and UNEP-WCMC upon the assignment of management categories as a mechanism for the rational international assessment of protected areas. On the contrary, inclusion of the non-categorised sites clearly shows the progress that has been made in assigning categories to most of the world's protected areas (67% of the total number and 81% of the area). The value of the category system reinforces the need to achieve the goal of progressively assigning all relevant sites to an IUCN category.
- The previous size limitation of a minimum of $10km^2$ (1,000 hectares), or $1km^2$ (100 hectares) in the case of islands, has not been applied. The rationale for this is not only the opportunity provided by the digital format, but also because even small areas can play a significant role in conservation – especially in the context of bioregional planning approaches. The IUCN protected area definition does not include a size restriction.

History of the United Nations List process

The first *United Nations List of National Parks and Equivalent Reserves* was produced at the request of the United Nations following a resolution adopted by the General Assembly at its 16th Session in December 1962 on 'Economic Development and Nature Conservation'. This resolution endorsed an earlier resolution (No. 713) of the 27th Session of the UN Economic and Social Council (ECOSOC) held in 1959, which recognised 'National Parks and Equivalent Reserves' as an important factor in the wise use of natural resources, and led to the compilation of the *World List of National Parks and Equivalent Reserves*.

The ECOSOC resolution reads as follows:

> *"The Economic and Social Council,*
>
> *Noting that national parks and equivalent reserves have been established in most countries which are Members of the United Nations or the specialized agencies, and that they contribute to the inspiration, culture and welfare of mankind,*
>
> *Believing that these national parks are valuable for economic and scientific reasons and also as areas for the future preservation of fauna and flora and geologic structures in their natural state,*
>
> (1) *Requests* the Secretary-General to establish, in co-operation with UNESCO, FAO, and other interested specialized agencies, a list of national parks and equivalent reserves, with a brief description of each, for consideration by the Council at its

twenty-ninth session, together with his recommendations for maintaining and developing the list on a current basis and for its distribution;

(2) *Invites* State Members of the United Nations and of the specialized agencies to transmit to the Secretary General a description of the areas they desire to have internationally registered as national parks or equivalent reserves; and

(3) *Furthermore invites* the International Union for Conservation of Nature and Natural Resources and other interested non-governmental organisations in consultative status to assist the Secretary-General, upon his request, in the preparation of the proposed list."

In his introductory statement to the first edition of the UN List, the UN Secretary-General noted the "widespread interest in the fact that the United Nations is issuing the List" and that "a number of Governments have indicated that new legislative measures are now under consideration for the establishment and protection of national parks and equivalent reserves". This early UN recognition, supported by IUCN and the International Commission on National Parks (now WCPA), provided an important impetus for the growing global momentum to establish protected areas. The number of listed protected areas has subsequently increased from just over 1,000 sites reported in the *1962 UN List* to over 12,754 sites listed in 1997, and 102,102 in the *2003 United Nations List of Protected Areas*.

Global recognition of the importance of protected areas and their linkage to broader environment and development issues has increased significantly during the past three decades. This recognition has been reflected in the 1972 Stockholm Conference on the Human Environment, the 1992 UN Conference on Environment and Development, the adoption and implementation of the Convention on Biological Diversity (CBD) and other international and regional environmental agreements. The United Nations Environment Programme, which was established in 1972 as a direct outcome of the Stockholm Conference, administers the CBD, which now has 187 Contracting Parties. The implementation of the CBD, in particular Article 8 (*In-situ* Conservation), and the inclusion of protected areas as an indicator for the Millennium Development Goals and the WSSD Plan of Implementation (2010 Targets) has further highlighted the relevance of protected areas to global conservation and sustainable development agendas.

Reinforcing the importance of the UN List process

The role of national governments through the UN system has provided the framework for concerted and collaborative action on global environmental issues. With respect to protected areas, this has involved a partnership with IUCN, WCPA and non-government organisations that has spanned more than 40 years. During this time the extent and importance of protected areas has increased, the global stakeholder base in conservation has widened considerably, the United Nations Environment Programme has been established, and the role of the World Database on Protected Areas endorsed by a number of international organisations.

As key mechanisms in the global collaborative process, the importance of the WDPA and the UN List have been reinforced by Decision 22/1/III of the UNEP Governing Council in February 2003 to update and renew the 1959 ECOSOC resolution. Specifically, the Council:

> "[Agreed] *that the United Nations Economic and Social Council resolution of 1959, subsequently endorsed by the General Assembly in 1962, needs to be renewed and updated.*"
>
> *and*

> [Requested] *the Executive Director, working in collaboration with the United Nations Educational, Scientific and Cultural Organization and the Food and Agriculture Organization of the United Nations, to seek a renewed mandate for the United Nations List process from the Economic and Social Council/General Assembly that reflects the role of the United Nations Environment Programme and its agreement with the World Conservation Union on new partnership arrangements for the World Database on Protected Areas."*

This decision acknowledges the importance given to protected areas within the UN system, and reinforces the value of partnership arrangements in achieving global conservation objectives. It also provides the basis for renewing the UN List mandate in the context of 21st century protected area priorities.

2. The World Database on Protected Areas

The WDPA is the largest repository of global information on protected areas. It has undergone re-development throughout the 1980s and 1990s, reflecting changing systems, technologies and needs. Originally implemented as a flat-file database only holding current protected areas information (that is, with no historical content in the database), protected areas data has been significantly extended[1] over the years. Currently the information is held as two components: current spatial extent and historic aspatial details. The aspatial component is a relational database designed to support changing requirements and to facilitate more detailed analyses of the information. It is also used in conjunction with the spatial data in many GIS analyses. An important advance has been the on-line access provided in recent years via the Internet, access not only to the analyses and compilations of the data but also to the underpinning data. The implementation of the Internet interface allows ready access to the information at all times. Users of the UN List are strongly encouraged to verify the current status of the information in this report by using the Internet[2], and notifying UNEP-WCMC of any errors or omissions through the email address provided.

Future adaptations are already planned and will initially focus on enabling and encouraging distributed updating of the information by experts with local knowledge.

In addition to production of the periodic UN List, the data in the WDPA has been used, and continues to be used, to support a number of global and regional assessments, including:

- Circumpolar Protected Areas Network (CPAN) – Strategy and Action Plan (1996)
- Biodiversity Conservation in the Tropics: Gaps in Habitat Protection and Funding Piorities (1997)
- WWF Forest for Life Campaign and Living Waters Campaign (1996/1998)
- European Forests and Protected Areas: Gap Analysis (2000)
- FAO Global Forest Resource Assessment (2000)
- Prioritisation of Target Areas For Forest Restoration (Report to WWF, 2000)
- Mountain Watch Study (2002)
- Protected areas information support for the Vth World Parks Congress (2003)
- Global Environment Outlook (ongoing)
- Global Biodiversity Outlook (ongoing)
- World Resources Report (ongoing)
- Protected area and thematic studies for the World Heritage Convention (ongoing)

[1] The information that supported this extension was held in records, but not initially included in the database.
[2] Website: http://sea.unep-wcmc.org/wdbpa/unlist

- Millennium Ecosystem Assessment
- Millennium Development Goals

As well as providing input to these assessments the databases held by UNEP-WCMC are frequently used in international oil spill emergency response action and contingency planning. The protected areas database is a key component in the early stages of emergency response, providing GIS- supported location maps of impacted areas. By incorporating this information at the outset the responders are able quickly to identify areas of sensitivity that may require specific protection. The information gathered during a response event is also fed back into the database to improve the effectiveness of future responses.

In 2001, a survey and review of the WDPA was commissioned by the World Commission on Protected Areas and undertaken in partnership with UNEP-WCMC. The review recommended the adoption of the following vision and goals, subsequently adopted by the WCPA Steering Committee in December 2001 and endorsed by UNEP-WCMC and IUCN:

Vision

A widely available, accurate and up-to-date World Database on Protected Areas that is accepted as a world standard by all stakeholders (government, intergovernmental and non-government), providing the essential link to information from multiple sources on protected areas and contributing to effective resolution of protected area planning and management issues at global, regional and national levels.

Goals

- Readily available information on protected areas to support assessment, monitoring, decision-making and development of policy at national and international levels.
- A core database on protected areas that is internationally recognised, current and managed to international standards.
- Improved access to information on protected areas that is already available on the Internet and gradual increases in the information available.
- Improved use of information and sharing of experience by protected area professionals.

In June 2002 the WCPA, IUCN, UNEP-WCMC and other organisations agreed to progress the development of the WDPA through the formation of a Consortium of co-operative stakeholders. The Consortium currently comprises representatives from intergovernmental and non-government organisations, including the major global conservation organisations. Since the formation of the Consortium, members have made valuable contributions to the WDPA, including data that has improved the quality of information in the *2003 UN List*. Current members of the Consortium are:

- American Museum of Natural History
- BirdLife International
- Conservation Biology Institute
- Conservation International
- Convention on Biological Diversity Secretariat
- Fauna & Flora International
- Ramsar Convention Secretariat
- The Nature Conservancy

- UNEP-World Conservation Monitoring Centre
- Wildlife Conservation Society
- World Heritage Centre
- World Resources Institute
- World Wildlife Fund – WWF-US
- World Wide Fund For Nature – WWF-International

Other key stakeholders include:

- Convention on Biological Diversity Secretariat
- Ramsar Convention Secretariat
- World Heritage Centre (UNESCO)
- Man and Biosphere Programme (UNESCO)

3. Compilation of the *2003 UN List of Protected Areas*

Derivation of 2003 data

Participation of national protected area agencies and other organisations in updating data in the WDPA is central to the UN List process.

In May 2002 the UNEP Executive Director and IUCN Director General jointly wrote to national environment ministers, seeking their cooperation in updating protected areas information for their respective countries. At the same time, the WDPA Consortium members agreed to contribute the WDPA country and regional protected area information that they held, or to which they had access. Since the UN List is essentially based on the information provided by national agencies, either directly or through delegated authorities such as the European Environment Agency (EEA), it was important to include the broader WDPA Consortium information before sending the information to countries for verification. This initial process resulted in updates to 42 countries. A further nine updates were provided by other organisations outside of the Consortium.

Following this process, UNEP-WCMC sent requests for updates and verification to 183 countries in November-December 2002, with hard copies of each country's protected areas information held in the WDPA. Explanatory notes to assist countries in completing the update were also provided, including information on the IUCN protected area definition and application of the management categories.

Through its cooperative agreement with UNEP-WCMC, the EEA undertook, through the European Topic Centre on Nature Protection & Biodiversity (ETC/NPB), the updating of data for the 38 countries covered by its authority. Although requests were sent to individual countries in Southeast Asia, data were also provided by the Association of Southeast Asian Nations Regional Centre for Biodiversity Conservation (ARCBC) for countries in the ASEAN region. In the event that no information was received from official sources, research was undertaken by UNEP-WCMC to obtain data – wherever possible – from published material and other sources.

UNEP-WCMC received 86 direct official national replies, representing 47% of the total. In addition, 15 official responses were received from European countries through the EEA/ETC-NC 2003 review of Europe in time for inclusion in the *2003 UN List*. However, the WDPA was updated for all European countries through the Common Database on Designated Areas (in partnership with EEA) in December 2002. Official data was also received for seven ASEAN countries through ARCBC, although direct official responses were also received from five of these countries. In effect, official updates were received from 103 countries, or 56% of all countries, through the combined efforts of UNEP-WCMC, EEA and ARCBC.

Criteria for inclusion

A review of the history of the UN List over the past 40 years shows that compilation of the UN List has been an evolving process, reflecting:

- the broadening of the concepts and values of protected areas that are represented in the UN List;
- the widening of the data collection base from only UN member countries to all countries – in 1960 there were 99 UN member countries, and 52 responded to the first reporting process; in 2002/2003 there were 191 UN members of which 103 responded;
- the shift in perspective on the size of protected areas to be included in the UN List, from no restriction to 1,000ha (10km^2) or 100ha if the protected area was on an island[3], back to no size restriction in 2003;
- the development, refinement and finally adoption in 1994 of the current IUCN Protected Areas Management Categories system that reflects the range of protected area management objectives; and
- adoption by IUCN at the 1992 World Parks Congress of the current definition of a protected area that is used as a basis for inclusion in the UN List.

As noted in the introduction, the *2003 UN List* represents a further step in the evolution of protected areas data presentation. The criteria for inclusion of protected areas in this edition are:

(1) All protected areas with and without IUCN management categories, provided that adequate information is available to ensure that they comply with the IUCN protected areas definition.

(2) All protected areas regardless of size.

(3) All countries and territories.

(4) International and regional sites: Natural and Mixed World Heritage Sites, Ramsar Sites, Biosphere Reserves, ASEAN Heritage Sites, European Commission Directive on the Conservation of Wild Birds, and other regional designations.

Aspects of data presentation

The information provided in the *2003 UN List* is a static snapshot of the World Database on Protected Areas taken in July 2003. However, data is continuously augmented by information provided by protected area agencies, organisations, individuals or groups active in protected areas and conservation. The process of protecting an area can change over time, for example, changes in size, classification, designation and gazetted status. Although the WDPA holds information on proposed sites or those subject to designation procedures, these are not included in the *2003 UN List*.

