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ISSN 1727-3781

2014 VOLUME 17 No 5

http://dx.doi.org/10.4314/pelj.v17i5.03

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JC Knobel*

1 Introduction

The history of how the Spanish Imperial Eagle[1] has been brought back from the brink of extinction is one of the most inspiring conservation success stories of our time. According to accounts in the literature, the Spanish Imperial Eagle was a common species in Spain and most of Portugal and also occurred as a breeding species in Morocco in the nineteenth century.[2] In 1974 a census yielded evidence of only 38 pairs in Spain, and the total population was estimated at no more than 50 pairs.[3] No Spanish Imperial Eagles were known to have bred in Portugal since 1977,[4] and in North Africa it was regarded as extinct as a breeding species.[5] Several threats contributed to this decline, among others shooting, poisoning, electrocution and

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1 *Aquila adalberti.* For information on the Spanish Imperial Eagle, see BirdLife International 2013 http://www.birdlife.org/datazone/speciesfactsheet.php?id=3534; Ferguson-Lees and Christie *Raptors of the World* (2001) 737-740; Ferrer *Spanish Imperial Eagle* 19ff; Forsman *Raptors of Europe* 367; Global Raptor Information Network date unknown http://www.globalraptors.org/grin/SpeciesResults.asp?specID=8348; González and Margalida *Biología* 37ff; IUCN 2013 http://www.iucnredlist.org/details/22696042/0; Jais 2009 http://europeanraptors.org/ raptors/ spanish_imperial_eagle.html; Mebs and Schmidt *Greifvögel Europas* 246-250. In older works the Spanish Imperial Eagle is treated as a race or subspecies of the Imperial Eagle *Aquila heliaca*; eg Cramp and Simmons *Handbook of the Birds of Europe* 225-233. In their handbook cited here, Ferguson-Lees and Christie also follow that classification, but in a later compact identification guide with the same title (Ferguson-Lees and Christie *Raptors of the World* (2005)) they accept the Spanish Imperial Eagle as a species in its own right, and this is now the prevailing position.

2 González *et al* "Status and Habitat Changes" 147-151.

3 González *et al* "Status and Habitat Changes" 148-149.

4 Ferguson-Lees and Christie *Raptors of the World* (2001) 739; Forsman *Raptors of Europe* 367.

5 It was regarded as extinct as a breeding species in Morocco by 1976. A pair again bred in 1995, but subsequent records involved mainly juvenile birds dispersing from breeding areas in Spain. See Ferguson-Lees and Christie *Raptors of the World* (2001) 737; Forsman *Raptors of Europe* 367; González *et al* "Status and Habitat Changes" 145.

collisions with electricity structures, diseases[6] depleting rabbit[7] populations, and habitat destruction.[8]

Concerted conservation efforts were launched, and by 2004 the Spanish Imperial Eagle had recovered to 198 pairs.[9] In 2013 407 pairs were counted, with 396 pairs in Spain and 11 pairs in Portugal.[10] At a time when bird of prey populations are in decline around the globe, the conservation of the Spanish Imperial Eagle is, judged by its outcomes thus far, an example worthy of emulation. Raptor[11] conservationists world-wide would be well advised to take note of the multitude of actions that were taken and the many resources that were utilised to make the conservation of the species a story of hope.

This contribution focuses on environmental law and policy as an integral part of the conservation interventions on behalf of the Spanish Imperial Eagle. It is hoped that this will give an insight into the sheer scope of the legal protection of the species, and will allow an evaluation to be made of the importance of environmental law and policy as contributing factors in the eagle's road to recovery. To facilitate such an evaluation, cognisance is taken of successes reported in respect of various conservation goals that have been adopted in respect of the species. In addition and where deemed appropriate, conservation successes in respect of other bird species, which are also protected under some of the legal and policy instruments that impact upon the conservation status of the Spanish Imperial Eagle, are noted to substantiate conclusions about the outcomes of those instruments.[12]

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6 Myxomatosis and Viral Haemorrhagic Disease. See Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/aquila_adalberti.pdf 12.

7 The Rabbit (*Oryctolagus cuniculus*) is the most important prey species of the Spanish Imperial Eagle. See González "Origin and Formation" 40.

8 See Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/aquila_adalberti.pdf 12ff for a discussion of these and lesser threats.

9 González *et al* "Status and Habitat Changes" 151.

10 Ministerio de Agricultura, Alimentación y Medio Ambiente 2013 http://www.magrama.gob.es/fr/prensa/noticias/el-%C3%A1guila-imperial-avanza-en-su-recuperaci%C3%B3n-y-supera-las-400-parejas-en-la-pen%C3%ADnsula-ib%C3%A9rica/tcm12-302145-16. A remarkable acceleration in the positive population trend in recent years is evident from the fact that in 2010 the total number of known pairs was 282, of which 3 pairs were in Portugal. See Jais 2009 http://europeanraptors.org/raptors/spanish_imperial_eagle.html.

11 The word "raptor" is used here as synonym for "bird of prey". See Kemp "What is a Raptor?" 14.

12 A comprehensive assessment of the effectiveness of compliance is not made here, but an in-depth

Attention is focused on laws and policies that deal directly or reasonably directly with the Spanish Imperial Eagle. Many general environmental laws and policies dealing with such crucial topics as pollution, climate change, and soil and water conservation are in place in Spain,[13] and although such laws and policies are of immense importance for the conservation of biodiversity, including the Spanish Imperial Eagle, they are not specifically discussed here.

This contribution concludes with some thoughts on the utilisation of environmental law and policy in the conservation of species. It reflects upon possible implications of the legal protection of the Spanish Imperial Eagle in respect of the use of environmental laws and policies in other jurisdictions, with special reference to the conservation of birds of prey in South Africa.

2 Sources of law and policy relevant to the conservation of the Spanish Imperial Eagle

Spain is a parliamentary monarchy, and the legislative power is seated in the Parliament.[14] The country is divided into Autonomous Communities that have their own parliaments and legislative powers. The State and the Autonomous Communities share decision-making and legislative powers over environmental matters.[15] Subject to some exceptions, the State has the legislative competence to make basic legislation about environmental protection.[16] The Autonomous Communities have the power to make additional legislation aimed at higher levels of environmental protection and are responsible for most of the enforcement.[17] Spain became a full member of the European Union in 1986, and European directives have

investigation of the structures and procedures aimed at achieving compliance and an assessment of their effectiveness would be a meritorious topic for future research (Ebbeson 2003 *JEL* 155).

[13] See Jans and Vedder *European Environmental Law* 339ff for an overview of European Union environmental laws; and Eritja *et al Environmental Law in Spain* 61ff for an overview of Spanish environmental laws.

[14] Eritja *et al Environmental Law in Spain* 20; Merino-Blanco *Spanish Law* 24ff.

[15] Eritja *et al Environmental Law in Spain* 21; see Merino-Blanco *Spanish Law* 49-52 on the relationship between state law and the laws of the Autonomous Communities.

[16] A 149(1.23) of the Constitution (*La Constitución Española* de 1978); cf Eritja *et al Environmental Law in Spain* 36.

[17] Eritja *et al Environmental Law in Spain* 36-37.

been transposed to state environmental legislation in many instances.[18] International treaties have also exercised an important influence on Spanish environmental law.[19] Environmental laws and policies pertaining to the legal conservation status of the Spanish Imperial Eagle can therefore be divided into (1) international legal instruments, (2) European Union laws and policy, (3) state or national laws and policy and (4) laws and policy of the Autonomous Communities.[20]

3 International legal instruments

3.1 The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention)

This Convention[21] imposes a duty on each state party to take legislative and administrative measures to ensure the conservation of the habitats of wild fauna species, especially those specified in Appendix II.[22] Appendix II enumerates a list of "Strictly Protected Fauna Species", and these include all species of the *Falconiformes*, thus including the Spanish Imperial Eagle. The state parties must also take appropriate legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. In particular, activities such as the following must be prohibited for those species: (1) deliberate capture and keeping and deliberate killing; (2) deliberate damaging or destruction of breeding or resting sites; (3) deliberate disturbance of wild fauna, particularly during periods of breeding and rearing; (4) deliberate destruction or taking of eggs; and (5) possession of or trade in these animals, whether alive or dead, and including stuffed

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[18] Eritja *et al Environmental Law in Spain* 38; on the relationship between state law and European law in general Merino-Blanco *Spanish Law* 37-38.

[19] Merino-Blanco *Spanish Law* 34ff on the relationship between state law and international treaties in general.

[20] See Ministerio de Agricultura, Alimentación y Medio Ambiente 2013 http://www.magrama.gob.es/fr/prensa/noticias/el-%C3%A1guila-imperial-avanza-en-su-recuperaci%C3%B3n-y-supera-las-400-parejas-en-la-pen%C3%ADnsula-ib%C3%A9rica/tcm12-302145-16 on the first three categories.

[21] *Convention on the Conservation of European Wildlife and Natural Habitats* (1979) (*Bern Convention*). See Bowman, Davies and Redgewell *Lyster's International Wildlife Law* 297-345 for a commentary. The convention treaty was signed by Spain in 1979, and it entered into force on 1 September 1986; see Council of Europe Treaty Office 2013 http://conventions.coe.int/Treaty/Commun/ListeTraites.asp?PO=SPA&MA=999&SI=2&CM=3&CL=ENG.

[22] A 4.1 of the *Bern Convention*.

specimens and any readily recognisable parts or derivatives.[23] The parties undertake a significant obligation to promote education and the dissemination of general information on the need to conserve species of wild flora and fauna and their habitats.[24]

A Standing Committee monitors the implementation of the Convention and gives guidance on its implementation, *inter alia* by reviewing reports, making recommendations and hearing complaints about breaches of the Convention. Various expert groups have been set up to address threats to and conservation requirements of specific groups of species or habitats, including a Group of Experts on the Conservation of Birds.[25] The Standing Committee recommended[26] in 1996 that parties carry out an Action Plan for the Spanish Imperial Eagle that had been drawn up under the editorship of Luis Mariano González of the Directorate for Nature Conservation of Spain.[27] The stated aim of the Action Plan was to increase the population and distribution of the Spanish Imperial Eagle to a sufficient degree to allow reclassification of the species as not threatened.[28] In 2013 the Standing Committee recommended that a revised Action Plan for the Spanish Imperial Eagle be implemented.[29]

In 1997, the Standing Committee recommended that Spain should ensure a reduction of Spanish Imperial Eagle mortality from electrocution by modifying or neutralising existing dangerous power pylons in key areas and preventing further problems by amending existing legislation or standards on the design of new pylons

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[23] A 6 of the *Bern Convention*.
[24] A 3.3 of the *Bern Convention*.
[25] Council of Europe 2014 http://www.coe.int/t/dg4/cultureheritage/about/governance/TPVS_en.asp.
[26] Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp?Ref=Rec(1996)48&Language=lanEnglish&Ver=original&Site=DG4-Nature&BackColorInternet=DBDCF2&BackColorIntranet=FDC864&BackColorLogged=FDC864.
[27] González "Action Plan".
[28] González "Action Plan" 13.
[29] Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp?id=2139005&Site=&BackColorInternet=B9BDEE&BackColorIntranet=FFCD4F&BackColorLogged=FFC679. The revised *Action Plan for the Spanish Imperial Eagle* was published in 2008 and is discussed in para 4.3 below.

and avoiding the construction of new power lines in the most sensitive breeding and dispersion areas.[30]

In an important but more general recommendation of 2011, the Standing Committee recommended the adoption of a zero-tolerance approach to the illegal killing, trapping and trade of wild birds. To this end the parties should strengthen enforcement at every stage of bird-related crime with appropriate political, judicial, operational, scientific and technical support and cooperation.[31] Insofar as their internal legal systems allow, parties should endeavour to create special units of judges and prosecutors with specialist training in wildlife crime, and ensure that all relevant cases are assigned to them.[32] An outcome of this recommendation was a further recommendation, in 2013, for the implementation of an Action Plan for the eradication of illegal killing, trapping and trade of wild birds.[33]

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[30] Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp?Ref=Rec(1997)60&Language=lan English&Ver=original&Site=DG4-Nature&BackColorInternet=DBDCF2&BackColorIntranet =FDC864&BackColorLogged=FDC864.

[31] Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp?id=1855837&Site=&BackColorInternet =B9BDEE&BackColorIntranet=FFCD4F&BackColorLogged=FFC679.

[32] See further Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp?Ref=Rec(1986)5&Language= lanEnglish&Ver=original&Site=DG4-Nature&BackColorInternet=DBDCF2&BackColorIntranet= FDC864&BackColorLogged=FDC864 on the prosecution of persons illegally catching, killing or trading in protected birds; Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp?Ref=Rec (2004)109&Language=lanEnglish&Ver=original&Site=DG4-Nature&BackColorInternet=DBDCF2 &BackColorIntranet=FDC864&BackColorLogged=FDC864 on minimising the adverse effects of wind power generation on wildlife; and Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp? Ref=Rec(2004)110&Language=lanEnglish&Ver=original&Site=DG4-Nature&BackColorInternet= DBDCF2&BackColorIntranet=FDC864&BackColorLogged=FDC864 on minimising adverse effects of above-ground electricity transmission facilities (power lines) on birds (the latter refers explicitly to threats to the Spanish Imperial Eagle).

[33] Council of Europe 2014 http://wcd.coe.int/ViewDoc.jsp?id=2138467&Site=&BackColorInternet= B9BDEE&BackColorIntranet=FFCD4F&BackColorLogged=FFC679.

3.2 The Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention or CMS) and the Memorandum of Understanding on Migratory Birds of Prey in Africa and Eurasia (the Raptors MoU)

The state parties to the *Convention on the Conservation of Migratory Species of Wild Animals*[34] acknowledge the importance of conserving migratory species and their habitats.[35] Appendix I enumerates migratory species that are endangered. The state parties must endeavour to provide immediate protection to these species.[36] The parties that are "Range States" of the endangered migratory species must endeavour (1) to conserve and, where feasible and appropriate, restore habitats of the species which are of importance in removing the species from the danger of extinction; (2) to eliminate or minimise the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species; and (3) to the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to endanger the species.[37] Those states must also prohibit the taking of animals belonging to such species, subject to certain exceptions.[38] "Taking" is defined to include hunting, capturing, harassing, deliberate killing, or attempting to engage in such activities.[39] Appendix II lists migratory species which have an unfavourable conservation status and which 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.[40] State parties must endeavour to conclude Agreements[41] to restore or maintain those species to a favourable

[34] See Bowman, Davies and Redgewell *Lyster's International Wildlife Law* 535-583 for a commentary. The *Convention on the Conservation of Migratory Species of Wild Animals* (1979) *(Bonn Convention)* entered into force in Spain on 1 May 1985. See CMS 2013 http://www.cms.int/pdf/en/summary_sheets/birds_of_prey.pdf.
[35] A II.1 of the *Bonn Convention*.
[36] A II.3(b) of the *Bonn Convention*.
[37] A II.4 of the *Bonn Convention*.
[38] A II.5 of the *Bonn Convention*.
[39] A I(i) of the *Bonn Convention*.
[40] A IV(1) of the *Bonn Convention*.
[41] A IV(3) of the *Bonn Convention*.

conservation status.[42] A long list of conservation measures that should be provided for in such Agreements is provided.[43] The Spanish Imperial Eagle is listed in Appendix I. All the species of the *Accipitridae*, including diurnal birds of prey such as eagles, hawks and vultures, are listed collectively in Appendix II.

