

Sciurus Carolinensis goes to Europe. A Case Study of Italy's legal management of invasive alien species.

GIULIA PETRACHI*

Abstract: The last decades have seen a notable growth in the number of legal sources dealing with the matter of biodiversity at large. Most of the time, the main concern in issues regarding environmental protection revolves around the harm that human beings can cause to ecosystems. As a matter of fact, the management of invasive alien species is concerned with the damages that flora and fauna subjects can cause to an ecosystem. This paper describes the development that took place in the management of invasive alien species at a European Union level, with an eye to the reflection it had at a national level, by analyzing the case of the *Sciurus Carolinensis* and its invasion of Italy. The paper can be of interest to several different targets. Indeed, the jurisprudential evolution in the field of allochthonous species is fairly new and papers that pronounce on the matter are still fairly rare.

Keywords: invasive alien species, *Sciurus Carolinensis*, Italian law, threatened species, IAS Regulation.

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1. *Introduction*

The European Union embraces a large territory characterized by rich biodiversity and a heterogeneous morphology. The characteristics of the territory of the Union, comprising islands and other isolated areas due to their morphological conformation, lead to a quite inhomogeneous distribution of fauna.

This paper analyses the issues that arise when an invasive alien species is introduced into a new ecosystem, in particular when the alien species presence proves to be harmful and there is a high chance that it spreads to neighboring countries.

The present paper analyses the options available to EU Member States when faced with the challenge of managing an invasive alien species, whose presence is potentially damaging for the economy and a threat to endemic species.

In particular, the paper considers the case of the introduction of the grey squirrel in Italy, which represents an economic damage for Italian forests and a threat for the red squirrel endemic to Italy¹.

The Italian case is interesting because it encompasses a variety of concerns, both legal and not. Namely, the risk of extinction because of the introduction of the invasive alien species, the pressing danger of cross/border contamination, and the ethical issues that have been risen by environmentalist NGOs regarding the eradication of the grey squirrel.

This paper is structured in four parts: first, it will provide an ecological explanation of the facts at issue, which will then be followed by a more specific description of the general legal framework for the protection of endemic species and then more specifically the legal status of the two species of squirrel concerned in the Italian case. Finally,

*Giulia Petrachi has pursued a bachelor's degree in Comparative European and International Legal Studies at University of Trento, and she is currently attending the Joint Nordic Master's in Environmental Law program, an LLM organized among the three Scandinavian universities of Uppsala, Joensuu and Tromsø. During her bachelor's degree, Giulia has spent a semester as Erasmus student at University of Vilnius (Lithuania).

1. See Sandro Bertolino, et al., *The Management of Grey Squirrel Populations in Europe: Evolving Best Practice*, in Craig M. Shuttleworth, Peter W.W. Lurz and John Gurnell (eds.), *The Grey Squirrel: Ecology & Management of an Invasive Species in Europe* 495 (European Squirrel Initiative 2016).

it will analyze the legal conflicts that arose during the trial eradication of the invasive species, to conclude by evaluating the benefits that may derive from a more harmonized approach to the management of biodiversity issues at a European Union level.

2. *The Grey Squirrel: recipe of an adorable catastrophe*

This paper revolves around a very specific biodiversity issue: the Eurasian squirrel, also known as red squirrel or *Sciurus Vulgaris*, whose preferred habitat is Europe and West Asia, has been assessed to be vulnerable or decreasing in population in the past years².

While part of the reason for its precarious condition is neglectful degradation of habitats, as argued by Verbeylen et al.³, the present paper focuses on its interaction and competition with the grey squirrel, also known as *Sciurus Carolinensis*, and how its presence in the same area as the *Sciurus Vulgaris* might have damaged the livelihood of the latter⁴.

2.1. *How the grey squirrel can be damaging to biodiversity*

As previously said, the grey squirrel can damage the red squirrel population due to the competition between the two species when sharing the same habitat. This competition arises for a number of reasons.