Application of the IUCN Protected Area Management Categories

The current six categories system (see box below) was first applied in the *1997 UN List*. In assigning categories, UNEP-WCMC has largely depended on the information provided by national governments, even though the IUCN 1994 Guidelines for Protected Area Management Categories state:

> *"It…follows from the international nature of the system, and from the need for consistent application of the categories, that the final responsibility for*

[3] There was no size restriction in the 1962 List; in subsequent editions to 1974 a formula was adopted by the International Commission for National Parks: minimum of 2,000ha in countries with a population density <50 persons/km^2 or 500ha with a population density >50 persons/km^2; then from 1974 to 1997 the criterion was a minimum of 1,000ha (10km^2) or 100ha (1km^2) on an island if the protected area included the whole island.

determining categories should be taken at the international level. This could be IUCN, as advised by its CNPPA and/or the World Conservation Monitoring Centre (e.g., in the compilation of the UN List) in close collaboration with IUCN."

A large number of the original IUCN categories were applied by government agencies that subsequently provided the information to UNEP-WCMC. In addition, in past years UNEP-WCMC has allocated management categories based on assessment of management objectives and legislation, and external (non-government) advice for those sites not categorised by government agencies. Although assignments were made for the *1997 UN List*, the report noted:

"A major undertaking, completed as part of the preparation for this edition of the UN List, has been the application of the new IUCN Management Categories…. Application of the new Management Categories system has been a lengthy and challenging process, requiring the management objectives of each national designation to be reviewed in relation to the criteria and guidelines established for the application of the new categories… It is likely, therefore, that not all protected areas have been allocated to the most appropriate category."

It is not possible for UNEP-WCMC and IUCN physically to undertake the assessment of thousands of uncategorised protected areas, and no new assignments have been made for uncategorised protected areas for the *2003 UN List*. To deal effectively with this issue will require the collaborative effort of all parties: national agencies and other protected area owners, IUCN, WCPA, UNEP-WCMC and other conservation organisations. The outputs of the current IUCN-University of Cardiff-UNEP-WCMC project, *Speaking a Common Language*, and deliberations at the Vth World Parks Congress in September 2003, should also contribute to a more effective and structured approach to assignment of the categories.

Some protected areas have more than one IUCN category assigned to them. For example, the vast area of the Great Barrier Reef Marine Park in Australia has been assigned Category VI in its entirety, but has also been officially assigned other relevant categories that relate to management zones within the park. In the current structure of the WDPA it is not possible to assign multiple designations in the "IUCN Category" field. The only way to do this currently is to create separate entries for each area or zone assigned a different category – which would in effect create "separate" protected areas, and artificially increase the number of sites in the database. This will be changed, but for the present, additional category assignments within single protected areas are placed in the "notes" field so that a reviewer can still obtain the relevant information. With respect to marine areas, changes will be based on the decision of the WCPA Steering Committee at its meeting in December 2002. That is: "in relation to large multi-purpose marine protected areas, zonation should be reflected in the World Database on Protected Areas only under the following conditions: (a) zones are clearly mapped; (b) zones are clearly defined in accordance with the IUCN protected area categories; and (c) zones are recognized by law".

Protected area designations used by countries are not necessarily directly comparable across countries because of potentially different legislative regimes. Over 1,000 different terms are known to be used around the world to designate protected areas. This highlights the value of a single international system for assigning categories based on management objectives, and therefore the importance of applying the IUCN categories.

Definitions of the IUCN Protected Area Management Categories

CATEGORY Ia

Strict Nature Reserve: protected area managed mainly for science

Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

CATEGORY Ib

Wilderness Area: protected area managed mainly for wilderness protection

Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

CATEGORY II

National Park: protected area managed mainly for ecosystem protection and recreation

Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

CATEGORY III

Natural Monument: protected area managed mainly for conservation of specific natural features

Area containing one, or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.

CATEGORY IV

Habitat/Species Management Area: protected area managed mainly for conservation through management intervention

Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

CATEGORY V

Protected Landscape/Seascape: protected area managed mainly for landscape/ seascape conservation and recreation

Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

CATEGORY VI

Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

Area containing predominantly unmodified natural systems, managed to ensure long-term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

4. Layout of the *2003 UN List*

Country summaries

A synthesis of each country's data precedes the site listings, with information provided in the following format:

INDIA		
ISO Code: IND		Last Official Response: 2003
Country Summary		
	Number	Area (ha)
Category Ia	1	133,010
Category Ib	1	20,000
Category II	92	3,642,484
Category IV	515	11,965,267
Category VI	3	1,138,500
Subtotal	**612**	**16,899,261**
Other	56	337,291
Total	**668**	**17,103,542**

National sites

Protected areas are listed by country, in alphabetic order of the English-language version of the country name. These are named by national designation (for example, national parks, nature reserves, wildlife sanctuaries) in the following format:

AUSTRALIA					
National Protected Areas					
Name	Latitude/ Longitude	Size (ha)	Year of establishment	IUCN Management Category	Last WDPA update
Commonwealth Marine Park					
Great Barrier Reef	20°00'S/150°00'W	34,540,000	1979	VI	2003

The latitude/longitude is based on a centre-point of the protected area. The year of establishment reflects when the current legal designation was applied; in some cases this may be more recent than the original date of establishment, for example where the legal designation of a site has changed. For some countries, such as Australia, Canada, India and the US, protected areas are listed by state, province and territory. In some cases, the names of protected areas are repeated with different site codes[4] (for example, Leeuwin-Naturaliste National Park x 20548,

[4] A code used by UNEP-WCMC to identify sites within the WDPA.

22673, 32376, 42065, and 8434). The reasons for this vary, but could result from variable locations (for example, "cluster" protected areas with the same designation), different administrative and/or management arrangements.

The *2003 UN List* also contains 3,223 individual datasheets, hyperlinked from site names where a sheet is available for that site. The datasheets hold additional information on aspects relating to the ecological attributes and management of the area concerned. In addition, locator maps are provided indicating the location, and the source of GIS data for the protected area. It should be noted that many datasheets were prepared using information from earlier IUCN and (then) WCMC publications and require updating. It is hoped that eventually links can be established from the UNEP-WCMC website directly to those of individual protected areas or national agencies where up-to-date information is held.

International sites

It should be noted that sites listed under 'International Sites' will also appear in the country lists of protected areas.

World Heritage Sites

The Convention Concerning the Protection of the World Cultural and Natural Heritage was adopted in Paris in 1972, and came into force in December 1975. The Convention is administered by UNESCO and provides for the designation of areas of "outstanding universal value" as World Heritage sites, with the principal aim of fostering international cooperation in safeguarding these important areas.

Every year the World Heritage Committee evaluates nominations by States Party to the Convention, taking into account assessments made by the Advisory Bodies: IUCN for natural and mixed site nominations; and ICOMOS for cultural sites. Information on the current 172 natural and mixed sites is presented in the *2003 UN List*.

To be included on the World Heritage List, sites must satisfy one or more of the selection criteria in the World Heritage Operational Guidelines, the main operational document on World Heritage. The criteria have been revised regularly by the Committee to match the evolution of the World Heritage concept.

Natural World Heritage properties should:

i. be outstanding examples representing major stages of the Earth's history, including the record of life, significant ongoing geological processes in the development of landforms, or significant geomorphic or physiographic features, or

ii. be outstanding examples representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals, or

iii. contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance, or

iv. contain the most important and significant natural habitats for in situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Mixed sites have both universally outstanding natural and cultural values. Since 1992 significant interactions between people and the natural environment have also been recognised through the listing of cultural landscapes (which are not included in the UN List). Protection, management and integrity of the site are important considerations in World Heritage listing. If

these aspects are severely compromised, the World Heritage Committee may designate a site "in danger", based on an assessment of the severity of threats that may affect its World Heritage values.

In the *2003 UN List*, World Heritage Sites are listed in alphabetical order of the English-language version of the country name, in the following format. Note that only countries with World Heritage Sites are listed. Sites that are on the World Heritage In Danger List in July 2003 are indicated accordingly.

World Heritage Sites							
CÔTE D'IVOIRE							
Name	**Natural**	**Mixed**	**Year of inscription**	**Criteria**	**Latitude/Longitude**	**Size (ha)**	**In-danger status 2003**
Comoé National Park	✓		1983	N (ii) (iv)	8°05'-9°06'N/3°01'-4°04'W	1,149,250	✓

A further feature of the *2003 UN List* is the inclusion of information datasheets for each World Heritage Site. These site sheets are prepared by UNEP-WCMC for IUCN as part of the nominated site evaluation process, updated by site evaluators and maintained in the database for those sites that are inscribed on the World Heritage List.

Biosphere Reserves

Biosphere reserves are areas of terrestrial and coastal/marine ecosystems that are internationally recognised under UNESCO's Man and the Biosphere (MAB) Programme. They are designed to promote and demonstrate a balanced relationship between people and nature. The reserves are nominated by national governments and remain under the sovereign jurisdiction of the States where they are situated. In 2003, there are 436 Biosphere Reserves recorded in the UN List.

The definition, criteria, and designation procedure of Biosphere Reserves are set out in the Statutory Framework adopted by the UNESCO General Conference in 1995. The *Seville Strategy for Biosphere Reserves* identifies objectives for the reserves at site, national and international levels. Many of the sites have been designated for over 20 years and hence are subject to the Periodic Review foreseen under Article 9 of the Statutory Framework. This review aims to encourage the authorities concerned to revise their Biosphere Reserves in the light of the Statutory Framework. Biosphere Reserves form a world network for promoting cooperative research and monitoring as well as exchange of information, and development of strong regional sub-networks.

In the *2003 UN List*, Biosphere Reserves are listed by country, in alphabetic order of the English-language version of the country name, in the following format. Note that only countries with Biosphere Reserves are listed.

Biosphere Reserves			
PERU			
Name	**Latitude/Longitude**	**Size (ha)**	**Year of designation**
Reserva de la Biósfera de Huascarán	9°45'S/77°28'W	399,239	1977
Reserva de la Biósfera del Manu	12°11'S/71°47'W	1,881,200	1977

Wetlands of International Importance (Ramsar Sites)

The Convention on Wetlands of International Importance Especially as Waterfowl Habitat was signed in Ramsar (Iran) in 1971, and came into force in December 1975. This Convention provides a framework for international cooperation for the conservation of wetland habitats. It places general obligations on contracting Party States relating to the conservation of wetlands throughout their territories, with special obligations pertaining to those wetlands that have been placed on the List of Wetlands of International Importance. In 2003, there are 1,305 designated wetlands.

Each State Party is obliged to list at least one site. Wetlands are defined by the Convention as: areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine waters, the depth of which at low tide does not exceed six metres.

In the *2003 UN List*, Ramsar Sites are listed by country in alphabetic order of the English-language version of the country name, in the following format. Note that only countries with Ramsar Sites are listed.

Wetlands of International Importance (Ramsar Sites)			
SWEDEN			
Name	**Latitude/Longitude**	**Size (ha)**	**Year of designation**
Träslövsläge-Morups Tånge	56° 58' 59"N/12° 19' 59"E	1,990	1989
Tysjöarna	63° 14'N/14° 35' 59"E	410	2001

European Commission Directive on the Conservation of Wild Birds (Birds Directive, 1979)

The Birds Directive has been in force since April 1981 and imposes legal obligations on European Union Member States to maintain populations of naturally occurring wild birds at levels corresponding to ecological requirements, to regulate trade in birds, to limit hunting of species able to sustain exploitation, and to prohibit certain methods of capture and killing. Article 4 requires Member States to take special measures to conserve the habitat of certain listed threatened bird species as well as migratory bird species, particularly with regard to wetlands, through the designation of Special Protection Areas (SPAs). To date 1,496 SPAs have been established. All SPAs form part of NATURA 2000, the EU network of protected areas.

List of Special Protection Areas (EC Directive 79/409)		
IRELAND		
Name	**Latitude/Longitude**	**Size (ha)**
Ballyallia Lake	52° 53'N/008° 59'W	308
Ballycotton Bay	51° 50'N/008° 00'W	92

Other protected area-related regional agreements

There are a number of other European agreements requiring establishment of protected areas that are included in the UN List:

- Council of Europe – Biogenetic Reserves (340 sites)
- Barcelona Convention – Specially Protected Areas of Mediterranean Importance (230 sites)
- EC Habitats Directive – Special Areas for Conservation (212 sites)
- European Diploma Type 'A' (36 sites), Type 'B' (11 sites), Type 'C' (7 sites)
- Helsinki Convention – Baltic Sea Protected Areas (3 sites)

In addition to the European sites, there are 11 sites listed as ASEAN Heritage Parks and Reserves under the *ASEAN Declaration on Heritage Parks and Reserves* (1984).

5. Information gaps, limitations and explanatory notes

It should be noted that information is not necessarily complete for each country – especially for countries that have not provided updates during 2002–2003. The dataset for the *2003 UN List* is also subject to the following limitations:

- The size is unknown for 23,428 (23%) protected areas. This means that the extent of regional and global protected areas networks is somewhat under-represented, although the missing information is largely that of the smaller sites.
- The date of establishment is unknown for 48,654 protected areas. In this case, the database reflects the date of entry of the protected area into the database. In some years, when bulk updates occur[5] this can artificially inflate the number of protected areas registered in that year (this acts as a crude proxy indicating that the sites were established "no later than" this date). As information about the year of protected area establishment is obtained these sites are recorded against their correct year.
- IUCN management categories have not been assigned to 34,036 protected areas.
- Geographic co-ordinates are still lacking for 20,634 sites.
- UNEP-WCMC does not yet have the geographical boundaries (polygons) of 74,512 protected areas[6]. Although this is a large figure, the larger sites (>100km^2) have a much better coverage than the small sites. This problem still limits the extent to which terrestrial and marine protected areas can be treated separately or compared, and constrains GIS analyses of the representativeness of protected areas. In the case of marine protected areas, 1,799 out of the 4,459 (over 40%) in the WDPA have polygons. However, in terms of area, 89% of the marine protected areas are in the form of polygons. This due to the inclusion of single large marine protected areas, such as the Great Barrier Reef Marine Park.
- Translation of some languages, such as Chinese and Arabic, into English can lead to unintentional duplication of site records when updates are received with apparently different site names, which are actually transliteration variants. This has at times resulted in some duplication of sites. An intensive effort was made during the production of the *2003 UN List* to minimise this problem. However, it is estimated that this type of error could affect 5%–7% of the database for these countries, and support is urgently needed from the relevant nations to rectify this problem.
- The WDPA is attempting to incorporate privately owned and managed protected areas, even where these do not have legal protection, and these are included (for the first time)

[5] For example, for the UN List years and in 2001 when a bulk update of the European Common Database on Designated Areas (CDDA) took place.