The Conference of the Parties (CoP) is the decision-making organ of the Convention and reviews its implementation.[44] At its fifth meeting, in 1997, the CoP encouraged Range States to support the implementation of the Action Plan[45] for the Spanish Imperial Eagle.[46] The CoP has also made resolutions on the reduction of the negative impacts of electrocution,[47] wind turbines[48] and poisons[49] on migratory bird populations.

The Convention makes provision for the conclusion of less formal Memoranda of Understanding,[50] which are not legally binding but which declare the intentions of the parties. A *Memorandum of Understanding on Migratory Birds of Prey in Africa and Eurasia* (the *Raptors MoU*) came into effect in 2008.[51] Its aim is to promote international coordination to achieve and maintain a favourable conservation status for migratory birds of prey throughout their ranges in Africa and Eurasia, and to reverse population declines where applicable. The Spanish Imperial Eagle is a listed species under the memorandum of understanding.[52] It has not been signed by Spain, but it has been signed by the European Union.[53]

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42 A V(1) of the *Bonn Convention*.
43 A V(5) of the *Bonn Convention*.
44 A VII of the *Bonn Convention*.
45 See paras 3.1 and 4.3 of this contribution.
46 CMS 2014 http://www.cms.int/sites/default/files/document/Rec5.1_E_0_0.pdf.
47 CMS 2014 http://www.cms.int/sites/default/files/document/RES_7_04_Electrocution_0_0.pdf.
48 CMS 2014 http://www.cms.int/sites/default/files/document/RES_7_05_Wind_Turbine_0_0.pdf
49 CMS 2014 http://www.cms.int/sites/default/files/document/10_26_poisoning_e_0_0.pdf.
50 See in general Bowman, Davies and Redgewell *Lyster's International Wildlife Law* 562-563 for a commentary. Territories in which the Spanish Imperial Eagle occur or may occur, such as Portugal and Morocco, have signed the MoU. Spain has not yet signed it, but the European Union has signed it. See CMS 2013 www.cms.int/about/partylist_e.pdf.
51 *Memorandum of Understanding on Migratory Birds of Prey in Africa and Eurasia* (the *Raptors MoU*). CMS date unknown http://www.cms.int/species/raptors/index.htm.
52 Annex 1; Annex 3, Table 1, category 1 of the *Raptors MoU*.
53 See CMS 2013 www.cms.int/about/partylist_e.pdf and CMS 2013 http://www.cms.int/en/Legalinstrument/birds-prey-raptors.

The memorandum of understanding includes an Action Plan for the conservation of migratory birds of prey in Africa and Eurasia,[54] containing detailed provisions on a wide spectrum of conservation activities that signatory states must aim to undertake.[55] Of particular interest for the present purpose is the first of these: the improvement of legal protection. Under this heading, governments of signatory states should review relevant legislation and take steps where possible to promote certain objectives: (1) to protect all birds of prey from deliberate killing, deliberate disturbance at nest sites and communal roost sites, egg-collecting and taking from the wild;[56] (2) to ban the use of exposed poisoned baits for predator control, and chemicals which have been shown to cause significant avian mortalities; and (3) to require all new power lines to be designed to avoid raptor electrocution. In addition, these governments, law enforcement agencies and non-governmental organisations should strengthen the application of legal protection and the reporting of raptor persecution, by the imposition of appropriate penalties, the training of law enforcement authorities, and the raising of public awareness to boost surveillance and the reporting of illegal conduct.

The Spanish Imperial Eagle is not known to be a migratory species in the strict sense.[57] Juvenile birds are known to disperse from the breeding territories, but as they become sexually mature they tend to return to their natal areas to find mates. Dispersing juvenile birds tend to visit specific dispersal sites, and these are not necessarily very far from the natal areas.[58] In the case of the isolated breeding population in the Doñana National Park, the dispersal of 80 per cent of the young was found not to reach a sufficient distance from the natal area to enable them to come into contact with juveniles from other breeding nuclei.[59] However, longer-range dispersal has also been recorded in some cases, and juvenile birds have for

[54] Annex 3 of the *Raptors MoU*.
[55] Table 2 of the *Raptors MoU*.
[56] Exceptions may be made where such conduct is authorised by a competent body, and this should happen only if such conduct is sustainable and not detrimental to the conservation status of the species.
[57] González *et al* "Status and Habitat Changes" 142.
[58] González *et al* "Effective Natal Dispersal" 173-186.
[59] Ferrer *Spanish Imperial Eagle* 202-204.

instance been known to cross the Mediterranean and to disperse into North Africa, mainly into Morocco, but even as far afield as Senegal.[60]

In the Convention text "migratory species" is 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".[61] Whether the trans-boundary movements of the Spanish Imperial Eagle comply literally with this definition is doubtful, but inter-state cooperation in respect of conservation efforts could benefit the species, especially if the small population in Portugal increases in numbers, and therefore it could be advantageous to have the Spanish Imperial Eagle listed by the Convention and the memorandum of understanding. In any event, it appears that the intention was not to give a restrictive meaning to "migratory"[62] and, in addition, the Convention encourages parties to conclude agreements for species whose members cross national boundaries periodically, even if such species have not been defined as migratory for the purpose of the Convention.[63]

3.3 Convention on Biological Diversity

This Convention is aimed at the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of the benefits of the use of genetic resources.[64] Each state party must develop national strategies, plans or programmes, or adapt existing ones, for the conservation and sustainable use of biodiversity.[65] State parties must integrate, as far as possible and appropriate, the conservation and sustainable use of biodiversity into relevant sectorial and cross-sectorial plans, programmes and policies.[66] The parties must establish, as far as

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[60] González *et al* "Status and Habitat Changes" 145.
[61] A I of the *Bonn Convention*.
[62] See Bowman, Davies and Redgewell *Lyster's International Wildlife Law* 540-541; Trouwborst 2012 *Diversity* 287-288.
[63] A IV(4) of the *Bonn Convention*. Trouwborst 2012 *Diversity* 268.
[64] *Convention on Biological Diversity* (1992). See Bowman, Davies and Redgewell *Lyster's International Wildlife Law* 587-629 for a commentary and an evaluation of the importance of the Convention for international biodiversity law. Spain signed the Convention in 1992 and ratified it on 21 December 1993; see CBD date unknown http://www.cbd.int/information/parties.shtml.
[65] A 6(a) of the *Convention on Biological Diversity*.
[66] A 6(b) of the *Convention on Biological Diversity*.

possible and appropriate, a system of protected areas where special measures will apply for the conservation of biodiversity.[67] The states must also regulate or manage biological resources, whether within or outside of protected areas, to ensure their conservation and sustainable use.[68] The Convention does not make express reference to the Spanish Imperial Eagle, but it has exercised an important influence in respect of other laws and policies that deal more directly with the species.[69]

3.4 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

This is an international agreement with the aim of controlling and monitoring international trade in species threatened or potentially threatened by such trade.[70] States that have joined *CITES* must take measures to enforce the provisions of the Convention.[71] The laws of the signatory states must give effect to the provisions of *CITES*. The Spanish Imperial Eagle is listed in Appendix I of *CITES*, which is devoted to species that are threatened with extinction.[72] Trade in specimens of such species must be subjected to particularly strict regulation.[73] An absolute prohibition of trade in specimens of such species is in place, except for certain non-commercial purposes such as scientific research, and only if a permit has been granted.[74]

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[67] A 8(a) of the *Convention on Biological Diversity*.
[68] A 8(c) of the *Convention on Biological Diversity*.
[69] See eg para 5.2 below.
[70] *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (1973) (*CITES*). See Bowman, Davies and Redgewell *Lyster's International Wildlife Law* 483-534 for a commentary.
[71] A VIII para 1 of *CITES*.
[72] A II para 1 of *CITES*.
[73] A II para 1 of *CITES*.
[74] A II paras 2 and 3 of *CITES*.

4 Laws and policies of the European Union

4.1 The Birds Directive 2009/147/EC

This Directive[75] was originally issued as *Council Directive 1979/409/EEC* of 2 April 1979 *on the Conservation of Wild Birds*,[76] and is the oldest nature conservation law adopted by the European Union. Its aim was to set up a comprehensive scheme of protection for all the wild birds that occur naturally in the European Union.[77]

The Directive provides that the member states must take measures to maintain the populations of all the wild bird species that occur naturally in the Union at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of those species to that level.[78] The member states must take measures to preserve, maintain or re-establish a sufficient diversity and surface area of habitats for all those species. These measures must include the creation of protected areas and the management of habitats in accordance with ecological needs, inside and outside of protected areas.[79] Measures must be taken to establish a general system of protection for all those bird species, and the following activities *inter alia* must be prohibited: (1) deliberate killing or capture by any method; (2) deliberate destruction, damaging or removal of nests and eggs; and (3) deliberate disturbance, particularly during the period of breeding and rearing.[80] Furthermore, the member states must prohibit trade in live or dead specimens of those species, and any readily recognisable parts or derivatives of such birds.[81]

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[75] Council Directive 2009/147/EC (30 November 2009) on the Conservation of Wild Birds (Codified Version) [2010] OJ L 20/7 (Birds Directive). See Jans and Vedder *European Environmental Law* 506-513 for a commentary.

[76] Council Directive 1979/409/EEC (2 April 1979) on the Conservation of Wild Birds [1979] OJ L 103/1. Directive 2009/147/EC codifies Directive 1979/409/EEC and its many amendments.

[77] European Commission 2013 http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm.

[78] A 2 of the *Birds Directive*.

[79] A 3 of the *Birds Directive*.

[80] A 5 of the *Birds Directive*. Aa 7 and 9 make provision for a number of exceptions to the provisions of a 5.

[81] A 6 of the *Birds Directive*.

As a wild bird species naturally occurring in the territory of the European Union, the Spanish Imperial Eagle benefits from these provisions. However, the Directive goes further and provides that certain species enumerated in Annex I, including the Spanish Imperial Eagle, shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction.[82] The member states must classify the most suitable territories as Special Protection Areas for the conservation of these species.[83] The member states have a duty to send all relevant information to the European Commission, to enable the Commission to ensure that the Special Protection Areas form a coherent whole that meets the protection requirements of these species in the geographical area where the Directive applies.[84] Member states must take steps to avoid the pollution or deterioration of habitats, or disturbances affecting the birds, in these areas. In addition, member states must also strive to avoid the pollution or deterioration of habitats outside the Special Protection Areas.[85]

In terms of the *Habitats Directive*,[86] the Special Protection Areas are automatically incorporated into the Natura 2000 Network created by that Directive.[87] It is important to understand that the Special Protection Areas and the land in the Natura 2000 Network are not necessarily public land formally proclaimed as national parks or nature reserves in a strict sense. It is envisaged that much of the land in this network will remain in private ownership, but will be subject to the provisions of the *Birds* and *Habitats Directives* for the purpose of protecting European biodiversity.[88] Advanced controls for compliance with the *Birds Directive* and other directives of the European Union are exercised through the European Commission and the European Court of Justice, and ensuring practical compliance with these directives is therefore

[82] A 4 of the *Birds Directive*.
[83] A 4.1 of the *Birds Directive*.
[84] A 4.3 of the *Birds Directive*.
[85] A 4.4 of the *Birds Directive*.
[86] Para 4.2 below.
[87] Para 4.2 below; European Commission 2013 http://ec.europa.eu/environment/nature/natura2000/index_en.htm.
[88] European Commission 2013 http://ec.europa.eu/environment/nature/natura2000/index_en.htm.

considerably easier than securing compliance with typical international legal instruments.[89]

Case law of the European Court of Justice has elaborated upon aspects of the designation of Special Protection Areas under the *Birds Directive*. The member states have a certain margin of discretion in the choice of Special Protection Areas, but the classification of those areas is subject to ornithological criteria determined by the Directive.[90] The discretion of the member states concerns the application of only those criteria for identifying the most suitable territories for conservation of the species listed in Annex I to the Directive, and not the territories that may appear to be the most suitable for classification according to other ornithological criteria.[91] If a member state has classified territories as Special Protection Areas that are manifestly fewer in number and smaller in total surface area than the sites considered as being the most suitable for the conservation of the species in question, this may be a ground to find that the member state has failed to fulfil its obligation under the Directive.[92] Furthermore, a member state may not reduce the surface area of a Special Protection Area, or alter its boundaries, unless the excluded areas are no longer the most suitable territories for the conservation of species of wild birds listed in Annex I to the Directive.[93]

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[89] See Ebbeson 2003 *JEL* 164-167 for a discussion of the role of the European Court of Justice in respect of compliance with the *Birds Directive*; see further Jans and Vedder *European Environmental Law* 139-250; Bowman, Davies and Redgewell *Lyster's International Wildlife Law* 206-207; Bowman 1999 *JEL* 297-300. The same compliance regime pertains to the *Habitats Directive* (para 4.2 below).

[90] Case C-3/96 *Commission v Netherlands* [1998] ECR I-3054 para 60; Case C-355/90 *Commission v Spain* [1993] ECR I-4221 para 26.

[91] Case C-3/96 *Commission v Netherlands* [1998] ECR I-3054 paras 61-62.

[92] Case C-3/96 *Commission v Netherlands* [1998] ECR I-3054 para 63.

[93] Case C-191/05 *Commission v Portugal* [2006] ECR I-6861 para 12-13. There is some doubt about the continued relevance of the principles that emerged from these cases, in view thereof that a 7 of the *Habitats Directive* provides that a 6(2)-(4) of the *Habitats Directive* shall replace obligations arising under a 4(4) of the *Birds Directive*, ie to avoid pollution or deterioration of habitats, or disturbances affecting the birds in those areas. Amongst others, a 6(4) provides that imperative reasons of overriding public interest may justify plans or projects that may impact negatively on habitats, and such reasons may include reasons of a social or economic nature. However, where a priority species such as the Spanish Imperial Eagle may be impacted upon, the reasons are more limited, for example to reasons of human health and public safety, or beneficial consequences of primary importance for the environment. Also, the European Court of Justice does not seem desirous to limit the designation of Special Protection Areas on the economic grounds provided for by the *Habitats Directive*. See Case C-44/95 *R v Secretary of State for the Environment, ex parte Royal Society for the Protection of Birds* [1996] ECR I-3805; Case C-209/04 *Commission v Austria*

4.2 The Habitats Directive 1992/43/EC

The *Habitats Directive*[94] is aimed at two principal strategies: a network of protected sites known as Natura 2000, and a system of strict species protection.[95] In respect of the first strategy, the Directive provides that a coherent European ecological network of special conservation areas must be set up under the title Natura 2000. The network must be composed of sites representing a list of natural habitat types enumerated in Annex I and the habitats of the species listed in Annex II, to enable these habitats to be maintained at or restored to a favourable conservation status. The Natura 2000 Network includes the Special Protection Areas created by the member states in terms of the *Birds Directive*.[96] Each member state incurs an obligation to contribute to the creation of Natura 2000 in proportion to the representation within its territory of the natural habitat types and the habitats of species listed in the Annexes.[97] No bird species are listed in Annex II, because the *Birds Directive* already lists the bird species most in need of special protective measures.[98] Annex I of the *Habitats Directive* includes extensive lists of various Mediterranean forest types, as well as the Sclerophyllous grazed forests, commonly known as *dehesas*, which are important as a habitat for the Spanish Imperial Eagle.[99] The protection of habitat should also favour the health of the populations of the animal species on which the Spanish Imperial Eagle preys.

