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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

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APPLYING THE BERN CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS TO THE PROBLEM OF HYBRIDISATION BETWEEN WOLVES (*CANIS LUPUS*) AND DOMESTIC DOGS

- An Analysis and a Proposal for a Standing Committee's Recommendation -

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in consultation with
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1. INTRODUCTION

The aim of this report is to contribute to the clarification of the obligations of contracting parties to the Council of Europe's 1979 Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)[1] in respect of the problem of hybridisation, in particular between wild wolves (*Canis lupus*) and domestic dogs (*Canis lupus familiaris*).[2]

Of all the challenges pertaining to wolf conservation and management in Europe today, hybridisation between wild wolves and domestic dogs is a particularly intricate one.[3] It has been documented to occur in many wolf populations across the continent.[4] As regards the dimensions of the problem, studies conducted in Italy, Portugal and Spain identified evidence of introgression by domestic dog genes in over 5% of all wolf samples examined.[5] Recommendations for addressing this challenge include both preventive and mitigation measures. Preventive measures mainly concern, first, actions to reduce numbers of feral and stray (free-ranging) dogs to a minimum and, second, the prohibition or restriction of the keeping of wolves and wolf-dog hybrids as pets.[6] Mitigation involves the detection of hybrid specimens and their removal from the wild wolf population.[7]

Hybridisation affects many species besides wolves, and poses increasingly significant biodiversity conservation problems.[8] This is especially so when wild animals interbreed with domestic ones or with alien species introduced by man. The adverse effects of the "introgression" of foreign genes into original populations poses a significant threat to many populations of wild animals, and

[1] Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19 September 1979; in force 1 November 1983).

[2] This reportreport is based on, and borrows from, an unpublished research report prepared by the current author for the LCIE (A. Trouwborst, *Wolf-Dog Hybrids and European Law: Clarifying Bern Convention and EU Habitats Directive Obligations in respect of Crosses between Wild Wolves and Domestic Dogs* (2013)), as well as a peer-reviewed law journal article, A. Trouwborst, 'Exploring the Legal Status of Wolf-Dog Hybrids and Other Dubious Animals: International and EU Law and the Wildlife Conservation Problem of Hybridisation with Domestic and Alien Species', 23:1 *Review of European, Comparative & International Environmental Law* (2014), 111.

[3] See C. Vilà and R.K. Wayne, 'Hybridisation between Wolves and Dogs', 13:1 *Conservation Biology* (1999), 195; L. Boitani, *Action Plan for the Conservation of the Wolves (*Canis lupus*) in Europe*, Nature and Environment No. 113 (Council of Europe Publishing, 2000); IUCN Wolf Specialist Group, *Manifesto on Wolf Conservation* (adopted 1973, revised 2000), at paragraph 12; E. Randi and V. Lucchini, 'Detecting Rare Introgression of Domestic Dog Genes into Wild Wolf (*Canis lupus*) Populations by Bayesian Admixture Analyses of Microsatellite Variation', 3 *Conservation Genetics* (2002), 31; P. Ciucci *et al.*, 'Dew-claws in Wolves as Evidence of Admixed Ancestry with Dogs' 81 *Canadian Journal of Zoology* (2003) 2077; A. Verardi, V. Lucchini and E. Randi, 'Detecting Introgressive Hybridisation between Free-ranging Domestic Dogs and Wild Wolves (*Canis lupus*) by Admixture Linkage Disequilibrium Analysis' 15 *Molecular Ecology* (2003) 2845; L. Boitani, 'Wolf Conservation and Recovery', in: D. Mech and L. Boitani (eds.), *Wolves: Behavior, Ecology, and Conservation* (Chicago University Press, 2003), 317, at 330-331; J. Linnell, V. Salvatori and L. Boitani, *Guidelines for Population Level Management Plans for Large Carnivores*, Large Carnivore Initiative for Europe report (European Commission, 2008), at 77-78; R. Godinho *et al.*, 'Genetic Evidence for Multiple Events of Hybridisation between Wolves and Domestic Dogs in the Iberian Peninsula', 20:24 *Molecular Ecology* (2011), 5154; M. Hindrikson *et al.*, 'Bucking the Trend in Wolf-Dog Hybridisation: First Evidence from Europe of Hybridisation between Female Dogs and Male Wolves', 7:10 *PLOS ONE* (2012), 1; Large Carnivore Initiative for Europe, *A Manifesto for Large Carnivore Conservation in Europe* (2013), at 7.

[4] For some examples, and to gain an impression of the current state of the knowledge on wolf-dog hybridisation in Europe, see M. Hindrikson *et al.*, ibid.; and R. Godinho *et al.*, ibid.

[5] E. Randi and V. Lucchini, n. 3 above; P. Ciucci *et al.*, n. 3 above; A. Verardi, V. Lucchini and E. Randi, n. 3 above; and R. Godinho *et al.*, ibid.

[6] See L. Boitani, *Action Plan for the Conservation of the Wolves (*Canis lupus*) in Europe*, n. 3 above; J. Linnell, V. Salvatori and L. Boitani, n. 3 above.

[7] L. Boitani, ibid.; J. Linnell, V. Salvatori and L. Boitani, ibid.

[8] Generally, see J.M. Rhymer and D. Simberloff, 'Extinction by Hybridisation and Introgression', 27 *Annual Review of Ecology and Systematics* (1996), 83; F.W. Allendorf *et al.*, 'The Problem with Hybrids: Setting Conservation Guidelines', 16:11 *Trends in Ecology & Evolution* (2001), 613; and J. Mallet, 'Hybridisation as an Invasion of the Genome', 20:5 *Trends in Ecology & Evolution* (2005), 229.

may in some cases even lead to the genetic extinction of entire species.[9] At a European scale, one study has estimated that at least 6% of all mammal species are subject to some degree of hybridisation.[10] Examples where significant wildlife conservation problems arise from anthropogenic (human-caused) hybridisation in Europe abound. In the "wild x domestic" category these include, to name a few, interbreeding between European wildcats (*Felis silvestris*) and stray domestic cats (*Felis catus*), and between native falcon species, such as peregrine (*Falco peregrinus*) or saker falcon (*Falco cherrug*), and captive-bred hybrid falcons that have been accidentally or intentionally released into the wild. Examples from the "wild x exotic" category include hybridisation between native red deer (*Cervus elaphus*) and sika deer (*Cervus nippon*) introduced from China, and between native white-headed ducks (*Oxyura leucocephala*) and introduced American ruddy ducks (*Oxyura jamaicensis*).

From the text of the provisions in the Bern Convention, it is not immediately apparent how measures to address hybridisation relate to contracting parties' obligations, or what the position of hybrids is in relation to (strict) protection requirements for the parental wild species. It is thus desirable, especially given the influence exercised by the Bern Convention on pertinent domestic policies and regulations, to clarify the scope and substance of its provisions in respect of the hybridisation problem. The present report aims to contribute to this clarification.