[6] UNEP-WCMC has in fact made considerable progress in obtaining GIS boundary data for many of the world's protected areas, which is now linked to the aspatial information contained in the WDPA. However, it should be noted that some countries, although providing this information, have placed restrictions on its use and availability through licence agreements with UNEP-WCMC.

where they are considered to meet the IUCN PA definition. However, many sites are undoubtedly missing from this classification.

- UNEP-WCMC is aiming to remove the duplication caused by multiple designations of the one geographic site. Some duplication remains; however, from a statistical standpoint it is possible to filter out these duplications in the GIS analyses and so avoid double counting.

6. Analysis of global protected area trends

The compilation of the UN List, through the WDPA updating process, provides a unique opportunity to review and summarise the status of the world's protected areas. The UN List provides the basis for assessing:

- growth in protected area numbers and extent at national, regional and global levels, as well as sub-national (province, state) levels for a number of countries;
- application of IUCN management categories, and the trends in protected area establishment on the basis of management objectives at sub-national, national, regional and global levels;
- extent of global protection for the world's biomes;
- growth in international sites, and the extent of application of international conventions and programmes;
- gaps in the global system of protected areas, and future priorities for action.

The data provided in the *2003 UN List* will enable various analyses to be undertaken by a range of data users – especially with the new format that now includes all protected areas. The information is presented so that separate analyses can be undertaken using the total protected area numbers and area, or using only those that have been assigned IUCN management categories. The following sections provide key analyses of the global data undertaken by UNEP-WCMC.

Number and extent of the world's protected areas

The *2003 UN List* contains 102,102 protected areas covering more than 18.8 million km^2. This figure is equivalent to 12.65% of the Earth's land surface, or an area greater than the combined land area of China, South Asia and Southeast Asia. If marine protected areas are excluded from these calculations (see discussion of marine areas below) the terrestrial extent of protected areas is some 17.1 million km^2 (11.5% of the land surface). This is almost the same area as the entire continent of South America. Summary statistics are presented in Table 1 and Figure 1. The total number and extent of protected areas presents the current global overview of the status of protection. However, it is the classification of protected areas into IUCN Management Categories that enables a distinction to be made on the basis of management objectives that countries are applying to their conservation estate, ranging from sites that are strictly protected through to those under sustainable use. This is the second UN List to present protected areas data using the six management categories system. The 2003 figures highlight the importance of the categories in establishing an international standard for classifying protected areas, and also the extent to which they are being applied by governments and other bodies that manage protected areas.

The overview of global statistics indicates that 67% of the world's protected areas have been assigned an IUCN management category, covering 81% of the total area protected. Among the categorised sites, the largest number lie within Category IV (Habitat/Species Management

Area) and Category III (Natural Monument). Together they comprise almost 47% of all protected areas. This is not surprising, since protected areas assigned to these categories often cover small geographic areas – especially in the case of Category III. Many of these small protected areas have been excluded in previous UN Lists because their areas are less than 10km^2. Examination of the regional data (see Annex) also reveals that some regions have large numbers of Category IV sites, notably South Asia (44.5% of all protected areas), Europe (39%), and North Eurasia (29.6%). Both South Asia and North Eurasia have large areas of Category IV (5.5% and 48.1% respectively). Categories Ia, Ib, II, V and VI together only comprise 20% of the total number of protected areas with Category II (National Park) comprising 3.8% and Category VI (Managed Resource Protected Area) 4%.

Turning to category by area, the picture changes dramatically, with Category II and Category VI comprising 47% of all protected areas. But this is not surprising, since national parks, in terms of management objectives, have traditionally been established to protect larger areas at the ecosystem and landscape level. The 2003 figures reflect the trend in previous UN Lists, although in relative terms the extent of Category II is marginally less than it was in 1997. However, the considerable extent of Category VI is a relatively recent phenomenon. It was the most significant innovation in the last revision of IUCN's management category system, and recognised the important role protected areas play in the sustainable livelihoods of local people. Whilst dedicated to biodiversity conservation, such sites accommodate local people and a degree of sustainable use as an integral part of site management. In the *1997 UN List*, Category VI sites accounted for 27% of the total extent of recorded protected areas using the criteria for that UN List. If non-categorised protected areas are excluded from the 2003 figures (see discussion below and Table 2), 28.9% of the area of protected areas has been assigned to Category VI. Two of the world's largest protected areas are classified as Category VI, namely the Ar-Rub'al–Khali Wildlife Management Area (640,000km^2) in Saudi Arabia and the Great Barrier Reef Marine Park in Australia (345,400km^2). Together, these two sites account for 22.5% of the total area under this management category – although it should be noted that the total area of the GBRMP has been subdivided into other IUCN categories based on the management objectives of legally defined zones within the park.

For comparative purposes, Table 2 presents the indicative ranking of 1997 and 2003 proportional percentage values by IUCN category (that is, excluding sites without categories). Some aspects of the global pattern of protected areas remain unchanged. These include: Category IV the most numerous; Category II the greatest extent; and Categories Ia and Ib the least in number and extent. The substantial increase in the numbers of Categories III and IV can be explained by the inclusion of all size classes in the *2003 UN List*. The inclusion of all sizes also affects the proportional relationship of other categories.

Figure 2 shows the distribution of protected areas by size class. Of the 102,102 protected areas recorded in the *2003 UN List*, 59,478 (58.25%) are less than 10km^2 in size. There are 41,997 (41.13%) with IUCN categories (see Figures 3 and 4).

