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The Protection of Land-based Wildlife under International Law

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Abstract

This article presents an overview of international wildlife protection law with the aim of presenting its breadth and the variety of approaches it takes which can be categorised as: protection by habitat; protection by species; protection through controlling trade; and protection as part of a wider ecosystem. The international law for the protection of wildlife presents a highly complex picture since (a) it relies on a variety of discreet approaches (or a combination thereof) (b) it applies to areas both within and beyond national jurisdiction (c) it applies also to areas such as Antarctica and international marine areas in which special international law regimes apply and (d) the subject of protection – animals – do not respect legally enforced territorial boundaries. In order to make it clearer, this article analyses the relevant law in the following manner: global treaties of general application; global treaties protecting habitats and/or species; and regional treaties. Other issues addressed include the use of scientific terminologies in a legal context and the relationship between wildlife conservation and animal welfare/rights. This analysis aims (a) to clarify the nature of the obligations placed on governments as Parties to these treaties (and the actions required for their implementation) and (b) to help us to identify the most effective strategies for the future development of national protective legislation and other measures. In view of the limited space available, the protection of land-based species is the focus of this article although, of course, the treaties described here apply also to the coastal and territorial waters of the Parties.

Keywords: Wildlife, protection, international law, species, habitats, sustainable conservation.

حفاظت از حیات وحش روی زمین از منظر حقوق بین الملل

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چکیده

این مقاله نگاهی کلی به حقوق بین الملل حفاظت از حیات وحش با هدف نشان دادن گستردگی و تنوع روش های موجود در آن دارد و به شرح زیر طبقه بندی می گردد. حفاظت از نظر زیست گاه، حفاظت از نظر تنوع گونه ها، حفاظت از طریق کنترل تجارب و حفاظت بعنوان بخشی از سیستم زیستی. حقوق بین الملل برای حفاظت از حیات وحش تصویر کاملاً پیچیده ای را ارائه می دهد. از آنجا که (a) آن بر اساس روش های متفاوتی است (و یا یک ترکیبی از آنها) (b) آن در برگیرنده مناطقی است که در داخل یا خارج از مرزهای ملی نیز می گردد (c) آن همچنین شامل مناطقی مانند اقیانوس منجمد و مناطق دریایی بین المللی که از رژیم حقوق بین المللی ویژه ای برخوردار است (d) و موضوع حفاظت حیوانات که اجرای قانونی آن مرزهای منطقه ای را محترم نمی شمارند. برای شفاف تر کردن، این مقاله قوانین مربوطه را به روش زیر مورد تجزیه و تحلیل قرار می دهد: کاربرد کلی قراردادهای جهانی؛ قراردادهای بین المللی حفاظت از محل سکونت و یا انواع گونه ها؛ و قراردادهای منطقه ای. سایر موضوعات مورد بررسی شامل استفاده از اصطلاحات علمی در یک مفهوم حقوقی و رابطه بین مراقبت از حیات وحش و حقوق و رفاه حیوانات است. این تجزیه و تحلیل با هدف (a) شفاف سازی ماهیت مسئولیت هایی که دولت ها بعنوان طرف های این قراردادها و اقداماتی که لازمست برای اجرای آنها انجام دهند و (b) به ما کمک می کند تا مؤثرترین راهبردهای لازم را برای توسعه قوانین حفاظتی ملی و سایر تمهیدات آتی بکار ببریم. با توجه به محدودیت فضایی قابل دسترسی، حفاظت از انواع گونه های زمینی تمرکز بررسی این مقاله می باشد، ولی قراردادهایی که اینجا مورد بررسی قرار می گیرد همچنین برای آب های مرکزی و منطقه ای طرف ها هم کاربرد دارد.

کلمات کلیدی: حیات وحش، حفاظت، حقوق بین الملل، گونه ها، محل سکونت، پایدار، مراقبت.

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Introduction

The international law relevant to the protection of wildlife presents a highly complex picture since (a) it relies on a variety of discreet approaches (or a combination thereof), (b) it applies to areas both within and beyond national jurisdiction, (c) it applies also to areas such as Antarctica (Francioni, 1993) and international marine areas (Anderson, 1986; Hayashi, 1995) to which special international law regimes apply and (d) the subject of protection – animals – do not respect legally enforced territorial boundaries. This wide-ranging area of international law takes a variety of approaches towards protecting wildlife that can be broken down mainly as: protection by habitat; protection by species; protection through controlling trade; and protection as part of a wider ecosystem (Van Heijnsberger, 1997; Lyster, 1989; De Klemm, 1982).

A helpful way to understand the 'division of labour' between the main treaties¹ protecting wildlife is to classify them into the following categories.

- 1) Treaties that are potentially applicable to all species and habitats on the planet – these are the 1973 CITES and the 1992 UN Convention on Biological Diversity.
- 2) Conventions applicable to all species and habitats within a certain region.
- 3) Treaties and other international agreements, applicable at regional or global levels, that have the conservation of either a particular habitat or species type as their objective.
- 4) Treaties that protect wildlife in areas special in themselves due to their particular environmental character and/or the international legal regime governing them, namely marine areas, Antarctica and the Arctic region.

It is important, however, to understand the synergy that exists between the treaties discussed here, one that is put into practice by the treaty bodies working co-operatively in areas that affect them (Glowka, 2000). For example, the secretariat of the 1971 Ramsar

Convention collaborates on its programmes with the secretariats of both the 1992 CBD and the 1979 Convention on Migratory Species, as well as with the World Heritage Centre (UNESCO). Moreover, the implementation of all of these treaties is heavily dependent on developments made by the various treaty bodies. To understand the operation of these treaties on the ground it is therefore necessary to examine the work of these Conferences of the Parties and other similar bodies established by the treaties for their interpretation and better implementation.

This overview of international wildlife protection law aims to present the breadth of international protection of wildlife and the variety of approaches it takes towards protection. This will (a) clarify the nature of the obligations placed on governments as Parties to these treaties (and the actions required for their implementation) and (b) help us to identify the most effective strategies for the future development of national protective legislative and other measures. In view of the limited space available, this paper will focus primarily on the protection of land-based species. Of course, the treaties described here apply also to the coastal and territorial waters of the Parties.

Terminology – “a rose by any other name”²

In order to specify which species or habitats to protect by law, we must be able to define them clearly. Usually the law relies on science, although the biological and the legal descriptions of an animal species may differ. Furthermore, the use of collective legal terms to refer to a wide range of biological forms³ can lead to some confusion. For example, the definition of 'fish' can cause problems whereby some statutes include crustaceans and molluscs in the term 'sea fish' while, zoologically, they belong to quite different phyla (Rees, 2002). In order to ensure that these are globally standardised, international law usually employs binomial system devised by Linnaeus in the 18th century for the purposes of identifying animal and plant species.⁴ This is a hierarchical system within which the main categories are called taxa⁵ and

it is sometimes easier to refer to the names of higher taxa rather than listing each species individually. For example, all whales, dolphins and porpoises belong to the order *Cetacea* and it is the order not the separate species within it that is the subject of protection.

