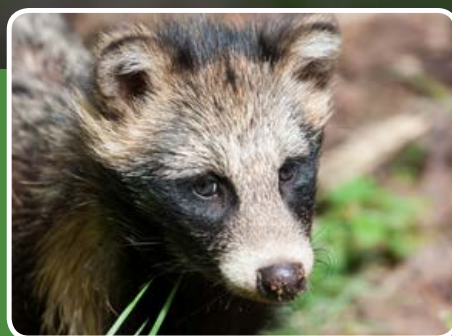


1st Edition

Appendices on regional conditions

A manual for the management of vertebrate invasive alien species of Union concern, incorporating animal welfare



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This document presents appendices (#34-41) for *A manual for the management of vertebrate invasive alien species of Union concern, incorporating animal welfare. 1st Edition*. It contains information regarding the regional conditions relevant to the application of the management measures, which was collated through a series of online technical workshops attended by a range of stakeholder groups across the European Union, including national authorities, academia, NGOs and practitioners in the field. Each of these eight 'Regional conditions' appendices corresponds to a different workshop region and showcases information on the presence of the 22 vertebrate IAS of Union concern in Member States from the region, legislation regarding the management of IAS of Union concern within Member States, and any restrictions or bans on their application in different Member States. It is important to note that the information in these appendices should not be taken as legal guidance to identify if a measure can or cannot be used, or what restrictions are placed on their use, but rather as a general overview to inform the user.

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Appendix 34. Regional conditions for the Alpine region

Austria (AT), Slovakia (SK), Slovenia (SI) (and Liechtenstein)

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1. Species presence in Member States from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each Member State in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)

Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Collosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
AUSTRIA																						
Presence	NP	P	NP	NP	NP	P	NP	NP	P	NP	P	P	P	F	NP	P	P	NP	NP	NP	P	P
Status		R				W			O		R	W	O			W	W				O	O
Impact		N				Y			N		Y	Y	N			N	Y				N	N
Highest impact						+											+					
References		30, EO				29, 30			30		30	30, EO	30	29, 30		30	29, 30				30	30, 38, 39
SLOVAKIA																						
Presence	NP	P	NP	NP	NP	P	NP	NP	P	NP	P	P	P	P	NP	P	P	NP	NP	NP	NP	P
Status		O				W			R		W	W	O	R		W	W					O
Impact		N				Y			N		Y	Y	N	Y		Y	Y					?
Highest impact						+								+			+					
References		31, 32				12, 15, 20			8, 31		6, 13, 31, 34	28, 31	14, 31	18, 19, 20, 31		6, 31, 34	15, 20, 31					5, 31
SLOVENIA																						
Presence	NP	P	NP	NP	NP	P	F	NP	P	NP	P	P	P	F	NP	P	P	F	NP	NP	P	P

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosclurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Mycocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
Status		O				W			W			W	O		O	O					O	R	
Impact		N				Y			?			?	N			?	Y					N	Y
Highest impact						+																	+
References	10, 16, 22, 43	1, 10, 16, 43	27		23	16, 22, 26, 35, 43, 45	17, EO		4, 11, 16, 24, 33, 36, 43	27	16, 27, 40, 43	11, 16, 25, 43	2, 7, 16	43	9	27, 16, 21, 43	16, 43, 44	27			37	16, 38, 39, 42, 43, EO	
LIECHTENSTEIN																							
Presence	NP	P	NP	NP	NP	?	NP	NP	F	NP	F	P	F	NP	NP	P	F	NP	NP	NP	NP	NP	
Status		O										W				R							
Impact		N										Y				N							
Highest impact																							
References	41	41		41								41				3, 41					41		

References:

1 - Bordjan & Šinigoj (2011), 2 - Božič (2001), 3 - Broggi (2006), 4 - Bužan et al. (2020), 5 - Čamba (2006), 6 - Chovancová et al. (2010), 7 - DOPPS, 8 - Ferenc (2015), 9 - Galanidi et al. (2019), 10 - Hanžel & Šere (2012), 11 - Hönigsfeld Adamič et al. (2009), 12 - http://www.sopsr.sk/invazne-web/?page_id=151, 13 - http://www.sopsr.sk/invazne-web/?page_id=190, 14 - rm.coe.int, 15 - Jakubčinová et al. (2018), 16 - Jogan et al. (2020), 17 - Kirbiš et al. (2016), 18 - Koščo & Halacka (2003), 19 - Koščo et al. (2008), 20 - Kováč et al. (2007), 21 - Kryštufek (2011), 22 - Kus Veenvliet & Veenvliet (2019a), 23 - Kus Veenvliet & Veenvliet (2019b), 24 - Kus Veenvliet & Veenvliet (2019c), 25 - Kus Veenvliet & Veenvliet (2019d), 26 - Kus Veenvliet & Veenvliet (2019e), 27 - Kus Veenvliet et al. (2020), 28 - Májský (2009), 29 - Nehring et al. (2010), 30 - Nehring et al. (2015), 31 - Nevřelová & Becková (2015), 32 - Pačenovský & Lešová (2020), 33 - Papež (2020), 34 - Poledníková et al. (2014), 35 - Povž & Šumer (2005), 36 - Schertler et al. (2020), 37 - Sovinc (2014), 38 - Standfuss et al. (2016), 39 - Vamberger et al. (2012), 40 - Vrezec (2007), 41 - Willi (2019), 42 - Zavod RS za varstvo narave (2018), 43 - Zavod RS za varstvo narave (2020), 44 - Zavod za ribištvo RS. (2017), 45 - Zavod za ribištvo (2014)

2. Toolbox of measures - restrictions/bans in Member States from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in an EU Member State = * followed by MS country code

Use of measure **banned** in an EU Member State = # followed by MS country code

Category	Measure name	<i>Alopochea aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Biological control	Native predators		#SI					#SI		#SI		#SI
Habitat manipulation	Aquatic barriers		*AT*SI *SK					*AT*SI *SK		*AT*SI *SK		
	Aquatic habitat management - Pond drying/draining		*SI *SK					*SI *SK		*SI *SK		*SI *SK
	Physical barriers											*AT*SI *SK
Hand removal	Hand removal											
	Physical fishing methods		*AT*SI *SK					*AT*SI *SK		*AT*SI *SK		*AT*SI *SK
Other	Egg oiling											
	Electrofishing		*AT*SI *SK					*AT*SI *SK		*AT*SI *SK		

Category	Measure name	<i>Alopochen aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Fertility Control - chemical (in bait) & injection				*AT *SI *SK	*AT *SI *SK			*AT *SI *SK			
	Hunting dogs (tracking/baying)			*AT *SI *SK	*AT *SI *SK	*AT *SI *SK			*AT *SI *SK			*AT *SI *SK
	Judas animals											
Poisoning or toxicants	Stupefying bait	#AT #SI #SK									#AT #SI #SK	
	Chemical treatment of the habitats		#AT #SI *SK	*AT #SI *SK		*AT #SI *SK		#AT #SI *SK		#AT #SI *SK		
	Poisons and toxins in bait					**AT #SI #SK						
Shooting	Shooting	*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK		*AT *SI *SK		*AT *SI *SK	#AT #SI #SK
Trapping	Drowning traps			#AT #SI #SK		#AT #SI #SK						
	Goodnature self-resetting											
	Spring traps			**AT #SI #SK	**AT #SI #SK	**AT #SI #SK			**AT #SI #SK			
	Cage traps	*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK		*AT *SI *SK			*AT *SI *SK
	Neck-hold traps, and snares			#AT #SI #SK	#AT #SI #SK				#AT #SI #SK			
	Live decoy traps	#AT #SI #SK										
	Cervical dislocation	*AT *SI *SK	*AT *SI *SK				*AT *SI *SK	*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	

Category	Measure name	<i>Alopochea aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
Dispatch/ removal only once captured	Cranial depression	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK		
	Decapitation	*AT *SI *SK	*AT *SI *SK					*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	*SI	
	Electrocution	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	
	Freezing		*AT *SI *SK							*AT *SI *SK		*AT #SI *SK	
	Injection euthanasia	*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK		*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	
	Keeping in captivity	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	
	Modified atmospheres	*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK		*AT *SI *SK		*AT *SI *SK		
	Shooting - dispatch restrained animals	*AT *SI *SK		*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SI *SK		*AT *SI *SK		*AT *SI *SK		
	Slaughter (knife)	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK	*AT *SI *SK		
	Surgical sterilisation				*AT *SI *SK	*AT *SI *SK			*AT *SI *SK			*AT *SI *SK	

3. Details of restrictions/bans of Toolbox measures in Member States from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Native Predators	The transfer of fish species between watersheds is prohibited by the Slovenian fisheries act.	Slovenia	Freshwater Fisheries Act (SI)
Aquatic barriers	Construction of physical barriers is restricted according to the MS Water Acts and the corresponding EU directive 2000/60/EC.	Austria, Slovakia, Slovenia	EU Water Framework Directive 2000/60/EC; Wasserrecht WRG 1959 (AT); vodný zákon (Waters Act) No. 51/2018 (SK); Waters Act (ZV-1) 2002 (SI)
Aquatic habitat management - Pond drying/draining	Needs assessment for checking impact upon native biodiversity. Also, may need to be undertaken at certain times of year to reduce impacts (e.g. to amphibians).	Slovakia, Slovenia	Act 543/2002 on nature and landscape protection (SK); Nature Conservation Act (SI)
Physical barriers	Permits are needed to be issued by the respective governments.	Austria, Slovakia, Slovenia	Regional nature protections laws (AT), Act 543/2002 on nature and landscape protection (SK), Nature Conservation Act (SI)
Physical fishing methods	Permits for recreational or commercial fishing are needed according to the requirements of the Member States fishing laws. The methods are prohibited or regulated according to the Member States respective fishing laws.	Austria, Slovakia, Slovenia	Regional fishing laws (AT), Act No. 216/2018 on fishing (SK), Freshwater Fisheries Act (SI)
Electrofishing	Permission needed. The methods should be performed by experts/ trained personnel.	Austria, Slovakia, Slovenia	Regional fishing laws (AT), Act No. 216/2018 on fishing (SK), Freshwater Fisheries Act (SI)
Fertility Control - chemical (in bait) & injection	Allowed if necessary, for health reasons or to limit the reproduction of animals, as well as for experimental animals. The method should be performed selectively only by veterinarians with veterinary practice and with licensed veterinary agents/ chemicals.	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 442/2004 (SK), Animal Protection Act (SI)
Hunting dogs (tracking/ baying)	Hunting with dogs is allowed. The corresponding permits should be issued.	Austria, Slovakia, Slovenia	Regional hunting laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act, Animal Protection Act (SI)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Stupefying bait	Mentioned in regional hunting laws as a prohibited method.	Austria, Slovakia, Slovenia	Regional hunting laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act (SI)
Chemical treatment of the habitats	Prohibited for fish according to fishing and hunting legislation. Regulated by nature protection legislation.	Austria, Slovakia, Slovenia	Regional nature protections /fishing/hunting laws (AT), Act 543/2002 on nature and landscape protection (SK), Act No. 274/2009 on hunting (SK), Act No. 216/2018 on fishing (SK), Nature Conservation Act (SI), Game and Hunting Act (SI), Freshwater Fisheries Act (SI)
Poisons and toxins in bait	The use of poisons and poisoned or anaesthetic bait is prohibited. The use of poisoned bait is allowed against rodents in some Austrian states (with restrictions).	Austria, Slovakia, Slovenia	Regional hunting laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act (SI)
Shooting	Permits for hunting by firearms of game bird and mammal species are required according to the Law on Hunting and Game Protection and the method can be applied only to species listed as game species. Not allowed for amphibians and reptiles.	Austria, Slovakia, Slovenia	Regional hunting laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act (SI)
Drowning traps	The use of non-selective traps for killing is prohibited for game mammals.	Austria, Slovakia, Slovenia	Regional hunting laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act (SI)
Goodnature self-resetting	The use of non-selective traps is restricted for game mammals.	Austria, Slovakia, Slovenia	Regional hunting laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act (SI)
Spring traps	The use of non-selective traps for killing is prohibited for game mammals. Within Austrian states (Carinthia) the use of Conibear spring traps is allowed, with restrictions.	Austria, Slovakia, Slovenia	Regional hunting laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act (SI)
Cage traps	Capture of birds in the wild by any means is prohibited in all MS. Permits for exemptions are necessary. Science research permits should be possible in SK. The use of non-selective traps is prohibited for protected species.	Austria, Slovakia, Slovenia	Regional Hunting Laws (AT), Act No. 274/2009 on hunting (SK), Act 543/2002 on nature and landscape protection (SK), Game and Hunting Act (SI), Nature Conservation Act (SI)
Neck-hold traps, and snares	The use of non-selective traps for killing is prohibited in all Member States.	Austria, Slovakia, Slovenia	Convention on the Conservation of European Wildlife and Natural Habitats (ETS No. 104), Regional Hunting Laws (AT), Act No. 274/2009 on hunting (SK), Game and Hunting Act (SI)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Live decoy traps	Capture of birds in the wild by any means is prohibited by nature protection legislations. Permits for exemptions are necessary. The use of non-selective traps for killing, as well as the use of live decoy, are prohibited by Hunting and Game Protection legislation in Austria and Slovenia.	Austria, Slovakia, Slovenia	Regional Hunting Laws (AT), Act No. 274/2009 on hunting (SK), Act 543/2002 on nature and landscape protection (SK), Game and Hunting Act (SI), Nature Conservation Act (SI)
Cervical dislocation	Allowed (after taking sedatives) for birds and small mammals used for scientific purposes.	Austria, Slovakia, Slovenia	TSchG, Tierschutz-Schlachtverordnung (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)
Cranial depression	Allowed for animals used for scientific purposes: manual blunt force in fish, amphibians, reptiles, small birds and mammals, and captive penetrating bolt in rabbits and large reptiles and mammals. Captive bolts are also recommended for farm animals and adults and larger birds, such as ostriches and waterfowl. Should be performed by trained personnel. Permits for vertebrate IAS may be required.	Austria, Slovakia, Slovenia	TSchG, Tierschutz-Schlachtverordnung (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)
Decapitation	No specific provisions/ recommendations about application of this method were found. Permits for vertebrate IAS may be required (AT, SI, SK). In Slovenia, for <i>Trachemys scripta</i> , it is only allowed if sedation plus general anaesthesia are applied, in combination with brain concussion; however, the method is not recommended.	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI), Action plan for <i>Trachemys scripta</i> (SI)
Electrocution	The method is allowed for farm mammals and birds. Permits for vertebrate IAS may be required.	Austria, Slovakia, Slovenia	TSchG, Tierschutz-Schlachtverordnung (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)
Freezing	No specific provisions/ recommendations about application of this method were found. Permits for vertebrate IAS may be required (AT, SK). Prohibited for <i>Trachemys</i> according to Action plan for <i>Trachemys scripta</i> (SI).	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Action plan for <i>Trachemys scripta</i> (SI)
Injection euthanasia	Allowed to be applied only by veterinarians with veterinary practice and with licensed veterinary agents/ chemicals. Allowed for all experimental animals, after taking sedatives. Permits for vertebrate IAS may be required.	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Keeping in captivity	Wild animals are allowed to be kept outside their natural environment in zoos, aquariums, terrariums, farms, aviaries and vivariums. The minimum requirements and conditions for raising vertebrate animals are specified by the 2. Tierhaltungsverordnung (AT). Zoos would accept animals in SI, but space and cost requirements hinder further keeping in captivity.	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 150/2019 on IAS (SK), Act No. 39/2007 on veterinary care (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)
Modified atmospheres	No specific provisions/ recommendations about application of this method were found. Permits for vertebrate IAS may be required.	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)
Shooting - dispatch restrained animals	No specific provisions/ recommendations about application of this method were found. Permits for vertebrate IAS may be required.	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)
Slaughter (knife)	Allowed for animals bred for the production of meat, leather or other products, after stunning. Permits for vertebrate IAS may be required.	Austria, Slovakia, w Slovenia	TSchG, Tierschutz-Schlachtverordnung (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)
Surgical sterilisation	Allowed for animals bred for the production of meat, leather or other products, after stunning. Permits for vertebrate IAS may be required.	Austria, Slovakia, Slovenia	TSchG (AT), Act No. 442/2004 on private veterinarians (SK), 39/2007 on veterinary care (SK), Animal Protection Act (SI)

4. Overview of legislation, standards and guidance within Member States from the region

4.1. Austria

The Republic of Austria is composed of nine federal (regional) states (Bundesländer). Austria's constituent states are not mere administrative divisions, but have some legislative authority distinct from the federal government. Due to Art. 15 Abs. 1 B-VG, the regional states government's nature protection sections are responsible for the management of vertebrate IAS in Austria.

The regional states are Vienna (W.), Lower Austria (NÖ), Upper Austria (OÖ), Burgenland (Bgld.), Styria (Stmk.), Salzburg (S.), Carinthia (K.), Tyrol (T.) and Vorarlberg (V.)

IAS legislation and EU directive implementation legislation:

Several regional governments issued laws on the direct implementation of EU directives into regional state legislation. In the states Vorarlberg and Lower Austria, the implementation of Regulation (EU) 1143/2014 is managed via the prospective regional nature protection laws.

These implementation laws stipulate the responsible institutions to organise and implement the activities related to removal/eradication of introduced alien species, which may threaten native species and habitats, to apply and control the implementation of the Regulation (EU) 1143/2014. Provides on penalties related to the implementation of Regulation (EU) 1143/2014.

Table 4. Key legislation directly or indirectly related to the management of IAS and vertebrate IAS of EU concern in regional states (IAS legislation and EU directive implementation legislation). All legislation reviewed was downloaded from <https://www.ris.bka.gv.at/> (last access 25.04.2021).

	Legislation/ guidance/ standard	Supplementary regulations	Target group of animals
W	Invasive Arten Gesetz – IAG (StF: LGBl. Nr. 37/2019, amend. LGBl. Nr. 37/2019,)		All IAS species
ÖÖ	Oö. EU-Begleitregelungs- und Umsetzungsgesetz - Oö. EU-BUG (StF: LGBl.Nr. 113/2018, amend. LGBl.Nr. 89/2019, LGBl.Nr. 95/2020)		All IAS species
B	Sammelgesetz EU-Verordnungen (LGBl.Nr. 74/2019)		All IAS species
	S.EU-Rechtsvorschriften-Begleitgesetz (StF: LGBl Nr 35/2019, amend. LGBl Nr 76/2019)		All IAS species

	Legislation/ guidance/ standard	Supplementary regulations	Target group of animals
Stmk	Steiermärkischen EU-Rechtsvorschriften-Begleitgesetzes (LGBl. Nr. 62/2017, amend. LGBl. Nr. 59/2020)	Verordnung über invasive gebietsfremde Säugetiere und Vögel Stammfassung (LGBl. Nr. 27/2021)	Vertebrate (mammal, bird) IAS of EU concern according to Art. 4 of Regulation (EU) 1143/2014 are listed in Verordnung LGBl. Nr. 27/2021)
K	Kärntner EU-Verordnungen-Begleitgesetz – K-EUBG (StF: LGBl. Nr. 58/2018, amend. LGBl Nr 89/2020)		All IAS species
T	Gesetz zur Durchführung bestimmter Verordnungen der Europäischen Union im Bereich der Tiroler Landesrechtsordnung (LGBl 2018/131, amend. LGBl. Nr. 54/2019, LGBl. Nr. 141/2019, LGBl. Nr. 20/2020)		All IAS species

Nature protection legislation:

The regional states government´s nature protection sections are responsible for the management of vertebrate IAS in Austria. The regional states legislations provide on the introduction into the natural environment, as well as import, breeding and raising of alien animal species, incl. subspecies and varieties, re-introduction of native animal species. In general, all wild (or free ranging) animals, not regulated (or listed) by fishing or hunting laws are protected or managed within the regional nature protection laws.

Table 5. Key legislation directly or indirectly related to the management of IAS and vertebrate IAS of EU concern in regional states (Nature protection legislation). All legislation reviewed was downloaded from <https://www.ris.bka.gv.at/> (last access 25.04.2021).

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
W	Wiener Naturschutzgesetz (amend. LGBl. Nr. 53/2001, LGBl. Nr. 92/2001, LGBl. Nr. 12/2006, LGBl. Nr. 29/2012, LGBl. Nr. 31/2013, LGBl. Nr. 71/2018)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All wild native and alien species not covered by hunting and fishing laws	§ 13 (3) provides on the introduction of alien species into the wild. Introductions need permission if negative impacts on the biodiversity are applicable.
NÖ	NÖ Naturschutzgesetz 2000 (NÖ NSchG 2000) (StF: LGBl. 5500-0, amend. LGBl. 5500-1, LGBl. 5500-2, LGBl. 5500-3, LGBl. 5500-4, LGBl. 5500-5, LGBl. 5500-6, LGBl. 5500-7, LGBl. 5500-8, LGBl. 5500-9, LGBl. 5500-10, LGBl. 5500-11, LGBl. Nr. 111/2015, LGBl. Nr. 38/2016, LGBl. Nr. 12/2018, LGBl. Nr. 26/2019, LGBl. Nr. 90/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 21a provides for the organising and implementation of activities related to removal/eradication of introduced alien species, which may threaten native species and habitats.
ÖÖ	Oö. Natur- und Landschaftsschutzgesetz 2001 - Oö. NSchG 2001 (StF: LGBl.Nr. 129/2001, amend. LGBl.Nr. 160/2001, LGBl.Nr. 84/2002, LGBl.Nr. 152/2002, LGBl.Nr. 106/2003, LGBl.Nr. 24/2004, LGBl.Nr. 61/2005, LGBl.Nr. 138/2007, LGBl.Nr. 30/2010, LGBl.Nr. 4/2013, LGBl.Nr. 90/2013, LGBl.Nr. 35/2014, LGBl.Nr. 92/2014, LGBl.Nr. 49/2017, LGBl.Nr. 54/2019, LGBl.Nr. 109/2019, LGBl.Nr. 125/2020)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 26 provides on the management of wild animals.

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
B	Burgenländisches Naturschutz- und Landschaftspflegegesetz - NG 1990 (StF: LGBl. Nr. 27/1991, amend. LGBl. Nr. 1/1994, LGBl. Nr. 54/1995, LGBl. Nr. 66/1996, LGBl. Nr. 86/1996, LGBl. Nr. 31/2001, LGBl. Nr. 32/2001, LGBl. Nr. 54/2004, LGBl. Nr. 58/2004, LGBl. Nr. 35/2008, LGBl. Nr. 24/2009, LGBl. Nr. 7/2010, LGBl. Nr. 79/2013, LGBl. Nr. 38/2015, LGBl. Nr. 20/2016, LGBl. Nr. 35/2018, LGBl. Nr. 43/2019, LGBl. Nr. 74/2019, LGBl. Nr. 89/2019, LGBl. Nr. 70/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 14 provides on the management of wild animals § 17 provides on the introduction of species into the wild.
S	Salzburger Naturschutzgesetz 1999 - NSchG (StF: LGBl Nr 73/1999, amend. LGBl Nr 96/1999, LGBl Nr 46/2001, LGBl Nr 1/2002, LGBl Nr 8/2002, LGBl Nr 88/2002, LGBl Nr 109/2003, LGBl Nr 96/2004, LGBl Nr 58/2005, LGBl Nr 100/2007, LGBl Nr 31/2009, LGBl Nr 116/2009, LGBl Nr 66/2011, LGBl Nr 107/2012, LGBl Nr 32/2013, LGBl Nr 106/2013, LGBl Nr 11/2017, LGBl Nr 56/2017, LGBl Nr 96/2017, LGBl Nr 19/2018, LGBl Nr 82/2018, LGBl Nr 33/2019, LGBl Nr 67/2019, LGBl Nr 61/2020)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 31 provides on the management of wild animals.

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
Stmk	Steiermärkisches Naturschutzgesetz 2017 – StNSchG 2017 (StF: LGBl. Nr. 71/2017, amend. LGBl. Nr. 87/2019)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 17, 18 provide on the management of wild animals and birds.
K	Kärntner Naturschutzgesetz 2002 - K-NSG 2002 (StF: LGBl Nr 79/2002, amend. LGBl Nr 63/2005, LGBl Nr 77/2005, LGBl Nr 103/2005, LGBl Nr 10/2009, LGBl Nr 9/2010, LGBl Nr 42/2010, LGBl Nr 8/2012, LGBl Nr 89/2012, LGBl Nr 104/2012, LGBl Nr 85/2013, LGBl Nr 65/2016, LGBl Nr 43/2017, LGBl Nr 57/2017, LGBl Nr 71/2018, LGBl Nr 38/2019, LGBl Nr 104/2019)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 21 (2) bans the introduction of IAS species into the wild.
T	Tiroler Naturschutzgesetzes 1997 (LGBl. Nr. 26/2005, amend. LGBl. Nr. 57/2007, LGBl. Nr. 98/2009, LGBl. Nr. 30/2011, LGBl. Nr. 110/2011, LGBl. Nr. 94/2012, LGBl. Nr. 150/2012, LGBl. Nr. 130/2013, LGBl. Nr. 14/2015, LGBl. Nr. 87/2015, LGBl. Nr. 26/2017, LGBl. Nr. 32/2017, LGBl. Nr. 127/2018, LGBl. Nr. 144/2018, LGBl. Nr. 138/2019, LGBl. Nr. 163/2019, LGBl. Nr. 80/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 26 provides on the management of wild animals.

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
V	Gesetz über Naturschutz und Landschaftsentwicklung (StF: LGBl.Nr. 22/1997, amend. LGBl.Nr. 58/2001, LGBl.Nr. 38/2002, LGBl.Nr. 1/2008, LGBl.Nr. 72/2012, LGBl.Nr. 44/2013, LGBl.Nr. 9/2014, LGBl.Nr. 58/2016, LGBl.Nr. 70/2016, LGBl.Nr. 2/2017, LGBl.Nr. 78/2017, LGBl.Nr. 67/2019, LGBl.Nr. 19/2020, LGBl.Nr. 24/2020, LGBl.Nr. 91/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)		§ 15 provides on the management of wild animals § 16 provides on the introduction of species into the wild.

Hunting legislation:

All nine federal states governments must issue hunting legislation, which provides on the protection and management of game mammals and birds, and on hunting rights. Regulates trade (within the federal state). Every federal state law provides a list with bird and mammal species that are the object of hunting in their respective state, sometimes including the alien species and IAS of EU concern. The legislations provide lists of means and methods which usage is prohibited for hunting. The introduction of alien game species into the natural environment or re-introduction of native game species, considering the public opinion in the region of re-introduction is sometimes also regulated. If IAS species of EU concern are listed in the respective states' legislation, these species are not protected by law and the management include their eradication.

Table 6. Key legislation directly or indirectly related to the management of IAS and vertebrate IAS of EU concern in regional states (Hunting legislation). All legislation reviewed was downloaded from <https://www.ris.bka.gv.at/> (last access 25.04.2021).

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
W	Wiener Jagdgesetz (StF.: LGBl. Nr. 06/1948, amend. LGBl. Nr. 31/1982 LGBl. Nr. 09/1993 LGBl. Nr. 11/2001 LGBl. Nr. 34/2001, LGBl. Nr. 36/2010 LGBl. Nr. 56/2010 LGBl. Nr. 11/2012 LGBl. Nr. 34/2013 LGBl. Nr. 46/2013 LGBl. Nr. 11/2017 LGBl. Nr. 71/2018 LGBl. Nr. 65/2019 LGBl. Nr. 43/2020)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in § 3 (<i>Nyctereutes procyonoides</i> , <i>Ondatra zibethicus</i> , <i>Procyon lotor</i>)	Provides on the management of game, and on hunting rights. Regulates trade of live game species and game products which is permitted only with veterinary certificate and certificate for origin. Provides a list with bird and mammal species that are the object of hunting. § 90 Provides a list of means and methods which usage is prohibited for hunting.
NÖ	NÖ Jagdgesetz 1974 (NÖ JG) (StF: LGBl. 6500-0 (WV), amend. (LGBl. 6500-1 LGBl. 6500-2 LGBl. 6500-3 LGBl. 6500-4 (DFB) LGBl. 6500-5 LGBl. 6500-6 LGBl. 6500-7 LGBl. 6500-8 LGBl. 6500-9 (VfGH) LGBl. 6500-10 (VfGH) LGBl. 6500-11 LGBl. 6500-12 LGBl. 6500-13 LGBl. 6500-14, LGBl. 6500-15 LGBl. 6500-16, LGBl. 6500-17 (DFB) LGBl. 6500-18 LGBl. 6500-19, LGBl. 6500-20 (DFB) LGBl. 6500-21, LGBl. 6500-22 LGBl. 6500-23 LGBl. 6500-24 LGBl. 6500-25 LGBl. 6500-26 LGBl. 6500-27 LGBl. 6500-28, LGBl. 6500-29 LGBl. Nr. 84/2015, LGBl. Nr. 96/2015 LGBl. Nr. 109/2015, LGBl. Nr. 23/2018, LGBl. Nr. 44/2018, LGBl. Nr. 68/2018, LGBl. Nr. 26/2019, LGBl. Nr. 2/2020)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in § 3 (<i>Nyctereutes procyonoides</i> , <i>Procyon lotor</i>)	Provides on the protection and management of game, and on hunting rights. Regulates trade of live game species and game products which is permitted only with veterinary certificate and certificate for origin. Provides a list with bird and mammal species that are the object of hunting. § 3 (4) Provides a list of means and methods which usage is prohibited for hunting. § 92a bans the usage of poisons and toxins, except free-available poisons against the Brown rat (<i>Rattus norvegicus</i>).

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
ÖÖ	Oö. Jagdgesetz (LGBl.Nr. 32/1964, amend. LGBl.Nr. 39/1965, LGBl.Nr. 39/1970, LGBl.Nr. 64/1984 , LGBl.Nr. 13/1988 , LGBl.Nr. 62/1988, LGBl.Nr. 2/1990, LGBl.Nr. 28/199, LGBl.Nr. 93/1996, LGBl.Nr. 79/2000, LGBl.Nr. 40/200, LGBl.Nr. 90/2001 , LGBl.Nr. 25/2002)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds under Annex to §3 Abs.1 (<i>Nyctereutes procyonoides</i> , <i>Procyon lotor</i>)	Provides on the protection and management of game, and on hunting rights. Provides a list with bird and mammal species object of hunting in Upper Austria (Annex). §59 and §62 provide on the means and methods which usage is prohibited for hunting.
B	Bgld.-JagdG. 2017 (StF: LGBl. Nr. 24/2017)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in § 4 (no IAS listed)	Provides on the protection and management of game, and on hunting rights. Provides a list with bird and mammal species object of hunting in Burgenland (Annex). § 93 provides on the usage of trapping.
S	Salzburger Jagdgesetz 1993 - JG (StF: LGBl Nr 100/1993, amend. LGBl Nr 151/1993 LGBl Nr 60/1994, LGBl Nr 2/1996, LGBl Nr 89/1996, LGBl Nr 9/1997, LGBl Nr 69/1998, LGBl Nr 17/2000, LGBl Nr 46/2001, LGBl Nr 70/2002, LGBl Nr 52/2005, LGBl Nr 58/2005, LGBl Nr 14/2006, LGBl Nr 63/2006, LGBl Nr 7/2008, LGBl Nr 51/2010, LGBl Nr 53/2011, LGBl Nr 15/2012, LGBl Nr 107/2012, LGBl Nr 106/2013, LGBl Nr 21/2015, LGBl Nr 14/2017, LGBl Nr 35/2017, LGBl Nr 62/2019, LGBl Nr 67/2019, LGBl Nr 73/2020, LGBl Nr 85/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in § 4 (<i>Alopochen aegyptiaca</i> , <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> , <i>Ondatra zibethicus</i> , <i>Oxyura jamaicensis</i> , <i>Threskiornis aethiopicus</i>)	Provides on the protection and management of game, and on hunting rights. Provides a list with bird and mammal species object of hunting in Salzburg (Annex). § 70 (3) provides on the means and methods which usage is prohibited for hunting. § 90 provides on the hunting management of IAS species.

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
Stmk	Steiermärkisches Jagdgesetz 1986 (LGBI. Nr. 23/1986, amend. LGBI. Nr. 50/1990, LGBI. Nr. 71/1991, LGBI. Nr. 16/1993, LGBI. Nr. 17/1993, LGBI. Nr. 72/1994, LGBI. Nr. 84/1999, LGBI. Nr. 58/2000, LGBI. Nr. 11/2005, LGBI. Nr. 78/2005, LGBI. Nr. 56/2006, LGBI. Nr. 32/2008, LGBI. Nr. 5/2010, LGBI. Nr. 45/2010, LGBI. Nr. 102/2011, LGBI. Nr. 42/2012, LGBI. Nr. 87/2013, LGBI. Nr. 156/2014, LGBI. Nr. 9/2015, LGBI. Nr. 96/2016, LGBI. Nr. 64/2017, LGBI. Nr. 59/2018)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in § 2 (<i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> , <i>Ondatra zibethicus</i> , <i>Procyon lotor</i>)	Provides on the protection and management of game, and on hunting rights. Provides a list with bird and mammal species object of hunting.
K	Kärntner Jagdgesetz 2000 - K-JG (StF: LGBI Nr 21/2000, amend. LGBI Nr 72/2001, LGBI Nr 7/2004, LGBI Nr 18/2004, LGBI Nr 20/2005, LGBI Nr 77/2005, LGBI Nr 79/2005, LGBI Nr 53/2006, LGBI Nr 15/2008, LGBI Nr 83/2008, LGBI Nr 33/2010, LGBI Nr 86/2012, LGBI Nr 89/2012, LGBI Nr 40/2013, LGBI Nr 85/2013, LGBI Nr 13/2018, LGBI Nr 49/2018, LGBI Nr 104/2019, LGBI Nr 70/2020, LGBI Nr 7/2021)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in § 4 (no IAS listed)	Provides on the protection and management of game, and on hunting rights. Provides a list with bird and mammal species object of hunting in Salzburg (Annex). § 58 provides on the means and methods which usage is prohibited for hunting.

	Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
T	Tiroler Jagdgesetz 2004 – TJG 2004 (LGBI. Nr. 41/2004, amend. LGBI. Nr. 34/2006, LGBI. Nr. 9/2008, LGBI. Nr. 8/2010, LGBI. Nr. 150/2012, LGBI. Nr. 130/2013, LGBI. Nr. 103/2014, LGBI. Nr. 64/2015, LGBI. Nr. 26/2017, LGBI. Nr. 144/2018, LGBI. Nr. 45/2019, LGBI. Nr. 75/2019, LGBI. Nr. 138/2019, LGBI. Nr. 163/2019, LGBI. Nr. 51/2020, LGBI. Nr. 116/2020)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in Annex to § 2 Abs. 1 (<i>Nyctereutes procyonoides</i> , <i>Procyon lotor</i>)	Provides on the protection and management of game, and on hunting rights. Provides a list with bird and mammal species object of hunting.
V	Gesetz über das Jagdwesen (StF: LGBI.Nr. 32/1988, amend. LGBI.Nr. 67/1993, LGBI.Nr. 21/1998 LGBI.Nr. 58/2001, LGBI.Nr. 6/2004, LGBI.Nr. 35/2004, LGBI.Nr. 54/2008, LGBI.Nr. 25/2011, LGBI.Nr. 44/2013, LGBI.Nr. 58/2016, LGBI.Nr. 70/2016, LGBI.Nr. 78/2017 LGBI.Nr. 37/2018, LGBI.Nr. 67/2019, LGBI.Nr. 19/2020, LGBI.Nr. 91/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All game mammals and birds listed in §4 Abs.1 (<i>Ondatra zibethicus</i>)	Provides on the protection and management of game, and on hunting rights. Provides a list with bird and mammal species object of hunting.

Fishing legislation:

All nine federal states governments must issue fishing legislation, which regulates management, use and protection and management of fish resources. They provide on means and methods which are allowed, and which are prohibited for use for recreational and commercial fishing. Permits for exemptions are issued for scientific purposes. Fishing laws provide also on standards and conditions for fish stocking and introduction of alien species and re-introduction of native species of fish and other aquatic organisms into the water. If IAS species of EU concern are listed in the respective states' legislation, these species are not protected by law and the management include their eradication.

Table 7. Key legislation directly or indirectly related to the management of IAS and vertebrate IAS of EU concern in regional states (Fishing legislation). All legislation reviewed was downloaded from <https://www.ris.bka.gv.at/> (last access 25.04.2021).

	Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
W	Wiener Fischereigesetz (StF: LGBl. Nr. 01/1948, amend. LGBl. Nr. 21/1984, LGBl. Nr. 48/1993, LGBl. Nr. 10/1998, LGBl. Nr. 11/2001, LGBl. Nr. 33/2001, LGBl. Nr. 22/2010, LGBl. Nr. 56/2010, LGBl. Nr. 10/2013, LGBl. Nr. 34/2013, LGBl. Nr. 16/2014, LGBl. Nr. 27/2018, LGBl. Nr. 71/2018, LGBl. Nr. 32/2019)	Wiener Fischereiverordnung	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish, mussel and fish species listed in § 1 Wiener Fischereiverordnung, no IAS listed	§ 45 provides on the management of IAS species. § 49 provides on means and methods which are allowed and which are prohibited for use for recreational and commercial fishing.
NÖ	NÖ Fischereigesetz 2001 (StF: LGBl. 6550-0, amend. LGBl. 6550-1, LGBl. 6550-2, LGBl. 6550-3, LGBl. 6550-4, LGBl. 6550-5, LGBl. 6550-6, LGBl. Nr. 83/2015, LGBl. Nr. 12/2018, LGBl. Nr. 23/2018)	NÖ Fischereiverordnung 2002 (StF: LGBl. 6550/1-0, amend. LGBl. 6550/1-1, LGBl. Nr. 93/2015)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish, mussel and fish species listed in § 1 NÖ Fischereiverordnung, no IAS listed	§ 36 provides on the management of IAS species. § 10 and 12 provide on means and methods which are allowed and which are prohibited for use for recreational and commercial fishing.

	Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
ÖÖ	Oö. Fischereigesetz 2020 (StF: LGBl.Nr. 41/2020)	Oö. Fischereiverordnung (StF: LGBl. Nr. 85/2020), Atterseefischereiordnung (StF: LGBl.Nr. 88/1985, amend. LGBl.Nr. 17/2010, LGBl.Nr. 86/2020) Donaufischereiordnung (StF: LGBl.Nr. 51/1984, amend. LGBl.Nr. 39/1985, LGBl.Nr. 51/1987, LGBl.Nr. 16/1992, LGBl.Nr. 102/2014, LGBl.Nr. 86/2020) Traunseefischereiordnung (StF: LGBl. Nr. 109/2017, amend. LGBl.Nr. 86/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish, mussel and fish species (§17 Oö. Fischereiverordnung)	§ 11 provides on the stocking of fish. § 17 (5) Oö. Fischereiverordnung provides on the management of IAS species.
B	Fischereigesetz 1949 (StF: LGBl. Nr. 1/1949, amend. LGBl. Nr. 32/2001, LGBl. Nr. 94/2002, LGBl. Nr. 79/2013, LGBl. Nr. 19/2017, LGBl. Nr. 74/2019, LGBl. Nr. 89/2019)	2. Fischereiverordnung (StF: LGBl. Nr. 9/1953, amend. StF: LGBl. Nr. 9/1953)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish, mussel and fish species	§ 52 provides on the management of IAS species. § 57 provides on means and methods which are allowed and which are prohibited for use for recreational and commercial fishing.
S	Fischereigesetz 2002 (StF: LGBl Nr 81/2002, amend. LGBl Nr 92/2005, LGBl Nr 118/2009, LGBl Nr 51/2010, LGBl Nr 104/2011, LGBl Nr 15/2012, LGBl Nr 107/2012, LGBl Nr 106/2013, LGBl Nr 14/2017, LGBl Nr 35/2017, LGBl Nr 67/2019, LGBl Nr 19/2020)	Salzburger Schonzeiten-Mindestlängen-Verordnung 2013, Salzburger Fischereiverordnung 2020 – S.FischVO 2020 (StF: LGBl Nr 116/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish, mussel and fish species listed in § 1 S.FischVO 2020 (IAS listed <i>Lepomis gibbosus</i> , <i>Pseudorasbora parva</i>)	§ 2 (10) provides on the management of IAS species. § 23 and § 26 provide on means and methods which are allowed and which are prohibited for use for recreational and commercial fishing.

	Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
Stmk	Steiermärkisches Fischereigesetz 2000 (LGBl. Nr. 85/1999, amend. LGBl. Nr. 78/2005, LGBl. Nr. 26/2013, LGBl. Nr. 87/2013, LGBl. Nr. 52/2014, LGBl. Nr. 63/2018)	Verordnung der Steiermärkischen Landesregierung vom 11. Dezember 2000 über die Schonzeiten und Mindestfanglängen von Wassertieren (StF: LGBl. Nr. 81/2000)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish and fish species	§ 12 and § 13 provide on means and methods which are allowed, and which are prohibited for use for recreational and commercial fishing.
K	Kärntner Fischereigesetz-K-FG (StF: LGBl Nr 62/2000, amend. LGBl Nr 77/2005, LGBl Nr 10/2009, LGBl Nr 55/2010, LGBl Nr 42/2011, LGBl Nr 45/2012, LGBl Nr 89/2012, LGBl Nr 2/2013, LGBl Nr 85/2013, LGBl Nr 13/2017, LGBl Nr 58/2018, LGBl Nr 71/2018, LGBl Nr 104/2019)	Kärntner Fischereischonzeitverordnung – K-FSV (StF: LGBl. Nr. 75/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish and fish species	§ 23 provides on the stocking of fish. § 35 provides on means and methods which are allowed and which are prohibited for use for recreational and commercial fishing.
T	Tiroler Fischereigesetz 2020 (StF: LGBl. Nr. 3/2021)	Tiroler Fischereiverordnung	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish and fish species	§ 21 (4) provides on the management of IAS species. § 20 provides on means and methods which are allowed and which are prohibited for use for recreational and commercial fishing.

	Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
V	Gesetz über die Fischerei in Binnengewässern (StF: LGBl.Nr. 47/2000, LGBl.Nr. 44/2013, LGBl.Nr. 80/2016, LGBl.Nr. 67/2019)	Fischereiverordnung – FiVo (StF: LGBl.Nr. 36/2001, LGBl.Nr. 60/2004, amend. LGBl.Nr. 87/2014, LGBl.Nr. 102/2016, LGBl.Nr. 81/2019) Gesetz über die Bodenseefischerei (StF: LGBl.Nr. 1/2002, amend. LGBl.Nr. 38/2002, LGBl.Nr. 36/2004, LGBl.Nr. 1/2008, LGBl.Nr. 57/2009, LGBl.Nr. 25/2011, LGBl.Nr. 44/2013, LGBl.Nr. 58/2016, LGBl.Nr. 81/2016, LGBl.Nr. 67/2019, LGBl.Nr. 19/2020, LGBl.Nr. 24/2020, LGBl.Nr. 91/2020)	VO (EU) 1143/2014 Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC)	All crayfish and fish species Species list in FiVo §14	§ 16 (1) provides on the management of IAS species.

Animal welfare legislation:

The federal governments have the legislative authority in regards of animal welfare and veterinary legislation. The **Tierschutzgesetz – TSchG** regulates the protection of **all** animals' life, health and well-being, as well as the protection of animals from inhumane, cruel and extremely cruel treatment; ensuring proper care and living conditions, adapted to their physiological and behavioural specifics. It defines inhumane treatment as any action causing pain, suffering, or strong fear to animals, and cruel treatment as any act or failure to act, resulting in continuous or repeated suffering of the animal, injury, or distress. Regulates implementation, management and control of veterinary activities, including the application of veterinary requirements for the protection of animal health and welfare. Provides on the protection and humane treatment of animals during transport, keeping, use, and killing. Provides lists of authorised methods for killing animals used for scientific purposes, as well as animals in farms, animals in fur farms, and discarded chickens and embryos in hatcheries. Permits for exemptions may be issued upon justification. Provides on the procedure of injection euthanasia of animals.

The animal keeping legislation (2. Tierhaltungsverordnung and Zoo-Verordnung) provides on the minimum requirements and conditions for raising vertebrate animals in zoos, homes and rescue centres, including the IAS of EU concern.

Table 8. Key legislation directly or indirectly related to the management of IAS and vertebrate IAS of EU concern in regional states (Animal welfare legislation). All legislation reviewed was downloaded from <https://www.ris.bka.gv.at/> (last access 25.04.2021).

Legislation/ guidance/ standard	Supplementary regulations	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
Tierschutzgesetz – TSchG (StF: BGBl. I Nr. 118/2004, amend. BGBl. I Nr. 54/2007, BGBl. I Nr. 2/2008, BGBl. I Nr. 35/2008, BGBl. I Nr. 80/2010, BGBl. I Nr. 114/2012, BGBl. I Nr. 80/2013, BGBl. I Nr. 61/2017, BGBl. I Nr. 148/2017, BGBl. I Nr. 37/2018, BGBl. I Nr. 86/2018)	2. Tierhaltungsverordnung (StF: BGBl. II Nr. 486/2004, amend. BGBl. II Nr. 26/2006, BGBl. II Nr. 384/2007, BGBl. II Nr. 57/2012, BGBl. II Nr. 68/2016, BGBl. II Nr. 341/2018)	All animal species	§ 6 provides on means and methods which prohibited for killing of animals. 2. Tierhalteverordnung provides information about the minimum requirements of keeping not domesticated vertebrate species.
	Zoo-Verordnung (StF: BGBl. II Nr. 491/2004, amend. BGBl. II Nr. 30/2006)		Provides on the conditions for keeping and breeding in zoos.

4.2. Slovakia

IAS legislation and EU directive implementation legislation:

The Slovak Republic (SR) issued **Act No. 150/2019 Coll.** on prevention, mitigation and management of introduction and spread of invasive alien species as amended, it was adopted on 10th May 2018. It entered into force on 1st August 2019 (<https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2019/150/20190801>). The act is a direct implementation of EU Regulation (EU) 1143/2014 into state legislation and its adaption to the conditions of the SR. Its provisions cover both IAS of EU concern as well as IAS of national concern listed in supplementary legislation. The act provides on the prevention, and management (including introduction and spread of invasive non-native species). The management includes restrictions on keeping and handling alien species, measures to prevent introduction and spread of invasive alien species, an information system and the competence of administration.

Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern include § 4 regarding rapid eradication measures and § 6 implementation of action plans for management.

Supplementary legislation:

Decree of the Slovak Government No. 449/2019 Coll., which issues the list of invasive species of concern for the Slovak Republic, which are not IAS of Union concern. It entered into force on 1st January 2020. It lists the following vertebrate species: *Ameiurus melas*, *Chrysemys picta*, *Gasterosteus aculeatus*, *Mustela vision*, *Neogobius fluviatilis*, *Neogobius gymnotrachelus*, *Neogobius kessleri*, *Neogobius melanostomus*.

Ordinance of the Ministry of Environment of the SR No. 450/2019 Coll., which stipulates condition and ways of eradication of IAS. It entered into force on 1st January 2020. Methods for the eradication of invasive non-native animal species are listed in Annex No. 1. Annex No. 2 and 3 provides on the methods of removing invasive non-native plant species. The methods include e.g. trapping (selective traps can be used only), native predators, individual capture and killing.

Elimination of animal IAS has to be in accordance with provisions Act No.216/2018 on fishing as amended and Ordinance of the Ministry of Environment of the SR No. 381/2018 Coll., which implements the Act No. 216/2018 on fishing as amended; as well as Act No. 274/2009 on hunting as amended and Ordinance of the Ministry of Agriculture of the SR No. 344/2009 Coll., which implements the act on hunting as amended.

Nature protection legislation:

Act No. 543/2002 Coll., on nature and landscape protection as amended according to the provision of § 7 ensures conservation of native species composition of ecosystems; the conservation includes regulation of intentional spread of alien species, monitoring of occurrence, population size and vectors of spreading. Release of alien animal species in the environment requires permit of nature protection authority.

Hunting legislation:

Act No. 274/2009 Coll., on hunting as amended stipulates conditions for protection of biodiversity and healthy population of game species and their natural habitats, use of hunting grounds, improvement of living conditions of game species listed under Annex No. 1, which include some alien species (e.g. different pheasant and deer species) as well several IAS species (*Procyon lotor*, *Myocastor coypus*, *Ondatra zibethica*, *Nyctereutes procyonoides*); § 65 provides the list of banned game hunting methods, which also applies also to IAS species. The hunting with poison, combustion, modified atmospheres, snares, spring traps, glue, hooks as well all non-selective trapping is banned, among others. Restriction for hunting with firearms are also listed. The keeping and transport of living muskrat is banned.

Fishing legislation:

Act No. 216/2018 Coll., on fishing as amended stipulates conditions for protection, breeding and catch of fish the way that it does not threaten water ecosystems and gene pool of native fish species, rights and obligations of persons in the use of waters on fish protection, breeding and catch of fish, system of administration in fishing, § 15-19 provide banned fishing methods which also applies to IAS species.

Animal welfare legislation:

Act No. 39/2007 Coll., on veterinary care as amended – provisions of the act cover veterinary conditions on animal health from the point of animal health and wellbeing, rights, and obligations of persons in veterinary area, system of veterinary administration; protection of animals, includes protection of wild

animals and dangerous animals in captivity, protection of pets, protection of animals in the time of their killing and the transport of animals, if the animal is kept as a pet or ornamental species. It also regulates the import from species of third countries.

Act No. 442/2004 Coll., on private veterinarians, on the Chamber of Veterinary Surgeons of the Slovak Republic – provisions of the act cover conditions and ways in which private veterinary activities and services are carried out; rights and obligations of private veterinarians; position and tasks of the Chamber of Veterinary Surgeons of the Slovak Republic.

Ordinance of the Ministry of Agriculture of the SR No. 283/2020 Coll., on conditions of protection of pets, requirements on capture of stray animals and requirements on quarantine stations and animal shelters; the ordinance covers general requirements on protection of pets and their breeding establishments and special requirements on protection of dogs, cats, rodents, birds, reptiles, amphibians, ornamental fish, and their breeding establishments. Not included within this ordinance are wild native species and IAS species.

4.3. Slovenia

IAS legislation and EU directive implementation legislation:

The framework is Regulation (EU) 1143/2014, which is directly implemented into Slovenian national legislation. For detailed implementation of EU Regulation and management of IAS, a specific national legislation (regulation) is being prepared by the government.

The definition of invasive alien species is not given in any Slovenian legislation. At the moment, there are no direct provisions on how to deal with already present invasive species.

Nature protection legislation:

Nature Conservation Act (Nature Conservation Act – Official Consolidated Text – ZON-UPB2 (Official Gazette of the Republic of Slovenia [Uradni list RS], No. 96/04 of 30 August 2004)) - determines biodiversity conservation measures and the system for the protection of valuable natural features for the purpose of contributing to nature conservation.

- Provides definition of alien (non-indigenous or allochthonous) species of animals (“*Non-indigenous (allochthonous) animal species shall mean a species that has been introduced by humans and was not present in the biocenosis of a certain ecosystem prior to such introduction. Of the extirpated species, those shall be deemed to be non-indigenous for which approximately the same biotope and biotic conditions no longer exist in the ecosystem as prior to the extirpation.*”) and plants (“*Non-indigenous (allochthonous) plant species shall mean a species that has been introduced by humans and was not present in the territory of Slovenia prior to such introduction.*”) and indigenous (“*autochthonous animal or plant species shall mean a species which naturally occurs in a certain ecosystem. Of the exterminated species those shall be considered indigenous for which approximately the same biotope and biotic conditions still exist in the ecosystem as prior to the extermination*”).
- Defines **introduction**: *Introduction shall mean the introduction of plants or animals into an ecosystem where plants or animals of that species have never been present. Introduction can be carried out with a purpose, i.e. so that plants or animals live in a new ecosystem, or can be*

unintended or a consequence of human negligence, e.g. discarding aquarium or terrarium animals in the wild or allowing animals to escape from enclosures. The bringing of animals into an area intended for animal breeding shall not be deemed to be the introduction thereof.

- Article 17 - introduction of plants or animals of non-indigenous species is prohibited, with some exceptions (providing nature risk assessment and some hunting animals or agricultural plants). Article 18 - Repopulation of plants or animals of non-indigenous species is supervised and monitored (providing nature risk assessment; can be consented or rejected by the ministry; doesn't apply fully to plants that are used in agriculture and forestry or animals for hunting).

Supplementary legislation:

Decree on special protection areas (Natura 2000 areas) (Official Gazette RS, nos. 49/04, 110/04, 59/07, 43/08, 8/12, 33/13, 35/13 – corr., 39/13 – Constitutional Court Decision, 3/14, 21/16, 47/18) – Article 7 (guidelines for protection) states that “*Animals and plants of non-native species and genetically modified organisms shall not be introduced into Natura areas*”. Natura 2000 Management Programme for Slovenia for the period 2015–2020 sets out conservation guidelines, where invasive species removal is suggested for many of the areas (but not detailed).

The Environmental Protection Act (Official Gazette RS, nos. 39/06 – official consolidated text, 49/06 – ZMetD, 66/06 – Constitutional Court Decision, 33/07 – ZPNačrt, 57/08 – ZFO-1A, 70/08, 108/09, 108/09 – ZPNačrt-A, 48/12, 57/12 and 92/13) provides a systematic framework for nature conservation, of which biodiversity conservation is a fundamental part. ZVO-1 thus regulates the protection of the environment from overburdening as a fundamental condition for sustainable development, and within this framework it provides basic principles of environmental protection, environmental protection measures, monitoring of the state of the environment and information on the environment, economic and financial instruments for environmental protection, public environmental protection services, and other issues related to environmental protection. The purpose of environmental protection is to promote and guide the kind of social development that will ensure long-term conditions for human health, well-being, and quality of life, as well as the preservation of biodiversity. Nature conservation remains inextricably embedded into the system of environmental protection, through joint planning and programming, joint environmental assessment procedures, joint environmental monitoring, environmental data publicity, access to environmental data, environmental taxes on the use of natural resources, nongovernmental organisations for environmental protection acting in the public interest, and the regulation of concessions on natural resources.

Rules on forest protection (Official Gazette RS, nos. 114/09, 31/16) is related to Act on Forests (Official Gazette RS, nos. 30/93, 56/99 – ZON, 67/02, 110/02 – ZGO-1, 115/06 – ORZG40, 110/07, 106/10, 63/13, 101/13 – ZDavNep, 17/14, 22/14 – Constitutional Court Decision, 24/15, 9/16 – ZGGLRS and 77/16).

The rules contain important provisions regarding action in the event of the occurrence of harmful organisms (non-native species, among others) in the forest: systematic detection and monitoring for their presence, measures to prevent their spread, and measures for control.

Acts on establishment of protected areas: Measures for IAS are foreseen in most of the acts for protected areas and included in management plans for protected areas. IAS included in other national strategic management plans (e.g. NPVO - National environmental action program 2020-2030, Decree on the marine environment management plan Official Gazette RS, no. 41/17).

Hunting legislation:

Game and Hunting Act (Official Gazette RS, nos. 16/04, 120/06 – Constitutional Court Decision, 17/08, 46/14 – ZON-C, 31/18, 65/20 in 97/20 – corr.) –

Provides that the introduction and repopulation of native or non-native species of wildlife is carried out on the basis of management plans, hunting areas and in accordance with the regulations in the field of veterinary medicine and nature conservation. Does not allow to keep in the enclosures those non-native game species that could change the genetic fund of the populations of indigenous game species in the event of escape from the enclosure. The law therefore restricts only the retention of those species of game that could interbreed with the native species but does not address other influences of non-native species that could occur when specimens escape into the wild. Management plans for game species (including some IAS) are regulated with Rules on forest management plans and game management plans (Official Gazette RS, nos. 91/10 in 200/20). The goal of Management Plans is to eradicate IAS (coypu, muskrat, racoon dog). The racoon is not listed as game species in Slovenia at the moment and not included in management plans.

Fishing legislation:

Freshwater Fisheries Act (ZSRib; Official Gazette RS, no. 61/06)

The aim of this Act is, among other things, to contribute to the prevention of the introduction of non-native fish species into inland waters and their spread. The Act does not define measures for controlling the spread and introduction of non-native fish species, except for banning any transfer of species between the Danube and Adriatic water basins (native in one but alien in the other) and between waterbodies. The Regulation on fishing species caught in inland waters (Official Gazette RS, No. 46/2007) determines species relevant to fishing, including all non-native fish and crustacean species that are not protected by nature conservation regulations. Rules on fishing regime (Official Gazette RS, nos. 99/07, 75/10) provides that minimum hunting rates and periods of conservation shall not apply to non-native fish species if they are defined as invasive species in the fishery farming plan and this is specified in the fishery farming plan (except for rainbow trout and carp). Prohibition on the investment of locally absent fish for which a farming permit must be obtained (Rules on commercial ponds, Official Gazette RS no. 113/2007).

Management programme for freshwater fish until 2021 - determines long-term policies and measures for fish management. It is also the basis for the preparation of fisheries management plans for fisheries areas and implementation for districts. Included are definitions of non-native or alien species and strategies on how to diminish populations of non-native (invasive) fish species and prevention of their spread, management. If caught at any time, alien fish species should not be put back into the water, e.g. pond drainage (fishing competitions and other occasions) - need to dispatch IAS (methods of fishing determined).

Animal welfare legislation:

Animal Protection Act (Official Gazette RS, no. 38/13 – Official Consolidated Text, 21/18 – ZNOrg in 92/20)

This Act does not deal directly with alien or invasive species, but since it concerns animal (vertebrate) welfare, prohibited actions against them, and possible handling, it is most important for the possible application of measures. This Act determines the responsibility of humans for the protection of

animals, i.e. the protection of their lives, health and welfare; it determines the rules for good animal handling; it defines what is deemed to be cruelty to animals and the kinds of conduct and procedures used on animals that are prohibited; it determines the conditions that must be ensured for the protection of animals in animal rearing, transport, performing certain procedures and experiments on animals, and the slaughtering and killing of animals. It also regulates the handling of fish, game and hunting dogs, unless otherwise regulated by laws governing fishery, game and hunting.

Article 5 defines and deals with animals, which comprise also vertebrate IAS. Actions that could be used in control of IAS and are prohibited by this law under Article 15 (use of poison and toxins, shooting of animals, use of leg-hold traps & snares, live animal baits, animal chasing, hunt game for rearing purposes in contravention of the hunting and fishery regulations, carry out procedures on animals in contravention of regulations). If in accordance with hunting and fishing regulations, the trapping of animals, culling animals from nature may be authorised. Article 19 deals with anaesthesia of animals. Article 20 prohibited the amputation of full or partial animal body parts, unless it is required to restrict the reproduction of animals among others. Article 26 defines permissions of killing of animals. Regarding the management of IAS species, following is applicable 5. *when such is necessary in order to maintain natural balance in accordance with the Act governing nature conservation*; 8. *in the case of an animal causing significant damage which cannot be prevented in any other manner*; 16. *when such is carried out in accordance with the regulations governing hunting and fishery*.

The killing of animals that is not regulated by Regulation (EC) 1099/2009 shall be carried out according to the procedures in which an animal is killed instantly or is appropriately stunned before being killed.

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Appendix 35. Regional conditions for the Atlantic region

Belgium (BE), France (FR), Ireland (IE), Netherlands (NL) (and United Kingdom, UK)

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1. Species presence in countries from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each country in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)

Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopoche aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Perccottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Belgium																						
Presence	P	P	NP	NP	NP	P	P	P	P	NP	P	P	P	NP	NP	P	P	P	P	P	P	P
Status	O	W				W	W	R	R		O	W	O			W	W	O	O	R	O	O
Impact	N	Y				Y	Y	?	?		N	Y	N			Y	?	N	N	?	N	?
Highest impact		+				+	+					+				+						
References	64, 87	2, 43, 87	2, 5, 6, 87	2, 70, 87	2, 87	2, 73, 76, 87	2, 3, 17, 18, 44, 45, 48, 87	13, 87	56, 65, 87	74, 75, 87	2, 87	66, 87	1, 2, 4, 68, 87	2, 87	28, 87	2, 74, 75, 87	2, 30, 87	2, 87	2, 87	2, 57, 87	2, 87	2, 11, 87
France																						
Presence	P	P	P	NP	NP	P	P	P	P	NP	P	P	P	NP	NP	P	P	NP	NP	P	P	P
Status	O	W	W			W	W	R	W		O	W	R			W	W			R	R	W

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosiurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Perccottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Impact	N	?	Y			Y	Y	?	Y		?	Y	?			Y	?			?	Y	Y
Highest impact			+				+		+			+				+						
References	64, 89	26, 43, 89	8, 14, 25, 89	31, 70, 89	60, 89	61, 89	46, 89	42, 89	65, 89	58, 89	47, 89	66, 89	50, 63, 89	32, 89	28, 89	47, 53, 89	30, 89	59, 89	33, 89	14, 89	15, 51, 52, 84, 89	11, 89
Ireland																						
Presence	NP	P	NP	P	NP	NP	NP	P	P	NP	NP	P	P	NP	NP	NP	NP	P	NP	P	NP	P
Status		C		O				R	R			R	O					W		O		O
Impact		N		N				?	?			?	N							?		?
Highest impact																		+				
References	86	86	55, 70, 86	86	70, 86	86	70, 86	12, 19, 20, 70, 86	65, 86	70, 86	86	66, 86	63, 86	70, 86	28, 86	86	30, 86	70, 86	70, 86	57, 70, 86	70, 86	11, 70, 86
Netherlands																						
Presence	P	P	NP	NP	NP	P	NP	P	P	NP	P	P	P	NP	NP	P	P	P	P	P	P	P
Status	O	W				W		O	R		R	W	R			R	W	O	O	R	O	O
Impact	N	Y				Y		N	?		?	Y	N			?	Y	N	N	?		?

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosiurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Perccottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Highest impact		+				+						+										
References	64, 88	35, 43, 81, 88	24, 80, 88	80, 88	70, 71, 72, 88	73, 76, 88	17, 18, 80, 88	39, 40, 41, 88	65, 88	70, 71, 72, 79, 88	21, 49, 88	7, 83, 88	63, 67, 77, 82, 88	70, 71, 72, 88	28, 88	49, 88	69, 88	23, 24, 88	22, 23, 88	57, 88	77, 78, 88	11, 88
United Kingdom																						
Presence	P	P	NP	NP	NP	P	NP	P	NP	P	P	NP	P	NP	NP	P	P	P	NP	P	P	P
Status	O	R				R		W		O	O		O			O	R	W		O	O	W
Impact	N	Y				Y		Y		N	N		N			N	Y	Y		?	N	?
Highest impact								+										+				
References	85	62, 43, 85	55, 85	70, 85	70, 85	16, 85	9, 85	9, 27, 85	29, 65, 85	9, 85	PC (D. Parr ot), 9, 85	66, 85	36, 37, 38, 70, 85	70, 85	28, 85	9, 70, 85	9, 10, 30, 85	34, 54, 85	70, 85	9, 70, 85	9, 70, 84, 85	11, 70, 85

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and Runhaar (2016); 81. Visser et al. (2015); 82. Vogelonderzoek Nederland (2019); 83. Ydenberg et al. (2019); 84. Yésou et al. (2017); 85. Online NBN atlas; 86. Online Biodiversity Ireland; 87. Online waarnemingen.be; 88. Online waarneming.nl; 89. Online INPN

2. Toolbox of measures - restrictions/bans in countries from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in a country = * followed by country code

Use of measure **banned** in a country = # followed by country code

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Collosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Biological control	Native predators					*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK								*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK				
Habitat manipulation	Aquatic barriers					*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK								*BE *FR *IE *NL *UK					
	Aquatic habitat management - Pond drying/draining					*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK								*BE *FR *IE *NL *UK					*BE *FR *IE *NL *UK
	Physical barriers																			
Hand removal	Hand removal																			*FR

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosiurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>		
	Physical fishing methods																					
Other	Egg oiling	*FR	*FR		*FR								*FR						*FR			
	Electrofishing					*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK								*BE *FR *IE *NL *UK							
	Fertility Control - chemical (in bait) & injection			*BE *FR *IE *NL *UK			*BE *FR *IE *NL *UK			*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK				*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK				
	Hunting dogs (tracking/ baying)																					
	Judas animals				*BE *FR *IE *NL *UK			*BE *FR *IE *NL *UK				*BE *FR *IE *NL *UK										
Poisoning or toxicants	Stupefying bait #BE#FR #IE #NL#UK																					
	Chemical treatment of the habitats					#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK		#BE #FR #IE #NL #UK			#BE #FR #IE #NL #UK		#BE #FR #IE #NL #UK								

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosiurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Poisons and toxins in bait															#BE #FR #IE #NL *UK				
Shooting	Shooting	*BE* FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK		*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK		*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	
Trapping	Drowning traps							*BE #FR *IE *NL *UK				*BE #FR *IE *NL *UK								
	Goodnature self-resetting			*BE *FR *IE *NL *UK												*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK		
	Spring traps			*BE *FR *IE *NL *UK								*BE *FR *IE *NL *UK		*BE *FR *IE *NL *UK		*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK		
	Cage traps	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK			*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK			*BE *FR *IE *NL *UK		*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK
	Neck-hold traps, and snares	#BE#FR #IE #NL#UK																		

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alouochen aegyptiaca</i>	<i>Callosiurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
	Live decoy traps	*BE *FR *IE *NL *UK	*BE *FR *IE *NL *UK		*BE *FR *IE *NL *UK																
Dispatch/ removal only once captured	Cervical dislocation	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK						*BE *IE *NL *UK		*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	
	Cranial depression	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	
	Decapitation	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK								*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK
	Electrocution	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK		#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK	#BE #FR #IE #NL #UK
	Freezing					*BE *IE *NL *UK	*BE *IE *NL *UK								*BE *IE *NL *UK						*BE *IE *NL *UK
	Injection euthanasia	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK
	Keeping in captivity	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK
	Modified atmospheres	*BE	*BE	*BE	*BE					*BE	*BE	*BE	*BE	*BE	*BE		*BE	*BE	*BE	*BE	*BE

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
		*IE *NL *UK	*IE *NL *UK	*IE *NL *UK	*IE *NL *UK				*IE *NL *UK	*IE *NL *UK	*IE *NL *UK	*IE *NL *UK	*IE *NL *UK	*IE *NL *UK		*IE *NL *UK	*IE *NL *UK	*IE *NL *UK	*IE *NL *UK	*IE *NL *UK
	Shooting - dispatch restrained animals	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK			*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK		*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK
	Slaughter (knife)	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK
	Surgical sterilisation	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK			*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK		*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK	*BE *IE *NL *UK

3. Details of restrictions/bans of Toolbox measures in countries from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Country where applied	Name of legislation
Native predators	Introduction of native predators must be allowed by authorities.	BE, FR, IE, NL, UK	Various Member State laws on conservation (implementation of Birds and Habitats Directives, among others)
Aquatic barriers	No aquatic barriers for native migratory fish may arise as a consequence of using barriers to manage IAS.	BE, FR, IE, NL, UK	Water Framework Directive, and Member State implementation thereof
Aquatic habitat management - Pond drying/draining	Drainage of a pond may require a permit.	BE, FR, IE, NL, UK	Member State laws on environmental compliance (various)
Hand removal	Requires authorisation by the state to be used in management of <i>Lithobates catesbeianus</i> .	FR	Code de l'environnement
Egg oiling	Permits required for use in management.	FR	Code de l'environnement (R. 411-46 and R. 411-47)
Electrofishing	A permit is needed to conduct electrofishing.	BE, FR, IE, NL, UK	Member State laws on fisheries
Fertility Control - chemical (in bait) & injection	For classical fertility control techniques (trap-neuter-release), at least the release of specimens is restricted. For <i>Lithobates catesbeianus</i> , we here refer to <i>genetic</i> rather than chemical sterilisation (sterile male release). As this involves the rearing and release of specimens, specific permits are also required.	BE, FR, IE, NL, UK; for genetic: BE, FR	EU Regulation 1143/2014 and Member State laws on conservation
Judas animals	As the release of animals of Union concern is prohibited, this generally restricts the application of the Judas technique.	BE, FR, IE, NL, UK	EU Regulation 1143/2014
Stupefying bait	No stupefying chemicals are approved for general use in the EU.	BE, FR, IE, NL, UK	Various Member State laws on conservation (implementation of Bern Convention)
Chemical treatment of the habitats	No biocides are currently authorised at EU plus Member State level for use on any of the vertebrate IAS of Union concern.	BE, FR, IE, NL, UK	Biocidal Products Regulation, and Member States implementation thereof
Poisons and toxins in bait	The use of biocides in bait is generally prohibited. Its use has been trialled in the UK for grey squirrel.	BE, FR, IE, NL, UK	Biocidal Products Regulation, and Member States implementation thereof
Shooting	A hunting license and/or firearms certificate is required.	BE, FR, IE, NL, UK	Member State laws on hunting and firearms
Drowning traps	Traps must be selective in their operation or use. Additional conditions on time of use, material used, and persons using the trap may also apply. Banned in France since 2019.	BE, FR, IE, NL, UK	Various Member State laws on conservation (implementation of Bern Convention and AIHTS, among others)
Goodnature self-resetting traps	Traps must be selective in their operation or use. Additional conditions on time of use, material used, and persons using the trap may also apply.	BE, FR, IE, NL, UK	Various Member State laws on conservation (implementation of Bern Convention, Birds and Habitats Directives)
Spring traps	Traps must be selective in their operation or use. Additional conditions on time of use, material used, and persons using the trap may also apply.	BE, FR, IE, NL, UK	As above

Measure name	Details on restrictions / ban	Country where applied	Name of legislation
Cage traps	Conditions apply with regards to selective use and follow-up at reasonable intervals.	BE, FR, IE, NL, UK	As above
Neck-hold traps, and snares	Leg-hold snares, neck-hold traps/snares, and non-lethal stop-snares (neck-hold traps) must be selective	BE, FR, IE, NL, UK	As above
Live decoy traps	Conditions apply with regards to follow-up at reasonable intervals and welfare of the decoy animal.	BE, FR, IE, NL, UK	As above
Cervical dislocation	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	Law on Animal welfare (BE), Animal Health and Welfare Act 2013 (IE), Animal Law (NL), Animal Welfare Act 2006 (UK)
Cranial depression	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	As above
Decapitation	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	As above
Electrocution	Electrical devices capable of stunning or killing mammals or birds are generally prohibited under the Bern Convention.	BE, FR, IE, NL, UK	Bern Convention, and Member State implementation thereof.
Freezing	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	Law on Animal welfare (BE), Animal Health and Welfare Act 2013 (IE), Animal Law (NL), Animal Welfare Act 2006 (UK)
Injection euthanasia	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	As above
Keeping in captivity	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	As above
Modified atmospheres	Though gasing is not allowed as a control technique in itself (Bern Convention), the use of modified atmospheres as a tool for euthanasia of captured animals is allowed. It can be used only in ways that avoid unnecessary suffering for the animal.	BE, IE, NL, UK	As above
Shooting – dispatch restrained animals	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	As above
Slaughter (knife)	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	As above
Surgical sterilisation	Animals can only be killed by skillful persons, avoiding unnecessary suffering for the animal.	BE, IE, NL, UK	As above

4. Overview of legislation, standards and guidance within countries from the region

4.1. Belgium

As a federal state that is divided in three highly autonomous regions (the Flemish Region, Walloon Region and Brussels-Capital Region), legal provisions regarding species management are found at both the federal and regional level.

The **Law on Animal Welfare** (*Wet betreffende de bescherming en het welzijn der dieren*¹) was published at the federal level in 1986. However, animal welfare, as a competence, was transferred from the federal to the regional level in 2014. Consequently, the law still serves as a common basis for Flanders, Wallonia and Brussels, yet now incorporates various regional modifications. With regard to the killing of animals, it states that “a vertebrate animal should only be killed after prior stunning” and “it should only be killed by a person who has the necessary knowledge and skills, using the most selective, fastest and least painful method for the animal”. The condition that prior stunning is mandatory does not hold, however, in cases of force majeure, for hunting or fishing purposes, and for the management of harmful organisms.

Also at federal level, several provisions exist that deal with the protection of cultivated plants of agricultural and horticultural importance (plant health). These provisions also refer to muskrat (*Ondatra zibethicus*) and grey squirrel (*Sciurus carolinensis*). The concerned **Royal Decree on Plant Health** (*Koninklijk besluit betreffende de bestrijding van voor planten en plantaardige producten schadelijke organismen*²) states that, for muskrat (*Ondatra zibethicus*), “any responsible party is obliged to cooperate to eradication campaigns”, which includes tolerating the use of equipment to capture specimens on their lands. The list of (fire)arms that are allowed or prohibited in Belgium is also laid down at federal level (**Arms Law**; *Loi réglant des activités économiques et individuelles avec des armes*³), and the same is true for approved biocides (*Arrêté royal relatif à la mise à disposition sur le marché et à l'utilisation des produits biocides*⁴).

Most of the competences that refer to the on-site management of species, as well as of captive populations, are at regional level. For the Region of Flanders, the management of invasive alien species is explicitly covered in species legislation. **The Species Decree** (*Besluit van de Vlaamse Regering met betrekking tot soortenbescherming en soortenbeheer*⁵) was primarily installed to secure the protection of native species, thereby implementing the Birds Directive (2009/147/EC) and Habitats Directive (92/43/EEC). Yet, it was updated in 2016 to implement the provisions of the IAS Regulation, too. Its Annexes lay down lists of measures that are either prohibited to be used for any species (native or alien), or are allowed for the management of alien species. As such, the Species Decree allows the use of live decoy animals, artificial light, gas weapons, nets, live-capture cages, and traps. For the three latter measures, conditions apply that should guarantee their selectivity, humaneness, but also the quick identification of their users in the light of law enforcement. Hunting in Flanders is further arranged through the **Hunting Conditions Decree** (*Besluit van de Vlaamse Regering houdende vaststelling van de voorwaarden waaronder de jacht kan worden uitgeoefend*⁶), and several Decrees exist that set out conditions with regards to fisheries.

For the Walloon Region, invasive alien species are specifically covered by the **IAS Decree** (*Décret relatif à la prévention et à la gestion de l'introduction et de la propagation des espèces exotiques envahissantes*⁷). A government Decision (*Arrêté du Gouvernement wallon*) is being prepared that will partly mark out the control techniques for use. The **Nature Conservation Law** (*La loi sur la*

¹ https://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=nl&la=N&cn=1986081434&table_name=wet

² <http://www.ejustice.just.fgov.be/eli/bsluit/1987/11/19/1988016240/justel>

³ http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=fr&la=F&table_name=loi&cn=2006060830

⁴ http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=fr&la=F&table_name=loi&cn=2019040431

⁵ <https://codex.vlaanderen.be/PrintDocument.ashx?id=1018227&datum=&geannoteerd=false&print=false>

⁶ <https://codex.vlaanderen.be/PrintDocument.ashx?id=1024157&datum=&geannoteerd=false&print=false>

⁷ <http://environnement.wallonie.be/legis/consnat/cons069.htm>

*conservation de la nature*⁸) is the legislative tool that limits the use of management measures in accordance with the Habitats Directive (92/43/EEC). Notably, its Annex V prohibits the use of measures such as electrical devices, mirrors, explosives, non-selective nets or traps, et cetera... Although slight differences may exist in the exact wording, or the accompanying conditions, of the measures across these two regions, none are known that prevent a consistent approach to the factual management of species in the field. Hunting in Wallonia is further arranged through the **Hunting Law** (*La loi sur la chasse*⁹) and its decisions, whereas fisheries are dealt with in a separate **Fisheries Decree** (*Décret relatif à la pêche fluviale, à la gestion piscicole et aux structures halieutiques*¹⁰).

The Brussels-Capital Region is the smallest and most heavily urbanized of the three regions in Belgium. It does not have legislation currently in place that is dedicated to invasive alien species. Yet, the framework for managing them is set by the **Nature Ordonnance** (*Ordonnantie betreffende het natuurbehoud*¹¹). It implements the Habitats Directive (92/43/EEC), sets out a framework for fisheries, and allows the government of Brussels to set up targeted actions against invasive species.

4.2. France

In France, all legal texts relating to environmental law are grouped to form the **Environmental Code** (*Code de l'environnement*¹²). It puts all legislation that deals with species and habitat protection, hunting and fisheries together in one document. A **Decree of 2017** has furthermore incorporated the provisions of the IAS Regulation into the Environmental Code (*Décret relatif au contrôle et à la gestion de l'introduction et de la propagation de certaines espèces animales et végétales*¹³). The animal species of Union concern are also embedded in French law by the means of a **Decree**, together with a list of non-EU-listed invasive species (*Arrêté relatif à la prévention de l'introduction et de la propagation des espèces animales exotiques envahissantes sur le territoire métropolitain*¹⁴; with further updates). Another Decree prohibits the introduction into the wildlife of specific freshwater species, including fishes and frogs (*Décret modifiant diverses dispositions du code de l'environnement relatives à la pêche en eau douce*¹⁵).

These lists and the Environmental Code thus serve as the foundation for legal specifications regarding invasive species management. For instance, a **Decree** specifies measures, times and administrative entities for lethal control of muskrat (*Ondatra zibethicus*), coypu (*Myocastor coypus*), raccoon (*Procyon lotor*) and raccoon dog (*Nyctereutes procyonoides*) populations (*Arrêté relatif au contrôle par la chasse des populations de certaines espèces non indigènes*¹⁶). Trapping specifications are included in another **Decree** (*Arrêté fixant les dispositions relatives au piégeage des animaux classés nuisibles*¹⁷). For species not listed on this national Decree, each county requires a specific Decree to control them in the wild (exotic squirrels, muntjac (*Muntiacus reevesi*), Egyptian goose (*Alopochen aegyptiaca*)...). Furthermore, a **Technical Note** is available that leads the overall approach for the management of Union list species, with explicit links to the Environmental Code (*Note technique relative à la mise en oeuvre des opérations de lutte contre les espèces exotiques envahissantes conformément à l'article L.411-8 du code de l'environnement*¹⁸).

⁸ <http://environnement.wallonie.be/legis/consnat/cons001.htm>

⁹ <http://environnement.wallonie.be/legis/dnf/chasse/chasse001.htm>

¹⁰ <http://environnement.wallonie.be/legis/dnf/peche/peche075.html>

¹¹ https://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=nl&la=N&cn=2012030115&table_name=wet

¹² https://www.legifrance.gouv.fr/codes/texte_lc/LEGITEXT000006074220/2021-03-09

¹³ <https://www.legifrance.gouv.fr/loda/id/LEGIARTI000034457208/2021-03-09/>

¹⁴ <https://www.legifrance.gouv.fr/loda/id/JORFTEXT000036629851>

¹⁵ https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000038416150/

¹⁶ <https://www.legifrance.gouv.fr/loda/id/JORFTEXT000033117600/>

¹⁷ <https://www.legifrance.gouv.fr/loda/id/JORFTEXT000000648027/>

¹⁸ http://www.especes-exotiques-envahissantes.fr/wp-content/uploads/2018/11/mtes_181102_note-technique-oprations-de-lutte-eee-signé.pdf

Animal welfare legislation primarily deals with companion animals and captive wild animals. E.g. the **Decree on the holding of animals** (*Arrêté du 8 octobre 2018 fixant les règles générales de détention d'animaux d'espèces non domestiques*¹⁹) incorporates issues of animal welfare and health in captivity. In practice, the aforementioned European regulations and directives are used as a general basis with regards to specimens in the wild. An Ethics Commission of the Veterinary Society has put forward an **Advice On Euthanasia**, which also refers to cases where an animal is euthanised because of biodiversity concerns (*Avis sur l'euthanasie animale*²⁰).

In summer 2021, a new animal welfare **law (n° 2021-1539) to combat animal abuse and strengthen the bond between animals and humans**²¹ was voted in France. This law includes measures such as a gradual ban on the use of animals in circuses and in dolphinariums, a ban on the sale of cats and dogs on classified ad websites and from pet farms, requirement for new pet owners to sign a certificate confirming their understanding of the responsibilities and costs involved, harsher penalties for animal abandonment and closure of the last mink farms in France. Also, a positive list of companion animals that excludes potential IAS will be drafted. This law was officially published after the workshop, on December 1st 2021.

4.3. Ireland

The Wildlife Act (**Wildlife Act 1976**²²) is the Irish legal basis for the protection of species, and for restrictions on the use of measures for capturing or killing specimens. Among other things, it specifies the types of firearms and guns that can be used, and prohibits, or specifies conditions on, traps, snares, nets, lines, hooks, arrows, birdlime, poison *et cetera*. Amendments (**Wildlife (Amendment) Act 2000**²³) have introduced restrictions on release (or escape) and transport of non-native species. Ireland's third National Biodiversity Action Plan, for the period 2017-2021, puts forward several actions on invasive alien species. One action is to publish legislation to address required provisions under the IAS Regulation and on responsibilities and powers regarding invasive alien species.

In 2011, comprehensive regulations which address deficiencies in Irish law implementing the Birds Directive (2009/147/EC) and Habitats Directive (92/43/EEC) were signed into law. The Birds and Natural Habitats Regulations (**European Communities (Birds and Natural Habitats) Regulations 2011**²⁴) contain important new provisions to address the problem of invasive species. A blacklist of unwanted species is set out in the Regulations under the Third Schedule. It is an offence without a licence, to release or allow to disperse or escape, to breed, propagate, import, transport, sell or advertise such species.

The Animal Health and Welfare Act (**Animal Health and Welfare Act 2013**²⁵) installs the obligation to respect the health and welfare of animals by preventing unnecessary suffering, and prohibits the use of poison. The Act does not apply to ordinary fishing or hunting activities. The Protection of Animals Regulations (European Union (**Protection of Animals used for Scientific Purposes) Regulations 2012**²⁶) provide additional protection for animal species; although it is principally aimed at the welfare of animals in laboratories, it also has a wider remit relating to scientific research on wild animals, including invasive species.

¹⁹ <https://www.legifrance.gouv.fr/loda/id/JORFTEXT000037491137>

²⁰ https://www.veterinaire.fr/fileadmin/cru-1613544255/user_upload/documents/actualites/comite_ethique_AES/Avis_euthanasie_animale.pdf

²¹ <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000044387560>

²² <http://www.irishstatutebook.ie/eli/1976/act/39/>

²³ <http://www.irishstatutebook.ie/eli/2000/act/38/>

²⁴ <http://www.irishstatutebook.ie/eli/2011/si/477/>

²⁵ <http://www.irishstatutebook.ie/eli/2013/act/15/>

²⁶ <http://www.irishstatutebook.ie/eli/2012/si/543/>

4.4. Netherlands

In the Netherlands, the provinces have specific competences, including environmental protection. Although the national legislation sets the stage for management of invasive alien species, many conditions are thus laid down at the provincial level. This also pertains to the IAS Regulation, for which a **Decision** (*Besluit houdende voorschriften ter uitvoering van verordening (EU) nr. 1143/2014*²⁷) and **Regulation** (*Regeling houdende wijziging van de Regeling natuurbescherming*²⁸) puts the provinces in charge of the management of most invasive alien species of the European Union list. For two species, muskrat (*Ondatra zibethicus*) and coypu (*Myocastor coypus*), the water boards are in charge of the management measures.

Here, we give an overview of legal initiatives at the national level, but leave specific conditions at the provincial level unaddressed (the twelve Dutch provinces being, in order of decreasing land area, Gelderland, Noord-Brabant, Friesland, Overijssel, Zuid-Holland, Noord-Holland, Drenthe, Groningen, Limburg, Zeeland, Utrecht, and Flevoland). Overall, the implementation is highly variable among the provinces.

The **Animal Law** (*Wet houdende een integraal kader voor regels over gehouden dieren en daaraan gerelateerde onderwerpen*²⁹), is the general animal welfare legislation which states that the infliction of pain or harm on an animal requires a reasonable purpose. This formulation was adopted from the **Animal Health and Welfare Law** (*Wet houdende vaststelling van de Gezondheids- en welzijnswet voor dieren*³⁰), that itself focuses mainly on pet animals, but also stipulates the need for a regulation for animals with possible human health safety issues (such as brown rats, *Rattus norvegicus*). The Animal Law also provides the possibility for management of animals that form a risk to human health, animal health, or the environment. This could encompass alien species. If so, the article further mentions that such management could include compulsory lethal techniques, when necessary for severe risk prevention or when this is mandatory under EU regulations.

The **Nature Protection Law** (*Wet houdende regels ter bescherming van de natuur*³¹) and **Decision on Nature Protection** (*Besluit natuurbescherming*³²) provide the legal framework for many biodiversity-related matters. These include the protection of species and habitats, wildlife management and hunting, and forestry. The laws also define exotic and invasive species, and a general duty of care which states that negative consequences for wildlife are to be avoided, limited or undone when and where possible. It states that for all derogations means and methods should be clearly regulated and further lists which actions and tools are permitted for species protected by the Birds Directive (2009/147/EC) and Habitats Directive (92/43/EEC). The legislation further stipulates that exceptions on the general rules are permitted for the control of alien invasive species populations. It further provides the possibility to list invasive alien species of major concern and obliges provinces to maximally reduce population numbers for these species. For this, the use of firearms or falconry is permitted.

The **Fisheries Law** (*Wet houdende nieuwe regelen omtrent de visserij*³³) focuses on commercial fisheries, but is relevant for the management of exotic fish species since it regulates the permitted lure and capture methods in the context of their influence on fish welfare. The **Water Law** (*Wet houdende regels met betrekking tot het beheer en gebruik van watersystemen*³⁴) includes the obligation for regional water authorities to actively manage muskrat (*Ondatra zibethicus*) and coypu (*Myocastor coypus*) to avoid damage.

²⁷ <https://wetten.overheid.nl/BWBR0037731/2016-03-18>

²⁸ <https://zoek.officielebekendmakingen.nl/stcrt-2018-13687.html>

²⁹ <https://wetten.overheid.nl/BWBR0030250/2020-01-01>

³⁰ <https://wetten.overheid.nl/BWBR0005662/2019-01-01>

³¹ <https://wetten.overheid.nl/BWBR0037552/2020-01-01>

³² <https://wetten.overheid.nl/BWBR0038662/2021-07-01>

³³ <https://wetten.overheid.nl/BWBR0002416/2019-01-01>

³⁴ <https://wetten.overheid.nl/BWBR0025458/2021-01-01>

The framework for the approval of biocidal products, in line with the Biocidal Products Regulation (EU 528/2012), is given by the **Law on Biocides and Plant Protection Products** (*Wet van houdende regeling voor de toelating, het op de markt brengen en het gebruik van gewasbeschermingsmiddelen en biociden*³⁵).

4.5. United Kingdom

Invasive non-native species legislation in the United Kingdom is not contained within a single act but is spread across different legal instruments. Some, but not all, conditions are the same across the four constituent countries (England, Scotland, Wales, Northern Ireland). We identify some of the key instruments here.

The WCA (**Wildlife and Countryside Act 1981**³⁶) is implemented in the United Kingdom to comply with the Birds Directive (2009/147/EC), as is **The Wildlife (Northern Ireland) Order 1985**³⁷ in Northern Ireland. The act gives protection to native species, but is also the principal legislation dealing with non-native species. The Act defines non-native species, and includes a list of such species that are considered established. It also stipulates methods that are prohibited for killing or taking wild birds, and other animals (a full range of species across all taxa are listed in Schedule 5 of the Act). Prohibited methods include snares, electrical devices, poison, stupefying bait, bird-lime, bows, explosives, and gas. The WCA has been amended in relation to England and Wales, Northern Ireland (**Wildlife and Natural Environment Act (Northern Ireland) 2011**³⁸), and Scotland (**Wildlife and Natural Environment (Scotland) Act 2011**³⁹). For example, the WANE (Scotland) Act explicitly introduces a regime for controlling invasive non-native species in the country.

Species control operations should be carried out in accordance with national legislation relating to animal welfare, which is set out in various laws. The Animal Welfare Act (**Animal Welfare Act 2006**⁴⁰) contains the general laws relating to vertebrate animal welfare. It makes owners and keepers responsible for ensuring that the welfare needs of their animals are met, which includes the need for animals to be protected from pain, injury, suffering and disease. It is an offence to cause unnecessary suffering to any animal, with the Act applying to all animals on common land. The Act does not apply to an animal while it is in its foetal or embryonic form. Appropriate national authorities may amend this part of the Act and/or add regulations relating to invertebrates. The Protection of Animals Act (**Protection of Animals Act 1911**⁴¹) covering all species, and the Wild Mammals Act (**Wild Mammals Protection Act 1996**⁴²) furthermore define several offences with regard to animal handling (e.g. inspection of spring traps, on the use of poisons; or crushing or drowning wild mammals).

The Destructive Imported Animals Act (Destructive Imported Animals Act 1932⁴³) restricts the keeping of non-native mammals including muskrat (*Ondatra zibethicus*), coypu (*Myocastor coypus*), and grey squirrel (*Sciurus carolinensis*). With regard to muskrat, it provides a framework for their destruction in cases of a new observation, in line with the rapid response framework installed under the IAS framework.