Figure 1. Global protected area number and extent 2003

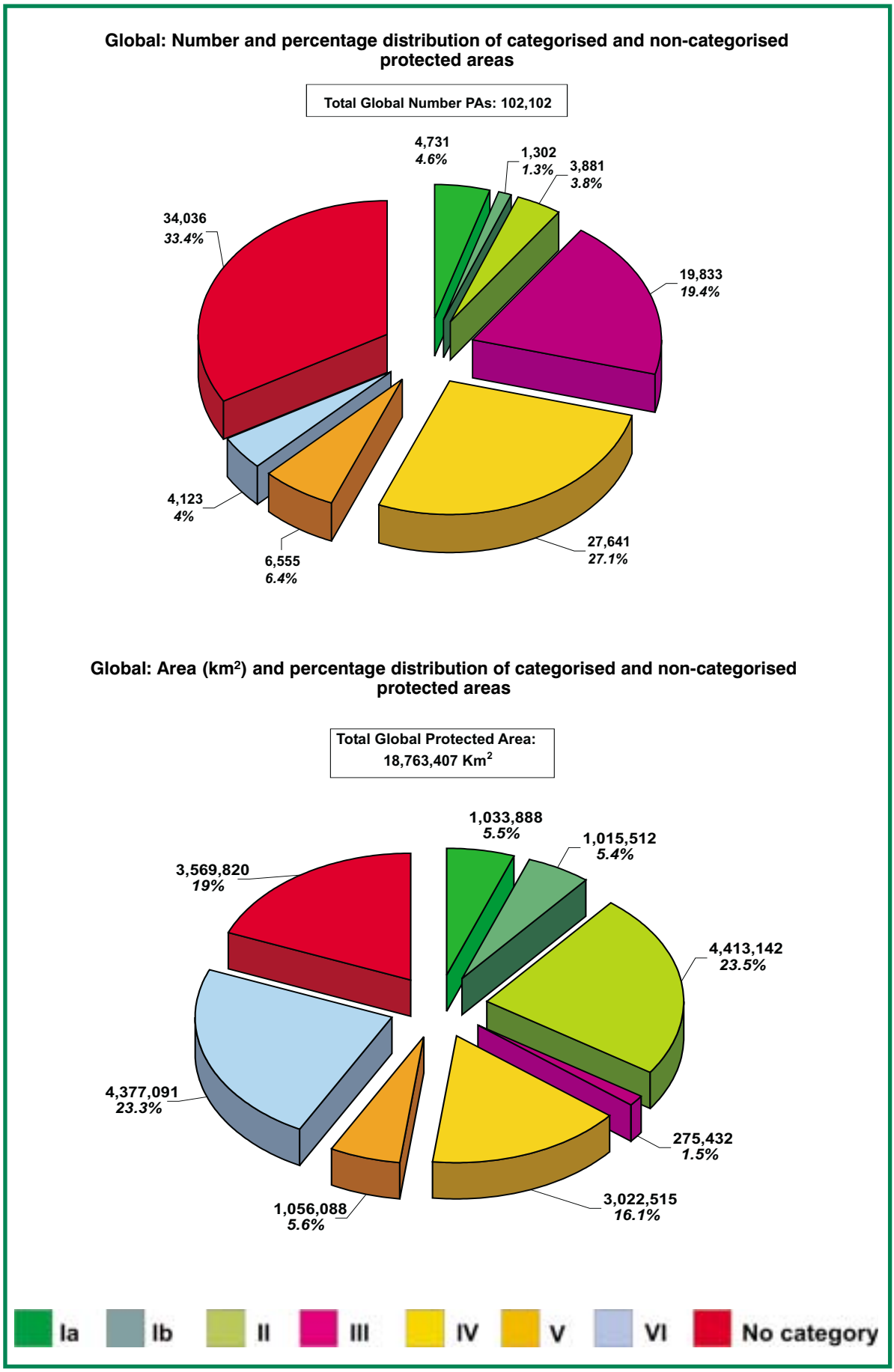


Figure 2. Global number and area of protected area by size class

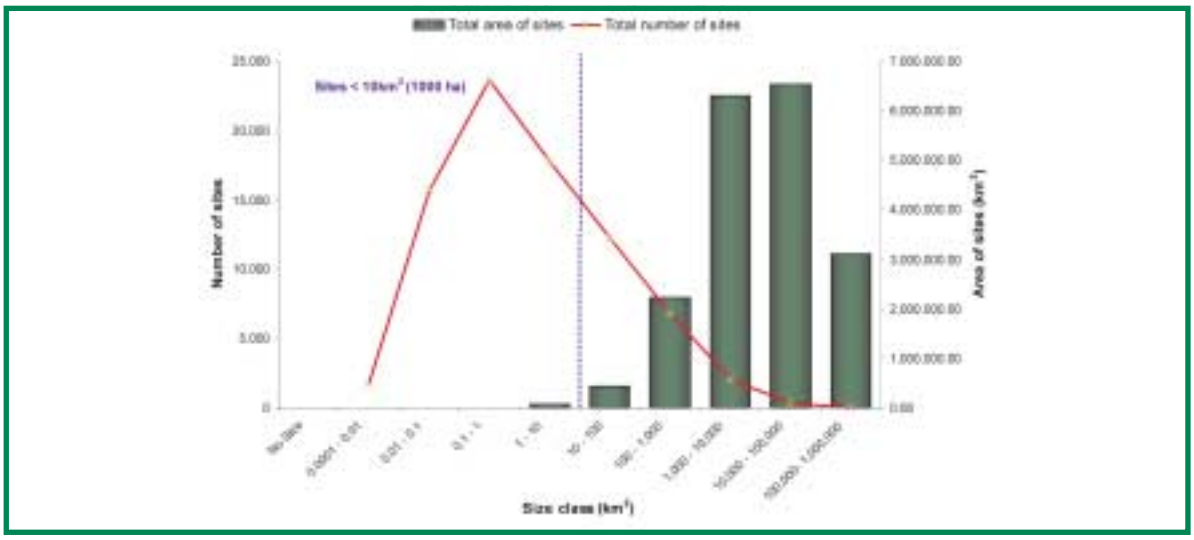


Figure 3. Global number of protected areas by IUCN category and size class

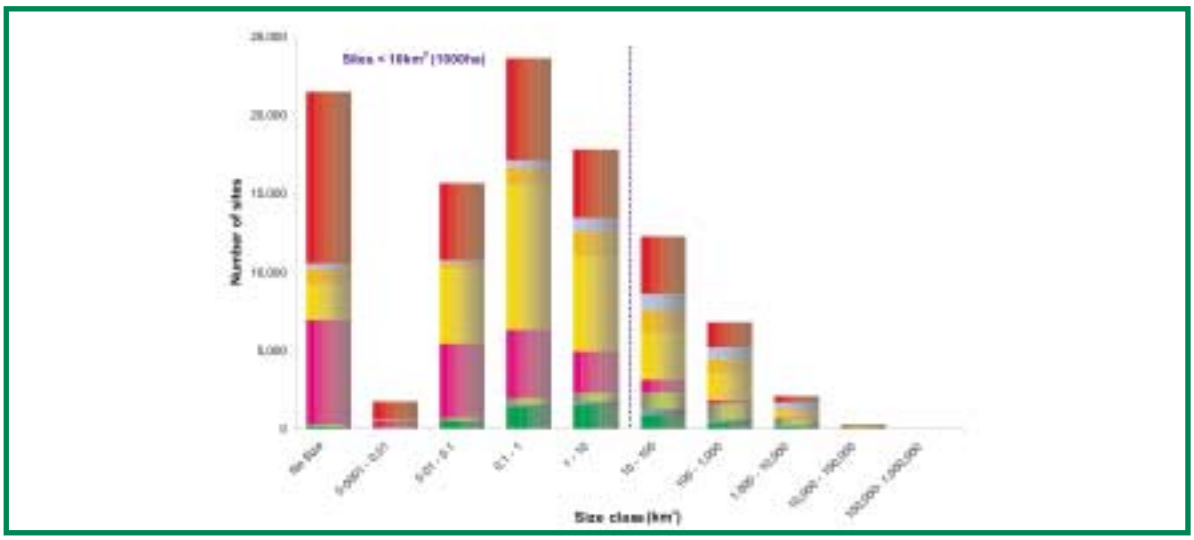


Figure 4. Global area of protected areas by IUCN Category and size class

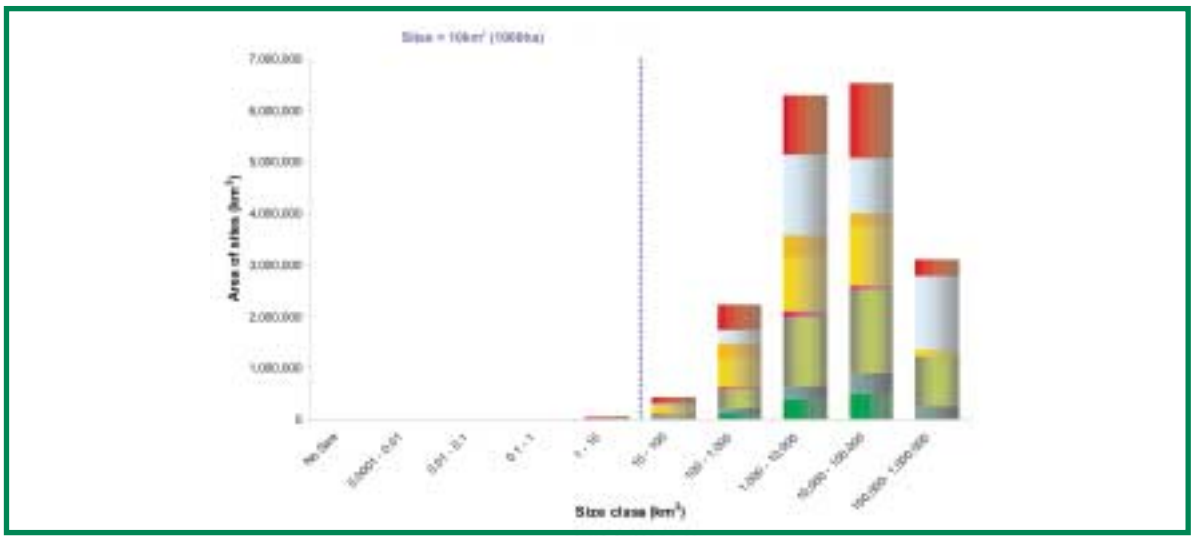


Table 1. Global number and extent of protected areas

Category	No. of sites	Proportion of total no. protected areas (%)	Area Covered (km²)	Proportion of total area protected (%)
Ia	4,731	4.6	1,033,888	5.5
Ib	1,302	1.3	1,015,512	5.4
II	3,881	3.8	4,413,142	23.6
III	19,833	19.4	275,432	1.5
IV	27,641	27.1	3,022,515	16.1
V	6,555	6.4	1,056,008	5.6
VI	4,123	4.0	4,377,091	23.3
No Category	34,036	33.4	3,569,820	19.0
Total	**102,102**	**100.00**	**18,763,407**	**100.00**

Table 2. Indicative ranking of 1997 and 2003 proportional percentage values by IUCN Category (excluding non-categorised sites)

1997				2003			
Number (%)		Area (%)		Number (%)		Area (%)	
IV	28.4	II	30.3	IV	40.6	II	29.0
V	19.0	VI	27.3	III	29.1	VI	28.8
VI	15.6	IV	18.6	V	9.6	IV	19.9
II	17.5	V	8.0	Ia	7.0	V	7.0
Ia	11.2	Ia	7.41	VI	6.1	Ia	6.8
Ib	5.1	Ib	7.11	II	5.7	Ib	6.7
III	3.2	III	1.5	Ib	1.9	III	1.8

Growth of the world's protected areas

The continuing growth in the world's protected areas is illustrated in Figures 5–7. Figure 5 depicts the cumulative number (line) and total area (columns) of protected areas in five-year increments, commencing in 1872 (the establishment of Yellowstone National Park). Protected areas where the year of establishment is not known are included in the 2003 total. It should be noted that the cumulative graph is only indicative of the general trend. As noted earlier in the discussion, major data inputs since the *1997 UN List* have included large numbers of sites without dates, therefore it is not possible to accurately represent growth in protected areas during this period. In Figure 5, as noted in the *1997 UN List* analysis, the columns indicating the cumulative total area protected "show little or no sign of any declining rate of establishment, perhaps contradicting the widely held view that opportunities to establish new protected areas are diminishing". However, Figures 6 and 7 show the more detailed cumulative growth for the period 1997–2003. Figure 6 indicates a significant increase in Categories III and IV, and in non-categorised protected areas. The areas shown in Figure 7 reflect an increase in Category IV and those without categories. Although the data for Category VI show

little change in the number, the total area shows a marked increase, perhaps as a result of extensions to existing sites.

Since the Vth World Parks Congress will be convened in 2003 it is appropriate to highlight the growth in protected areas using as a benchmark the years in which the World Parks Congress has been held (data derived from WDPA records, not figures published in previous UN Lists):

Table 3. Protected areas in World Parks Congress years

Year	Number	Area
1962	9,214	2.4 million km^2
1972	16,394	4.1 million km^2
1982	27,794	8.8 million km^2
1992	48,388	12.3 million km^2
2003	102,102	18.8 million km^2

Figure 5. Cumulative growth in protected areas by 5-year increment: 1872–2003

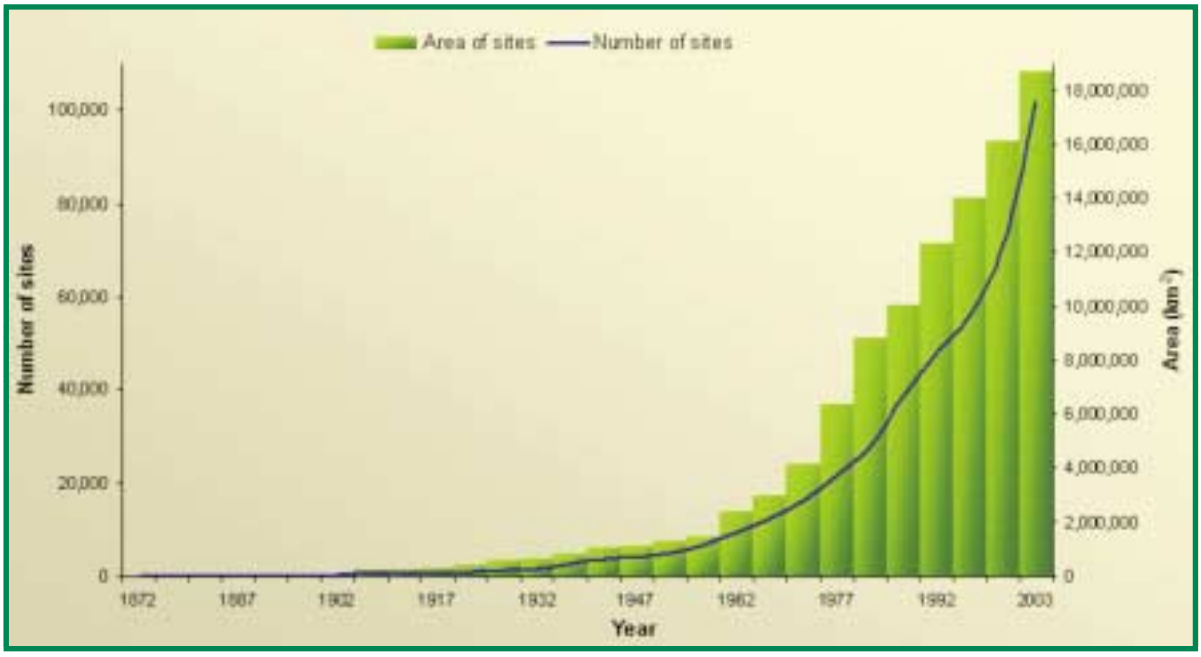


Figure 6. Cumulative growth in global number of protected areas: 1997 to 2003

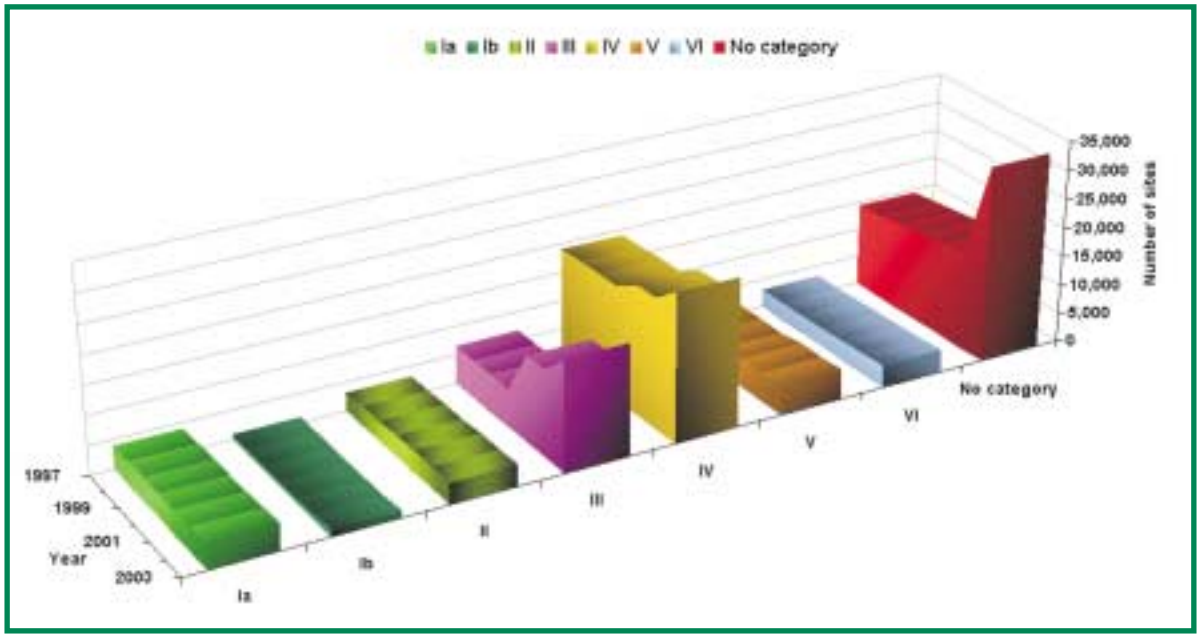
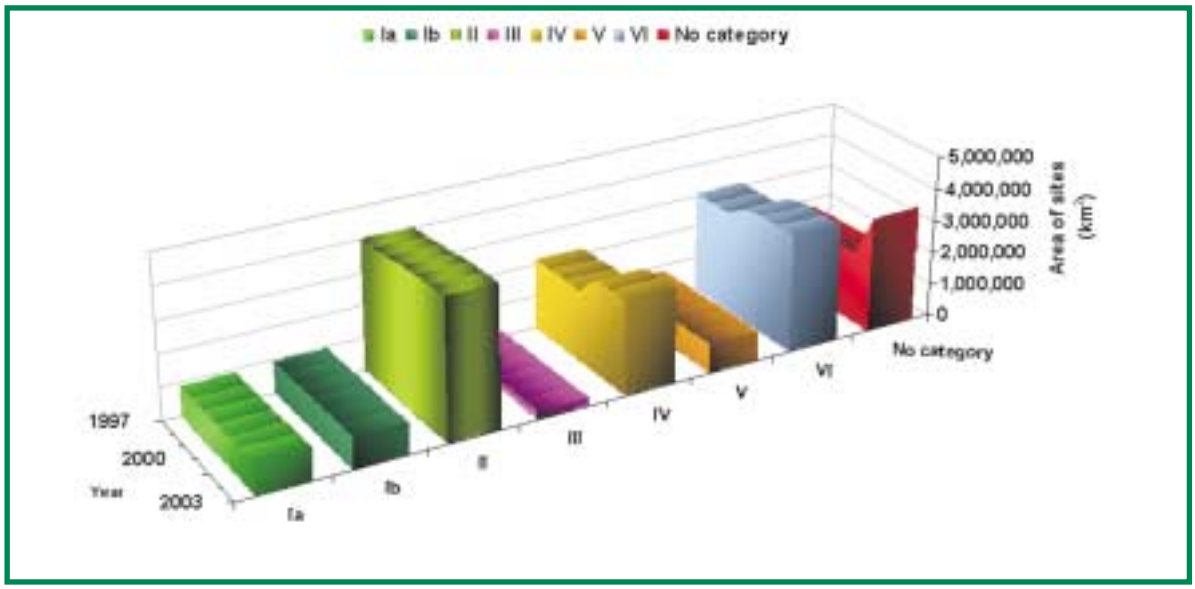


Figure 7. Cumulative growth in global area of protected areas: 1997–2003



Coastal and marine protected areas

The UN List includes a large number of protected areas that incorporate shoreline and marine habitats, including those that are specifically dedicated to marine conservation. Consequently, a calculation based on the extent of land area will be inflated by these marine sites.