[2006] ECR I-2775 para 40. See further Jans and Vedder *European Environmental Law* 508, 510; European Commission *Nature and Biodiversity Cases* 13-17.

[94] *Council Directive 1992/43/EC* (21 May 1992) *on the Conservation of Natural Habitats and of Wild Fauna and Flora* [1992] OJ L 206/7 (*Habitats Directive*). See Jans and Vedder *European Environmental Law* 513-518 for a commentary.

[95] European Commission 2013 http://ec.europa.eu/environment/nature/legislation/habitatsdirective /index_en.htm.

[96] A 3(1) of the *Habitats Directive*.

[97] A 3(2) of the *Habitats Directive*.

[98] Machado Carrillo *Guidelines for Action Plans* 19.

[99] González *et al* "Status and Habitat Changes" 142; Meyburg "Spanish Imperial Eagle" 256.

4.3 Action Plan for the Spanish Imperial Eagle (Aquila Adalberti) in the European Union

Since 1993 BirdLife International[100] has prepared Action Plans for threatened European bird species, including the Spanish Imperial Eagle. The Action Plans were endorsed in 1996 by the Ornis Committee of the European Union's *Birds Directive* and the Standing Committee of the (*Bern*) *Convention on the Conservation of European Wildlife and Natural Habitats*.[101] The current Action Plan for the Spanish Imperial Eagle[102] was commissioned by the European Commission and prepared by BirdLife International to contribute to the implementation of the *Habitats*[103] and *Birds*[104] *Directives*.[105] In 2013 the Standing Committee of the *Bern Convention* recommended the implementation of the current, revised Action Plan for the Spanish Imperial Eagle.[106]

The goal of the Action Plan is to restore the Spanish Imperial Eagle population to a favourable conservation status. The objective is to remove it from the list of globally threatened species by 2018, and to this end the plan adopts the target of a stable or increasing population of at least 1 000 mature individuals. To attain this objective a two-pronged approach is envisaged. First, it must be ensured that the recovery of the population continues at the same rate as in previous years, or at a higher rate. Habitat quality must be improved and more habitat must become available, food availability throughout the year must be improved, and the annual productivity of the breeding population must be increased. Second, human-induced mortality must be reduced significantly. To this end, the number of deaths from electrocution and poisoning must be reduced, and the level of information and awareness among the public must be heightened.[107]

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[100] BirdLife International 2013 http://www.birdlife.org.
[101] Nagy and Burfield "Saving Europe's Most Endangered Birds" 602. Also see para 3.1 above.
[102] Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/aquila_adalberti.pdf.
[103] See para 4.2 above.
[104] See para 4.1 above.
[105] Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/aquila_adalberti.pdf 2.
[106] Para 3.1 above.
[107] Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/

The Action Plan enumerates priority actions that must be attended to: (1) protecting the habitats of the Spanish Imperial Eagle through natural resource management plans; (2) strengthening the implementation of environmental impact assessment in the nesting, dispersal and recolonisation areas of the species; (3) establishing agreements with private landowners and providing advice on habitat management and awarding non-monetary compensation and improvements for properties that cooperate in protecting the species; (4) maintaining protected habitat for the species, including nesting, dispersal and recolonisation areas; (5) including all known nesting sites in the network of protected natural areas and drawing up natural resource management plans in accordance with Act 42/2007;[108] (6) establishing suitable conservation regimes and implementing natural resource management in the juvenile dispersal and recolonisation areas; (7) carrying out regular inventory and mapping of breeding areas, dispersal areas and recolonisation areas; (8) studying the ecology of juvenile dispersal; (9) restricting quarrying and other "rural activities" near nests; (10) eliminating human disturbance in nesting areas during the breeding season; (11) providing supplementary feeding when appropriate; (12) rehabilitating eaglets that have fallen out of nests and returning them to the wild; (13) annual monitoring of the breeding population; (14) increasing rabbit populations through active management; (15) improving the scientific basis and quality of technical plans for the management of hunting grounds with the inclusion of formal commitments to conserve the eagles; and (16) identifying cost-effective techniques and methods for rabbit recovery.[109] The Action Plan sets out an action framework, ranking the actions listed above and other actions in terms of priority, and assigning responsibility for their execution to national and/or regional authorities.[110]

wildbirds/action_plans/docs/aquila_adalberti.pdf 6-7.

[108] See para 5.2 below.

[109] Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/aquila_adalberti.pdf 7.

[110] Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/aquila_adalberti.pdf 24-28.

4.4 Regulation (EC) 142/2011 of 25 February 2011

The European Union has established strict sanitary legislation to combat Bovine Spongiform Encephalopathy (Mad Cow Disease) and other diseases,[111] making the removal of livestock carcasses for mechanical disposal mandatory, and this has resulted in food shortages for scavenging wildlife.[112] *Regulation 142/2011*[113] contains provisions that balance the need for sanitary legislation with the conservation needs of scavenging wildlife by allowing the feeding of certain specified scavenging species at specifically established feeding sites, and also allowing certain carcasses to be left in the field away from established feeding sites, subject to conditions and control mechanisms aimed at preventing the spread of disease.[114] Vultures are the most obvious avian beneficiaries of these provisions, but the Regulation also lists the Spanish Imperial Eagle as one of the scavenging species that may benefit from these provisions.[115]

5 Spanish national legislation and policies

5.1 Spanish Constitution

The *Spanish Constitution*[116] makes explicit provision for the protection of the environment. It provides that everyone has the right to enjoy an environment that is suitable for personal development, and everyone has the duty to preserve it.[117] It

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[111] Regulation (EC) 1069/2009 of the European Parliament and of the Council (21 October 2009) *Laying Down Health Rules as Regards Animal By-products and Derived Products Not Intended for Human Consumption and Repealing Regulation* (EC) 1774/2002 (Animal By-products Regulation) [2009] OJ L 300/1. Its predecessor was Regulation (EC) 1774/2002 of the European Parliament and of the Council (3 October 2002) *Laying Down Health Rules Concerning Animal By-products and Derived Products Not Intended for Human Consumption* [2002] OJ L 273/1.

[112] Margalida *et al* 2010 *Journal of Applied Ecology* 932.

[113] Commission Regulation (EU) 142/2011 (25 February 2011) *Implementing Regulation (EC) 1069/2009 of the European Parliament and of the Council Laying Down Health Rules as Regards Animal By-products and Derived Products not Intended for Human Consumption and Implementing Council Directive 97/78/EC as Regards Certain Samples and Items Exempt from Veterinary Checks at the Border Under that Directive* [2011] OJ L 54/1.

[114] A 14 read with chapter II of Annex VI of *Regulation 142/2011*.

[115] In respect of feeding stations: Annex VI chapter II s 2.1(a)(i) of *Regulation 142/2011*; in respect of feeding outside feeding stations: Annex VI chapter II s 3 of *Regulation 142/2011*.

[116] *La Constitución Española de* 1978 (the *Spanish Constitution*). An English translation is available at Anonymous date unknown http://www.congreso.es/portal/page/portal/Congreso/Congreso/Hist_Normas/Norm/const_espa_texto_ingles_0.pdf.

[117] A 45(1) of the *Spanish Constitution*. See Eritja *et al Environmental Law in Spain* 31.

furthermore provides that the public authorities must look after the rational use of all natural resources with the aim of protecting and improving the quality of life and preserving and restoring the environment.[118] The *Constitution* also provides that criminal or administrative sanctions shall be established for transgressions of these last-mentioned provisions, and that wrongdoers shall be obliged to repair damage that they have caused.[119] It is notable that, unlike many constitutions, the Spanish *Constitution* not only grants a fundamental environmental right, but goes further to impose a corresponding duty on everyone to preserve the environment.[120] These provisions form the constitutional context for all Spanish environmental laws, including those that impact on the conservation status of the Spanish Imperial Eagle.

5.2 Ley 42/2007, de 13 de diciembre, del patrimonio natural y de la biodiversidad

This Act[121] creates a legal framework for the conservation, sustainable use, improvement and restoration of natural heritage and biodiversity as part of the duty to preserve and the right to enjoy an environment suitable for the development of the person, as established in the *Constitution*.[122] The Preamble makes it clear that the Act gives effect to the provisions of the *Convention on Biological Diversity*[123] and the *Birds Directive*[124] and *Habitats Directive*[125] of the European Union, and contributes to the Natura 2000 Network.[126] The predecessor of this Act was *Ley 4/1989, de 27 de marzo, de conservación de los espacios naturales y de la flora y fauna silvestres*,[127] which Act originally transposed the *Birds Directive* into Spanish law.[128]

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[118] A 45(2) of the *Spanish Constitution.* See Eritja *et al Environmental Law in Spain* 31.
[119] A 45(3) of the *Spanish Constitution.* See Eritja *et al Environmental Law in Spain* 193.
[120] See Eritja *et al Environmental Law in Spain* 31-32.
[121] Act 42 of 2007, of 13 December, on natural heritage and biodiversity.
[122] A 1 of Act 42 of 2007. The relevant provision in the *Spanish Constitution* is a 45.2. See Eritja *et al Environmental Law in Spain* 138.
[123] Para 3.3 above.
[124] Reference is made to the original *Birds Directive* of 1979; see para 4.1 above.
[125] Para 4.2 above.
[126] Para 4.2 above.
[127] Act 4 of 1989, of 27 March, on the preservation of natural spaces and wild flora and fauna.
[128] In Title IV of Act 42 of 2007. Background information was provided in the Explanatory Statement with which the Act commenced. See further Eritja *et al Environmental Law in Spain* 138.

Title III of the Act deals with the conservation of biodiversity, and chapter I thereof deals with the *in situ* conservation of wild indigenous biodiversity. It provides that the Autonomous Communities must take the necessary measures to ensure the conservation of wild biodiversity, preferably by conserving its habitats, and by establishing specific protection regimes for species listed in the categories listed *inter alia* in articles 53 and 55.[129]

Article 53 provides for the listing of species, subspecies and populations that are worthy of special protection procedures on account of their scientific, ecological, or cultural value; their uniqueness, rarity, or the degree to which they are threatened; and those listed as protected in the annexes of the European directives and international agreements ratified by Spain.[130] Animals listed in terms of this article may not be killed, captured, chased or disturbed, and their nests, breeding areas, wintering areas or rest areas may not be destroyed or damaged. Living or dead specimens or parts of specimens of these animals may not be possessed, transported, traded, or imported or exported, except in cases to be determined by regulation. The prohibitions apply to all phases of the life cycle of the relevant species, subspecies or populations, with the inclusion of eggs.[131]

Article 55 makes provision for a Spanish Catalogue of Threatened Species to be included in and to be at the heart of the list of wildlife species in need of special protection measures. If supported by scientific evidence, species must be listed in one of two categories. Taxa or populations are listed as Endangered if their survival is unlikely if the causal factors of their current situation continue to apply, while taxa

[129] A 52(1) of Act 42 of 2007.

[130] As noted above, the Spanish Imperial Eagle is listed in the annexes of such directives and agreements as the *Birds Directive* and the *Convention on the Conservation of Migratory Species of Wild Animals*.

[131] A 54(1) of Act 42 of 2007. It may be noted in passing that species not mentioned in aa 53 and 55 are also protected. A 52 provides that it is forbidden to kill, damage, or intentionally disturb wild animals, irrespective of the method used or the stage of their life cycle in which the animals find themselves. This prohibition extends to the destruction, damaging, and collecting of nests, eggs or chicks, as well as the possession, transportation, and trade in living or dead specimens of wild animals or parts of such specimens. Exceptions to these provisions are allowed by way of specific regulation of such topics as hunting, agriculture and fisheries for animals not included in any of the categories defined in aa 53 and 55 (a 52(3)). The competent public administrations must prohibit the introduction of alien species and subspecies when these are likely to compete with indigenous wild species or to impact on their genetic purity or ecological balance (a 52(2)), and they must also assess the desirability of reintroducing species that are locally extinct (a 52(4)).

or populations are listed as Vulnerable if they are at risk of qualifying as Endangered in the near future if the adverse factors that affect them are not corrected.[132] Any citizen or organisation may lodge a request, with supporting scientific evidence, that a species should be included or excluded from one of these categories, or moved from one of these categories to the other.[133] The National Catalogue of Threatened Species was originally established by *Real Decreto 439/1990, de 30 de marzo, por el que se regula el Catálogo Nacional de Especies Amenazadas*,[134] and it listed the Spanish Imperial Eagle as Endangered.[135] The current Spanish Catalogue of Threatened Species was proclaimed by *Real Decreto 139/2011, de 4 de febrero, para el desarrollo del listado de especies silvestres en régimen de protección especial y del Catálogo Español de Especies Amenazadas*,[136] and it too lists the Spanish Imperial Eagle as Endangered.[137]

In respect of a species listed as Endangered, a Recovery Plan must be adopted within three years to ensure its survival.[138] The Sectorial Conference on the Environment, on the proposal of the State Commission for Natural Heritage and Biodiversity, will adopt Conservation Strategies for threatened species that occur in more than one Autonomous Community, such as *inter alia* the Spanish Imperial Eagle. The Conservation Strategies will serve as guiding frameworks for the Recovery Plans to be drafted by the Autonomous Communities.[139]

The provisions in Chapter I for the *in situ* conservation of species in the Spanish Catalogue of Threatened Species are complemented by Chapter II, which makes

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[132] A 55(1) of Act 42 of 2007.
[133] A 55(2) of Act 42 of 2007.
[134] *Royal Decree 439/1990*, of 30 March, regulating the National Catalogue of Threatened Species.
[135] Annex I of Royal Decree 439/1990.
[136] *Royal Decree 139/2011*, of 4 February, for the development of the list of wild species subjected to special protection measures and the Spanish Catalogue of Threatened Species. See para 5.3 below.
[137] The Bonelli's Eagle *Aquila fasciata* | *Hieraaetus fasciatus* is also listed in the Spanish Catalogue of Threatened Species, but in the Vulnerable category. Other eagle species listed in *Real Decreto 139/2011* are the Golden Eagle *Aquila chrysaetos*, Booted Eagle *Hieraaetus pennatus* | *Aquila pennata* and Short-toed Snake Eagle *Circaetus gallicus*. They are not included in the Spanish Catalogue of Threatened Species, but are listed as species subject to special protection measures.
[138] A 56(1)(b) of Act 42 of 2007.
[139] A 57 of Act 42 of 2007.

provision for an obligation to conduct captive breeding programmes,[140] and to establish a network of banks of biological and genetic material, giving priority to the preservation of biological and genetic material from endangered wild flora and fauna indigenous to Spain, and especially of endemic endangered species.[141]

Chapter III provides that international wildlife trade will take place in a sustainable manner and in accordance with international law, in particular *CITES* and other international conventions and treaties.[142] As noted above,[143] the Spanish Imperial Eagle is listed in Appendix I of *CITES*.