³⁵ <https://wetten.overheid.nl/BWBR0021670/2020-01-01>

³⁶ <https://www.legislation.gov.uk/ukpga/1981/69>

³⁷ <https://www.legislation.gov.uk/nisi/1985/171/contents>

³⁸ <https://www.legislation.gov.uk/niu/2011/15/contents>

³⁹ <https://www.legislation.gov.uk/asp/2011/6/contents>

⁴⁰ <http://www.legislation.gov.uk/ukpga/2006/45/contents>

⁴¹ <https://www.legislation.gov.uk/ukpga/Geo5/1-2/27/section/10>

⁴² <https://www.legislation.gov.uk/ukpga/1996/3/section/2>

⁴³ <http://www.legislation.gov.uk/ukpga/Geo5/22-23/12/contents>

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Appendix 36. Regional conditions for the Black Sea, Steppic & Continental East region

Bulgaria (BU) and Romania (RO)

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1. Species presence in Member States from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each Member State in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)

Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosiurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Bulgaria																						
Presence	NP	NP	NP	NP	NP	P	NP	NP	P	NP	P	P	NP	P	NP	NP	P	NP	NP	F?	NP	P
Status						W			W		W	W		R			W					R
Impact						Y			Y		Y	Y		Y			Y					Y
Highest impact						++			++		+	+		+			++					
References						1, 2, 3, 4, 5, 6, 7, 8, 9, 10,11, EO			12, 13, 14, 15, 16, 17, 18, 19, 20, EO		19,21, 22,2 3	12, 13, 19, 24, 25, 26, 27, 28, 29, 30		2, 31, 32, 33, EO			1, 2, 32, 34, 35, 36, 37, EO					38, 39, 40
Romania																						
Presence	NP	P	NP	NP	NP	P	NP	NP	P	NP	P	P	NP	P	NP	F	P	NP	NP	NP	P	P
Status		O				W			R		R	W		R			W				O	O
Impact						Y					Y						Y					Y
Highest impact						++			+		+	++		+			++					
References		41, 42,				7, 43,			20, 41, 43,		41, 43,	41, 43,		43, 45,		50	37, 43,4				42, 43	41, 43,

2. Toolbox of measures - restrictions/bans in Member States from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in an EU Member State = * followed by MS country code

Use of measure **banned** in an EU Member State = # followed by MS country code

Category	Measure name	<i>Alouatta aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Biological control	Native predators		*BG *RO				*BG *RO		*BG *RO			#BG #RO
Habitat manipulation	Aquatic barriers – physical & non-physical		*BG *RO				*BG *RO		*BG *RO			
	Aquatic habitat management - Pond drying/drainage		*BG *RO				*BG *RO		*BG *RO			*BG *RO
	Physical terrestrial barriers											*BG *RO
Hand removal	Hand removal	*BG *RO	*BG *RO				*BG *RO		*BG *RO		*BG *RO	*BG *RO
	Physical fishing methods		*BG *RO				*BG *RO		*BG *RO			*BG *RO
Other	Egg oiling	*BG *RO									*BG *RO	

Category	Measure name	<i>Alopoche aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Electrofishing		*BG *RO				*BG *RO		*BG *RO			
	Fertility Control - chemical (in bait) & injection				*BG #RO	*BG #RO		*BG #RO		*BG #RO		
	Hunting dogs (tracking/baying)			*BG #RO	*BG *RO	*BG *RO		#BG #RO		#BG #RO		#BG #RO
	Judas animals	*BG *RO		*BG *RO	*BG *RO	*BG *RO		*BG *RO		*BG *RO	*BG *RO	*BG *RO
Poisoning or toxicants	Stupefying bait	#BG #RO									#BG #RO	
	Chemical treatment of the habitats		#BG #RO	#BG #RO		#BG #RO	#BG #RO		#BG #RO			
	Poisons and toxins in bait					#BG #RO						
Shooting	Shooting	#BG #RO		*BG #RO	*BG *RO	*BG *RO		#BG #RO		#BG #RO	#BG #RO	
Trapping	Drowning traps			#BG #RO		#BG #RO						
	Goodnature self-resetting traps #BG#RO											
	Spring traps			#BG #RO	#BG #RO	#BG #RO		#BG #RO		#BG #RO		
	Cage traps	*BG *RO		*BG *RO	*BG *RO	*BG *RO		*BG *RO		*BG *RO		*BG *RO
	Neck-hold traps, and snares			#BG #RO	#BG #RO			#BG #RO				
	Live decoy traps	#BG *RO										

Category	Measure name	<i>Alopochen aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Percocottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Dispatch/ removal only once captured	Cervical dislocation	*BG *RO	*BG *RO				*BG *RO		*BG *RO	*BG *RO	*BG *RO	
	Cranial depression	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	
	Decapitation	*BG *RO	*BG *RO				*BG *RO		*BG *RO	*BG *RO	*BG *RO	
	Electrocution	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	
	Freezing		*BG *RO						*BG *RO			*BG *RO
	Injection euthanasia	*BG *RO		*BG *RO	*BG *RO	*BG *RO		*BG *RO		*BG *RO	*BG *RO	*BG *RO
	Keeping in captivity	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO
	Modified atmospheres	*BG *RO		*BG *RO	*BG *RO	*BG *RO		*BG *RO		*BG *RO	*BG *RO	
	Shooting - dispatch restrained animals	*BG *RO		*BG *RO	*BG *RO	*BG *RO		*BG *RO		*BG *RO	*BG *RO	
	Slaughter (knife)	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	*BG *RO	
Surgical sterilisation				*BG *RO	*BG *RO		*BG *RO			*BG *RO	*BG *RO	

3. Details of restrictions/bans of Toolbox measures in Member States from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Native predators	Permits for re-introduction of native species into the environment are needed according to the requirements of the Biological Diversity Act and Law on Fisheries and Aquaculture. A permit for re-introduction of native animal species is issued only if it will be carried out in a way which would contribute to the restoration of the species in a favourable state. The procedure requires a favourable decision of the National Biodiversity Council and written authorisation granted by: 1) Executive Director of the Executive Agency of Forestry – in respect of any game species; 2) Minister of Environment and Waters – in respect of all other species. The procedure further requires taking into consideration the public opinion in the region of re-introduction of the species. The provisions of this act refer also to fish and other aquatic organisms. In case the introduced fish predators are species not protected by the Biological Diversity Act and are native to the region/ river basin, then the stocking may be performed according to the requirements of the Law on Fisheries and Aquaculture (2001). Prohibited in the national and natural parks if the species are not from the same area/ water basin according to the Protected Areas Act. The method is not applicable to <i>T. scripta</i> , which usually occurs together with the protected native species.	Bulgaria	Biological Diversity Act (2002), Protected Areas Act (1999), Law on Fisheries and Aquaculture (2001)
	Permits for re-introduction of native species into the environment are needed. The method is not applicable to <i>T. scripta</i> , which usually occurs together with the protected native species.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna; Emergency Ordinance No 23/2008 regarding fishing and aquaculture, Law 407/2006 regarding hunting and game protection
Aquatic barriers	Construction of aquatic physical barriers, including barrages and weirs, which may reduce the connectivity and water flow, is prohibited according to Water Act. In certain cases, there might be possibilities to apply for permits to be issued by the Ministry of Environment and Water and its affiliated/ regional units, and by local authorities. The Law on Fisheries and Aquaculture (Art. 44b) stipulates that all owners/ managers of existing or new dams, weirs and other technical facilities, which block the river along its entire width, hindering the natural migration of fish, are obliged to build fish passages in line with the River Basin Management Plans and according to the requirements and procedures of the Environmental Protection Act, Biological Diversity Act, and Water Act.	Bulgaria	Water Act (2000), Law on Fisheries and Aquaculture (2001), Environmental Protection Act (2002), Biological Diversity Act (2002)
	Culpable destruction or degradation of dams, canals, banks, of hydrotechnical installations related to fishing facilities; as well as destruction or degradation of fish	Romania	Emergency Ordinance No 23/2008 regarding fishing and aquaculture (Art. 63, 64)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>passes, nurseries or waterfalls is illegal. Ensuring the water flow required for the normal development of fish fauna downstream of a dam is stipulated in the Emergency Ordinance No 23/2008. Also, opening/closing/obstructing, with fishing fences or fishing gear of any kind, of canals and ditches connecting lakes, ponds or floodplains by unauthorised persons is prohibited.</p> <p>In certain cases, there might be possibilities to apply for permits to be issued by the National Agency for Fishing and Aquaculture or Ministry of Environment, Water and Forests and its affiliated/ regional units, by local authorities and water body managers. Permits are required for protected areas.</p>		
Aquatic habitat management - Pond drying/draining	<p>Regulated by Water Act and Law on Fisheries and Aquaculture, which provides on drying/draining of artificial water bodies, such as reservoirs, dams and weirs, canals, sand-pit lakes, aquaparks, cooling reservoirs of thermoelectric power plants, etc. (Art. 3 (1) 2) if necessary. Permits should be issued by the Ministry of Environment and Water and its affiliated/ regional units, the Executive Agency of Fisheries and Aquaculture/ Ministry of Agriculture, Food and Forestry, by local authorities and managers. The water body managers are obliged to ensure the transfer of the fish and other aquatic organisms to another water body and their return, or to finance their restoration (Law on Fisheries and Aquaculture, Art. 44a (2)).</p>	Bulgaria	Water Act (2000), Law on Fisheries and Aquaculture (2001)
	<p>Culpable reduction of water flow on watercourses if it endangers the existence of living aquatic resources is illegal. Measures are required for the cleaning of fishing areas and for protecting/saving living aquatic resources when building or emptying accumulation lakes, as mentioned in the Emergency Ordinance No 23/2008.</p> <p>Permits are needed to be issued by the National Agency for Fishing and Aquaculture or Ministry of Environment, Water and Forests and its affiliated/ regional units, by local authorities and water body managers. Permits are required for protected areas.</p>	Romania	Emergency Ordinance No 23/2008 regarding fishing and aquaculture (Art. 63)
Physical barriers	<p>There are no specific regulations for vertebrate IAS. There might be possibilities to apply for permits to be issued by the Ministry of Environment and Water and its affiliated/ regional units, by local authorities, water body managers and land owners.</p>	Bulgaria	Biological Diversity Act (2002), Water Act (2000)
	<p>There are no specific regulations for vertebrate IAS. There might be possibilities to apply for permits to be issued by the National Agency for Fishing and Aquaculture or Ministry of Environment, Water and Forests and its affiliated/ regional units, by local authorities, water body managers and land owners.</p> <p>Permits are required for protected areas.</p>	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna; Emergency Ordinance No 23/2008 regarding fishing and aquaculture
Hand removal	<p>All forms of deliberate capture and killing by all devices, means and methods are prohibited for all species of wild birds, their eggs and nests. Permits from the Ministry of Environment and Water for collecting birds in the wild, their eggs or nests may be issued only for research and monitoring purposes.</p> <p>Permits from the Executive Agency of Fishery and Aquaculture for fishing with net</p>	Bulgaria	Biological Diversity Act (2002), Law on Fisheries and Aquaculture (2001)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>devices and traps are needed. The methods should be selective and performed by experts/ trained personnel.</p> <p>In case of bird species, including migratory ones, the killing or intentional capturing is forbidden by any means. So is the destroying, damaging and/or intentional collection of nests and/or eggs in nature, and the deliberate disturbance particularly during periods of reproduction or growing. Permits may be issued in particular cases by the Ministry of Environment, Water and Forests with the agreement of the Romanian Academy of Sciences. The application of fishing methods is regulated by the Emergency Ordinance No 23/2008 regarding fishing and aquaculture. The methods should be selective and performed by experts/ trained personnel.</p>	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III); Emergency Ordinance No 23/2008 regarding fishing and aquaculture
Physical fishing methods	<p>Permits from the Executive Agency of Fishery and Aquaculture for fishing with net devices and traps are required. Permits from the Minister of Agriculture, Food and Forestry for trawling are required. A special procedure is applied for beam trawling, which is prohibited in areas specified by an order of the Minister of Agriculture, Food and Forestry. The following methods are prohibited: - Weapons - Harpoons (except for recreational fishing in the Black Sea) - Barbed hook lines 'Karmatsi' - Small nets type 'Parachute'. The methods should be performed by experts/trained personnel. Permits for scientific purposes can be issued only to people with MSc degree, major in hydrobiology, zoology or ecology. In case of reptiles (<i>Trachemys scripta</i>), permits for the use of aquatic/sun basking traps are needed. The method should be selective and performed by experts/trained personnel.</p>	Bulgaria	Law on Fisheries and Aquaculture (2001)
	<p>Permits from the National Agency for Fishing and Aquaculture (Ministry of Agriculture and Rural Development) are required for fishing with net devices. Catching Salmonidae with the hand, commercial fishing gear, hand-made fishing gear or natural baits is illegal. Fishing with more than 3 artificial flies in waters with Salmonidae is illegal. Fishing with rod using monofilament net is illegal. Catching fish with net tools and row of fishing lines (RO: pripoane) in rivers and lakes from the mountain area as well as rivers in the hills or lowland areas is illegal, except for the Danube and the Prut rivers. The following methods are prohibited: - Weapons - Spears/Harpoons - Electric fishing - Explosives - Poisons and narcotics - Monofilament nets except for gillnets used for turbot fishing with a mesh size of</p>	Romania	Emergency Ordinance No 23/2008 regarding fishing and aquaculture (Art. 58-60, 64)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	at least 400 mm - Nets with mesh sizes smaller than minimum legal dimensions The methods should be performed by experts/ trained personnel. In case of reptiles (<i>Trachemys scripta</i>), permits for the use of aquatic/sun basking traps are needed. The method should be selective and performed by experts/trained personnel.		
Egg oiling	No specific regulations for IAS. All forms of deliberate capture and killing by all devices, means and methods are prohibited for all species of wild birds, their eggs and nests. Permits from the Ministry of Environment and Water for collecting bird eggs in the wild may be issued only for research and monitoring purposes. The method should be selective and performed by experts/ trained personnel.	Bulgaria	Biological Diversity Act (2002)
	No specific regulations for IAS. The destroying, damaging and/or intentional collection of bird eggs in nature, and the deliberate disturbance of wild birds, particularly during periods of reproduction or growing is forbidden. Permits may be issued in particular cases by the Ministry of Environment, Water and Forests with the agreement of the Romanian Academy of Sciences. The method should be selective and performed by experts/ trained personnel.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)
Electrofishing	Fishing by 'Electric current and devices and equipment for catching by electrofishing and radiation' is prohibited. However, permits for electrofishing for scientific purposes can be issued by the Minister of Agriculture, Food and Forestry, following a procedure of application through the Executive Agency of Fishery and Aquaculture. The method should be performed by experts/trained personnel (permits can be issued only to people with MSc degree, major in hydrobiology, zoology or ecology).	Bulgaria	Law on Fisheries and Aquaculture (2001)
	Permits from the National Agency for Fishing and Aquaculture (Ministry of Agriculture and Rural Development) are required for scientific fishing using prohibited methods and equipment (e.g. electrofishing). The method should be performed by experts/trained personnel.	Romania	Emergency Ordinance No 23/2008 regarding fishing and aquaculture (Ch. VII)
Fertility Control - chemical (in bait) & injection	No specific regulations for IAS. Allowed to be applied if necessary for health reasons or to limit the reproduction of animals, as well as for experimental animals. The method should be performed selectively only by veterinarians with veterinary practice and with licensed veterinary agents/chemicals.	Bulgaria	Law on Hunting and Game Protection (2000), Veterinary Medical Act (2006), Animal Protection Act (2008)
	The use of chemicals that cause sterility is prohibited for game mammal species, including <i>Ondatra zibethicus</i> and <i>Nyctereutes procyonoides</i> according to Law 407/2006 regarding hunting and game protection. Feeding of wild animals in natural protected areas by any physical or legal persons is illegal, with the exception of the administrators of the game funds or the administrators/curators of the natural protected areas, under Law 49/2011.	Romania	Law 407/2006 regarding hunting and game protection (Art. 42), Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.VI)
Hunting dogs (tracking/	Hunting with dogs is allowed, except hunting with greyhounds, which is prohibited. Permits for hunting of game mammal species in the wild are required	Bulgaria	Law on Hunting and Game Protection (2000), Ordinance No 27/ 10.06.2004

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
baying)	according to the Law on Hunting and Game Protection and the method can be applied only to species listed as game species in Annex 1 of this law. The species <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> are listed as game mammals and should follow the requirements of the law. Not allowed for <i>Procyon lotor</i> and <i>Tamias sibiricus</i> , which are not listed as game species, and for amphibians and reptiles.		
	Hunting with dogs is allowed, except hunting with greyhounds or greyhound crossbreeds, which is prohibited. Permits for hunting of mammal species in the wild are required according to Law 407/2006 regarding hunting and game protection. The species <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> are listed as game species and their capture should follow the requirements of this law. The method is not allowed for <i>Myocastor coypus</i> , <i>Procyon lotor</i> and <i>Tamias sibiricus</i> , which are not listed as game species, and for amphibians and reptiles.	Romania	Law 407/2006 regarding hunting and game protection
Judas animals	No specific regulations for IAS. Permits from the Ministry of Environment and Water for collecting birds in the wild can be obtained for research and monitoring purposes. The capture of <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> should follow the requirements of the Law on Hunting and Game Protection. No specific regulations about the use of Judas animals. The application of this method should be in accordance with the Veterinary Medical Act and Animal Protection Act.	Bulgaria	Biological Diversity Act (2002), Law on Hunting and Game Protection (2000), Veterinary Medical Act (2006), Animal Protection Act (2008)
	No specific regulations for IAS. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time. In case of bird species, including migratory ones, the killing or intentional capturing, as well as deliberate disturbance, particularly during periods of reproduction or growing, is forbidden by any means. Permits can be issued in particular cases by the Ministry of Environment, Water and Forests with the agreement of the Romanian Academy of Sciences. The capture of <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> should follow the requirements of Law 407/2006 regarding hunting and game protection. No specific regulations about the use of Judas animals.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III), Law 407/2006 regarding hunting and game protection
Stupefying bait	The method 'Poisoned or anaesthetic bait' is prohibited for all birds in the wild according to the Biological Diversity Act. The method 'Poisonous and anaesthetic substances, and poisoned or anaesthetic bait' is prohibited for game birds and mammals, including <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> , according to the Law on Hunting and Game Protection. As the method may be lethal and non-selective, permits for exemptions cannot be issued.	Bulgaria	Biological Diversity Act (2002), Law on Hunting and Game Protection (2000)
	In case of bird species, including migratory ones, the killing or intentional capturing is forbidden by any means. The use of poisoned or anaesthetic bait is prohibited for bird and mammal species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.VI)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions), <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> , according to Law 49/2011. Feeding of wild animals in natural protected areas by any physical or legal persons is illegal, with the exception of the administrators of the game funds or the administrators/curators of the natural protected areas, under Law 49/2011. As the method may be lethal and non-selective, permits for exemptions cannot be issued.		
Chemical treatment of the habitats	The method 'Explosives, poisonous and anaesthetic substances' is prohibited to be used for all fish according to the Law on Fisheries and Aquaculture. The method 'Poisonous and anaesthetic substances, and poisoned or anaesthetic bait' is prohibited for game animals, incl. <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> according to Law on Hunting and Game Protection. Regulated also by the Water Act and Law on Protection Against the Harmful Impact of Chemical Substances and Preparations. As the method may be lethal and non-selective, permits for exemptions cannot be issued.	Bulgaria	Law on Fisheries and Aquaculture (2001), Law on Hunting and Game Protection (2000), Water Act (2000), Law on Protection Against the Harmful Impact of Chemical Substances and Preparations (2000)
	The use of poisons is prohibited for fish species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions) according to Law 49/2011. The use of chemicals that cause poisoning, sterility or death of game individuals, incl. <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> is prohibited according to Law 407/2006 regarding hunting and game protection. As the method may be lethal and non-selective, permits for exemptions cannot be issued.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III), Law 407/2006 regarding hunting and game protection
Poisons and toxins in bait	Prohibited for game mammals, including <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> according to Law on Hunting and Game Protection. As the method may be lethal and non-selective, permits for exemptions cannot be issued.	Bulgaria	Law on Hunting and Game Protection (2000)
	The use of poisons and poisoned or anaesthetic bait is prohibited for mammal species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions), including <i>Myocastor coypus</i> , <i>Ondatra zibethicus</i> and <i>Nyctereutes procyonoides</i> , according to Law 49/2011. Feeding of wild animals in natural protected areas by any physical or legal persons is illegal, with the exception of the administrators of the game funds or the administrators/curators of the natural protected areas according to the same law. The use of chemicals that cause poisoning, sterility or death of game individuals, incl. <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> is prohibited according to	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III), Law 407/2006 regarding hunting and game protection

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	Law 407/2006 regarding hunting and game protection. As the method may be lethal and non-selective, permits for exemptions cannot be issued.		
Shooting	Permits from the Ministry of Environment and Water for collecting birds in the wild can be issued only for research and monitoring purposes. Permits for hunting by firearms of game bird and mammal species in the wild are required according to the Law on Hunting and Game Protection and the method can be applied only to species listed as game species in Annex 1 of this law. The species <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> are listed as game mammals and the application of the method should follow the requirements of the law. The method is not allowed for <i>Alopochen aegyptiaca</i> , <i>Threskiornis aethiopicus</i> and <i>Procyon lotor</i> , which are not listed as game species, and for amphibians and reptiles.	Bulgaria	Biological Diversity Act (2002), Law on Hunting and Game Protection (2000)
	In case of bird species, including migratory ones, the killing or intentional capturing is forbidden by any means. Permits for hunting bird and mammal species in the wild are required according to Law 407/2006 regarding hunting and game protection and the method can be applied only to species listed as game species in Annex 1 of this law. The species <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> are listed as game mammals and the application of the method should follow the requirements of this law. Hunting with birds of prey, using bows or unauthorised traps is illegal. The method is not allowed for <i>Alopochen aegyptiaca</i> , <i>Threskiornis aethiopicus</i> , <i>Myocastor coypus</i> and <i>Procyon lotor</i> , which are not listed as game species, and for amphibians and reptiles.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III), Law 407/2006 regarding hunting and game protection (Art. 42)
Drowning traps	The use of traps for non-selective hunting or killing is prohibited for game mammals, incl. <i>Myocastor coypus</i> and <i>Ondatra zibethicus</i> according to the Law on Hunting and Game Protection. Permits for exemptions are not possible to be issued.	Bulgaria	Law on Hunting and Game Protection (2000)
	The use of traps, which are non-selective according to their principle or their conditions of use, is prohibited for mammal species listed in Annex 5 of Law 49/2011 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions), including <i>Myocastor coypus</i> and <i>Ondatra zibethicus</i> .	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)
Goodnature self-resetting	The method 'Traps which are non-selective according to their principle or their conditions of use' is prohibited for protected species under the Biological Diversity Act. The method 'Traps, snares and nets, birdlime and pits, if applied for non-selective hunting or killing' is prohibited for game mammals according to the Law on Hunting and Game Protection. Permits for exemptions are not possible to be issued.	Bulgaria	Law on Hunting and Game Protection (2000), Biological Diversity Act (2002)
	The use of traps, which are non-selective according to their principle or their conditions of use, is prohibited for mammal species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions) according to Law 49/2011.		
Spring traps	The use of traps for non-selective hunting or killing is prohibited according to the Biological Diversity Act and for game mammals, incl. <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> according to the Law on Hunting and Game Protection. Permits for exemptions are not possible to be issued.	Bulgaria	Law on Hunting and Game Protection (2000), Biological Diversity Act (2002)
	The use of traps, which are non-selective according to their principle or their conditions of use, is prohibited for mammal species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions), including <i>Myocastor coypus</i> , <i>Ondatra zibethicus</i> and <i>Nyctereutes procyonoides</i> , according to Law 49/2011.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)
Cage traps	Capture of birds in the wild by any means is prohibited by the Biological Diversity Act. Permits for exemptions for research and monitoring purposes may be issued. The use of non-selective traps is prohibited for protected species by the Biological Diversity Act and for game mammals, including <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> by the Law on Hunting and Game Protection. As the cage traps capture the animals alive, and if they do not cause any injuries, permits for exemptions may be required, considering all risks of possible capture and injury also of native species.	Bulgaria	Biological Diversity Act (2002), Law on Hunting and Game Protection (2000)
	In case of bird species, including migratory ones, the killing or intentional capturing is forbidden by any means. The use of non-selective traps is prohibited for bird and mammal species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions), including <i>Myocastor coypus</i> , <i>Ondatra zibethicus</i> and <i>Nyctereutes procyonoides</i> , according to Law 49/2011. As the cage traps capture the animals alive, and if they do not cause any injuries, permits for scientific purposes may be required, considering all risks of possible capture and injury also of native species.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)
Neck-hold traps, and snares	The method 'Traps which are non-selective according to their principle or their conditions of use' is prohibited for species protected under the Biological Diversity Act. The method 'Traps, snares and nets, birdlime and pits, if applied for non-selective hunting or killing' is prohibited for game mammals, including <i>Myocastor coypus</i> , <i>Nyctereutes procyonoides</i> and <i>Ondatra zibethicus</i> , by the Law on Hunting and Game Protection.	Bulgaria	Law on Hunting and Game Protection (2000), Biological Diversity Act (2002)
	The use of traps, which are non-selective according to their principle or their	Romania	Law 49/2011, Emergency Ordinance No

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	conditions of use, is prohibited for mammal species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions), including <i>Myocastor coypus</i> , <i>Ondatra zibethicus</i> and <i>Nyctereutes procyonoides</i> , according to Law 49/2011.		57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)
Live decoy traps	Capture of birds in the wild by any means is prohibited by the Biological Diversity Act. Permits for exemptions may be issued for research and monitoring purposes. The use of traps for non-selective hunting or killing, as well as the use of live decoy, are prohibited for protected species by the Biological Diversity Act, and for game birds according to the Law on Hunting and Game Protection. As the method may be lethal and non-selective, permits for exemptions cannot be issued.	Bulgaria	Biological Diversity Act (2002), Law on Hunting and Game Protection (2000)
	In case of bird species, including migratory ones, the killing or intentional capturing is forbidden by any means. The use of non-selective traps is prohibited for bird species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions) according to Law 49/2011. The use of live decoy is not regulated.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)
Cervical dislocation	The measure is not specifically regulated for vertebrate IAS. Allowed (after taking sedatives) for birds and mammals (rodents and rabbits) up to 1 kg used for scientific purposes. Accepted for farm birds when applied by trained personnel. Recommended for young birds only and at low number. Trained personnel is required.	Bulgaria	Veterinary Medical Act (2006)
	The measure is not specifically regulated for vertebrate IAS. Permits can be issued for farm birds by the National Sanitary Veterinary and Food Safety Authority. Allowed in the case of animals used for scientific purposes (fish, amphibians, reptiles, only birds under 1 kg, birds over 250 g are sedated, only rodents under 1 kg, rodents over 150 g are sedated, only rabbits under 1 kg, rabbits over 150 g are sedated, dogs, cats, ferrets and foxes, big mammals, non-human primates). Trained personnel is required.	Romania	Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annex 3); Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014 (Annex 4)
Cranial depression	The measure is not specifically regulated for vertebrate IAS. It is allowed for animals used for scientific purposes, as follows: 1) manual blunt force trauma in fish, amphibians, reptiles and rodents (below 1 kg), birds and rabbits (below 5 kg) and other newborn mammals; and 2) captive penetrating bolt in rabbits and large reptiles and mammals. Captive bolts are also recommended for farm animals and adults and larger birds, such as ostriches and waterfowl. Should be performed by trained personnel.	Bulgaria	Veterinary Medical Act (2006)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	The measure is not specifically regulated for vertebrate IAS. Allowed for animals bred for fur, only if it is immediately followed by bleeding. In case of animals used for scientific purposes: 1) Percussive blow to the head is recommended only for birds under 5 kg, rodents under 1 kg, rabbits under 5 kg, new-borns of dogs, cats, ferrets and foxes, big mammals, and non-human primates; 2) Penetrating bolt is recommended for fish, amphibians, large reptiles only, birds, rodents, cats, dogs, ferrets, foxes, and non-human primates. Trained personnel is required.	Romania	Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annex 6); Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014 (Annex 4)
Decapitation	The measure is not specifically regulated for vertebrate IAS. Allowed only for birds (below 250 g) and rodents (if no other methods are possible) used for scientific purposes. Possible to be used for farm birds in emergency cases (if no other methods are possible and after stunning). Trained personnel is required.	Bulgaria	Veterinary Medical Act (2006)
	The measure is not specifically regulated for vertebrate IAS. Allowed for farm birds. Permits need to be issued by the National Sanitary Veterinary and Food Safety Authority. Allowed also for animals used for scientific purposes: fish, amphibians, reptiles, only birds under 250 g, rodents only when other methods are not possible, rabbits, dogs, cats, ferrets and foxes, big mammals, and non-human primates. Trained personnel is required.	Romania	Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annex 3); Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014 (Annex 4)
Electrocution	The measure is not specifically regulated for vertebrate IAS. Electrical current is allowed for stunning of animals used for scientific purposes. Electrocution is possible to be applied for farm mammals and birds. Trained personnel is required.	Bulgaria	Veterinary Medical Act (2006)
	The measure is not specifically regulated for vertebrate IAS. Allowed for animals bred for the production of meat, leather, fur or other products and for the killing of animals to combat diseases. Electrical stunning allowed for animals used for scientific purposes, special equipment required (fish, amphibians, reptiles, birds, rodents, rabbits, dogs, cats, ferrets and foxes, big mammals, non-human primates). In all cases, permits and trained personnel are required.	Romania	Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annexes 3, 6); Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014 (Annex 4)
Freezing	The measure is not specifically regulated for vertebrate IAS. Freezing with dry ice (CO ₂) is recommended for killing birds (all ages) in the Instructions for humane killing of animals when managing of epizootic outbreak (2019). Trained personnel is required.	Bulgaria	Veterinary Medical Act (2006)
	The use of this measure is not specifically regulated/ allowed for vertebrate IAS.	Romania	
Injection euthanasia	The measure is not specifically regulated for vertebrate IAS. It is allowed to be applied on animals, which are incurably ill or suffer from infectious diseases, animals which are aggressive, animals used in scientific experiments, and animals caught at borders during illegal transport. The measure is allowed for all experimental animals, after taking sedatives. Allowed also for killing animals in fur farms and recommended for farm mammals	Bulgaria	Veterinary Medical Act (2006)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	and birds when managing of epizootic outbreak. Recommended to be used for large birds. Allowed to be applied only by veterinarian with veterinary practice and with licensed veterinary agents/ chemicals according to the Veterinary Medical Act.		
	The measure is not specifically regulated for vertebrate IAS. Allowed for animals bred for fur, only when substances, doses and methods used cause immediate loss of consciousness, followed by death. Anaesthetic overdose can be used in the case of animals used for scientific purposes, after prior sedation when appropriate (fish, amphibians, reptiles, birds, rodents, rabbits, dogs, cats, ferrets and foxes, big mammals, non-human primates). Trained personnel is required.	Romania	Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annex 6); Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014 (Annex 4)
Keeping in captivity	The measure is not specifically regulated for vertebrate IAS. Wild animals are allowed to be kept outside their natural environment only in zoos, aquariums, terrariums, circuses, farms, aviaries and vivariums. The Ministry of Environment and Water keeps a register of the organisations and persons, who own and maintain collections of alien species, while the Ministry of Agriculture, Food and Forestry keeps a register of the organisations and persons who own and maintain collections of alien game species. The minimum requirements and conditions for raising vertebrate animals in zoos and rescue centres, including the following IAS of EU concern: <i>Herpestes</i> , <i>Muntiacus</i> , <i>Myocastor coypus</i> , <i>Nasua nasua</i> , <i>Nyctereutes procyonoides</i> , <i>Procyon lotor</i> , and <i>Trachemys</i> sp., are specified by the Biological Diversity Act. Conditions for keeping and breeding of game animals (incl. <i>Myocastor coypus</i>) in livestock farms, considering their physiological and behavioural specifics are provided by the Animal Protection Act.	Bulgaria	Biological Diversity Act (2002), Animal Protection Act (2008), Veterinary Medical Act (2006)
	The measure is not specifically regulated for vertebrate IAS. Individuals with disabilities, orphaned chicks or confiscated individuals under the regulations of Law 49/2011 (including <i>Myocastor coypus</i> , <i>Ondatra zibethicus</i> and <i>Nyctereutes procyonoides</i>) can be kept in rehabilitation and/or care centres.	Romania	Law 49/2011, Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna (Ch.III)
Modified atmospheres	The measure is not specifically regulated for vertebrate IAS. The use of carbon dioxide is allowed for farm animals. The measure is accepted but not recommended for birds and its use depends on the age of the bird; it is not used for waterfowl. It is allowed (when in high concentrations) for killing discarded small chickens in hatcheries. Carbon dioxide, if applied gradually, is also allowed for birds and rodents (excl. fetuses and newborn) used for scientific purposes. Carbon monoxide and chloroform are allowed for killing animals from fur farms. Carbon monoxide is accepted for farm birds (excl. waterfowl). Argonum (Ar) and dinitrogen (N ₂) are allowed for birds, rodents and pigs used for scientific purposes. Argonum at appropriate concentration is also accepted for farm birds. Inert gases in association with carbon dioxide are recommended for use in newborn farm mammals (sheep, goats and pigs) and all birds when managing of epizootic outbreak. Trained personnel is required.	Bulgaria	Veterinary Medical Act (2006)
	The measure is not specifically regulated for vertebrate IAS.	Romania	Order 180/2006 for the approval of sanitary-

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>Exposure to carbon dioxide is allowed for animals bred for the production of meat, leather, fur or other products and for the killing of animals to combat diseases. The use of carbon monoxide and chloroform is allowed for fur animals (e.g. CO in mustelids and chinchilas; and CHCl₃ in chinchilas).</p> <p>Exposure to carbon dioxide is allowed in the case of animals used for scientific purposes (fish, amphibians, reptiles, rodents except foetus and new-borns, rabbits, dogs, cats, ferrets and foxes, big mammals, and non-human primates). Inert gases (Ar, N₂) are recommended for fish, amphibians, reptiles, rabbits, cats, dogs, ferrets and foxes, swine, non-human primates). In all cases permits and trained personnel are required.</p>		<p>veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annexes 3, 6); Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014 (Annex 4)</p>
Shooting - dispatch restrained animals	<p>The measure is not specifically regulated for vertebrate IAS.</p> <p>Allowed for experimental animals – reptiles and big mammals, as well as smaller mammals (e.g. cats, dogs, foxes) when no other possible method. Should be performed by experience shooters, with a license, and in the field.</p> <p>Allowed also for farm animals, except animals from fur farms. Accepted for farm birds when shot in the head and performed by trained personnel. Applied only in emergency cases and for killing birds of big size.</p>	Bulgaria	Veterinary Medical Act (2006)
	<p>The measure is not specifically regulated for vertebrate IAS.</p> <p>Allowed for animals bred for the production of meat, leather or other products (particularly big farm game and deer) and for the killing of animals to combat diseases.</p> <p>Allowed for animals used for scientific purposes (fish, amphibians, reptiles and big mammals only by experienced shooters outdoors, birds, rodents, rabbits, cats, dogs, ferrets and foxes only by experienced shooters outdoors if no other methods available, non-human primates). In all cases permits and trained personnel are required.</p>	Romania	Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annex 3); Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014 (Annex 4)
Slaughter (knife)	<p>The measure is not specifically regulated for vertebrate IAS.</p> <p>Regulated for farm animals by the Veterinary Medical Act and following the requirements of Ordinance No 22/ 14.12.2005 on the minimum reduction of animal suffering during slaughter and killing. Possible to be used for farm birds in emergency cases (if no other methods are possible and after stunning). Should be performed by trained personnel.</p>	Bulgaria	Veterinary Medical Act (2006)
	<p>The measure is not specifically regulated for vertebrate IAS.</p> <p>Allowed for animals bred for the production of meat, leather or other products, after stunning.</p> <p>Trained personnel is required.</p>	Romania	Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 162/2010 (Annex 4)
Surgical sterilisation	<p>The measure is not specifically regulated for vertebrate IAS.</p> <p>Allowed if necessary for health reasons or to limit the reproduction of animals, as well as for experimental animals and for stray dogs. Should be performed only by veterinarian with veterinary practice and following the requirements of the Veterinary Medical Act.</p>	Bulgaria	Veterinary Medical Act (2006), Animal Protection Act (2008)
	<p>The measure is not specifically regulated for vertebrate IAS.</p> <p>It should follow Law 205/2004 regarding animal protection and the veterinary</p>	Romania	Law 205/2004 regarding animal protection, State Gazette No 531/2004; Veterinary

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	regulations.		regulations

4. Overview of legislation, standards and guidance within Member States from the region

The main regulation directly related to the management of vertebrate IAS, in particular to deliberate introductions in the wild, in Bulgaria is the Biological Diversity Act (2002) with amendments. For Romania, these are the Government Emergency Ordinance No 57/2007 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna, approved with amendments and supplements by Law No 49/2011, as further amended, and Ministry Order No 979/2009 regarding the introduction of allochthonous species, interventions on invasive species as well as the re-introduction of indigenous species listed in Annexes 4A and 4B of the Government Emergency Ordinance No 57/2007.

4.1. Bulgaria

Table 4. Key legislation directly or indirectly related to the management of IAS and vertebrate IAS of EU concern in Bulgaria. All legislation reviewed was downloaded by professional software from State Gazette and updated/in force on the day of the download (27.12.2020).

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
<p>Biological Diversity Act (2002), State Gazette No. 77/2002 (amend. 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018)</p>	<p>Ordinance No 4/ 08.07.2003 (amend. 2018, 2019) on the conditions and procedure for issue of permits for introduction of alien plant and animal species or re-introduction of native plant and animal species into the environment.</p> <p>Ordinance No 6/ 23.10.2003 (amend. 2006, 2009) on the minimum requirements and conditions for raising animals in zoological gardens and centres for raising and breeding of protected species.</p> <p>Ordinance No 8/ 12.12.2003 (amend. 2004, 2015, 2018) on the conditions and procedure for issue of permits for exemptions from the ban introduced by the Biological Diversity Act for animal and plant species listed in Annex 3, for animal species in Annex 4, for all species of wild birds other than Annex 3 and Annex 4, and for the use of non-selective devices, means and methods for capture and killing under Annex 5.</p>	<p>Habitats Directive (Council Directive 92/43/EEC)</p> <p>Birds Directive (Directive 2009/147/EC)</p> <p>Regulation (EU) 1143/2014</p> <p>EEC Council Regulation 3254/91 (Leghold Trap)</p>	<p>Alien species, incl. subspecies and varieties</p> <p>IAS of EU concern according to Art. 4 of Regulation (EU) 1143/2014</p>	<p>Provides on:</p> <ul style="list-style-type: none"> - Introduction into the natural environment, as well as import, breeding and raising of alien animal species, incl. subspecies and varieties; - Re-introduction of native animal species - Implementation of Regulation (EU) 1143/2014. <p>Stipulates the responsible institutions:</p> <ul style="list-style-type: none"> - to organise and lead the activities related to removal/eradication of introduced alien species, which may threaten native species and habitats - to apply and control the implementation of the Regulation (EU) 1143/2014. <p>Provides on penalties related to the implementation of the Regulation (EU) 1143/2014.</p> <p>Stipulates that all forms of deliberate capture and killing by all devices, means and methods are prohibited for the animal species listed in Annex 3 (wild animal species protected on the entire territory of Bulgaria) and all species of wild birds.</p> <p>The use of non-selective devices, means and</p>

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
	<p>Ordinance No 14/ 27.10.2005 on the conditions for issue of permits for introduction of alien tree, shrub and game species into the natural environment or re-introduction of native tree, shrub and game species, considering the public opinion in the region of re-introduction.</p>			<p>methods for capture and killing listed in Annex 5 is prohibited for capture and killing of the species listed in Annex 4 (wild animals under regime of protection and regulated use in nature). Permits for exemptions are issued according to Ordinance No 8/ 12.12.2003 for scientific purposes and training, as well as for the introduction of alien species or re-introduction of native species and the selection necessary for that purpose, among others.</p> <p>Stipulates that the Minister of Environment and Water and the Minister of Agriculture, Food and Forestry may, by order published in the State Gazette, prohibit the import, breeding and rearing outside zoos, breeding and rearing centres, and rescue centres of alien animals that pose a danger to humans.</p> <p>Provides on the minimum requirements and conditions for raising vertebrate animals in zoos and rescue centres, including the following IAS of EU concern, specified in Ordinance No 6/ 23.10.2003: <i>Muntiacus</i> sp., <i>Myocastor coypus</i>, <i>Nasua nasua</i>, <i>Nyctereutes procyonoides</i>, <i>Procyon lotor</i>, and <i>Trachemys</i> sp.</p>
<p>Animal Protection Act, 31.01.2008 (amend. 2008, 2009, 2011, 2014, 2016, 2017, 2018)</p>	<p>Ordinance No 40/ 02.12.2008 on the conditions for raising farm animals, considering their physiological and behavioural specifics</p> <p>Ordinance No 2/ 11.02.2009 (amend. 2006, 2009) on the conditions for raising and breeding of bird and mammal game species in livestock farms, considering their physiological and behavioural specifics</p>	<p>Commission Regulation (EC) No 1739/2005 of 21.11.2005 laying down animal health requirements for the movement of circus animals between Member States</p>	<p>Wild vertebrate animals; Game species; Pet animals; Stray animals</p>	<p>Regulates the protection of animals' life, health and well-being, as well as the protection of animals from inhumane, cruel and extremely cruel treatment; ensuring proper care and living conditions, adapted to their physiological and behavioural specifics.</p> <p>Defines inhumane treatment as any action causing pain, suffering, or strong fear to animals, and cruel treatment as any act or failure to act, resulting in continuous or repeated suffering of the animal, injury, or distress.</p>

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
				Provides on the conditions for keeping and breeding of game animals (incl. <i>Myocastor coypus</i>) in livestock farms, considering their physiological and behavioural specifics (Ordinance No 2/ 11.02.2009).
<p>Veterinary Medical Act, 02.05.2006 (amend. 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020)</p>	<p>Ordinance No 4/ 12.03.2002 (amend. 2003) for border veterinary control</p> <p>Ordinance No 14/ 03.02.2006 on the minimum requirements for protection and humane treatment in raising calves</p> <p>Ordinance No 16/ 03.02.2006 (amend. 2017) on the protection and humane treatment during raising and use of animals in farms</p> <p>Ordinance No 20/ 01.11.2012 (amend. 2014, 2016) on the minimum requirements for protection and humane treatment of experimental animals and requirements for the sites where they are kept, used and/or delivered</p> <p>Ordinance No 22/ 14.12.2005 on the minimum reduction of animal suffering during slaughter and killing</p> <p>Instructions for killing of birds (2014)</p> <p>Instructions for humane killing of animals when managing of epizootic outbreak (2019)</p> <p>Guide for welfare of farm animals (2014)</p> <p>Instructions to farmers for welfare</p>	<p>EU Animal Health Policy</p> <p>EU Directive 2010/63/EU on the protection of animals used for scientific purposes</p> <p>Council Regulation (EC) No 1/ 200/ 22.12.2004 on the protection of animals during transport and related operations</p> <p>Council Regulation (EC) No 1099/2009 on the protection of animals at the time of killing</p>	Animals	<p>Regulates implementation, management and control of veterinary activities, including the application of veterinary requirements for the protection of animal health and welfare.</p> <p>Provides on the protection and humane treatment of animals (animals in farms, animals used for scientific purposes, pet animals, etc.) during transport, keeping, use, and killing.</p> <p>Provides lists of authorised methods for killing animals used for scientific purposes (Annex 6 of Ordinance No 20/ 01.11.2012), as well as animals in farms, animals in fur farms, and discarded chickens and embryos in hatcheries (Ordinance No 22/ 14.12.2005). Permits for exemptions may be issued upon justification.</p> <p>Provides on the procedure of injection euthanasia of animals (incurably ill, suffering from infection diseases, aggressive, animals used in scientific experiments, or animals caught at borders during illegal transport).</p>

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
	of farm animals (2014)			
Law on Hunting and Game Protection , State Gazette No. 78/2000 (amend. 2001, 2002, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2018, 2019)	Ordinance No 27/ 10.06.2004 (amend. 2014, 2016) on the breed groups of hunting dogs and requirements to be met by them, the conditions for their use and the procedure for their examination	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC) EEC Council Regulation 3254/91 (Leghold Trap)	Game mammal and bird species, including some alien species and IAS of EU concern	Provides on the protection and management of game, and on hunting rights. Regulates trade (within the country) and export of live game species and game products which is permitted only with veterinary certificate and certificate for origin. Provides a list with bird and mammal species object of hunting in Bulgaria (Annex 1), including the following IAS of EU concern: <i>Ondatra zibethicus</i> <i>Myocastor coypus</i> <i>Nyctereutes procyonoides</i> . Provides a list of means and methods which usage is prohibited for hunting. Stipulates the rules for hunting with dogs, the requirements for the breed groups, their training and examination. The introduction of alien game species into the natural environment or re-introduction of native game species, considering the public opinion in the region of re-introduction, is regulated by the Biological Diversity Act and Ordinance No 14/ 27.10.2005.
Law on Fisheries and Aquaculture , State Gazette No 41/2001 (amend. 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020)	Ordinance No 4/ 13.01.2006 on the conditions and procedure for the first sale of fish and other aquatic organisms Ordinance No 37/ 10.11.2008 (amend. 2011, 2013, 2016, 2018) on the use of the reservoirs which are state property for fishery, and rules for commercial and recreational fishing and aquaculture in water bodies, which are state property	Habitats Directive (Council Directive 92/43/EEC) Regulation (EU) No 1380/2013 on the Common Fisheries Policy	Fish and fish products	Regulates management, use and protection of fish resources, and trade of fish, fish products and other aquatic organisms, including genetic material (fertilised eggs, sperm, stocking material, etc.) from fishery, aquaculture or import. Provides on standards and conditions for fish stocking in reservoirs and requires preparation of stocking reports, veterinary health certificate and genetic certificate (in case of sturgeon stocking).

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
				<p>Provides on means and methods which are allowed and which are prohibited for use for recreational and commercial fishing and for aquaculture in the Danube River, Black Sea and inland waters of Bulgaria. Permits for exemptions are issued for scientific purposes.</p> <p>Introduction of alien species and re-introduction of native species of fish and other aquatic organisms into the water bodies is regulated by the Biological Biodiversity Act and Ordinance No 4/ 08.07.2003.</p>
<p>Law on protection against the harmful impact of chemical substances and preparations, 2000 (amend. 2002, 2003, 2005, 2006, 2007, 2008, 2010, 2012, 2014, 2015, 2017, 2018, 2019)</p>	<p>Register of biocides for which a marketing authorisation for Bulgaria has been issued until 16.12.2020 (Ministry of Health)</p>	<p>Biocidal Products Regulation (Regulation EU 528/2012)</p> <p>Regulation (EC) 1907/2006 (REACH)</p>	<p>Vertebrate animals</p>	<p>Provides on conditions and procedures for the trade, import, export, storage, use and placement on the market of chemical substances and preparations, including biocides.</p> <p>Regulates the implementation of Regulation EU 528/2012 and Regulation (EC) 1907/2006 (REACH), among others.</p> <p>Requires limitation and non-repetition of studies/ testing on vertebrate animals.</p>
<p>Law on support to farmers, State Gazette No 58/1998 (amend. 1999–2020)</p>	<p>Ordinance No 4/ 08.08.2017 (amend. 2018, 2019) for the implementation of measure 14 'Animal welfare' of the Rural Development Programme for the period 2014–2020</p>		<p>Animals in farms</p>	<p>Sets the provisions aimed to offer the necessary state support to farmers in Bulgaria, including requirements to observe the animal welfare principles.</p>

4.2. Romania

Table 5. Key legislation directly or indirectly related to the management of IAS and vertebrate IAS of EU concern in Romania. The national information system for legislation administered by the Ministry of Justice was used for documentation, available at <http://legislatie.just.ro/Public/NLEX> (last check December 2020).