According to World Database on Protected Areas records, 4,116 protected areas in the UN List contain marine and coastal elements, covering 4.3 million km^2, however only part of this total figure is marine as the sites also contain land areas. The largest marine protected area is the Great Barrier Reef Marine Park in Australia (345,400km^2). Until such time as digital boundary data are available for all protected areas, the use of simple habitat markers to identify marine areas will inevitably lead to some degree of error in summary statistics. Utilising the currently held GIS data, with the addition of large sites without polygon boundaries but known

to be largely or entirely marine, the current best estimate for actual protected sea area is 1.64 million km^2, or 8.7% of the 2003 global total of 18.8 million km^2. This figure represents only 0.5% of the surface area of the oceans.

Extent of protection of the world's terrestrial biomes

The extent to which the global protected areas network is representative of the world's major terrestrial biomes is summarised in Table 4, based on Udvardy's biogeographical classification. The Udvardy system is used so that a comparison can be made with analysis undertaken at UNEP-WCMC by Green and Paine[7], which was based on the *1997 UN List* data. However, it should be noted that the 1997 analysis under-represented the protection of biomes by about 30%. This is because only 16,636 (55%) of the 30,350 protected areas were classified, although the data used represented just over 70% of the global protected areas network at that time.

The present analysis suggests that the 10% target established for the protection of biomes at the IIIrd World Parks Congress in 1982 has been reached or exceeded for nine of the 14 biomes. It can be seen from the current analysis that there is a substantial increase in the coverage of some biomes, notably Tropical Humid Forests (23.3% from 8.8%), Subtropical/Temperate Rainforests (16.9% from 10.3%) and Mixed Island Ecosystems (29.7% from 16.32%). This increase results from the additional, recent protected areas information that has been input to the WDPA for both categorised and non-categorised sites. For example, excluding sites without categories, protected area coverage of the Tropical Humid Forests biome would have increased to 12.9%. The biomes that still fall well short of the target are Lake Systems (1.54%) and Temperate Grasslands (4.59%) – also noted by Green and Paine in 1997. The Vth World Parks Congress will present an opportunity to review the efficacy of using the Udvardy biome approach *vis-à-vis* other methods of biogeographic region analysis. Another issue that needs to be addressed is conservation of marine ecosystems through a global, ecologically representative system of protected areas. The importance of this issue was highlighted by the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002. Consequently, the WSSD Plan of Implementation calls for the establishment of effective marine protected area systems by 2012.

As well as ensuring biogeographic and ecosystem representativeness, it is essential that existing protected areas are effectively managed to ensure that the objectives for establishing protected areas are achieved. The statistical, mainly quantitative, overview provided by the UN List provides no basis for assessing this effectiveness.

[7] Michael J.B. Green and James Paine, State of the World's Protected Areas at the End of the Twentieth Century. Paper presented at IUCN World Commission on Protected Areas Symposium on 'Protected Areas in the 21st Century: From Islands to Networks', Albany, Australia, 24–29th November 1997.

Table 4. Extent of protection of the world's major terrestrial biomes

BIOMES (Udvardy, 1975)	Protected Areas – *2003 UN List*					
Biome name	Area (km²)	Total number (incl. sites with no area)	Extent (km²)	Number of sites with no area	% Biome Protected	
					2003	1997 Analysis
Tropical Humid Forests	10,513,210	3,422	2,450,344	623	23.31	8.77
Subtropical/Temperate Rainforests/Woodlands	3,930,979	6,196	665,174	227	16.92	10.29
Temperate Needle-Leaf Forests /Woodlands	15,682,817	13,297	1,350,221	3,455	8.61	5.72
Tropical Dry Forests/Woodlands	17,312,538	5,746	2,210,563	1,551	12.77	7.07
Temperate Broad-leaf Forests	11,216,659	35,735	856,502	9,341	7.64	3.60
Evergreen Sclerophyllous Forests	3,757,144	5,334	399,587	693	10.64	4.39
Warm Deserts/Semi-Deserts	24,279,843	2,008	2,492,377	908	10.27	4.83
Cold-Winter Deserts	9,250,252	1,235	704,037	580	7.61	5.90
Tundra Communities	22,017,390	405	2,606,041	40	11.84	8.38
Tropical Grasslands Savannahs	4,264,832	318	654,310	25	15.34	7.42
Temperate Grasslands	8,976,591	3,533	411,839	852	4.59	0.98
Mixed Mountain Systems	10,633,145	9,345	1,735,828	1,388	16.32	9.10
Mixed Island Systems	3,252,563	3,425	967,129	364	29.73	16.32
Lake Systems	517,695	261	7,989	128	1.54	1.12
TOTAL	**145,605,658**	**90,260**	**17,511,941**	**20,175**	**12.03**	**6.52**

Analysis by regions

This edition of the UN List includes analyses of regional protected area statistics. The global divisions used are based on the IUCN World Commission on Protected Areas terrestrial regions (South America and Brazil regions have been combined). The rationale for choosing IUCN, rather than United Nations, regions, is based on: their geographic logic; the long-standing relationship of the WCPA to the UN List process; the global representation of the WCPA network; the WCPA role in encouraging adoption of the IUCN management categories; and the fact that the Vth World Parks Congress is to be convened later in 2003. The statistics presented in the *2003 UN List* will assist, as they have done for previous congresses spanning 40 years, in the presentations and debates in Durban in September 2003.

Analyses for the WCPA regions are presented as pie charts showing the key statistics for number and area. The charts reveal considerable variation from region to region in terms of the application of IUCN management categories, and the different emphases placed on management objectives for protected areas. A summary of the major category type in each region, by area, is presented in Table 5. Where most sites are not categorised (NC), the figure is included with the highest percentage IUCN category.

Table 5. Predominant categories in IUCN WCPA regions by area

IUCN WCPA Region	Predominant Category	% Area Protected
Antarctic	Ia	81.0
Australia and New Zealand	VI	39.8
Caribbean	II	39.0
Central America	NC II	34.6 19.7
East Asia	Ib	44.2
Eastern and Southern Africa	NC VI	31.9 28.3
Europe	V	46.1
North Africa and Middle East	VI	62.0
North America	II	36.7
North Eurasia	IV	48.1
Pacific	VI	52.6
South America and Brazil	NC II	52.4 17.5
South Asia	IV	50.5
Southeast Asia	VI	26.8
Western and Central Africa	IV	34.1

Note on the WCPA Antarctic Region

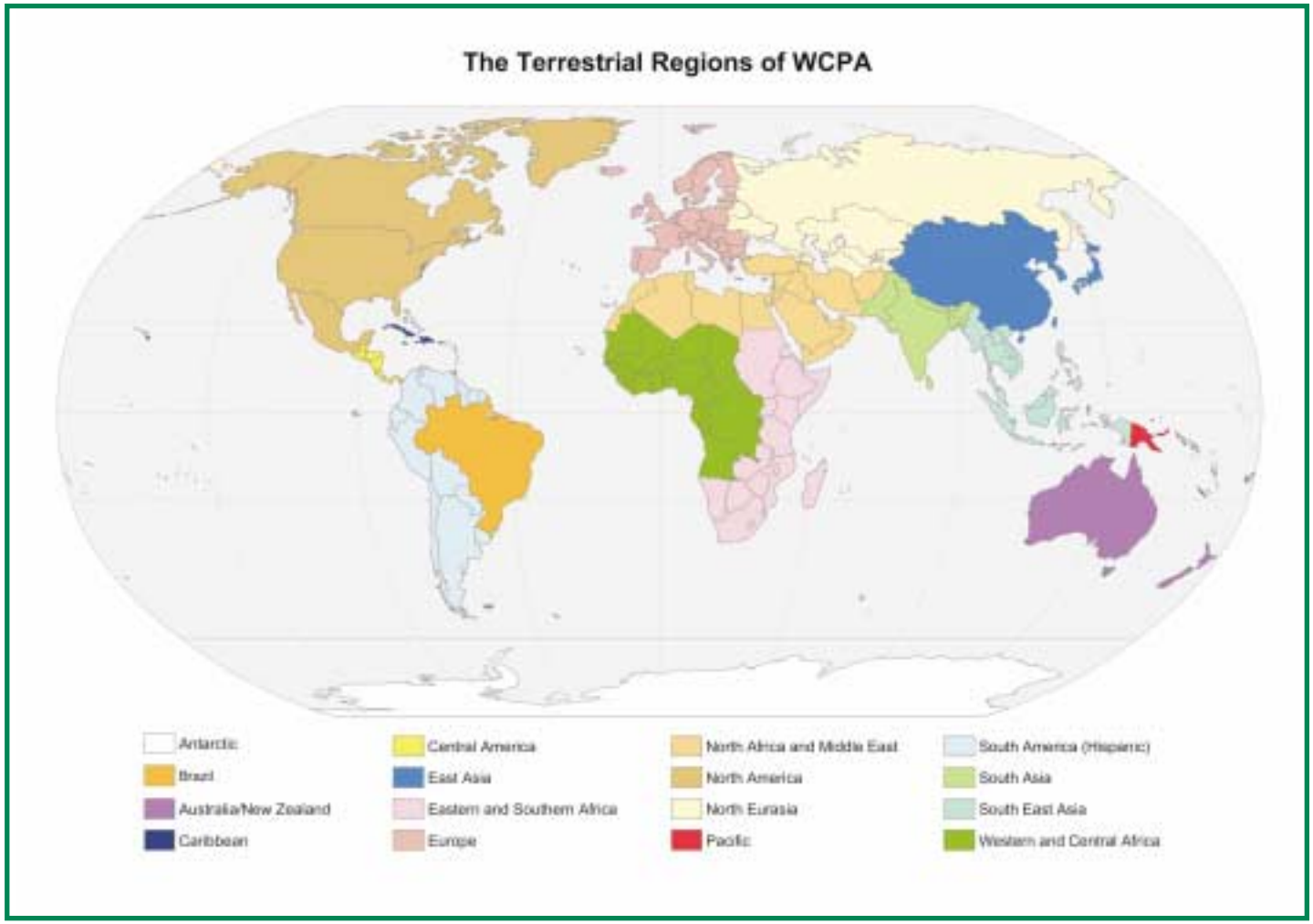
The data for the Antarctic region requires explanation. This vast area (14,024,488km^2) appears severely under-represented (70,294km^2 or 0.5% of the total area) as most of the protected areas recorded are those established in the Sub-Antarctic island territories of various countries. However, Antarctica (the area south of 60° South latitude) is protected through the 1959 Antarctic Treaty and its Environmental Protection Protocol. Through this agreement, the countries active in Antarctica consult on the uses of a whole continent. The Treaty now has 44 signatories, 27 are Consultative Parties on the basis of being original signatories or by conducting substantial research there. The treaty is administered through Antarctic Treaty Consultative Meetings, which includes designation and management of protected areas. The Environmental Protection Protocol to the Treaty was ratified in 1997. Under this Protocol the whole continent of Antarctica and its dependent marine ecosystems is designated a "natural reserve devoted to peace and science". Article 3 of Annex V – Area Protection and Management – provides for the establishment of Antarctic Specially Protected Areas, including any marine area. Although not reflected in the *2003 UN List*, the world's protected areas estate has increased considerably as a result of this Protocol.

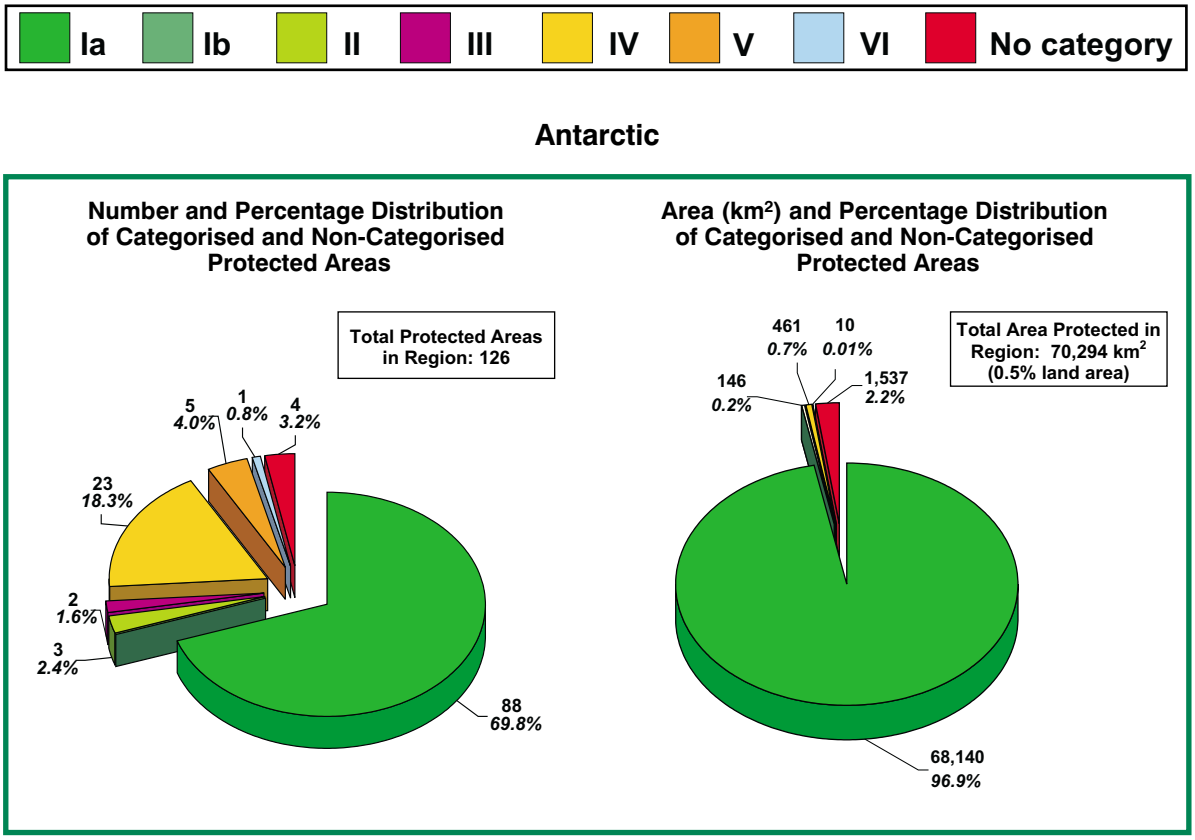
7. Updating the World Database on Protected Areas

Protected areas now form a major component of the way governments and other bodies utilise and manage the Earth's resources. The periodic UN List of Protected Areas is an important tool for monitoring the progress of this important aspect of human endeavour: conservation and wise use of the planet's remaining wild resources and places.