In the first place, the grey squirrel is bigger and can survive on a more varied diet, which does not only depend on coniferous products, but which also includes them. On the other hand, the red squirrel, naturally smaller sized, feeds on a mostly coniferous diet. These

2. See Sandro Bertolino and Piero Genovesi, *Spread and Attempted Eradication of the Grey Squirrel (Sciurus Carolinensis) in Italy, and Consequences for the Red Squirrel (Sciurus Vulgaris) In Eurasia*, 109 *Biological Conservation* 351 (2003).

3. See Goedele Verbeylen, Lucas Wauters and Erik Matthysen, *Effects of habitat fragmentation on red squirrels (Sciurus vulgaris L. 1758)*, 4th Benelux Congress of Zoology (Utrecht 1997).

4. See Bertolino and Genovesi, *Spread and Attempted Eradication of the Grey Squirrel (Sciurus Carolinensis) in Italy, and Consequences for the Red Squirrel (Sciurus Vulgaris) In Eurasia*, at 352 (cited in note 2).

characteristics may be already sufficient in order to make the grey squirrel fitter for survival and more inclined to exploit resources in the area it inhabits, in a way that could damage the habitat and the existence of the red squirrel. Moreover, the two species experience scarcity of resources in the same period of the year, which causes them to struggle and fight for food⁵.

Furthermore, as Kenward highlighted, grey squirrels also represent a disturbance and a possible detriment for humans, resulting from their competition with humans for nuts and crops, the damage they create to commercial tree plantations, and their harmful habit of gnawing on phone cables. These damages are often committed by the red endemic squirrels as well, but due to their smaller size and diminishing population, their impact on human existence is proportionally smaller⁶.

Finally, Italy is the habitat of two endemic subspecies of the red squirrel, the *Sciurus Vulgaris Italicus* and the *Sciurus Vulgaris Meridionalis*⁷. The latter represents a strain as well of the *Sciurus* family which is present exclusively in Italy. Then, in consideration of its circumscribed population, it is to be considered an extremely frail species, and could risk extinction as a result of its competition with the grey squirrel.

2.2. *Difference and similarities between Italy and the UK*

Interestingly, the takeover of the grey squirrel in an area where the red squirrel was endemic is something that already happened, and the phenomenon presented similar characteristics to the Italian case.

Indeed, the grey squirrel first arrived in Great Britain, another area where the red squirrel used to be the main squirrel population. As in the Italian case, also in Great Britain the takeover happened progressively and slowly and expanded to all the border States. Currently, the

5. See Sandro Bertolino and Piero Genovesi, *Linee guida per il controllo dello scoiattolo grigio (Sciurus Carolinensis) in Italia*, INFS 17 (2001).

6. See R.E. Kenward, *The causes of damage by Red and Grey squirrels*, 13 *Mammal Review* 159 (1983).

7. See Anna Lisa Signorile, Daniele Paoloni and Daniel C. Reuman, *Grey squirrels in central Italy: a new threat for endemic red squirrel subspecies*, 16 *Biological Invasions* 2339 (2014).

grey squirrel has become the main squirrel species in Great Britain, Wales, Northern Ireland, and the Republic of Ireland, with the red squirrel surviving only in smaller areas in Scotland⁸.

Nonetheless, there is a main difference between the British and the Italian case. At the present moment, Italy still presents a relatively small and circumscribed area of grey squirrel takeover, with settlements of this species expanding over the border in France and Switzerland, while the takeover is almost complete in the UK⁹. This main difference should not be disregarded, since it makes it possible for eradication projects and plans to still be considered as viable solutions.

2.3. *Expansion of the grey squirrel settlement in Italy*

Some experts have argued that the Italian areas inhabited by grey squirrels seem to preclude the progression of the invasion due to their position and morphology¹⁰. Arguably, three factors stand in sheer contrast with this argument.

In the first place, letting that the grey squirrel will occupy more or less extended areas, trusting that the population will not expand soon, requires a blind faith in environmental factors, and this is generally not a sound policy.