Animal Welfare/Rights and International Wildlife Law

It should be made clear at the outset what the relationship is between animal welfare/rights and wildlife protection law (Austen and Richards, 2000; Bowman, 1996b; D'Amato and Chopra, 1991). Essentially, the latter is concerned primarily with conservation and protection of animal species, frequently for economic or recreational reasons. There are cases where wildlife protection law does incidentally provide for the welfare of the animals in question, for example where conservationists have sought to protect the minke whale as a species⁶ and this resulted in the prohibition of hunting methods deemed cruel by animal welfare activists (Harper, 1997). More deliberate recognition of the welfare of wild animals is found in regulations in CITES covering their treatment when in transit and in detention and in the Berne Convention in relation to indiscriminate methods of killing. However, the interests of these two positions do not always coincide, and international wildlife law clearly derives from a conservationist philosophy (i.e. to protect animal species as an element in an ecosystem and for its ecological value) and not an animal welfare or rights one.

Development of International Wildlife Protection Law

Concern for preserving flora and fauna that grew out of 18th and 19th observation of the natural world coincided with the growth of industrialisation that led to the adoption of early national legislation for the protection of the environment. It is possible to track the changes of approach over time from one designed to protect economic and sporting interests, to a more purely 'conservationist' approach to, more recently,

concerns with preserving biological diversity. In early wildlife law, animals were viewed as either useful to humans or harmful ('vicious') and, later, their economic value or as a source of food and clothing being the main reason for their protection (Birnie and Boyle, 2002). Later, the recreational value of wildlife for hunting or fishing became recognised and it is only recently that public concern has developed for protection of animals as species valuable for their own sake, with a specific emphasis on endangered species and rational management/use.

The early adoption of treaties was *ad hoc* and limited in scope with some bilateral fisheries Conventions adopted in the mid-19th century to stop over-exploitation (Sands, 2002). An early example of international co-operation was for the conservation of migratory birds. In 1884, an International Ornithological Committee was established to draft a treaty and the Convention to protect Birds Useful to Agriculture was adopted in 1902.⁷ However, it is from the late 1960's and the 1970s that the vast bulk of treaties were developed in this area, with a heavily conservationist approach. Treaties adopted at and post-Rio (1992) have moved towards an ecosystem approach with sustainable conservation as a key objective. The philosophical development of underlying principles of this area of law in recent times can be seen in the following soft law instruments.

The Stockholm Declaration (1972) called for flora and fauna to be safeguarded for the benefit of present and future generations through careful planning and management. The threats to wildlife and its habitat and the need to reconcile conservation with economic development are emphasised in Principle 4.⁸ The World Charter for Nature (IUCN, 1982) took this further by affirming the following General Principles: (1) nature shall be respected and its essential processes shall not be impaired; (2) the genetic viability on the Earth shall not be compromised and the population levels of all life forms, wild and domesticated, must be at least sufficient for their survival and so necessary

habitats shall be safeguarded; and (3) all areas of the Earth, both land and sea, shall be subject to these principles of conservation and special protection shall be given to unique areas, to representative samples of all the different types of ecosystems and to the habitats of rare or endangered species.

More recently, Principle 7 of the Rio Declaration (1992) introduced the new element of sustainable development and, with it, a more ecosystem-centred approach to conservation. It reads as follows: "States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem."⁹ The interdependent existence of species and habitats has meant that classifying and arranging biodiversity agreements into a coherent structure is challenging. Up to now, these have developed in a disorganised and *ad hoc* way and the continued loss of biodiversity is testament to their only limited success.

Global Treaties of General Application

The main global treaties for protection of wildlife can be divided into two main categories: (1) those of a general application that contribute to the international protection of wildlife and (2) those that have as their subject of protection specific species of animal and/or their habitats. Certain legal techniques and approaches to protection taken by these treaties can be identified and evaluated for their usefulness. The different regulatory techniques have been used to promote species conservation are applied, broadly, either *in situ* (on-site) or *ex situ* (off-site); and on the basis of a specific habitat or a whole ecosystem or on the basis of a single species.

The following are the most common techniques and mechanisms for the international regulation of conservation of land-based species (Sands, 2002).

1. The establishment of conservation and protected areas.
2. Prohibitions on and/or regulations concerning the taking of particular species (e.g. establishing seasons or other periods when the taking of the

species is permitted).

3. The establishment of quotas for the taking of species.
4. Prohibition on certain methods and means of taking (e.g. driftnet fishing, use of explosives).
5. Regulated taking or exploitation subject to compliance with general standards limiting utilisation to what is 'rational', 'optimal' or 'maximal.'
6. Limitations or prohibitions concerning international trade in species (e.g. CITES).
7. Protection and management of habitats.
8. Protection and management of ecosystems.
9. Prohibition on the introduction of new or alien species (De Klemm, 1996).

Establishing protected areas is an old and well-tried method. In 2005, protected areas covered 11.68 m ha land in Iran (7.23% of the total land mass as compared with an international standard of a minimum of 10%)¹⁰ (IDoE, 2006). IUCN developed a system whereby protected areas were categorised as either *Totally Protected Areas* maintained in a natural state and in which all extractive uses were prohibited¹¹ or *Partially Protected Areas* that might be managed for specific uses such as recreation or tourism and in which certain extractive activities were allowed.¹² It is not only the size of an area being protected but also the protection/conservation measures applied that are also important. This approach, however, has not stemmed the rate of species extinction, partly because the areas have often been too small to be effective and effects of activities outside the area have impacted on the area itself; ineffective management and inadequate funding have also been a problem (Sands, 2002). As a response, newer approaches have been introduced that use 'buffer zones' and 'biosphere reserves'¹³ and 'bio-regional management'.¹⁴

Another important approach – that does not rely on a treaty system as such - is drawing up national inventories (based on the IUCN *Red List* system) of endangered and/or extinct/near extinct species (For

Iran: Jalili and Jamshid, 1999). This is, in fact, an approach of fundamental importance since it is impossible to develop useful policies either nationally or internationally without sufficient information as to which species are under threat and at what level of threat.¹⁵ The *Red List* provides an objective and explicit framework for classifying species according to their risk of extinction, the main categories that describe the level of threat are: extinct; extinct in the wild; critically endangered; endangered; vulnerable; near threatened; and of least concern.

The two main treaties of general application are the Convention on the International Trade in Endangered Species (CITES) (1973) and the UN Convention on Biological Diversity (1992).

Convention on the International Trade in Endangered Species of Fauna and Flora (1973)

The Convention on the International Trade in Endangered Species (CITES) was adopted in 1973¹⁶ and there are now tens of thousands of plant and animal species subject to its regulations (Kosloff and Texler, 1987; Hill, 1990; Karno, 1991; Sand, 1997; Bowman, 1998). The Preamble indicates that the main purpose of the Convention is international co-operation to protect wild flora and fauna against over-exploitation through international trade.

The way CITES operates is to list endangered species in one of its three Appendices and to apply different protective measures to each. This approach of establishing annexes of protected species is drawn from some of the earliest environmental treaties and has the advantage of giving a built-in flexibility to the treaty – the substantive rules and principles remain the same, but the lists to which they apply can be up-dated when necessary. The term “species” is defined as any “species, sub-species or geographically separate population thereof”; the term “specimen” is also defined.¹⁷ The latter is a rather complex formulation that illustrates two important points: the interaction that exists between the main treaty text and the appendices; and the fact that animals are often killed

not for themselves but for some specific part or derivative thereof.¹⁸

The level of protection enjoyed by any CITES listed species therefore depends on which of the two appendices it is listed in. Extremely tight limits are placed on the trade in Appendix I species (which is mostly prohibited) while controlled trade is allowed for Appendix II species. There are complex regulations covering the requirement for export and import certificates with varying levels of strictness for Appendix I, II and III species. Parties should designate (or establish) two national authorities – scientific and management – to oversee this. Parties are free to introduce stricter domestic measures of protection and so the standards in this Convention should be regarded as minimum standards.¹⁹ In Appendix III, parties may list species that are subject to regulation within their jurisdiction to prevent or restrict exploitation which require the co-operation of other parties to control their trade,²⁰ allowing parties to assist each other in enforcing their domestic wildlife legislation. Species originally listed in Appendix III frequently find their way into Appendix II over time.