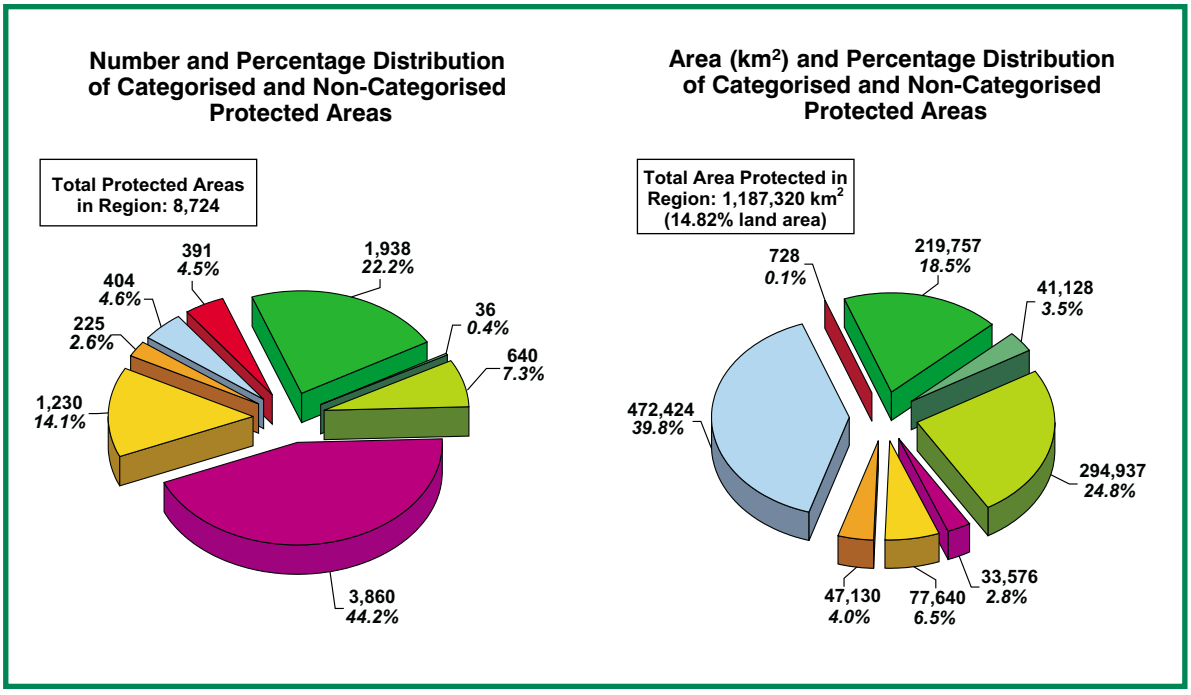
The World Database on Protected Areas underpins the UN List and in order to maintain the currency of the WDPA and improve its accuracy UNEP-WCMC, IUCN and the World Commission on Protected Areas (WCPA) request protected area agencies, organisations and individuals to review national data and advise UNEP-WCMC of any discrepancies and/or updates. As noted earlier in the report, protected area data can be reviewed through the Centre's website.

Annex. Protected Area Number and Extent by IUCN WCPA Region

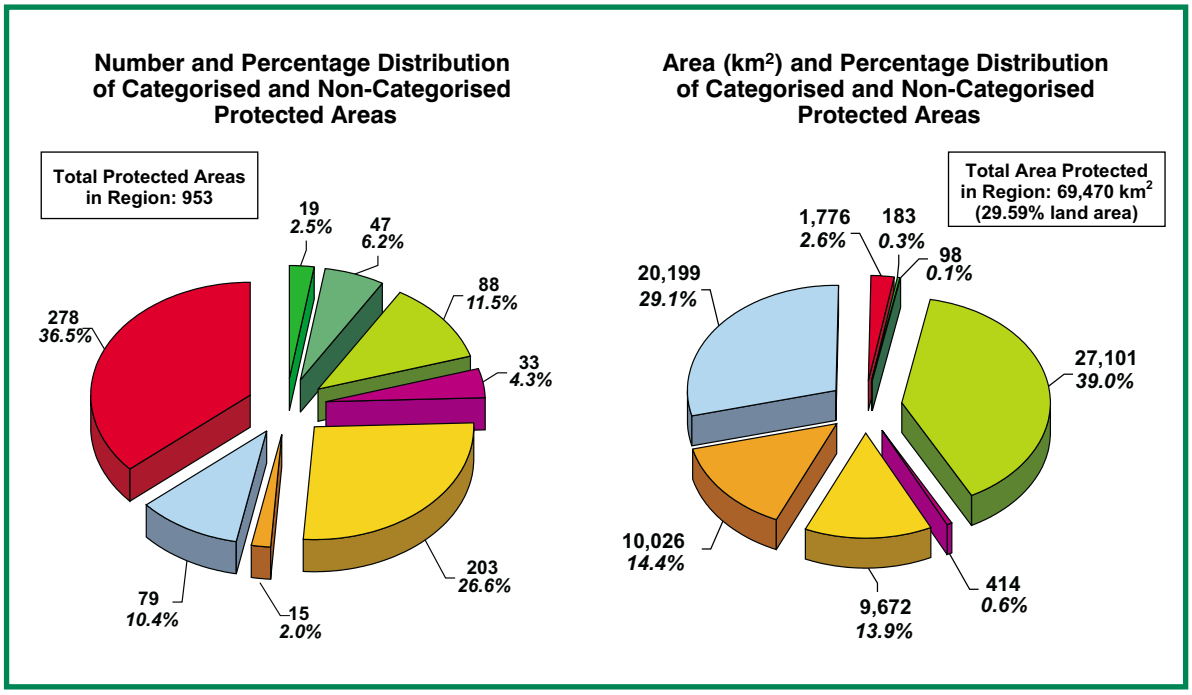




Region contains: Antarctica, Bouvet Island, Falkland Islands, French Southern Territories, Heard and McDonald Islands, St. Helena, South Georgia and the South Sandwich Islands

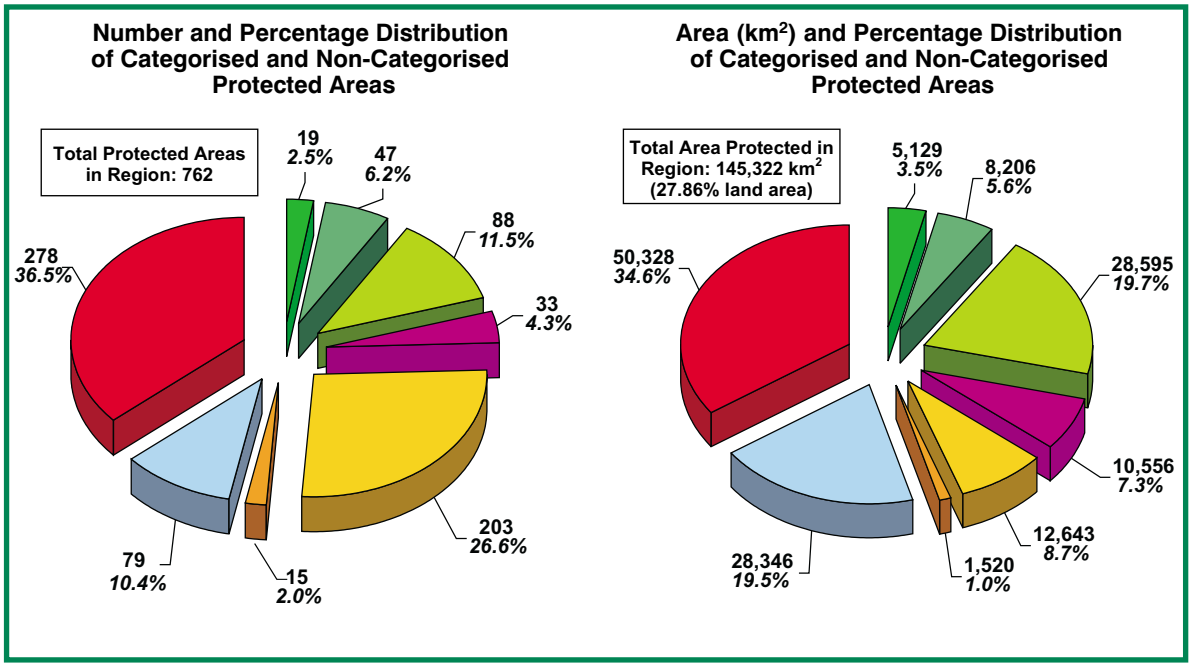


Caribbean



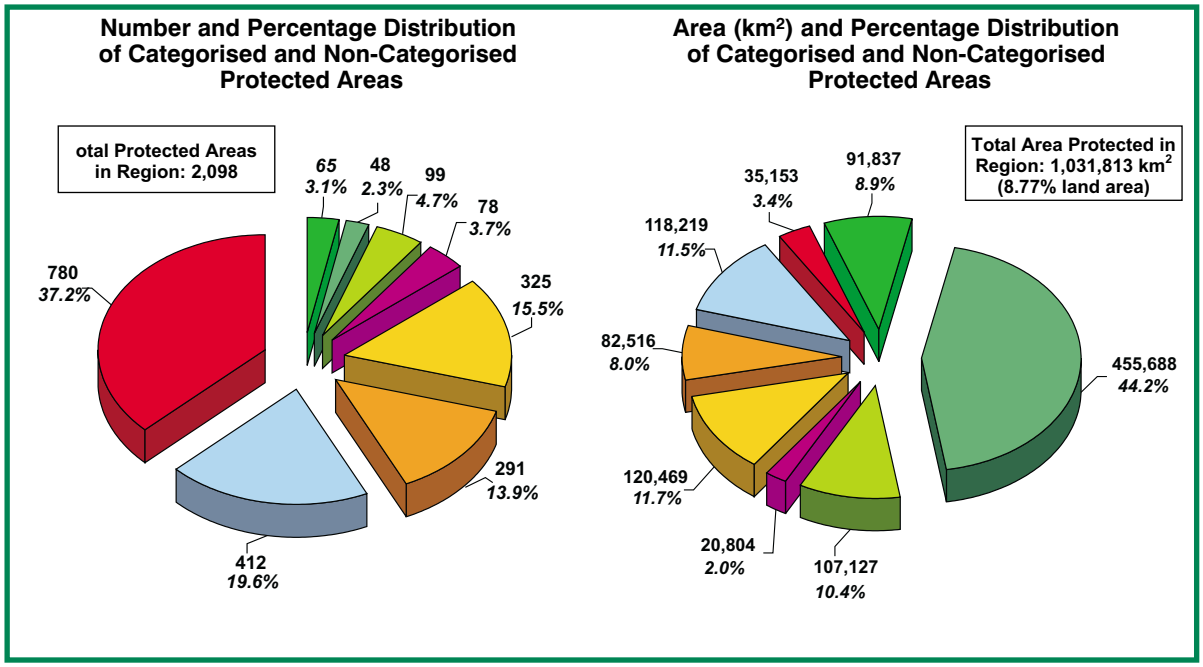
Region contains: Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bermuda, Cayman Islands, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Netherlands Antilles, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands, Virgin Islands (British), Virgin Islands (US)

Central America



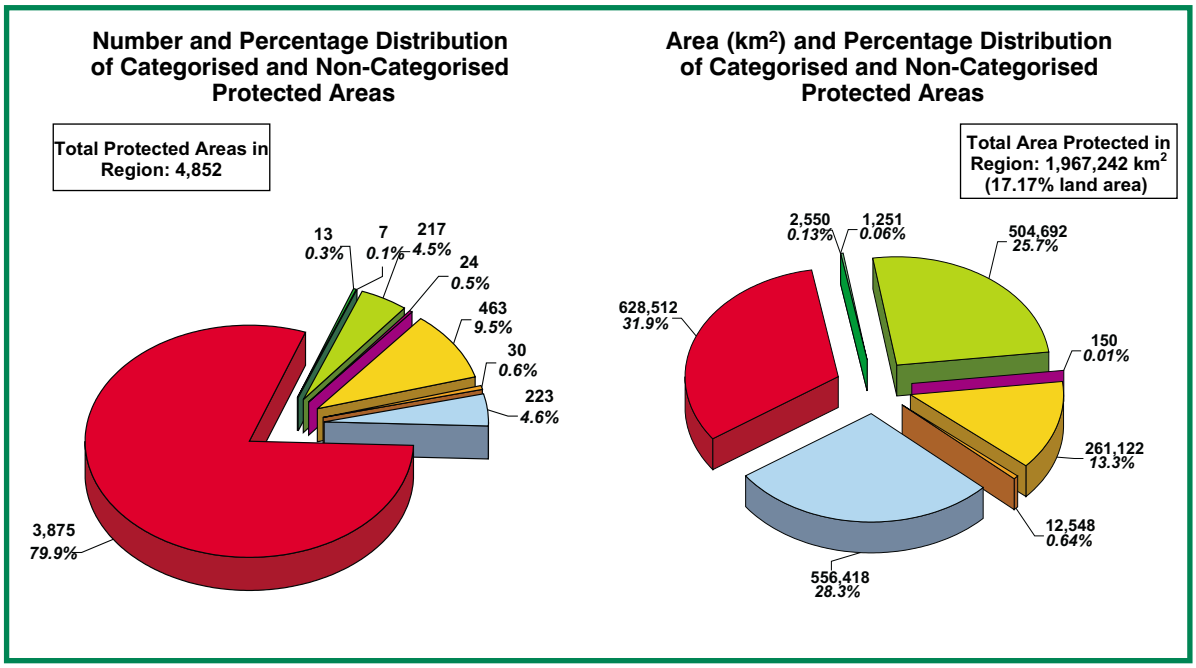
Region contains: Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, El Salvador