Whereas the principal focus of this analysis is on wolf-dog hybrids, the findings below are to a large extent also relevant for other species. The nature of the wolf-dog problem, the measures to prevent and remedy it, and the associated legal questions, are representative of other hybridisation issues in the "wild x domestic" domain and, to a large degree, also in the "wild x exotic" domain.[11]

Such interbreeding with domestic and exotic species and other cases of anthropogenic hybridisation are widely perceived as biodiversity conservation problems. In addition, there are many cases of so-called "natural" hybridisation, involving two wild, indigenous (sub)species.[12] An apt example is hybridisation between wolves and golden jackals (*Canis aureus*), which has also been documented to occur in Europe.[13] Such natural hybridisation may or may not, depending on the circumstances and one's perspective, constitute, or be perceived as, a conservation problem.[14] The focus of the present report is restricted to anthropogenic hybridisation, the most problematic type from a conservation point of view, even if natural hybridisation also gives rise to intricate legal questions. Incidentally, there are also interesting cases where the boundaries between the two categories are blurred, for instance, when hybridisation is the consequence of the *natural* adaptation of species to *anthropogenic* climate change.[15]

The report employs standard international law research methodology. Accordingly, its aim is pursued chiefly through the identification of relevant provisions and their interpretation with respect to the hybridisation problem, using the generally applicable rules of international law regarding

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[9] See, e.g., D. Gottelli *et al.*, 'Molecular Genetics of the Most Endangered Canid – the Ethiopian Wolf *Canis simensis*', 3:4 *Molecular Ecology* (1994), 301; M.J. Daniels and L. Corbett, 'Redefining Introgressed Protected Mammals: When is a Wildcat a Wild Cat and a Dingo a Wild Dog?', 30:3 *Wildlife Research* (2003), 213; A.E. Elledge *et al.*, 'Assessing the Taxonomic Status of Dingoes *Canis familiaris dingo* for Conservation', 36:2 *Mammal Review* (2006), 142; J.A. Leonard, J. Echegaray, E. Randi and C. Vilà, 'Impact of Hybridisation with Domestic Dogs on the Conservation of Wild Canids', in: M.E. Gompper (ed.), *Free-Ranging Dogs and Wildlife Conservation* (Oxford University Press, 2013), 70

[10] See J. Mallet, n. 8 above.

[11] Very different conclusions may apply in cases of natural hybridisation between two native wild (sub)species. In such scenarios it will, furthermore, be relevant whether both species concerned are internationally protected ones, or only one of them.

[12] M. Genovart, 'Natural Hybridisation and Conservation', 18:6 *Biological Conservation* (2009), 1435; F.W. Allendorf *et al.*, n. 8 above.

[13] A.E. Moura *et al.*, 'Unregulated Hunting and Genetic Recovery from a Severe Population Decline: The Cautionary Case of Bulgarian Wolves', 15 *Conservation Genetics* (2014), 405.

[14] M. Genovart, ibid.; F.W. Allendorf *et al.*, ibid.

[15] A clear example is the recent, presumably climate-induced arrival of the originally African long-legged buzzard (*Buteo rufinus cirtensis*) as a breeding bird in Spain, where it seems prone to hybridizing with native European common buzzards (*Buteo buteo*). On the legal issues arising from this instance, see A. Trouwborst, 'Transboundary Wildlife Conservation in a Changing Climate: Adaptation of the Bonn Convention on Migratory Species and its Daughter Instruments to Climate Change', 4:3 *Diversity* (2012), 258, at 262 and 278.

interpretation. The basic rule, as codified in the Vienna Convention on the Law of Treaties,[16] is that a treaty "shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose".[17] Furthermore, account shall be taken, *inter alia*, of "any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions"; "any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation"; and "any relevant rules of international law applicable in the relations between the parties".[18] Of particular interest for present purposes is the potential influence of stated objectives ("object and purpose"), subsequent decisions adopted by treaty bodies,[19] in particular the Standing Committee of the Bern Convention, and to some extent "other relevant rules". In a context such as the present, the latter may refer to treaties such as the Convention on Biological Diversity (CBD)[20] and the Convention on Trade in Endangered Species (CITES),[21] or regional instruments such as the mountain treaty regimes concerning the Alps[22] and the Carpathians.[23] Mention should be made, finally, of the European Union (EU)'s 1992 Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive)[24] – which serves the implementation of the Bern Convention within the EU (all EU member states and the EU itself are contracting parties)[25] – and associated case law of the EU Court of Justice (ECJ).

The analysis below is structured along the lines of the distinction between "passive" species protection (system of prohibitions and exceptions) and "active" species protection (active measures which are typically, but not necessarily, part of species protection plans). Following a brief introduction of the protected status of wolves under the Convention in Section 2, active species protection is addressed in Section 3, and passive species protection in Sections 4 and 5. Concluding remarks and recommendations are set out in Section 6. Section 7 proposes a text for a Recommendation that might be considered for adoption by the Standing Committee.

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[16] Convention on the Law of Treaties (Vienna, 23 May 1969; in force 27 January 1980) ('Vienna Convention'). On treaty interpretation generally, see R. Gardiner, *Treaty Interpretation* (Oxford University Press, 2008).

[17] Vienna Convention, ibid., Article 31.1.

[18] Ibid., Article 31.3.

[19] On the potential of such decisions to serve as 'subsequent agreement' or 'subsequent practice' in the context of treaty interpretation see, e.g., R. Churchill and G. Ulfstein, 'Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law', 94:4 *American Journal of International Law* (2000), 623, at 641; J. Verschuuren, 'Ramsar Soft Law is Not Soft at All: Discussion of the 2007 Decision by the Netherlands Crown on the Lac Ramsar Site on the Island of Bonaire' (2008), found at: <http://www.ramsar.org/pdf/wurc/wurc_verschuuren_bonaire.pdf>; A. Wiersema, 'The New International Law-Makers? Conferences of the Parties to Multilateral Environmental Agreements', 31:1 *Michigan Journal of International Law* (2009), 231; M. Bowman, P. Davies and C. Redgwell, *Lyster's International Wildlife Law*, 2nd ed. (Cambridge University Press, 2010), at 46; and A. Trouwborst, 'Conserving European Biodiversity in a Changing Climate: The Bern Convention, the European Union Birds and Habitats Directives and the Adaptation of Nature to Climate Change', 20:1 *Review of European Community and International Environmental Law* (2011), 62, at 66-67.

[20] Convention on Biological Diversity (Rio de Janeiro, 5 June 1992; in force 29 December 1993).

[21] Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, DC, 3 March 1973; in force 1 July 1975).

[22] Convention on the Protection of the Alps (Salzburg, 7 March 1991; in force 6 March 1995); and Protocol on the Implementation of the Alpine Convention of 1991 Relating to the Conservation of Nature and the Countryside (Chambéry, 20 December 1994; in force 18 December 2002).

[23] Framework Convention on the Protection and Sustainable Development of the Carpathians (Kiev, 22 May 2003; in force 4 January 2006); and Protocol on Conservation and Sustainable Use of Biological and Landscape Diversity (Bucharest, 19 June 2008; in force 28 April 2010).

[24] Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora, [1979] OJ L206/7 ('Habitats Directive').

[25] On the relationship between the Bern Convention and the Habitats Directive, see Y. Epstein, 'The Habitats Directive and Bern Convention: Synergy and Dysfunction in Public International and EU Law', 26:2 *Georgetown International Environmental Law Review* (2014), 139.