Obviously, any appendix (listing) system requires clear criteria for inclusion of a species and one of the main tasks of the Conference of the Parties (COP) is to consider and adopt amendments to Appendices I and II.²¹ At its first meeting, the COP adopted detailed criteria for listing and de-listing species known as the ‘Berne Criteria’²² but these proved controversial, seen as taking a protectionist approach to removing or down-listing species²³ (see Dansky, 1999). Revised criteria were adopted at the ninth meeting in 1994 with new standards for amendments to Appendix I or II and requiring parties to apply the precautionary principle “so that scientific uncertainty should not be used as a reason for failing to act in the best interest of conservation of the species”²⁴ (Dickson, 1999). Under the new criteria, a species must be currently threatened with extinction to qualify for Appendix I listing, in the sense that it meets one or more specified biological criteria.²⁵ This is an important new element that

closely mirrors the IUCN *Red List* criteria also adopted in 1994. Under these criteria, any amendments to Appendix I should be based on the best information available, giving details about species distribution, habitat availability, population trends, geographic trends, ecosystem role and specific threats.²⁶ It also provides criteria for down-listing a species from Appendix I to II, but only according to certain precautionary measures.

Certain exceptions to the treaty rules are provided for in CITES. For example, the trade provisions do not apply to the transit or transshipment of species; they do not apply to non-commercial trade of certain specimens between scientists or scientific institutions; and special provisions apply to trade animals bred in captivity.²⁷ CITES also allows parties to make reservations to the Convention in relation to any species listed in Appendix I, II or III and any parts or derivatives specified in relation to an Appendix III species, either at the time of ratification or when an appendix is amended. Reserving parties are treated as non-parties with respect to trade in the designated species or its parts/derivatives. This allows them to trade freely with non-parties and other parties that have placed similar reservations on the species in question without having to apply the requirements of CITES.²⁸ It is, of course, in the nature of any international treaty that compromises are needed in order to secure its adoption. However, there is little doubt that their operation has had a negative effect on those endangered species placed on the CITES appendices that are subject to such reservations.

CITES has strong institutions, with a permanent secretariat that oversees the operation of the Convention and the appendices. It may seek assistance from "suitable inter-governmental and non-governmental international or national agencies and bodies technically qualified in protection, conservation and management of wild flora and fauna."²⁹ The Conference of the Parties (COP) meets at least every two years to consider and adopt amendment to

Appendices I and II, review progress in the restoration and conservation of listed species and to make recommendations for improving the implementation of the Convention.³⁰ In 2000, it established an Animals Committee³¹ and it can also establish additional committees and working groups as needed. For example, a Panel of Experts on the African Elephant was established in 1989. The COP has also requested that the IUCN Law Programme prepare legal opinions on matters arising under CITES, and non-governmental organisations participate as observers in meetings of the COP, although they cannot vote. An example of the importance of such a treaty-based organ, the COP has used its powers in some cases to deal with issues not provided for in the treaty itself. For example, CITES does not include any specific provisions on the establishment of quota systems but the COP has used its powers to adopt four quota systems³² (Lyster, 1989a).

Compared with other global treaties protecting wildlife, CITES contains relatively detailed enforcement provisions. All parties must take appropriate measures to enforce the Convention and prohibit trade in specimens in violation of its provisions, including penalising trade and possession and confiscation and/or return to the State of export. The COP has also adopted various resolutions aimed at improving compliance. In 2000 the COP urged the parties, intergovernmental organisations and NGOs to provide additional financial support for the enforcement of the Convention. The Secretariat was also required to develop closer international liaison between the Convention's institutions, national enforcement agencies and existing intergovernmental bodies, especially the World Customs Organisation and ICPO-Interpol. Further resolutions have also been adopted to improve enforcement in certain targeted countries and regions. It is therefore a relatively effective and successful treaty, although the control of trade alone can never address threats such as habitat destruction and pollution.

UN Convention on Biological Diversity (1992)³³

Biodiversity can be understood in terms of three hierarchical categories that describe different aspects of living systems that are measured in different ways:

- genetic diversity: the variation of genes within a species;
- species diversity: the variety of species within a region; and
- ecosystem diversity: the variety of ecosystems within a region.

Clearly, it is the second level that is of most direct relevance to this article, although both the first and third are also implicated in the reproductive capacity of a species and the sustainability of a species' habitat, for example.

The relationship between the preservation of biological diversity³⁴ and wildlife protection law is, clearly, a very close one and much biodiversity related regulation will protect species and their habitats and vice versa (see Anon, 1996 and 2000). However, 'biodiversity' is obviously a more comprehensive notion that covers the total variety to be found in nature – all species of plants, trees, animals and micro-organisms along with the ecosystems of which they are a part and provide their habitat. The definition given of 'biodiversity' in the 1992 UN Convention on Biological Diversity (CBD) makes clear that this is viewed not just as a question of preserving particular species of plant or animal or protecting particular areas or regions. It is important, therefore to realise that the protection afforded to species of wildlife under the CBD is to some degree 'by default' and is not the primary purpose of that Convention. This differs from wildlife treaties that tend to deal with issues relating to the preservation of biodiversity sectorally, i.e. by addressing specific problems and by preserving various components of biodiversity separately.

The CBD has three objectives which are: the conservation of biological diversity; the sustainable use of the components of biological diversity; and the equitable sharing of benefits arising out of the utilisation of genetic resources.³⁵ With respect to the

components of biodiversity, the CBD applies to areas within national jurisdiction but, for processes and activities carried out under the jurisdiction or control of a party, the Convention may also apply beyond the limits of national jurisdiction, wherever the effects of such processes and activities occur.³⁶ The Convention also requires notification, exchange of information and consultation on activities likely to have a significant adverse effect on the biodiversity of other States or areas beyond national jurisdiction. The CBD places several general obligations on parties³⁷ and requires them, *inter alia*, to take the following broad policy actions: develop national strategies, plans or programmes (or adapt existing ones) for the conservation and use of biodiversity; and integrate, where appropriate, the conservation and sustainable use of biodiversity into sectoral or cross-sectoral³⁸ plans and plans, programmes and policies.

It also requires certain specific measures of the Parties, such as identification and monitoring of the components of biodiversity (including wildlife) important for conservation and sustainable use, paying particular attention to those requiring urgent conservation measures. Annex I establishes an indicative list of categories of ecosystems or habitats for identification and monitoring. Some of these are of clear relevance to wildlife protection, such as: those containing high diversity, large numbers of endemic or threatened species or wilderness; those required by migratory species. It also lists species and communities thereof to be identified and monitored. Parties are required also to identify and monitor activities that have, or are likely to have, significant adverse impacts on conservation and sustainable use of biodiversity. The approach taken here by the CBD shows an evolution of thinking that goes beyond traditional conservation towards a positive interaction between conservation and sustainable use. Where an adverse effect is identified, the processes or activities in question must be regulated or managed.³⁹ This clearly has important implications for many economic activities (i.e. agricultural, industrial, recreational, etc.)

that might negatively affect wildlife in some way. Environmental impact assessment (EIA) is required for any planned projects likely to have significant adverse effects, ensuring the minimisation of adverse impacts.⁴⁰

Detailed rules covering both *in situ* and *ex situ*⁴¹ conservation are also set out. The *in situ* conservation measures⁴² include: establishing a system of protected areas or areas in which special measures are needed; developing guidelines for the selection, establishment and management of these areas; regulating and/or managing biological resources important for the conservation of biological diversity; promoting the protection of ecosystems, natural habitats and the maintenance of viable populations; preventing the introduction of alien species which threaten ecosystems, habitats or species. The measures for *ex situ* conservation⁴³ include: taking measures to conserve the components of biodiversity; establishing and maintaining facilities for conservation of and research on plants, animals and micro-organisms; ensuring the recovery and rehabilitation of threatened species and their reintroduction into natural habitats under appropriate conditions.