East Asia



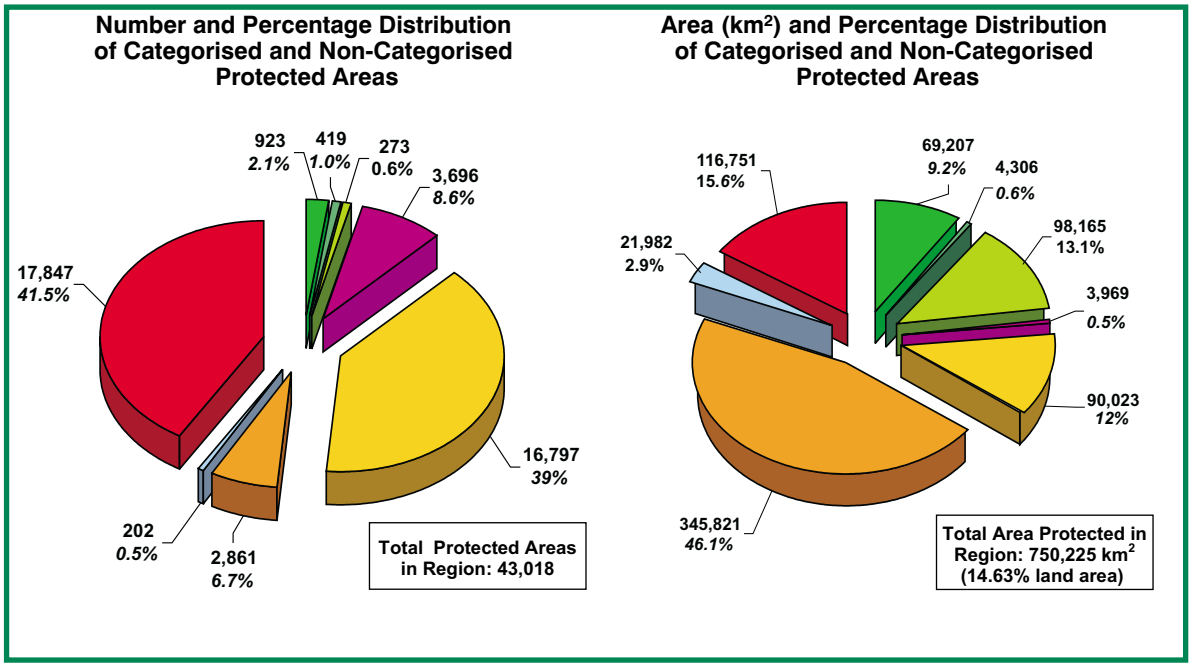
Region contains: China, Democratic People's Republic of Korea, Hong Kong, Japan, Macao, Mongolia, Republic of Korea, Taiwan, Province of China

Eastern and Southern Africa



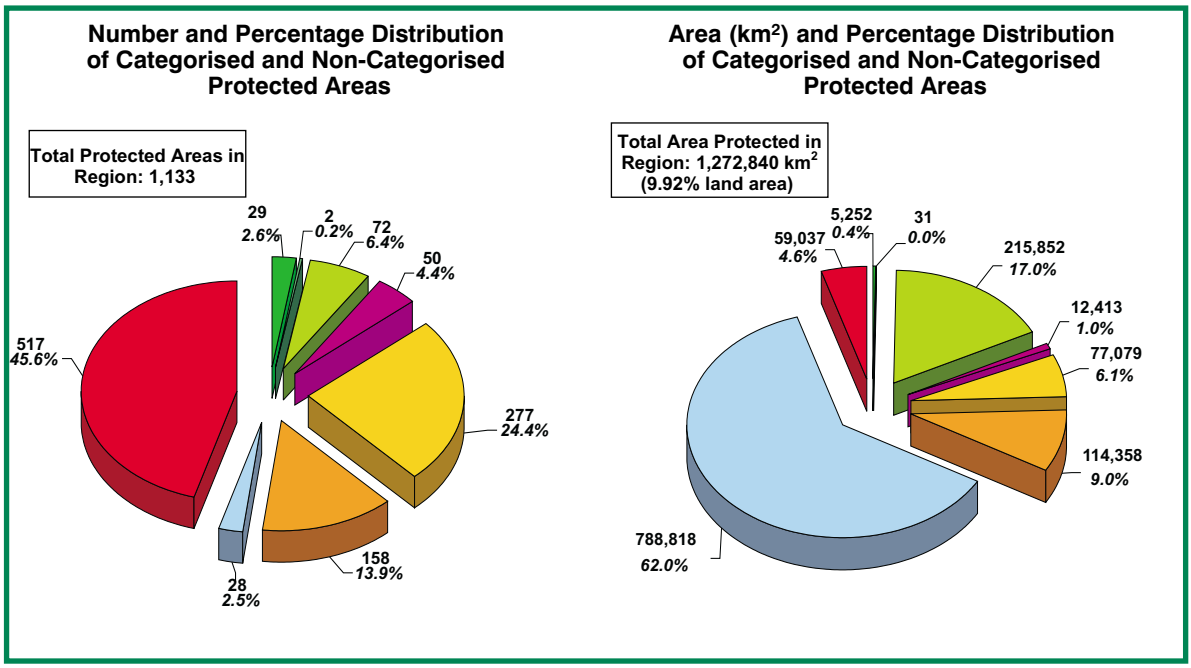
Region contains: Botswana, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mayotte, Mozambique, Namibia, Réunion, Seychelles, Somalia, South Africa, Sudan, Swaziland, Uganda, United Republic of Tanzania, Zambia, Zimbabwe

Europe



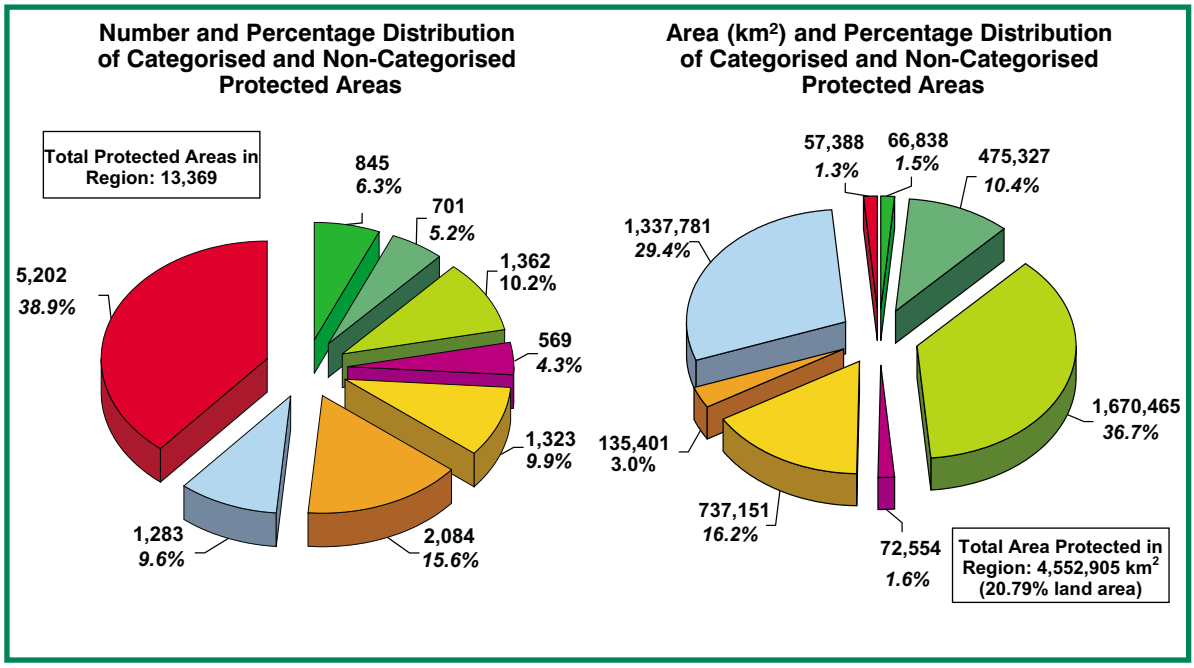
Region contains: Albania, Andorra, Austria, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Czech Republic, Denmark, Estonia, Faroe Islands, Federal Republic of Germany, Finland, France, Gibraltar, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Slovakia, Slovenia, Spain, Svalbard and Jan Mayen Islands, Sweden, Switzerland, United Kingdom, Vatican City State (Holy See), Yugoslavia,

North Africa and Middle East



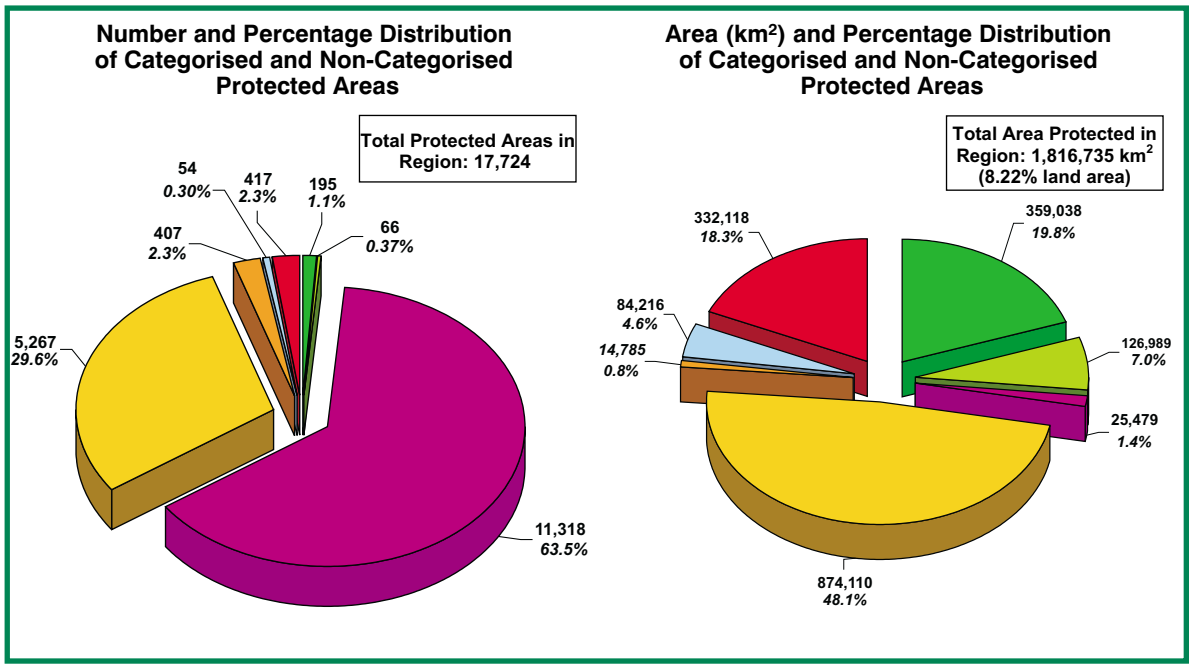
Region contains: Afghanistan, Algeria, Bahrain, Cyprus, Egypt, Iran, Islamic Republic of, Iraq, Israel, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, Turkey, United Arab Emirates, Western Sahara, Yemen

North America



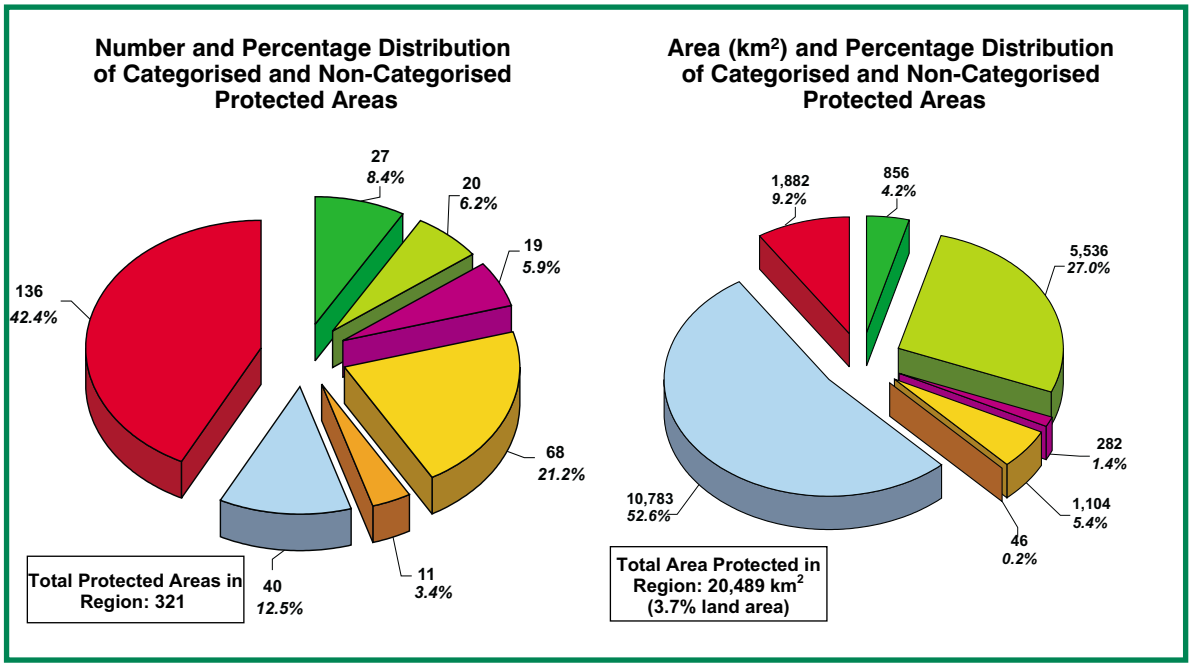
Region contains: Canada, Greenland, Mexico, St. Pierre and Miquelon, United States