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
Law 49/2011 , State Gazette No 262/2011	Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC) Council Regulation (EEC) No 348/81 of 20 January 1981 on common rules for imports of whales or other cetacean products EEC Council Regulation 3254/91 (Leghold Trap) Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein	Protected species and alien and invasive species	Provides definitions for native, allochthonous and invasive species (Art. 4). Stipulates that for introduced allochthonous wild species, an assessment of the impact of the introduction on native flora and fauna is mandatory and the European Commission should be informed on the results of the assessment. The introduction of allochthonous wild birds can be performed only after consultation with the European Commission (Art. 34). Stipulates the responsible authorities for the implementation of Council Regulations no. 338/97, 348/81 and 3254/91 (Art. 35). Stipulates that methods and means of capturing and killing listed in Annex 6 are prohibited when dealing with species regulated by the current law (Annexes 3-5). Permits for exemptions can be issued under special conditions (Art. 36-38). Annex 5B includes <i>Myocastor coypus</i> , <i>Ondatra zibethicus</i> , <i>Nyctereutes procyonoides</i> among species considered of national interest whose collection and exploitation requires management measures. Stipulates the penalties related to the implementation of the law and the authorities responsible for control (Ch. 5-6).
Ministry Order No 979/2009 , State Gazette No 500/2009	Emergency Ordinance No 57/2007 regarding the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna		Alien and invasive species (except species targeted by	Regulates the introduction of non-native species, interventions on invasive species, and the re-introduction of the native species provided in the annexes No 4A and 4B of

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
	(Art. 34)		other regulations, species not included on the approved lists of invasive species and genetically modified organisms)	<p>Emergency Ordinance No 57/2007 at national level.</p> <p>Stipulates that the deliberate introduction of invasive species is forbidden in the national territory (except for research and development activities performed by legal persons that comply with special conditions) (Art. 5; Annex 2).</p> <p>The containment/eradication of invasive species is allowed based on a permit issued by the competent public authority responsible for the protection of the environment, based on the favourable scientific opinion of the Romanian Academy, on a case by case basis, according to procedures established for the authorisation of research-development activities (Art. 5(3)).</p> <p>Stipulates that the persons responsible for the deliberate or accidental introduction of invasive species on national territory are liable for payment of all damage recorded until complete eradication, in agreement with the national legislation.</p> <p>Does not provide lists of invasive species, suggests using the list available at Europe-aliens.org until the approval of a national list of invasive species (Art. 9).</p>
Law 407/2006 regarding hunting and game protection, State Gazette No 944/2006			Game species	<p>Provides on the protection and management of game, and on hunting rights and methods.</p> <p>Stipulates that the administrator of the game fund endorses the proposals to introduce game species that do not exist in the wild in Romania, based on impact studies approved by the Romanian Academy and by the central public authority responsible for the protection of the environment.</p>

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
				<p>Provides a list with mammal and bird species that can be hunted in Romania (Annex 1), including <i>Ondatra zibethicus</i> and <i>Nyctereutes procyonoides</i>.</p> <p>Provides penalties related to the usage of prohibited means and methods of hunting.</p>
Emergency Ordinance No 23/2008 regarding fishing and aquaculture, State Gazette No 180/2008			Aquatic animals	<p>Regulates the protection, conservation, management and exploitation of living aquatic resources, aquaculture activity, processing and marketing of fishery and aquaculture products in Romania and Romanian waters by ships under the Romanian flag or under flags of other states.</p> <p>Provides definition for introduced species, any species of fish or other aquatic animal being intentionally or accidentally introduced by man in an aquatic habitat that is different than the one in which it occurs naturally.</p> <p>Provides approved fishing methods and quotas for recreational fishing, e.g. 10 individuals/day in alpine habitats with salmonids, including <i>Oncorhynchus mykiss</i> and <i>Salvelinus fontinalis</i>.</p> <p>Stipulates that the introduction for culture in open-air fisheries of exotic species or species absent at local level requires approval from the Ministry of Agriculture and Rural Development and the Ministry of Environment, based on studies that establish the conditions for quarantine and control in order to avoid escapes in the wild (Art. 46).</p> <p>Provides penalties related to the usage of prohibited means and methods of fishing.</p>
Law 205/2004 regarding animal protection , State Gazette No 531/2004	Emergency order No 175/14.11.2020		Animal species (except stray dogs and	Regulates the necessary measures to ensure living conditions and welfare of animals with or without owner. Provides minimum

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
			animals used for research purposes)	<p>requirements to ensure the welfare of the animals and defines bad treatment and cruelty towards animals as well as related penalties.</p> <p>Stipulates that owners can legally possess wild animals only if authorised by the veterinary and food safety directorate and for a limited period of time, in order to care for animals in peril, with the approval of the National Sanitary Veterinary and Food Safety Authority.</p> <p>The use of vertebrates in circus, caravans and similar type of shows is prohibited with the exception of horses, dogs, some bird species and animals in aquariums (including dolphins).</p> <p>Provides on the obligations of police for the protection of animals, including wild animals.</p>
<p>Law 43/2014 regarding the protection of animals used for scientific purposes, State Gazette No 326/2014</p>			<p>Living vertebrates (non-human animals, including larval forms that feed autonomously and fetal forms of mammals starting the last third of their normal development) and living cephalopods</p>	<p>Provides on the protection of animals used for scientific purposes, in case the use of living animals cannot be avoided. In such instance, the lowest number of animals should be used and all measures must be taken to improve the conditions of rearing, housing and care of the animals, as well as the methods used in the procedures, in order to eliminate or minimize the pain, suffering, distress or lasting harm which may be caused to the animals.</p> <p>Special provisions are in place in the case of threatened species listed in Annex A of the Council Regulation no. 338/97 (on the protection of species of wild fauna and flora by regulating trade therein), non-human primates, animals captured in the wild, strictly protected animals according to Ordinance 57/2007 and wandering and untamed animals pertaining to domesticated</p>

Legislation/ guidance/ standard	Supplementary regulations	Related EU Legislation	Target group of animals	Key provisions directly or indirectly related to the management of IAS and vertebrate IAS of EU concern
				species. Provides requirements regarding the housing and caring units to ensure the welfare of animals, as well as methods that can be used for killing if necessary.
Order 180/2006 for the approval of sanitary-veterinary norm on the protection of animals at the time of slaughter or killing, State Gazette No 721/2006	Ordinance No 42/2004 regarding the organisation of sanitary-veterinary and food safety activity (Art. 10)	Council Directive 93/119/EC of 22 December 1993 on the protection of animals at the time of slaughter or killing	Animals raised for the production of meat, leather, fur or other products	Provides on the movement, accommodation, restraint, stunning, slaughter and killing of animals and methods of killing animals for the purpose of combating diseases. Annex 3 provides details on permitted methods for the stunning or killing of animals, other than those bred for fur. Annex 6 provides details on permitted methods for killing animals bred for fur.
Law 60/2004 regarding the protection of pet animals, State Gazette No 400/2004		European Convention for the protection of pet animals	Pet animals	Provides basic principles to ensure the welfare of animals, prohibits the causing of unnecessary pain, physical or mental suffering to a pet animal as well as their abandonment.

5. Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance

The management measures which are restricted or prohibited from use in Bulgaria and Romania are listed in the legislation related to biodiversity and conservation of wild flora and fauna, to hunting and game protection, and to fisheries and aquaculture. There are no specific measures that focus on IAS of EU concern. However, there are measures related directly or indirectly to the management of vertebrate IAS as species representatives of the wild terrestrial, semiaquatic and aquatic fauna, species of national interest whose collection and exploitation requires management measures, game species, fishing/angling species, species used for scientific purposes, livestock/aquaculture and pet species, species of zoos and aquaria, etc.

5.1. Bulgaria

Biological Diversity Act (2002)

This act stipulates that all forms of deliberate capture and killing by all devices, means and methods are prohibited for the animal species listed in Annex 3 (wild animal species protected on the entire territory of Bulgaria) and all species of wild birds. Permits for exemptions can be issued according to Ordinance No 8/12.12.2003 for scientific purposes and training, as well as for the introduction of alien species or re-introduction of native species and the selection necessary for that purpose, among others. Furthermore, the Biological Diversity Act provides a list of prohibited non-selective devices, means and methods for capture and killing (Annex 5) (**Table 6**). These measures refer to 1) species listed in Annex 4 (wild animals under regime of protection and regulated use in nature); and 2) species listed in Annex 3 and all other wild birds with issued permits for exemptions according to Ordinance No 8/12.12.2003.

Table 6. Prohibited non-selective devices, means and methods for capture and killing under the Biological Diversity Act (2002).

No	Means and methods	Mammals	Birds	Freshwater fish
	Non-selective means			
1	Live animals, incl. blind or mutilated used as live decoys	X		
2	Snares, birdlime, hooks, live birds which are blind or mutilated used as decoys		X	
3	Sound recorders	X	X	
4	Electrical and electronic devices capable of killing or stunning	X	X	
5	Electric current and other devices and means capable of stunning the fish			X
6	Artificial light sources	X	X	
7	Mirrors and other dazzling devices	X	X	
8	Devices for illuminating targets	X		
9	Sighting devices for night shooting comprising an electronic image magnifier or image converter	X	X	
10	Explosives	X	X	X
11	Nets which are non-selective according to their principle or their conditions of use	X	X	
12	Traps which are non-selective according to their principle or their conditions of use	X	X	
13	Crossbows	X		
14	Poison	X		X
15	Poisoned or anaesthetic bait	X	X	
16	Gassing or smoking out	X		
17	Semi-automatic or automatic weapons with a magazine capable of holding more than two rounds of ammunition	X	X	
18	Dead animals or parts of animals used as decoy in habitats of bears	X		
19	Use of permanent facilities – shelters for hunting waterfowl		X	

No	Means and methods	Mammals	Birds	Freshwater fish
20	Hunting with birds of prey	X	X	
21	Use of lead bullets when hunting in wetlands	X		
22	Use of lead bullets when hunting in wetlands and at distance up to 200 m around		X	
23	Barbed hook lines 'Karmatsi' (BG: кърмаци)			X
24	Trawling and dredging			X
Modes of transport				
25	Aircraft	X	X	
26	Moving motor vehicles	X	X	
27	Motor-boats driven at a speed exceeding five kilometres per hour, or in the Black Sea – 18 kilometres per hour		X	

Law on Hunting and Game Protection (2000)

The law provides on the allowed means and methods for hunting and the requirements that should be met (Art. 56), as well as the procedures for issue of permits. Hunting is allowed with a smooth-bore barrel hunting firearm with a bullet, hunting long firearm with a rifle barrel, and a short firearm with a rifle barrel for hunting purposes. When the weapon is semi-automatic, it cannot hold more than one plus two rounds in the magazine, except for the short firearms with a rifle barrel for hunting purposes. Hunting weapons cannot be automatic. According to this law, hunting with dogs (except greyhounds) is allowed following the requirements of the Ordinance No 27/ 10.06.2004. It stipulates the rules for hunting with dogs, the requirements for the breed groups, their training and examination. Only stationary traps for selective hunting and nets, which are placed not less than 1000 m from the border of the neighbouring hunting area, can be used for catching live game for the purposes of re-introduction, refreshment of blood, and for carrying out veterinary medical control. Permits for hunting for scientific purposes can be issued.

This law also provides a list of means and methods, which usage is prohibited for hunting in Bulgaria (Art. 65) (**Table 7**).

The provisions of the law refer to the following groups of species:

- 1) Bird and mammal species object of hunting in Bulgaria (Annex 1), including the following IAS of EU concern:
 - *Ondatra zibethicus*
 - *Myocastor coypus*
 - *Nyctereutes procyonoides*;
- 2) Mammals and birds introduced in the country for hunting purposes;
- 3) Wild and stray dogs and cats in the hunting areas.

Table 7. Prohibited means and methods for capture and killing of game species under the Law on Hunting and Game Protection (2000).

No	Means and methods
1	Weapons that do not meet the requirements of the law (Art. 56) and crossbows
2	Traps, snares and nets, birdlime and pits, if applied for non-selective hunting or killing
3	Poisonous and anaesthetic substances, and poisoned or anaesthetic bait
4	Electrical sound recording devices, artificial light sources, and devices for illuminating targets
5	Mirrors and other dazzling devices
6	Electrical devices capable of killing or stunning
7	Live animals, incl. blind or mutilated used as live decoys
8	Explosives, gassing or smoking out
9	Sighting devices for night shooting comprising an electronic image magnifier or image converter
10	Motor vehicles
11	Aircraft
12	Falcons and other birds of prey, regardless of their taxonomy and origin, as well as greyhounds
13	Motor-boats driven at a speed exceeding five kilometres per hour, or in the Black Sea – 18 kilometres per hour
14	Weapons with attached silencer
15	Shot (pellets) with a diameter of more than 6 mm during group hunting of wild boar with a

	smooth-bore weapon; when conducting group hunting of wild boar with smooth-bore weapons, the use of only 'bullet' type ammunition is allowed
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Law on Fisheries and Aquaculture (2001)

This law provides on the means and methods which are allowed and which are prohibited (**Table 8**) for use for recreational and commercial fishing and for aquaculture in the Danube River, Black Sea and inland waters of Bulgaria. It refers to all freshwater and marine fish species.

Permits for use of the following means and methods can be issued for scientific purposes:

- Electric current and devices and equipment for catching by electrofishing and radiation
- Trawling and dredging except beam trawling.

Table 8. Prohibited means and methods for capture and killing of fish under the Law on Fisheries and Aquaculture (2001).

No	Means and methods
	Article 35
1	Explosives, poisonous and anaesthetic substances
2	Electric current and devices and equipment for catching by electrofishing and radiation
3	Trawling and dredging except beam trawling
4	Beam trawling in areas specified by an order of the Minister of Agriculture, Food and Forestry upon a proposal of the executive director of the Executive Agency of Fisheries and Aquaculture
5	Weapons
6	Harpoons (except for recreational fishing in the Black Sea)
7	Barbed hook lines 'Karmatsi' (BG: кърмаци)
8	Small nets type 'Parachute'
	Article 36
9	Commercial fishing in the Danube River and the Black Sea with nets when they contain 'sails' or separate elements with a mesh size of less than the specified size in the Law
	Article 37
10	Commercial and recreational fishing by 'mowing'

5.2. Romania

Government Emergency Ordinance No 57/2007 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna, approved with amendments and supplements by Law No 49/2011, as further amended

The ordinance stipulates that the use of methods and means of capturing and killing listed in Annex 6 (see **Table 9**) is prohibited when dealing with species regulated by the current law (Annexes 3–5). Permits for exemptions can be issued under special conditions (Art. 36–38). Annex 5B includes *Myocastor coypus*, *Ondatra zibethicus*, and *Nyctereutes procyonoides* among species considered of national interest whose collection and exploitation requires management measures.

Table 9. Prohibited non-selective devices, means and methods for capture and killing under the Government Emergency Ordinance No 57/2007 and Law No 49/2011.

Management measures (prohibited)	Target species
<ul style="list-style-type: none"> - Any form of harvesting, capturing, killing, destroying or harming of individuals in their natural environment, at any stage of their life cycle; - Deliberate disturbance during reproduction, growth, hibernation and migration periods; - Damaging, destruction and/or deliberate collection of nests and/or eggs from the wild; - Damaging and/or destroying reproduction or resting sites; - Possession, transport, trade or exchange for any purpose of individuals taken from the wild, at any stage of their life cycle. 	Animal species listed in Annex 4A (species of community (EU) interest, plant and animal species that require strict protection) and 4B? (species of national interest, plant and animal species that require strict protection) (except birds), and animal species included in the national Red Lists
<ul style="list-style-type: none"> - Intentional killing or capture, regardless of the method used; - Damage, destruction and/or deliberate collection of nests and/or eggs from the wild; - Collecting eggs in the wild and keeping them, even if empty; 	All species of birds

Management measures (prohibited)	Target species
<ul style="list-style-type: none"> - Deliberate disturbance, particularly during reproduction, growth and migration periods; - Possession of individuals pertaining to species for which hunting and capture are prohibited; - The sale, possession or transport for sale of living or dead individuals, or any easily identifiable part or derived product, with the following exceptions: species listed in Annex 5D (bird species of community (EU) interest, whose marketing is allowed) that were captured, killed or obtained through legal means and species listed in Annex 5E (bird species of community (EU) interest, whose marketing is allowed under special conditions) for which a special permit has been issued. 	
<p>Hunting during periods of reproduction and rearing of chicks, as well as during the return to nesting grounds in the case of migratory birds.</p>	<p>Bird species listed in Annex 5C (species of community (EU) interest, whose hunting is allowed)</p>
<p>Unsustainable sampling in the wild and exploitation of individuals if the following measures are not in place (depending on the situation):</p> <ul style="list-style-type: none"> Regulating access in certain areas and/or certain periods; Temporary and/or local ban on the collection and capture of certain species; Regulation of periods, methods and means of harvesting/capturing; Establishing a system for authorising harvest/capture, transport and marketing, including the establishment of quotas; Encouraging cultivation and rearing in captivity, in order to reduce the pressure on populations. 	<p>Species listed in Annex 5 (species of community (EU) and national interests, whose collection from nature and exploitation are subject to management measures, whose hunting and marketing is allowed, and whose marketing is allowed under special conditions), including <i>Myocastor coypus</i>, <i>Ondatra zibethicus</i>, and <i>Nyctereutes procyonoides</i></p>
<p><u>Non-selective means:</u></p> <ul style="list-style-type: none"> - Captive animals, incl. blind or mutilated, used as live bait - Sound recorders - Electrical and electronic devices capable of killing or stunning - Artificial light sources - Mirrors and other dazzling devices - Devices for illuminating targets - Sighting devices for night shooting comprising an electronic image magnifier or image converter - Explosives - Nets which are non-selective according to their principle or their conditions of use - Traps which are non-selective according to their principle or their conditions of use - Crossbows - Poisons and poisoned or anaesthetic bait - Gassing or smoking out - Semi-automatic or automatic weapons with a magazine capable of holding more than two rounds of ammunition 	<p>Mammal species listed in Annex 4 (species of community (EU) and national interests, plant and animal species that require strict protection) and Annex 5, including <i>Myocastor coypus</i>, <i>Ondatra zibethicus</i>, and <i>Nyctereutes procyonoides</i> (except species with issued permits for exemption)</p>
<p><u>Non-selective means:</u></p> <ul style="list-style-type: none"> - Poison - Explosives - Electric current - Certain types of nets 	<p>Fish species listed in Annexes 4 and 5 (except species with issued permits for exemption)</p>
<p><u>Non-selective means:</u></p> <ul style="list-style-type: none"> - Snares, birdlime, hooks, blind or mutilated birds used as live bait - Sound recorders, electrical and electronic devices capable of killing or stunning - Artificial light sources, mirrors and other dazzling devices, devices for illuminating targets, sighting devices for night shooting comprising an electronic image magnifier or image converter - Explosives - Nets, traps, poisoned or anaesthetic bait - Semi-automatic or automatic weapons with a magazine capable of holding more than two rounds of ammunition 	<p>Bird species listed in Annexes 4 and 5 (except species with issued permits for exemption)</p>
<p><u>Modes of transport:</u></p> <ul style="list-style-type: none"> - Aircraft - Moving motor vehicles - Motor-boats driven at a speed exceeding five kilometres per hour, or in the Black Sea – 18 kilometres per hour 	<p>Species listed in Annexes 4 and 5 (animals) except species with issued permits for exemption</p>

Law 407/2006 regarding hunting and game protection, State Gazette No 944/2006

The law stipulates that hunting is practiced using firearms and authorised traps. Hunting by approved means can also be done using hunting dog breeds, according to the regulations approved by the administrator (Art. 33).

The law also provides a list of means and methods, which usage is prohibited for hunting in Romania (**Table 10**).

The provisions of the law refer to game species (listed in Annex 1), including the following IAS of EU concern:

- *Ondatra zibethicus*
- *Nyctereutes procyonoides*

Table 10. Prohibited means and methods for capture and killing of game species under Law 407/2006 regarding hunting and game protection.

No	Means and methods
1	The use of flags and fences to set directions for individuals of game species, as well as animal detectors
2	Hunting deer, roe deer, chamois, mouflons, wild boars and bears, by using cartridges other than those with single projectiles, the characteristics of which are provided by the technical regulations issued by the administrator
3	Hunting rabbits, pheasants or partridges in feeders or from sunset to sunrise
4	Hunting deer, roe deer and chamois in feeders, salt deposits, on the run or with chasing dogs
5	Hunting water birds near holes in ice during frost, if the surface of the water is frozen more than 70%
6	Hunting chicks of game birds unable to fly
7	Using weapons of a calibre unsuitable for the species for which the hunting action is authorised
8	The use of odorivectors, except for scientific research, in which case the administrator approves their use but under the conditions stipulated separately in the given authorisation
9	The manufacture, marketing, holding or use of pellets with a diameter greater than 5 mm
10	Entering hunting grounds or using weapons and ammunition that are not approved or authorised for hunting in Romania
11	The use of blind or mutilated animals as decoys, electronic callers, sound recorders and dazzling mirrors
12	The use during night-time shooting of laser aiming devices, of systems comprising electronic waste light converters or amplifiers, infrared sighting devices and thermal imaging devices; except the use of target lighting devices for hunting wild boar, jackal and fox, in case of a waiver from the central public authority responsible for the environment
13	Chasing game species individuals with motor boats, whose travel speed is higher than 5 km/h, as well as hunting from cars
14	Gassing and fumigation of burrows without the approval of the administrator
15	Hunting mammals and birds using unauthorised traps
16	The use of noose for hunting, greyhounds or greyhound crossbreeds
17	Hunting using headlights or lighting devices, except in emergency cases as established by waivers granted by the central public authority responsible for the environment for the collection of wild boars in order to prevent damage or to combat epizootic diseases
18	The use of chemicals that cause poisoning, sterility or death of game individuals (exceptions can be granted in some cases)
19	Using unauthorised traps, birds of prey and bows for hunting
20	Using crossbows and weapons unauthorised for hunting in Romania
21	Hunting with other weapons than hand-held
22	Hunting during the night (except for species for which this is allowed) (Arts. 39 and 42)

Emergency Ordinance No 23/2008 regarding fishing and aquaculture, State Gazette No 180/2008

This ordinance regulates the protection, conservation, management and exploitation of living aquatic resources, aquaculture activity, processing and marketing of fishery and aquaculture products. Special permits for fishing for scientific purposes can be issued by the National Agency for Fishing and Aquaculture to entities established through Emergency Ordinance No 57/2002.

The ordinance provides on means and methods which are allowed and which are prohibited (**Table 11**) for use for recreational and commercial fishing in Romania. Its provisions refer to aquatic animals, including some alien fish species (e.g. *Oncorhynchus mykiss* and *Salvelinus fontinalis*).

In case of recreational/sport fishing the following methods are allowed:

- Fishing rod with maximum 2 hooks in flowing or stagnant waters in the mountain area
- Maximum of 4 fishing rods with 2 hooks each in waters in hilly and lowland areas, along the Danube River and its branches, and in the Danube Delta
- Maximum of 2 fishing rods or one sabiki / flasher rig (RO: Țaparină, BG: ченепе), with 10 hooks each, in the territorial waters of the Black Sea
- Fishing of Salmonidae in mountain waters is allowed only with artificial baits
- In waters in hilly and lowland areas, along the Danube River, in the Danube Delta and maritime waters, a recreational fisherman may catch up to 5 kg of fish per day or a single fish if its weight exceeds 5 kg
- In mountain waters with Salmonidae, a fisherman can catch up to 10 individuals per day, in total, of the following species: native trout, rainbow trout, brook trout, grayling and *Coregonus* (Art. 24).

Table 11. Prohibited means and methods for capture and killing of fish under the Emergency Ordinance No 23/2008 regarding fishing and aquaculture.

No	Means and methods
1	Commercial or recreational fishing is prohibited along a flowing watercourse for 500 m downstream of a dam (Art. 9 ¹)
2	Recreational fishing of any fish or other aquatic animals without permit in natural habitats (Art. 58)
3	Recreational fishing of any fish or other aquatic animals below the legal minimum dimensions (Art. 58)
4	Catching Salmonidae manually, with commercial fishing gear or with other artisanal fishing gear
5	Fishing of Salmonidae using natural baits
6	Fishing with more than 3 artificial flies in waters with Salmonidae
7	The catch by a single person practicing recreational/ sport fishing of more than 10 individuals per day, in total, of trout, grayling and whitefish species in mountain waters or of more than 5 kg of fish per day in waters from hilly and lowland areas, unless a single individual weighing more than 5 kg has been fished
8	Recreational/ sport fishing in natural habitats, by any methods and means, of fish and other aquatic animals, during the prohibition period and in protected areas
9	Angling using monofilament nets (Art. 59)
10	Placement of fixed or drifting fishing gear on more than two-thirds of the width of rivers, canals and the Danube River
11	The use of fixed or drifting fishing gear in the Razelm-Sinoe lagoon complex, in the Belciuc-Erenciuc lakes and in coastal lakes
12	Catching fish with nets and row of fishing lines (RO: pripoane) in rivers and lakes in the mountain area, as well as in hilly and lowland rivers, with the exception of the Danube and the Prut rivers
13	The introduction into natural habitats or fisheries of other species than the existing ones, without the approval of the National Agency for Fisheries and Aquaculture (Art. 62)
14	Reducing the flow and volume of water on watercourses for the purpose of illegal fishing
15	The opening, closing, obstructing with fishing fences or fishing gear of any kind, by unauthorised persons, of canals and ditches connecting lakes, ponds or floodplains
16	Fishing with nets having mesh sizes below minimum legal dimensions
17	The production, importation, marketing, possession or use for fishing of trawl-nets, tunnel-nets, fyke nets and other commercial fishing gear by unauthorised persons
18	Fishing with spear and any other stinging or hooking gear, by raking or harpooning
19	The production, import, holding, marketing or use of monofilament nets, other than gillnets used for turbot fishing, with a mesh size of at least 400 mm
20	Fishing with unauthorised gear
21	Electric fishing, the possession of appliances and devices that destroy living aquatic resources using electricity, fishing with explosive materials, fishing with toxic and narcotic substances of any kind, and the use of firearms for the purpose of killing fish or other aquatic life

Note: It is important to note that standards and regulations at the national level (Bulgaria and Romania) are constantly being updated, and therefore, information presented within this Appendix will become outdated.

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Appendix 37. Regional conditions for the Boreal region

Estonia (EE), Finland (FI), Latvia (LV), Lithuania (LT) and Sweden (SE)

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1. Species presence in Member States from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each Member State in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)

Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopochea aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
ESTONIA																						
Presence	?	F	NP	NP	NP	NP	NP	?	P	?	P	P	?	P	NP	?	NP	NP	NP	?	NP	P
Status									R		W	W		R						O		R
Impact											Y	N		?								N
Highest impact											+											
References		14, 16							EO		11, 12	1		2, 3						EO		4
FINLAND																						
Presence	NP	NP	NP	NP	NP	P	NP	NP	NP	NP	P	P	F	NP	NP	NP	NP	NP	NP	NP	NP	P
Status						R					W	R										O
Impact						?					Y	?										?
Highest impact											+											

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Perccottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
References						22					23, 24, 25	19, 21, 22	19, 22									19, 21, 22	
LATVIA																							
Presence	?	F	NP	NP	NP	NP	NP	P	P	?	P	P	?	P	NP	?	NP	NP	NP	?	NP	P	
Status								O	R		W	W		W						O		R	
Impact								?			Y	?		Y								?	
Highest impact											+												
References		13, 14						EO	EO		11	EO		6, 8						EO		5	
LITHUANIA																							
Presence	?	F	NP	NP	NP	NP	NP	?	?	?	P	P	?	P	NP	F	F	NP	NP	?	F	P	
Status									R		W	W		W						O		R	
Impact											Y	N		Y								?	
Highest impact											+												
References		14, EO							EO		11	7		9, EO		17	10			EO	15	5	
SWEDEN																							
Presence	NP	P	NP	NP	NP	P	NP	NP	NP	NP	P	P	F	NP	NP	NP	NP	NP	NP	NP	F	F	P
Status		O				R					R	R										O	

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Impact		N				N					Y	Y										?
Highest impact											+											
References		19, 26, 27				18, 19					19, 20, 27	19, 27	26							27	26	21, 27

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1 - Birnbaum (2006); 2 - Kangur & Kangur (1998); 3 - Tambets & Järvekülg (2005); 4 - Martinson (2020); 5 - Pupins & Pupina (2011); 6 – Pupina et al. (2015); 7 - Skyrienė & Paulauskas (2012); 8 - Pupins & Ceirans (2019); 9 - Reshetnikov (2010); 10 - Anonymous (2017); 11 – Paulauskas et al. (2016); 12 – Kärssin et al. (2017); 13 - Putni (website); 14 - Mazurska & Solarz (2020); 15 – Jusys et al. (2017); 16 - Anonymous (2012); 17 - Canova & Rossi (2008); 18 - Johansson (2020); 19 - European Commission (website); 20 - Dahl & Åhlén (2019); 21 - European Protection Agency /website); 22 - Invasive Alien Species Portal (website); 23 - Krüger et al. (2018); 24 – Nummi et al. (2019); 25 - Kauhala & Kowalczyk (2011); 26 - Swedish Species Information Center (website); 27 - Swedish Association for Hunting and Wildlife Management (2020)

2. Toolbox of measures - restrictions/bans in Member States from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in an EU Member State = * followed by MS country code

Use of measure **banned** in an EU Member State = # followed by MS country code

Category	Measure name	<i>Alopocheus aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Biological control	Native predators		*SE						*SE		*SE			
Habitat manipulation	Aquatic barriers – physical & non-physical													
	Aquatic habitat management - Pond drying/draining		*LT *SE						*LT *SE		*LT *SE			*LT *SE
	Physical terrestrial barriers													
Hand removal	Hand removal	*FI *SE						*FI *SE					*FI *SE	*FI *SE
	Physical fishing methods		*SE						*SE		*SE			
Other	Egg oiling	#LV *SE						#LV *SE					#LV *SE	
	Electrofishing		*EE *FI *LV *SE						*EE *FI *LV *SE		*EE *FI *LV *SE			

Category	Measure name	<i>Alopoche aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Fertility Control - chemical (in bait) & injection			*FI *SE		*FI *SE	*FI *SE			*FI *SE		*FI *SE		
	Hunting dogs (tracking/ baying)			*SE	*SE	*SE	*SE			*SE		*SE		
	Judas animals	#EE *FI *SE		#EE *FI *SE	#EE *FI *SE	#EE *FI *SE	#EE *FI *SE	#EE *FI *SE		#EE *FI *SE		#EE *FI *SE	#EE *FI *SE	#EE *FI *SE
Poisoning or toxicants	Stupefying bait	*FI *SE		*FI *SE									*FI *SE	
	Chemical treatment of the habitats		*SE						*SE		*SE			
	Poisons and toxins in bait						*EE *FI *LV *SE							
Shooting	Shooting	*LT*LV *SE		*LT *SE	*LT *SE	*LT *SE	*LT *SE	*LT*LV *SE		*LT *SE		*LT*LV *SE	*LT*LV *SE	*LT *SE
Trapping	Drowning traps				*EE *FI *LT *SE		*EE *FI *LT *SE							
	Goodnature self-resetting traps *EE*LV*LT													
	Spring traps				*FI *LT *SE	*FI *LT *SE	*FI *LT *SE			*FI *LT *SE		*FI *LT *SE		
	Cage traps	*FI *LT *SE		*FI *LT *SE	*FI *LT *SE	*FI *LT *SE	*FI *LT *SE	*FI *LT *SE		*FI *LT *SE		*FI *LT *SE		*FI *LT *SE
	Neck-hold traps, and snares				*EE *FI	*EE *FI				*EE *FI				

Category	Measure name	<i>Alopoche aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
					*LV*LT *SE	*LV*LT *SE				*LV*LT *SE				
	Live decoy traps	*EE *FI *LT*SE												
Dispatch/ removal only once captured	Cervical dislocation													
	Cranial depression													
	Decapitation													
	Electrocution													
	Freezing													
	Injection euthanasia													
	Keeping in captivity													
	Modified atmospheres													
	Shooting - dispatch restrained animals													
	Slaughter (knife)													
Surgical sterilisation			*SE		*SE	*SE			*SE		*SE		*SE	

3. Details of restrictions/bans of Toolbox measures in Member States from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Native predators	Restrictions (all fishes) – Moving of fish must have approval from responsible authority.	Sweden	The ordinance on fishing, aquaculture and the fishing industry “Förordning om fisket, vattenbruket och fiskerinäringen” (1994:1716), Chapter 2, 6 §
Aquatic habitat management - Pond drying/draining	For almost any activity classified as water works according to chapter 11 in the Swedish Environmental Code (1998:808) (which includes draining a larger pond) a permit is needed (all water living species). In the assessment process the general rules of consideration in chapter 2 of the Code shall be applied.	Sweden	Swedish Environmental Code “Miljöbalken” (1998:808)
	Ban for all small waterbodies not listed in the official water body list.	Lithuania	Special arrangements for inland fishing 2018 m. birželio 27 d. įsakymo Nr. D1-603 redakcija
Hand removal	Restrictions (all bird species) - Removal of eggs must have approval from responsible authority.	Finland and Åland	Hunting Act “Metsästyslaki” (28.6.1993/615) 40§ Hunting Act “Jaktlagen (1985:31) för landskapet Åland” 27 §
	Restrictions (all bird species) - Removal of eggs must have approval from responsible authority.	Sweden	The hunting regulation “Jaktförordningen” (SFS 1987:905) 15 §
Physical fishing methods	Prohibition (all fishes) - possibility to have exceptions issued by responsible authority.	Sweden	The ordinance on fishing, aquaculture and the fishing industry “Förordning om fisket, vattenbruket och fiskerinäringen” (1994:1716) and regulations from the Swedish Agency for Marine and Water Management “Fiskeriverkets föreskrifter” (FIFS 2004:36)
Egg oiling	Ban on killing birds. Law does not specify methods or tools. See also Hunting Law “Medību likums” (08.7.2003) for	Latvia	Law on the conservation of species and biotopes (16.3.2000)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	additional restrictions and/or exemptions for hunted species and IAS management.		
	Restrictions (all bird species) - Must have approval from responsible authority.	Sweden	The hunting regulation "Jaktförordningen" (SFS 1987:905) 15 §
Electrofishing	Ban (for industrial fishing), permits allowed for management (including of IAS).	Estonia	Fishing Act "Kalapüügiseadus" (19.02.2015)
	Ban (for all fishes). Derogations from authority are possible - must have approval from responsible authority.	Finland	Animal Welfare Act "Eläinsuojelulaki" (4.4.1996/247) 7§, 10§ The Fishing Act (379/2015). 46§ Specific restrictions from the government on derogation
	Ban (for industrial fishing), permits allowed for management (including of IAS).	Latvia	Regulations for industrial fishing in inland waters "Noteikumi par rūpniecisko zveju iekšējos ūdeņos" (02.5.2007)
	Restrictions (all fishes) - Must have certificate in electrofishing or equivalent experience, approval from responsible authority, and ethical approval.	Sweden	The ordinance on fishing, aquaculture and the fishing industry "Förordning om fisket, vattenbruket och fiskerinäringen" (1994:1716)
Fertility control - chemical (in bait) & injection	Restrictions (for all animals) - Must have approval from responsible authority.	Finland	Animal Welfare Act "Eläinsuojelulaki" (4.4.1996/247) 7§, 10§
	Restrictions (all animals) - Must have approval from responsible authority.	Sweden	The regulation on animal welfare "Djurskyddsförordningen" (SFS 2019:66)
Hunting dogs	Restrictions (all mammals and birds) - Depending on the time of the year.	Sweden	The hunting regulation "Jaktförordningen" (SFS 1987:905) § 16-19
Judas animals	Ban to release alien species in nature. No exemptions allowed.	Estonia	Nature Conservation Act §58
	Restrictions (for all animals) - Must have approval from responsible authority. Must have an exam on treating animals .	Finland	Animal Welfare Act "Eläinsuojelulaki" (4.4.1996/247) 7§, 10§
	Restrictions (all mammals and birds) - Must have approval from responsible authority. Restrictions to release invasive alien species in nature.	Sweden	The hunting regulation "Jaktförordningen" (SFS 1987:905) 15 §

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
			The Swedish environmental code (SFS 1998:808) Chapter 29, section 2 c.
Stupefying bait	Restrictions (for all mammal and bird species) - Must have approval from responsible authority.	Finland and Åland	Hunting Act "Metsästyslaki" (28.6.1993/615) 33§ Hunting Act "Jaktlagen (1985:31) för landskapet Åland" 47 §
	Restrictions (all mammals and birds) - Must have approval from responsible authority.	Sweden	The hunting regulation "Jaktförordningen" (SFS 1987:905) 15 c §
Chemical treatment of the habitats	Restrictions (all fish) - Use of poison in order to eradicate fish would need a permit both according to the legislation on fisheries and depending on the poison used also according to the regulations on use of chemicals.	Sweden	The Fisheries Act "Fiskelag" (1993:787) The ordinance on fishing, aquaculture and the fishing industry "Förordning om fisket, vattenbruket och fiskerinäringen" (1994:1716) And regulations by the Swedish Chemicals Agency
Poisons and toxins in bait	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS) or eradication of domestic pests.	Estonia	Hunting Act "Jahiseadus" (25.4.2013)
	Restrictions (all mammal and bird species) - Must have approval from responsible authority. Allowed for domestic pest species; rats, mice and voles in regulated places.	Finland and Åland	Hunting Act "Metsästyslaki" (28.6.1993/615) 33§ and 34§ Hunting Act "Jaktlagen (1985:31) för landskapet Åland" 47 §
	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS) and eradication of domestic pests.	Latvia	Hunting Law "Medību likums" (08.7.2003)
	Restrictions (all mammals and birds) - Must have approval from responsible authority.	Sweden	The hunting regulation "Jaktförordningen" (SFS 1987:905) 15 §
Shooting	Ban on killing birds. Law does not specify methods or tools. See also Hunting Law "Medību likums" (08.7.2003) for	Latvia	Law on the conservation of species and biotopes (16.3.2000)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	additional restrictions and/or exemptions for hunted species and IAS management.		
	Shooting for hunting purpose with gear other than rifles, e.g., bows, automatic weapons, and generally from the air, moving vehicles or motorboats, is banned but permits are allowed for management (including of IAS).	Lithuania	Hunting law "Medžioklės įstatymas" (20.6.2002)
	Restrictions (all mammals and birds) - Depending on the time of the year. Some species, among those; <i>Nyctereutes procyonoides</i> , <i>Procyon lotor</i> , <i>Myocastor coypus</i> , <i>Ondatra zibethicus</i> and <i>Oxyura jamaicensis</i> , may according to appendix 4 of the hunting regulation (SFS 1987:905), be hunted all year around, with legal measures, to prevent damage. May need a license for the weapon. Restrictions on which weapons and calibers can be used to kill reptiles (SJVFS 2019:8).	Sweden	The hunting regulation "Jaktförordningen" (SFS 1987:905) 2 §, appendix 4:2 The law on weapons "Vapenlagen" (SFS 1996:67) Chapter 2 and 3. Swedish Board of Agriculture´s regulation on slaughter and other killing of animals (SJVFS 2019:8)
Drowning traps, spring traps, neck-hold traps, snares and cage traps	Restrictions (all species) – allowed for some species and some groups of people. Derogations from the restrictions can be given by the responsible authorities.	Finland and Åland	Hunting Act "Metsästyslaki" (28.6.1993/615) 33§ and 34§ Hunting Act "Jaktlagen (1985:31) för landskapet Åland" 47 §
	Restrictions (all species) – allowed for some species and some groups of people, for some models education is also obligatory. Derogations from the restrictions can be given by the responsible authorities.	Sweden	The hunting regulation "Jaktförordningen" (SFS 1987:905) 15 §
Drowning traps	Ban (for hunted species of mammals and birds), permits could be allowed for management (including of IAS).	Estonia	Hunting Act "Jahiseadus" (25.4.2013)
	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Lithuania	Hunting law "Medžioklės įstatymas" (20.6.2002)
Goodnature self-resetting	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Estonia	Hunting Act "Jahiseadus" (25.4.2013)
	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Latvia	Hunting Law "Medību likums" (08.7.2003)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Lithuania	Hunting law "Medžioklės įstatymas" (20.6.2002)
Spring traps	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Lithuania	Hunting law "Medžioklės įstatymas" (20.6.2002)
Cage traps	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Lithuania	Hunting law "Medžioklės įstatymas" (20.6.2002)
Neck-hold traps, and snares	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Estonia	Hunting Act "Jahiseadus" (25.4.2013)
	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Latvia	Hunting Law "Medību likums" (08.7.2003)
	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Lithuania	Hunting law "Medžioklės įstatymas" (20.6.2002)
Live decoy traps	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Estonia	Hunting Act "Jahiseadus" (25.4.2013)
	Restrictions (all mammal and bird species) - Must have approval from responsible authority.	Finland	Hunting Act "Metsästyslaki" (28.6.1993/615) 33§ Hunting Act "Jaktlagen (1985:31) för landskapet Åland" 47 §
	Ban (for hunted species of mammals and birds), permits allowed for management (including of IAS).	Lithuania	Hunting law "Medžioklės įstatymas" (20.6.2002)
	Restrictions (all mammals and birds) - Must have approval from responsible authority.	Sweden	The Swedish Environmental Protection Agency's Regulation on use of traps "Naturvårdsverkets föreskrifter och allmänna råd om användande av fångstredskap" (NFS 2018:3) 28 §
Surgical sterilisation	Restrictions (all animals) - Must have approval from responsible authorities.	Sweden	The law on animal welfare "Djurskyddslagen" (SFS 2018:1192) and the regulation on animal welfare "Djurskyddsförordningen" (SFS 2019:66)

4. Overview of legislation, standards and guidance within Member States from the region

4.1. Estonia

Table 4. Overview of each legislation/guidance/standard and how they affect the management of the vertebrate IAS of Union concern and other IAS.

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions on welfare related to the management of IAS and vertebrate IAS of EU concern
<p>Animal Protection Act (13.12.2000)</p> <p>Loomakaitseadus (13.12.2000)</p>	<p>Council Regulation (EC) No. 1/2005 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No. 1255/97 (for transportation).</p>	<p>All animals: 'Animal' means a mammal, bird, reptile, amphibian, fish or invertebrate for purpose of the Act.</p>	<p>Capture and when already captured:</p> <p>Article 2. An animal keeper must ensure that an animal, according to its species and age, be provided with:</p> <p>2.2. adequate care;</p> <p>2.4. other factors necessary for the health and welfare of an animal.</p> <p>Article 3. The use of devices or equipment that may cause injury to animals is prohibited in the keeping of animals.</p> <p>3.3. The person must hold a certificate regarding the completion of the training specified in subsection (2) of this Act, which certifies that the person may directly engage in keeping animals kept for the purpose specified therein or in keeping animals of the species or group specified therein.</p> <p>Article 4.</p> <p>4.1. A prohibited act with respect to an animal is an act causing the death or injury of an animal, or an act causing pain or avoidable physical or mental suffering to an animal, such as forcing an animal to undertake efforts beyond its capabilities, organising animal fights, abandoning or leaving an animal in a helpless state, breeding activities that cause suffering to an animal, and other acts with similar consequences that are not caused by the medical treatment of an animal, another veterinary procedure or an emergency.</p> <p>Article 6. Protection of animals living freely in wild</p> <p>6.2. The capture of an animal living freely in the wild that is to be used in a procedure may be carried out only by a competent person using methods</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions on welfare related to the management of IAS and vertebrate IAS of EU concern
			<p>that do not cause the animals avoidable pain, suffering, distress or lasting harm except the subjects to the Estonian Hunting Act.</p> <p>6.3. An injured animal or an animal in poor health captured in the wild for the purpose of animal experimentation must be examined by a veterinarian or another competent person and the veterinarian or another competent person will take measures to minimise the suffering of the animal, if necessary.</p> <p>Article 10. Permitted killing of animals</p> <p>10.2. In the event of permitted slaughter and killing of an animal, a method for slaughter and killing that causes the animal the least possible amount of physical and mental suffering must be chosen.</p> <p>Transportation:</p> <p>Must be ensured in accordance with the requirements provided for in Council Regulation (EC) No. 1/2005 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No. 1255/97.</p> <p>Nutrition (when captured):</p> <p>2. An animal keeper must ensure that an animal, according to its species and age, be provided with:</p> <p>2.1. appropriate quantities of feed and drinking water.</p> <p>Health (when captured):</p> <p>3.1. The health and welfare of farm animals must be examined as frequently as necessary in order to prevent avoidable suffering.</p> <p>3.1. For the purpose of ensuring the health and welfare of an animal, the animal keeper must have the required knowledge of the anatomy and physiology of the animal, the behaviour characteristic of the animal species and the animal protection requirements.</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions on welfare related to the management of IAS and vertebrate IAS of EU concern
			<p>Behavioural opportunities (when captured):</p> <p>2. An animal keeper must ensure that an animal, according to its species and age, be provided with:</p> <p>2.3. adequate microclimate, and space or construction works that satisfies the need for movement characteristic of the given species.</p>
<p>Nature Conservation Act (21.4.2004)</p> <p>Looduskaitseadus (21.4.2004)</p>	<p>None</p>	<p>A mammal, bird, reptile, amphibian or fish species not native to Estonia.</p>	<p>Capture and when already captured:</p> <p>57.1. It is prohibited to introduce live specimens of non-native species in the wild, and to plant or sow non-native plants in the wild (<i>i.e. IAS cannot be used as Judas animals</i>).</p> <p>Article 57.5. It is prohibited to rear specimens of non-native species which are likely to disrupt natural balance in artificial conditions or conduct transactions with the live specimens of such species, except in cases which can be justified from a scientific point of view with the permission of the Estonian Environmental Board.</p> <p>Article 57.6. [American] minks and raccoon dogs may be kept in artificial conditions in farms holding a permit issued by the Environmental Board in mainland Estonia. The requirements for keeping minks and raccoon dogs in artificial conditions and the procedure for the issue of permits shall be established by a regulation of the Estonian Minister of the Environment.</p> <p>Article 57.7. Specimens of [American] minks and raccoon dogs may be imported into Estonia only on the basis of a permit of the Environmental Board for the purposes of gene pool renewal and to the extent of not more than 20 per cent of the breeding stock per farm within two years.</p> <p>58.2. Animals of native species may be relocated with the permission of the Estonian Environmental Board.</p> <p>58.3. The release of a specimen of a local animal species kept in an artificial environment shall take place only on the basis of the action plan specified in § 49 of the Estonian Nature Conservation Act, except for the release of an individual kept in an artificial environment for the purpose of treating injury or restoring viability.</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions on welfare related to the management of IAS and vertebrate IAS of EU concern
			<p>Transportation:</p> <p>Article 4. Specimens of non-native species kept in artificial conditions may be relocated for keeping in artificial conditions in another location only with the permission of the Estonian Environmental Board.</p>
<p>Hunting Act (25.4.2013)</p> <p>Jahiseadus (25.4.2013)</p>	None	All native and non-native game animals; specimens of any non-native species accidentally released in the wild.	<p>Capture / removal:</p> <p>Article 23.4. The Estonian Environmental Board shall organise hunting:</p> <p>23.4.2. to kill non-native species not specified in the hunting rules accidentally released in the wild.</p>
<p>Fishing Act (19.2.2015)</p> <p>Kalapüügiseadus (19.2.2015)</p>	None	All species of fish, <i>Lampetra fluviatilis</i> and other Cyclostomata; <i>Astacus</i> spp., shrimps and prawns and other Decapoda; <i>Ommastrephes</i> spp. and other Cephalopoda	<p>Capture:</p> <p>Article 10. Prohibited activities, fishing methods and fishing gear</p> <p>10.5. Briefly outlines prohibitions relating to fishing gear and methods.</p>

4.2. Finland

Table 5. Overview of each legislation/guidance/standard and how they affect the management of the vertebrate IAS of Union concern and other IAS.