Secondly, even though the morphological characteristics of the areas taken over by the grey squirrel in the North West of Italy seem to preclude the invasion to expand to the rest of the Italian territory, the proximity to the French and Swiss border represents a danger for their ecosystems¹¹. The French and Swiss governments have condemned the lack of any effective action by the Italian government, as it follows a real threat both for the biodiversity of their forests and their endemic

8. See Signorile, Paoloni and Reuman, *Grey squirrels in central Italy* at 2340 (cited in note 7).

9. See Bertolino and Genovesi, *Spread and Attempted Eradication of the Grey Squirrel (Sciurus Carolinensis) in Italy, and Consequences for the Red Squirrel (Sciurus Vulgaris) In Eurasia* at 353 (cited in note 2).

10. See *id.* at 352.

11. See Nick Squires, *French and Swiss Government Fear Grey Squirrels in Italy Are Heading Their Way* (The Telegraph UK, January 15, 2015), available at <https://www.telegraph.co.uk/news/worldnews/europe/italy/11348769/French-and-Swiss-fear-grey-squirrels-in-Italy-are-heading-their-way.html> (last visited April 24, 2021).

species of squirrels¹². In order to give legal recognition to the emergent takeover phenomenon, and to protect the endangered red squirrel, France assigned the red squirrel the status of protected already back in 1976, through L. n. 76-629 of 10 July 1976¹³ and the Decree n. 77-1295 of 25 November 1977¹⁴, later transposed in the Environmental Code of France¹⁵. Nonetheless, eradication has still not been effective on the part of France.

3. *The interaction between EU instrument, national law and the Bern Convention*

To obtain a complete understanding of the legal background of this case study, it is necessary to examine the interaction of norms at the three levels involved: national, supranational (which, in this specific case, indicates the European Union level) and international.

Firstly, national law, insofar as it is relevant to the case under, has represented an interpretative obstacle, which will be further analyzed in the following chapters. Nonetheless, the application of national law is secondary to European Union law, as *Simmenthal*¹⁶ and *Costa v. Enel*¹⁷ have made clear in the past. This status of primacy entails that national laws which conflict with Union Laws should not be applied¹⁸. For the purposes of this specific case study, it is only necessary

12. See Nick Squires, *French and Swiss Government Fear Grey Squirrels in Italy Are Heading Their Way* (The Telegraph UK, January 15, 2015), available at <https://www.telegraph.co.uk/news/worldnews/europe/italy/11348769/French-and-Swiss-fear-grey-squirrels-in-Italy-are-heading-their-way.html> (last visited April 24, 2021).

13. See Loi 10 July 1976, no. 76-629.

14. See Art. 4, Décret 25 Novembre 1977, no. 77-1295 (Décret pris pour l'application des articles 3 et 4 de la loi n° 76-629 du 10 Juillet 1976 sur la protection de la nature et concernant la protection de la flore et de la faune sauvages du patrimoine naturel français).

15. See Art. L. 411-1 and L. 411-2, Ordonnance 18 Septembre 2000, no. 2000-914 (Code de l'environnement).

16. See C-106/77, *Amministrazione delle Finanze dello Stato v. Simmenthal S.p.a.*, ECR 1978 I-629.

17. See C-6/64, *Flaminio Costa v E.N.E.L.*, ECR 1964 585.

18. See *id.*

to consider the role of directives and regulation since the other instruments to the management of the *Sciurus Carolinensis* in Italy.

According to Art. 288 TFEU, a regulation has a general content and enjoys direct applicability, thus Member States must abide by the norms imposed by these instruments, without need of previous enclosure in their legal system¹⁹. By contrast, a directive binds Member States to achieve a specific result, but States must transpose it before the instrument becomes directly applicable.

Indeed, the present case study is concerned with two European Union instruments: the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, and the Regulation 1143/2014 on Invasive Alien Species.