North Eurasia



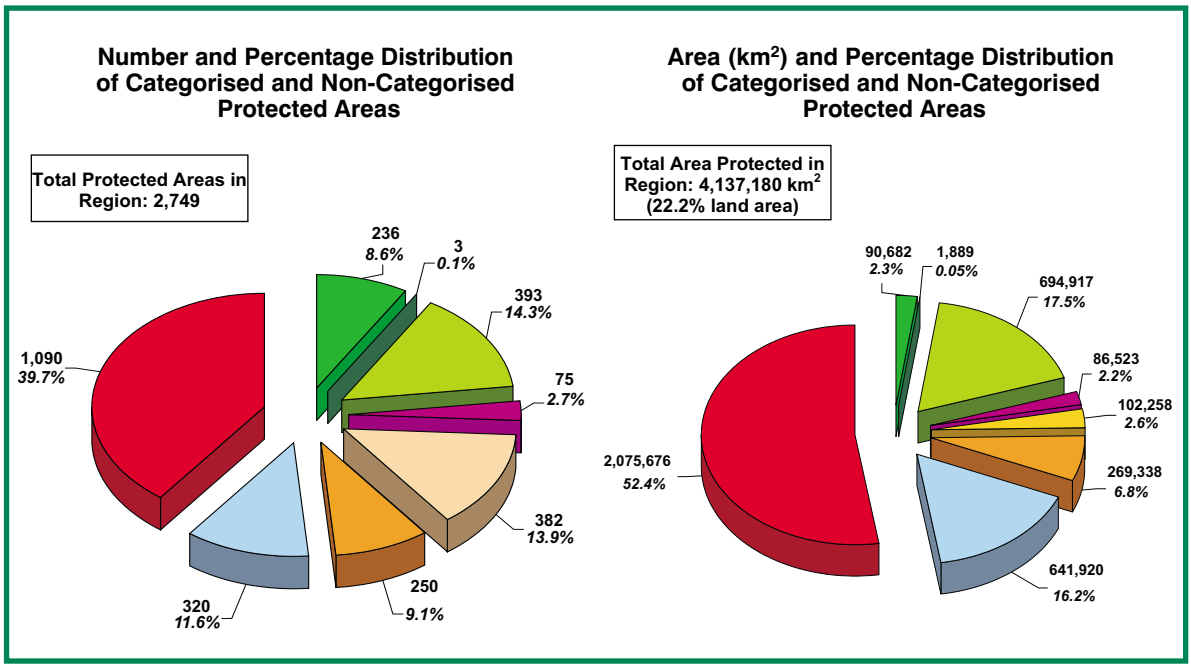
Region contains: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

Pacific



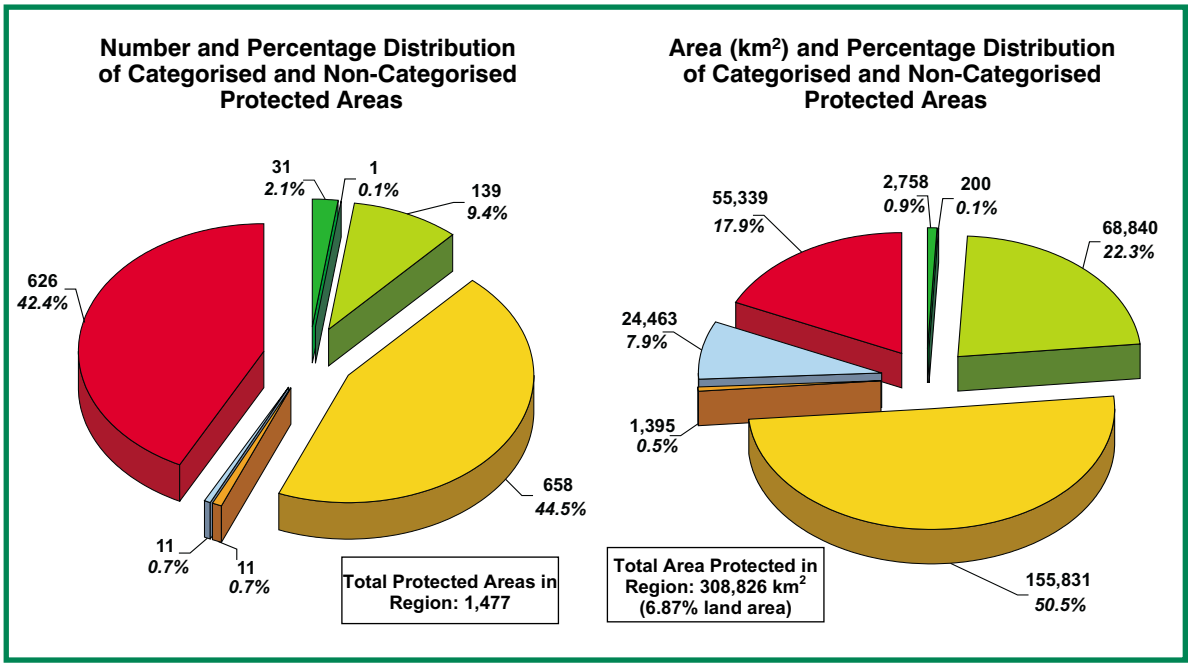
Region contains: American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States Minor Outlying Islands, Vanuatu, Wallis and Futuna Islands

South America and Brazil



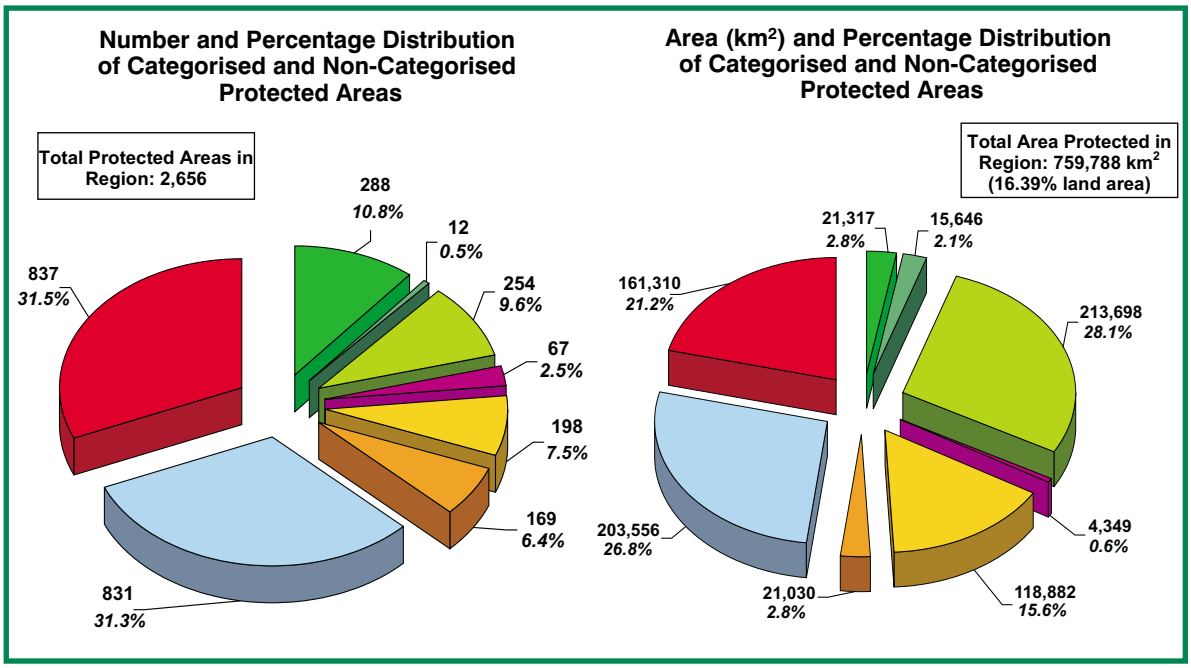
Region contains: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Peru, Paraguay, Suriname, Uruguay, Venezuela

South Asia



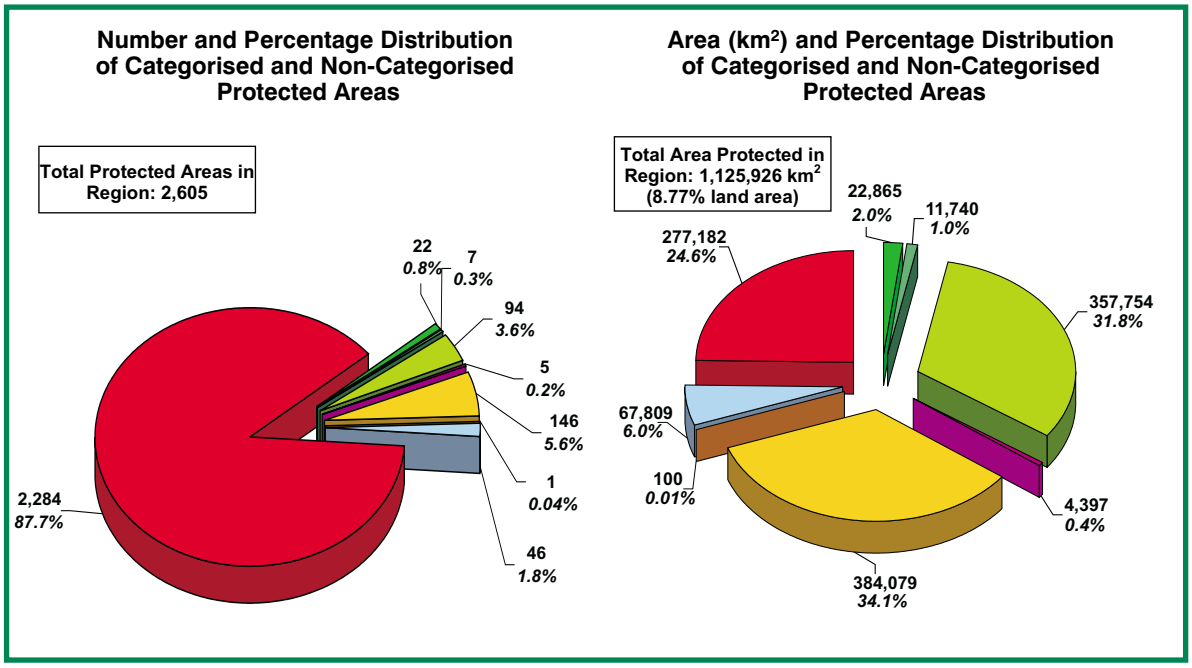
Region contains: Bangladesh, Bhutan, British Indian Ocean Territory, India, Maldives, Nepal, Pakistan, Sri Lanka

Southeast Asia



Region contains: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam

Western and Central Africa



Region contains: Angola, Burundi, Benin, Burkina Faso, Central African Republic, Cape Verde, Chad, Cameroon, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Mauritius, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Togo

Note that the summary percentage land area statistic given for each region is based on the total area protected. This is inclusive of both terrestrial and marine surfaces and hence does not give a true representation of the land area protected. The actual land surface protected in each WCPA region is provided below:

Antarctica	0.0%	North Africa and Middle East	9.7%
Australia/NZ	9.6%	North America (includes Greenland and Hawaii)	18.2%
Brazil	18.3%	North Eurasia	7.2%
Caribbean	11.7%	Pacific	2.1%
Central America	24.8%	South America (Hispanic)	24.9%
East Asia	8.5%	South Asia	6.8%
Eastern and Southern Africa	14.6%	South East Asia	14.8%
Europe	13.1%	Western and Central Africa	8.7%

IUCN – The World Conservation Union

Founded in 1948, The World Conservation Union brings together States, government agencies and a diverse range of non-governmental organizations in a unique world partnership: nearly 1000 members in all, spread across some 140 countries.

As a Union, IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

The World Conservation Union builds on the strengths of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional and global levels.

UNEP-WCMC

The UNEP WORLD CONSERVATION MONITORING CENTRE is the biodiversity assessment and policy implementation arm of the United Nations Environment Programme (UNEP), the world's foremost intergovernmental environmental organization. UNEP-WCMC aims to help decision-makers recognize the value of biodiversity to people everywhere, and to apply this knowledge in all that they do. The Centre's challenge is to transform complex data into policy-relevant information, to build tools and systems for analysis and integration of these data, and to support the needs of nations and the international community as they engage in joint programmes of action.

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IUCN The World Conservation Union

WCPA WORLD COMMISSION ON PROTECTED AREAS

UNEP WCMC