Annex IV lists those species whose habitat must be the focus of special conservation measures to ensure the survival and reproduction of the species. The Spanish Imperial Eagle is listed in the Annex. Title II of the Act deals with the Cataloguing, Conservation and Restoration of Habitats and Areas of Natural Heritage, and Chapter 3 of this title, which deals with protected areas of European Union importance in the Natura 2000 network, provides that Special Protection Areas shall be declared for the bird species listed in Annex IV.[144] These areas must be declared by the Autonomous Communities, and the Communities must report to the Ministry of the Environment to enable the ministry to report to the European Comission.[145] The Autonomous Communities must monitor the conservation status of habitats and species of conservation interest to the European Union, especially taking into account the priority natural habitat types and priority species, as well as for the conservation of the bird species listed in Annex IV, and report annually to the Ministry of the Environment.[146]

Title VI deals with offences and penalties.[147] The Act makes provision for criminal sanctions,[148] administrative sanctions, and obligations to repair environmental

[140] A 59 of Act 42 of 2007.
[141] A 60 of Act 42 of 2007.
[142] A 69 of Act 42 of 2007.
[143] Para 3.4 above.
[144] A 43 of Act 42 of 2007. See again para 4.1 above on the Special Protection Areas, and para 4.2 on the Natura 2000 Network.
[145] A 44 of Act 42 of 2007.
[146] A 47 of Act 42 of 2007.
[147] Aa 75-79 of Act 42 of 2007.

damage.[149] Several offences giving rise to administrative penalties are listed,[150] and they include destroying, killing, capturing or trading species catalogued as Endangered, including the Spanish Imperial Eagle.[151] Destruction of the habitat of Endangered species, in particular in respect of breeding, wintering, resting or foraging areas, is also listed as such an offence.[152]

5.3 Real Decreto 139/2011, de 4 de febrero, para el desarrollo del listado de especies silvestres en régimen de protección especial y del Catálogo Español de Especies Amenazadas

This Royal Decree establishes the current Spanish Catalogue of Threatened Species,[153] in which the Spanish Imperial Eagle is listed as Endangered.[154] The Royal Decree sets out criteria and procedures for inclusion of species in the list of species under a special protection regime and the Spanish Catalogue of Threatened Species.[155] Species listed in the annexes to international conventions ratified by Spain and directives of the European Union qualify for inclusion in the Spanish Catalogue of Threatened Species.[156] The Royal Decree also provides guidelines for the periodic assessment of the state of conservation of the species included in the list and the catalogue.[157] In the case of species listed as Endangered, including the Spanish Imperial Eagle, such assessments must be performed every three years[158] and should include, if possible, information on (1) changes in its distribution range; (2) population dynamics and viability; (3) the location of its habitat with an assessment of its quality, extent, degree of fragmentation, load capacity and

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[148] A 78 of Act 42 of 2007.
[149] A 75 of Act 42 of 2007.
[150] A 76 of Act 42 of 2007. See in general Eritja *et al Environmental Law in Spain* 196-204. Serious offences can attract fines in the range of €5,001-200,000 and very serious offences can attract fines from €200,000-2,000,000; see a 77.
[151] A 76.1.b of Act 42 of 2007.
[152] A 76.1.d of Act 42 of 2007.
[153] *Royal Decree 139/2011*, of 4 February, for the development of the list of wild species subjected to special protection measures and the Spanish Catalogue of Threatened Species.
[154] Annex of *Royal Decree 139/2011*. The predecessor of this Royal Decree, in which the Spanish Catalogue of Threatened Species was originally established, was *Royal Decree 439/1990* 30 March (n 135).
[155] Aa 5-8 of *Royal Decree* 139/2011.
[156] A 6(2) of *Royal Decree* 139/2011.
[157] A 9 of *Royal Decree* 139/2011.
[158] A 9(4) of *Royal Decree* 139/2011.

threats; and (4) an evaluation of risk factors pertaining to the species.[159] Other topics that are dealt with include Conservation Strategies for endangered species,[160] captive breeding,[161] reintroduction,[162] and cooperation for the conservation of the listed species with the Autonomous Communities[163] and internationally.[164]

5.4 Ley 5/2007, de 3 de abril, de la red de parques nacionales

While most protected areas are created in terms of Act 42 of 2007, Act 5 of 2007[165] establishes the legal framework for the creation of national parks, which are defined as "natural spaces of high ecological and cultural value that have been little affected by human exploitation or activity and that because of their beauty, their diverse ecosystems or their singular flora, fauna or geology possess outstanding ecological, aesthetic, cultural, educational and scientific values that need to be conserved and that are of general interest to the State".[166] Some Spanish national parks, such as Doñana and Monfragüe, house important breeding populations of the Spanish Imperial Eagle.[167] However, an interesting feature of the recovery of the Spanish Imperial Eagle in the last thirty years is the fact that the population grew faster on private land than on public land that is formally protected as national parks or nature reserves in a strict sense.[168]

5.5 Estrategia para la Conservación del Águila Imperial Ibérica

The purpose of the Strategy for Conservation of the Spanish Imperial Eagle is to promote and encourage actions necessary to eliminate the threat of extinction faced by the Spanish Imperial Eagle.[169] The Strategy provides a framework to coordinate

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[159] A 9(3) of *Royal Decree* 139/2011.
[160] A 11 of *Royal Decree* 139/2011.
[161] A 12 of *Royal Decree* 139/2011.
[162] A 13 of *Royal Decree* 139/2011.
[163] A 14 of *Royal Decree* 139/2011.
[164] A 15 of *Royal Decree* 139/2011.
[165] Act 5 of 2007, of 3 April, on the national parks network. For an overview, see Eritja *et al Environmental Law in Spain* 148-156.
[166] A 3(a) of Act 5 of 2007, as translated by Eritja *et al Environmental Law in Spain* 148.
[167] González *et al* "Status and Habitat Changes" 145.
[168] González *et al* "Status and Habitat Changes" 154-155. In this regard it is important to remember that much of the land comprising the Special Protection Areas and the Natura 2000 Network remains in private ownership. See paras 4.1 and 4.2 above.
[169] Ministerio de Medio Ambiente 2001 http://www.magrama.gob.es/es/biodiversidad/temas/

the conservation actions of the central government and the five Autonomous Communities in which the Spanish Imperial Eagle occurs in respect of the conservation of the species. To this end it prescribes the minimum content of the Recovery Plans that must be drafted by the Autonomous Communities,[170] and it establishes mechanisms to coordinate the actions of the Autonomous Communities and the central government in relation to the species.[171] To achieve this, the following objectives are proposed: (1) eliminating mortality due to unnatural causes; (2) maintaining and improving habitat; (3) increasing the annual breeding productivity of the species; (4) facilitating the recovery of rabbit populations; (5) facilitating private sector involvement; and (6) increasing awareness levels in respect of the conservation problems faced by the species.[172] The Strategy then proceeds to flesh out, in considerable detail, guidelines for conservation actions in respect of the Spanish Imperial Eagle.

5.6 Real Decreto 1432/2008, de 29 de agosto, por el que se establecen medidas para la protección de la avifauna contra la colisión y la electrocución en líneas eléctricas de alta tensión

Royal Decree 1432/2008 establishes measures for the protection of birds from collision with and electrocution on high voltage power lines.[173] The Preamble of the Decree acknowledges that an increasing number of electricity transmission structures creates an increased risk of electrocution or collision for some species listed in the Spanish Catalogue of Threatened Species.[174] It notes that research on the unnatural causes of the mortality of birds has shown that electrocution and collision with electricity transmission structures has become the main conservation problem for such iconic species as the Spanish Imperial Eagle. Other species also suffer mortalities, and in view of estimates that at least several tens of thousands of

Conservacion-de-especies-amenazadas/aguila_tcm7-20345.pdf. The strategy was approved by the National Commission for the Protection of Nature on 9 July 2001.

[170] See Act 42 of 2007 a 57, but note that because this Strategy predates Act 42 of 2007, it was formulated under Act 4 of 89, the forerunner of Act 42 of 2007, a 31.2. See para 5.2 above.

[171] Para 2 of the Strategy.

[172] Para 3 of the Strategy.

[173] *Royal Decree 1432/2008*, of 29 August, establishing measures for the protection of birds from collision and electrocution on high voltage power lines.

[174] As regulated by a 55 of Act 42 of 2007.

birds die each year in Spain because of power lines, with concomitant interruptions and irregularities in electricity distribution, the Royal Decree is aimed at preventing or at least reducing these mortalities. The Preamble states that these measures are taken in partial fulfillment of mandates contained in the Constitution,[175] the *Convention on the Conservation of European Wildlife and Natural Habitats*,[176] Act 42 of 2007,[177] and the Resolution on Electrocution of Migratory Birds taken by the Conference of the Parties under the *Convention on Migratory Species of Wild Animals* in Bonn in 2002.[178]

The provisions of the Royal Decree are applicable to power lines located in areas designated as Special Protection Areas for birds,[179] areas where Recovery Plans developed by the Autonomous Communities for bird species included in the Spanish Catalogue of Threatened Species are applicable, and in priority areas for the reproduction, feeding, dispersion and local concentration of bird species included in the Spanish Catalogue of Threatened Species, or regional catalogues, in so far as these areas are not already included in the previous two categories.[180] The Royal Decree prescribes detailed measures to be taken to prevent or mitigate bird electrocutions on high-voltage lines,[181] as well as measures to prevent or mitigate bird collisions with electricity structures.[182] The maintenance of power lines that support nests of bird species included in the list of wild species under a special protection regime,[183] or power lines that are in close proximity to the nests of such species, is prohibited at the time of breeding unless, by way of exception, such maintenance is necessary to correct faults that interrupt the normal power supply.[184]

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[175] A 45 of the *Spanish Constitution*; see para 5.1 above.
[176] Para 3.1 above.
[177] Para 5.2 above.
[178] Para 3.2 above. Other legal instruments that are acknowledged in the Preamble as being applicable to the matter regulated by the Royal Decree are *Ley 21/1992, de 16 de julio, de industria* (Act 21 of 1992, of July 16, of industry), and *Ley 54/1997, de 27 de noviembre, del sector eléctrico* (Act 54 of 1997, of 27 November, on the electricity sector).
[179] According to aa 43 and 44 of Act 42 of 2007.
[180] Aa 3 and 4 of *Royal Decree* 1432/2008 .
[181] A 6 of *Royal Decree* 1432/2008.
[182] A 7 of *Royal Decree* 1432/2008.
[183] In accordance with aa 53 and 54 of Act 42 of 2007; see para 5.2 above.
[184] A 9 of *Royal Decree* 1432/2008.

The Royal Decree makes provision for penalties in the case of non-compliance with its provisions.[185]

5.7 Estrategia Nacional Contra el Uso ilegal de Cebos Envenenados en el Medio Natural

The purpose of this Strategy[186] is to provide guiding criteria for the eradication of the illegal use of poisoned baits in the natural environment.[187] In an analysis of the severity of the problem, the Strategy notes that in the period between 1990 and 2003 information was recorded on more than 6 500 instances of the poisoning of birds and mammals, and this included more than 70 instances where Spanish Imperial Eagles were the victims.[188] It is furthermore noted that the local extinction of the Spanish Imperial Eagle in some areas has been attributed to unlawful poisonings.[189] The use of poisons or other non-selective forms of killing wildlife is punishable under the *Criminal Code*,[190] but a factor that has encouraged the widespread use of poison as an illegal method of predator control has been the difficulty in securing convictions due to the commission of procedural flaws or the incomplete collection of forensic evidence. Most criminal cases were dismissed because it was impossible to establish who was responsible for the poisonings.[191]

To fulfil its stated purpose the Strategy sets forth guidelines to achieve three main objectives. The first objective is the enhancement of knowledge and information on the problem of poisoning. The second objective is prevention and deterrence. To achieve this, the Strategy states that the following targets should be addressed: (1) linking agricultural aid to the policy criteria of the European Union underlying the

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[185] A 10 of *Royal Decree* 1432/2008.

[186] *National Strategy on the Illegal Use of Poisoned Bait in the Natural Environment* (23 September 2004) (see Comisión Nacional de Protección de la Naturaleza 2004 http://www.venenono.org/wp-content/uploads/2011/12/1.ESTRATEGIA_Nacional_venenos.pdf).

[187] Para II (1) of the Strategy.

[188] Para I of the Strategy.

[189] Appendix 1 of the Strategy.

[190] *Ley Orgánica 10/1995, de 23 de noviembre, del Código Penal* (*Organic Act* 10 of 1995, of 23 November, the Criminal Code) as amended by *Ley Orgánica 15/2003, de 25 de noviembre, por la que se modifica la Ley Orgánica 10/1995, de 23 de noviembre, del Código Penal* (*Organic Act* 15 of 2003, of 25 November, amending the *Organic Act* 10 and 1995, of 23 November, the Criminal Code) a 336, see para 5.9 below.

[191] Para I of the Strategy.

agricultural conservation of the natural environment; (2) proposing measures to control and prevent damage; (3) providing technical assistance with the use of toxic products; (4) streamlining and improving compensation (where appropriate) for damages caused by wildlife; and (5) conducting campaigns communicating the message that the benefits from not using poisoned baits are greater than the damage sought to be prevented by the use of poisoned baits. The third objective is prosecuting criminal acts, and here the Strategy is aimed at (1) increasing surveillance and the detection of poisonings; (2) increasing efforts to expose and process cases of poisoning; (3) improving coordination between environmental administration bodies and organs of justice; (4) improving coordination between different administrations (of the state and the Autonomous Communities) involved in fighting the illegal use of poisons; (5) designing a suite of legislative reforms to fill gaps in the legal protection of the species threatened by the unlawful use of poisons; and (6) improving training.[192] The Strategy then proceeds to flesh out actions that should be taken to achieve these objectives in considerable detail.[193] One of the more noteworthy actions is the promotion of the establishment of specialised mobile patrols, where possible equipped with tracker dogs trained in the detection of poisoned baits, that should preferably be deployed for monitoring in high-risk areas.[194]

5.8 Real Decreto 1632/2011, de 14 de noviembre, por el que se regula la alimentación de determinadas especies de fauna silvestre con subproductos animales no destinados a consumo humano

This Royal Decree[195] makes provision for the feeding of certain scavenging bird of prey species of community interest, while maintaining high sanitary standards to prevent the spread of disease in accordance with the European *Regulation (EC) 142/2011*.[196] The Preamble of this Royal Decree acknowledges that it is based on the duty of the conservation of wild birds laid down in the *Birds Directive*, the

[192] Para II (2) of the Strategy.
[193] Para II (4-5) of the Strategy.
[194] Para II (4.8.2) of the Strategy.
[195] *Royal Decree 1632/2011*, of 14 November, on the feeding of certain wildlife species with animal by-products not intended for human consumption.
[196] Para 4.4 above.