2. THE LEGAL STATUS OF WOLVES UNDER THE CONVENTION

To set the stage, the current Section concisely introduces the legal regimes applicable to wolves under the Bern Convention. Depending on the contracting party concerned, the wolf is (i) a "strictly protected fauna species" under Appendix II; (ii) a "protected fauna species" under Appendix III; or (iii) neither.[26] This diversity of legal regimes is the result of thirteen contracting parties having availed themselves of the possibility to submit a reservation regarding the wolf when joining the Convention.[27]

As by default the wolf is listed on Appendix II of the Bern Convention, the first regime applies to all parties that did not submit a reservation. These parties "shall take appropriate and necessary legislative and administrative measures to ensure the *special* protection" of the wolf.[28] In similarly unequivocal terms, the Convention requires these parties to prohibit:

a) "all forms of deliberate capture and keeping and deliberate killing;

b) the deliberate damage to or destruction of breeding or resting sites;

c) the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation insofar as disturbance would be significant in relation to the objectives of this Convention;

d) (N/A);

e) *the possession of and internal trade in these animals, alive or dead, including stuffed animals and any readily recognisable part of derivative thereof, where this would contribute to the effectiveness* of the provisions of this article.[29]"

In accordance with reservations submitted by Lithuania and Spain, wolves count as Appendix III animals in respect of these countries. Therefore, these two states are under a duty to "take appropriate and necessary legislative and administrative measures to ensure the protection" (without the adjective "special") of the wolf.[30] As a consequence, the system of prescribed prohibitions as just reproduced does not apply. Any exploitation of wolves in Lithuania and Spain, however, "shall be regulated in order to keep the populations out of danger", for example through closed seasons and regulation of trade.[31]

In respect of animals from Appendices II *and* III, parties "shall prohibit the use of all indiscriminate means of capture and killing and the use of all means capable of causing local disappearance of, or serious disturbance to, populations", and in particular "the means specified in Appendix IV".[32] Snares, poisoned baits and (semi) automatic weapons figure among the prohibited items included in this fourth Appendix. The Convention allows parties to grant exemptions from the above prohibitions only when the following three cumulative conditions are met: (i) the exception is made for one of the purposes stated in Article 9;[33] (ii) there is "no other satisfactory solution"; and (iii) "the exception will not be detrimental to the survival of the population concerned".[34]

In the third set of countries alluded to above, wolves have neither Appendix II nor Appendix III status. This concerns Belarus, Bulgaria, the Czech Republic, Finland, Latvia, "the Former Yugoslav

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[26] For general analyses of the relevance of the Bern Convention for wolves and other European large carnivores, see A. Trouwborst, 'Managing the Carnivore Comeback: International and EU Species Protection Law and the Return of Lynx, Wolf and Bear to Western Europe', 22:3 *Journal of Environmental Law* (2010), 347; and Y. Epstein, 'Population Based Species Management across Legal Boundaries: The Bern Convention, Habitats Directive, and the Gray Wolf in Scandinavia', 25 *Georgetown International Environmental Law Review* (2013), 549.

[27] Bern Convention, Article 22.

[28] Ibid., Article 6 (emphasis added).

[29] Ibid.

[30] Ibid., Article 7.

[31] Ibid.

[32] Ibid., Article 8.

[33] These include, e.g., 'public health and safety', 'research and education', and the prevention of 'serious damage to crops, livestock, forests, fisheries, water and other forms of property'. Ibid., Article 9.

[34] Ibid., Article 9.1.

Republic of Macedonia", Poland, Slovak Republic, Slovenia, Turkey and the Ukraine. Under the Bern Convention,[35] these contracting parties "merely" have to conform to the general obligation of Article 2 to "maintain the population of wild fauna" – including wolves – "at, or adapt it to, a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements and the sub-species, varieties or forms at risk locally".

3. PREVENTING AND MITIGATING WOLF-DOG HYBRIDISATION

Article 6 of the Bern Convention reads as follows:

"*Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. The following will in particular be prohibited for these species: [etc]*."

It follows from the formulation of this provision that the required system of prohibitions (passive species protection) does not necessarily exhaust the obligation to take "appropriate and necessary" measures. Where it is apparent that these prohibitions alone (passive species protection) will not suffice to ensure the special protection of the species involved, it appears that the taking of additional action (active species protection) is necessary in order to comply with Article 6. Similar considerations apply to Article 7, which is applicable to the "protection" of wolves in those states where they qualify as Appendix III species. Furthermore, active measures may be essential in order to comply with the general duty in Article 2 – which applies to *all* contracting parties – to take "requisite measures to maintain the population of wild flora and fauna at, or adapt it to, a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements and the needs of sub-species, varieties or forms at risk locally".[36] The Standing Committee has confirmed in this regard that "in many instances wild species which have an unfavourable conservation status (particularly those listed in Appendix II of the Convention) may require special conservation efforts to acquire a population level which corresponds to their ecological requirements, as stated in Article 2 of the Convention".[37] Lastly, Article 3(1) instructs parties to "take steps to promote national policies for the conservation of [*inter alia*] wild fauna".

Whether and to what extent such active measures are necessary will obviously vary from species to species and from situation to situation. In addition, Articles 6 and 7 apparently leave a measure of discretion to individual contracting parties in determining what are the "appropriate and necessary" measures to ensure the (special) protection of the species involved. The same is true in respect of the "requisite measures" to maintain populations at, or adapt them to levels which correspond to ecological requirements, as required by Article 2. Similar considerations apply to Article 3. Depending on the circumstances, a party's margin of discretion in respect of the implementation of the above duties may be broader or narrower. For instance, this discretionary room will shrink if the best scientific data available clearly indicate that a particular type of conservation action is necessary. Likewise, when the Standing Committee has expressly pointed out that a specific course of action is essential for a given species in a concrete instance, then that is arguably what a contracting party involved must do to implement its obligations under the Convention in good faith – unless that party can come up with a different course of action that is demonstrably capable of achieving the same level of protection.

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[35] It should be noted that many of these states are subject to stricter protection obligations regarding wolves under the EU Habitats Directive.

[36] What the 'level' referred to in Article 2 precisely amounts to is not defined in any more detail in either the Convention or the Explanatory Report. Much will thus depend on the circumstances and the positions taken by contracting parties in each case, although it is probably safe to assume that species should at a minimum be conserved with a view to avoiding them being listed under the Red List of the International Union for Conservation of Nature (IUCN). The formulation of Article 2 also appears to suggest that conservation considerations will outweigh socio-economic ones in case of irreconcilable conflict between the two. See also M. Bowman, P. Davies and C. Redgwell, n. 19 above, at 299-300.

[37] Standing Committee Recommendation No. 59 (1997) on the Drafting and Implementation of Action Plans of Wild Fauna Species, preamble.