The Habitats Directive, hereinafter HD, is an instrument of the Union aimed at protecting biodiversity in different ways, be it through the protection of actual specimens of flora and fauna, or the protection of areas of interest. Moreover, the HD includes the norms of protection already enshrined by the Birds Directive, which forms the cornerstone of the Union's conservation policy alongside with the HD itself²⁰. Notably, the HD is a paramount for the EU framework of natural protection thanks to its comprehensiveness, since it envisions a set of Annexes which divides animals and plants according to their situation in the wild, and assigns them to different treatments and recognition according to their status. Moreover, the HD establishes the Natura 2000 Network, which is an ecological network of protected areas, either for their ecological characteristics or for being the habitat of a protected species²¹.

The HD has a relevance in this case study because if the red squirrel, endemic to Europe, was recognized by the Directive as a species deserving of institutional protection, its status would be different. In particular, the animal would enjoy further protection, which would make the presence of the grey squirrel unacceptable for ensuring the red squirrel's due conditions of existence²².

19. See Art. 288, TFEU.

20. See Article 7, Council Directive (CEE) 21 May 1992, no. 43 (on the conservation of natural habitats and of wild fauna and flora) (so called "Habitat Directive").

21. See *id.*

22. See Bertolino and Genovesi, *Spread and Attempted Eradication of the Grey Squirrel (Sciurus Carolinensis) in Italy, and Consequences for the Red Squirrel (Sciurus*

Conversely, the Regulation, hereafter mentioned as the IAS Regulation, belongs to the framework of environmental protection of the EU. It focuses specifically on the introduction of new animals and plants into an allochthonous natural environment and on what should be done in order to reduce the negative effects that they may cause to the habitat²³. For the purpose of this paper, the IAS Regulation is relevant since it is addressed to cases such as the one examined in this paper, moreover it sets the guidelines that Member States should follow in this kind of situation. However, the case at hand takes place largely before the implementation of the Regulation, which creates a conflict in practice: the previous Italian legal framework regulating the management of the *Sciurus Carolinensis* differs greatly from the regime applicable in the aftermath of the IAS Regulation adoption. The nature of this conflict will be further analyzed in the next chapters.

It is now necessary to consider the international law instruments that relate with the case at hand. Undoubtedly, the most relevance belongs to the Bern Convention on the Conservation of European Wildlife and Natural Habitats. This Convention is a specific legal instrument of the Council of Europe in the field of natural conservation and presents a fully international character²⁴. The Bern Convention is concerned with the protection of natural habitats and endangered species, and it was adopted in the early '80s to enhance the cooperation between States in matters regarding vulnerable ecosystems. The requirement of protection of flora and fauna enshrined in the Convention is binding on Member States, however, a certain specimen can be "strictly protected" or simply "protected", according to the Appendix it falls into.

It needs to be remarked, and it will be given further consideration, how the Bern Convention was included in the regulatory framework of the EU, thus automatically binding on the Union Member States, when the EU ratified it in 1982.

Vulgaris) *In Eurasia* at 355 (cited in note 2).

23. See Preamble, Regulation (EU) 22 October 2014, no. 1143 (on the prevention and management of the introduction and spread of invasive alien species) (so called "IAS Regulation").

24. See Bern Convention on the Conservation of European Wildlife and Natural Habitats of the Council of Europe (1979).

Furthermore, the Rio Convention on Biological Diversity is also worth mentioning as an instrument of international law. The Convention is part of the three Rio Conventions (the other two focusing on Climate Change and Desertification) and has as its objectives "the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from commercial and other utilization of genetic resources"²⁵, with a specific focus over ecosystems and genetic resources. This Convention is relevant for the case study because it contains one of the few explicit mentions of eradication of invasive alien species and was one of the earlier ones at that²⁶.

4. *The near threatened, the decreasing and the protected*

In this section, some issues already mentioned in the third chapter will be the subject of a more in-depth analysis. First of all, it must be clarified why the status of the *Sciurus Vulgaris* is of any relevance to the European Union, even though the species is not expressly mentioned in the Habitats Directive. This can be explained, first and foremost, by the fact that the red squirrel falls within the category of protected fauna according to the Bern Convention²⁷.