Habitats Directive, Act 42 of 2007 and the Spanish Catalogue of Threatened Species. The Autonomous Communities are responsible for authorising and overseeing such activities.[197] Authorisation may be given for carcasses or meat products to be placed in established feeding sites for scavenging wildlife,[198] and for some dead wild animals and livestock to be left in the field away from feeding sites, provided this takes place in protected areas designated for the species and subject to various specified sanitary controls.[199] The Spanish Imperial Eagle is listed as one of the scavenging species of community interest that may be fed in terms of these provisions.[200]

5.9 Ley Orgánica 10/1995, de 23 de noviembre, del Código Penal

The national *Criminal Code*[201] provides that activities such as the hunting of threatened species, hindering their reproduction or migration, destroying or seriously altering their habitat, or trading in specimens of such species or parts of them, will be punished with imprisonment from four months to two years[202] or a fine of eight to twenty-four months.[203] In addition to either of these penalties, an offender's professional, trading or hunting rights may be suspended for two to four years.[204] If the violation involves a species listed as in danger of extinction, such as the Spanish

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[197] Aa 4 and 5 read with a 2.2(a) of the *Royal Decree 1632/2011*.

[198] A 4 of the *Royal Decree* 1632/2011.

[199] A 5 of the *Royal Decree 1632/2011*. Such areas will always form part of the Natura 2000 network; Dr N López personal communication.

[200] In the Annex to the *Royal Decree 1632/2011*. Other listed bird of prey species include the Golden Eagle *Aquila chrysaetos*, four vulture species and two kite species.

[201] *Organic Act* 10 of 1995, of 23 November, the *Criminal Code*. For a commentary on the Criminal Code 1995 and its subsequent reforms, see Bachmaier and García *Criminal Law in Spain* 41ff. For a commentary on the Spanish criminal law system, see Bachmaier and García *Criminal Law in Spain* 19ff, and on the general principles of criminal liability in Spanish law, Bachmaier and García *Criminal Law in Spain* 72ff. For a commentary on criminal liability for environmental transgressions, see Eritja *et al Environmental Law in Spain* 193-196. The various environmental laws usually contain provisions dealing with criminal and administrative liability. See eg Act 42 of 2007 aa 75-79; *Royal Decree 1432/2008* a 10.

[202] See in general on imprisonment as a penalty in Spanish criminal law Bachmaier and García *Criminal Law in Spain* 158ff.

[203] A 334.1 of the *Criminal Code*. Fines are expressed in terms of a day-fine system, but are paid in money (a 50.1 and 50.2). The daily quota may reach a maximum of €400, and months are construed as 30 days and years as 360 days (a 50.4). See on the day-fine system Bachmaier and García *Criminal Law in Spain* 164; and in general on fines as penalties in Spanish criminal law Bachmaier and García *Criminal Law in Spain* 163ff.

[204] A 334.1 of the *Criminal Code*. See in general on penalties that restrict rights Bachmaier and García *Criminal Law in Spain* 159ff.

Imperial Eagle, the penalty imposed must be in the upper half of the authorised range of penalties.[205] The Code also provides that the unauthorised use of poison or other non-selective means to kill wildlife will be punished with imprisonment from four months to two years or a fine of eight to twenty-four months, and, in addition to these penalties, an offender's professional, trading or hunting rights may also be suspended for one to three years.[206]

5.10 Real Decreto 1997/1995, de 7 de diciembre, por el que se establece medidas para contribuir a garantizar la biodiversidad mediante la conservación de los hábitats naturales y de la fauna y flora silvestres

This Royal Decree[207] transposes the *Habitats Directive*[208] of the European Union into Spanish Law.[209] In accordance with the Directive, it makes provision for Special Protection Areas designated for birds under the *Birds Directive*[210] to be included in the Natura 2000 Network.[211]

6 Laws and policies of the Autonomous Communities

The Spanish Imperial Eagle occurs in only five of the Autonomous Communities: Andalusia, Castilla-La Mancha, Castilla y León, Extremadura and Madrid. For this reason only the laws and policies of these five Autonomous Communities are discussed in this contribution. A considerable body of legislation and policy documents is in place, and in an attempt to prevent tedious repetition, only selected examples will be highlighted, and they will be organised thematically rather than according to region.

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[205] A 334.2 of the *Criminal Code*.

[206] A 336 of the *Criminal Code*. See also Jais 2010 http://europeanraptors.org/interviews/interview _illegal_poisoning_spain_beatriz_sanchez.html.

[207] *Royal Decree 1997/1995*, of 7 December, on measures to contribute towards securing biodiversity through the conservation of natural habitats and of wild fauna and flora, amended by *Real Decreto 1193/1998, de 12 de junio, por el que se modifica el Real Decreto1997/1995, de 7 de diciembre, por el que se establecen medidas para contribuir a garantizar la biodiversidad mediante la conservación de los hábitats naturales y de la fauna y flora silvestres* (*Royal Decree 1193/1998*, of 12 June, amending the *Royal Decree* of 7 December, on measures to contribute towards biodiversity through the conservation of natural habitats of fauna and flora).

[208] Para 4.2 above.

[209] Preamble; a 1(1) of *Royal Decree 1997/1995*.

[210] Para 4.1 above.

[211] A 3.2 of Royal Decree 1997/1995.

6.1 The basic protection of biodiversity and threatened species

The basic biodiversity conservation laws of the Autonomous Communities give protection to the Spanish Imperial Eagle. Relevant laws include *Ley 8/2003, de 28 de octubre, de la flora y la fauna silvestres* in Andalusia;[212] *Ley 9/1999, de 26 de mayo, de conservación de la naturaleza* in Castilla-La Mancha;[213] *Ley 8/1998, de 26 de junio, de conservación de la naturaleza y de espacios naturales de Extremadura* in Extremadura;[214] and *Ley 2/1991, de 14 de febrero, para la protección y regulación de la fauna y flora silvestres en la Comunidad de Madrid* in the Community of Madrid.[215] These laws provide for the protection of wildlife, irrespective of status as threatened or otherwise, against such acts as killing, injury, disturbance, interference with nests, and trade.[216] Special provisions deal with threatened species[217] including the Spanish Imperial Eagle, and such special measures may be far-reaching. For instance, in Castilla-La Mancha even unauthorised study, photography and sound recording that may cause disturbance in sensitive areas such as breeding areas are prohibited.[218] In the Community of Madrid a similar prohibition of the observation and photography of listed species without authorisation applies.[219] In Andalusia every citizen has a duty to notify competent authorities if an injured or potentially dying specimen of a threatened species is discovered.[220] In Extremadura provision is made for the governing junta to pay compensation for damage caused by threatened species to people or their property,[221] and in the Community of Madrid aid may be granted to non-profit conservation organisations, as well as the owners or occupiers of land that is located in declared protected areas, or who assist with conservation actions provided for by

[212] Act 8 of 2003, of 28 October, on wild animals and plants in Andalusia.
[213] Act 9 of 1999, of 26 May, on the conservation of nature in Castilla-La Mancha.
[214] Act 8 of 1998, of 26 June, on nature conservation and protected areas in Extremadura.
[215] Act 2 of 1991, of 14 February, on the protection of fauna and flora in the Community of Madrid.
[216] Eg Act 8 of 2003 (Andalusia) a 7; Act 9 of 1999 (Castilla-La Mancha) a 64.
[217] Eg Act 8 of 2003 (Andalusia) a 7; Act 9 of 1999 (Castilla-La Mancha) aa 77-79; Act 8 of 1998 (Extremadura) a 59; Act 2 of 1991 (Madrid) aa 9, 14.
[218] Act 9 of 1999 (Castilla-La Mancha) a 78.
[219] Act 2 of 1991 (Madrid) a 14.3.
[220] Act 8 of 2003 (Andalusia) a 29.
[221] Act 8 of 1998 (Extremadura) a 61.

the relevant law.[222] Threatened species are typically listed in regional catalogues of threatened species, and the Spanish Imperial Eagle is consistently categorised as endangered in the catalogues.[223]

The biodiversity laws of the Autonomous Communities make provision for penalties for offences.[224] Offences in respect of endangered species, including the Spanish Imperial Eagle, are classified as very serious offences[225] and may attract fines in the range of 60 000 to 300 500 Euros.[226]

6.2 Recovery Plans

Under Act 42 of 2007 the Autonomous Communities have the responsibility to draw up Recovery Plans for endangered species.[227] As noted, a national strategy was drawn up to guide the Autonomous Communities in the drafting of the Recovery Plans for the Spanish Imperial Eagle.[228] Four such Recovery Plans have been produced, some dealing with a group of species and others dedicated to the Spanish Imperial Eagle only. They are: *Acuerdo de 18 de enero de 2011, del consejo de gobierno, por el que se aprueban los planes de recuperación y conservación de determinadas especies silvestres y hábitats protegidos*;[229] *Decreto 275/2003, de 9 de septiembre, por el que se aprueban los planes de recuperación del águila imperial ibérica (Aquila adalberti), de la cigüeña negra (Ciconia nigra) y el plan de conservación del buitre negro (Aegypius monachus), y se declaran zonas sensibles*

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[222] Act 2 of 1991 (Madrid) additional provision 1 and 2.

[223] Andalusian Catalogue of Threatened Species in Annex II of Act 8 of 2003 (Andalusia); *Decreto 33/1998, de 5 de mayo, por el que crea el Catálogo Regional de Especies Amenazadas de Castilla-La Mancha* (*Decree 33/1998*, of 5 May, establishing the Regional Catalogue of Threatened Species in Castilla-La Mancha); *Decreto 37/2001, de 6 de marzo, por el que se regula el Catálogo Regional de Especies Amenazadas de Extremadura* (*Decree 37/2001*, of 6 March, regulating the Regional Catalogue of Threatened Species of Extremadura); *Decreto 18/1992, de 26 de marzo, por el que se aprueba el Catálogo Regional de Especies Amenazadas de Fauna y Flora Silvestres y se crea la Categoría de Árboles Singulares* (*Decree 18/1992*, of 26 March, approving the Regional Catalogue of Threatened Species of Wild Fauna and Flora in the Community of Madrid).

[224] Act 8 of 2003 (Andalusia) aa 67-85; Act 9 of 1999 (Castilla-La Mancha) aa 107-127; Act 8 of 1998 (Extremadura) aa 64-77; Act 2 of 1991 (Madrid) aa 41-53.

[225] Eg Act 8 of 2003 (Andalusia) a 75.1; Act 9 of 1999 (Castilla-La Mancha) aa 108.6, 108.7; Act 8 of 1998 (Extremadura) aa 66.4.2, 66.4.3; Act 2 of 1991 (Madrid) aa 45.5(a), 45.5(b).

[226] Eg Act 8 of 2003 (Andalusia) a 82.1(c).

[227] A 57 of Act 42 of 2007; see para 5.2 above.

[228] See para 5.5 above.

[229] Agreement of 18 January 2011 of the Governing Council approving recovery and conservation plans for certain species of wildlife and habitats [in Andalusia].

las áreas críticas para la supervivencia de estas especies en Castilla-La Mancha;[230] *Decreto 114/2003, de 2 de octubre, por el que se aprueba el plan de recuperación del Águila Imperial Ibérica y se dictan medidas para su protección en la Comunidad de Castilla y León*;[231] and *Orden de 6 de junio de 2005 por la que se aprueba el plan de recuperación del Águila Imperial Ibérica en Extremadura*.[232]

The Recovery Plans are contained in lengthy and detailed documents, and an overview of the Recovery Plan of Extremadura will serve as an example of the scope of these plans. In the introduction to the Recovery Plan of Extremadura, a summary of the legal background of the plan is provided, as well as summaries of the history of conservation efforts pertaining to the Spanish Imperial Eagle, and information on the taxonomy, biology and ecology of the species.[233] The stated purpose of the plan is to promote an increase in the Spanish Imperial Eagle population in Extremadura to at least 200 mature birds, and in this way to contribute to the conservation and recovery of the species. To this end, ten priorities for action are proposed: (1) significantly increasing the surface area of protected habitat for the Spanish Imperial Eagle; (2) reducing mortality by electrocution to an insignificant level by modifying power pylons; (3) working towards eradicating the use of poisons in the field; (4) activating (captive) breeding programmes and reintroducing birds into potential habitat; (5) improving the hunting habitat and increasing the numbers of important prey species such as rabbits and hares; (6) involving people whose responsibilities, occupation, geographic location and so forth can impact on the conservation of the Spanish Imperial Eagle; (7) promoting support and/or cooperation agreements with the owners or occupiers of farms and other private land on which breeding and hunting grounds of the Spanish Imperial Eagle are situated; (8) developing methods by which the mortality of hatched eaglets can be minimised; (9) minimising the disturbance of breeding pairs; and (10) carrying out the effective control of problem

[230] *Decree 275/2003*, of 9 September, recovery plan for the Spanish Imperial Eagle, Black Stork and Cinereous Vulture in Castilla-La Mancha.
[231] *Decree 114/2003*, of 2 October, recovery plan for the Spanish Imperial Eagle in Castilla y León.
[232] Order of 6 June 2005 approving the recovery plan for the Spanish Imperial Eagle in Extremadura.
[233] A 1 of the Order of 6 June 2005.

predators that are not included in the Regional Catalogue of Threatened Species of Extremadura.[234]

The land areas to which the Recovery Plan applies are described, with definitions of breeding areas, dispersion areas and recolonisation areas, and detailed descriptions of all the areas in Extremadura that are regarded as important for the conservation of the Spanish Imperial Eagle.[235] The Recovery Plan also contains provisions dealing with the monitoring of the implementation of the plan,[236] its duration (until its goal is reached), and its review (annually for the main objectives and performance measures, and in-depth within six years).[237]

Under the heading "Action Plan" practical measures that must be implemented are set forth in great detail.[238] Examples of such measures include: (1) establishing appropriate conservation regimes for breeding, dispersal and recolonisation areas;[239] (2) establishing agreements with landowners to advise on habitat management and potentially including compensation for loss of income and improvements to the properties to assist with the implementation of the Recovery Plan;[240] (3) provisionally suspending hunting rights in areas where the placement of poisons is detected,[241] (4) ensuring that the habitat requirements of the Spanish Imperial Eagle are taken into account in land-use planning instruments;[242] (5) promoting the recovery of native vegetation, especially oak trees (used by Spanish Imperial Eagles for nesting) where feasible; (6) increasing rabbit populations to a level where they can sustain a population of Spanish Imperial Eagles of the size aimed at by the Plan;[243] (7) controlling excessive populations of other predators that are capable of