Depending on the circumstances, the taking of preventive and mitigation action to address hybridisation may thus be mandatory under the Convention. An example where this clearly seems to be the case involves the white-headed duck. As one of the Standing Committee Recommendations that have been adopted in respect of this species states, "the main threat to the long-term survival of the species is its hybridisation with American Ruddy Ducks *Oxyura jamaicensis* introduced in Europe".[38] The Recommendation, adopted in 2010, urges parties to "implement without delay the actions" specified in an appended Action Plan.[39] This Plan aims for the eradication of all ruddy ducks *and* hybrids between the two species in the wild by 2015 and the phasing out of all captive ruddy duck and hybrid populations by 2020, setting out various actions to achieve this.[40] This generic Action Plan is accompanied in the Recommendation by a set of specific actions recommended to certain "priority states". To pick one instance, Spain is called on to "continue its current policy to eradicate every single Ruddy Duck or hybrid detected in its territory".[41]

Whereas the wolf-dog hybridisation problem is different from the white-headed duck problem and probably not as urgent, the removal of wolf-dog hybrids is clearly in line with the Bern Convention provisions reviewed above. What is more, a good argument can evidently be made that where an obvious hybrid has been detected, efforts to remove it from the wild population must be considered mandatory. Comparable considerations apply to preventive measures concerning captive wolf-dog hybrids and the control of feral and stray dogs. To what extent these measures are to be considered obligatory will again depend on the circumstances.

Hybridisation is addressed to some degree in the Bern Convention Action Plan for Wolves adopted in 2000. The Plan cites feral and stray dogs as "a danger for the wolf" on account of the risk of hybridisation.[42] According to the Plan, "it appears necessary to remove these feral and stray dogs".[43] It calls for law reform, where needed, to achieve this. Also, the keeping of wolf-dog hybrids as pets "should not be allowed anymore and crossbreeding should be discouraged".[44] As regards mitigation, the Action Plan draws attention to the difficulty of identifying hybrids in the wild, but proposes their removal in case of such identification.[45] The Standing Committee has declared that it considers the actions proposed in the Plan as "guidelines for competent national authorities".[46] In a 2012 Recommendation on "large carnivores" populations in Europe requesting special conservation action, the Standing Committee specifically focused on the wolf-dog hybridisation problem in Italy.[47] The Recommendation calls on Italy to pursue "efforts to control hybrids, drafting and implementing a strategy aimed to reduce progressively the genetic pollution affecting wolf in Italy".[48]

Furthermore, detailed guidance is contained in the LCIE's "Policy Support Statement" entitled "Response to hybridisation between wild wolves and domestic dogs", which is annexed to the Guidelines for Population Level Management Plans for Large Carnivores ("Carnivore Guidelines").[49] The Carnivore Guidelines received a measure of endorsement by the Standing Committee in 2008.[50]

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[38] Standing Committee Recommendation No. 149 (2010) on the Eradication of the Ruddy Duck (*Oxyura jamaicensis*) in the Western Palaearctic, preamble.
[39] Ibid., at paragraph 1.
[40] Ibid., Appendix.
[41] Ibid., at paragraph 5.
[42] L. Boitani, *Action Plan for the Conservation of the Wolves (*Canis lupus*) in Europe*, n. 3 above, at paragraph 4.7.5.
[43] Ibid.
[44] Ibid., at paragraph 4.7.6.
[45] Ibid.
[46] Standing Committee Recommendation No. 74 (1999) on the Conservation of Large Carnivores, Preamble.
[47] Standing Committee Recommendation No. 162 (2012) on the Conservation of Large Carnivores Populations in Europe Requesting Special Conservation Action.
[48] Ibid., at paragraph 2.
[49] See J. Linnell, V. Salvatori and L. Boitani, n. 3 above, at 77-78.
[50] Standing Committee Recommendation No. 137 (2008) on Population Level Management of Large Carnivore Populations.

The guidance concerned includes the following:

- *Everything possible should be done to minimise the risk of hybridisation between wolves and dogs. This requires that the keeping of wolves and wolf-dog hybrids as pets be prohibited, discouraged, or at least carefully regulated, and that strong actions be taken to minimise the numbers of feral and stray dogs.*
- *Everything practically possible should be done to remove obvious hybrids from the wild should such an event occur and be detected. In reality this will be most effectively achieved through lethal control, as the chances of selectively live capturing all the specific members of a hybrid pack are minimal. Furthermore, the welfare issues associated with keeping wildborn hybrids in captivity must be considered – as it is almost inevitable that they will be captured after the period when they can potentially be socialised towards humans.*
- *It is important that management authorities clarify their legislation concerning the legal status of wild-born wolf-dog hybrids. Their management status should be such that they receive the same legal status as wolves from hunters and the public in order to close a potential loophole for the irregular killing of wolves – but such that they can be effectively removed under special license by carefully trained government appointed wardens when necessary. [..]*
- *When removing potential hybrids from the wild it is crucial that all staff are familiar with the physical characteristics of wolves and hybrids, and that great care be taken to not kill pure wolves by mistake. A clear set of criteria should be decided in advance. From experience F1 hybrids can generally be recognised based on morphological criteria – but later generations may be difficult to detect – even with genetic methods. In cases where identity is unclear, it is possible to collect scats and have them DNA tested before making a management decision.*[51]

As regards the legal status of wild-born wolf-dog hybrids it is worth highlighting that the LCIE Statement stresses that these should "receive the same legal status as wolves" so as to "close a potential loophole for the irregular killing of wolves", while at the same time ensuring the effective removal of such hybrids "under special license by carefully trained government appointed wardens when necessary". This important aspect is discussed in further detail in Section 4 below, which deals with passive protection requirements.

The LCIE Statement also draws attention to the need for as much clarity as possible regarding what is, and what is not, to be understood as a "hybrid" in the present setting. This is crucial from a practical management perspective, and equally crucial in order to achieve an effective and consistent application of the active and passive species protection requirements imposed by the Convention. The only[52] pertinent guidance encountered in relevant international legal instruments is a description in a Resolution on hybrids adopted by the CITES Conference of the Parties (COP) in order to close a legal loophole in the system set up under this Convention to protect species from adverse impacts of international trade.[53] The Resolution stipulates that "hybrid animals that have in their recent lineage one or more specimens of species included in Appendix I or II shall be subject to the provisions of the Convention just as if they were full species, even if the hybrid concerned is not specifically included in the Appendices".[54] The Resolution adds that "as a guideline, the words 'recent lineage', as used in this Resolution, shall generally be interpreted to refer to the previous four generations of the lineage".[55] Applied to the current context of wolf-dog crosses, the term "hybrids" would thus cover dogs "that have in their recent lineage one or more specimens" of wolf – with "recent lineage" roughly understood as "the previous four generations of the lineage".[56] The application of this or a similar criterion could be of some use in the passive species protection context, to determine which free-ranging "dogs with wolf blood" would still fall under the strict species protection rules, and which would not. This is discussed in Section 4 below. The same criterion is less useful, however, in the active species protection context, where the main concern is countering the introgression of domestic dog genes into wolf populations. Hence, the converse question is more urgent, i.e., which "wolves

[51] Ibid.
[52] No guidance on hybridisation could be identified in any of the Decisions adopted hitherto by the CBD COP.
[53] CITES Resolution Conf. 10.17 (Rev. CoP14) on Animal Hybrids (1997/2007).
[54] Ibid., operative part under (a).
[55] Ibid., operative part under (d).
[56] CITES Resolution Conf. 10.17 (Rev. CoP14), n. 53 above, operative part under (a) and (d).

with dog blood" count as "hybrids" and should therefore be removed from the wild population. From the latter perspective, it would probably be most appropriate, in line with evolving scientific insights,[57] to adopt an *ad hoc* definition of hybrids incorporating genetics and morphology, whereby any wolf-like animal that can be proven (genetically) to have certain dog genes and/or (morphologically) to have certain physical dog characteristics, is considered a "wolf-dog hybrid".