Moreover, the preamble of the Habitats Directive claims that its provisions concerned the protection of threatened species, thus encompassing the red squirrel as a threatened species as well. Once determined that a species falls under the scope of the Directive, Member States must comply with the obligations of Article 12 of the Directive. Primarily, they should establish a system of strict protection of the species, prohibiting deliberate capture or killing, disturbance, destruction or taking of eggs and deterioration of breeding sites or resting places, while prohibiting keeping, sale and transport of said species²⁸.

The second notion that should be pointed out is the status of vulnerability of the red squirrel. According to Article 1, paragraph g, of

25. Art. 1, Rio Convention on Biological Diversity (1992).

26. See *id.* at Art. 8(h) ("Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species").

27. See Appendix III, Bern Convention (1979) (cited in note 24).

28. See Art. 12, para. 1 (a-d) and 2, Council Directive 43/1992 (cited in note 20).

the Habitats Directive, a species is vulnerable when it is "believed likely to move into the endangered category in the near future if the causal factors continue operating"²⁹. Therefore, broadly speaking, labelling the Eurasian squirrel as vulnerable means to assume that the persistent presence of the *Sciurus Carolinensis* could cause it to receive the status of endangered.

The third concept that must be addressed is the status qualified as "vulnerable" and where it is derived from. A mention of the red squirrel being vulnerable has been made by the IUCN³⁰, the global authority that collects data regarding the status of the natural world and establishes measures for the safeguard of biodiversity. However, it is at national level that the recognition of the status of a species has its greater impact its protection. Indeed, different national legislations recognize a special status for the red squirrel, e.g., in the UK it is included in Schedules 5 and 6 of the Wildlife & Countryside Act 1981 (amended by the Countryside & Rights of Way Act 2000)³¹. Accordingly, under Italian law the red squirrel is endangered and not hunt-able, thus protected according to L. 27/12/1977, n. 968 on wild fauna³², and, more recently, to L. n.157/92 on hunting operations³³. An analysis of how these norms practically applied in Italy is possible through the observation of the management of the grey squirrel case.

5. *The proceeding of 1996*

In 1996 the grey squirrel population of Italy occupied a small area of Piedmont. To solve the situation quickly, directions were given to begin a progressive eradication of the animal. This seemed to be the best solution to contain the invasion, also in consideration of the relatively small effort needed for intervening against a population which

29. *Id.*, Art. 1, para. g (ii).

30. See Steven Stan, et al., *Sciurus Vulgaris Eurasian Red Squirrel (The IUCN Red List of Threatened Species 2016)*, available at <https://www.iucnredlist.org/species/20025/115155900> (last visited April 24, 2021).

31. See Part 3, Countryside and Rights of Way Act 2000 (Conservation of biological diversity).

32. See Title IV, L. 27 December 1977, no. 968.

33. See Art. 2, 19 and 20, L. 11 February 1992, no. 157.

was still very circumscribed at the time. Moreover, the eradication process would have prevented, once and for all, both the risk of expansion of the species to the rest of Italy and France, and the dangerous contribution to the decrease of the red squirrel population³⁴.

In the 90's the IAS Regulation had not been drawn up yet, so the project was implemented in compliance with national norms. In particular, plans for controlling the invasive population were drafted in accordance with Article 19 of L. 157/92, which requires approval by the National Wild Fauna Institute (hereafter NWFI)³⁵. However, at that time the L. 157/92 did not include norms regarding the control of the population or eradication of invasive species, hence leaving the project in a grey legislative area³⁶. Nevertheless, the L.157/92 mentioned the temporary capture of invasive species, which seemed to grant a way to intervene³⁷, despite not explicitly allowing the project. The L. 157/92 interpretations with regard to actions of eradication are still debated and inhomogeneous³⁸.