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
Act on Managing the Risks Caused by Alien Species (30.12.2015/1709)	Regulation (EU) No 1143/2014 of the European Parliament and of the Council on the prevention and management of the introduction	Alien species	<p>Section 16. Capturing and killing of a bird or mammal species released into the environment</p> <p>A bird or mammal species released into the environment that is included in the Union list or is of national concern may be captured and killed in compliance with the provisions on the</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
Laki vieraslajeista aiheutuvien riskien hallinnasta (30.12.2015/1709)	and spread of invasive alien species.		<p>capturing and killing of an unprotected bird or mammal laid down in the Hunting Act or under it</p> <p>Hunting devices and hunting methods referred to in section 33, subsection 1, paragraphs 1–3 and 6-14 shall not be used in the capturing and killing of a bird and mammal referred to in this section.</p> <p>In addition, restrictions may be laid down by government decree concerning:</p> <ul style="list-style-type: none"> (1) a certain hunting device or hunting method; (2) an area or time for using a hunting device or hunting method; (3) the animal species to be captured. (4) the characteristics and use of firearms and cartridges referred to in Section 6 of the Firearms Act (1/1998); (5) the characteristics and use of a hunting bow and arrow; (6) the characteristics and use of air guns. <p>The prohibition on causing unnecessary pain and pain to an animal is laid down in Section 3 of the Animal Welfare Act and Section 32 of the Animal Welfare Act.</p>
<p>Government Decree on Managing the Risks Caused by Alien Species (704/2019)</p> <p>Valtioneuvoston asetus vieraslajeista aiheutuvien riskien hallinnasta (30.12.2015/1709)</p>	Regulation (EU) No 1143/2014	Invasive alien species of Union and national concern.	<p>Section 3. Prohibited hunting devices</p> <p>Spring traps may not be used to trap <i>Procyon lotor</i> or <i>Nyctereutes procyonoides</i>, nor may air guns be used to kill them.</p> <p>The provisions of subsection 1 also apply to other mammals of comparable or larger size referred to in section 16 the Invasive Alien Species Act</p> <p>Spring traps may not be used to catch <i>Myocastor coypus</i> on land, nor may air guns be used to kill them.</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>Section 4. Requirements concerning firearms. Regulates calibers allowed to kill IAS.</p> <p>Section 5. Breaking a muskrat nest</p>
<p>Animal Welfare Act (4.4.1996/247)</p> <p>Eläinsuojelulaki (4.4.1996/247)</p>	None	This Law applies to all vertebrate animals.	<p>Section 1. The purpose of this law is to protect animals in the best possible way from suffering and pain. The purpose of the act is also to promote animal welfare and good treatment.</p> <p>Section 3. Animals must be treated well and not be caused unnecessary suffering. It is forbidden to cause unnecessary pain and suffering to animals.</p> <p>Section 32. The animal shall be killed as quickly and painlessly as possible by a method and technique suitable for killing it.</p>
<p>Hunting Act (28.6.1993/615)</p> <p>Metsästyslaki (28.6.1993/615)</p>	None	This Law applies to game animals and unprotected animals.	<p>Section 33. Hunting devices and methods of hunting</p> <p>Describes the measures that are generally prohibited in hunting.</p> <p>Section 34. Further provisions on hunting devices and hunting methods</p> <p>These provisions are issued by Government Decree, <i>Hunting Decree (666/1993)</i>.</p> <p>Provisions include the characteristics and use of firearms, traps, spring traps etc.</p> <p>Section 41. The Finnish Wildlife Agency may grant permission to derogate from the restrictions on the prohibitions on hunting gear and methods laid down in section 33., and the provisions of the Government Decree.</p>
Fishing Act (379/2015)	None	All fish	This comprehensive Act on fisheries seeks to ensure ecologically, economically and socially sustainable management of fish resources in such a way as to secure a sustainable and diversified return on fish resources, the natural

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>life cycle of fish stocks, and the diversity and protection of fish resources and other aquatic flora and fauna.</p> <p>Section 46. Prohibited ways of fishing, catching methods and fishing equipment</p>

4.2.1. Finland/Åland

Table 6. Overview of each legislation/guidance/standard and how they affect the management of the vertebrate IAS of Union concern and other IAS.

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
<p>Nature Conservation Act (1998:92)</p> <p>Landskapslag (1998:92) om naturvård</p>	<p>Regulation (EU) No 1143/2014 of the European Parliament and of the Council on the prevention and management of the introduction and spread of invasive alien species.</p>	<p>Alien species</p>	<p>Section 1. This Act also aims to supplement the provisions of Regulation (EU) 1143/2014 of the European Parliament and of the Council on the prevention and management of the introduction and spread of invasive alien species (EU Regulation on invasive alien species).</p> <p>Section 19. Prohibition on releasing alien species into the environment</p> <p>An alien species may not be kept, bred or cultivated, planted, sown or otherwise treated in such a way that it may enter the environment.</p> <p>What is prescribed in subsection 1. does not apply:</p> <p>[...] 3) release into the wild of game and game stocks of foreign origin with the permission of the provincial government [...].</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
<p>Government Decree on Invasive Alien Species (2020:114)</p> <p>Landskapsförordning (2020:114) om invasiva främmande arter.</p>	Regulation (EU) No 1143/2014	Invasive alien species of Union and national concern.	<p>Section 1. Invasive species of national concern.</p> <p>Section 3. When hunting invasive alien mammal and bird species, the provisions of the Hunting Act (1985:31) shall be observed.</p> <p>Annex A. List of species of national (Åland) concern.</p>
<p>Animal Welfare Act (1998:95)</p> <p>Djurskyddslag (1998:95) för landskapet Åland</p>	None	This Law applies to all vertebrate animals.	<p>Section 1. The purpose of this law is to protect animals in the best possible way from suffering and to promote animal welfare.</p> <p>Section 3. Animals must be treated well and not be caused unnecessary suffering. It is forbidden to cause unnecessary pain and suffering to animals.</p> <p>Section 13. Tools, devices or substances intended for use on animals and that obviously can cause unnecessary suffering are not allowed to be imported to the region, manufactured, sold, transferred or used.</p> <p>Section 14. Wild mammals and birds are not allowed to be taken from their natural environment to be held in captivity [...] wild mammals and birds can however be held [...] for other acceptable temporary need.</p> <p>Section 23. Transportation of animals must be carried out in a way that not subject the animals for unnecessary suffering.</p> <p>Section 29. The animal shall be killed as quickly and painlessly as possible.</p>
<p>Hunting Act (1985:31)</p> <p>Jaktlag (1985:31) för landskapet Åland</p>	None	This Law applies to all wild mammals and birds	<p>Section 30. If [...] an animal that is not protected at any time of the year enters a yard, building, garden, park, crop field, or fish farm, the holder may to prevent damage kill and keep the animal. What is stated applies regardless of whether the hunting rights belongs to another [...] and if hunting may not otherwise be conducted there.</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>Section 31a. To prevent [...] the spread of invasive species in the fauna, the Government of Åland can allow hunting for a certain species in a specific area, during a specific time, and thereby allow the use of in 47 and 50 §§ forbidden hunting devices, methods or motorized vehicles. Hunting according to the above is allowed irrespective of hunting rights or if hunting is otherwise not allowed.</p> <p>Section 47. Hunting devices and methods of hunting Describes the measures that are generally prohibited in hunting.</p> <p>Section 51a. The Government may, if it proves necessary for special reasons, decide that prohibited hunting devices or means of capture may be used when hunting for a particular game species.</p> <p>Section 51b. When hunting for Raccoon Dog, Mink, Fox and Badger, stationary mounted artificial light is allowed to facilitate hunting. When hunting for these animals, flashlights or other similar lighting is allowed when 1) when the animal is dispatched in conjunction with hunting with baying dog, 2) when hunting in burrows, 3) when checking traps.</p> <p>Further provisions on hunting devices and hunting methods These provisions are issued by Government Decree, <i>Hunting Decree (2006/70)</i>. Provisions include the hunting seasons, characteristics and use of firearms, and use of hunting dogs.</p> <p>Section 2. If not otherwise stated in these provisions, hunting is allowed during the below specified times for these species: Year-round: Muskrat, Mink, Raccoon dog, [...]</p>

Legislation/ guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>In addition, hunting is permitted throughout the year for species included in the list of invasive alien species of Union importance referred to in Article 4 (1) of the Regulation (EU No 1143/2014) on invasive alien species.</p> <p>Section 4. Use of dogs. It is forbidden to hunt with a dog between 1 March and 31 August. When hunting with dog is prohibited, the dog must be kept under such supervision that it is prevented from running loose and disturb wildlife.</p> <p>Notwithstanding the provisions of subsection 1. dogs may be used in the cases listed in Annex 1, which is annexed to this Regulation.</p> <p>Throughout the year and with exception of subsection 1. Is [...] dogs allowed for hunting for special purposes with the permission of the government.</p> <p>Annex 1. Hunting with dogs is allowed for [...] Raccoon dog and Mink:</p> <ul style="list-style-type: none"> a) hunting and training 1.9-last of February b) hunting and training in burrows 1.7-15.4 c) hunting on islands according to regulations determined by the Government, between 1.3-15.4. <p>Section 6. The energy of a bullet, fired from a rifled barrel, used for hunting, must exceed 100 joule at the muzzle.</p>

4.3. Latvia

Table 7. Overview of each legislation/guidance/standard and how they affect the management of the vertebrate IAS of Union concern and other IAS.

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
<p>Animal Protection Law (09.12.1999)</p> <p>Dzīvnieku aizsardzības likums (09.12.1999)</p>	<p>Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97 (<i>for transportation</i>)</p>	<p>All “animals” without proper specification, including captive animals, pets, farm animals. This law does not specify between IAS and any other animals.</p>	<p>Capture:</p> <p>Section 27. It is prohibited to capture and keep in captivity wild amphibians, reptiles, birds and mammals, except in the cases specified in this Law and laws and regulations governing nature protection and hunting.</p> <p>Section 27.1. It is prohibited to train and use as an exhibition animal an animal of wild species (both taken from the wild and bred in captivity), and show it to the public as an exhibition animal.</p> <p>Section 29. It is prohibited to release a tamed wild animal, which is not accustomed to a life in the wild, into the open.</p> <p>Section 44. It is prohibited to kill an animal. <u>The prohibition does not apply to:</u></p> <p>44.1. animals kept for farming purposes;</p> <p>44.2. animal euthanasia;</p> <p>44.3. hunting;</p> <p>44.4. fishing;</p> <p>44.7. cases, when a programme combating infectious diseases or invasive species provides for the killing of an animal.</p> <p>Section 46. In the killing of an animal, the method which causes the least suffering for the animal shall be selected.</p> <p>Section 47. An animal kept for farming purposes may be killed under certain listed circumstances.</p>

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>Transportation:</p> <p>Section 9.4. The Latvian Food and Veterinary Service shall be the competent authority regarding the protection of animals during transport and related operations in accordance with Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97.</p> <p>Section 10.8. The procedures for transporting animals, the welfare requirements for transporting animals in means of transport, as well as the procedures by which a permit of an animal carrier and a permit for means of transport for transporting animals shall be issued and registered.</p> <p>Section 36.1. An animal shall be transported by an appropriate means of transport, ensuring conditions not harmful to its health.</p> <p>Section 36.2. If necessary, prior to transportation or during transportation, an animal may be injected with tranquillising medical substances, observing the instructions of a practising veterinarian.</p> <p>Section 38.2. Delay of the transportation of an animal shall be permitted only for the good of the animal or in cases when there is cause for suspicion regarding the animal becoming ill with an infectious disease.</p> <p>Nutrition (when captured):</p> <p>Section 5.2. An animal owner has the following obligations:</p> <p>5.2.5. to ensure the compliance of animal keeping conditions, equipment, food and water with its physiological and ethological needs taking into account the species of the relevant animal, degree of development, adaptation and domestication.</p>

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>Environment (when captured): Section 5.2. An animal owner has the following obligations: 5.2.1. to take care of the health, welfare and use of an animal in accordance with its species, age and physiology; 5.2.2. to ensure that society has a favourable attitude towards the animal in the possession of the owner; 5.2.3. to ensure that the animal does not disturb or threaten human beings or other animals; 5.2.4. to not permit uncontrolled animal reproduction; 5.2.6. to not subject an animal to pain and suffering, as well as to prevent the possibilities for injury thereof; 5.2.8. upon a request of the officials of the institutions referred to in Section 9 of this Law, in accordance with the competence thereof, to immediately demonstrate the animal, its place of keeping, as well as the animal's passport or vaccination certificate and other documents related to the animal.</p> <p>Health (when captured): Section 5.2. An animal owner has the following obligations: 5.2.1. to take care of the health, welfare and use of an animal in accordance with its species, age and physiology.</p> <p>Behavioural opportunities (when captured): Section 5.2. An animal owner has the following obligations: 5.2.7. taking into account the physiological and ethological needs of an animal, to ensure physical activity for the animal, but for an animal with limited movement - sufficient area of keeping.</p> <p>Mental state/psychological wellbeing (when captured): Section 5.2. An animal owner has the following obligations:</p>

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
			5.2.7. taking into account the physiological and ethological needs of an animal, to ensure physical activity for the animal, but for an animal with limited movement - sufficient area of keeping.
Animal Transport Regulations (18.6.2013) Dzīvnieku pārvadāšanas noteikumi (18.6.2013)	Based on Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97	Live vertebrate animals	Transportation (when captured): Article 5. When transporting pet animals in the territory of the Republic of Latvia, there shall be a vaccination certificate or a passport of pet animal issued by a practising veterinarian authorised by the Food and Veterinary Service (hereinafter - Service) in the means of transport. Article 6. When transporting animals in a means of transport, the welfare requirements referred to in Article 3 and Annex I to Regulation No 1/2005 (Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97) shall be complied with.
Law on the conservation of species and biotopes (16.3.2000) Sugu un biotopu aizsardzības likums (16.3.2000)	Partially based on the Birds Directive 79/409/EEC (April 1979), amended 2009 as the Directive 2009/147/EC	All birds	Section 14. Prohibited Activities with Animals of the Specially Protected Species, including birds. It is prohibited to kill any bird. but local exceptions apply for game species, scientific research etc. [The authorities are investigating possibilities to add IAS as an exception.] Section 18: (1) The introduction and release into nature of species uncharacteristic to the nature of Latvia is prohibited. [exemptions to this may be allowed for IAS species]

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
Hunting Regulations (22.7.2014) Medību noteikumi (22.7.2014)	None	All "animals" species, without specifying.	Capture, hunting and removal from the wild: Article 3.2.15. states that species not characteristic to Latvian fauna or invasive species (as per a list) can be hunted without limitations all year round but other named ones have a specific season. Article 92 lists species that are able to be hunted using 'hunting gear' [specified by another legal act, the Latvian Hunting Law, Medību likums (08.07.2003)]
Latvian Regulations for Industrial Fishing in Inland Waters Noteikumi par rūpniecisko zveju iekšējās ūdeņos (02.5.2007)	None	Fish and crayfish	Describes the different gear that can be used for industrial fishing as well as what is banned.
Regulations for Fishing, Crayfish Fishing and Underwater Hunting Makšķerēšanas, vēžošanas un zemūdens medību noteikumi (22.12.2015)	None	Fish and crayfish	Describes which tools, methods and gear are permitted for individual angling, for instance.

4.4. Lithuania

Table 8. Overview of each legislation/guidance/standard and how they affect the management of the vertebrate IAS of Union concern and other IAS.

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
<p>Law on welfare and protection of animals (03.10.2012)</p> <p>Gyvūnų gerovės ir apsaugos įstatymas (03.10.2012)</p>	<p>None</p>	<p>All “animals” without proper specification, including captive animals, pets, farm animals. This law does not distinguish between IAS and any other animals.</p>	<p>Capture and removal from the wild:</p> <p>Article 1. Provides a general principle “Cruel treatment and torture of animals, any direct or indirect promotion and encouragement of cruel treatment and torture of animals and instigation of violence against animals shall be prohibited.”</p> <p>Article 2. outlines specific actions that shall constitute cruel treatment and torture of animals and provides the possibility for exemption from them provided by legal acts.</p> <p>Article 5. outlines specific actions that <u>shall not</u> constitute cruel treatment or torture of animals. Aspects of hunting and environmental protection are included here.</p> <p>Transportation when captured:</p> <p>Article 2. The following actions shall constitute cruel treatment and torture of animals:</p> <p>2.20. transport of animals in breach of requirements of legal acts regulating animal welfare during transport.</p> <p>Article 11. Animals must be transported so that they would not be injured and would not endure unnecessary stress and would remain safe during transport. Transport containers used to transport animals must be of sufficient surface area and height corresponding to the kind and size of animals and the nature of the scheduled journey.</p> <p>Nutrition (when captured):</p>

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>Article 2. The following actions shall constitute cruel treatment and torture of animals:</p> <p>2.17. providing insufficient amounts of food or water for animals.</p> <p>Environment (when captured):</p> <p>Article 2. The following actions shall constitute cruel treatment and torture of animals:</p> <p>2.15. keeping of animals under statutory conditions unsuitable for their species, age, physiology and behaviour;</p> <p>2.16. use of unsuitable and harmful animal keeping, care or labour facilities.</p> <p>Health (when captured):</p> <p>Article 2. The following actions shall constitute cruel treatment and torture of animals:</p> <p>2.2. failure to provide veterinary assistance where animals need it;</p> <p>2.8. surgery on animals without anaesthetics, except for the cases provided for by legal acts;</p> <p>2.11. use of chemical substances and other means and devices detrimental to animal health or having an irritating effect, causing fear, stress, suffering or harm to animals, their health and welfare.</p> <p>Behavioural opportunities (when captured):</p> <p>Article 2. The following actions shall constitute cruel treatment and torture of animals:</p> <p>2.15. keeping of animals under statutory conditions unsuitable for their species, age, physiology and behaviour;</p>

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
			2.18. failure to ensure resting periods for animals given their physiological needs.
<p>On the introduction, reintroduction and enforcement regime, invasive species control and eradication procedures, Invasive Species Control Board rules, Introduction, reintroduction and transfer program (22.5.2006)</p> <p>Dėl Introdukcijos, reintrodukcijos ir perkėlimo tvarkos, Invazinių rūšių organizmų kontrolės ir naikinimo tvarkos, Invazinių rūšių kontrolės tarybos sudėties ir nuostatų, Introdukcijos, reintrodukcijos ir perkėlimo programos patvirtinimo (22.5.2006)</p>	None	Invasive species and IAS, in particular. This Regulation is dedicated to IAS and describes the areas of introduction and reintroduction of IAS, control and eradication procedures, and rules for responsibilities in relation to IAS.	<p>Capture / removal from the wild:</p> <p>Article 1.2 – The Invasive Species Control Board writes a proposal for a list of invasive species, causing serious damage to biodiversity, human health or causing economic loss, to be approved by the Lithuanian Minister for the Environment.</p>
[Description of the procedure for special fishing in inland waters, approved by the Minister of Environment of the Republic of Lithuania in 2009 June 15 No. by order no. D1-331 “On the Approval of the Description of the Procedure for Special Inland Fishing” (wording of Order No. D1-603 of 27 June 2018)]	None	<i>Pseudorasbora parva</i> , <i>Perccottus glenii</i>	5. Having a Permit to lower the water level issued in accordance with the Description of the Procedure for Issuing Permits to Lower the Water Level in Ponds and Dammed Lakes, approved by the Minister of Environment of the Republic of Lithuania in 1999. January 29 by order no. 33 “On Permission to Lower the Water Level approval of the description of the procedure for the issue of ponds and dammed lakes”, a special fishing permit for the purpose of fish farming shall be issued in accordance with the established procedure, which specifies the conditions for catching and transferring fish. Fish are transferred by drawing up the fish breeding act specified in the rules of the Fish

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key welfare provisions related to the management of IAS and vertebrate IAS of EU concern
Specialiosios žvejybos vidaus vandenyse tvarkos aprašo, patvirtinto Lietuvos Respublikos aplinkos ministro 2009 m. birželio 15 d. Nr. įsakymu Nr. D1-331 „Dėl Specialiosios žvejybos vidaus vandenyse tvarkos aprašo patvirtinimo“ (2018 m. birželio 27 d. įsakymo Nr. D1-603 redakcija			<p>Breeding State Water Bodies approved by the Minister of Agriculture of the Republic of Lithuania and the Minister of Environment of the Republic of Lithuania in 2010. April 19 by order no. 3D-354 / D1-303 “On Approval of Rules for Fish Breeding in State Water Bodies”, Annex 2. During fishing, the rules for issuing and filling in fishing logbooks approved by the Minister of Environment of the Republic of Lithuania in 2000 shall be filled in. May 1 by order no. 180 “On the Approval of the Rules for Issuance and Completion of Fishing Logbooks of Fishing Units”, a fishing logbook of fishing units of the established form (hereinafter referred to as the Fishing Logbook) is submitted.</p> <p>Issuing permits only applies to waterbodies included in the Lithuanian register of state water bodies. However, if the waterbody is not included in the register, permits cannot be issued and management actions (incl. surveys) cannot be undertaken.</p>
<p>National environmental protection strategy (2016)</p> <p>No Lithuanian name for the document was found</p>	None	All species of animals and plants native and non-native to Lithuania.	<p>Capture / removal from the wild:</p> <p>The populations of invasive game species (such as <i>Nyctereutes procyonoides</i> and <i>Neovison vison</i>) should be reduced or, if possible, exterminated.</p> <p>Section 85. Extermination of invasive alien flora and fauna species through the use of various extermination measures and methods, and halting of their spread by strengthening control, analysing methods of spreading, raising public awareness and improving the legal framework.</p>
<p>Lithuanian Hunting law Medžioklės įstatymas (2002)</p> <p>Hunting Regulations (2005)</p>	None	Hunted species of birds and mammals (game)	These legal acts regulate hunting in Lithuania, describe who is allowed to hunt and which hunting gear, weapon and methods are allowed, and, in part, define the list of species permitted to be hunted.

4.5. Sweden

In Sweden a law is issued by the Parliament. The law sets out the main rules in a specific area. A regulation can then be issued by the government and the rules in the regulation are able to go into more detail. Detailed implementing rules on, for example, methods are often laid down in regulations issued by governmental agencies.

Table 9. Overview of each legislation/guidance/standard and how they affect the management of the vertebrate IAS of Union concern and other IAS.

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
The Swedish environmental code (SFS 1998:808) Miljöbalken (1998:808)	Habitats Directive (Council Directive 92/43/EEC) Birds Directive (Directive 2009/147/EC) Regulation (EU) No 1143/2014	All	Chapter 28, section 1 states that in order to perform their tasks pursuant to this Code, authorities and persons engaged by authorities to perform a task shall be given access to properties, buildings, other structures and means of transport for the purpose of carrying out investigations and taking other measures. The penalty provision is Chapter 29, section 2 c in the Code. Any person who, whether deliberately or through gross negligence, handles an invasive alien species in contrary to article 7 in Regulation (EU) No 1143/2014 or contrary to national legislation shall be liable to a fine or a term of imprisonment not exceeding two years.
The regulation on invasive alien species (SFS 2018:1939) Förordning (2018:1939) om invasiva främmande arter	Regulation (EU) No 1143/2014	All invasive alien species of EU concern. When Sweden adopts a national list this Regulation will target all the IAS of national concern as well.	The national regulation complements Regulation (EU) No 1143/2014. It provides rules on division of responsibilities. According to section 30-33 and 42 the 21 county administrative boards in Sweden have most of the responsibility for eradication and management measures on invasive alien species. The national authorities can take over some of that responsibility.
The law on animal welfare (SFS 2018:1192) Djurskyddslagen (2018:1192)	Regulation (EC) No 882/2004 Council Regulation (EC) No 1/2005 Council Regulation (EC) No 1099/2009 Regulation (EC) No 854/2004	All animals kept by humans and animals in the wild used in experiments. Chapter 9, section 4 and 6 also applies to abandoned or undomesticated animals of a species that is considered a domestic animal species.	The law sets out rules to secure animal welfare and respect for animals. All animals should be treated well and kept in such a way that they are protected against unnecessary suffering and illness (Chapter 2, section 1). Animals should be allowed a natural behaviour (Chapter 2, section 2). Animals should be given sufficient supervision (Chapter 2, section 3). Animals may not be abandoned or harmed (Chapter 2, section 8 and 9).

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>When animals are put to death they should not be caused unnecessary suffering or discomfort. The county administrative boards control compliance with animal welfare legislation in Sweden.</p> <p>The law also contains rules on experiments on animals (Chapter 7). Anyone who wants to use, breed, keep or provide animals for experiments needs a permit (Chapter 7, section 2). Anyone who wants to use animals in experiments also needs an ethical approval (Chapter 7, section 9 and 10).</p>
<p>The regulation on animal welfare (SFS 2019:66)</p> <p>Djurskyddsförordningen (2019:66)</p>	<p>Regulation (EC) No 882/2004</p> <p>Council Regulation (EC) No 1/2005</p> <p>Council Regulation (EC) No 1099/2009</p> <p>Regulation (EC) No 854/2004</p>	<p>All animals kept by humans and animals in the wild used in experiments.</p>	<p>The Regulation sets out rules in more detail on how animals should be kept and handled.</p> <p>Stables and other areas where animals are kept should have daylight and not be too noisy (Chapter 2, section 14). It is prohibited to have any equipment for electric shocks to change animals' behaviour in the stables or areas where the animals are kept (Chapter 2, section 16).</p> <p>Chapter 4 contains rules on surgical procedures and care for animals, e.g. according to section 1 castration is allowed even when it's not medically motivated and according to section 3 the principle rule is that hormones are prohibited, but exemptions can be made.</p> <p>Chapter 5 sets out rules on putting animals to death and Chapter 7 contains rules on experiments on animals.</p>
<p>Swedish Board of Agriculture's regulation on slaughter and other killing of animals (SJVFS 2019:8)</p> <p>Statens jordbruksverks föreskrifter och allmänna råd om slakt och annan avlivning av djur (SJVFS 2019:8)</p>	<p>None</p>	<p>Escaped pets and production animals</p>	<p>12 § describes what tools are legal to use to kill escaped animals, for example <i>Trachemys scripta</i>.</p>

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
<p>Swedish Board of Agriculture 's regulations and general guidelines on the transport of live animals (SJVFS 2019:7)</p> <p>Statens jordbruksverks föreskrifter och allmänna råd om transport av levande djur (SJVFS 2019:7)</p>	Regulation (EC) No 1/2005	All animals kept by humans and wild animals used in experiments.	The Swedish Board of Agriculture regulates animal welfare issues related to transportation of animals including fish.
<p>The hunting law (SFS 1987:259)</p> <p>Jaktlagen (1987:259)</p>	<p>Habitats Directive (Council Directive 92/43/EEC)</p> <p>Birds Directive (Directive 2009/147/EC)</p>	Mammals and birds (=game species)	<p>According to Section 3 the principle rule is that all game species are protected under the law. Species may be hunted only when the law or the supplementary regulations allows it.</p> <p>Section 27 states that the hunt should be conducted in a way that the animal is not exposed to unnecessary suffering.</p> <p>Sections 7 and 8 in the hunting law, in combination with Section 25 in the hunting regulation, gives the Swedish EPA the possibility to take decisions to allow alien species to be hunted (even if the hunt is not allowed under the law or the supplementary regulations). The Swedish EPA appoints the hunters and may decide that the appointed hunters will have access to other people's land.</p>
<p>The hunting regulation (SFS 1987:905)</p> <p>Jaktförordningen (1987:905)</p>	<p>Habitats Directive (Council Directive 92/43/EEC)</p> <p>Birds Directive (Directive 2009/147/EC)</p>	Mammals and birds (=game species)	<p>See above.</p> <p>According to the Regulation traps need to be approved before they may be used (Section 11), and animals need to be put to death or immediately set free when a live trap is checked (Section 12 a). The Swedish EPA may take decisions on derogations from these rules. The Swedish EPA may also take other decisions on derogations from the hunting legislations, such as allowing lights when hunting in the dark and using other hunting gear or methods such as allowing artificial lights, nets (on birds), night vision, poison etc. (section 15, 15 a and 15 b).</p> <p>In some cases, the decision will be made by the County Administrative Board.</p>

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
			<p>Section 16 states when dogs are allowed to be used in the hunt.</p> <p>Some species, may according to appendix 4, be hunted all year around to prevent damage.</p>
<p>The Swedish Environmental Protection Agency's Regulation on use of traps (NFS 2018:3)</p> <p>Naturvårdsverkets föreskrifter och allmänna råd (NFS 2018:3) om användande av fångstredskap</p>	<p>Habitats Directive (Council Directive 92/43/EEC)</p> <p>Birds Directive (Directive 2009/147/EC)</p>	Mammals and birds (=game species)	<p>The aim of these rules are that animal welfare and safety should be considered when using traps.</p> <p>All traps need to be manufactured in accordance with a permit from the Swedish EPA to be allowed to be used (Section 5).</p> <p>Putting a trapped animal to death is part of the hunt and should be conducted in a way that doesn't cause the animal unnecessary suffering (Section 10).</p> <p>Traps should be used in a way that minimizes the risk of bycatch. Bycatch should be released if the animal can stay alive without unnecessary suffering (Section 12 and 13).</p> <p>If an invasive alien species is caught as catch or bycatch, it should not be released (Section 15).</p>
<p>The law on weapons (SFS 1996:67)</p> <p>Vapenlagen (1996:67)</p>	<p>Only Chapter 1 a: Regulation (EU) 2016/679 Directive 95/46/EC</p>	All	The relevant law controlling weapons and ammunition.
<p>The Regulation on weapons (SFS 1996:70)</p> <p>Vapenförordningen (1996:70)</p>	<p>Only Chapter 1 a: Regulation (EU) 2016/679 Directive 95/46/EC</p>	All	Chapter 2 section 3 and 4 controls the right to keep weapons for hunting.
<p>The fisheries act (1993:787)</p> <p>Fiskelag (1993:787)</p>	The EU Common Fisheries Policy		Paragraph 19 states that the government or an agency decided by the government may issue regulations on among other things the use of fishing vessels, fishing methods or gear and also about the use of gear, bait, boats or anything else that can spread crayfish plague or any other disease.
<p>The ordinance on fishing, aquaculture and the fishing industry (1994:1716)</p>	The EU Common Fisheries Policy	The regulations set out general rules for how, where and when fishing can be conducted.	Chapter 2 paragraph 6 contains provisions that are partly motivated by animal welfare. It states among other things that fishing may not be carried out with certain methods.

Legislation / guidance/ standard	Related EU Legislation	Target group of animals	Key provisions related to the management of IAS and vertebrate IAS of EU concern
Förordning om fisket, vattenbruket och fiskerinäringen (1994:1716)			<p>However, fishing with eel scissors, whose teeth are no more than six millimetres, is permitted.</p> <p>Chopping hook may be used to salvage fish that have been caught with other gear. Exemptions from this may under special circumstances be issued by the Swedish Agency for Marine and Water Management or the county administrative boards.</p> <p>Chapter 2 paragraph 6 contains provisions about fish farming and releasing or moving fish.</p>
<p>Regulations from the Swedish Agency for Marine and Water Management (FIFS 2004:36)</p> <p>Fiskeriverkets föreskrifter (FIFS 2004:36) om fiske i Skagerrak, Kattegatt och Östersjön</p>	None	Specified regulations on the conduct of fisheries	As an example of these regulations it is forbidden to fish with hook gear with the intention of attaching the hook or hooks externally to the fish by chopping or snatching. When fishing, hook gear specially adapted for the said jerk fishing must not be used (Chapter 2 par. 11).

5. Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance

5.1. Estonia

In Estonia, there are no particular legal acts devoted to the management of vertebrate IAS.

According to the **Estonian Animal Protection Act** (Loomakaitseadus, 13.12.2000), the principle rule is that it is prohibited to kill any specimen of any animal species (inclusive captive, pets or wild). However, some exceptions apply under sections:

- 6.2: The capture of an animal living freely in the wild that is to be used in a procedure may be carried out only by a competent person using methods that do not cause the animals avoidable pain, suffering, distress or lasting harm except the subjects to the Estonian Hunting Act) and;
- 10.2: In the event of permitted slaughter and killing of an animal, a method for slaughter and killing that causes the animal the least possible amount of physical and mental suffering must be chosen).

The **Estonian Hunting Act** (Jahiseadus, 25.4.2013) defines game / hunted animals, weapons and gear allowed to be used for hunting. Any person must obtain a specific permit in order to be legally eligible to hunt in Estonia. Section 23.4 of the Estonia Hunting Act specifies that the Estonian Environmental Board shall organise hunting ... (23.4.2) to kill non-native species not specified in the hunting rules accidentally released in the wild. This, indeed, does not only apply to the hunting / game species, but in a broader sense can be used where relevant and useful to all invasive vertebrate IAS.

Section 24.4 of the Estonian Hunting Act defines that it is prohibited to hunt:

- 24.4.3. using self-shooting devices, explosives, electrical devices, birdlime, snares, net, poison, gas and smoke;
- 24.4.4. pursuing the game in motorised water craft, motor vehicles and all-terrain vehicles, shooting at the game from motor vehicles and all-terrain vehicles or using motorised water craft, motor vehicles and all-terrain vehicles in another manner for shooting the game;
- 24.4.5. using artificial light sources;
- 24.4.7. using crossbows, air rifles, firearms with a silencer, laser sight or sighting devices for night shooting;
- 24.4.8. game animals fleeing from a natural disaster;
- 24.4.9. animals in a helpless situation, unless otherwise provided by law;
- 24.4.10. by means of falconry;
- 24.4.11. using firearms that are not hunting firearms;
- 24.4.12. using bows that are not hunting bows within the meaning of subsection 27 (1) of this Act.

Additionally, section 28.1 of the Estonian Hunting Act regulates use of traps and lists the traps permitted to use for hunting in Estonia:

- 28.1.1. box traps which do not injure the game;
- 28.1.2. crow net traps;
- 28.1.3. muskrat net traps;
- 28.1.4. beaver net traps;
- 28.1.5. restraining nets and scoop nets for catching beavers alive;
- 28.1.6. steel trap immediately killing the game.

Drowning and live decoy traps are not allowed to be used.

Circulation of weapons in Estonia is regulated by the Estonian Weapons Act (Relvaseadus, 13.06.2011).

The **Estonian Fishing Act** (Kalapüügiseadus, 19.2.2015), section 10.5, defines limitations for fishing and angling in Estonia. It says that it is prohibited to:

- catch fish without using fishing gear (*no specific fishing gear is mentioned in the Act*),

- with fishing gear not specified in this Act and not described in the Estonian Fishing Rules or caught by the gear or method prohibited pursuant to this Act or legislation established on the basis thereof,
- or using methods which cause fish to die for no purpose and damage to fish resources, such as:
 - o fishing using electricity,
 - o toxic or narcotic substances,
 - o firearms or,
 - o explosive charges

Use of fishing gear and fishing methods not described in the Fishing Act and/or those that might be prohibited e.g. electrofishing, is allowed if the Ministry of the Environment has issued an authorization for special purpose fishing. This is usually only in response to IAS species.

The **Estonian Environmental Board** (Keskkonnaamet) is responsible for granting permits on scientific research, removal from the wild, killing or dispatching individuals of non-hunted species, including measures for eradication of IAS in Estonia. These procedures apply in full to the management of IAS species, and so issuing permits for use of various measures and specific gear and traps need to be requested to the Estonian Environmental Board.

5.2. Finland

The Finnish laws and regulations state when, how and by whom unprotected animals can be hunted. The Specific Finnish laws regarding IAS, the **Act on Managing the Risks Caused by Alien Species** (30.12.2015/1709), and the **Government Decree on Invasive Alien Species** (2020:114) (Åland), incorporates the full meaning of the EU-regulation No 1143/2014 into the Finnish law and regulates responsibilities for eradication and management of invasive alien species between the government and national and regional authorities.

Most of the regulation of management measures refer to the **Hunting Act** (28.6.1993/615) and Hunting Act (1985:31) (Åland). The Government Decree on Managing the Risks Caused by Alien Species (704/2019), however, puts a strict ban of spring traps for *Procyon lotor* and *Nyctereutes procyonoides* and, when used on land, to catch *Myocastor coypus*. In addition, air guns are strictly banned for use on *Myocastor coypus*.

Use of management (including hunting) measures for mammals and birds, including IAS, are regulated in the Hunting Act (28.6.1993/615). The use of the following hunting devices and methods is generally prohibited for hunting:

- (1) explosives;
- (2) poisons and baits containing poison or anaesthetic substances;
- (3) electrical devices causing loss of consciousness or death;
- (4) aiming devices intended for night shooting that electronically enlarge or alter the picture; (does not apply to IAS)
- (5) artificial sources of light and devices that illuminate the target as well as mirrors and other blinding devices; (does not apply to IAS)
- (6) bird glues, bird nets and hooks;
- (7) automatic weapons and self-loading weapons with a magazine capable of holding more than three rounds of ammunition;
- (8) catching or killing with gas or smoke;
- (9) the use of live animals as a decoy;
- (10) pitfalls and traps to which a firearm or spear or some other comparable device has been placed as well as other similar hunting devices which are dangerous to humans or domestic animals;
- (11) spring traps which do not kill immediately;
- (12) a crossbow or similar bow weapon;
- (13) spear, spear-thrower, harpoon or similar weapon;
- (14) blowing pipe;
- (15) a mechanical device that generates sound (does not apply to IAS)

All of these measures can however get a derogation by the Finnish Wildlife Agency if deemed necessary (Hunting act (28.6.1993/615, 41§)).

On Åland, the Hunting Act (1985:31), Section 47. Hunting devices and methods of hunting, describes the measures that are generally prohibited in hunting. However, section 51a and b states that the Government may, if it proves necessary for special reasons, decide that prohibited hunting devices or means of capture may be used when hunting for a particular game species, including IAS.

The Animal Welfare Act (4.4.1996/247) and Animal Welfare Act (1998:95) (Åland), states that it is forbidden to cause unnecessary pain and suffering to animals, and the animal shall be killed as quickly and painlessly as possible by a method and technique suitable for killing it. It does not, however, state any specifics regarding the measures that can be used.

According to the Fishing Act (379/2015, 46§), the following fishing methods and fishing gear shall be prohibited for fishing:

- (1) pressure by explosion or other means;
- (2) firearms;
- (3) narcotic, toxic or otherwise polluting substances;
- (4) electric current;
- (5) intentional hooking of the fish from outside ;
- (6) fishgig, harpoon or a comparable blade, hook or a pointed equipment, fishing by using fire or light with a landing net in a river, rapids and currents in waters with migratory fish and, from 15 April to 31 May, in other waters as well;
- (7) in rapids and currents in waters with migratory fish, angling, ice fishing and fishing with a grayling trap;
- (8) a net drifting with currents or attached to a vessel;
- (9) other fishing gear, devices and ways of fishing that unnecessarily damage or kill fish or endanger the preservation of a fish stock or are harmful to biodiversity.

According to the Fishing Act (379/2015, 47§), the Centre for Economic Development, Transport and the Environment may however grant a derogation for the prohibitions if deemed necessary.

5.3. Latvia

In Latvia, there are no particular legal acts devoted to the management of vertebrate IAS, but such acts exist for IAS plant species (e.g., Regulations Regarding Restriction of the Distribution of Invasive Alien Plant Species (Invazīvo augu sugu izplatības ierobežošanas noteikumi, 30.06.2008)).

According to section 44 of the Latvian Animal Protection Law (Dzīvnieku aizsardzības likums, 09.12.1999), the principle rule is that it is prohibited to kill any specimen of any animal species (inclusive captive, pets or wild). However, this general killing ban does not apply to the following circumstances:

- 44.1. animals kept for farming purposes;
- 44.2. animal euthanasia;
- 44.3. hunting;
- 44.4. fishing;
- 44.7. cases, when a programme combating infectious diseases or invasive species provides for the killing of an animal.

Different legal acts apply to the situations under subsections 44.1-44.7 and special permits need to be obtained in order legally be able to hunt, combat invasive species etc.

The Latvian Hunting Regulations (Medību noteikumi, 22.7.2014) define which species can be legally hunted in Latvia. Subsection 3.2.15 of the Regulations specifically state that listed invasive species can be hunted without limitations all year round. Relevant IAS vertebrate species are:

- *Mustela vison*
- *Nyctereutes procyonoides*
- *Dama dama*
- *Ovis orientalis*
- *Cervus nippon*
- *Procyon lotor*
- *Myocastor coypus*,
- *Marmota bobak*

There is a specific hunting season for other listed species, for example, *Canis aureus* can only be hunted from July 15 till March 31. It is important to consider that these regulations only apply to “wild game” (= hunted species) and not to fish, amphibians, reptiles and most birds.

Section 92 of the Latvian Hunting Regulations specifies, that “Using hunting gear is permitted to hunt the following species” [the list has been shortened, only IAS vertebrate species retained in it]:

- *Mustela vison*
- *Nyctereutes procyonoides*
- *Ondatra zibethicus*
- *Procyon lotor*
- *Myocastor coypus*
- *Marmota bobak*

The Hunting Regulations further refer to Latvian Hunting law (Medību likums, 08.07.2003) whereby “hunting gear” is described as “traps, snares or other tools for hunting wild game”. ‘Tools’ are not further defined but could potentially include those incorporating poisons or toxins used in bait. Bird lime, use of blind or mutilated animals as bait is prohibited for hunting under this law. In addition, the Latvian Nature Conservation Agency is responsible for coordination and reconciliation of any action not falling within the definition of “hunting” and activities such as wildlife-connected research, collecting or management measures. Upon providing reasoned justification, permits shall be issued on particular measures, gear or species. Therefore, at least for the IAS mentioned in section 92 of the Regulations, there are no limitations on use of hunting gear (e.g., traps and snares).

Additionally, subsection 3 of the Latvian Hunting Law (Medību likums, 08.07.2003) specifies that “In the cases referred to in Paragraph six of this Section the Nature Conservation Agency shall issue a permit for the acquisition, hunting or holding in captivity of individuals of non-hunttable species in accordance with the laws and regulations regarding issuing a permit for acquisition of individuals of non-hunttable species and shall inform the State Forest Service regarding the permits issued.” For catching or killing hunted animals with the aim of research, a permit from the Latvian Nature Conservation Agency is required (see below).

The classification and circulation of hunting weapons in Latvia is regulated by section 8 of the Law on the Handling of Weapons (Ieroču aprites likums, 14.03.2019).

The Latvian Regulation for Industrial Fishing in Inland Waters (Noteikumi par rūpniecisko zveju iekšējās ūdeņos, 02.5.2007) bans the use of electrofishing gear. The regulations also define permitted dimensions for industrial nets, net traps, and impose ban on industrial fish in particularly protected nature areas in Latvia. The Regulations also define permitted gear for industrial fish in Latvian water and no other industrial fishing gear is allowed.

Individual angling in Latvia is regulated by the Regulation for Fishing, Crayfish Fishing and Underwater Hunting (Makšķerēšanas, vēžošanas un zemūdens medību noteikumi, 22.12.2015). Among those regulations are some that partly consider aspects of animal welfare. Such are regulations on the methods and tools that can be used and any other methods, tools and gear are banned. For angling with the aim of research, a permit from Latvian Nature Conservation Agency is required (see below).

The Latvian Nature Conservation Agency (Dabas aizsardzības pārvalde) is responsible for issuing permits relating to scientific research, removal from the wild, killing or dispatching individuals of non-hunted species. The permits are issued under the Procedures for Issuing Permits for Acquiring Individuals of Non-Game Species, for Introducing Wild Species Uncharacteristic to the Nature of Latvia (Introduction), and Restoring Populations of Species in the Nature (Re-Introduction) (Kārtība, kādā izsniedz atļaujas nemedijamo sugu indivīdu iegūšanai, ievieš Latvijas dabai neraksturīgas savvaļas sugas (introdukcija) un atjauno sugu populāciju dabā (reintrodukcija), 21.12.2010). These procedures apply in full to the management of IAS species, and so issuing permits for use of various measures and specific gear and traps needs to be requested from the Latvian Nature Conservation Agency.

5.4. Lithuania

In Lithuania, there are no particular legal acts devoted to the management of vertebrate IAS.

According to section 1 of the Lithuanian Law on welfare and protection of animals (Gyvūnų gerovės ir apsaugos įstatymas, 03.10.2012), the principle rule is that it is prohibited to kill or torture any specimen of any animal species (inclusive captive, pets or wild). Cruel treatment and torture of animals, any direct or indirect promotion and encouragement of cruel treatment and torture of animals and instigation of violence against animals shall be prohibited.

Section 4 of the Lithuanian Law on welfare and protection of animals defines what exactly is considered cruel treatment and torture of animals:

- 4.3. frightening, injuring or killing of animals, except for the cases provided for by legal acts;
- 4.7. slaughter of animals without stunning them, except for the cases provided for by legal acts;
- 4.24. other actions causing the death of animals, pain, suffering or threatening the animal's health or life, except for the cases provided for by legal acts.

Additionally, section 5.1 specifies the actions that shall not constitute cruel treatment or torture of animals:

- 5.1.2. hunting of animals in accordance with requirements set forth by legal acts;
- 5.1.6. killing of animals for purposes related to environment protection in accordance with requirements set forth by legal acts.

In turn, the Lithuanian National environmental protection strategy (2016) specifically defines that populations of invasive game species (such as *Nyctereutes procyonoides* and *Neovison vison*) should be reduced or, if possible, exterminated. Section 85 of the Lithuanian National environmental protection strategy adds that extermination of invasive alien flora and fauna species through the use of various extermination measures and methods, and halting of their spread by strengthening control, analysing methods of spreading, raising public awareness and improving the legal framework, is one of goals of the strategy. Whilst the strategy is not legally binding it does provide clear opportunities to apply management measures for IAS that might otherwise be prohibited under the Lithuanian Law on welfare and protection of animals.