In summary, addressing hybridisation through preventive and mitigation measures, including the removal of hybrid specimens from the wild, is in conformity with the obligations of parties under the Bern Convention, and may indeed be essential in order to comply with those obligations.[58] It is important to signal that this conclusion applies regardless of one's interpretation concerning the legal status of hybrids in respect of *passive* protection requirements, discussed below. The development of formal guidance containing further clarification regarding the role of active protection requirements in addressing wolf-dog hybridisation is highly desirable.

Although a comprehensive analysis of national practice is beyond the scope of the present report, a few domestic examples are considered here for illustrative purposes. The Management Plan of Saxony (Germany) takes the following position regarding free-ranging wolf-dog hybrids: "For species protection reasons, the removal of hybrids from the population is called for".[59] Also in Finland, addressing wolf-dog hybridisation is formal policy. The national Management Plan for wolves states: "The Finnish wolf population will be kept genetically pure. Wolf-dog hybrids and feral dogs running in packs with wolves will be removed from the population".[60] Finally, one of the "necessary actions" set out in the Estonian Action Plan for large carnivores is that when any wolf-dog hybrids are detected, the "state takes action for removing them from nature".[61]

4. WOLF-DOG HYBRIDS AND THE STRICT PROTECTION OF WOLVES: CLOSING A POTENTIAL LEGAL LOOPHOLE

Domestic dogs clearly do not classify as "wild fauna", and obviously do not figure in either of the Bern Convention's appendices. The Explanatory Report to the Convention emphasises with respect to the Convention's scope that the use of "[t]he word 'wild' before flora and fauna is meant to exclude animals or plants stemming from bred or cultivated stocks".[62] The Bern Convention's generic species protection duties reviewed in Section 2 above, thus clearly do not apply to dogs. They do apply to wolves – although arguably not to wolves born and raised in captivity. None of the above or other provisions in the Convention, however, make clear to what extent those duties apply in respect of (wild-born, free-ranging) *hybrids* between wolf and dog. Neither has any express guidance on this count been provided in the Explanatory Report or, hitherto, by the Standing Committee.

The principal question to be answered here in respect of the Bern Convention is whether or not wild-born hybrid specimens must be considered subject to the protection requirements in respect of wolves in those countries where the special protection regime of Article 6 applies, in particular the

[57] See, e.g., M.J. Daniels *et al.*, 'Morphological and Pelage Characteristics of Wild Living Cats in Scotland: Implications for Defining the "Wildcat"', 244:2 *Journal of Zoology* (1998), 231; M.J. Daniels *et al.*, 'Ecology and Genetics of Wild-living Cats in the North-East of Scotland and the Implications for the Conservation of the Wildcat', 38 *Journal of Applied Ecology* (2001), 146; and M.J. Daniels and L. Corbett, n. 9 above.

[58] Similar conclusions apply to EU member states in respect of their obligations under the Habitats Directive; see A. Trouwborst, n. 2 above.

[59] Staatsministerium für Umwelt und Landwirtschaft der Freistaates Sachsen, *Managementplan für den Wolf in Sachsen* (2009), at 26 (author's translation; the original reads: 'Aus Artenschutzgründen ist eine Entfernung von Hybriden aus der Population geboten').

[60] Finnish Ministry of Agriculture and Forestry, *Management Plan for the Wolf Population in Finland* (2005), at 54.

[61] P. Männil and R. Kont, *Action Plan for Conservation and Management of Large Carnivores (Wolf* Canis lupus, *Lynx* Lynx lynx, *Brown Bear* Ursus arctos*) in Estonia in 2012-2021* (2012), at 96.

[62] *Ad Hoc* Committee for the Protection of Wildlife, Explanatory Report Concerning the Convention on the Conservation of European Wildlife and Natural Habitats (Council of Europe, 1979), paragraph 18. This document was written by the *ad hoc* committee that drafted the text of the Convention. It contains explanations that can contribute to a proper understanding of the treaty text, although the Report is expressly not to be regarded as an authoritative interpretation source. Ibid., paragraph II.

prescribed prohibitions of killing and capturing. The answer to this question is of evident importance both from a legal and from a practical management point of view.

As hinted at above, textual interpretation of the Convention does not provide the answer. The Convention does not state clearly that hybrids living in the wild are covered by the prescribed prohibitions. Conversely, the Convention does not state in so many words either that the scope of these prohibitions is restricted to 100% genetically pure specimens of the species involved.

Evidently, the purpose of the Convention is to conserve (*inter alia*) wolves, not to conserve wolf-dog hybrids – quite the contrary. An interpretation that would, at first sight, appear to conform to this state of affairs, would be to consider hybrids as *not included* within the scope of the strict protection requirements. That the drafters of the Convention did not expressly include hybrids within this scope might be taken as an indication that they did not intend for them to be covered, although this is not certain.

Other than that, there is little to support this interpretation, however. The research conducted for this report did not, in any case, yield any concrete indications in support of this interpretation in guidance adopted by the Standing Committee or in other international legal instruments. What is more, interpreting the protection requirements' scope as limited to genetically pure wolves is clearly problematic. Indeed, if such an interpretation were correct, wolves with even the tiniest fraction of domestic dog DNA would be excluded from protection – an apparently untenable position. A comparison with the Przewalski's horse (*Equus przewalskii*) can serve to illustrate this point.[63] Whereas it is known that a degree of hybridization with the domestic horse (*Equus caballus*) is prevalent throughout the entire population of this species,[64] this has not stood in the way of its legal protection, including under international wildlife instruments – the Przewalski's horse is listed in CITES Appendix I.

An alternative interpretation, that is not prone to this problem, is to consider wild-born, free-ranging hybrids as *included* within the scope of the special protection requirements of Article 6. Notably, this interpretation starts from the same basis as the previous interpretation, namely the purpose of the Convention to protect wild fauna, in this case wild wolves. The subsequent reasoning, however, is different, and produces a different outcome. A good example of this reasoning can be found in the LCIE Policy Support Statement on hybridisation, already cited in Section 3 above.[65] The statement expressly pleads for wolf-dog hybrids to receive "the same legal status as wolves from hunters and the public in order to close a potential loophole for the irregular killing of wolves".[66] Indeed, if hybrids were to be considered legally unprotected, it is easy to see how this could lead to increased killing of wolves, given the difficulty of distinguishing hybrids from genetically "pure" wolves. This might involve not only accidental but also intentional killing, as the unprotected status of hybrids might be used as a cover for killing actual wolves. (Whether the defense "I thought I was shooting a hybrid" is used in good faith or not makes little difference to the outcome.) Besides, and related to this, if hybrids were to be considered unprotected, this could pose a serious obstacle for the prosecution of people for the illegal killing of wolves, given the applicable standards of proof in criminal proceedings. Haig and others have described this same problem in the context of the United States Endangered Species Act (ESA) with regard to the spotted owl (*Strix occidentalis*):

> *Lack of specific legal protection for hybrids under the ESA may constitute an indirect threat for Spotted Owls and other listed species with similar hybrid issues. Presently, without reliable molecular markers, individuals involved in killing (i.e., "take" defined in*

[63] See also F.W. Allendorf *et al.*, n. 8 above, at 618.
[64] One of the thirteen founding animals of the current Przewalski's horse population was a domestic horse mare. See O.A. Ryder, 'Genetic Studies of Przewalski's Horses and their Impact on Conservation', in: L. Boyd and K.A. Houpt (eds.), *Przewalski's Horse* (State University New York Press, 1994), 75.
[65] J. Linnell, V. Salvatori and L. Boitani, n. 3 above.
[66] Ibid., at 78.