In addition, when enacting a project, it was also necessary to comply with regional legislation. In this specific case, which happened in the provincial area of the city of Cuneo, the law of reference was the one of Piedmont region. In particular, the Regional law, 4 September 1996, n. 70 specifies in its Article 30 that actions of control of wild fauna are delegated to the administration of provinces³⁹, thus

34. See Bertolino and Genovesi, *Spread and Attempted Eradication of the Grey Squirrel (Sciurus Carolinensis) in Italy, and Consequences for the Red Squirrel (Sciurus Vulgaris) In Eurasia* at 355 (cited in note 2).

35. See Art. 19, L. 157/1192 (cited in note 33) (Nowadays, the National Wild Fauna Institute in Italy does not exist anymore as it has converged in the "Istituto Superiore per la Protezione e la Ricerca Ambientale", which is an institution of the Italian government that is concerned with conservation of wild fauna, and the study of the status, evolution and relationship between the environmental components through research in the field of ecology, veterinary and genetics, collaborating with Universities and research organs both at a national and international level).

36. See Bertolino and Genovesi, *Linee guida per il controllo dello scoiattolo grigio (Sciurus Carolinensis) in Italia* at 23 (cited in note 5).

37. See Art. 4, L. 157/1992 (cited in note 33).

38. See Unione Zoologica Italiana, *Documento dell'Unione Zoologica Italiana in relazione all'intervento preliminare di eradicazione dello scoiattolo grigio in Piemonte* (January 22, 2000), available at <http://www.uzionlus.it/documenti/eradicazione-scoiattolo.pdf> (last visited April 24, 2021).

39. See Art. 30, Regional Law 4 September 1996, n. 70.

allocating the decisional power on whether and how the project was to be carried out in the hands of one of the twenty local administrations present in Italy⁴⁰.

The provision that came closer to addressing the action that was going to take place was the Bern Convention, which in its Article 11 specifies how the contracting parties should strictly control the introduction of non-endemic species. Nonetheless, the disposition does not explicitly address plans for the eradication of said species⁴¹. On the other hand, the Rio Convention on Biodiversity of 1992 demands governments to prevent the introduction, or the control or the eradication of allochthonous species that could threaten endemic species. However, this Convention was a recent legal instrument, whose implementation and interpretation on a national level were still unclear, as it has been shown by the following proceeding in court.⁴²

The trial eradication started in April 1997 and it was directed and approved by the NWFII, but the operation quickly interrupted in June of the same year. Actually, a radical animal rights group (i.e., Legambiente) brought legal action against the project of eradication and the NFWI, bringing charges of animal cruelty, damage of state property and illegal hunting⁴³.

The issue had to be further litigated in court, since Legambiente's members had previously discussed the terms of the eradication with the NWFII, in order to establish an eradication project that was carried out with as little pain and distress for the specimens of grey squirrel as possible. However, during the execution of the project, the animal rights group considered that the Institute was not respecting the agreement terms, since the placed poisonous traps accidentally caused the death of a female squirrel who was still nurturing her offspring. This fact appeared to Legambiente members as unjustifiably and needlessly cruel to the animals⁴⁴.

40. See Art. 4, L. 157/1992 (cited in note 33).

41. See Art. 11, para. 25, Bern Convention (1979) (cited in note 24).

42. See Bertolino and Genovesi, *Spread and Attempted Eradication of the Grey Squirrel (Sciurus Carolinensis) in Italy, and Consequences for the Red Squirrel (Sciurus Vulgaris) In Eurasia* at 355 (cited in note 2).

43. See Dan Perry, *Animal Rights and Environmental Wrongs: The Case of the Grey Squirrel in Northern Italy*, 5(2) *Essays in Philosophy* 335 (2004).

44. See *ibid.*

In court, it was debated whether the project could be classified as a research project, thus legally falling under the jurisdiction of the NFWI, or as a pest control project, which is not part of the jurisdiction of the NFWI and would have classified the action as illegal hunting⁴⁵.