According to the Lithuanian Hunting law (Medžioklės įstatymas, 2002) and Hunting Regulations (2005), hunting in Lithuania is permitted only with rifles. The forbidden hunting methods and gear are:

- limesticks
- nets
- traps
- bows
- automatic weapons
- electrical devices
- hunting from air, moving vehicles or motorboats

As long as citizen hunters have a general hunting permit there are no restrictions on hunting IAS of union concern – i.e. special permits are not required for citizen hunting of racoon or racoon dog. For IAS management programmes there is a need to gain a special permit from the Environment Protection Agency. General rules for hunting all animals (e.g. welfare) will apply to IAS of Union concern as well.

Falconry is permitted only upon obtaining a special permit, linked to documentation on legally acquired birds and a special permit to keep birds in captivity. Hunting with not fully-grown birds is banned. Hunting wild birds without dogs is forbidden (hunting crows *Corvus corone* ssp. is the only exception). Additionally, section 3.1 of the Lithuanian Hunting Law states that wild animals living in the wild are owned by the state (while, in the case of Estonia and Lithuania, wild animals belong to nobody).

The Lithuanian Environmental Protection Agency (Aplinkos apsaugos departamentas) is responsible for issuing free permits in relation to the following situations:

- taking wild non-protected animals from their place of being by killing them for zoological collections, scientific, studying, educational, aesthetic or regulatory purposes;

- for observation of wild animals in the wild (except for murine rodents, mole, amphibians, molluscs, spiders, insects, and other invertebrate animals), photography, filming, drawing, voice recording and marking, measurement and other research, requiring animals to be caught or temporarily removed (up to 1 hour) from its natural habitat, or when they are disturbed, their habitats or living environment are damaged;
- use of wild animals for scientific, teaching, educational, aesthetic purposes, with or without taking them out of habitats, if the use of wild animals is envisaged in protected areas with a limited access of people;
- taking species of hunted animals from habitats both during the hunting term established in the rules of hunting in the territory of the Republic of Lithuania.

These procedures apply in full to the management of IAS species, and issuing permits for use of various measures and specific gear and traps can be requested from the Lithuanian Environmental Protection Agency.

5.5. Sweden

The Swedish overarching laws and regulations regarding IAS mentioned in the section above, i.e. the Swedish Environmental code (SFS 1998:808) and the regulation on invasive alien species (SFS 2018:1939), do not directly regulate any management measures, but incorporate the full meaning of the EU-Regulation No 1143/2014 into the Swedish law and regulate responsibilities for eradication and management of invasive alien species between the government and national and regional authorities.

The law on animal welfare (SFS 2018:1192) and the regulation on animal welfare (SFS 2019:66), sets out rules to secure animal welfare and respect for animals kept by humans and animals in the wild used in experiments. The law on animal welfare (SFS 2018:1192) also states that anyone who wants to use, breed, keep or provide animals for experiments needs a permit (Chapter 7, section 2). Anyone who wants to use animals in experiments also needs an ethical approval (Chapter 7, section 9 and 10). An example would be the Swedish adaptive raccoon dog (*Nyctereutes procyonoides*) management, where raccoon dogs are used in experiments to improve the efficiency of the management.

The Swedish Board of Agriculture's regulation on slaughter and other killing of animals (SJVFS 2019:8), chapter 9 describes what measures are legal to use to kill escaped animals held by humans, for example *Trachemys* ssp. Swedish Board of Agriculture's regulations and general guidelines on the transport of live animals (SJVFS 2019:7), regulates animal welfare issues related to transportation of animals including fish.

Use of management (including hunting) measures for mammals and birds is regulated in the Swedish hunting law (SFS 1987:259), the hunting regulation (SFS 1987:905), the Swedish Environmental Protection Agency's Regulation on use of traps (NFS 2018:3), the Swedish Environmental Protection Agency's Regulation on hunting and state owned game (NFS 2002:18), the law on weapons (SFS 1996:67) and the Regulation on weapons (SFS 1996:70).

According to section 3 of the Swedish hunting law (SFS 1987:259) the principle rule is that all game species (wild birds and mammals) are protected under the law. Species may be hunted only when, where, how and by who the hunting law (SFS 1987:259) or the supplementary regulations states. Section 27 of the hunting law (SFS 1987:259) states that the hunt, when allowed, should be conducted in a way that the animal is not exposed to unnecessary suffering.

Some species that are causing damage, among those the invasive alien *Nyctereutes procyonoides*, *Procyon lotor*, *Myocastor coypus*, *Ondatra zibethicus* and *Oxyura jamaicaensis* may, according to appendix 4 of the hunting regulation (SFS 1987:905), be hunted all year around, with legal measures, to prevent damage.

Specific aspects relating to use of traps are:

- Traps (live capture and killing traps) have to be tested and approved for humaneness and manufactured in accordance with directions from the Swedish EPA to be allowed to be used.
- Traps should be used in ways that minimise the risk of bycatch. (NFS 2018:3, section 5).

- Approved live traps have to be checked at least once a day and shall be placed so that captured animals are not exposed to bad weather or other circumstances that may cause unnecessary suffering (NFS 2018:3, section 8).
- Putting a trapped animal to death is part of the hunt and should be conducted in a way that doesn't cause the animal unnecessary suffering (NFS 2018:3, section 10).

Weapons allowed for killing animals are generally regulated in the law on weapons (SFS 1996:67) and the Regulation on weapons (SFS 1996:70), but more specifically, e.g. regarding limitations due to risk of unnecessary suffering if too small calibres/amount of energy is used, in the Swedish Environmental Protection Agency's Regulation on hunting and state owned game (NFS 2002:18).

The hunting regulation (SFS 1987:905), appendix 5, regulates measures banned for trapping and killing of mammals and birds.

- Banned measures for Mammals:
 - Live animals used as decoys which are blind or mutilated
 - Tape recorders
 - Electrical devices capable of killing and stunning
 - Artificial light sources
 - Mirrors and other dazzling devices
 - Devices for illuminating targets
 - Sighting devices for night shooting comprising an electronic image magnifier or image converter
 - Explosives
 - Non selective nets
 - Non selective traps
 - Poison and poisoned or anaesthetic bait
 - Gassing or smoking out
 - Semi-automatic or automatic weapons with a magazine capable of holding more than two rounds of ammunition
 - Aircraft
 - Motor vehicles in motion
- Banned measures for Birds:
 - Snares
 - Live animals used as decoys which are blind or mutilated
 - Tape recorders
 - Electrical devices capable of killing and stunning
 - Artificial light sources
 - Mirrors and other dazzling devices
 - Devices for illuminating targets
 - Sighting devices for night shooting comprising an electronic image magnifier or image converter
 - Explosives
 - Non selective nets
 - Non selective traps
 - Poison and poisoned or anaesthetic bait
 - Gassing or smoking out
 - Semi-automatic or automatic weapons with a magazine capable of holding more than two rounds of ammunition
 - Aircraft
 - Motor vehicles in motion
 - Limes
 - Hooks

Currently only leg-hold traps are strictly banned. The Swedish EPA may take decisions on derogations from the use of all other measures in the hunting legislations, such as allowing non-approved traps, lights when hunting in the dark and using other hunting gear or methods such as allowing artificial lights, nets, night vision, poison etc. (section 15, 15 a and 15 b in the hunting regulation).

Section 7 and 8 in the hunting law, in combination with section 25 in the hunting regulation, also gives the Swedish EPA the possibility to take decisions to allow alien species to be hunted (even if the hunt is not allowed under the law or the supplementary regulations). The Swedish EPA appoints the hunters and may also decide that the appointed hunters will have access to other people's land.

The fisheries act and the ordinance on fishing, aquaculture and the fishing industry in combination with the detained regulations issued by the Swedish Agency for Marine and Water Management, provide detailed regulations on how any kind of fishing activity shall be conducted. The ordinance on fishing, aquaculture and the fishing industry (1994:1716) contains provisions that are partly motivated by animal welfare (chapter 2 paragraph 6). It states, among other things, that fishing may not be carried out with:

- poison
- explosives or other narcotic or lethal substances
- electric current
- firearms or such gear with which the fish can be targeted.

Chapter 2 paragraph 6 contains restrictions on moving fish, including predatory fish.

Exemptions from these bans of measures may, under special circumstances, be issued by the Swedish Agency for Marine and Water Management or the county administrative boards (Chapter 2, paragraph 21). For fishing with the aim of research more thorough welfare regulations are in place (The law on animal welfare (SFS 2018:1192) (Chapter 7, section 2)). There is also a need for ethical approval by a special ethical board for animal experiments (Chapter 7, section 9 and 10). Such approval is applied for by the Swedish Board of Agriculture.

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Appendix 38. Regional conditions for the Continental Central & Pannonian region

Croatia (HR), Czechia (CZ), Hungary (HU) and Poland (PO)

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1. Species presence in Member States from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each Member State in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)

Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopoche aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Croatia																						
Presence	NP	P	NP	NP	P	P	NP	NP	P	NP	P	P	NP	P	NP	P	P	NP	NP	NP	P	P
Status		O			R	W			R		O	R		O		O	W				O	W
Impact		?			Y	Y			Y		N	?		?		?	Y				?	Y
Highest impact					+	+											+					+
References	18	1, 6	19	20	1, 6, 7	1, 2, 3, 4	21	22	1, 11, 12	23	1, 13, 14, 15	1, 16	24	1, 4, 5	25	1, 17	1, 2, 4	26	27	28	8	1, 9, 10
Czechia																						
Presence	NP	P	NP	NP	NP	P	NP	NP	P	NP	P	P	NP	NP	NP	P	P	NP	NP	NP	NP	P
Status		W				R			W		W	W				W	W					W
Impact		?				?			?		?	?				?	Y					Y

	<i>Acridotheres tristis</i>	<i>Alopothen aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Highest impact															+	+						
References	9	1	10	11	12	2	13	14	3	15	4	5	16	17	18	6	7	19	20	21	22	8
Hungary																						
Presence	NP	P	NP	NP	NP	P	NP	NP	P	NP	P	P	P	P	NP	P	P	NP	NP	NP	P	P
Status		O				W			R		W	W	O	W		W	W				O	R
Impact		Y				Y			Y		Y	Y	N	Y		Y	Y				N	Y
Highest impact						+						+		+			+					
References	15	PC	16	17	18	1, 2, 3	19	20	PC	21	4, 5	6, 7	PC	8, 9, 10, 11	22	5, 12	13	23	24	25	PC	14
Poland																						
Presence	P	P	NP	P	NP	P	NP	NP	P	P	P	P	P	P	P	P	P	NP	NP	NP	P	P
Status	O	R		O		R			R	O	W	W	O	W	O	R	W				O	R
Impact	N	Y		?		?			Y	N	Y	Y	?	Y	N	Y	Y				N	Y
Highest impact		+									+					+	+					
References	1, PC	2, 3, PC	4	5, 6	7	8, 9, PC	10	11	12, 13	14	15, 16, 17	18, 19	20, 21, 22, PC	23, 24, PC	25, PC	26, 27, 17	28, 29, 8, PC	30	31	32	33, PC	34, 35, 36, PC

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Czechia

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2. Toolbox of measures - restrictions/bans in Member States from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in an EU Member State = * followed by MS country code

Use of measure **banned** in an EU Member State = # followed by MS country code

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Biological control	Native predators					*PL	*PL		*PL	*PL		*PL			*PL		*PL
Habitat manipulation	Aquatic barriers - physical & non-physical																
	Aquatic habitat management - Pond drying/drainage																
	Physical terrestrial barriers																
Hand removal	Hand removal	*PL	*PL	*PL		*PL						*PL	*PL		*PL	*PL	*PL
	Physical fishing methods					*PL *HU						*PL *HU	*PL		*PL *HU		*PL
Other	Egg oiling			#PL												#PL	
	Electrofishing					*PL *HU						*PL *HU			*PL *HU		
	Fertility Control - chemical (in bait) & injection						*PL	*PL	*PL	*PL	*PL			*PL			*PL

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alouatta aegyptiaca</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Hunting dogs (tracking/baying)				*PL		*PL	*PL	*PL	*PL				*PL			*PL
	Judas animals	*CZ	*CZ	*CZ	*CZ		*CZ	*CZ	*CZ	*CZ	*CZ			*CZ		*CZ	*CZ
Poisoning or toxicants	Stupefying bait	#CZ #HU #PL	#CZ #HU #PL	#CZ #HU #PL			#CZ #HU #PL		#CZ #HU #PL					#CZ #HU #PL		#CZ #HU #PL	
	Chemical treatment of the habitats					*HR #HU	*HR #HU			*HR #HU		*HR #HU			*HR #HU		
	Poisons and toxins in bait				#CZ *HR #HU #PL					#CZ *HR #HU #PL							
Shooting	Shooting	#CZ *HU *PL	#CZ *HU *PL	#CZ *HU *PL	#CZ *HU *PL		*CZ *HU *PL	#CZ *HU *PL	*CZ *HU *PL	*HU *PL	#CZ *HU *PL			*CZ *HU *PL		#CZ *HU *PL	#CZ *HU *PL
Trapping	Drowning traps						#CZ #HR #HU #PL			#CZ #HR #HU #PL							
	Goodnature self-resetting				*CZ #HR *HU #PL												
	Spring traps				#CZ #HR *HU #PL		#CZ #HR *HU #PL	#CZ #HR *HU #PL	#CZ #HR *HU #PL	#CZ #HR *HU #PL				#CZ #HR #PL			
	Cage traps	#HR *HU *PL	#HR *HU *PL		*HR *HU *PL		*HR *HU *PL	#HR *HU *PL	*HR *HU *PL	*HR *HU *PL	#HR *HU *PL			#HR *HU *PL			#HR *HU *PL
	Neck-hold traps, and snares				#CZ #HR #HU #PL		#CZ #HR #HU #PL	#CZ #HR #HU #PL	#CZ #HR #HU #PL					#CZ #HR #HU #PL			

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alouatta aegyptiaca</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percocottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
	Live decoy traps	#CZ #HR *HU #PL	#CZ #HR *HU #PL	#CZ #HR *HU #PL														
Dispatch/ removal only once captured	Cervical dislocation	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL		#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL		
	Cranial depression	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL
	Decapitation	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL			#HU *PL			#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL	
	Electrocution	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL		#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	#CZ #HU *PL	
	Freezing					#CZ #HU *PL						#CZ #HU *PL			#CZ #HU *PL		#CZ #HR #HU *PL	
	Injection euthanasia	*HR *HU *PL	*HR *HU *PL	*HR *HU *PL	*HU *PL		*HR *HU *PL	*HR *HU *PL	*HR *HU *PL	*HR *HU *PL	*HR *HU *PL			*HR *HU *PL		*HR *HU *PL	*HR *HU *PL	
	Keeping in captivity	*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL		*HU *PL	*HU *PL	*HU *PL	*HU *PL	*HU *PL
	Modified atmospheres	#HU *PL	#HU *PL	#HU *PL	#HU *PL		#HU *PL	#HU *PL	#HU *PL	#HU *PL	#HU *PL			#HU *PL		#HU *PL	#HU *PL	
	Shooting - dispatch restrained animals	*PL	*PL	*PL	*PL		*PL	*PL	*PL	*PL	*PL			*PL		*PL		
	Slaughter (knife)	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	*CZ #HU *PL	
Surgical sterilisation		*CZ *HU *PL		*CZ *HU *PL		*CZ *HU *PL	*CZ *HU *PL	*CZ *HU *PL	*CZ *HU *PL	*CZ *HU *PL			*CZ *HU *PL		*CZ *HU *PL	*CZ *HU *PL		

3. Details of restrictions/bans of Toolbox measures in Member States from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Biological control - native predators	Use of native predators (e.g. fish-restocking) is regulated.	Poland	Fishing Act and relevant decrees applied for fish species. Other species covered by the Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)
Hand removal	Restrictions in place for this method across all species.	Poland	The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)
Physical fishing methods	Must be conducted according to the fishing law.	Hungary	2013 CII. Act on Fish Management and Protection of Fish, 46. §
	Must be conducted according to the fishing law.	Poland	See references at end of table: [A] [B] [C]
Egg oiling	It is forbidden to kill wild animals not included in the regulation on invasive alien species [B]. Thus, the method can only be applied to <i>Alopochen aegyptiaca</i> and <i>Oxyura jamaicensis</i> because they are on the list. All other egg laying species that do not appear on the list cannot be managed using this method.	Poland	The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724) [B]
Electrofishing	The method is restricted; the Act regulates its use. It can only be used with special permission and if certain conditions are met.	Hungary	2013 CII. Act on Fish Management and Protection of Fish, 46. §
	The regulation specifies the detailed conditions for catching fish, including the electrofishing method (technical and organizational conditions, fishing periods).	Poland	[A]
Fertility Control - chemical (in bait) & injection	Veterinary treatments on animals are allowed for the necessary reduction of the population, and may only be performed by authorized persons. Veterinary treatments may be performed on animals only by qualified persons with due care being taken	Poland	Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724), Art. 2.1) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	to limit the suffering and stress of the animal. Procedures causing pain are performed under general or local anesthesia, except for those procedures which, according to the principles of veterinary art, are performed without anesthesia.		
Hunting dogs (tracking/ baying)	Hunting with dogs must be carried out in accordance with the hunting law, which applies only to game species, which in the case of invasive alien species are raccoon dogs and raccoons. In case of no-game species, a special permit can be issued by the General Directorate for Nature Protection.	Poland	Regulation of the Minister of the Environment of 23 March 2005 on detailed conditions for hunting and marking carcasses (Journal of Laws 2005 No. 61 item 548) / Rozporządzenie Ministra Środowiska z dnia 23 marca 2005 r. w sprawie szczegółowych warunków wykonywania polowania i znakowania tusz (Dz.U. 2005 nr 61 poz. 548)
Judas animals	Permission is needed to release animals back to nature; however, gaining this permission has not been seen in any case yet.	Czechia	No. 114/1992 Coll. (Act) on the protection of nature and landscape. § 5 (4)
Stupefying bait	Stupefying bait poisons are prohibited.	Czechia	Act No. 246/1992 Coll. (Act), on the protection of animals from cruelty
	Prohibited hunting gear.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 (1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadásatról)
	This method is only allowed for species classed as game. Muskrat, raccoon and raccoon dog are classed as game; however, it is forbidden to catch them using this method.	Poland	The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)
Chemical treatment of the habitats	Euthanizing with lime allowed/applied in IAS fish management. Using all other chemicals is banned.	Croatia	Veterinary Act (OG 82/13, 148/13, 115/18, 52/21)
	It is strictly forbidden to put out or dispose of chemicals specified in a separate legal act that are hazardous to waters and aquatic organisms within 1,000 meters from the shoreline of natural and semi-natural waters and wetlands.	Hungary	Act on Nature Conservation No. 43 of 1996 (18. § (4)
Poisons and toxins in bait	Poisons in bait allowed only in case of rodents (pests). They must be used with caution and only in situations where there is no possibility for native and non-pest rodent species to be	Croatia	The Act on hunting (OG 99/18, 32/19, 32/20), Section 66, (1), 11

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	affected. Needs to be used by certified personel.		
	Toxins in bait are prohibited.	Czechia	Act No. 246/1992 Coll. (Act), on the protection of animals from cruelty
	Prohibited hunting gear.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 37/A. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról)
	This method is only allowed for species classed as game. Muskrat, raccoon and raccoon dog are classed as game; however, it is forbidden to catch them using this method.	Poland	The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)
Shooting	Muskrat listed as a game species – allowed to be hunted by all hunters; hunting for coypu, raccoon and raccoon dog can be carried out only by the “hunting guard”.	Czechia	Game management Act No. 449/2001 Coll.
	Must be carried out in accordance with the hunting law.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 37/A and 37/B. (1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról)
	Must be carried out in accordance with the hunting law.	Poland	The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)
Drowning traps	It is forbidden to hit, drown or suffocate animals.	Croatia	The Animal protection act (OG 102/2017), Section 5, (2), 24
	Forbidden to use.	Czechia	Act No. 246/1992 Coll. (Act), on the protection of animals from cruelty § 5 (5) a)
	Forbidden to use.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996, 71. § point 20 (1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról,

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
			valamint a vadászatról)
	<p>It is forbidden to catch game IAS (muskrat, raccoon and raccoon dog) with this method.</p> <p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering. Thus, this method is also banned for non-game species.</p>	Poland	<p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p>
Goodnature self-resetting	It is forbidden to hunt/catch animals with traps that are non-selective.	Croatia	The Act on hunting (OG 99/18, 32/19, 32/20), Section 66, (1), 11
	Forbidden to use gas to kill game species. Muskrat is considered a game species and so this measure cannot be used on them.	Czechia	Game management Act No. 449/2001 Coll. § 45 (1) a)
	Must be carried out in accordance with the hunting law.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 (1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról)
	<p>This method is allowed for species classed as game. Muskrat, raccoon and raccoon dog are classed as game; however, it is forbidden to catch them using this method.</p> <p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>Only non-wound traps, including those that do not catch the limb, are allowed.</p> <p>Thus, this method is also banned for non-game species.</p>	Poland	<p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>Regulation of the Minister of the Environment of September 29, 2009 on the use of live traps (Journal of Laws 2009 no. 167 item 1321), §7 / Rozporządzenie Ministra Środowiska z dnia 29 września 2009 r. w sprawie stosowania pułapek żywołownych (Dz.U. 2009</p>

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
			nr 167 poz. 1321)
Spring traps	It is forbidden to hunt/catch animals with traps that are non-selective.	Croatia	The Act on hunting (OG 99/18, 32/19, 32/20), Section 66, (1), 11.
	Forbidden to use.	Czechia	Game management Act No. 449/2001 Coll. § 45 (1) a) Act No246/1992 against cruelty on animals §14 (1) a)
	Must be carried out in accordance with the hunting law.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 (1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról)
	This method is only allowed for species classed as game. Muskrat, raccoon and raccoon dog are classed as game; however, it is forbidden to catch them using this method. The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering. Only non-wound traps, including those that do not catch the limb, are allowed. Thus, this method is also banned for non-game species.	Poland	The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713) The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724) Regulation of the Minister of the Environment of September 29, 2009 on the use of live traps (Journal of Laws 2009 no. 167 item 1321), §7 / Rozporządzenie Ministra Środowiska z dnia 29 września 2009 r. w sprawie stosowania pułapek żywołownych (Dz.U. 2009 nr 167 poz. 1321)
Cage traps	It is forbidden to hunt/catch animals with traps that are non-selective. Selective live traps are allowed. Can be used with permits from Ministry of Agriculture and Ministry of Economy and Sustainable Development. Traps can be used for catching IAS – mongoose, coypu, raccoon dog and muskrat, in cases when there is no possibility for native and game species to be affected.	Croatia	The Act on hunting (OG 99/18, 32/19, 32/20), Section 66, (1), 11.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	Must be carried out in accordance with the hunting law.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 (1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról)
	<p>Allowed in case of game and non-game species.</p> <p>Regulation allows the following species of predators to be caught in live traps – raccoon dog, raccoon.</p> <p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>Only live traps of a certain specification are allowed.</p> <p>Only non-wound traps, including those that do not catch the limb, are allowed.</p> <p>This applies to non-game species.</p>	Poland	<p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>Regulation of the Minister of the Environment of September 29, 2009 on the use of live traps (Journal of Laws 2009 no. 167 item 1321), §7 / Rozporządzenie Ministra Środowiska z dnia 29 września 2009 r. w sprawie stosowania pułapek żywołownych (Dz.U. 2009 nr 167 poz. 1321)</p> <p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p>
Neck-hold traps, and snares	It is forbidden to hunt/catch animals with traps that are non-selective.	Croatia	The Act on hunting (OG 99/18, 32/19, 32/20), Section 66, (1), 11
	Forbidden to use.	Czechia	Game management Act No. 449/2001 Coll. § 45 (1) a) Act No246/1992 against cruelty on animals §14 (1) a)
	All types of snares are a prohibited hunting gear.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 37/A. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról)
	<p>This method is only allowed for species classed as game. Muskrat, raccoon and raccoon dog are classed as game; however, it is forbidden to catch them using this method.</p> <p>The killing of animals may only take place in a humane manner,</p>	Poland	The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>which involves inflicting a minimum of physical and mental suffering.</p> <p>Only non-wound traps, including those that do not catch the limb, are allowed.</p> <p>Thus, this method is also banned for non-game species.</p>		<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>Regulation of the Minister of the Environment of September 29, 2009 on the use of live traps (Journal of Laws 2009 no. 167 item 1321), §7 / Rozporządzenie Ministra Środowiska z dnia 29 września 2009 r. w sprawie stosowania pułapek żywołownych (Dz.U. 2009 nr 167 poz. 1321)</p>
Live decoy traps	It is forbidden to hunt/catch animals with traps that are non-selective.	Croatia	The Act on hunting (OG 99/18, 32/19, 32/20), Section 66, (1), 11.
	Forbidden to use.	Czechia	Game management Act No. 449/2001 Coll. § 45 (1) d) Act No246/1992 against cruelty on animals §14 (1) n)
	Allowed in case of game species.	Hungary	Act on Conservation of Game, Game Management and Hunting No. 53 of 1996 37/A. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról)
	<p>It is forbidden to catch game IAS (muskrat, raccoon and raccoon dog) with the use of weapons and ammunition other than hunting, explosives, poisons, baits with intoxicating properties, artificial light, glue, snares, traps, self-shooting or digging burrows, and using other unlawful means.</p> <p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>Only non-wound traps, including those that do not catch the limb, are allowed.</p>	Poland	<p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42aa, p. 12) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>Regulation of the Minister of the Environment of September 29, 2009 on the use of live traps (Journal of Laws 2009 no. 167 item 1321), §7 / Rozporządzenie Ministra Środowiska z dnia 29 września 2009 r. w sprawie stosowania pułapek żywołownych (Dz.U. 2009</p>

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
			nr 167 poz. 1321)
All measures that result in death	Carcass disposal must be carried out by specialized entities.	Croatia	Veterinary Act (OG 82/13, 148/13, 115/18, 52/21)
Cervical dislocation	Prohibited in case of currently listed vertebrate IAS.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.) 3., 12., 24/F § (1998. évi XXVIII. törvény az állatok védelméről és kíméletéről)
	<p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>	Poland	<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>
Cranial depression	Prohibited in case of currently listed vertebrate IAS.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.) 3., 12., 24/F § (1998. évi XXVIII. törvény az állatok védelméről és kíméletéről)
	The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.	Poland	The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>		<p>poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>
Decapitation	<p>Prohibited in case of currently listed vertebrate IAS.</p>	Hungary	<p>Animal Protection and Welfare Act (1998 XXVIII.) 3., 12., 24/F § (1998. évi XXVIII. törvény az állatok védelméről és kíméletéről)</p>
	<p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal</p>	Poland	<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>		
Electrocution	Forbidden to use.	Czechia	Act No246/1992 against cruelty on animals §14 (1) f)
	Prohibited in case of currently listed vertebrate IAS.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.) 3., 12., 24/F § (1998. évi XXVIII. törvény az állatok védelméről és kíméletéről)
	<p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>	Poland	<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>
Freezing	It is forbidden to use this method on vertebrate animals other than fish.	Croatia	Freshwater fishing Act (OG 63/19)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	Forbidden to use.	Czechia	Act No246/1992 against cruelty on animals §5 (5) f)
	Prohibited in case of currently listed vertebrate IAS.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.) 3., 12., 24/F § (1998. évi XXVIII. törvény az állatok védelméről és kíméletéről)
	<p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>	Poland	<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>
Injection euthanasia	Small Indian mongoose, as not-game species, can be euthanized.	Croatia	<p>The Act on hunting (OG 99/18, 32/19, 32/20)</p> <p>The Animal protection act (OG 102/2017)</p>
	Available, but restricted.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.)
	<p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>If it is necessary to immediately kill a wild animal, this operation</p>	Poland	The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p> <p>Veterinary treatments on animals are allowed for the necessary reduction of the population, and may only be performed by authorized persons. Veterinary treatments may be performed on animals only by qualified persons with due care being taken to limit the suffering and stress of the animal. Procedures causing pain are performed under general or local anesthesia, except for those procedures which, according to the principles of veterinary art, are performed without anesthesia.</p>		<p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p> <p>Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724), Art. 2.1) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p>
Keeping in captivity	<p>Keeping in captivity (zoos, aquaria) on condition that escape is prevented.</p>	Hungary	<p>3/2001. (II. 23.) KöM – FVM – NKÖM – BM joint decree on the detailed rules for the establishment, operation and maintenance of zoos and animal shelters / 3/2001. (II. 23.) KöM–FVM–NKÖM–BM együttes rendelet az állatkert és az állatotthon létesítésének, működésének és fenntartásának részletes szabályairól)</p>
	<p>Prohibition of rearing and closed breeding of game animals, with the exception of pheasants and animals recognized as farm animals on the basis of separate regulations.</p> <p>Prohibition of keeping animals in improper living conditions,</p>	Poland	<p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art 16.1 / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p>

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	including keeping them in a state of gross neglect or sloppiness, or in rooms or cages that prevent them from maintaining their natural position.		Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724), Art. 2.1) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)
Modified atmospheres	Whilst not specifically banned, CO ₂ euthanasia is not considered an economically viable method, especially if it involves large numbers of (medium to large) animals.	Croatia	Feedback from workshop participants
	Prohibited in case of currently listed vertebrate IAS.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.)
	<p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>	Poland	<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>
Shooting - dispatch restrained animals	The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.	Poland	The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>		<p>poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>
Slaughter (knife)	Restricted, the animal must be stunned before slaughtering with a knife.	Czechia	Act No246/1992 against cruelty on animals § 5a
	Prohibited in case of currently listed vertebrate IAS.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.)
	<p>The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.</p> <p>If it is necessary to immediately kill a wild animal, this operation is performed by shooting the animal by a person authorized to use a firearm.</p> <p>If the animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals. The voivodship sejmik, after consulting the regional nature protection council, a social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, will determine, by resolution, the place, conditions, time and ways of limiting the animal</p>	Poland	<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p> <p>[D]</p>

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	<p>population.</p> <p>The killing of carnivorans is possible with the use of hunting weapons or other methods used in the slaughter of farm animals.</p> <p>Animals may only be killed by qualified personnel and only in a certain way.</p>		
Surgical sterilisation	Possible to carry out, but it is not possible to release the animal back to nature afterwards.	Czechia	No. 114/1992 Coll. (Act) on the protection of nature and landscape, § 5 (4)
	Available, but restricted.	Hungary	Animal Protection and Welfare Act (1998 XXVIII.) 9. § (1998. évi XXVIII. törvény az állatok védelméről és kíméletéről)
	Veterinary treatments on animals are allowed for the necessary reduction of the population, and may only be performed by authorized persons. Veterinary treatments may be performed on animals only by qualified persons with due care being taken to limit the suffering and stress of the animal. Procedures causing pain are performed under general or local anesthesia, except for those procedures which, according to the principles of veterinary art, are performed without anesthesia.	Poland	<p>The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)</p> <p>The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713), Art. 42a, p. 1a. / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)</p>

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[A] Announcement of the Minister of Maritime Economy and Inland Navigation of 25 September 2018 on the publication of a uniform text of the Regulation of the Minister of Agriculture and Rural Development on catching fish and conditions for rearing, breeding and catching other organisms living in water (Journal of Laws 2018, item 2003) - Ordinance of the Minister of Agriculture and Rural Development of November 12, 2001 on catching fish and conditions of rearing, breeding and catching other organisms living in water (Journal of Laws of 2001, No. 138, item 1559) / Obwieszczenie Ministra Gospodarki Morskiej i Żeglugi Śródlądowej z dnia 25 września 2018 r. w sprawie ogłoszenia jednolitego tekstu rozporządzenia Ministra Rolnictwa i Rozwoju Wsi w sprawie połowu ryb oraz warunków chowu, hodowli i połowu innych organizmów żyjących w wodzie (Dz.U. 2018 poz. 2003) - Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi z dnia 12 listopada 2001 r. w sprawie połowu ryb oraz warunków chowu, hodowli i połowu innych organizmów żyjących w wodzie (Dz.U. 2001 nr 138 poz. 1559)

[B] Regulation of the Minister of Environment of 9 September 2011 on the list of plants and animals of alien species which, if released into the natural environment, may pose a threat to native species or natural habitats (Journal of Laws 2011, No. 210, item 1260) / Rozporządzenie Ministra Środowiska z dnia 9 września 2011 r. w sprawie listy roślin i zwierząt gatunków obcych, które w przypadku uwolnienia do środowiska przyrodniczego mogą zagrozić gatunkom rodzimym lub siedliskom przyrodniczym (Dz.U. 2011 nr 210 poz. 1260)

[C] Announcement of the Marshal of the Sejm of the Republic of Poland of October 14, 2019 on the publication of the uniform text of the Inland Fisheries Act (Journal of Laws of 2019, item 2168) - The Act of 18 April 1985 on Inland Fisheries (Journal of Laws 1985 No.21 item 91) / Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dnia 14 października 2019 r. w sprawie ogłoszenia jednolitego tekstu ustawy o rybactwie śródlądowym (Dz.U. 2019 poz. 2168) - Ustawa z dnia 18 kwietnia 1985 r. o rybactwie śródlądowym (Dz.U. 1985 nr 21 poz. 91)

[D] Regulation of the Minister of Agriculture and Rural Development of 9 September 2004 on the qualifications of persons entitled to professional slaughter as well as the conditions and methods of slaughter and killing animals (Journal of Laws 2004 No 205, item. 2102) / Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi z dnia 9 września 2004 r. w sprawie kwalifikacji osób uprawnionych do zawodowego uboju oraz warunków i metod uboju i uśmiercania zwierząt (Dz.U. 2004 nr 205 poz. 2102)

4. Overview of legislation, standards and guidance within Member States from the region

4.1. Croatia

The Animal protection act (OG 102/2017) from 1st of April 2019 / Zakon o zaštiti životinja NN 102/17, 32/19 na snazi od 01.04.2019

- This Act lays down the responsibility and obligations of natural and legal persons for the protection of animals during use (including all vertebrates and cephalopods), including the protection of life, health and welfare, manner of handling animals, animal protection requirements to be complied with during their handling, breeding, performing procedures on animals, at time of killing, transport, use of animals for scientific purposes, keeping animals in zoos, circuses and other performances, during the sale of pet animals and the handling of abandoned and lost animals, inspection supervision and misdemeanour provisions. It does not apply in situations of hunting and game management, and fishing.
- The Act itself is divided into different subsections such as; Fundamental provisions of animal protection, Protection of wild animals, Protection of animals in zoos.
- Each of these subsections offers a detailed overview of expected humane practices when dealing with their respective themes.
- According to Article 5 of the Animal protection act (OG 102/2017) the offers a basic guide to interacting with animals according to legislation in the Republic of Croatia:
 - It is prohibited to kill animals, subject them to pain, suffering and injury, and intentionally expose them to fear or disease, contrary to the provisions of this Act.
 - It is prohibited to:
 - raise animals in a way that causes them pain, suffering and fear and to intentionally injure them, contrary to the rules of the profession and the latest scientific developments,
 - in the breeding of animals, to increase aggressiveness of animals through selection or other methods,
 - give animals as prizes in games of chance,
 - force animals into a behaviour that causes them pain, suffering, injury or death
 - expose animals to adverse temperatures and weather conditions, contrary to the accepted animal hygiene standards for individual animal species, or to lack of oxygen, thus causing them pain, suffering, injury or fear or death,
 - give animals food or substances the ingestion of which causes pain, suffering, injury, fear or death,
 - neglect an animal in terms of its health, housing, nutrition, and care,
 - cut off body parts of live animals that are sensitive to pain contrary to the provisions of this Act,
 - restrict the movement of animals in a way that causes them pain, suffering, injury or fear, in contravention of the provisions of this Act,
 - prodding animals, squeezing, pulling or bending of body parts or hanging of animals, unless these are procedures in compliance with Council Regulation (EC) No 1099/2009 of 24 September 2009 on the protection of animals at the time of killing (SL L 303, 18.11.2009) (hereinafter: Regulation (EC) No 1099/2009) and hitting, drowning or suffocating animals in any other way,
 - throwing or intentional shooting at animals regardless of the type of weapon or device for shooting, except for the purposes of stunning or killing animals in compliance with the provisions of Regulation (EC) No 1099/2009 and for the purpose of protecting the safety of humans and animals, 29. throwing of firecrackers or other pyrotechnical devices onto animals, with the exception of emergency situations when the need for the dispersal of animals is required pursuant to special regulations,
 - keeping and use of wild animals for the purpose of public display, with the exception of zoos.

The Act on the prevention and management of the introduction and spread of alien and invasive alien species (OG 15/18, 14/19) from 15th of February 2019 / Zakon o sprječavanju unošenja i širenja stranih te invazivnih stranih vrsta i upravljanju njima NN 15/18, 14/19 na snazi od 15.02.2019

- This Act regulates the issue of prevention of introduction and spread and management of invasive alien species of concern in the European Union and alien species, including invasive alien species of concern in the Republic of Croatia, in order to prevent or mitigate their adverse effects on biodiversity, ecosystem services and / or human health, taking into account possible adverse effects on the economy as an aggravating factor.
- This Law contains provisions that are in accordance with:
 - 1. Article 22 (b) of Council Directive 92/43 / EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992), as last amended by Council Directive 2013/17 / EU of 13 May 2013 adapting certain directives in the field of the environment, by reason of the accession of the Republic of Croatia (OJ L 158, 10.6.2013)
 - 2. Article 11 of Directive 2009/147 / EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version) (OJ L 20, 26.1.2010), as last amended by Council Directive 2013/17 / EU of 13 May 2013 adapting certain directives in the field of the environment by reason of the accession of the Republic of Croatia (OJ L 158, 10.6.2013).
- This Act establishes a framework for the implementation of the provisions of the following Union regulations:
 - 1. Regulation (EU) no. Regulation (EC) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species (OJ L 317, 4.11.2014) (hereinafter: Regulation (EU) No 1143/2014)
 - 2. Commission Implementing Regulation (EU) 2016/145 of 4 February 2016 adopting the format of a document serving as evidence for a permit issued by the competent authorities of the Member States enabling institutions to carry out certain activities related to invasive alien species of concern in the Union in accordance with Regulation (EU) no. 1143/2014 of the European Parliament and of the Council (OJ L 30, 5.2.2016) (hereinafter: Commission Implementing Regulation (EU) 2016/145).
- This Act is adopted taking into account the notification procedure under Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and rules on information society services (OJ L 241, 17 September 2015).
- The Act on the prevention and management of the introduction and spread of alien and invasive alien species (OG 15/18, 14/19) prohibits the release of alien species into nature or into ecosystems in which they do not occur naturally, as well as their placement on the market. The exceptions to this prohibition are permitted for the species which do not constitute a threat to native biodiversity, human health or economy, which needs to be assessed for each species and situation separately.
- Article 10 (OG 14/19) of the same act states that an invasive alien species that have been blacklisted cannot:
 - be imported into the Republic of Croatia except in the event of transport under customs supervision
 - be put on the market in the Republic of Croatia
 - traded
 - kept, including being kept in controlled conditions
 - be cultivated and / or reproduced, including in controlled conditions or
 - introduced into nature
- Owners that don't keep animals with intent to use in commercial purposes, and they are classified as invasive and/or alien species that cause concern to the Republic of Croatia, can retain ownership until the rest of their life if they abide by following terms:
 - the animals have to have been pets before they were classified as invasive species that cause concern to the Republic of Croatia or
 - the animals have to be contained in a controlled environment and all necessary precautions need to be taken to inhibit their reproduction or escape.

- Another exception are invasive and/or alien species that cause concern for the Republic of Croatia for medicinal products or research purposes. In this case the Legal entity needs to obtain permission from the Ministry.

The act on freshwater fishing (OG 63/19) from 6th of July 2019 / Zakon o slatkovodnom ribarstvu NN 63/19, na snazi od 06.07.2019

- invasive species are classified as foreign species of fish for which the assessment of the risk of invasiveness has determined that its introduction or spread causes significant changes in the composition, structure and functioning of ecosystems, and can cause significant economic losses.
- translocation is the introduction of an alien and/or invasive fish species whose native habitat is within the borders of the Republic of Croatia, but is not a natural habitat in the watercourse or left where it was introduced and/or intends to enter
- Under the restrictions section in this act, it states that it's prohibited to use invasive and/or alien species of fish as bait regardless if they are alive or dead.

The Act on hunting (OG 99/18, 32/19, 32/20) from 17th of November 2018 / Zakon o lovstvu NN 99/18, 32/19, 32/20 na snazi od 17.11.2018

- Invasive species are mentioned in only once in Article 63 of the act, where it states that the competent Ministry is responsible for determining the type of weapons used on invasive and/or alien species that is not described as a game species within that law whose removal is prescribed by another competent authority.
- Game species are listed in the Hunting Act (Official Gazette 140/05, 75/09, 14/14, 21/16 - Decision of the Constitutional Court of the Republic of Croatia, 41/16 - Decision of the Constitutional Court of the Republic of Croatia, 67/16 - Decision of the Constitutional Court of the Republic of Croatia and 62/17). Currently this list only includes native game species. Invasive alien species of concern in the Union could be added to the list if their use is carried out in accordance with management plans for which nature protection conditions have been met or ecological network acceptability assessment has been carried out by the regulating agencies governing nature protection.
- Regulation of Game species which are considered invasive alien species of concern in the Union is regulated with The Act on the prevention and management of the introduction and spread of alien and invasive alien species (OG 15/18, 14/19).
- No invasive alien species listed by the EU are considered huntable in Croatia.

The Act on aquaculture (OG 130/17, 111/18, 144/20) from 30th of December 2020 / Zakon o akvakulturi NN 130/17, 111/18, 144/20 na snazi od 30.12.2020

- The regulation of invasive and/or alien species in aquaculture is regulated by article 16 (OG 144/20).
- Legal or natural persons referred to in Article 9, paragraph 1 of this Act shall be granted the entry of a foreign species or the transfer of a locally absent species not covered by Annex IV. Council Regulation (EC) no. 708/2007 for its use in aquaculture by issuing a permit for the use of alien and locally absent species in aquaculture.
- The permit for the use of alien and locally absent species in aquaculture, at the request of the legal or natural person referred to in paragraph 1 of this Article, shall be issued by the Ministry in accordance with Council Regulation (EC) no. 708/2007, with the prior consent of the central state administration body responsible for nature protection. No appeal shall be allowed against the permit referred to in this paragraph, but an administrative dispute may be initiated.
- Together with the request referred to in paragraph 2 of this Article, the legal or natural person referred to in paragraph 1 of this Article shall also submit the documentation in accordance with the framework guidelines set out in Annex I to Council Regulation (EC) no. 708/2007.
- The risk assessment referred to in Article 9 of Council Regulation (EC) No 708/2007 and the risk assessment referred to in paragraph 7 of this Article shall be carried out by an expert body in accordance with a special regulation on alien and invasive alien species.

4.2. Czechia

After the velvet revolution in 1989, the Czech Republic has accepted and implemented all requirements of international legal regulations on animal welfare into its national law system. Specifically, the Czech Republic adopted all regulations of the Council of Europe, i.e.:

- European Convention on Protection of Animals kept for Farming Purposes

- European Convention on the Protection of Animals in International Transport
- European Convention on the Protection of Pet Animals
- European Convention on the Protection of Animals for Slaughter
- European Convention on the Protection of Vertebrate Animals used for Experimental and other Scientific Purposes.

These conventions form a basis for animal protection regulations also in the European Communities (EC), which the Czech Republic has transposed and implemented into its national law systems:

- Council Directive 98/58/EC concerning the protection of animals kept for farming purposes
- Council Regulation (EC) No 1/2005 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97
- Council Regulation (EC) No 1099/2009 on the protection of animals at the time of killing

Besides that, the Czech Republic has also transposed the two EU nature conservation Directives and a CITES Regulation, which also creates legal consequences in the area of animal welfare:

- Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
- Directive 2009/147/EC of the European Parliament and of the Council of Europe on the conservation of wild birds
- Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein

Generally, the protection of animals included in legal regulations of the Czech Republic was divided into two main areas. The first, the so-called "direct protection of animals from cruelty" comprising the protection as set out in legal regulations that define, prohibit and prosecute cruelty to animals, and the second, so-called "indirect protection of animals from cruelty" comprising their protection as set out by legal regulations that define handling the animals, the conditions of keeping, breeding and care of animals in that they define conditions providing for cases in which there is no cruelty to animals as defined by a special law but health damage, suffering, pain or permanent damage to their welfare could be inflicted in a different way.

Various changes to Czech legislation governing IAS management are likely to come into force in late 2021; the intention being that more measures are made available – under restrictions where applicable. The detail below is correct as of May 2021. Practitioners should check with the Czech authorities to make sure the new legislation is being followed.

I. The direct protection of animals

No. 246/1992 Coll. (Act), on the protection of animals from cruelty / 246/1992 Sb. Zákon na ochranu zvířat proti týrání

The Act No 246/1992 Coll., on the protection of animals against cruelty, is the basic law related to animal protection governing the activities of all the state authorities of animal protection in the Czech Republic, such as the Ministry of Agriculture, including the Central Commission for Animal Welfare, and the veterinary administration authorities. For the purposes of this Act: a) "animal" means a live vertebrate, other than man, excluding foetal or embryonic forms, b) "wild animal" means any animal of a species whose wildlife population lives independently, including those kept in captivity.

The Act prohibits cruelty to animals and defines the large number of activities which are considered to constitute cruelty. Section § 4 (1) includes an extensive list of what cruelty to animals means. This includes aspects such as restrictions on providing food and water, administering of narcotics, keeping animals in ways that many cause suffering to themselves or each other, handling of animals etc.

Also, the Act prohibits killing an animal without the reason and specifies reasons for killing an animal. It regulates the protection of animals during killing and specifies the legal methods of killing an animal. Unless stipulated otherwise by this Act, the following methods of killing animals shall be prohibited:

- drowning or other methods of suffocating, including the administration of muscle relaxants,
- administration of such substances and products, the dose of which does not induce deep general anaesthesia in the animal and does not cause subsequently certain death,

- beating to death, stabbing to death or other methods causing undue pain or suffering to an animal,
- use of electric current, unless an immediate loss of consciousness occurs,
- use of adhesives or other similar means causing long lasting restriction of the movement of an animal which results in the death of an animal due to the lack of food or liquid or as a consequence of other metabolic disorders.