ESA section 2) a Spotted Owl may escape prosecution under the ESA by claiming that the bird in question was a hybrid when in fact it was a Spotted Owl.[67]

Recently, in Germany, a hunter was prosecuted who had shot a wolf, allegedly because he took it for a dog when he pulled the trigger. In court, his lawyer actually argued – unsuccessfully, in the end – that the animal was a hybrid and therefore unprotected.[68]

It can thus clearly be held that the scope of the special protection requirements laid down in Article 6 of the Bern Convention, when viewed in light of the objective of effective wild fauna conservation, should be interpreted as including wolf-dog hybrids living in the wild. As the United Nations International Law Commission has stated in this regard:

When a treaty is open to two interpretations one of which does and the other does not enable the treaty to have appropriate effects, good faith and the objects and purposes of the treaty demand that the former interpretation should be adopted.[69]

There is, moreover, further evidence to indicate that this second interpretation is the superior one.

First, in terms of non-binding but indicative guidance, it is of some significance that the Carnivore Guidelines, to which the LCIE Policy Support Statement on hybrids cited above is annexed, have received a measure of endorsement by the Standing Committee.[70] An additional, more indirect pointer is contained in the European Action Plan for Wolves that was adopted by the Standing Committee in 2000.[71] Its section on hybridisation does not expressly address the legal status of wolf-dog hybrids. It does, however, contain a warning of a familiar kind when discussing the control of feral and stray dogs: "It is not acceptable to allow everybody to kill these dogs because wolves will be also killed (for example if shepherds were allowed to do it)".[72] If this risk already exists in respect of feral dogs, then all the more so in respect of wolf-dog hybrids.

Second, it is instructive to draw a parallel with another international legal instrument, CITES. The purpose of this global wildlife treaty is to protect wild flora and fauna from adverse impacts resulting from international trade. To ensure the effective protection of the wild species involved, which are listed in appendices to the Convention, and to avoid loopholes in the system of protection, the CITES COP has adopted a common interpretation regarding the position and treatment of hybrids, i.e., crosses between species protected under the Convention and other species.[73] The reasoning behind the COP Resolution in question is that "trade in hybrids of species included in the Appendices should be controlled in order to support the controls on trade in the species included in Appendices I and II".[74] To that end, as already stated in the previous Section of this report, the COP decided that "hybrid animals that have in their recent lineage one or more specimens of species included in Appendix I or II shall be subject to the provisions of the Convention just as if they were full species, even if the hybrid concerned is not specifically included in the Appendices".[75] The COP provided a rough definition of what is to be understood as a hybrid in this context, by indicating that "as a guideline, the words 'recent lineage', as used in this Resolution, shall generally be interpreted to refer to the previous four generations of the lineage".[76]

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[67] S.M. Haig *et al.*, 'Genetic Identification of Spotted Owls, Barred Owls, and their Hybrids: Legal Implications of Hybrid Identity', 18:5 *Conservation Biology* (2004), 1347, at 1355.
[68] Amtsgericht Montabaur, Pressemeldung: Strafprozess um Getöteten Wolf im Westerwald (17 January 2013); C. Schultz, 'Erschossener Wolf: Jäger Muss 3500 Euro Strafe Zahlen', *Hamburger Abendblatt* (17 January 2013).
[69] Yearbook of the International Law Commission, Volume II (UN Doc. A/CN.4/SER.A/1966/Add.l, 1966), at 219.
[70] Standing Committee Recommendation No. 137, n. 50 above.
[71] See L. Boitani, *Action Plan for the Conservation of the Wolves (*Canis lupus*) in Europe*, n. 3 above.
[72] Ibid., at paragraph 4.7.5, under (a).
[73] CITES Resolution Conf. 10.17 (Rev. CoP14) on Animal Hybrids (1997/2007).
[74] Ibid., preamble.
[75] Ibid., operative part under (a).
[76] Ibid., operative part under (d).

Third, it is instructive to consider the case law of the EU Court of Justice (even if the Court's jurisdiction is limited to EU law), in which the Court has adopted an approach similar to the one taken by the CITES parties and in the LCIE Policy Support Statement. Although the Court has not expressly addressed the issue of hybridisation, there is an apparent parallel between the above reasoning concerning the legal status of wolf-dog hybrids and the reasoning of the Court in a case regarding the protection of bird subspecies. In this judgment, the Court adopted a similarly expansive interpretation of the scope of protection provisions from the EU Wild Birds Directive,[77] in order to avoid uncertainties and potential weakening of the protection offered to birds by those provisions.[78] This concerned the question whether subspecies which naturally occur exclusively *outside* Europe are still protected under the Directive if the species involved is covered by the Directive. The Court concluded that they are.[79] "[I]f the scope of the Directive were to be limited to those subspecies which occur within European territory and did not extend to non-European subspecies", so the Court held, it would be "difficult to implement the Directive in the Member States, which would in turn 'run counter to the aim of providing effective protection for European avifauna".[80] Of course, that such non-European subspecies are covered by the required prohibitions means just that. It clearly does *not* mean that EU member states are under an obligation to achieve a favorable conservation status or similar objective for such non-European subspecies. (That would indeed be absurd, given the absence in the wild within their territories of the subspecies involved.) Likewise, considering wolf-dog hybrids as being covered by the Bern Convention's passive species protection requirements means just that. It evidently does *not* entail an obligation (for instance under Article 2) to achieve a particular conservation status for wolf-dog hybrids – quite the contrary.

Taken together, the above considerations appear to lead to the conclusion that the scope of the passive protection requirements laid down in Article 6 of the Convention is to be understood as *including* wild-born wolf-dog hybrids. In particular, Bern Convention contracting parties where wolves have Appendix II status, must be deemed to be under a legal duty to prohibit the killing, capturing, etc., of wolves *and* of free-ranging wolf-dog hybrids within their respective jurisdictions, and to enforce these prohibitions. Whereas taken in isolation this position may come across as counter-intuitive – similar to the protected status of non-European subspecies under the Birds Directive and of hybrids under CITES – the closer inspection above appears to leave little room for a different conclusion.[81]

Whereas the above analysis plainly points to this second interpretation as the most plausible, certainty as to whether this is indeed the correct interpretation will not exist until the Standing Committee takes an express position on the issue. One obvious recommendation flowing from the above is for the Standing Committee to do so, by adopting a Recommendation clarifying the implications of the Bern Convention with regard to (wolf-dog) hybridisation, as it has done in the past regarding other issues.[82] An essential element of any such guidance would be the description of what is to be understood as a (wolf-dog) "hybrid".