Notably, the CBD establishes a financial mechanism to provide new and additional resources to support developing countries in meeting the agreed incremental costs of implementing the Convention in full.⁴⁴ The Convention also provides for a developed set of institutional arrangements for overseeing the implementation of the Convention⁴⁵ and allows various Working Groups to be established on an *ad hoc* basis to look into specific questions and provide expertise.⁴⁶

The CBD is now the principal framework within which the development and implementation of rules for the conservation of biodiversity now occurs. However, the relationship of the CBD with other international instruments – particularly CITES – remains unclear (Sands, 2002). This last point is one to bear in mind when seeking to place the CBD within the category of instruments that provide international

protection to animals and wildlife – of course it does, but its main focus is not that and its approaches are not always those usually employed for this purpose.

Global Conventions Protecting Specific Habitats or Species

The main global treaties directed at specific species and/or their habitats are: the Convention on Wetlands of International Importance (1971) ('Ramsar Convention'); the Convention for the Protection of the World Cultural and Natural Heritage (1972); the Convention on the Conservation of Migratory Species of Wild Animals (1979) ('Bonn Convention'); the Polar Bears Convention (1973); and the Vicuna Convention (1979).

Convention on Wetlands of International Importance (1971) ('Ramsar Convention')

The earliest international instrument to address the conservation of a specific habitat is one of special significance to Iran – the Convention on Wetlands of International Importance Especially as Waterfowl Habitat⁴⁷ adopted at Ramsar in 1971. Its adoption Reflected at the time a new legal approach of protecting a habitat type rather than a species i.e. an indirect form of species protection (Timoshenko, 1983; Bowman, 1995). The Ramsar Convention grew out of the activities of the International Waterfowl research Bureau (an NGO) and now has 158 Parties and protects 1,717 sites covering a total surface area of 159 million hectares.⁴⁸ Wetlands represent some of the world's most productive life-support systems and provide an essential habitat for many species of waterfowl, fish, amphibians, reptiles and mammals (Lyster, 1989a); they are, however, vulnerable to a variety of threats such as drainage, land reclamation and pollution.

The definition given for "wetlands"⁴⁹ has been criticised as failing to reflect the enormous variety of wetlands and their dynamic character, while other commentators regard it as broad and capable of

covering mangrove swamps, peat bogs, water meadows, coastal beaches and waters, tidal flats, mountain lakes and tropical river systems (Lyster, 2002; Sands, 2002). According to the broadest grouping of habitat types, there are thirty categories of natural wetlands and nine man-made categories (WCMC, 2000). The basic obligations placed on the parties are the following.

- Conservation of listed wetlands and the wise use of wetlands.
- Establishing nature reserves on wetlands in their territory.
- Endeavouring to increase populations of waterfowl.
- Ensuring that it is informed of any actual or likely change of any kind affecting its listed wetlands and to pass on such information to the Convention's secretariat.⁵⁰

The Convention also encourages research, the exchange of data and capacity building in relation to implementing its obligations.⁵¹ Parties should also consult over the conservation and wise use of transboundary wetlands and co-ordinate their policies and regulations for these.⁵²

The Convention establishes the List of Wetlands of International Importance and each party is required to designate at least one suitable wetland site in their territory for inclusion in it on ratification.⁵³ After that, the addition of other wetland sites, or the extension of listed wetlands, is a matter for each party.⁵⁴ This is similar to the World Heritage Convention (below) in the way it carefully preserves the parties' sovereign rights. In identifying such sites, they should take account of their international significance in terms, *inter alia*, of ecology and zoology.⁵⁵ Their "international responsibilities for the conservation, management and wise use of migratory stocks and wildfowl" must be taken into account when designating a wetland site, reducing it or deleting it from the list⁵⁶ (Navid, 1989; Bowman, 1999a). Iran has, for example, restricted the boundaries of the wetlands at Mian Kaleh and Shadegan Marsh. Here,

again, the importance of developing appropriate criteria for listing is apparent and these have evolved over the years (see below).

Implementation of the Convention is reviewed by Conferences of Wetlands and Waterfowl comprising representatives from every party held every three years with COP 10 to be held in 2008. The COP has the authority to look at implementation issues, additions and changes to the List of Wetlands and any changes in the character of listed wetlands. It may also make recommendations to parties on the conservation, management and wise use of wetlands and their flora and fauna and the parties must pay attention to these⁵⁷ (Sands, 2002). For example, the Convention text suggests that "wise use" applies only to non-listed wetlands but the 1987 COP extended its application to all wetlands and defined it in such a way as to allow more human use than restricted recreational use traditionally allowed in protected areas. It has also extended the notion of "wetlands" to include their support systems, namely the wider catchments to which they belong (Farrier and Tucker, 2000). With regard to listing wetlands, the COP adopted the 'Cagliari Criteria' in 1980 that made it clear that wetland species were not restricted to waterfowl but might include, for example, sea turtles or endemic crustaceans. It adopted further criteria for identifying wetlands and guidelines for their wise use at the 3rd COP at Regina (1987), superseded at subsequent COPs held in 1990, 1996 and 1999. In these later versions, the criteria are divided into two groups: Group A for identifying sites containing rare or unique wetland types; and Group B for identifying wetland sites of international importance for conserving biological diversity (including general criteria based on species and ecological communities and specific ones on water birds and fish).⁵⁸

The Cagliari COP (1980) also recommended that any large-scale wetland transformation should be preceded by an EIA assessing all the values affected and should involve ecologists in the planning process while the Regina COP (1987) addressed the

responsibility of development agencies toward wetlands. The 4th COP held in Montreux adopted a major Recommendation (4.8) regarding change in the ecological character of Ramsar sites that called on the Convention Bureau to maintain a record of sites where such changes have occurred that has become known as the 'Montreux Record'. Notably, this record should and to "distinguish between sites where preventive or remedial action has not as yet been identified, and those where the contracting party has indicated its intention to take preventive or remedial action or has already initiated such action".⁵⁹ From these examples, it is clear that the work of the COP creates an important dynamic for such a Convention and allows it to evolve as scientific and legal understanding moves forward.

The Conference has also established a number of working groups to help in its task and their activities are also bringing Ramsar into closer alignment with the CBD. IUCN acts as a Secretariat, maintaining the list, assisting the COP and liaising with parties over changes in ecological status of wetlands.⁶⁰ As a further means of improving implementation, especially by developing countries and countries with economies in transition, the Conference established a Wetland Conservation Fund in 1990 (subsequently renamed as the Ramsar Small Grants Fund for Wetland Conservation and Wise Use).