Production, import and sale of jaw traps and glue traps is also prohibited.

In case of „wild animals“, the Act in § 14 states. No person shall catch or kill a wild animal:

- using a springe, deadfall, trapping net, noose, snare, harpoon or jaw traps or using a similarly constructed instrument,
- using a poisoned baits and poison in any form including gassing and fumigation, with the exception of cases referred to in paragraph 4,
- using hawk traps and birdlime,
- using electric current, excluding the exercise of rights stipulated by specific legislation,2a)
- using live animals as decoys or baits, excluding hunting pursuant to specific legislation1g).

The Act specifies the use of Anaesthesia, the protection of animals at a public performance and the obligations of organisers of such events, the protection of animals during transport. It also lays down the conditions which shall be met in breeding farm animals and companion animals, the conditions of breeding and protection of experimental animals and requirements for the protection of wild animals.

The Act defines the animal protection authorities and their sphere of competence as well as the administrative delicts and infractions in the field of animal protection.

In 2016 the Act was amended and by §5(7) the breeding and killing of animals for fur was prohibited, resulting in closing the last nine fur farms breeding minks and foxes in January 2019.

This text stems from the version of Act valid till 31st January 2021. The Cruelty Act is however to be amended five times in years 2021-2027, the English versions of these amendments are not available yet.

II. The indirect protection of animals

Protection of nature and landscape

No. 114/1992 Coll. (Act) on the protection of nature and landscape / 114/1992 Sb. Zákon o ochraně přírody a krajiny, as amended contains the following relevant sections:

- § 5 4) *An intentional spread of geographically non-native plant or animal species and of plant or animal hybrids into the landscape is possible only with a permit of the nature protection authority. This does not apply for non-native plant species if they are part of an agreed forest management plan.*
- § 5 - *Nature protection authority can decide on eradication of geographically non-native species.*
- § 16, 26, 29 and 34 - *in national parks, protected landscape areas, national natural reserves and natural reserves, it is forbidden to allow or to conduct intentional release of geographically non-native plant and animal species.*
- § 77 - *With the exception of protected areas, municipalities with extended powers give permits for the release of geographically non-native plant and animal species and hybrids into the wild.*

And is implemented by **No. 395/1992 Coll. (Decree) implementing some law provisions of Act No. 114/1992 Coll. / 395/1992 Sb. Vyhláška, kterou se provádí zákon o ochraně přírody a krajiny**, in wording of Decree No. 105/1997 Coll., No. 200/1999 Coll., No. 85/2000 Coll., No. 190/2000 Coll.

Hunting

Game management Act No. 449/2001 Coll. / 449/2000 Sb. Zákon o myslivosti.

This section provides overarching guidance: § 4 - *For release of geographically non-native species considered as game by International Council for Game and Wildlife Conservation (CIC) a prior agreement by the nature conservation authority and hunting authority is needed and must comply with veterinary regulations.*

From the Union list of IAS species, only muskrat (*Ondatra zibethicus*) is a game species in the Czech

Republic, with the set hunting season from 1st November to end of February. However, the hunting law allows to game-keeper guard, in § 14 a) *To kill the racoon, racoon dog, mink or coypu and other introduced, in the wild undesirable, animal species, the list of which shall be laid down by a decree.* The decree, however, has not been issued yet, so the number of species game-keeper is allowed to hunt remains racoon, racoon dog, mink and coypu. Also, a game manager is allowed according to § 35 a) *To kill other animals harmful to game management* which can be theoretically interpreted as any of the IAS species.

According to Act on the protection of nature and landscape, § 5 *Nature protection authority can decide on eradication of geographically non-native species.* If this species is not categorised as game, then it can, but does not have to, be hunted/killed according to Game Management Act. This depends on the species (vertebrates vs. invertebrates), the area (hunting ground vs. non hunting ground) and method of hunting/killing/capturing the non-native species. On the basis of this decision, the nature protection authority can “expand” the right to hunt non-native species (also in case of species named in Game Management Act - racoon, racoon dog, mink and coypu) to all hunters.

All hunting/killing/capturing of all game and non-game species has to always be pursuant to Act on the protection of animals from cruelty. Hunting/killing/capturing of game species has to be done using one of the hunting methods which are not banned. It is forbidden according § 45:

- *to catch the game into snares, on bird-lime, into steel-traps, into cage traps for hawks, dead-fall traps and contact traps and by means of hooks, to catch muskrats into basket traps,*
- *to hunt the game by the method causing useless torments, to poison the game or to kill it with gas,*
- *to catch the game into trapping nets unless it is caught for the purposes of stocking or unless the feathered game is caught for ornithological research,*
- *to shoot the feathered game with decoy owl, to catch the game by means of living animals used as baits,*
- *to add attractants and narcotics to feed unless they are added for the purposes of game capture.*

This Act is implemented by **No. 244/2002 Coll. (Decree) implementing the Game Management Act / 244/2002 Sb. Vyhláška, kterou se provádí zákon o myslivosti.**

Fisheries

No. 99/2004 Coll. The Act on Fish Farming / 99/2004 Sb. Zákon o rybnářství contains the following relevant section:

- § 12 – *release into the wild of non-native species of fish and water organisms is governed by a special legal decree.* **No. 197/2004 Coll. (Decree) to The Act on Fish Farming / 197/2004 Sb. Vyhláška k provedení zákona o rybnářství.**

Water

No. 254/2001 Coll. Water Act / 254/2001 Sb. Vodní zákon contains the following relevant sections:

- § 35 – *It is forbidden to release fish and other aquatic animals from non-native and genetically not sufficiently examined populations to water flows and water reservoirs without an agreement of a respective water authority.*
- § 116 – *Natural or legal persons commit a tort by releasing non-native, genetically modified, non-suitable and non-verified fish or other aquatic organisms' populations into water flows or reservoirs.*

4.3. Hungary

I. The nature of Hungarian animal welfare and its evolution

In Hungary animal welfare appears in numerous pieces of legislation and the related regulations can be found in multiple sectors. However, guaranteeing the five “animal liberties” to captive animals’ features in all of them. These are:

1. Living without hunger or thirst: to provide enough fresh water and food of appropriate quality and quantity
2. Living without discomfort: to provide a suitable environment (including hiding and resting places)
3. Life without pain, injury or illness: protection from injury and illness, as well as examination and

- prompt treatment if necessary.
4. Right to normal behaviour: sufficient space, adequate housing and company of animals of the same species.
 5. Life without fear or torment: no mental suffering comes from the environment or treatment of the animals.

With regard to today's Hungarian animal welfare legislation, there were two milestones directly related to the protection of animals. The first is that since the 16th of March 1998 Hungary has an independent law on animal protection (1998 XXVIII. Animal Protection and Welfare Act), which entered into force on the 1st of January 1999. The second is the amendment of the Criminal Code in 2004, when animal cruelty was criminalised, so that mistreatment of animals became punishable by criminal law as well.

Looking at the progress of the different implementing regulations of the Animal Protection and Welfare Act, the following order can be established: keeping animals used for scientific purposes (1998); keeping domestic animals (1999), keeping dangerous animals (1999), keeping zoo animals (2001), keeping circus animals (2007), keeping pets (2010).

II. Animal Protection and Welfare Act and its implementation regulations

The most important pieces of legislation for the management of invasive alien vertebrate species are the Animal Protection and Welfare Act (1998 XXVIII.) and its implementation regulations. The legislation around animal welfare is grouped into different sections such as; The Animal Protection and Welfare Act (in general), Keeping pets, Transport of animals, Operation of animal shelters, animal boarding houses, zoos and circuses.

According to the Animal Protection and Welfare Act, all species of living animals should not be killed without good reason. However, should it be necessary, it is to be done painlessly. This section shows the most important sections of legislation that are relevant to vertebrate invasive species, highlighting those specific sections that have not been described above.

Animal Protection and Welfare Act / 1998. évi XXVIII. törvény az állatok védelméről és kíméletéről:

- The animal keeper is obliged to act with care ("the care of a good farmer") and to provide appropriate living conditions according to the species, the variety of species and its physiological needs.
- The keeper is obliged to ensure the proper and safe accommodation of the animal, its professional care and the prevention of its escape.
- It is forbidden to cause unreasonable or avoidable pain, suffering or injury to the animal, or to harm the animal.
- Abandoning ownership or keeping of dangerous animals kept in the human environment is prohibited. The animal must not be expelled, abandoned or exposed.
- Interventions involving pain or injury to the animal – with the exception of immediate interventions in the interest of the animal – can only be performed by a person with professional training or, in the case of routine interventions by animal keepers, only by experienced personnel.
- The animal must not be killed without a valid reason or circumstance.
- The animal may be killed only after narcotization.
- Keeping, breeding and marketing animals which are ecologically dangerous to the native flora and fauna of the country is forbidden. The list of these animals is defined in a separate legal act. An animal kept in breach of the ban shall be confiscated by the animal welfare authority which ensures the transfer of the animal's ownership. If this is excluded by law or in case it is unsuccessful, the authority ensures the final placement of the animal. If the final placement of the animal can only be provided at a regular cost, the previous owner has to pay a cost for a maximum of 12 months, depending on the severity and recurrence of the infringement. In case of an unsuccessful placement of the animal, it may be killed in a permitted manner.

3/2001. (II. 23.) KöM – FVM – NKÖM – BM joint decree on the detailed rules for the establishment, operation and maintenance of zoos and animal shelters / 3/2001. (II. 23.) KöM–FVM–NKÖM–BM együttes rendelet az állatkert és az állatotthon létesítésének, működésének és fenntartásának részletes szabályairól

- The application for a zoo permit must include, inter alia, guarantees to prevent the escape of the animals as well as prevent the potential ecological hazards to native animals and plants.
- The minimum placement conditions as set in the Annex of the joint decree must be provided to keep animals or groups of animals in the zoo.

222/2007. (VIII. 29.) government decree on the detailed rules for authorisation of the establishment and operation, as well as maintenance of circus menageries / 222/2007. (VIII. 29.) Korm. rendelet a cirkuszi menaszéria létesítése és működtetése engedélyezésének, valamint fenntartásának részletes szabályairól

- During the permit procedure of the permanent menagerie, the compliance of the activity to the requirements of national and European Union legislation on nature protection must be subject of professional examination as set out in the application or as subject to additional conditions.
- Guarantees to prevent the escape of the animals must accompany the application for the permanent menagerie license.
- Animals have to be placed where the conditions are appropriate to the animals' welfare and where they are able to practice their natural behaviour.
- The minimal placement requirements, detailed in the act on the establishment, operation, and maintenance of zoos and animal shelters, must be provided in order to keep animals or groups of animals belonging to the permanent menagerie.

41/2010. (II. 26.) government decree on trading and keeping of pets / 41/2010. (II. 26.) Korm. rendelet a kedvtelésből tartott állatok tartásáról és forgalmazásáról

- The keeping of certain vertebrate species listed by the European Union is prohibited in Hungary since 2010 (see more: Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance.)
- The pet trader keeps up-to-date records of the number of individuals of vertebrate animals acquired, in stock, sold and dead, with the exception of freshwater fish not covered by the international convention on nature conservation.
- In the pet trade facility, animals must be placed in an escape-proof manner in such a way that their peace and undisturbed rest are ensured in the sales area.

32/1999. (III. 31.) decree of the Ministry of Agriculture and Rural Development on the animal protection regulations for keeping farm animals / 32/1999. (III. 31.) FVM rendelet a mezőgazdasági haszonállatok tartásának állatvédelmi szabályairól

- As of 2020 there aren't any invasive alien vertebrate species in Hungary that could be bred on fur farms in accordance with the relevant EU legislation (see more: Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance.)

III. Other related legislation

Naturally, there are other sectoral pieces of legislation as well which are relevant to the management of invasive alien vertebrate species. The most important of these are the following, with the special sections highlighted.

Act on Nature Conservation No. 43 of 1996 / 1996. évi LIII. törvény a természet védelméről

- The introduction of a new living organism from a plant and animal geography point of view can only be permitted if they do not harm natural processes in the natural habitats of the indigenous species during their establishment and adaptation.
- Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species has to be applied during the authorization and/or control of the import, transit, export, keeping, breeding, cultivation, propagation, marketing, or use of an alien invasive species.
- In case of an overpopulation of huntable (and fishable) game and fish species, or in order to eliminate non-native, alien species, the nature conservation authority shall initiate the reduction or eradication of these animal populations to the hunting (and fishing) authority.

- The introduction of a non-native, non-huntable wild animal species, as well as the reintroduction of a wild animal species requires the permission of the nature conservation authority.
- The hunting authority may oblige the hunting company to reduce or eradicate the population of alien wild animal species by hunting methods initiated by the nature conservation authority.
- The introduction of non-native fish species into natural or near-natural waters and the transfer of such fish species from other fishponds to other living waters is prohibited.

Act on Conservation of Game, Game Management and Hunting No. 53 of 1996; 79/2004. (V. 4.) FVM decree on the rules for implementing the 1996. LV. act on the protection of game, game management and hunting rules for implementing the 1996. LV. Act / 1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról; 79/2004. (V. 4.) FVM rendelet a vad védelméről, a vadgazdálkodásról, valamint a vadászatról szóló 1996. évi LV. törvény végrehajtásának szabályairól

- The following invasive alien species on the EU list are huntable in Hungary:
 - Egyptian goose (*Alopochen aegyptiaca*),
 - Muskrat (*Ondathra zibethicus*),
 - Raccoon dog (*Nyctereutes procyonoides*),
 - Raccoon (*Procyon lotor*).

According to the hunting act these species cannot be hunted using hunting gear and methods listed in sections 37/A and 37/B of the Hunting Act. (see more: Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance.)

- In the case of the Egyptian goose, killing is only allowed in a certain period of the year in order to ensure the peace of other goose species (close season: 01.02-30.09.).

2013 CII. Act on Fish Management and Protection of Fish; 133/2013. (XII. 29.) VM decree on the establishment of certain rules of fish management and fish protection / 2013. évi CII. törvény a halgazdálkodásról és a hal védelméről; 133/2013. (XII. 29.) VM rendelet a halgazdálkodás és a halvédelem egyes szabályainak megállapításáról

- Any activity related to invasive alien fish species or other beneficial aquatic animals in fish production facilities can only be authorized in cases listed in Article 8 and 9 of regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species.
- If an invasive alien species is concerned in a procedure of the fishery management authority, the provisions of regulation (EU) No 1143/2014 of the European Parliament and of the Council as well as the Act on the Protection of Nature relating to invasive alien species also have to be applied.
- To maintain and protect the fish population of natural waters, to maintain and develop the diversity of the habitat appropriate for the environmental conditions, the most important tasks (amongst others) are the reduction and repelling of invasive alien fish species and fish-consuming vertebrate species that endanger native fish populations.
- In order to protect native fish population, releasing non-native fish and invasive non-native fish is prohibited. Alien live bait can only be used in fisheries where the alien fish was caught.
- The following invasive alien species are listed by the EU:
 - Stone moroko (*Pseudorasbora parva*),
 - Pumpkinseed (*Lepomis gibbosus*),
 - Chinese sleeper (*Perccottus glenii*).

These species may not be caught by fishery gears and methods that are listed in the Fishery Act (see more: Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance.)

4.4. Poland

Various changes to Polish legislation governing IAS management are likely to come into force in late 2021/early 2022. The detail below is correct as of May 2021. Practitioners should check with the Polish authorities to make sure the new legislation is being followed.

I. Protection of animal rights

The Act of August 21, 1997 on the protection of animals (Journal Of Laws 1997 No. 111, item 724) / Ustawa z dnia 21 sierpnia 1997 r. o ochronie zwierząt (Dz. U. 1997 Nr 111 poz. 724)

The Animal Protection Act lays down the rules of conduct in relation to all vertebrate animals. The

individual chapters of this act refer to a range of different aspects such as: free-living (wild) animals (Chapter 6), animal transport (Chapter 7), rules for conducting medical and veterinary treatments on animals (Chapter 8), the procedure for slaughtering, killing and reducing the animal populations (Chapter 10), as well as aspects such as supervision over compliance with animal protection regulations (Chapter 10a).

Provisions of the Chapter 1 important for IAS management:

- Art. 6. 1. It is forbidden to kill animals, except for:
 - 2) catching fish in accordance with the provisions on fisheries and inland fisheries,
 - 3) the need to kill immediately,
 - 4) actions necessary to remove a serious health hazard to humans or animals,
 - 5) removing individuals that pose a direct threat to humans or other animals, if no other way to remove the threat is possible,
 - 6) hunting, shooting and reducing the population of game animals,
 - 9) killing animals of alien species threatening native species or natural habitats within the meaning of the Act of 16 April 2004 on nature protection - conducted in accordance with art. 33 and separate regulations.

Provisions of the Chapter 6 important for IAS management:

- Art. 21. Free-living (wild) animals constitute a national good and should be provided with conditions for development and free existence, except for those referred to in Art. 33a paragraph. 1.

Provisions of the Chapter 7 important for IAS management:

- Art. 24. The rules of conduct in the field of the transport of vertebrate animals are laid down in Council Regulation (EC) No. 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97 (Journal of Laws UE L 3 of 05.01.2005, p. 1), hereinafter referred to as "Regulation No 1/2005",
- Art. 24a. A district veterinarian performs the tasks and powers of the competent authority specified in Regulation No. 1/2005.

Provisions of the Chapter 8 important for IAS management:

- Art. 27. 1. Medical and veterinary treatments on animals are allowed to save their life or health and for the necessary population reduction, and may be performed only by authorized persons.
- Art. 27. 2. Medical-veterinary and zoo-technical treatments or other treatments resulting from production technology may be performed on animals only by persons with qualifications specified in separate regulations, with due care being taken to limit the suffering and stress of the animal,
- Art. 27. 3. Procedures causing pain are performed under general or local anaesthesia, with the exception of those procedures which, according to the principles of veterinary art, are performed without anaesthesia.

Provisions of the Chapter 10 important for IAS management:

- Art. 33:
 - 1a. The killing of animals may only take place in a humane manner, which involves inflicting a minimum of physical and mental suffering.
 - 3a. When the immediate killing of an animal is necessary for the implementation of the tasks related to the protection of nature in the area of the national park, the need to kill the animal posing a threat is stated in the administrative decision by the director of the national park where the animal is located. The persons authorized to implement the decision are employees of the National Parks Service authorized by the director of the national park.
 - 4. If it is necessary to kill immediately, this operation is carried out by: 1) administration of a sedative - by a veterinarian; 2) shooting a free-living (wild) animal - by a person authorized to use a firearm.
- Art. 33a:
 - Where animals pose an extraordinary threat to human life, health or economy, including hunting, it is allowed to take measures to reduce the population of these animals.

- 2. The voivodship parliament, after consulting the regional nature protection council, social organization whose statutory purpose is to protect animals, and the Polish Hunting Association, shall determine, by resolution, the place, conditions, time and ways of limiting the animal population referred to in paragraph 1.
- Art. 34:
 - A vertebrate animal in a slaughterhouse may be killed only after it has been rendered unconscious by appropriately qualified persons.
 - 4. It is forbidden to:
 - killing animals in the period constituting 10% of the duration of pregnancy for a given species, immediately preceding the planned date of delivery, and 48 hours after delivery, with the exception of: b) the need for immediate killing,
 - slaughter or killing of vertebrate animals with the participation of children or in their presence;
 - evisceration, fur/hairs burning, skin removal, smoking and separation of parts of warm-blooded animals, before the cessation of respiratory and muscular reflexes.
 - The minister responsible for agriculture shall determine, by way of a regulation:
 - qualifications of persons entitled to professional slaughter,
 - conditions for unloading, moving, detaining, immobilizing animals for the purpose of slaughtering or killing animals,
 - conditions and methods of slaughter and killing animals according to the species - with a view to ensuring the humane treatment of animals during their slaughter or killing.

Provisions of the Chapter 10a important for IAS management:

- Art. 34a. 1. The Veterinary Inspection supervises compliance with the provisions on the protection of animals.
- Art. 34a. 3. Non-governmental organizations whose statutory goal is to protect animals, may cooperate with the Veterinary Inspection in exercising the supervision referred to in par. 1.

According to the act on the protection of animals it is forbidden to kill wild animals, with the exception of animals of alien species threatening native species or natural habitats within the meaning of the **Regulation of the Minister of Environment of 9 September 2011 on the list of plants and animals of alien species which, if released into the natural environment, may pose a threat to native species or natural habitats (Journal of Laws 2011, No. 210, item 1260) / Rozporządzenie Ministra Środowiska z dnia 9 września 2011 r. w sprawie listy roślin i zwierząt gatunków obcych, które w przypadku uwolnienia do środowiska przyrodniczego mogą zagrozić gatunkom rodzimym lub siedliskom przyrodniczym (Dz.U. 2011 nr 210 poz. 1260).**

Regulation of the Minister of Agriculture and Rural Development of 9 September 2004 on the qualifications of persons entitled to professional slaughter as well as the conditions and methods of slaughter and killing animals (Journal of Laws 2004 No 205, item. 2102) / Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi z dnia 9 września 2004 r. w sprawie kwalifikacji osób uprawnionych do zawodowego uboju oraz warunków i metod uboju i uśmiercania zwierząt (Dz.U. 2004 nr 205 poz. 2102)

- The regulation specifies the required qualifications of people who kill (slaughter) animals.

Regulation of the Minister of Agriculture and Rural Development of September 2, 2003 on the minimum conditions for the maintenance of individual species of farm animals (Journal of Laws of 2003, No. 167, item 1629) / Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi z dnia 2 września 2003 r. w sprawie minimalnych warunków utrzymania poszczególnych gatunków zwierząt gospodarskich (Dz.U. 2003 nr 167 poz. 1629)

- The regulation defines the conditions for keeping farm animals.

Act of 15 January 2015 on the protection of animals used for scientific or educational purposes (Journal of Laws of 2015, item 266) / Ustawa z dnia 15 stycznia 2015 r. o ochronie zwierząt wykorzystywanych do celów naukowych lub edukacyjnych (Dz.U. 2015 poz. 266)

- Provisions governing the conduct of animal experiments.

Regulation of the Minister of Science and Higher Education of 5 May 2015 on training, apprenticeships and internships for people performing activities related to the use of animals

for scientific or educational purposes (Journal of Laws of 2015, item 628) / Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 5 maja 2015 r. w sprawie szkoleń, praktyk i staży dla osób wykonujących czynności związane z wykorzystywaniem zwierząt do celów naukowych lub edukacyjnych (Dz.U. 2015 poz. 628)

- Regulation on the requirements that must be met by people who plan and carry out experiments on animals and kill laboratory animals.

Regulation of the Minister of Agriculture and Rural Development of 14 December 2016 on the minimum requirements to be met by a center and minimum requirements for the care of animals kept in the center (Journal of Laws of 2016, item 2139) / Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi z dnia 14 grudnia 2016 r. w sprawie minimalnych wymagań, jakie powinien spełniać ośrodek, oraz minimalnych wymagań w zakresie opieki nad zwierzętami utrzymywanymi w ośrodku (Dz.U. 2016 poz. 2139)

- The regulation defines the conditions for keeping laboratory animals.

II. Nature protection

Act of April 16, 2004 on nature protection (Journal of Laws of 2004, No. 92, item 880) / Ustawa z dnia 16 kwietnia 2004 r. o ochronie przyrody (Dz.U. 2004 nr 92 poz. 880)

- Art. 120. 1. It is forbidden to introduce into the natural environment and to move in this environment of plants, animals or fungi of alien species.
- Art. 120. 2f. The minister responsible for the environment, in consultation with the minister responsible for agriculture, shall define, by way of a regulation, a list of plants, animals and fungi of alien species which, if released into the natural environment, may pose a threat to native species or natural habitats, guided by the need to ensure the continuity and existence of protection of the diversity of native plant, animal or fungi species.
- Art. 11. 4. The minister responsible for the environment shall establish, by way of an ordinance, a game protection zone, specifying the areas included in it, as well as the criteria and methods for maintaining the appropriate number and structure of the population of individual game species, taking into account the need to:
 - the protection of game species in national parks;
 - creating a safety zone for game species coming to feeding grounds outside the national park;
 - maintaining the appropriate number and structure of the population of individual species of game animals in the area of the national park in order to maintain the natural balance.
 - The protection of game animals in the game protection zone is the responsibility of the director of the national park.

III. Hunting law

The Act of October 13, 1995, Hunting Law (Journal Of Laws 1995 No. 147, item 713) / Ustawa z dnia 13 października 1995 r. Prawo łowieckie (Dz.U. 1995 nr 147 poz. 713)

- Art. 3. The purpose of hunting is:
 - protection, preservation of diversity and management of populations of game animals;
 - 2) protection and shaping of the natural environment to improve the living conditions of animals.
- Art. 42aa. It is forbidden to:
 - 2) collecting, possessing, manufacturing, storing or marketing poaching tools and devices;
 - 3) gaining the unlawfully obtained carcass or trophies of game animals;
 - 5) a person authorized by the lessee or the manager of the hunting district authorizes a person who is not authorized to perform hunting to hunt;
 - 6) acquiring game of a different species, sex or in more than the authorization issued by the leaseholder or the manager of the hunting district;
 - 7) a person authorized by the leaseholder or the manager of the hunting district authorizes to exceed the acquisition of game approved in the annual hunting plan;
 - 8) hunting for migratory game birds on the seashore in a strip of 3000 m inland from the shore or 5000 m inland;
 - 9) hunting with sighthounds or their hybrids;
 - 10) hunting during the protective period;
 - 11) hunting without hunting license;

- 12) gaining possession of game by means of weapons and ammunition other than hunting, explosives and poisons, intoxicating food, artificial light, sticks, snares, pits, self-shooting or digging holes traps and other prohibited means;
 - 13) shooting at game at a distance less than 500 m from the place of public meetings during their duration or at a distance less than 150 m from residential buildings;
 - 15) performing hunting in the presence or participation of children up to 18 years of age.
- Art. 44a.
- 1. The leaseholder or the manager of the hunting circuit may catch predators in live traps.
 - 1a. The leaseholder or the manager of the hunting district kills predators caught in live traps with the use of hunting weapons or other methods used in slaughtering farm animals in order to reduce them.

Regulation of the Minister of the Environment of 23 March 2005 on detailed conditions for hunting and marking carcasses (Journal of Laws 2005 No. 61 item 548) / Rozporządzenie Ministra Środowiska z dnia 23 marca 2005 r. w sprawie szczegółowych warunków wykonywania polowania i znakowania tusz (Dz.U. 2005 nr 61 poz. 548)

- § 3. [Weapons used due to the type of hunting]:
- Only hunting firearms are allowed to hunt and shoot animals that pose an extraordinary threat to human life, health or economy, which, when fully loaded, can fire up to six single shots; the magazine of semi-automatic firearms may contain a maximum of two rounds.
 - 4. For hunting small game, only hunting cartridges with shots up to 4.5 mm in diameter are used.
 - Predators are hunted with the hunting bullets mentioned in paragraph. 2 and 3, hunting cartridges mentioned in sec. 4 or hunting cartridges with solid shells.
- § 5.:
- When performing hunting, it should be taken into account that: 1) hunting with dogs or battue may take place in the period from October 1 to January 15; this restriction does not apply to hunting game birds with dogs, and hunting foxes with dogs, and hunting for a gunshot with a dog on the edge; 3) the hunter should search, investigate and kill the injured game as quickly as possible and in a way that spares it unnecessary suffering; 5) hunting for birds may take place under the condition that a dog arranged for this purpose is used, however, there is one dog for no more than three hunters;
- § 6. During hunting, no shots are taken at:
- 1) doe-guides;
 - 2) game near feeders, licks, barrier belts and points of permanent feeding, except for hunting at bait for wild boars and predators;
 - 3) game from motor vehicles and horse-drawn vehicles, as well as power boats with a running engine;
 - 4) game in fenced feeding plots during the vegetation period of the plants grown there and when they are made available to game; 5) non-flying birds, with the exception of hazel grouses, geese and coots;
 - 6) hares standing still in the field;
 - 7) unrecognized targets.
- § 9:
- 1. When crossing, driving through or staying in a hunting district in which the hunter is not authorized to hunt, when using public means of transport and while in towns and settlements, the hunter's gun must be unloaded and put in a case.
 - 2. When crossing or driving through built-up areas, or when driving a vehicle, in the circuit where the hunter is hunting, the gun should be unloaded.
- § 47. [Hunting with hunting birds] 1. Hunting with hunting birds may be carried out individually or collectively.

Regulation of the Minister of the Environment of September 29, 2009 on the use of live traps (Journal of Laws 2009 no. 167 item 1321) / Rozporządzenie Ministra Środowiska z dnia 29 września 2009 r. w sprawie stosowania pułapek żywołownych (Dz.U. 2009 nr 167 poz. 1321)

- § 2. The following species of predators, hereinafter referred to as "predators", may be caught in live traps: 1) raccoon dog (*Nyctereutes procyonoides*); 2) raccoon (*Procyon lotor*).
- § 3. On behalf of the lessee or the manager of the hunting district, traps may be used by a person who has his written authorization.
- § 4. 1. Catches of predators in live traps may be carried out during hunting periods for individual species. 2. Catches of predators in live traps may only be carried out within the limits of hunting zones.
- § 5. Predators are caught within the number of animals planned to be obtained in the annual hunting plan in force in the marketing year.
- § 6. 1. For catching predators, stationary and portable live traps may be used, the location of which the leaseholder or the manager of the hunting circuit informs the owner or manager of the land about.
- § 6. 2. Live traps may be traps: 1) cage; 2) box; 3) tubular. 3. Live traps may be traps: 1) pass-through - enabling the predator to enter from both sides; 2) one-sided - allowing the predator to enter only from one side.
- § 7. 1. Live traps should meet the following conditions: 1) be non-injurious traps, including those that do not catch the limb; 2) be sized to the size of predators; 3) ensure the response of the ratchet mechanism to the weight of specific predators; 4) be equipped with a bait that only attracts predators; 5) in the case of box traps - be equipped with an opening to control the contents of the trap; 6) have a safety device preventing a captured predator from leaving.
- § 7. 2. Traps should be inspected at least once a day by persons holding the authorization referred to in § 3.

Regulation of the Minister of the Environment of 11 March 2005 on the list of game species (Journal of Laws of 2005, No. 45, item 433) / Rozporządzenie Ministra Środowiska z dnia 11 marca 2005 r. w sprawie ustalenia listy gatunków zwierząt łownych (Dz.U. 2005 nr 45 poz. 433)

- The regulation specifies a list of game species to which includes *Nyctereutes procyonoides*, *Procyon lotor* and *Ondatra zibethicus*.

IV. Fishing law

Announcement of the Minister of Maritime Economy and Inland Navigation of 25 September 2018 on the publication of a uniform text of the Regulation of the Minister of Agriculture and Rural Development on catching fish and conditions for rearing, breeding and catching other organisms living in water (Journal of Laws 2018, item 2003) - Ordinance of the Minister of Agriculture and Rural Development of November 12, 2001 on catching fish and conditions of rearing, breeding and catching other organisms living in water (Journal of Laws of 2001, No. 138, item 1559) / Obwieszczenie Ministra Gospodarki Morskiej i Żeglugi Śródlądowej z dnia 25 września 2018 r. w sprawie ogłoszenia jednolitego tekstu rozporządzenia Ministra Rolnictwa i Rozwoju Wsi w sprawie połowu ryb oraz warunków chowu, hodowli i połowu innych organizmów żyjących w wodzie (Dz.U. 2018 poz. 2003) - Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi z dnia 12 listopada 2001 r. w sprawie połowu ryb oraz warunków chowu, hodowli i połowu innych organizmów żyjących w wodzie (Dz.U. 2001 nr 138 poz. 1559)

The regulation describes the permissible conditions and methods of fishing/angling.

5. Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance

5.1. Croatia

The act on freshwater fishing (OG 63/19) from 6th of July 2019 / Zakon o slatkovodnom ribarstvu NN 63/19, na snazi od 06.07.2019

- Under the restrictions section in this act, it states that it is prohibited to use invasive and/or alien species of fish as bait regardless if they are alive or dead.

The Act on hunting (OG 99/18, 32/19, 32/20) from 17th of November 2018 / Zakon o lovstvu NN 99/18, 32/19, 32/20 na snazi od 17.11.2018

- No invasive alien species listed by the EU are considered huntable in Croatia.

5.2. Czechia

Game management Act No. 449/2001 Coll. Zákon o myslivosti

From the Union list of IAS species, only muskrat is a game species in the Czech Republic. However, the hunting law allows to game-keeper guard, in § 14 a) *To kill the racoon, racoon dog, mink or coypu and other introduced, in the wild undesirable, animal species, the list of which shall be laid down by a decree.* The decree, however, has not been issued yet, so the number of species game-keeper is allowed to hunt remains racoon, racoon dog, mink and coypu. For all game species following hunting methods are banned: using snares, spring traps, neck-hold traps and it is also prohibited to use gas for killing the game species.

No. 246/1992 Coll. (Act), on the protection of animals from cruelty / 246/1992 Sb. Zákon na ochranu zvířat proti týrání

For the purposes of this Act, the “animals” means a *live vertebrate, excluding foetal or embryonic forms*, thus refers to all IAS species. According to this law, some of the management measures are restricted or prohibited from use. It is forbidden namely to *use a springe, deadfall, trapping net, noose, snare, harpoon or jaw traps or using a similarly constructed instrument, use a poisoned baits and poison in any form including gassing, use electric current, and live animals as decoys or baits.*

No. 114/1992 Coll. (Act) on the protection of nature and landscape / 114/1992 Sb. Zákon o ochraně přírody a krajiny

According § 5 4) *An intentional spread of geographically non-native plant or animal species and of plant or animal hybrids into the landscape is possible only with a permit of the nature protection authority.* Moreover in § 16, 26, 29 and 34 is written - *in national parks, protected landscape areas, national natural reserves and natural reserves, it is forbidden to allow or to conduct intentional release of geographically non-native plant and animal species.*

5.3. Hungary

41/2010. (II. 26.) government decree on the keeping and trade of pets / 41/2010. (II. 26.) Korm. rendelet a kedvtelésből tartott állatok tartásáról és forgalmazásáról

- According to 1998. XXVIII. Animal Protection and Welfare Act 24/F. §, animals which are ecologically dangerous to the native flora and fauna of the country are listed in Annex 1. According to this Annex 1, the keeping of the following vertebrate species listed by the European Union has been prohibited for private persons in Hungary since 2010:
 - Chinese sleeper (*Percottus glehni*),
 - American bullfrog (*Rana catesbeiana*),
 - Red-eared slider (*Trachemys scripta elegans*) – specimens with armour lengths less than 15 cm,
 - Ruddy duck (*Oxyura jamaicensis*),
 - Raccoon (*Procyon lotor*),
 - Raccoon dog (*Nyctereutes procyonoides*),
 - Coypu (*Myocastor coypus*),
 - Grey squirrel (*Sciurus carolinensis*),
 - Fox squirrel (*Sciurus niger*),
 - Pallas's squirrel (*Callosciurus erythraeus*).

32/1999. (III. 31.) decree of the Ministry of Agriculture and Rural Development on the animal protection rules for keeping farm animals / 32/1999. (III. 31.) FVM rendelet a mezőgazdasági haszonállatok tartásának állatvédelmi szabályairól

- It is forbidden to keep specimens of species for their fur except the long-tailed chinchilla (*Chinchilla lanigera*) and the angora rabbit (*Oryctolagus cuniculus var. domestica*). Earlier, the legislation allowed the breeding of the coypu (*Myocastor coypus*) and the American mink (*Mustela vison*), but this is banned since 2020. All other invasive alien vertebrate species that could possibly be bred for their fur are banned in Hungary since 1999.

Act on Conservation of Game, Game Management and Hunting No. 53 of 1996; 79/2004. (V. 4.) FVM decree on the rules for implementing the 1996. LV. act on the protection of game, game management and hunting rules for implementing the 1996. LV. Act / 1996. évi LV. törvény a vad védelméről, a vadgazdálkodásról, valamint a vadászatról; 79/2004. (V. 4.) FVM rendelet a vad védelméről, a vadgazdálkodásról, valamint a vadászatról szóló 1996. évi LV. törvény végrehajtásának szabályairól

- The following invasive alien species of listed by the EU are huntable in Hungary:
 - Egyptian goose (*Alopochen aegyptiaca*),
 - Muskrat (*Ondatra zibethicus*),
 - Raccoon dog (*Nyctereutes procyonoides*),
 - Raccoon (*Procyon lotor*).

According to the hunting act these species may not be hunted with hunting gear and methods listed in sections 37/A and 37/B of the Hunting Act (see next two points).

- Prohibited hunting gears: poisoned and explosive-headed arrows; crossbow; a silencer mounted on a firearm; loop, hook, aviary, pit; nets which are non-selective according to their principle or their conditions of use; automatic and self-loading (semi-automatic) bullet firearms; blind or mutilated live bait; electric shock devices; explosives other than for trapping mammals with nets; night vision aiming devices consisting of an electronic magnifier or image converter; poisoned or sedative baits.
- Prohibited hunting methods: game can only be killed or captured as specified by the Hunting Act. It is prohibited to capture or kill game species by poison or by trapping methods provided for in Regulation (EEC) No 3254/91 of 4 November 1991 prohibiting the use of leghold traps in the Community and prohibiting the importation of fur and products derived from certain species of wild animals originating in countries which use killing traps or methods which do not comply with humane trapping standards. The prohibited hunting methods are the following: hunting, regardless of the hunting season, at a time when the possibility of escape of the game animal is significantly limited for any natural reason.
- In the case of Egyptian goose, killing is only allowed in a certain period of the year in order to ensure the peace of other goose species (close season: 01.02-30.09.). In case of a complete hunting ban to ensure the peace of the waterfowl, the ban automatically extends to the Egyptian goose. Where hunting with lead shot is prohibited, it also applies to this species.

2013 CII. Act on Fish Management and Protection of Fish; 133/2013. (XII. 29.) VM decree on the establishment of certain rules of fish management and fish protection / 2013. évi CII. törvény a halgazdálkodásról és a hal védelméről; 133/2013. (XII. 29.) VM rendelet a halgazdálkodás és a halvédelem egyes szabályainak megállapításáról

- The following invasive alien species listed by the EU are fishable in Hungary:
 - Stone moroko (*Pseudorasbora parva*),
 - Pumpkinseed (*Lepomis gibbosus*),
 - Chinese sleeper (*Perccottus glenii*).

These species may not be caught by fishery gears and methods listed in the Fishery Act (see next points).

- It is forbidden to use any fishing tool or method for catching fish that may damage or endanger the fish population or its habitat.

Prohibited fishing methods: the use and possession (in or on the banks of a fishery) of any fishing device that is based on the physiological effects of electricity on fish; use of a toxic or narcotic substance; use of explosives; use of a sharp tool; use of diving harpoons or other diving equipment suitable for catching fish; application of raking; application of the loop fishing method; use of a self-

hooking method with a line hook, bottom hook, flap hook or spring principle; applying gill net.

5.4. Poland

Act of April 16, 2004 on nature protection (Journal of Laws of 2004, No. 92, item 880) / Ustawa z dnia 16 kwietnia 2004 r. o ochronie przyrody (Dz.U. 2004 nr 92 poz. 880)

Keeping, breeding, reproducing, offering for sale and selling alien species which, if released into the natural environment, may pose a threat to native species or natural habitats, is possible only after obtaining a permit from the competent regional director of environmental protection (Article 120 (2) (2) of the Act on nature conservation). On the other hand, importing invasive alien species from abroad and keeping, breeding, reproducing, offering for sale and selling these imported specimens requires the consent of the General Director for Environmental Protection (Article 120 (2) (1) of the Nature Conservation Act).

Regulation of the Minister of Environment of 9 September 2011 on the list of plants and animals of alien species which, if released into the natural environment, may pose a threat to native species or natural habitats (Journal of Laws 2011, No. 210, item 1260) / Rozporządzenie Ministra Środowiska z dnia 9 września 2011 r. w sprawie listy roślin i zwierząt gatunków obcych, które w przypadku uwolnienia do środowiska przyrodniczego mogą zagrozić gatunkom rodzimym lub siedliskom przyrodniczym (Dz.U. 2011 nr 210 poz. 1260)

- The following species from the list of 22 vertebrate IAS of Union concern are listed:
Pseudorasbora parva, *Pseudorasbora parva*, *Lithobates catesbeianus*, *Lithobates catesbeianus*, *Alopochen aegyptiaca*, *Oxyura jamaicensis*, *Procyon lotor*, *Sciurus carolinensis*.
- In accordance with Polish legislation, invasive species in Poland are those listed in the appendix to the ordinance of the Minister of the Environment of September 9, 2011 on the list of plants and animals of alien species which, if released into the natural environment, may pose a threat to native species or natural habitats. Thus, only these species are subject to the regulation specified in Art. 120 of the Act of April 16, 2004 on nature protection (Journal of Laws of 2013, item 627, as amended), prohibiting their introduction into the natural environment and movement within it.

Keeping, breeding, reproducing, offering for sale and selling alien species which, if released into the natural environment, may pose a threat to native species or natural habitats, is possible only after obtaining a permit from the competent regional director of environmental protection (Article 120 (2) (2) of the Act on nature conservation). On the other hand, importing invasive alien species from abroad and keeping, breeding, reproducing, offering for sale and selling these imported specimens requires the consent of the General Director for Environmental Protection (Article 120 (2) (1) of the Nature Conservation Act).

Announcement of the Marshal of the Sejm of the Republic of Poland of October 14, 2019 on the publication of the uniform text of the Inland Fisheries Act (Journal of Laws of 2019, item 2168) - The Act of 18 April 1985 on Inland Fisheries (Journal of Laws 1985 No.21 item 91) / Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dnia 14 października 2019 r. w sprawie ogłoszenia jednolitego tekstu ustawy o rybnictwie śródlądowym (Dz.U. 2019 poz. 2168) - Ustawa z dnia 18 kwietnia 1985 r. o rybnictwie śródlądowym (Dz.U. 1985 nr 21 poz. 91)

- Art. 3i. It is prohibited to: 1) introduce fish of a foreign species, the introduction of which requires a permit, without the required permit or contrary to the conditions specified in this permit (the implication of this regulation is the prohibition of releasing caught fish of non-indigenous species).

Announcement of the Minister of Maritime Economy and Inland Navigation of 25 September 2018 on the publication of a uniform text of the Regulation of the Minister of Agriculture and Rural Development on catching fish and conditions for rearing, breeding and catching other organisms living in water (Journal of Laws 2018, item 2003) - Ordinance of the Minister of Agriculture and Rural Development of November 12, 2001 on catching fish and conditions of rearing, breeding and catching other organisms living in water (Journal of Laws of 2001, No. 138, item 1559) / Obwieszczenie Ministra Gospodarki Morskiej i Żeglugi Śródlądowej z dnia 25 września 2018 r. w sprawie ogłoszenia jednolitego tekstu rozporządzenia Ministra Rolnictwa i Rozwoju Wsi w sprawie połowu ryb oraz warunków chowu, hodowli i połowu innych organizmów żyjących w wodzie (Dz.U. 2018 poz. 2003) - Rozporządzenie Ministra Rolnictwa i

Rozwoju Wsi z dnia 12 listopada 2001 r. w sprawie połowu ryb oraz warunków chowu, hodowli i połowu innych organizmów żyjących w wodzie (Dz.U. 2001 nr 138 poz. 1559)

- § 8. After being caught, fish from the species of *Perccottus glenii* and *Pseudorasbora parva* should not be released into the fishery where they were caught, or into other waters.