Even though *national* laws and policies are evidently not to be considered solid indicators concerning the correct interpretation of *international* rules, it is nonetheless interesting to investigate and compare how (wolf-dog) hybrids are currently treated in the relevant domestic legislation of states parties. In the Netherlands' Flora and Fauna Act, to consider one instance, "hybrids" are expressly encompassed within the definition of the term "species" – a clarification that has been included in the

[77] Directive 2009/147/EC of 30 November 2009 on the Conservation of Wild Birds, [2010] OJ L20/7.
[78] ECJ, Case C-202/94, *Van der Feesten*, [1996] ECR I-355.
[79] From the Directive's overall objective and the use of the term 'species', the Court deduced that 'if a subspecies occurs naturally in the wild in the European territory of the Member States to which the Treaty applies, the species to which the subspecies belongs must be considered to be a European species and, consequently, all the other subspecies of the species in question, *including those which are not European*, will be covered by the Directive'. Ibid., at paragraph 12 (emphasis added).
[80] Ibid., at paragraph 16.
[81] A similar conclusion applies in respect of the EU Habitats Directive; see A. Trouwborst, n. 2 above.
[82] See, e.g., Standing Committee Recommendation No. 142 (2009) Interpreting the CBD Definition of Invasive Alien Species to Take into Account Climate Change.

Act to comply with CITES requirements.[83] This entails that any wolf-dog hybrids in the Netherlands would fall within the scope of the strict protection provisions applicable to "pure" wolves. In Germany, to give another example, hybrids similarly benefit from the same strictly protected status as wolves under the Federal Nature Conservation Act (*Bundesnaturschutzgesetz*), with the specification that this applies to hybrids up to the fourth generation (a criterion again apparently instigated by the CITES approach discussed above).[84] The Action Plan applicable to large carnivores in Estonia, finally, notes a need to clarify the legal status of wolf-dog hybrids in relevant domestic legislation, and proposes in this regard that "wolf-dog hybrids are equalised to wolf".[85] A more comprehensive inventory of national legislation is, unfortunately, beyond the scope of the present report.

By way of clarification, even if the Standing Committee were to endorse an interpretation whereby wild-living hybrids are *excluded* from the scope of the applicable passive species protection requirements under the Bern Convention – despite the apparent problems inherent in such an interpretation – this would ostensibly *not* preclude contracting parties from prohibiting the killing and capturing of (wolf-dog) hybrids under national law. It would only mean that such national prohibitions are not *explicitly* required by the Convention, even if an *implied* obligation to do so may still exist (for the latter, see Section 3 above.) In other words, such prohibitions are compatible with states' obligations under the Convention, regardless of which of the two interpretations discussed above is correct.

Besides, it is important to stress that the application of the special protection regime of the Bern Convention to wild-born wolf-dog hybrids – i.e., the second interpretation – does *not* stand in the way of the government-controlled removal of such hybrids from the wild, which may indeed be *mandatory* under the same Convention (see Section 3 above). It does entail that such removal requires the issuing of derogations from strict protection on a case-by-case basis. This is discussed in the next Section.

5. REMOVING WOLF-DOG HYBRIDS: DEROGATING FROM STRICT PROTECTION

As concluded above, it appears that wolf-dog hybrids living in the wild are to be considered as *within* the scope of the prohibitions required under Article 6 of the Bern Convention. In countries where this provision applies to wolves, removing a hybrid specimen from the wild population – whether by killing or capturing it – would thus require a derogation ex Article 9 of the Convention. Notably, the *active* protection requirements flowing forth from Article 6 of the Convention may thus require parties to derogate from the *passive* protection duties arising from the very same provision. (This state of affairs is not unique for the current context. Other apparent examples include the elimination of rabid wolves and the temporary capture of wolves for monitoring purposes.)

The question needs to be considered, therefore, how the removal of wolf-dog hybrids from the wild relates to the criteria for derogations from strict protection laid down in Article 9 of the Convention. This provisions sets out three conditions, all of which must be met for a derogation to be permissible:

(a) the derogation is made for one of the purposes stated in Article 9;

(b) there is "no other satisfactory solution"; and

(c) the derogation will "not be detrimental to the survival of the population concerned".

Regarding condition (a), the purpose of removing any detected wolf-dog hybrids from the wild will generally be to serve the interest of the wild wolf population itself. It appears that such derogations could legitimately be based on the first mentioned option in Article 9, which allows for derogations "for the protection of … fauna".[86] One may also imagine circumstances where a wolf-dog

[83] Wet van 25 mei 1998 houdende Regels ter Bescherming van in het Wild Levende Planten- en Diersoorten (*Staatsblad* 1998, 402), Article 1.2.
[84] See, e.g., LANA, *Vollzugshinweise zum Artenschutzrecht* (version November 2010), at 28-29; and Staatsministerium für Umwelt und Landwirtschaft der Freistaates Sachsen, n. 59 above, at 26.
[85] Männil and Kont, n. 61 above, at 86.
[86] Bern Convention, Article 9.1.

hybrid would be removed primarily because of some sort of problematic behaviour displayed by it. As the LCIE Policy Support Statement reports, there is reason to believe that free-ranging wolf-dog hybrids "will show more undesirable behaviours than pure wolves because of their inferior adaptation", including a "greater tendency than pure wolves to attack livestock and demonstrate bold behavior".[87] In such cases, the derogation could be based rather on the grounds of the avoidance of serious damage to livestock, or the interest of "public safety".[88]

Condition (b) may influence the *means* employed for removing specific hybrids from the wild. In particular, the question could arise whether capture would be a satisfactory alternative for killing the animal(s) involved. According to the LCIE Statement in the Carnivore Guidelines, this is likely to be doubtful. It states that removal of wolf-dog hybrids "will be most effectively achieved through lethal control, as the chances of selectively live capturing all the specific members of a hybrid pack are minimal".[89] This may be different in the case of a lone hybrid, although the consideration that wild-born hybrids should not be kept in captivity for animal welfare reasons may plead in favour of the lethal option in either case.[90] Condition (b) is, in any event, unlikely to affect the removal of hybrids from the wild *as such*.

Condition (c), finally, is likewise unlikely to stand in the way of derogations to eliminate wolf-dog hybrids. After all, the latter's removal is generally understood to benefit rather than worsen the conservation status of the wolf population concerned – which is in most cases precisely why hybrids *are* removed.

It is inherent to the system of strict protection under the Bern Convention that every single purported derogation must be put to the test of the aforementioned three conditions. The above analysis clearly demonstrates, however, that none of these conditions is likely to pose an obstacle to the removal of detected wolf-dog hybrids from the wild.[91] Selected instances from the domestic sphere appear to confirm this. To follow up on the German and Finnish examples considered previously, in both countries the removal of hybrid specimens by competent persons under special authorisation is standard policy.[92]

Incidentally, derogations may also, under the same three conditions, be issued to enable the use of otherwise prohibited means for the killing or capturing of wolf-dog hybrids.[93]

6. CONCLUSIONS AND RECOMMENDATIONS

The above analysis of the scope and substance of relevant legal obligations under the Bern Convention in respect of the problem of wolf-dog hybridisation renders several main conclusions. (Incidentally, what these conclusions entail with regard to wolf-dog hybrids will also be applicable to many other cases of anthropogenic hybridisation, both involving domestic and alien species.)

First, addressing hybridisation through preventive and mitigation measures – including, in the wolf-dog context, measures addressing feral and stray dogs and captive hybrids, and the removal of hybrid animals from the wild – is in conformity with the generic species protection obligations of contracting parties under the Bern Convention, and may indeed be essential in order to comply with those obligations. These conclusions apply regardless of one's position concerning the legal status of hybrids with regard to passive protection requirements.