UNESCO Convention on the Protection of the Cultural and Natural Heritage⁶¹

This is a Convention that is aimed at establishing a system of collective protection of cultural and natural heritage and includes habitat protection of threatened species within its definition of the "natural heritage": "2. Geological and physiological formations and areas "which constitute the habitat of threatened species of animals or plants of outstanding universal value from the point of view of science or conservation". Selected sites are inscribed on an international list (the World Heritage List or the List of World Heritage in Danger) and the State on whose territory it is found must

ensure its management and protection⁶² (Simmonds, 1997; Blake, 2001). There is also a duty on the international community to co-operate the protection of these sites. The sovereignty of the parties is ensured by the fact that they identify their own sites as candidates for international listing. Each party must take measures, to integrate protection into comprehensive planning programmes, to set up appropriate services, to take necessary legal and administrative measures and to submit reports on measures taken to the World Heritage Committee established under the Convention.⁶³ Furthermore, parties must not "take any deliberate measures which might damage directly or indirectly the cultural and natural heritage."⁶⁴ It is noteworthy, however, that of Iran's nine sites inscribed on the Convention's Lists, all are cultural not natural properties and, as such, do not contribute to wildlife protection.⁶⁵

This Convention establishes strong institutional arrangements with the World Heritage Committee, an intergovernmental Committee comprising 21 Parties, a permanent secretariat (based in UNESCO's World Heritage Centre established in 1992) and a General Assembly of the States Parties to the Convention.⁶⁶ The World Heritage Committee selects sites for inscription from among candidates submitted by parties.⁶⁷ The List of World Heritage in Danger is established for sites threatened by "serious and specific dangers," that require "major operations" for their conservation and for which assistance is requested under the Convention's provisions for international assistance. The WHC establishes the criteria for selecting sites for the two lists, giving the Convention an important flexibility to respond to new challenges.⁶⁸ A World Heritage Fund is also established under the Convention as a trust fund made up mainly of compulsory and voluntary contributions from parties and the use of which is to be determined by the WHC.⁶⁹ Any party may request international assistance for a cultural or natural heritage property inscribed on one of the two lists that is located on its territory.

Convention on the Conservation of Migratory Species of Wild Animals (1979) ('Bonn Convention)

Given that migratory species frequently cross national boundaries, they obviously pose a special challenge to an international law system that is premised on the territorial sovereignty of the State. The only effective way to apply conservation measures for migratory species is through international co-operation over legal regulation, (De Klemm, 1989) a challenge responded to by the 1979 Convention on the Conservation of Migratory Species of Wild Animals (1979 Bonn Convention).⁷⁰ This grew directly out of Recommendation 32 of the 1972 Stockholm Action Plan and was aimed at addressing the lack of uniformity and limited scope of application of existing agreements in this area (Lyster, 1989a: 278). Iran has ratified the Convention and entered into force for Iran on 1 February 2008; Iran has also concluded MOUs over the Siberian crane, the slender-billed curlew and the Indian Ocean SE Asian marine turtle. However, on a regional level, neither Turkey nor Iraq has any formal connection with the Convention.

The 1979 Bonn Convention is an interesting treaty for the following three reasons.

- It covers an unusually wide range of threats to listed species.
- It has unusually restrictive provisions.
- It establishes a precedent in international wildlife law for providing subsidiary agreements that focus attention and efforts on specific species.⁷¹

The main objective of the 1979 Bonn Convention is the conservation and effective management of migratory species and their protection throughout every stage of their migration (Lyster, 1989b). These are defined as: "The entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries".⁷² Hence, the migratory character of the species must follow a fixed pattern and, at the same

time, where only a part of the whole population is under threat it should still be protected.

Appendices are again a central mechanism of this Convention, and Article III provides for the listing in Appendix I of migratory species where there is reliable evidence that the species is endangered.⁷³ Parties that are range States⁷⁴ for Appendix I migratory species must endeavour to achieve the following three objectives.

- To conserve and restore habitats.
- To prevent or minimise the negative effects of activities that seriously impede or prevent the migration of species.
- To prevent, reduce or control factors that are endangering or are likely further to endanger the species.⁷⁵

A clear obligation is placed on Range States to prohibit the taking⁷⁶ of Appendix I migratory species, except in certain limited circumstances. Notably, range States' jurisdiction extends to vessels of which they are the flag State planning to take species outside their territorial jurisdiction. The Convention secretariat must be informed of any such taking of Appendix I species.⁷⁷ Other than taking, the scope of threats to Appendix I species that are regulated is an exceptionally broad one⁷⁸ and might require, for example, control of pesticide use, the introduction of an alien predator or the killing of an essential food source⁷⁹ (Sands, 2002).

Migratory species should be listed in Appendix II when they have "an unfavourable conservation status"⁸⁰ and "require international agreements for their conservation and management", as well as those which "have a conservation status which would significantly benefit from the international co-operation that could be achieved by an international agreement".⁸¹ This is very interesting since the main criterion for Appendix II listing is that the species would benefit from international co-operation (not the usual criteria based on the level of endangerment) (De Klemm, 1989). It also means that a species might well appear on both Appendices I and II for different

reasons. States should endeavour to conclude agreements to benefit these species, with the aim of restoring the migratory species in question to a favourable conservation status or to maintain such a status.⁸² Such agreements should be open to accession to all range States, even non-parties to the 1979 Bonn Convention.⁸³ Article V(4) sets out the basic characteristics of such agreements. Parties must provide the secretariat with regular information on the migratory species listed in Appendices I and II for which they consider themselves to be range states and on the implementation of the required measures.⁸⁴

The institutional arrangements for the Convention are three-fold: a COP, a Scientific Council and the Secretariat. The COP is the principal decision-making body of the Convention and has responsibility for reviewing its implementation, including reviewing and assessing the conservation status of migratory species and improving the effectiveness of the Convention.⁸⁵ Any amendments to Appendices I and II are adopted at meetings of the COP by a two-thirds majority (of parties present and voting) and enter into force after 90 days for all parties unless they have lodged a reservation.⁸⁶ The COP meets every three years and has added numerous species to Appendices I and II. The COP has also established a formal review process for selected Appendix I species with a view to recommending specific conservation action.

Polar Bears, Vicuna and Birds

There are a few treaties that deal specifically with a particular species, such as the Convention for the Conservation of Antarctic Seals (1972),⁸⁷ the Agreement on Conservation of Polar Bears (1973)⁸⁸ and the 1979 'Lima' Convention for the Conservation and Management of the Vicuna⁸⁹ (Lyster, 1989a). Since these are geographically- as well as species-specific, they do not fall within the category of treaties of general application and have no direct relevance to Iran. However, they do contain certain provisions or points of interest. For example, the 1973 Polar Bears Convention allows the taking of polar bears in the

Arctic to prevent serious disturbance of the management of other living resources,⁹⁰ thus recognising the need for overall ecosystem balance. Parties must also protect the ecosystems of polar bears, including habitat components,⁹¹ and must manage the populations in accordance with sound conservation practices on the basis of the best scientific data.⁹² Local people are also allowed to take polar bears as an exercise of their traditional rights if they use traditional methods.⁹³ The 1979 Lima Convention (protecting the llama-like vicuna in South America) is an interesting example of a treaty aimed at balancing the economic benefits of the vicuna with conservation requirements,⁹⁴ although Argentina refused to ratify it for this reason. Although the parties may allow trade in vicuna under very limited conditions if the population levels are sufficiently high, the species is listed in Appendix I of CITES and so not open to international trade.