[234] A 2 of the Order of 6 June 2005.
[235] A 3 of the Order of 6 June 2005.
[236] A 4 of the Order of 6 June 2005.
[237] A 5 of the Order of 6 June 2005.
[238] A 6 of the Order of 6 June 2005.
[239] Action Plan para A.1.1 of the Order of 6 June 2005.
[240] Para A.1.2 of the Order of 6 June 2005.
[241] Para A.2.1 of the Order of 6 June 2005. Landowners, and other people with a financial interest in commercial hunting poison the predators of species that may be hunted, such as rabbits and partridges. See Jais 2010 http://europeanraptors.org/interviews/interview_illegal_poisoning_spain_beatriz_sanchez.html.
[242] Para A.3.1 of the Order of 6 June 2005.
[243] Para B.4.1 of the Order of 6 June 2005.

eroding the prey base of the Spanish Imperial Eagle;[244] (8) placing restrictions on the hunting of rabbits where deemed appropriate to facilitate the recovery of rabbit populations;[245] (9) surveying Spanish Imperial Eagle nests outside the breeding season, and structurally reinforcing nests that are in danger of collapsing, or replacing them with artificial breeding platforms;[246] (10) placing supplementary food near nests where a weak eaglet is in danger of dying, or in more urgent cases, removing the weak eaglet for veterinary care and reintroducing it into the nest when it has recovered;[247] (11) prohibiting agricultural, forestry, hunting and similar activities in a security zone around an active Spanish Imperial Eagle nest from 15 January to 15 September to prevent disturbance during the breeding season;[248] (12) monitoring and/or limiting vehicle traffic that could disturb breeding efforts, or in exceptional cases even closing roads temporarily;[249] (13) identifying power lines where eagles are prone to electrocution and modifying them to eliminate the danger;[250] (14) producing an inventory and maps of suitable habitat for recolonisation by the Spanish Imperial Eagle;[251] (15) supporting a captive breeding programme of the Spanish Imperial Eagle as a reserve in case a natural disaster or epidemic seriously depletes the wild population;[252] (16) conducting on-going research and monitoring to evaluate the implementation of the proposed measures;[253] (17) conducting public awareness campaigns about the Spanish Imperial Eagle aimed at schools, hunting societies, electricity suppliers, farmers and agricultural societies, conservation partnerships, lawyers, taxidermists, forest managers, and agencies controlling toxic pesticides;[254] and (18) appointing a

[244] Para B.4.2 of the Order of 6 June 2005.
[245] Para B.4.3 of the Order of 6 June 2005.
[246] Para B.5.2 of the Order of 6 June 2005.
[247] Para B.5.3 of the Order of 6 June 2005. This provision is aimed at preventing the mortality of an eaglet due *inter alia* to cainism. Cainism refers to siblicide where a stronger eaglet kills its weaker sibling, and this occurs frequently, but not invariably, in the breeding cycle of the Spanish Imperial Eagle. See Ferrer *Spanish Imperial Eagle* 83; Meyburg "Spanish Imperial Eagle" 261; Margalida *et al* "Breeding Biology" 302.
[248] Para B.5.6 of the Order of 6 June 2005.
[249] Para B.5.6.2 of the Order of 6 June 2005.
[250] Para B.6.1 of the Order of 6 June 2005.
[251] Para B.7.1.1 of the Order of 6 June 2005.
[252] Para B.8.1 of the Order of 6 June 2005.
[253] Para C.9 of the Order of 6 June 2005.
[254] Para D.10 of the Order of 6 June 2005.

Regional Recovery Plan Coordinator that will coordinate the implementation of the plan and liaise with other Autonomous Communities.[255]

A few interesting practical measures prescribed by the Recovery Plan for the Spanish Imperial Eagle in Castilla y León include: (1) restricting access to critical areas, displaying a notice with the words "temporary limited access for conservation between 1 February and 15 August, except for authorised personnel";[256] (2) restricting forestry management activities between 1 February and 15 August in areas of at least 50 acres around active nests, taking into account features of the land such as hills, valleys, roads *etcetera*, and, where these are not present, a circle with a radius of 500 metres around the nest;[257] (3) prohibiting the felling of any tree that supports a nest that is currently in use, or that has been used in the previous ten years;[258] (4) prohibiting the construction of wind farms or wind turbines in any area where the Recovery Plan applies, unless certain specified conditions are met;[259] (5) prohibiting tests or tours of quad bikes, all-terrain vehicles, and mountain bikes from 1 February to 15 August in critical areas, except for tours expressly authorised by the General Directorate of the Natural Environment;[260] (6) prohibiting the recording of images of nests except when related to research projects, the dissemination of information or management activities authorised by the General Directorate of the Natural Environment;[261] and (7) providing that owners of farms and forests located within the area to which the Recovery Plan applies will have preference for aid earmarked by the Junta of Castilla y León for environmental conservation and management.[262]

The formation of several patrols of Environmental Agents specialised in the investigation of poisoning cases, as well as dog units for the detection of poisons, as also envisaged by the National Strategy on the illegal use of poison in the natural

[255] Para E.11.1 of the Order of 6 June 2005.
[256] A 5 of Decree 114/2003.
[257] A 6.1(a) of Decree 114/2003.
[258] A 6.1(j) of Decree 114/2003.
[259] A 7.1(a) of Decree 114/2003.
[260] A 7.2(b) of Decree 114/2003.
[261] A 7.2(c) of Decree 114/2003.
[262] A 9.2 of Decree 114/2003.

environment, is one of the more noteworthy conservation actions proposed by the Andalusian Recovery Plan.[263]

6.3 Protection against electrocution

Several regional laws provide protection for birds, including the Spanish Imperial Eagle, against death by electrocution on or collision with electricity transmission structures. These include *Decreto 178/2006, de 10 de octubre, por el que se establecen normas de protección de la avifauna para las instalaciones eléctricas de alta tensión* in Andalusia;[264] *Decreto 5/1999 de 02-02-99, por el que se establecen normas para instalaciones eléctricas aéreas en alta tensión y líneas aéreas en baja tensión con fines de protección de la avifauna* in Castilla-La Mancha;[265] *Decreto 73/1996, de 21 de mayo, sobre las condiciones técnicas que deben cumplir las instalaciones eléctricas en la Comunidad Autónoma de Extremadura, para proteger el medio natural* in Extremadura;[266] and *Decreto 40/1998, de 5 de marzo, por el que se establecen normas técnicas en instalaciones eléctricas para la protección de la avifauna* in Madrid.[267]

Decree 178/2006 of Andalusia may serve as an example of these laws. The decree extends the mandatory protection of birds against mortality on high voltage electricity installations over the entire area of Andalusia, in the wake of the proven effectiveness of *Decreto 194/1990, de 19 de junio, por el que se establecen normas de protección de la avifauna para las instalaciones eléctricas de alta tensión con conductores no aislados*,[268] which established such mitigating measures in the formally protected natural areas in Andalusia. The measures of the current decree apply to the construction of new high-voltage overhead electrical installations and to existing structures that pass through Special Protection Areas for birds and special

[263] Para 8.3.12-8.3.13 of the Agreement of 18 January 2011.
[264] *Decree 178/2006*, of 10 October, establishing standards for the protection of birds from high voltage electrical installations in Andalusia.
[265] *Decree 5/1999*, of 2 February, for the protection of birds from power lines in Castilla-La Mancha.
[266] *Decree 73/1996*, of 21 May, on the technical conditions to be met by electrical installations in the Autonomous Community of Extremadura to protect the natural environment in Extremadura.
[267] *Decree 40/1998*, of 5 March, laying down technical rules for electrical installations for the protection of birds in Madrid.
[268] *Decree 194/1990*, of 19 June, establishing protection standards for the avifauna on high voltage electrical installations in Andalusia.

conservation zones in Andalusia. The decree contains detailed provisions about the construction of structures to minimise the electrocution of birds[269] and the fixing of markers to minimise bird collisions.[270] Electricity structures supporting nests of threatened species, including the Spanish Imperial Eagle, may not be serviced during the breeding period unless certain prescribed circumstances described in article 9 of Act 8 of 2003, of 28 October[271] are present and permission is granted by the head of a provincial environmental delegation.[272] If urgent action is needed to ensure the continuity and quality of power supply and prior permission cannot be obtained, the necessary maintenance may be performed and reported to a provincial environmental office within ten days.[273] To prevent fire risk or power interruption or to safeguard the safety of persons, the provincial environmental delegation may authorise the removal of nest material before breeding has started or after it has been completed. Such authorisation may be made conditional on the provision of an alternative nesting platform for the breeding pair.[274]

6.4 Protection against poisoning

Orden 02-08-05, de la consejería de medio ambiente, por la que se apruebo el plan regional de lucha contra el uso ilegal de venenos en el medio natural in Castilla-La Mancha[275] and *Estrategia para la Erradicación del Uso ilegal de Cebos Envenenados en Andalucía* in Andalusia[276] are regional laws and policies providing protection against the poisoning of wildlife, including the Spanish Imperial Eagle.

The Regional Plan of Castilla-La Mancha may serve as example. In its introduction the Plan refers to the importance of poisoned bait as a cause of the mortality of endangered species, specifically citing the Spanish Imperial Eagle as an example.[277] The stated purpose of the plan is to eliminate the illegal use of poisoned bait, or to

[269] A 4 of Decree 178/2006.
[270] A 5 of Decree 178/2006.
[271] Para 6.1 above.
[272] A 6.1 of Decree 178/2006.
[273] A 6.2 of Decree 178/2006.
[274] A 6.3 of Decree 178/2006.
[275] Order 02-08-05 of the Council for the Environment for approving the regional plan to combat the illegal use of poison in the natural environment.
[276] Strategy for the Elimination of the Illegal Use of Poisoned Bait in Andalusia.
[277] A 1 of Order 02-08-05.

reduce it to a minimum.[278] To achieve this end the following objectives are adopted: (1) improving the availability of information on the illegal use of poisoned baits and its consequences; (2) discouraging and preventing the use of poisoned baits; (3) increasing the effectiveness of administrative sanctions for transgressions, and the persecution for criminal offences; (4) developing appropriate protocols for dealing with cases of illegal poisoning; and (5) facilitating cooperation between various administrations and organisations fighting the use of poisons in nature. The plan then fleshes out various activities that must be performed to reach the adopted objectives.

7 Discussion

7.1 Outcomes of interventions

Several positive outcomes are associated with the conservation interventions on behalf of the Spanish Imperial Eagle. Reference has already been made to the remarkable increase in the population size of the species, from 38 known pairs in 1974 to 407 known pairs in 2013.[279] These figures, in juxtaposition with the history of decline before the implementation of conservation initiatives, arguably constitute the most compelling evidence that the conservation initiatives have been successful.

The drafters of the European Action Plan for the Spanish Imperial Eagle note that the breeding population has increased annually in Spain since 2000, and state that these increases may partially be attributed to more thorough searches in its range, but that the "spectacular increase" in the last two decades is probably related to an increase in adult survival, which can to a certain extent be attributed to successful conservation actions.[280] This view is supported by other authors.[281] In an overview of forest raptor conservation in Spain, Del Moral attributes the "considerable increase" of the Spanish Imperial Eagle in the last decade largely to "intense manipulation of the species and its habitat, together with great efforts on the part of

[278] A 2 of Order 02-08-05.
[279] Para 1 above.
[280] Sánchez, González and Barov 2008 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/aquila_adalberti.pdf 10.
[281] Eg Castaño and Guzmán "Population Dynamics" 86; Ortega *et al* "Demographic Description" 388.

the autonomous communities where it occurs".[282] A report by BirdLife International commissioned by the European Commission to review the implementation of Species Action Plans for threatened birds in the European Union in the period 2004-2010 provides details of several successes.[283] It states that the population of the Spanish Imperial Eagle has increased fivefold over the preceding thirty years.[284] All but one of the nuclei of occupancy have increased in surface area, and new nuclei have been formed in four areas.[285] The species is still regarded as vulnerable under IUCN[286] criteria, and the long-term target of the Action Plan has not been reached yet, but due to steady increases the development of the population is heading towards that aim,[287] and the medium-term target has been achieved.[288]

The surface area of land subject to protection measures for the benefit of the Spanish Imperial Eagle has increased significantly. At the time of the BirdLife report the Spanish Imperial Eagle occurred in 24 Important Bird Areas, 22 in Spain and 2 in Portugal. All of them have been designated as Special Protection Areas. There were 17 National Protection Areas in which the species occurred, and 90 European Union Special Protection Areas, four of them in Portugal. In total, 107 areas protected by the law contained 70,56 per cent of the total breeding population of the Spanish Imperial Eagle. The total surface area of Special Protection Areas designated for the species amounted to 3,8 million hectares.[289]

Success was also achieved with interventions aimed at minimising mortality and maximising the reproductive productivity of the species. In respect of electrocution

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[282] Del Moral "Conservation of Forest Raptors" 54.

[283] Barov and Derhé 2011 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/Final%20report%20BirdLife%20review%20SAPs.pdf 237-244. The review of the species action plan for the Spanish Imperial Eagle was done in 2008.

[284] Barov and Derhé 2011 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/Final%20report%20BirdLife%20review%20SAPs.pdf 237.

[285] Barov and Derhé 2011 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/Final%20report%20BirdLife%20review%20SAPs.pdf 237.

[286] International Union for the Conservation of Nature and Natural Resources. IUCN 2013 http://www.iucn.org.

[287] Barov and Derhé 2011 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/Final%20report%20BirdLife%20review%20SAPs.pdf 238.

[288] Barov and Derhé 2011 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/Final%20report%20BirdLife%20review%20SAPs.pdf 12.