During the trial, the Ministry of the Environment, the superior Italian authority on matters of biodiversity, held that the act of eradication was aimed at protecting the endemic red squirrel, recognized as state property, contrarily to the grey squirrel which does not benefit from the same title⁴⁶.

In November 1999, the trial concluded, and the Court stated that the NFWI was not responsible for damage to state property. Accepting the argument proposed by the Ministry of the Environment, the project was rather recognized as a protection measure for state property. Nonetheless, the Court found the NFWI to be culpable of the other two charges, namely animal cruelty and illegal hunting⁴⁷.

This decision has been then reversed by the Appellate Court in June 2000⁴⁸. Part of the argument against the charge of animal cruelty was that the action had been led using anesthetizers, as it had been explicitly requested by one of the environmentalist organizations⁴⁹, in accordance both with what had been previously agreed with Legambiente and with the guidelines of the Panel of Euthanasia of 1993⁵⁰.

45. See Bertolino and Genovesi, *Spread and Attempted Eradication of the Grey Squirrel (Sciurus Carolinensis) in Italy, and Consequences for the Red Squirrel (Sciurus Vulgaris) In Eurasia* at 355 (cited in note 2).

46. See *ibid.*

47. See Unione Zoologica Italiana, *Documento dell'Unione Zoologica Italiana in relazione all'intervento preliminare di eradicazione dello scoiattolo grigio in Piemonte*, P. 3, (January 22, 2000), available at <http://www.uzionlus.it/documenti/eradicazione-scoiattolo.pdf> (last visited April 24, 2021).

48. See Bertolino and Genovesi, *Linee guida per il controllo dello scoiattolo grigio (Sciurus Carolinensis) in Italia* at 23 (cited in note 3).

49. See Unione Zoologica Italiana, *Documento dell'Unione Zoologica Italiana in relazione all'intervento preliminare di eradicazione dello scoiattolo grigio in Piemonte*, P. 3, (January 22, 2000), available at <http://www.uzionlus.it/documenti/eradicazione-scoiattolo.pdf> (last visited April 24, 2021).

50. See Dan Perry, *Animal Rights and Environmental Wrongs: The Case of the Grey Squirrel in Northern Italy* at 335 (cited in note 43).

6. *Evolution in norms after the proceeding*

Following the proceeding, another strategic plan of control was proposed in 2000. This proposal did not involve eradication but was mostly aimed at the protection of the red squirrel and at the attempt to prevent the expansion of the grey squirrel in the neighboring countries⁵¹. However, the action plan was still under consideration in 2010⁵².

After 1997, the drafting and implementation of the IAS Regulation represented a sensible improvement for the legal approach to the management of invasive species for several reasons. In the first place, it introduced a binding set of obligations regarding the actions employable in order to manage allochthonous species, which harmonized the approaches of the Member States. Furthermore, the Regulation shed a new light over the proceeding of 1997, since it describes projects of eradication as a crucial mean to prevent reproduction and spread, so it should be the first option to be considered⁵³.

More specifically, eradication measures are the subject of the entirety of Chapter III of the Regulation, and they are imposed as an obligation in Article 17⁵⁴. Their derogation can be conceded only in case of technical infeasibility, disproportionate cost, and serious impact on human health or on other species⁵⁵.

Three years after the drafting of the IAS Regulation, the Italian Government incorporated it in its own legal system through the Legislative Decree n. 230 of 2017. This Decree not only recognizes the legitimacy of the process of eradication, but it also establishes that a quota drawn from the fund created through administrative sanctions should be used for financing projects of eradication⁵⁶.

Moreover, after the conclusion of the 1997 proceeding, the Standing Committee of the Bern Convention and the Council of Europe issued many recommendations regarding the case of the *Sciurus*

51. See *ibid.*

52. See United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC), *Review of the Grey Squirrel* 10 (Cambridge 2010).