The 1950 International Convention for the Protection of Birds⁹⁵ is an international treaty designed to protect not a specific species but rather one of the six main categories of animals.⁹⁶ It is intended to protect birds in the wild (Bowman, 1999a) by protecting: all birds during their breeding season; migratory birds during their return flight to nesting grounds (between March and July); and species in danger of extinction or of scientific interest throughout the year.⁹⁷ It achieves this through the prohibition of a variety of activities.⁹⁸ Certain exceptions to these provisions are set out in Articles 6 and 7, subject to administrative requirements such as issuing permits. Each party must also prepare a list of birds that may be captured or killed on its territory and a list of species of indigenous or migratory birds which may be kept in captivity.⁹⁹ Interestingly, there is also a requirement for public education on the need to preserve and protect birds – a surprisingly innovative approach at the time.¹⁰⁰

Its effectiveness, however, has been limited by the lack of any financial or institutional arrangements and it has managed to attract only limited participation. A

much more comprehensive and modern approach is that taken by a regional treaty - the 1979 EC Wild Birds Directive¹⁰¹ - that establishes a complex regulatory scheme for protecting all species of birds and their eggs, nests and habitats within the territories of European Member States which must maintain their populations of wild birds at an appropriate level.¹⁰² To achieve this, they must preserve, maintain or re-establish a sufficient diversity and habitat area for wild birds, including protected areas,¹⁰³ thus combining species and habitat protection. It also establishes a system of Annexes providing different levels of protection. Annex I lists 181 species of birds subject to special habitat conservation measures to ensure their survival and reproduction while others introduce, *inter alia*, trade controls and prohibitions on certain methods of killing.

Regional Treaties

Regional treaties sometimes contain more innovative approaches than those found in global treaties. They also represent a response to the varying environmental needs and concerns of different regions while devolving the responsibility for managing international environmental issues to the most appropriate level - regional, sub-regional or bilateral.¹⁰⁴ Given the constraints on space, it is possible only to look in brief at this area of wildlife law and I have chosen to focus here on the Berne Convention on the Conservation of European Wildlife and their Natural Habitats (Council of Europe, 1979)¹⁰⁵ which is a highly significant treaty (Nollkaemper, 1987; De Klemm, 1989). Membership of this Convention has now expanded to include some (mainly African) non-member States of the Organisation and, as shall be seen, its provisions may at times apply to Iran (Lyster, 1989a). It places clear and unequivocal binding obligations on parties and an effective system of administration has been developed to promote and oversee their implementation. The Berne Convention has three objectives: to conserve wild flora and fauna and their habitats; to give

particular attention to endangered and vulnerable¹⁰⁶ species, including migratory species; and to promote international co-operation. It applies to all species and their habitats and is applicable to visiting migratory species that are not confined to Europe as well as to European species of fauna and flora found outside the European continent.

As a general duty, parties are required to take protection measures "to maintain the population of wild flora and fauna at, or adapt it to, a level which corresponds in particular with ecological, scientific and cultural requirements ..."¹⁰⁷ To achieve this, parties must *inter alia* take the following general measures: promote national conservation policies and take account of conservation issues in planning and development; encourage the re-introduction of species;¹⁰⁸ and control strictly the introduction of non-native species.¹⁰⁹ The heaviest emphasis is placed on habitat protection and the requirements concerning the impact of planning and development policies on habitats of wild fauna, especially of those in Appendix II (see below), would suggest the need for buffer zones around protected areas and prevent the building of an industrial zone or airport in an area that would damage a nearby national park.¹¹⁰ This reflects a European acceptance of the need to curb public works where the habitat protection and even avoidance of disturbance to species is concerned.¹¹¹ This can have a significant impact on development planning and policy-making.

The approach of the Convention to international co-operation is of interest. Not only should parties co-ordinate protection efforts in frontier areas, but should give special attention to areas of importance to migratory species on their migration routes (e.g. wintering, staging, feeding, breeding or moulting areas).¹¹² Since many 'European' migratory birds winter in Africa and Asia (including in Iran) and these provisions do not restrict this obligation to the parties' own territories, parties appear obliged to protect areas important to these species in areas outside their national jurisdiction. The question is, of course, what form such protection might take; this could, for

example, involve co-operation with less developed countries on migration routes and assistance to them in conservation activities. Furthermore, Appendix II lists “all species” of certain animals – does this mean that the provisions of Berne extend to Asian species of falcons or only to falcons that occur in Europe? The answer is ‘probably not’ in view of the Convention’s title and the assumption that it applies to *European* species of wildlife only. Do parties have an obligation to control the activities of their nationals and flag State vessels with regard to listed species wherever they are? The response to this is ‘probably yes’ in relation to Appendix II species given that the treaty includes no limiting phrase such as “in Europe” to the obligation in Article 1(1) “to conserve wild flora and fauna and their natural habitats”.

These general measures are strengthened by certain, more targeted, specific measures related to its system of Appendices,¹¹³ such as: to ensure the conservation of habitats of the wild fauna species listed as strictly protected in Appendix II; to give “special attention” to the protection of areas of importance to migratory species specified in Appendices II and III; and to prohibit the deliberate capture, keeping, killing, damage, destruction¹¹⁴ or disturbance of (protected) wild fauna species listed in Appendix II as well as the possession of or internal trade in these species or their parts. Notably, there are no special criteria for listing and this has led to the listing of some common species such as the hedge sparrow that is found throughout Europe. Moreover, Appendix III provides an opportunity for listing species not regarded as requiring the ‘special protection’ of Appendix II, and these include all species of reptile and amphibian (Lyster, 1989a:135). Importantly, parties must identify all important breeding and resting sites of Appendix II species on their territory, a major undertaking¹¹⁵ but one that can greatly enhance the level of protection. From this, we can see that this is a very comprehensive approach that includes all of the various types of protection found in different agreements.

Parties are free to adopt stricter conservation measures if they wish.¹¹⁶ Equally, parties are permitted to make exceptions to the prohibitions set out in Articles 4-8¹¹⁷ but only if there is “no other satisfactory solution” and that “the exception will not be detrimental to the survival of the population concerned” (general conditions). Certain specific conditions also need to be fulfilled to permit exceptions, such as that they are: for the protection of fauna and flora; to prevent serious damage to crops, livestock, fisheries etc.; for research and education of repopulation; for reintroduction; and for necessary breeding. Berne is the first treaty calling for the re-introduction of native species and this has proved a controversial requirement in the case of native species of wolves, for example. In addition to its strongly obligatory language, the Convention has an effective implementation system overseen by a Standing Committee (composed of a representative from each party) that, unusually, meets annually. This Committee has the power to recommend measures and make proposals for improving the effectiveness of the Convention.¹¹⁸ It may adopt amendments to the Appendices¹¹⁹ and has made several amendments to the Appendices, including that addition of 400 species Appendix I in 1991.

Conclusion

This overview of the international law applicable to the protection of wildlife has shown that it is a complex and wide-ranging area of environmental law that employs a broad range of different approaches to protection (conservation). The obligations placed on Parties by treaties often far-reaching and may have implications for economic resource-based activities, land-use policies (including agricultural or industrial uses) as well as for larger development projects and public works. Although international co-operation is the basis of treaty-making in this area and protective approaches to migratory species and trade-based controls rely directly upon it, much of the implementation of these treaty rules implicates

governments at national, regional and local levels. It requires them undertake measures ranging from establishing protected areas and buffer zones, conducting inventories of wildlife (and their conservation status) ensuring healthy ecosystems and finding a balance between recreational 'exploitation' of wildlife and their habitats and their conservation. This places a heavy burden on States, many of which lack the human and financial resources to meet it and international assistance in capacity-building and financing wildlife protection in developing countries is essential for the effectiveness of the existing law. Given that there is now a fairly comprehensive picture of international regulation in this area to which Iran has consented to be bound, it is important to ensure that the necessary domestic legislation and regulations are adopted for their effective implementation. It would also be worth considering the development of a regional Convention similar, for example, to the model of the Berne Convention that can ensure much better regional protection for wildlife.