[289] Barov and Derhé 2011 http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/Final%20report%20BirdLife%20review%20SAPs.pdf 239.

and collision with electricity structures, significant progress has been made. After the modification of identified dangerous power lines in the Doñana National Park in Andalusia in 1987, the survival of radio-tracked juvenile Spanish Imperial Eagles in their first six months increased from 17,6 per cent in 1986 and 1987 (sample size 17) to 80 per cent in 1988 and 1989 (sample size 15).[290] An analysis of the influence of electrocution-mitigating interventions on the Andalusian population of the Spanish Imperial Eagle over an extended period spanning from 1974 to 2009 established that the interventions had succeeded in reducing mortalities to such a degree that electrocution was no longer considered to be the most important threat to the species in the region.[291]

In respect of poisoning, a notable event was the establishment of specialised patrols of agents dedicated exclusively to investigate poisonings and the creation of a dog unit with dogs trained to find poisoned bait in Castilla-La Mancha.[292] In Andalusia two specialised dog units, the first in Europe, had already been created in 2003.[293] Indications are reported that such units have a significant deterrent value, aided by advertising, in addition to their value in detecting transgressions.[294] In 1997 Spanish conservation bodies launched the *Antidoto* programme[295] to combat the illegal use of poisons to kill predators.[296] One of the aims of the project was to improve the prosecution of offenders, but the success rate has been relatively low with only about 15 successful prosecutions for the illegal poisoning of raptors in a 10-year period.[297] Viñuela and Villafuerte[298] comment that such prosecution is an "urgent initial step in trying to solve the problem, [but] cannot be regarded [as] a long-term and robust solution". Poisoning remains a major stumbling-block to the conservation

[290] Ferrer *Spanish Imperial Eagle* 195-198.
[291] López-López *et al* 2011 http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0017196&representation=PDF 1-6.
[292] Jais 2010 http://europeanraptors.org/interviews/interview_illegal_poisoning_spain_beatriz_sanchez.html; Roda 2008 http://www.revistamedioambientejccm.es/articulo.php?id=20&idn=46.
[293] De la Bodega Zugasti, Fajardo and Ruiz date unknown http://www.cms.int/bodies/ScC/poison_wg/poisoning_spain.pdf.
[294] Roda 2008 www.revistamedioambientejccm.es/articulo.php?id=20&idn=46.
[295] SEO/Birdlife 2011 http://www.venenono.org/?page_id=286.
[296] Viñuela and Villafuerte "Predators and Rabbits" 517.
[297] Viñuela and Villafuerte "Predators and Rabbits" 518.
[298] Viñuela and Villafuerte "Predators and Rabbits" 518. The authors investigated the (perceived) conflict between the conservation of predators and the interests of persons such as hunters and gamekeepers in large rabbit populations.

of the Spanish Imperial Eagle and several vulture species,[299] and in one report the law enforcement to prevent the illegal poisoning of the Spanish Imperial Eagle is described as "not currently effective".[300]

The value of the supplementary feeding of breeding Spanish Imperial Eagles was investigated in four Autonomous Communities in West Central Spain.[301] Sibling aggression was found to be the most important factor contributing to mortality of chicks, and it was furthermore established that such sibling aggression was reduced by supplementary feeding.[302] Nests where supplementary feeding was implemented produced 1,56 fledglings per brood, compared to 0,72 fledglings per brood in nests where no supplementary feeding took place.[303] Supplementary feeding did not appear to have a negative influence on the provisioning rates of the adult birds.[304] The researchers concluded that supplementary feeding is a good management tool in the conservation of the Spanish Imperial Eagle.[305]

Reintroduction programmes have also had positive results. Over a ten-year period 73 young birds were released in the province of Cadiz, and a small breeding population has been established there.[306] Furthermore, two birds that have bred in Portugal originated from a reintroduction programme in Andalusia.[307]

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[299] Jais 2010 http://europeanraptors.org/interviews/interview_illegal_poisoning_spain_beatriz_sanchez.html.
[300] Deinet *et al Wildlife Comeback in Europe* 246.
[301] González *et al* "Supplementary Feeding" 507-522.
[302] González *et al* "Supplementary Feeding" 520-521.
[303] González *et al* "Supplementary Feeding" 507.
[304] González *et al* "Supplementary Feeding" 519.
[305] González *et al* "Supplementary Feeding" 522.
[306] BirdLife International 2013 http://www.birdlife.org/datazone/speciesfactsheet.php?id=3534.
[307] BirdLife International 2013 http://www.birdlife.org/datazone/speciesfactsheet.php?id=3534.

7.2 Thoughts on the role of the law in the conservation of the Spanish Imperial Eagle

As noted above, a plethora of legal provisions affects the conservation status of the Spanish Imperial Eagle. It is notable that these legal provisions address the conservation challenges faced by the Spanish Imperial Eagle in an exceptionally comprehensive manner, to such an extent that the legal protection of the species truly can be characterised as holistic. It is hard to conceive of any known negative or potentially negative influence on the security of the species that has escaped the attention of the lawgiver.

It is furthermore notable that while the legal provisions aimed at the survival of the Spanish Imperial Eagle certainly include criminal sanctions for transgressions, they go very much further to compel, authorise, facilitate, and direct positive human actions that can help to save the species. Amongst other things, the creation of Special Protection Areas, diverse measures to safeguard breeding birds and dispersing juveniles, modifying electricity structures to minimise electrocution and collision risks, the drafting of comprehensive Recovery Plans, on-going research and monitoring, and the engagement with the public to raise awareness of and national pride in the species are noteworthy examples of such actions. On the negative side, the legal regime pertaining to the Spanish Imperial Eagle is very complex because of the multitude of legal and policy documents involved. Fortunately the complexity is mitigated somewhat by a substantial degree of consistency between the aims and methods of the various provisions across the spectrum from the international treaties to the decrees and orders of the Autonomous Communities.

On an intuitive level it is probably self-evident that these laws and policies were instrumental in the conservation of the Spanish Imperial Eagle. On the other hand, it is extremely difficult, if not impossible, to quantify the relative importance of the making of the laws and policy and efforts to enforce them as against other human endeavours aimed at improving the conservation status of the species.[308] For

[308] Verschuuren "Effectiveness of Nature Protection Legislation" 39-40.

instance, filtering out the impact of voluntary work done by conservation non-governmental organisations to arrive at a truer understanding of the causal effect of the laws and policies is very difficult. Whether or not greater accuracy would really result from such a filtering process, if it were indeed possible, is perhaps even debateable. Clearly, this is a situation of cumulative causation, where a diversity of interventions co-contributed, in not readily divisible measures, to the enhanced conservation status of the Spanish Imperial Eagle.

It is worth bearing in mind that most, if not all, of the relevant conservation actions were taken in the wake of legislative action, and under the authority and regulation of the law. A report to Rewilding Europe[309] by the Zoological Society of London,[310] BirdLife International[311] and the European Bird Census Council[312] identifies the following drivers of the recovery of the Spanish Imperial Eagle: habitat management; including the improvement of food availability and the modification of power lines; non-governmental organisations engaging national authorities, local communities and private landowners to protect habitat; and bolstering wild populations by reintroduction programmes. It is noticeable that the majority of these drivers are provided for and regulated by the legislation and policies dealing with the Spanish Imperial Eagle.

In addition, it is submitted that if the onset of legal protection marks a change of a negative population trend into a positive one, this may be taken as at least *prima facie* evidence that the law is playing a positive role in the conservation of a relevant species.[313] That this is indeed applicable here is accepted by scientists specifically in respect of the Spanish Imperial Eagle, but also more generally in respect of a diversity of bird of prey species in Spain and even more generally in respect of

[309] Rewilding Europe 2011 http://www.rewildingeurope.com.
[310] ZSL date unknown http://www.zsl.org.
[311] BirdLife International 2013 http://www.birdlife.org.
[312] EBCC 2013 http://www.ebcc.info.
[313] Donald *et al* 2007 *Science* 812 (in respect of the effectiveness of the Birds Directive in the conservation of birds in the European Union): "[R]elatively simple yet robust population monitoring can play an important role in assessing the success of supragovernmental conservation policies, as it already has in demonstrating the environmentally damaging effects of international policy in other sectors." It should be borne in mind that a lag-time between the advent of legal protection and an upturn in the population trends of relevant species should be allowed for. Donald *et al* 2007 *Science* 812.

European birdlife. In respect of the Spanish Imperial Eagle, the report to Rewilding Europe[314] concludes explicitly:

> The spectacular recovery of the Spanish Imperial Eagle has been to a great degree the result of active conservation effort and legal protection. The species benefits from protection under international and national legislation and protected areas encompass more than 70% of the total breeding population.

In an analysis of the status and habitat changes of the Spanish Imperial Eagle population during the period 1974-2004, González[315] and others come to a similar conclusion:

> [W]e think that the increase of the Spanish imperial eagle population will continue naturally… [T]he factor which seems to have been most influential in the positive evolution of their population has been the improvement in man's attitude towards the species, reflected first in private initiative and later in legislation.

In respect of Spanish birds of prey in general, Viñuela and Villafuerte[316] declare:

> Spanish raptor populations suffered dramatic declines in the first half of the 20th century, mainly due to human persecution, which included government campaigns sponsoring the killing of predators… Following the implementation of protection laws in the mid-1970s, populations of most species recovered during the 1980s, sometimes slowly, as in the case of imperial eagles…, and sometimes rapidly, as in the case of griffon vultures…

In respect of bird species in the European Union in general, analyses of population trends provide evidence that legal protection is impacting positively on the conservation status of species. Furthermore, such analyses suggest that intensive intervention in the wake of legal protection gives better results than less intensive intervention. In a BirdLife report on the status of European birds[317] the following conclusions are reached: population trends of species with a special legal conservation status, in this instance listing in Annex I of the *Birds Directive*, were healthier than those of species without such status;[318] species that were subject to Species Action Plans fared better than species without such plans;[319] and

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[314] Deinet *et al Wildlife Comeback in Europe* 246.
[315] González *et al* "Status and Habitat Changes" 155.
[316] Viñuela and Villafuerte "Predators and Rabbits" 512.
[317] Papazoglou *et al Birds in the European Union.*
[318] Papazoglou *et al Birds in the European Union* 11.
[319] Papazoglou *et al Birds in the European Union* 12; also Nagy and Burfield "Saving Europe's Most Endangered Birds" 606.

comprehensive protection of the habitats of species with Species Action Plans by the Special Protection Areas network could be one of the reasons why these species fared better than Annex I species without Species Action Plans.[320]

In a carefully substantiated study, Donald and others compared bird population data for 1970-1990 with equivalent data for 1990-2000 to evaluate the impact of the *Birds Directive* on the conservation status of bird species in the European Union. The researchers found that:

> The data are … consistent with the hypothesis that the *Birds Directive* brought demonstrable benefits to bird populations in the EU and that international policy intervention can be effective in addressing conservation issues over large geographical areas.[321]

In view of the above-mentioned considerations, it appears safe to conclude that, while exact quantification remains elusive, the relevant laws and policies contributed to the conservation status of the Spanish Imperial Eagle, and probably provided much of the impetus for the multitude of conservation interventions that have been taken, and which have been successful not only to halt, but indeed decisively to reverse, the decline of the Spanish Imperial Eagle. In addition, it seems equally pertinent to conclude that protective legislation is far more likely to make a meaningful difference if it is accompanied by concerted conservation action, as in the case of the Spanish Imperial Eagle.

Two extra-legal factors merit specific mention. First, the will of the people was probably of paramount importance. Scientists have pointed out that where political interest existed and financial investment was made, meaningful conservation interventions have taken place.[322] Non-governmental organisations have also played

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[320] Papazoglou *et al Birds in the European Union* 12-13.

[321] Donald *et al* 2007 *Science* 812. The authors developed five expectations that could be statistically tested to prove that the *Directive* had a detectable positive impact (811). Some of these expectations are not useful in respect of the Spanish Imperial Eagle because they require comparison of the population trends of the relevant species inside and outside the European Union. Because the current distribution of the Spanish Imperial Eagle is largely confined to the European Union, these expectations cannot meaningfully be tested for the eagle. However, testing of the expectations enabled the researchers to conclude that the *Directive* has had a positive impact in respect of the conservation of European birdlife, and this conclusion is important for the topic of this contribution.

[322] López-López *et al* 2011 http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F

a crucial role, and in this regard special mention should be made of the *Alzando el Vuelo* (Flying High) programme[323] of SEO/BirdLife Spain and the *Fundación de Amigos del Aguila Imperial*.[324] These programmes engage national authorities, local communities and private landowners to form a large land stewardship network that conserves Spanish Imperial Eagle habitat, and agreements are entered into with private landowners who manage their land in ways that are favourable to Spanish Imperial Eagle conservation.[325]

A second extra-legal factor is the availability of considerable financial resources to give effect to the laws protecting the Spanish Imperial Eagle. The extinction of the Spanish Imperial Eagle in Spain would mean the global extinction of the species, and Spain is therefore in a special position as effectively the sole custodian of the species on earth. Spain is also the country with the richest biodiversity in Western Europe.[326] The European Union has accordingly allocated generous funding towards the conservation of the biodiversity of Spain,[327] including the Spanish Imperial Eagle,[328] and the importance of this for giving effect to the relevant laws and the comprehensive recovery plans for the Spanish Imperial Eagle should not be underestimated.

Conservationists sometimes express scepticism about the role of the law in biodiversity conservation. This could stem from a spectrum of causes, but would probably often relate to problems with enforcement, whether it is inefficient enforcement or a lack of enforcement,[329] or overzealous enforcement, which could

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10.1371%2Fjournal.pone.0017196&representation=PDF 6.

[323] SEO/BirdLife 2010 http://www.aguilaimperial.org.

[324] Fundación de Amigos del Aguila Imperial 2005 http://www.amigosaguilaimperial.org.

[325] BirdLife International 2013 http://www.birdlife.org/datazone/speciesfactsheet.php?id=3534; Deinet *et al Wildlife Comeback in Europe* 246.

[326] Eritja *et al Environmental Law in Spain* 161.

[327] Eritja *et al Environmental Law in Spain* 23.

[328] Since 1992 the LIFE programme has invested more than €10 million in the conservation of the Spanish Imperial Eagle; Barov 2011 http://ec.europa.eu/environment/nature/conservation/wildbirds/docs/conservation_threatened_birds.pdf 19. The Spanish Ministry of Agriculture, Food and Environment has spent more than €15,5 million on the modification of electricity structures in recent years, and the Spanish Imperial Eagle was one of the principal benefactors of these expenses; Ministerio de Agricultura, Alimentación y Medio Ambiente 2013 http://www.magrama.gob.es/fr/prensa/noticias/el-%C3%A1guila-imperial-avanza-en-su-recuperaci%C3%B3n-y-supera-las-400-parejas-en-la-pen%C3%ADnsula-ib%C3%A9rica/tcm12-302145-16.

[329] See eg EWT 2012 www.ewt.org.za/scientific%20publications/EWT%20Scoping%20Report_

precipitate a backlash among citizens[330] or hinder the research and conservation efforts of biologists.[331] Scepticism about the law could also relate to a mistaken impression about the nature and scope of biodiversity laws, for instance that they consist of lists of offences visited by criminal sanction, which are more likely to alienate people than to win people over to conservation causes.[332] The conservation history of the Spanish Imperial Eagle suggests that the law can contribute meaningfully to the conservation of species. It also refutes an impression that biodiversity laws are aimed only at criminalising certain human acts, showing instead that the law can fulfil a wide range of functions – initiating, empowering, and facilitating a holistic suite of conservation actions to the benefit of the biodiversity of our planet.

8 Thoughts on the use of environmental law and policy in the conservation of birds of prey in South Africa and elsewhere

Reflecting on the legal protection of the Spanish Imperial Eagle gives rise to two pertinent thoughts on the use of environmental law and policy in conserving birds of prey in South Africa and elsewhere. These two thoughts may at first be taken to be somewhat in conflict with each other, but should, it is submitted, rather be seen as complementary.

October%202012-without%20crops_V.0.3.pdf.

[330] For example, in the Philippines a logging concession was cancelled by the President when a logging company failed to comply with legislation protecting nests of the Philippine Eagle *Pithecophaga jefferyi*. This caused a backlash in which loggers no longer trusted conservationists, and government agents began to turn a blind eye to similar transgressions. See Krupa "Legislation for the Philippine Eagle" 597. Special legal protection of the Javan Hawk-Eagle *Spizaetus bartelsi* heightened the demand for the species in illegal trade. See Nijman "Javan Hawk-Eagle" 148-152.