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[87] J. Linnell, V. Salvatori and L. Boitani, n. 3 above, at 77.
[88] Bern Convention, Article 9.1.
[89] J. Linnell, V. Salvatori and L. Boitani, n. 3 above, at 77.
[90] Ibid.
[91] Similar considerations apply in respect of the EU Habitats Directive; see A. Trouwborst, n. 2 above.
[92] Staatsministerium für Umwelt und Landwirtschaft der Freistaates Sachsen, n. 59 above, at 26; Finnish Ministry of Agriculture and Forestry, n. 60 above, at 54.
[93] In EU member states derogations may *not* be made, however, to allow for the use of leghold traps, as the latter is categorically prohibited in an EU Regulation lacking a derogation clause: Regulation 3254/91 of 4 November 1991 Prohibiting the Use of Leghold Traps in the Community and the Introduction into the Community of Pelts and Manufactured Goods of Certain Wild Animal Species Originating in Countries which Catch Them by Means of Leghold Traps or Trapping Methods which Do not Meet International Humane Trapping Standards, [1991] OJ L308/1, Article 2.

Second, it appears that the scope of the passive protection requirements laid down for wolves in Article 6 of the Convention is to be understood as *including* wolf-dog hybrids living in the wild. In particular, contracting parties where wolves have Appendix II status must be deemed to be under a legal duty to prohibit the killing and capturing of such hybrids within their respective jurisdictions, and to enforce these prohibitions. The same is true in respect of other strictly protected species. The principal alternative interpretation, whereby said hybrids would be considered as *excluded* from the scope of these prohibitions, is prone to several problems of both a fundamental and a practical nature, affecting the Convention's objectives and effective application with regard to wolves.

Third, assuming that the interpretation of hybrids as covered by the prescribed prohibitions is correct, where the special protection regime of the Convention applies, the removal of hybrids from the wild may only take place when the three conditions for derogations from strict protection under Article 9 are fulfilled. This is to be evaluated on a case-by-case basis. Generally speaking, however, such removal appears compatible with all three conditions.

The central recommendation flowing from the above analysis is for the Standing Committee of the Convention to follow the example of the CITES COP by adopting express guidance concerning hybridisation, in order to remove ambiguity and promote a uniform application of the Bern Convention regarding this issue. Specifically, it is recommended to clarify the position of (wolf-dog) hybrids under the Convention, and of measures to address hybridisation, along the lines of the above analysis. An essential ingredient of such clarification would be the adoption of a definition or common understanding of the term "wolf-dog hybrid". In Section 7 below, a text is provided that might serve as a starting point for the drafting of a Recommendation for adoption by the Standing Committee.

A further recommendation is for additional research to take place into the domestic practice of the many states parties involved, *inter alia* to gain a better understanding of the degree to which such practice currently conforms to the interpretations set out in the present analysis.

7. PROPOSAL FOR A STANDING COMMITTEE RECOMMENDATION

COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

Convention on the Conservation
of European Wildlife and Natural Habitats

Standing Committee

Draft Recommendation No. .. (2014) of the Standing Committee, adopted on … December 2014, on hybridisation between wild wolves (*Canis lupus*) and domestic dogs (*Canis lupus familiaris*)

The Standing Committee to the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the Convention,

Having regard to the aims of the Convention to conserve wild flora and fauna and its natural habitats;

Recalling in particular Articles 2, 3, 6 and 7 of the Convention;

Recalling its Recommendations No. 74 (1999) on the conservation of large carnivores, No. 82 (2000) on urgent measures concerning the implementation of action plans for large carnivores in Europe, No. 115 (2005) on the conservation and management of transboundary populations of large carnivores, No. 137 (2008) on population level management of large carnivores populations, No. 162 (2012) on the conservation of large carnivores populations in Europe requesting special conservation action, and No. 163 (2012) on the management of expanding populations of large carnivores in Europe;

Recalling also the "Action Plan for the Conservation of the Wolves (*Canis lupus*) in Europe" ["Nature and Environment Series" No. 113] and the "Guidelines for Population Level Management Plans for Large Carnivores" [document T-PVS/Inf(2008)17];

Aware of the challenges posed to the conservation of wolves (*Canis lupus*) by hybridisation between wild wolves and domestic dogs (*Canis lupus familiaris*);

Noting the need to address these challenges through effective preventive and mitigation measures, including the detection of free-ranging wolf-dog hybrids and their government-controlled removal from wild wolf populations;

Noting, at the same time, that it is in the interest of effective wolf conservation to accord free-ranging wolf-dog hybrids a similar level of protection from the general public as wolves – given *inter alia* the difficulty of distinguishing between wolves and wolf-dog hybrids – and to ensure that the removal of any detected wolf-dog hybrids is conducted exclusively in a government-controlled manner;

Noting that the national legislation of several Contracting Parties already accords free-ranging wolf-dog hybrids a similar level of protection as wolves;

Mindful of the approach to hybrids taken under the Convention on Trade in Endangered Species of Wild Fauna and Flora (CITES), in particular CITES Resolution Conf. 10.17 (Rev. CoP14) on Animal Hybrids;

Defining, for the purposes of the implementation of this recommendation, the term 'wolf-dog hybrid' as meaning a wild living animal with both wolf and dog ancestry which can be confirmed by the current taxonomic techniques (using both morphological and genetic features);

Noting that this recommendation aims, *inter alia*, to clarify the meaning of Article 6 of the Convention with regard to wolf-dog hybrids, and not of Article 4 concerning habitat protection;

Wishing to clarify the meaning of the provisions of the Convention in respect of the problem of wolf-dog hybridisation,

Recommends the Contracting Parties to the Convention to:

1. Take adequate measures to monitor, prevent and mitigate hybridisation between wild wolves and dogs, including, as appropriate, effective measures to minimise numbers of feral and stray (free-ranging) dogs, and the prohibition or restriction of the keeping of wolves and wolf-dog hybrids as pets;
2. Take action to promote the detection of free-ranging wolf-dog hybrids, and to ensure government-controlled removal of detected wolf-dog hybrids from wild wolf populations;
3. Interpret the prohibitions prescribed in the second sentence of Article 6 of the Convention as covering not only wild wolves but also free-ranging wolf-dog hybrids, in order to ensure an effective system of protection for wolves;
4. Where wolves are subject to special protection pursuant to Article 6 of the Convention, correspondingly accord free-ranging wolf-dog hybrids a similar level of protection under national legislation as wolves from killing, capturing and the other acts prohibited in Article 6, without prejudice to the careful government-controlled removal of detected wolf-dog hybrids from wild wolf populations.

Footnote: Reminder of prohibitions under second sentence of Article 6

The following will in particular be prohibited for these species:

a all forms of deliberate capture and keeping and deliberate killing;
b the deliberate damage to or destruction of breeding or resting sites;
c the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention;
d the deliberate destruction or taking of eggs from the wild or keeping these eggs even if empty;
e the possession of and internal trade in these animals, alive or dead, including stuffed animals and any readily recognisable part or derivative thereof, where this would contribute to the effectiveness of the provisions of this article.