Notes

1. The most important international and regional treaties in this area are: African Convention on the Conservation of Nature and Natural Resources (1968); 'Ramsar' Convention on Wetlands of International Importance Especially as a Wildfowl Habitat (1971); UNESCO Convention on the Protection of the Cultural and Natural Heritage (1972); Convention on the International Trade in Endangered Species (CITES) (1973); Agreement on the Conservation of Polar Bears (1973); Berne Convention on the Conservation of European Wildlife and their Natural Habitats (1979); Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979); EC Wild Birds Directive (1979); Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) (1980); UN Convention on the Law of the Sea (UNCLOS) (1982); Protocol on Environmental Protection to the Antarctic Treaty (1991); Convention on Biological Diversity (CBD) (1992); EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (1992); Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (Straddling Stocks Agreement) (1995).
2. William Shakespeare *Romeo and Juliet* (Act ii, scene 4): "What's in a name? That which we call a rose/ By any other name would smell as sweet."
3. The most widely used classification of living things is known as the "Five Kingdom Classification" that divides all organisms into animals, plants and fungi, single-celled organisms and blue-green algae. Animals are then classified into the following categories: mammals; fish; birds; reptiles; amphibians; and invertebrates.
4. As do, for example, the Appendices to the CITES Convention (1973).
5. In the singular, it is 'taxon'. These taxa are: Kingdom; Phylum (pl. phyla); Class; Order; Family; Genus (pl. genera); Species (pl. species).
6. Predominantly in the context of the International Whaling Commission established under the 1946 International Convention for the Regulation of Whaling.
7. Notably, this Convention relied on regulatory techniques still used today, namely: granting absolute protection to certain species of birds; a prohibition on their killing or the destruction or taking of their nests, eggs or breeding places; prohibiting the use of certain methods of capture or destruction.
8. This reads: Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat which are now gravely imperilled by a combination of adverse factors. Nature conservation including wildlife must therefore receive importance in planning for economic development.
9. Chapter 15 of Agenda 21 (the plan for implementing the Declaration) deals with the

- conservation of biological diversity and has been reaffirmed by the Plan of Implementation from the 2002 WSSD
10. These comprise 165 protected areas, 19 national parks, 93 reserves and 35 wildlife sanctuaries.
 11. These conform to Categories Ia, Ib, II and III of the IUCN management categories. See: IUCN, *Guidelines for Protected Areas Management Categories* (1994).
 12. These conform to Categories IV, V and VI. *Ibid.*
 13. First introduced by the 'Man and Biosphere' (MAB) programme of UNESCO in 1976.
 14. This last aims to integrate economic, ecological, cultural and managerial considerations at the regional level; examples are the Great Barrier Reef Marine Park (Australia) and Adirondack Regional Park (New York State).
 15. Iran currently has 37 species inscribed on the Red List.
 16. Washington, 3 March 1973 [993 UNTS 243]. It has 169 parties; Iran ratified CITES in 1976.
 17. This reads: "any animal or plant, whether alive or dead ... for species included in Appendices I and II, any readily recognisable part or derivate thereof; and for species included in Appendix III, any readily recognisable part or derivate thereof specified in Appendix III in relation to the species."
 18. For example, the killing of African elephants for their ivory or the Asian Tiger for its spleen (used in Chinese medicine).
 19. Article II(1); Article II(2); Article IV.
 20. Article II(3).
 21. Articles IX(3) and XV.
 22. See: *Criteria for the Addition of Species and Other Taxa to Appendices I and II and for the Transfer of Species and Other Taxa from Appendix I to Appendix II* [Res. Conf. 1.1 (1976)]
 23. For example, when attempts were made to up-list the African elephant to Appendix I in 1989, opponents to this argued that the African elephant did not meet the Berne Criteria for threatened extinction at species level. The issue of elephants and ivory has continued to challenge the COP and the CITES system as a whole.
 24. See: *Criteria for the Amendment of Appendices I and II* [Res. Conf. 9.24 (1994)].
 25. These include: species with a small population in the wild or one that has a restricted area of distribution; species that have experienced a decline in the number of individuals in the wild; or species that are likely to become threatened species within a period of five years.
 26. *Criteria op.cit.n.24* at Annexes 1 and 6.
 27. Article VII. The details for application of these provisions are set out in various Resolutions of COP (documents cited as Res. Conf.), such as: Res. Conf. 10.6 (1997); 6.8 (1987); 10.20 (1997); 5.11 (1985); 11.15 (2000); 8.16 (1992).
 28. Articles X, XV(3), XVI(2) and XXIII(3).
 29. Article XII(1).
 30. Articles XI and XII. So far, the COP has met fourteen times and it has established committees, sub-committees and working groups.
 31. Res. Conf. 11.1 (2000) on *Establishment of Committees*. The 23rd meeting of this committee is in April 2008.
 32. These are in relation to: the trade in lion skins (a quota approved in 1983 and regulated by a 1997 resolution); trade in markhor (*capra falconeri*) hunting trophies from Pakistan; trade in ivory from African elephants (until its listing in Appendix I in 1989; and trade in the African spurred tortoise (specified in the appendices). Res. Conf. 9.21 (1994) on *The Interpretation and Application of Quotas for Species Included in Appendix I*.
 33. Adopted at Rio de Janeiro, 5 June 1992 [31 ILM 822 (1992)]. Iran ratified the CBD in 1996.
 34. An increasing number of bilateral and regional treaties in place that incorporate these new approaches. Examples of these are the 1992 EU Habitats' Directive, the 1992 CBD and the 1995 Straddling Stocks Agreement.
 35. Art. 1.