53. See Preamble, para. 24, Regulation (EU) 1143/2014 (cited in note 23).

54. See *id.*, Art. 17 para. 1.

55. See *id.*, Art. 18 para. 1 (a-c).

56. See Legislative Decree, 15 December 2017, n. 23.

Carolinensis. First and foremost, the Recommendation n. 77/1999 of the Council of Europe insists that Member States hosting allochthonous species that are threatening endemic biodiversity should act to a feasible extent to eradicate said species. Concurrently, the Standing Committee has openly addressed Italy and the management of the grey squirrel in three recommendations (Recommendation 78/1999, Recommendation 114/2005 and Recommendation 123/2007), where it repeatedly called for the eradication of the grey squirrel in the confining areas with Switzerland⁵⁷. Finally, in 2008 the Standing Committee of the Bern Convention issued a case file directed at Italy for not complying with the three previous recommendations.

The Italian government, conscious of the lack of clarity of L. 157/92 about the eradication of invasive alien species, issued a new law on matters of biodiversity and environmental protection. It declared that allochthonous species should be controlled even through projects of eradication, thus, clearing any possible conflict that could arise between national law and European law⁵⁸.

Despite the judicial odyssey that the first eradication attempt got caught in, in May 2020 another management plan for the grey squirrel population has been drafted. The plan included a risk assessment regarding the presence of the *Sciurus Carolinensis* in different administrative regions of Italy, as required by the IAS Regulation. Furthermore, methods of eradication are included in order to avoid inflicting cruelty and pain onto the animals, again in compliance with the IAS Regulation⁵⁹.

57. See Standing Committee of the Bern Convention on the Conservation of European Wildlife and Habitat, *Recommendation no. 78 on the conservation of the Red squirrel (Sciurus vulgaris) in Italy* (December 3, 1999); Standing Committee of the Bern Convention on the Conservation of European Wildlife and Habitat, *Recommendation No. 114 on the control of the Grey squirrel (Sciurus carolinensis) and other alien squirrels in Europe* (December 1, 2005); Standing Committee of the Bern Convention on the Conservation of European Wildlife and Habitat, *Recommendation No. 123 on limiting the dispersal of the Grey squirrel (Sciurus carolinensis) in Italy and other Contracting Parties* (November 29, 2007) (the three recommendations are calls to action for Italy that specifically address the issue of the eradication of the grey squirrel).

58. See Art. 7, co. 5, L. 28 December 2015, no. 221.

59. See Art. 17, para. 2, Regulation (EU) 1143/2014 (cited in note 23).

7. *Conclusions*

By the beginning of 2021, the 2020 plan has not yet been implemented. Beside what the practical results of this new management plan will be, it transpires from the previous chapters that the process of dealing with invasive species is lengthy and burdensome, mostly due to conflicts of law, cross-border disagreements, and misinformed but well-intentioned ethics struggle. The situation is not made any easier by the biological fact that, in a disposed environment with suitable conditions, the expansion of an allochthonous species can spread like an avalanche with great damages for the economy and the biodiversity of a State.

Harmonization of norms under the regime of the IAS Regulation certainly simplified the solution of transboundary issues and resolved some ethical aspects. Moreover, having a harmonized legislation allows to have some extent of predictability for what regards the management of invasive alien species and its results. This could enhance the communication and the exchange of management directives among the government and the environmentalist organizations, also by speeding up the decision process.

However, it is not enough taking into consideration harmonization on management of such environmental transboundary issues - which are highly damaging for biodiversity - and the potential fast spreading. It is as well mostly important to have applicable international law instruments that span beyond the European Union legal system. So, instruments like the IUCN Watch, the Bern Convention and the Rio Convention become extremely relevant, because the strict and mere application of national law may become a potential obstacle for effective solutions.

Today, the case of the grey squirrel is still unsolved, and the IAS Regulation is still a new legal instrument. Nevertheless, management of invasive alien species seems to be growing in importance and improving its effectiveness, so the positive result of a more effective harmonization will possibly become more evident in the next years.