[331] For example, strict protectionist legislation has at one stage been blamed for keeping the Californian Condor *Gymnogyps californianus* off-limits for conservationists at a critical time, with the ironic result that appropriate interventions could not be made in time to arrest the sharp decline of that species; Temple "Conservation and Management" 213. Today the conservation of that species is on a better footing. See Arizona Game and Fish Department 2013 http://www.azgfd.gov/w_c/california_condor.shtml; Peregrine Fund date unknown http://www.peregrinefund.org/condor.

[332] For example, Temple "Conservation and Management" 212-213 argues that legal protection can be effective only if the decline of a species is caused by human persecution or over-harvesting, and that reliance on legal protection is misplaced if the habitat of the species has been altered or its food-chain contaminated with toxic chemicals. The legal regime pertaining to the Spanish Imperial Eagle shows that such a view of the role of the law is too restrictive.

First, the conservation of the Spanish Imperial Eagle carries a message of hope. It shows that conservation can really work and that environmental law and policy can play an integral and central part in this. For any jurisdiction that must assume responsibility for species that require radical legislative intervention, it is difficult to conceive of an example more worthy of emulation than the Spanish and European interventions on behalf of the Spanish Imperial Eagle.

Second, the conservation of the Spanish Imperial Eagle also carries a warning. It shows what extreme measures may be necessary to save a species that has come close to extinction. It illustrates how protective legislation may add exacting duties to the burdens of natural as well as juristic persons, in both the public and private sectors,[333] to turn the negative population trend of an endangered species around. It also provides insights into the financial costs, as well as the measure of political and citizen commitment, which may be needed to implement and enforce the relevant legal and policy instruments to make effective conservation a reality.

It is submitted that these two thoughts produce a twofold message that should be heeded by policy makers, conservationists, environmental lawyers and citizens everywhere: if a species has suffered such a serious decline that it is on the edge of extinction, concerted legal and other conservation interventions can halt such a decline and even reverse it decisively, but such interventions are onerous and expensive. Ideally, effective conservation measures should be in place before populations have declined to a critical level. In simple words, it is probably easier and less costly to protect species while they are still common than when they are in danger of extinction. Neglecting to conserve species while they are still common may necessitate labour-intensive and expensive interventions, with no guarantee of success, in the future.

The threats experienced by South African raptors are similar to those experienced by the Spanish Imperial Eagle. Habitat loss, direct persecution by shooting and trapping, poisoning, electrocution and collision with electricity structures constitute the most serious threats to South African raptors, just as they do in the case of the

[333] See paras 3-6 above.

Spanish Imperial Eagle.[334] Until recently only one South African raptor species[335] has regionally been listed as endangered, but this is about to change. BirdLife South Africa and the Percy Fitzpatrick Institute for African Ornithology at the University of Cape Town are finalising a new Red List of the birds of South Africa, Lesotho and Swaziland.[336] In the new Red List, no fewer than twelve South African raptor species are likely[337] to be listed as endangered[338] and two as critically endangered.[339] Vulture species feature prominently here because they are extremely vulnerable to mass poisonings, which are often performed intentionally either to obtain vulture body parts for traditional medicine or to prevent vulture movements from alerting conservation personnel to the activities of elephant or rhinoceros poachers.[340] One of the African vulture species, the Cape Vulture,[341] is largely confined to Southern Africa, and its breeding distribution is almost confined to the Republic of South Africa.[342] The Black Harrier, another raptor species that will in all likelihood be re-classified as endangered, is in a similar situation in respect of its distribution and breeding range.[343] The world-wide survival of both these endangered species is in all likelihood inextricably linked to the success of South African conservation initiatives. However, because these species venture into neighbouring countries such as Namibia and Zimbabwe, transboundary conservation will also be essential. For all the endangered vulture species, transboundary conservation cooperation will be particularly important, because research has shown that individuals of these species

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[334] In respect of eagle species in particular, see Knobel 2013 *PER/PELJ* 163-167.
[335] The Bearded Vulture *Gypaetus barbatus*.
[336] BirdLife South Africa 2014 http://www.birdlife.org.za.
[337] This is based on advance information presented by Mr M Taylor of BirdLife South Africa at a raptor conference held by the Bird of Prey Working Group of the Endangered Wildlife Trust in Phalaborwa in May 2013.
[338] They are the Hooded Vulture *Necrosyrtes monachus*; Cape Vulture *Gyps coprotheres*; White-backed Vulture *Gyps africanus*; Lappet-faced Vulture *Aegypius tracheliotos*; White-headed Vulture *Aegypius occipitalis*; Black Harrier *Circus maurus*; African Marsh Harrier *Circus ranivorus*; Bateleur *Terathopius ecaudatus*; Southern Banded Snake Eagle *Circaetus fasciolatus*; Martial Eagle *Polemaetus bellicosus*; Tawny Eagle *Aquila rapax* and Pel's Fishing Owl *Scotopelia peli*.
[339] Bearded Vulture *Gypaetus barbatus* and Taita Falcon *Falco fasciinucha*.
[340] International Workshop on Poisoning and Vultures 2014 http://www.4vultures.org/2014/05/07/ african-vultures-poison-dramatic-biodiversity-crisis-with-as-yet-uncharted-human-health-consequences 1, 4.
[341] *Gyps coprotheres*. See eg BirdLife International 2013 http://www.birdlife.org/datazone/ speciesfactsheet.php?id=3379; IUCN 2013 http://www.iucnredlist.org/details/22695225/0.
[342] Piper "Cape Vulture" 490.
[343] Simmons, Curtis and Jenkins "Black Harrier" 502.

forage widely over international boundaries and a single poisoning event in a neighbouring country could have a devastating effect on populations that breed in the Kruger National Park of South Africa, for instance.[344]

In respect of the general import and methodology of the applicable legislative and policy instruments, there is much common ground between Spain and South Africa. Like the legislation in force in Spain, South African laws protect birds of prey against the key threats of direct killing and poisoning.[345] Legislation providing for the creation of national parks and other protected areas plays an important role in the conservation of South African birds of prey.[346] South African birds of prey are protected against unlawful trade under the *CITES* Convention, although all South African raptor species, bar one, are listed in Appendix II rather than Appendix I, unlike the Spanish Imperial Eagle.[347] Unlike in Spain, South African legislation does not directly address bird of prey mortalities on electricity structures. ESKOM, the main electricity supplier of South Africa,[348] and the Endangered Wildlife Trust[349] have established a strategic partnership that mitigates this risk on a voluntary cooperative basis.[350] At the moment the work of this partnership is regarded as satisfactory, and in the shorter term legal coercion is deemed to be unnecessary and perhaps even undesirable.[351]

The most striking differences between the relevant Spanish laws and policies and the South African ones pertain to their breadth of scope and the detail they contain.

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[344] International Workshop on Poisoning and Vultures 2014 http://www.4vultures.org/2014/05/07/ african-vultures-poison-dramatic-biodiversity-crisis-with-as-yet-uncharted-human-health-consequences 4; Botha, Ogada and Virani 2012 http://www.peregrinefund.org/docs/pdf/ research-library/2012/2012-PAVS-Proceedings.pdf.

[345] See Knobel 2013 *PER/PELJ* 180-190 for an overview of applicable national and provincial legislation and 197-207 for an evaluation of these provisions in respect of the conservation of South African eagle species in particular.

[346] See Knobel 2013 *PER/PELJ* 168-169, 174, 179-180, 190 for an overview of applicable international instruments and national and provincial legislation and 192-197 for an overview of the value of South African protected areas for the conservation of South African eagle species.

[347] CITES 2013 http://www.cites.org/eng/app/appendices.php. The Peregrine Falcon *Falco peregrinus* is listed in Appendix I. Trade in the species listed in Appendix II are not subjected to quite such stringent controls as in respect of the species listed in Appendix I. See further Knobel 2013 *PER/PELJ* 169-170.

[348] ESKOM 2013 http://www.eskom.co.za.

[349] EWT 2013 http://www.ewt.org.za.

[350] EWT date unknown http://www.ewt.org.za/programmes/WEP/wep.html.

[351] Knobel 2013 *PER/PELJ* 204-205.

In respect of scope, the provisions applicable to the Spanish Imperial Eagle are clearly far more all-encompassing and holistic. The net is cast much wider to regulate aspects that remain completely unexplored terrain in South African law. Striking examples include the regulation of prey populations, intensive interventions to secure breeding success, and the prohibition of certain forms of land-use, even on private property, that may impact negatively on the Spanish Imperial Eagle.[352] In addition, the laws and policies protecting the Spanish Imperial Eagle also distinguish themselves by the depth of their detail, as shown by the examples highlighted in this contribution.[353] Furthermore, the Spanish laws are more prescriptive. A good example of this is the fact that the drafting of management plans is compulsory for the Spanish Imperial Eagle and must be reviewed by organs of state at regular intervals,[354] whereas in South Africa the applicable legislation merely allows for the discretionary or voluntary drafting of species management plans by organs of state, volunteer organisations or persons.[355] One could argue that South African conservation organisations should avail themselves of this opportunity to draft such plans,[356] but the financial burden associated with this, for instance to convene meetings of all stakeholders involved, must then be borne by the relevant non-governmental organisation[357] and is not borne by organs of state as in Spain.

When comparing the position in South Africa to that in Spain, sight must not be lost of two key aspects that place Spain in an advantageous position compared to many other jurisdictions, and certainly South Africa. First, the European Union oversees compliance with the *Birds Directive* and other directives of the European Union through the European Commission and the European Court of Justice, and second, as a member of the European Union, Spain has received considerable financial resources for conservation in general and the Spanish Imperial Eagle in particular. Realism about the capacity and funding challenges faced by conservationists and law

[352] Eg paras 5-6 above.
[353] Eg paras 5-6 above.
[354] Para 5.2 above.
[355] Knobel 2013 *PER/PELJ* 181.
[356] Knobel 2013 *PER/PELJ* 207-208. A Biodiversity Management Plan has been gazetted for the Bearded Vulture; see GN 350 in GG 37620 of 8 May 2014.
[357] The author is grateful to Mr A Botha of the Birds of Prey Programme of the EWT (EWT date unknown http://www.ewt.org.za/programmes/BoPP/bop.html) for pointing out this implication.

enforcement officials in South Africa must inform conservation planning in South Africa.[358]

Fortunately, many South African raptor species are still relatively common, and for them interventions as intensive as those on behalf of the Spanish Imperial Eagle are not needed and would constitute an inappropriate burden on the state and its citizens. However, while the populations of many raptor species may still be relatively strong in numbers, most of them show declining trends over time. To ignore these trends while there is still time to save these species would be regrettable. Ensuring that their legal protection is adequate is a good starting-point,[359] although it should ideally be a first step only and should be followed up at least by awareness campaigns to inform the citizenry about the conservation needs of these species.[360]

For other species, such as the Bearded Vulture, the Cape Vulture, and the Taita Falcon, the best available evidence suggests that time is running out.[361] If South African government organisations and non-governmental organisations had the resources and the will to mount conservation interventions on a scale similar to that of the interventions on behalf of the Spanish Imperial Eagle, and if African governments could cooperate in the conservation of African raptors in a manner similar to that of the members of the European Union in respect of the conservation of European raptors, the endangered South African species could probably be saved.

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[358] See eg EWT 2012 http://www.ewt.org.za/scientific%20publications/EWT%20Scoping%20 Report_October%202012-without%20crops_V.0.3.pdf 1.

[359] Although all bird of prey species are subject to legal protection in South Africa, there is room for improvement. Few species enjoy protection under the national legislation, and protection under the provincial legislation is not always satisfactory. To mention one example, large eagle species, such as the Verreaux's Eagle *Aquila verreauxii* and Crowned Eagle *Stephanoeatus coronatus*, may lawfully be killed by landowners, their families and persons with their permission in those provinces where the *Nature and Environmental Conservation Ordinance* 19 of 1974 (Cape) (s 27) is in force. Such species typically occur in relatively low densities and have slow reproductive rates, and while circumstances can occur where landowners may have a reason to kill such birds on their property, it is highly desirable that such killing be subjected to licencing controls by nature conservation officers. See further Knobel 2013 *PER/PELJ* 198-204.

[360] Cf eg Nijman "Javan Hawk-Eagle" 151.

[361] As will be evident from the new Red List of the Birds of South Africa, Lesotho and Swaziland. In respect of the Southern African population of the Bearded Vulture, see Krüger *et al* 2014 *Bird Conservation International* 162 *et seq*; *Biodiversity Management Plan for the Bearded Vulture* GN 350 in GG 37620 of 8 May 2014.

Knowledge of the wide diversity of interventions, legal and otherwise, on behalf of the Spanish Imperial Eagle, combined with knowledge of their effectiveness, and balanced by realism about African funding and capacity challenges, could assist conservationists and legislatures to choose the most appropriate interventions for the African species.

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LIST OF ABBREVIATIONS

CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CoP	Conference of the Parties
EBCC	European Bird Census Council
ESKOM	Electricity Supply Commission of South Africa
EWT	Endangered Wildlife Trust
IUCN	International Union for the Conservation of Nature
JEL	Journal of Environmental Law
PER/PELJ	Potchefstroomse Elektroniese Regsblad / Potchefstroom Electronic Law Journal
Raptors MoU	Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia
SEO/Birdlife	Sociedad Española de Ornitología / Birdlife
ZSL	Zoological Society of London

THE LEGAL STATUS OF THE SPANISH IMPERIAL EAGLE IN SPAIN AND THOUGHTS ON ENVIRONMENTAL LAW AND POLICY AS CONTRIBUTING FACTORS IN THE CONSERVATION OF SPECIES

JC Knobel*

SUMMARY

This contribution reflects on the contributory role of environmental law and policy in the successful conservation interventions on behalf of the rare Spanish Imperial Eagle (*Aquila Adalberti*), with the aim of gaining insights that may be more universally applicable, including in jurisdictions such as South Africa. An overview of applicable international, European and Spanish laws and policies is given, and the role played by these instruments is considered together with successes attained with diverse conservation goals in respect of the Spanish Imperial Eagle. The exceptionally comprehensive character of the legal protection of the Spanish Imperial Eagle is highlighted, in conjunction with some extra-legal factors that have contributed to successful outcomes. While quantification of the role of the law in the conservation of a species remains elusive, it is probably safe to conclude that environmental law and policy have played a vital and central role in the improvement of the conservation status of the Spanish Imperial Eagle. It is submitted that the conservation interventions on behalf of the Spanish Imperial Eagle show that concerted legal and other conservation interventions can effectively halt and reverse the decline of an endangered species. However, such interventions are onerous and expensive and ideally, effective conservation measures should be in place before populations have declined to a critical level. Birds of prey face similar threats in South Africa and Spain, and a number of South African raptor species will soon be classified as endangered. While South African biodiversity laws and policy are similar to the European and Spanish laws in general import and methodology, the South African laws and policy are more restricted in scope, less detailed and less prescriptive. When comparing the use of Spanish and South African legislation in the

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conservation of birds of prey, sight must not be lost of the varying conservation needs of different species and the unequal resources available to different jurisdictions.

KEYWORDS: Environmental law and policy; biodiversity; Spanish Imperial Eagle; *Aquila Adalberti*; bird of prey; species; endangered; conservation; international wildlife law.