36. Article 4(a) and (b).
37. Such as: Article 5 requires that all Parties cooperate for the conservation and sustainable use of biodiversity in relation to areas beyond national jurisdiction and on other matters of mutual interest.
38. "Sectoral" as in the agricultural sector, the tourism sector etc. Article 6 of the Convention.
39. Article 7.
40. EC Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora includes a similar approach and can have significant impact on planning in Art.6(3) although partly mitigated by Art.6(4).
41. *In situ* and *ex situ* conservation are both defined in Article 2.
42. Set out in Article 8.
43. Set out in Article 9.
44. Arts. 20 & 21.
45. Namely, the Conference of the Parties (COP) that keeps the implementation of the Convention under review; a Subsidiary Body on Scientific, Technical and Technical Advice that provides such advice to the COP; and a Secretariat that conducts the day-to-day administration of work related to the Convention (arranging meetings, notifying States, providing a central focal point etc.) and supports the COP and Subsidiary Body in their work.
46. Articles 23-25.
47. Ramsar, 2 Feb. 1971, in force December 1975 [1996 UNTS 245]. The Convention has 133 Parties and has been amended twice: by the Paris Protocol (3 Dec.1982, in force Oct.1986 [22 ILM 698]) and the Regina Amendments (28 May 1987, in force May 1994 [IELMT 977:9/13]). The Paris Protocol inserted a new article Art.10 *bis* to provide for amendment to the Convention.
48. Information available on www.ramsar.org (accessed 2 Feb.2008).
49. 'Wetlands' are defined in Article 2(1) 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 water the depth of which at low tide does not exceed six metres".
50. Arts.3 and 4(1) and (4). "Waterfowl" are defined in Art.2(2) as "birds which are ecologically dependent on wetlands".
51. Arts.4(3) and (5) .
52. Art.5.
53. Iran now has 22 designated wetland sites covering a total of 1,481,147 hectares; the first site designated was that of Alagol, Ulmagol and Ajigol Lakes in Mazandaran in 1975.
54. Art.2(4) and (5).
55. Arts. 2(1) and 3.
56. Arts.2(5) and (6) and 4(2).
57. Art.6(3).
58. The latest version of these criteria is to be found in the *Strategic Framework and Guidelines for the Future Development of the List of Wetlands of International Importance of the Convention on wetlands (Ramsar, Iran, 1971)*, adopted by the Ramsar COP in Res.VII.11 (1999), Part V.
59. There are currently (10/10/2008) 7 Iranian wetlands entered on the Montreaux record (in 1990 and 1993): Alagol, Ulmagol & Ajigol Lakes in Mazandaran (1,400 ha); Anzali Mordab (Talab) complex in Gilan (15,000 ha); Hamun-e-Puzak, south end in Sistan & Baluchestan (10,000 ha); Hamun-e-Saberi & Hamun-e-Helmand in Sistan & Baluchestan (50,000 ha); Neyriz Lakes & Kamjan Marshes in Fars (108,000 ha); Shadegan Marshes & mudflats of Khor-al Amaya & Khor Musa in Khuzestan (400,000 ha); and Shurgol, Yadegarlu & Dorgeh Sangi Lakes in Azarbayjan-e Gharbi (2,500 ha).
60. Art.8. The Secretariat function is fulfilled by IUCN.
61. Adopted in Paris on 16 Nov. 1972, entry into force 1975 [1037 UNTS 151]. There are 184 States Parties.
62. Art.4.
63. Arts. 5 and 29.
64. Art. 6(3).

65. This compares negatively with Indonesia that has 7 properties listed of which 4 are natural properties. In total as of 10 October 2008, there were 679 cultural properties, 174 natural properties and 25 mixed properties inscribed on the World heritage List.
66. Arts. 8, 14 and 16.
67. Art.11.
68. These are set out in the *Operational Guidelines* to the Convention that have been up-dated several times, most recently in 2005.
69. Arts. 13(6) and 15-18.
70. Bonn, 23 June 1979, in force Nov.1983 [19 ILM 15 (1979)]. It has 80 States Parties; The Preamble calls for the “concerted action of all states within the national jurisdictional boundaries of which such species spend any part of their life cycle.”
71. *Ibid* at 297.
72. In the Preamble and Arts. I(1)(a) and II(1).
73. Art. III(1) and (2). “Endangered” is defined in Art. I(1)(e) as “in danger of extinction throughout all or a significant portion of its range.”
74. I.e. States over which the species move as part of their regular migration.
75. Art. III(4).
76. Capture or killing. In Art.III(5).
77. Art. III(5) and (7).
78. Art.III(4) (a), (b) and, especially, (c).
79. For more on this, see: Lyster *op.cit.* n.51 at pp.284-5.
80. An “unfavourable conservation status” exists under one of the following conditions. (1)The migratory species is not maintaining itself on a long-term basis as a viable component of its ecosystems. (2) The range of the migratory species is either being reduced or likely to be reduced on a long-term basis. (3) There is not, and will not be in the foreseeable future, a sufficient habitat to maintain the population of the migratory species in the long-term.(4) The distribution and abundance of the migratory species do not approach historic coverage and levels to an extent sufficient for potentially suitable ecosystems to exist or consistent with wise wildlife management.Art. I(1)(c) and (d).
81. Art. IV(1).
82. Arts. IV(3) and (4) and V(1).
83. Art. V (2) and (3).
84. Art.VI.
85. Arts. VII, VIII and IX.
86. Art. XI.
87. London, 1 June 1972 [11 ILM 251 (1972)].
88. Oslo, 15 Nov.1973, in force May 1976 [13 ILM 13 (1973)].
89. Lima, 20 Dec.1979, in force March 1982 [IEMLT 979:94].
90. Arts. I and III(1) (a)-(c).
91. such as denning and feeding sites and migration patterns.
92. Art.II.
93. Art. III(1)(d).
94. Art. 1 notes that: “the conservation of the vicuna provides an economic production alternative for the benefit of the Andean population and [Parties] commit themselves to its gradual use under strict governmental control ...”
95. Paris, 19 March 1902, [IEMLT 902:22].
96. Generally held to be: mammals; fish; birds; reptiles; amphibians; and invertebrates.
97. Arts. 1 and 2.
98. Namely, the import, export, offering for sale, giving or possession of any live or dead bird, or part, or eggs or their shells or broods killed or captured in breach of the Convention It also outlaws certain methods that are likely to result in the mass killing or capture of birds or cause them unnecessary suffering. Arts. 3,4 and 5.
99. For the purpose of regulating trade in birds or to prevent their destruction. Arts. 8-11.
100. Art.10.
101. Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds [OJ L103, 25 April 1979, 1 (as amended)].
102. Understood to be at a level that “at a level which

- corresponds in particular to economic, scientific and cultural requirements while taking account of economic and recreational requirements, or to adapt the population of these species to that level.”Art. 2.
103. Art. 3.
104. The most important regional and sub-regional treaties not discussed here are: Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (1940); the African Convention on the Conservation of Nature and Natural Resources (1968); Convention on the Conservation of Nature in the South Pacific (Apia Convention) (1976); Treaty for Amazonian Co-operation. Brasilia (1978); Benelux Convention on Nature Conservation and Natural Resources (1982); Agreement on the Conservation of Nature and Natural Resources adopted by the Association of South East Asian Nations (1985); Kingston Protocol Concerning Specially Protected Areas and Wildlife (1990) to the 1983 Cartagena Convention; Convention on the Protection of the Alps (1991); Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994); and the Protocol on Wildlife Conservation and Law Enforcement (1999) to the South African Development Community (SADC) Treaty (1999). Kingston Protocol Concerning Specially Protected Areas and Wildlife (1990) to the 1983 Cartagena Convention; Convention on the Protection of the Alps (1991);
105. Berne, 19 Sept. 1979, in force 1982 [UKTS No.56 (1982). It currently has 46 Parties. See also: Council of Europe (1979).
106. Note that ‘endangered and vulnerable’ is broader in sense than ‘threatened’ and brings this Convention into line with 1973 CITES terminology.
107. Art.2. Similar to Art.2 of the EC Wild Birds Directive (1979).
108. This has proved highly controversial with the re-introduction of native species of wolf in some European countries.
109. Arts. 2,3 and 11.
110. Art.4(1) and (2).
111. Art.6(2) of the EC Habitats Directive (1992) requires Member States to “take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as the disturbance of species for which the areas have been designated ...”.
112. Art.4(4) and (3), respectively.
113. Arts. 4, 5,6,7,8 and 10. Appendix I covers strictly protected animals and Appendix II protected animals.
114. Art. 6(b). There is some ambiguity, however, as to whether ‘deliberate’ destruction or damage excludes those activities that are destructive or damaging but not as their primary purpose such as road-building?
115. Each Party has 100s such sites, not all in protected areas or even on publicly-owned land.
116. Art.12.
117. Art.9.
118. Arts. 13 and 14.
119. Arts. 15 and 17.

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