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Appendix 39. Regional conditions for the Continental West region

Germany (DE), Denmark (DK) and Luxembourg (LU)

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1. Species presence in Member States from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each Member State in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)

Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopoche aegyptiaca</i>	<i>Collosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Germany																						
Presence	P	P	NP	NP	NP	P	P	P	P	P	P	P	P	P	NP	P	P	NP	NP	P	P	P
Status	O	W				W	R	O	W	O	W	W	O	O		W	W			R	O	W
Impact	Y	Y				Y	Y	?	Y	?	Y	Y	Y	Y		Y	Y			Y	Y	Y
Highest impact									+			+				+						
References	[4; 41; 43]	[10; 42; 43]	[42; 43]	[42; 43]	[42; 43]	[8; 41; 43]	[26; 42; 43]	[42; 43]	[15; 19; 42; 43; 59; 67]	[42; 43]	[14; 23; 24; 42; 43; 44; 65; 66]	[6; 17; 42; 43]	[9; 41; 43]	[8; 41; 43; 64]	[43]	[28; 29; 42; 43; 62; 63]	[8; 42; 43; 58]	[42; 43]	[2; 43]	[1; 27; 42; 43]	[42; 43]	[18; 25; 42; 43; 58]
Denmark																						
Presence	NP	P	NP	NP	NP	P	NP	P	P	P	P	P	P	NP	NP	P	P	NP	NP	P	P	P
Status		R				R		O	O	O	W	W	O			O	W			O	O	W
Impact		Y				Y		N	N	N	Y	Y	N			N	Y			N	N	?
Highest impact											+	+										
References		[16; 20; 21; 20]	[20]	[4; 57]	[20]	[7; 22; 47]	[20]	[20]	[20; 33]	[20; 36]	[3; 20; 20]	[5; 20]	[9; 16; 31]	[20]	[PC]	[20; 39]	[20; 32]	[20]	[20]	[20; 37]	[16; 34]	[20; 38]

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosiurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
		30; 40]									35; 45]											
Luxembourg																						
Presence	NP	P	NP	NP	NP	P	NP	NP	P	NP	NP	P	NP	NP	NP	P	P	NP	NP	NP	NP	P
Status		W				R			O			W				W	O					R
Impact		Y				Y			?			Y				Y	Y					Y
Highest impact						+						+					+					
References	[2]	[1; 49]	[2]	[2]	[2]	[46; 50]	[2]	[2]	[51]	[2]	[52]	[13; 53; PC]	[2; 9]	[2]	[PC]	[48; 54; 60]	[12; 55]	[2]	[2]	[2]	[2]	[56]

References:

1. Adriaens et al. (2019); 2. Anonymous. (2015-2021); 3. Baagoe & Jensen (2007); 4. Bauer & Woog (2008); 5. Birnbaum (2014); 6. Burghause (1996); 7. CABI Invasive Species Compendium (2020); 8. Christian Wiesner et al. (2010); 9. Cranswick & Hall (2010); 10. Curtis et al. (2007); 11. De Sousa (2019); 12. De Sousa (2020); 13. De Sousa & Louis (2019); 14. Drygala et al. (2008); 15. Feldhaus & Steinberg (2015); 16. Fox et al. (2015); 17. Fritz (2017); 18. Geiger (1996); 19. Gethöffer & Siebert (2020); 20. Grousset et al. (2018); 21. Gyimesi & Lensinik (2012); 22. Jensen (2002); 23. Kauhala et al. (2000); 24. Kauhala & Kowalczyk (2011); 25. Kordges (2011); 26. Laufer (2007); 27. Marmet et al. (2011); 28. Michler (2017); 29. Michler & Michler (2012); 30. Miljøstyrelsen. Factsheet - Egyptian Goose; 31. Miljøstyrelsen. Species Lexicon - Amerikansk skarveand; 32. Miljøstyrelsen. Species Lexicon - Båndgrundling; 33. Miljøstyrelsen. Species Lexicon - Coypu; 34. Miljøstyrelsen. Species Lexicon - Hellig ibis; 35. Miljøstyrelsen. Species Lexicon - Mårhund; 36. Miljøstyrelsen. Species Lexicon - Næsebjørn; 37. Miljøstyrelsen. Species Lexicon - Sibirisk jordeger; 38. Miljøstyrelsen. Species Lexicon - Terrapin; 39. Miljøstyrelsen. Species Lexicon - Vaskebjørn; 40. Miljøstyrelsen. Species Lexicon Nilgås; 41. Nehring et al. (2015); 42. Nehring & Skowronek (2017); 43. Nehring & Skowronek (2020); 44. Opermanis et al. (2001); 45. Pagh & Chriel (2017); 46. Pfeiffenschneider (2020); 47. Przybylski & Zięba (2020); 48. Ries et al. (2014); 49. Ries (2015a); 50. Ries (2015b); 51. Ries (2015c); 52. Ries (2015d); 53. Ries (2015e); 54. Ries (2015f); 55. Ries (2015g); 56. Ries (2015h); 57. Ryall (2016); 58. Scheibner et al. (2015); 59. Scheide (2013); 60. Schley et al. (2014); 61. Schneeweiß (2016); 62. Schneeweiß et al. (2019); 63. Schönbrodt (2015); 64. Nehring et al. (2010); 65. Sutor et al. (2010); 66. Sutor et al. (2014); 67. Vossmeier et al. (2016).

2. Toolbox of measures - restrictions/bans in Member States from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in an EU Member State = * followed by MS country code

Use of measure **banned** in an EU Member State = # followed by MS country code

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trochermys scripta</i>
Biological control	Native predators			*DE #DK *LU	*DE #DK *LU							*DE #DK *LU		*DE #DK *LU			*DE #DK *LU
Habitat manipulation	Aquatic barriers – physical & non-physical			*DE *DK *LU								*DE *DK *LU		*DE *DK *LU			
	Aquatic habitat management - Pond drying/draining			*DE *DK *LU	*DE *DK *LU							*DE *DK *LU		*DE *DK *LU			*DE *DK *LU
	Physical terrestrial barriers		*DE *DK *LU		*DE *DK *LU												*DE *DK *LU
Hand removal	Hand removal	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU							*DE *DK *LU		*DE *DK *LU		*DE *DK *LU	*DE *DK *LU
	Physical fishing methods			*DE *DK *LU	*DE *DK *LU							*DE *DK *LU		*DE *DK *LU			*DE *DK *LU
	Egg oiling		*DE *DK *LU								*DE *DK *LU					*DE *DK *LU	

Category	Measure name	<i>Acribatheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottatus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Electrofishing			*DE *DK *LU	*DE *DK *LU							*DE *DK *LU		*DE *DK *LU			
	Fertility Control - chemical (in bait) & injection				*DE #DK *LU	*DE #DK *LU		*DE #DK *LU	*DE *DK *LU	*DE #DK *LU			*DE #DK *LU		*DE #DK *LU		
	Hunting dogs (tracking/ baying)					*DE *DK *LU	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU			*DE *DK *LU		*DE *DK *LU		*DE *DK *LU
	Judas animals	*DE *DK *LU	*DE *DK *LU			*DE *DK *LU	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU		*DE *DK *LU		*DE *DK *LU	*DE *DK *LU	*DE *DK *LU
Poisoning or toxicants	Stupefying bait	*DE #DK #LU	*#DE #DK #LU			*DE #DK #LU										*DE #DK #LU	
	Chemical treatment of the habitats			*DE *DK *LU	*DE *DK *LU		*DE *DK *LU			*DE *DK *LU		*DE *DK *LU		*DE *DK *LU			
	Poisons and toxins in bait									#DE #DK #LU							
Shooting	Shooting	*DE *DK *LU	*DE *DK *LU		*DE *DK *LU	*DE *DK *LU	*DE *DK *LU	#*DE #*DK #*LU	*DE *DK *LU	*DE *DK *LU	*DE *DK *LU		*DE *DK *LU		*DE *DK *LU	*DE *DK *LU	
Trapping	Drowning traps						#DE #DK #LU			*DE #DK #LU							
	Goodnature self-resetting traps *#DE#DK#LU																
	Spring traps						*DE #DK #LU	#*DE #*DK #*LU	#DE #DK #LU	*DE #DK #LU			*DE #DK #LU		#DE #DK #LU		
	Cage traps	*DE *DK #LU	*DE *DK *LU			*DE *DK *LU	*DE *DK *LU	#*DE #*DK #*LU	*DE *DK #LU	*DE *DK *LU	*DE *DK *LU		*DE *DK *LU		*DE *DK *LU		*DE *DK *LU

Category	Measure name	<i>Acribatheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottatus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
	Neck-hold traps, and snares						*DE #DK #LU	*DE #DK #LU	#DE #DK #LU				#DE #DK #LU					
	Live decoy traps	*DE #DK #LU	*DE #DK #LU															
Dispatch/ removal only once captured	Cervical dislocation	*DE #DK #LU	*DE #DK #LU	#DE #DK #LU							*DE #DK #LU	#DE #DK #LU	#DE #DK #LU	*DE #DK #LU	*DE #DK #LU			
	Cranial depression	*DE #DK #LU	*DE #DK #LU		*DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	*DE #DK #LU	*DE #DK #LU		#DE #DK #LU		*DE #DK #LU	*DE #DK #LU		
	Decapitation	*DE #DK #LU	*DE #DK #LU	#DE #DK #LU	#DE #DK #LU							#DE #DK #LU		#DE #DK #LU	#DE #DK #LU	*DE #DK #LU		
	Electrocution	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU		#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU	#DE #DK #LU
	Freezing			#DE #DK #LU	#DE #DK #LU									#DE #DK #LU				#DE #DK #LU
	Injection euthanasia	*DE #DK #LU	*DE #DK #LU			*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU		*DE #DK #LU		*DE #DK #LU	*DE #DK #LU	*DE #DK #LU
	Keeping in captivity	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU
	Modified atmospheres	*DE #DK #LU	*DE #DK #LU				*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU		*DE #DK #LU		*DE #DK #LU	*DE #DK #LU	
	Shooting - dispatch restrained animals	#DE #DK #LU	*DE #DK #LU			*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU			*DE #DK #LU		*DE #DK #LU	#DE #DK #LU	
	Slaughter (knife)	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU		*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU		*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	*DE #DK #LU	

Category	Measure name	<i>Acribatheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Perccottus glenii</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Surgical sterilisation					*DE *DK *LU		*DE *DK *LU	*DE *DK *LU	*DE *DK *LU			*DE *DK *LU			*DE *DK *LU	

3. Details of restrictions/bans of Toolbox measures in Member States from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
Biological control: Native predators	<p>The introduction of native predators or enhancing of predatory activity might not only result in predation of target species (IAS), but might also affect non-target species, among which might be also specially protected species. Therefore, exemptions according to §45 (7) BNatSchG might have to be granted by the responsible authorities.</p> <p>In Germany, it is furthermore prohibited according to §39 BNatSchG to disturb or destroy the natural habitats of animals and plants without a sound reason and it is prohibited to destroy the habitats of especially protected species (§44 BnatSchG). §23 BNatSchG prohibits disturbance or destruction of nature conservation areas. The promotion of native predators for the management of IAS might result in deleterious changes to natural ecosystems or food-webs and might thus negatively affect habitats. Where those measurements affect especially protected species or nature conservation areas, the prohibitions of §§23 and 44 BNatSchG of non-target species and even protected species have to be respected.</p> <p>Releasing animals into the wild is restricted according to §40</p>	Germany	[4; 5; 7]	Permission from national authorities possible for persons with expert knowledge.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
	<p>BNatSchG and §28 BJagdG in addition to Federal Hunting and Nature Protection regulations. The handling of native predators that might involve translocation and capture has to respect animal welfare and to ensure that animals do not suffer unnecessary pain and stress according to §1 TSchG.</p> <p>For fish species, the use of native predators is also restricted.</p> <p>The measure is not explicitly cited as prohibited nor restricted, but native predators are not used as part of the management of invasive species.</p> <p>Restricted. The measure needs a permission from national authorities. Permit only for persons with expert knowledge.</p>	<p>Germany</p> <p>Denmark</p> <p>Luxembourg</p>	<p>[53,54]</p> <p>[33,36, pers. comm., workshop]</p> <p>[10]</p>	
Habitat manipulation: all measures listed	<p>Sound reason for habitat manipulation is necessary §39 BNatSchG, if particularly protected species are affected. For regulation of IAS, exemptions may be needed. A permit is necessary from national authorities according to the requests of BNatSchG and TSchG. Local regulations may additionally exist.</p> <p>Restricted. Permission by national authorities needed.</p> <p>Restrictions according to habitat zones. Permission needed.</p>	<p>Germany</p> <p>Denmark</p> <p>Luxembourg</p>	<p>[7]</p> <p>[35]</p> <p>[9, 10]</p>	Exemptions possible through §45 (7) BNatSchG or article 14 92/43 EWG. Local regulations for protected areas of Federal states have to be respected.
Hand removal (all types)	Restricted according to BNatSchG. Permission is needed from national authorities.	Germany	[7]	Exemptions possible through local authorities.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
	<p>Restricted. Permission from national authorities is needed.</p> <p>Restrictions possible according to type of habitat (habitat zones). Permission from national authorities is needed (pers. comm., workshop).</p>	<p>Denmark</p> <p>Luxembourg</p>	<p>[51]</p> <p>[10]</p>	
Hand removal: Physical fishing methods	<p>The use of most physical fishing methods is prohibited by §4 BartSchV, if species are not subject to hunting or fishery regulations. Exemptions can be made by federal district administration to prevent significant agricultural, forestry, fishing, water or other public service damage, to protect native flora and fauna, or for purposes of research, education or reintroduction, or for breeding for any of these purposes (§45 (7) BNatSchG). Exemptions according to federal state fishing regulations may be needed. A permit by national authorities may be needed.</p> <p>Restrictions on fishing devices. It is requested to have a permit from the Danish Ministry of the Environment and Food to use e.g. any kind of aquatic traps.</p> <p>Trapping and non-selective traps are prohibited as a measure of application to IAS of Union concern as expressed in the Grand-Ducal laws on nature protection and hunting. Exemptions can be made by national authorities.</p>	<p>Germany</p> <p>Denmark</p> <p>Luxembourg</p>	<p>[5; 7; 22; 53; 54]</p> <p>[9; 35]</p> <p>[10; 26; 27; 28]</p>	

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
Other: Egg oiling	Permit needed. Permit needed. Permit needed.	Germany Denmark Luxembourg	[7] [38] [10]	
Other: Electrofishing	Approval necessary from federal state authorities according to federal state regulations. Prohibited according to fishery regulations. Prohibited according to fishery regulations. Mentioned as management method in the action plan for Lepomis gibbosus .	Germany, Federal State of Hesse Denmark Luxembourg	[22] [2; 35] [24; 26; 55]	Exemptions possible for experts made by local authorities. Exemptions possible for specific purposes.
Other: Fertility Control - chemical (in bait) & injection	Restrictions probable due to BNatSchG, BArtSchG and likely exemptions have to be granted by national authorities according to the BNatSchG. The welfare of targeted species has to be respected according to §1 TSchG, in respect to recaptures for repeated administration or remote administration of the chemicals. Prohibited due to the complementary law on nature protection and animal welfare. Generally prohibited. For IAS control needs permission by national authorities.	Germany Denmark Luxembourg	[5; 6; 7] [34; 40] [10; 11; pers. comm., workshop]	Exemptions possible only for GPS – collared raccoon dogs by national authorities.
Other: Hunting dogs	The use of hunting dogs for tracking or baying may be restricted according to local and regional regulations on nature conservation and in general has to be in line with habitat, hunting	Germany	[7]	

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
	<p>and nature regulations and may therefore not disturb wild animals, especially if particularly protected species are present in the habitat.</p> <p>Hunting dogs as a measure for application to IAS of Union concern is not cited as prohibited or restricted. Hunting dogs are often used in relation to hunting and sometimes for luring species such as the racoon dog (<i>Nyctereutes procyonoides</i>) out of burrows.</p> <p>Hunting dogs as a measure for application to IAS Union of concern is not cited as prohibited or restricted.</p>	<p>Denmark</p> <p>Luxembourg</p>	<p>[37; 56]</p> <p>[10]</p>	
Other: Judas animals	The use of telemetric devices on animals in some federal states is subject to legislation for scientific use of animals, as well as animal welfare; a permit is needed.	Germany, Denmark, Luxembourg	[6; 8; 38]	
Poisoning or toxicants: Stupefying bait	<p>Use of stupefying bait is prohibited for game species, particularly protected species. There might be exemptions made depending on the federal state.</p> <p>Use of stupefying bait is prohibited.</p>	<p>Germany</p> <p>Denmark, Luxembourg</p>	<p>[4; 5]</p> <p>[10; 40]</p>	
Poisoning or toxicants: Chemical treatment of the habitats	Gassing or smoking is prohibited for particularly protected species, exemptions may be needed for IAS. The implementation of the measures requires a sound reason that justifies the impacts on other species (§ 39 BNatSchG) and an authorisation by the	Germany	[5; 19; 20; 21]	

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
	<p>responsible authorities has to be obtained as far as particularly protected species or their habitats are concerned (§§ 44 and 45 (7) BNatSchG). Additionally, local regulations for protected areas of Federal states have to be respected.</p> <p>Habitat manipulation needs permission by authorities due to protection of nature. If regulation of a species targets the prevention of undermining of dikes, dams or buildings, the Danish conservation authorities can permit the regulation by the use of gas. The use of rotenone is prohibited on <i>Pseudorasbora parva</i> due to its impact on the environment and human health. The use of poison for other than mice and rats is prohibited.</p> <p>Gassing or smoking is prohibited for capture and killing of mammals and birds. Chemical treatment of habitats is restricted as a measure of application to IAS of Union concern as expressed in the nature protection law. The use of rotenone is prohibited on <i>Pseudorasbora parva</i>. The use of poison is prohibited with exemptions for pest species.</p>	<p>Denmark</p> <p>Luxembourg</p>	<p>[37; 39; 50; 57]</p> <p>[10; 16]</p>	
Poisoning or toxicants: Poisons and toxins in baits	The use of poison or anaesthetic baits is prohibited for game species and particularly protected species.	Germany	[4; 6]	Exemptions can be made by federal district administration to prevent significant agricultural, forestry, fishing, water or other public service damage, to protect native flora and fauna, or for

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
	Shooting with semi-automatic or automatic weapons which magazine can contain more than two cartridges is prohibited for killing mammals and birds. For hunting huntable species, certain firearms are prohibited: (semi)automatic rifles, weapons equipped with an artificial light source, a device for night shooting or a silencer, pistols, revolvers. For shooting raccoon, racoon dog, muskrat , American mink or coypu , metal grain cartridges with a diameter over 4 mm or bullet cartridges with a caliber of less than .22 or 5.58 mm are prohibited. Shooting during the night is forbidden. Occasional shooting of <i>Alopochen aegyptiaca</i> is permitted.	Luxembourg	[10; 12; 14; 15; 17; 49]	
Trapping: Drowning traps	Prohibited according to §4 (1), 1 BArtSchG. For game species, according to §19 BjagdG, drowning traps would have to kill immediately (which they don't). Multiple special regulations for protected areas are possible in each federal state (e.g. VO Landschaftsschutzgebiet Untere Haase-Niederung; VO Landschaftsschutzgebiet Natura 2000-Emsauen von Salzbergen bis Papenburg, here, non-selective traps and killing traps forbidden). Drowning traps prohibited. Drowning traps prohibited.	Germany Denmark Luxembourg	[4; 5; 18; 19; 59] [34] [27]	Exemptions can be made by federal district administration to prevent significant agricultural, forestry, fishing, water or other public service damage, to protect native flora and fauna, or for purposes of research, education or reintroduction, or for breeding for any of these purposes (§4 BArtSchV).
Trapping: Goodnature self-resetting traps	Unclear whether restricted or prohibited. Mechanism similar to self-shooting devices, which are	Germany	[4]	

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
	prohibited according to §19 (9) BJagdG. Prohibited.	Denmark, Luxembourg	[27; 36; 39]	
Trapping: Spring traps	For huntable species, prohibited if not killing immediately according to §19 (9) BJagdG. For not huntable species: sound reason necessary according to §39 BNatSchG, since it is prohibited to use if particularly protected species are affected. In addition, trapping prohibited by §4 (1),1 BArtSchV. Multiple special regulations for protected areas are possible in each federal state (e.g. VO Landschaftsschutzgebiet Untere Haase-Niederung; VO Landschaftsschutzgebiet Natura 2000-Emsauen von Salzbergen bis Papenburg, here, non-selective traps and killing traps prohibited). Prohibited.	Germany Denmark, Luxembourg	[4; 5; 7; 19; 20; 59] [27; 36]	Exemptions can be made by federal district administration to prevent significant agricultural, forestry, fishing, water or other public service damage, to protect native flora and fauna, or for purposes of research, education or reintroduction, or for breeding for any of these purposes (§4 BArtSchV).
Trapping: Cage traps	Prohibited if not catching unharmed, selectivity desirable, applicable for game species as well as Trachemys scripta and Tamias sibiricus according to management plans. For game species, requirements made by §19 (9) BJagdG for traps: <u>catch unhurt</u> . Multiple special regulations for protected areas are possible in each federal state. For not huntable species: sound reason necessary according to §39 BNatSchG, since it is prohibited if particularly protected species are affected. In addition, trapping is prohibited by §4 (1),1 BArtSchV.	Germany	[1; 31; 43; 44; 45; 47] [3; 4; 19; 20; 44] [5; 7]	Regulations for trapping in each Federal State and differences according to protected areas (Schutzgebiete). Exemptions may be possible due to §45 (7) BNatSchG or article 14 92/43 EWG. Exemptions can be made for cage trapping of Ondatra zibethicus (application and expert knowledge necessary) by federal district administration due to §4 (2), 1.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
	<p>Requirements are made for live trapping (killing traps are prohibited). Trapping is applicable for Ondatra zibethicus, Procyon lotor and Nyctereutes procyonoides according to action plans.</p> <p>Prohibited if not catching unharmed, selectivity desirable, applicable for Ondatra zibethicus, Myocastor coypus, Trachemys scripta in action plans, not mentioned for Procyon lotor.</p>	Denmark	[32; 39; 41; 42]	
		Luxembourg	[10; 13; 14; 15; 17; 27]	
Trapping: Neck-hold traps, and snares	<p>Snares of every kind are forbidden in Germany according to §19(1)8. BjagdG (15) and §4(1)1. BArtSchG (16).</p> <p>Prohibited.</p>	Germany	[16; 18; 20]	
	Prohibited.	Denmark, Luxembourg	[27; 36]	
Trapping: Live decoy traps	Limited according to §4 TSchG.	Germany	[23]	
	Prohibited.	Denmark	[36]	
	Prohibited.	Luxembourg	[27]	
Dispatch/ removal only once captured	<p>According to animal welfare regulations, killing of vertebrates is only allowed if animals are anaesthetized or without pain, only by persons with expert knowledge and skills (in Denmark: a veterinarian). This is also effective for hunting or pest control. For game species, killing has to be done by an expert with knowledge and skills (e.g. hunters) according to good practice of hunting.</p>	Germany, Denmark, Luxembourg	[4; 6; 8; 18; 29; 38]	
Cervical dislocation	<p>Only allowed for birds, rodents and rabbits, and with specific body weight; animals have to be pre-anaesthetized.</p>	Germany, Denmark, Luxembourg	see above	

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
Cranial depression	Only allowed for fish, amphibians, reptiles, birds, rodents and rabbits, and with specific body weight; animals have to be pre-anaesthetized.	Germany, Denmark, Luxembourg	see above	
Decapitation	Only allowed for birds and rodents, and with specific body weight; animals have to be pre-anaesthetized.	Germany, Denmark, Luxembourg	see above	
Electrocution	“Electrical anaesthesia” is applicable for fish, amphibians, birds, rabbits and large mammals, but it is unclear if the method is similar.	Germany, Denmark, Luxembourg	see above	
Freezing	Not listed in the legislation mentioned; prohibited. For Denmark, it is prohibited for <i>Trachemys scripta</i> .	Germany, Denmark, Luxembourg	see above; pers. comm., workshop	
Injection euthanasia	Applicable for all species in combination with prior sedation, expert knowledge necessary.	Germany, Denmark, Luxembourg	see above	
Keeping in captivity	Limited due to BNatSchG.	Germany	see above	Exemptions by national (Germany: federal) authorities according to national laws (Germany: §40c BNatSchG).
	Restricted. Mentioned as prohibited for game species.	Denmark	[52]	Exemptions made by national authorities.
	Restricted.	Luxembourg	Pers. comm. (de Sousa)	
Modified atmospheres	Carbon dioxide exposure possible for birds and rodents, inhalation of inert gases (argon, nitrogen) also for large mammals.	Germany, Denmark, Luxembourg	see above	
Shooting - dispatch restrained animals	Only appropriate for reptiles and large mammals; for game species in Germany according to hunting law, and for mammals and birds in Denmark in accordance with hunting regulations.	Germany, Denmark, Luxembourg	see above	

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation (Listed in box below)	Exemptions
Slaughter (knife)	For Germany, according to §4a (1) TSchG (19), slaughter of homoiotherm animals with a knife is allowed only after previous anesthesia of the animal. Use of knife only possible when bleeding fish after concussion in Denmark.	Germany, Denmark, Luxembourg	see above	Exemptions for Germany are possible according to §4a (2) TSchG. Further rules may be specified following §4b TSchG.
Surgical sterilisation	Not listed in Annex 1 of the legislation mentioned; permit needed. Restrictions for some taxa, permit needed.	Germany, Denmark Luxembourg	see above [30]	

List of legislation in **Table 3:**

1. Verordnung des Ministeriums für Ländlichen Raum und Verbraucherschutz zur Durchführung des Jagd- und Wildtiermanagementgesetzes (DVO JWVG) vom 2. April 2015, §§ 5, 9 und 10 geändert durch Verordnung vom 25. Februar 2018 (GBl. S. 62), geändert durch Verordnung vom 22. Januar 2019 (GBl. S. 32), geändert durch Verordnung vom 29. Januar 2020 (GBl. S. 23). (2015). <http://www.landesrecht-bw.de/jportal/?quelle=jlink&query=WildTManagGDV+BW+%C2%A7+19&psml=bsbawueprod.psm1&max=true&aiz=true>
2. Bekendtgørelse om rekreativt fiskeri i salt- og ferskvand samt redskabsfiskeri mv. i ferskvand (2015).
3. Bundesjagdgesetz. (1977). Verordnung über die Jagdzeiten vom 2. April 1977 (BGBl. I S. 531), die zuletzt durch Artikel 2 der Verordnung vom 7. März 2018 (BGBl. I S. 226) geändert worden ist.
4. Bundesjagdgesetz in der Fassung der Bekanntmachung vom 29. September 1976 (BGBl. I S. 2849), das zuletzt durch Artikel 291 der Verordnung vom 19. Juni 2020 (BGBl. I S. 1328) geändert worden ist (1976). <https://www.gesetze-im-internet.de/bjagdgb/BJNR007800952.html>
5. Bundesartenschutzverordnung vom 16. Februar 2005 (BGBl. I S. 258, 896), die zuletzt durch Artikel 10 des Gesetzes vom 21. Januar 2013 (BGBl. I S. 95) geändert worden ist (2005). https://www.gesetze-im-internet.de/bartschv_2005/BJNR025810005.html
6. Tierschutzgesetz in der Fassung der Bekanntmachung vom 18. Mai 2006 (BGBl. I S. 1206, 1313), das zuletzt durch Artikel 280 der Verordnung vom 19. Juni 2020 (BGBl. I S. 1328) geändert worden ist (2006). <https://www.gesetze-im-internet.de/tierschg/BJNR012770972.html>
7. Bundesnaturschutzgesetz vom 29. Juli 2009 (BGBl. I S. 2542), das zuletzt durch Artikel 290 der Verordnung vom 19. Juni 2020 (BGBl. I S. 1328) geändert worden ist (2009). https://www.gesetze-im-internet.de/bnatschg_2009/BJNR254210009.html
8. Tierschutz-Versuchstierverordnung vom 1. August 2013 (BGBl. I S. 3125, 3126), die zuletzt durch Artikel 394 der Verordnung vom 31. August 2015 (BGBl. I S. 1474) geändert worden ist (2013). <https://www.gesetze-im-internet.de/tierschversv/BJNR312600013.html>
9. Seefischereiverordnung vom 18. Juli 1989 (BGBl. I S. 1485), die zuletzt durch Artikel 1 der Verordnung vom 1. April 2019 (BGBl. I S. 434) geändert worden ist (1989).
10. Loi du 18 juillet 2018 concernant la protection de la nature et des ressources naturelles et modifiant (2018). <http://data.legilux.public.lu/eli/etat/leg/loi/2018/07/18/a771/jo>
11. Loi du 27 juin 2018 sur la protection des animaux. (2018). <http://data.legilux.public.lu/eli/etat/leg/loi/2018/06/27/a537/jo>
12. De Sousa, T. (2019). Plan d'action pour espèces exotiques envahissantes au Grand-Duché de Luxembourg: l'Ouette d'Égypte, *Alopochen aegyptiacus* (Linnaeus, 1766). In L. Administration de la nature et des forêts (Ed.), (13/12/2019 ed.).
13. De Sousa, T. (2019). Plan d'action pour espèces exotiques envahissantes au Grand-Duché de Luxembourg: la Tortue de Floride, *Trachemys scripta* ssp. (Schoepff, 1792). In L. Administration de la nature et des forêts (Ed.), (13/12/2019 ed.).
14. De Sousa, T. (2019). Plan d'action pour espèces exotiques envahissantes au Grand-Duché de Luxembourg: le Ragondin, *Myocastor coypus* (Molina, 1792). In L. Administration de la nature et des forêts (Ed.), (Vol. 20 pp).

15. De Sousa, T. (2019). Plan d'action pour espèces exotiques envahissantes au Grand-Duché de Luxembourg: le Raton laveur, Procyon lotor (Linnaeus, 1758). In L. Administration de la nature et des forêts (Ed.), (13/12/2019 ed.).
16. De Sousa, T. (2020). Plan d'action pour espèces exotiques envahissantes au Grand-Duché de Luxembourg: le Goujon asiatique, Pseudorasbora parva (Temminck & Schlegel, 1846). In L. Administration de la nature et des forêts (Ed.), (pp. 21).
17. De Sousa, T. L., Louis. (2019). Plan d'action pour espèces exotiques envahissantes au Grand-Duché de Luxembourg: le Rat musqué, Ondatra zibethicus (Linnaeus, 1766). In L. Administration de la nature et des forêts (Ed.), (13/12/2019. ed.).
18. Dtu. (2016). Beskrivelse af dyreværns mæssig korrekt aflivning af dyr på EU-listen.
19. Verordnung über das Landschaftsschutzgebiet „Natura 2000-Emsauen von Salzbergen bis Papenburg“ im Landkreis Emsland, in den Städten Papenburg, Haren (Ems), Meppen, Lingen (Ems), den Samtgemeinden Dörpen und Lathen sowie den Gemeinden Rhede (Ems), Geeste, Emsbüren und Salzbergen (2016).
20. Verordnung über das Landschaftsschutzgebiet „Natura 2000-Untere Haseniederung“ im Landkreis Emsland in den Städten Meppen und Haselünne (2017).
21. Richtlinie 92/43/EWG des Rates vom 21. Mai 1992 zur Erhaltung der natürlichen Lebensräume sowie der wild lebenden Tiere und Pflanzen (FFH-Richtlinie) (1992).
22. Fischereigesetz für das Land Hessen (Hessisches Fischereigesetz - HFischG)) in der Fassung vom 3. Dezember 2010 letzte berücksichtigte Änderung: zuletzt geändert durch Artikel 8 des Gesetzes vom 22. August 2018 (GVBl. S. 362) (2010).
23. Landwirtschaft, A. (2013). Bericht des Expertenausschusses Jagd an das Präsidium der Oberreihkonferenz zum Thema „Umgang mit gebietsfremden Arten (Neozoen) am Oberrhein“
24. Loi du 7 mars 2019 portant modification de la loi modifiée du 28 juin 1976 portant réglementation de la pêche dans les eaux intérieures. (2019). <http://data.legilux.public.lu/eli/etat/leg/loi/2019/03/07/a133/jo>
26. Loi du 28 juin 1976 portant réglementation de la pêche dans les eaux intérieures. (1976). <http://data.legilux.public.lu/eli/etat/leg/loi/1976/06/28/n5/jo>
27. Loi du 25 mai 2011 relative à la chasse (2011).
28. Règlement grand-ducal du 16 avril 2003 portant réglementation des périodes de pêche et de la taille légale de bonne prise pour les différentes espèces de poissons (2011).
29. Règlement grand-ducal du 11 janvier 2013 relatif à la protection des animaux utilisés à des fins scientifiques. (2013).
30. Règlement grand-ducal du 6 novembre 2018 déterminant les interventions mineures sur animaux pouvant être effectuées sans anesthésie et les motifs zootechniques impératifs pour l'amputation ou l'amputation partielle d'un animal. (2018).
31. Massow, F. v., & Wunderlich, S. (2019). Übersicht zu den gesetzlichen Regelungen zur Fangjagd in den Bundesländern. In D. Jagdverband (Ed.).
32. Bekendtgørelse om bekæmpelse af bisamrotter - BEK nr. 819 (1987). <https://www.retsinformation.dk/eli/Ita/1987/819>
33. Miljø- og, F. (2016). Bekendtgørelse om våben og ammunition der må anvendes til jagt m.v. - BEK nr. 923.
34. Bekendtgørelse af dyreværnsloven - LBK nr. 20 (2018). <https://www.retsinformation.dk/eli/Ita/2018/20>
35. Miljø- og, F. (2019). Bekendtgørelse af lov om fiskeri og fiskeopdræt (fiskeriloven) - LBK nr. 261.
36. Miljø- og, F. (2019). Bekendtgørelse af lov om jagt og vildtforvaltning - LBK nr. 265.
37. Bekendtgørelse af lov om naturbeskyttelse - LBK nr. 240 (2019). <https://www.retsinformation.dk/eli/Ita/2019/240>
38. Bekendtgørelse om dyreforsøg. BEK nr. 2028 (2020).
39. Bekendtgørelse om vildtskader - BEK. 1006 (2020). <https://www.retsinformation.dk/eli/Ita/2020/1006>
40. Lov om ændring af lov om naturbeskyttelse, lov om planlægning, lov om vandløb og museumsloven (2003). <https://www.retsinformation.dk/eli/ft/200312L00146>
41. Miljøstyrelsen. (2017). Handlingsplan mod invasive arter. https://mst.dk/media/143350/handlingsplan_invasive-arter_juni17.pdf
42. Forvaltningsplan for mink, mårhund og vaskebjørn i Danmark (2020). https://mst.dk/media/191343/netversion-miljoestyrelsen_forvaltningsplan_2020-mink-maerhund-og-vaskeboern.pdf
43. Landesverordnung über jagdbare Tierarten und über die Jagdzeiten (JagdZVSH) vom 6. März 2019, aufgrund der §§ 17a und 38 des Landesjagdgesetzes in der Fassung vom 13. Oktober 1999 (GVObI. Schl.-H. S. 300, ber. 2008 S. 135), zuletzt geändert durch Artikel 9 des Gesetzes vom 21. Februar 2018 (GVObI. Schl.-H. S. 58, ber. S. 128), in Verbindung mit § 2 Absatz 2, § 19 Absatz 2 und des § 22 Absatz 1 Satz 3, Absatz 2 Satz 2 und Absatz 4 Satz 2 des Bundesjagdgesetzes in der Fassung der Bekanntmachung vom 29. September 1976 (BGBl. I S. 2849), zuletzt geändert durch Artikel 2 des Gesetzes vom 14. November 2018 (BGBl. I S. 1850). (2019). http://www.gesetze-rechtsprechung.sh.juris.de/jportal/portal/t/16me/page/bsshoprod.psml/action/portlets.jw.MainAction?p1=0&eventSubmit_doNavigate=searchInSubtreeTOC&showdoccase=1&doc.hl=0&doc.id=jlr-JagdZVSH2019rahmen&doc.part=R&toc.poskey=#focuspoint

44. Jagd in Schutzgebieten Gem. RdErl. d. ML u. d. MU v. 3. 12. 2019 — 406-22220-21 — (2019). https://www.ml.niedersachsen.de/startseite/themen/wald_holz_jagd/jagd_in_niedersachsen/gesetze-und-andere-bestimmungen-rund-um-das-thema-jagd-und-jaeger-5137.html
45. Buchstaben-Schmuckschildkröte – Management- und Maßnahmenblatt zu VO (EU) Nr. 1143/2014 (2018). <https://neobiota.bfn.de/unionsliste/art-19-management.html>
46. Nordamerikanischer Ochsenfrosch – Management- und Maßnahmenblatt zu VO (EU) Nr. 1143/2014 (2018). <https://neobiota.bfn.de/unionsliste/art-19-management.html>
47. Sibirisches Streifenhörnchen – Management- und Maßnahmenblatt zu VO (EU) Nr. 1143/2014 (2018). <https://neobiota.bfn.de/unionsliste/art-19-management.html>
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49. Règlement grand-ducal du 16 décembre 2011 concernant l'emploi des armes et munitions de chasse, les moyens autorisés pour l'exercice de la chasse ainsi que l'emploi du chien de chasse.
50. Miljø- og Fødevarerministeriet: Lov om ændring af lov om kemikalier og ophævelse af lov om behandling af oplysninger om brug af plantebeskyttelsesmidler i jordbruget
51. Miljø- og Fødevarerministeriet: Bekendtgørelse om forebyggelse og håndtering af introduktion og spredning af invasive ikkehjemmehørende arter på EU-listen og om en national liste med handelsforbud m.v. over for invasive arter - BEK nr. 1285
52. Ministeriet for Fødevarer, Landbrug og Fiskeri: Bekendtgørelse af lov om mark- og vejfred - LBK nr 2154 af 16/12/2020
53. Bayerisches Fischereigesetz (BayFiG) in der Fassung der Bekanntmachung vom 10. Oktober 2008
54. Verordnung zur Ausführung des Bayerischen Fischereigesetzes (AVBayFiG) in der Fassung der Bekanntmachung vom 10. Mai 2004
55. Pfeiffenschneider, M. H., F. (2020). Plan d'action pour espèces exotiques envahissantes au Grand-Duché de Luxembourg : Perche soleil, Lepomis gibbosus (Linnaeus, 1758). In L. Administration de la nature et des forêts (Ed.), (pp. 20).
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57. Miljøstyrelsen. Factsheet - Egyptian Goose https://mst.dk/media/117363/fakta_nilgaas.pdf
58. Bekendtgørelse om våben og ammunition der må anvendes til jagt m.v. - BEK nr.1397 (2020)
59. Drygala, F., Stier, N., Zoller, H., Boegelsack, K., Mix, H. M., & Roth, M. (2008). Habitat use of the raccoon dog (*Nyctereutes procyonoides*) in north-eastern Germany. *Mammalian Biology - Zeitschrift für Säugetierkunde*, 73(5), 371-378. <https://doi.org/http://dx.doi.org/10.1016/j.mambio.2007.09.005>

4. Overview of legislation, standards and guidance within Member States from the region

4.1. Germany

The **constitutional law** of Germany includes animal welfare as a national objective (Article 20a). The **German Animal Welfare Act (TierSchG**, entered into force 1972, reformed 18.05.2006, last amendment 19 June 2020) contains rules and prohibitions concerning the keeping, treatment and killing of animals in order to ensure their well-being. It is prohibited to cause pain, suffering or damage to an animal without a good reason (§1). Killing vertebrates requires prior, effective anaesthesia (§4), except for the killing in the course of hunting, and may only be carried out by people who have the necessary knowledge and skills (§1a). If killing takes place in the course of pest control, the least painful method must be used. Slaughtering animals is also subjected to special regulations and will – according to our knowledge - not be applicable to the term of slaughter of invasive alien species, since the objective is not the production of food. Nevertheless, warm-blooded animals may only be slaughtered if stunned before (§4a). Details to these regulations are given in the General regulation for the implementation of the Animal Welfare Act.

The **General regulation for the implementation of the Animal Welfare Act** summarizes and describes expert knowledge for the humane killing of animals. Certain professional trainings for expert skills are listed. Hunters, and studies of veterinary and human Medicine as well as biology (zoology) are included. The regulation also extends to stunning and killing fur animals and pest control. If killing of IAS is necessary, important information on expert knowledge can be assessed here.

The **Federal Regulation for the Protection of Species (BArtSchV**, entered in force 25 February 2005, last amendment 21 January 2013) contains commandments, prohibitions and guidelines in order to preserve species of wild flora and fauna. The annexes contain and define especially protected species that may not be kept or traded with according to the § 44 BNatSchG. There are four species that are not allowed to be held, traded, bred, conserved or given to someone according to this law, although not being especially protected, including *Sciurus carolinensis*. For further handling or keeping of animals the holder has an authorisation and sufficient knowledge of the breeding and care of the species, and provides enough evidence that care is taken that the species will not escape and animal welfare regulations are respected. In that case a declaration must be made to the authorities.

The regulation distinguishes particularly and not particularly protected species. For both, if not due to hunting or fishery legislation, the use of hooks, lime, glue, crossbows, poisoning or numbing bait, semi-automatic or automatic weapons loaded with more than two bullets, explosives and snares is prohibited, whereas the use of traps and nets is only allowed if animals - excluding birds - are not hunted randomly, in great numbers or get killed. The prohibition of treatment with gas or fumigating applies only to particularly protected species. Exemptions may be made to prevent damage of agriculture and forestry, fishery and water industry, to protect the indigenous flora and fauna, to facilitate scientific research and teaching, as well as repopulation and breeding.

Regarding the protection of endangered objects, the drainage in case of flooding, the protection from flooding and the defence against damage, the use of traps, excluding cage traps with flap locks, is permitted in the management of **muskrat**. For each species, closed season times are provided during the year, and additional protection of animals with offspring is added (for **coyupu**, closed season times and protection of animals with offspring has been suspended in Lower Saxony and Bremen, e.g. **Table 4**).

The **Federal Nature Conservation Act (BNatSchG**, entered into force 24 December 1976, revised version entered into force 01 March 2012, last amendment 19 June 2020) shall protect the flora, fauna, soil and waters in Germany. In general, it is prohibited to capture, harm or kill wild animals or to destroy their dwellings without a reasonable cause. Paragraphs 40a-f refer to IAS, e.g. keeping, management actions, action plans and public hearings. §44 specifies provisions for specially protected and certain other species of animals and plants, e.g. prohibits any persecution, catching, injuring or killing or these species or to disturb or even remove them from the wild, although exemptions may be made in especially authorized interventions. In addition, every Federal State has

an own version of Federal Nature Conservation Act, which may refer to special structures, environments or surroundings that are not referenced here.

The **Federal Hunting Law (BJagdG)**, entered into force 1 April 1953, last amendment 19 June 2020) defines the term “hunting” as the permission to hunt and acquire wild living species in line with the obligation to foster the population of these animals, leading to a healthy wildlife in accordance with cultural, agricultural, forest and fishery industry needs. It specifies the species that are subject to hunting in Germany, the regulations on devices used for hunting as well as the definition of areas in which hunting is possible. Abandonment or introduction of alien animals into the wild is only authorised with written authorization from the authorities.

The species subjected to Federal Hunting Law do not include any IAS, whereas the federal states have implemented regional hunting laws containing different IAS species (see details below). Hunting techniques that are prohibited in general are: the use of birdlime, traps, fishhooks, nets or bow nets in order to hunt game birds; the use of pits without authorisation of the authority; the production, sale, purchase and use of snares; spring guns; devices that do not kill immediately or live traps that harm the animal; poisoning or the use of poisoned bait, as well as hounding.

The law itself does not specify the term “immediate death” for the use of traps. Additional information can be found in the “Agreement on International Humane Trapping Standards” from 1998, which applies to all EU members. The rules for hunting game birds are pertinent to the regulation of the **Egyptian goose**.

Federal State hunting legislations (summary of the 16 federal states):

Each federal state has its own hunting legislation, as the Federal Hunting Law leaves certain decisions to the federal states. For details, see **Table 4**. In all federal states, **raccoon** and **raccoon dog** are amendable to the regional hunting legislation, **coypu** not being a game species in Hamburg, Rhineland-Palatine, and North Rhine-Westphalia. The **muskrat** is considered as a game species in Brandenburg only, the **Egyptian goose** is not a game species in Hamburg and Berlin. For lower Saxony and Bremen, the protection of fostering animals (parents of newborn) is suspended.

In general, trapping refers to live and killing traps. Whereas killing traps have to ensure immediate killing (see AIHTS), live traps have to ensure that the animals trapped remain unharmed. Since the guidelines of AIHTS have not been subscribed by Germany yet, there is still a scientific discussion going on around that. The regulation of hunting in nature conservation areas or wildlife reserves is left to the federal states, but local regulations of each nature conservation area have to be considered.

Table 4. Federal game species and closed seasons for hunting.

Common name	Egyptian goose	Coypu	Raccoon dog	Muskrat	Raccoon
Class	Bird	Mammal	Mammal	Mammal	Mammal
HH	y / cl	n	y/ay	n	y/ay
SH	y / cs	y/cs	y/ay	n	y/ay
HB	y/cs	y/panp	y/cs/yay	n	y/cs/yay
LS	y/cs	y/panp	y/cs/yay	n	y/cs/yay
NRW	y/cs/yay	n	y/cs	n	y/cs
BW	y/cs	y/cs	y/cs	n	y/cs
BY	y/cs	y/ay	y/ay/panp	n	y/ay/panp
TH	y/ay	y/ay	y/ay	n	y/ay
SN	y/cs	y/ay	y/ay	n	y/ay
SA	y/cs/yay	y/ay	y/ay	n	y/ay
MV	y/cs	y/ay	y/ay	n	y/ay
BB	y/cs	y/ay	y/ay	y/ay	y/ay

B	n	y/cs	y/cs	n	y/cs
HE	y/cs	y/cs	y/cs	n	y/cs
RP	y/cs/yay	n	y/cs/y	n	y/cs/y
S	y/cs	y/ay	y/cs	n	y/ay

HH – Hamburg, SH – Schleswig-Holstein, HB – Bremen, LS-Lower Saxony, NRW-North-Rhine-Westphalia, BW-Baden-Württemberg, BY-Bavaria, TH-Thuringia, SN-Saarland, SA-Saxony-Anhalt, MV-Mecklenburg-Pomerania, BB-Brandenburg, B-Berlin, HE-Hesse, RP-Rhineland-Palatinate, S-Saxony; y: game species/cl: closed all year, cs: closed season, ay: no closed season/ yay: no closed season for young animals, panp: parental animals not protected

The **Federal law on the disposal of animal by-products** (entered into force 25 January 2004) implements regulation (EC) No 1069/2009 of 21 October 2009 in order to regulate the disposal of animal by-products of the categories one and two. Risk material of the categories one and two must not be gathered, transported, used or disposed of in a way that risks life or health of third parties or animals. The competent authority is obliged to organise the appropriate way of disposal. Regulation (EC) No 1069/2009 article 8 and 9 do categorize wild animals that may carry a zoonotic disease as category one. Since this cannot be excluded for some of the IAS species, the regulation has to be taken into account. They therefore must be disposed of by burning, pressure sterilisation and burial, used as combustible or processing into certain derived products. Animals that are killed for other reasons than human consumption, including animals killed for the purpose of control of epidemics, are organised in risk category two. It must be rendered harmless by burning, pressure sterilisation and further disposal in a landfill, use as combustible, or processing into certain derived products. Risk material of category three contains killed game, edible but not meant for human consumption for commercial reasons or downgraded to not-edible but free from zoonoses or animal diseases and Rodentia not belonging to categories one or two. This material may be disposed of by burning, disposal in landfills, processing to feed, fertiliser or biogas if human health is not endangered or use as combustible. According to this, healthy IAS must be considered as material of category 3 and ways of disposal are less strictly limited. It is not clear if they may be left in bait places.

There are some **Federal laws and regulations on fishery**, which here are exemplarily listed for the Federal State of Lower Saxony and Hesse. Not every Federal State does provide regulations on fishery, these two do contain prohibitions to catch certain species, to use certain trapping devices and closed seasons. Here, width of nets, escape – options for *Lutra lutra* and prohibitions of electrofishing are mentioned. In addition, the enwildernessment of caught fish or native predator fish is restricted e.g. in Bavaria.

In the Law on Sea Fishery, regulations on trapping devices (§14 SeeFischV). Details on fishing devices and closed seasons for several species are provided, which have to be respected when dealing with IAS (for potential by-catch).

The **Regulation on fish diseases** states that an authorisation is needed to hold aquaculture fishes, and released fishes must be in good sanitary health and may not come from establishments where unexplained deaths occurred.

The **ordinance on the protection of animals used for experimental or other scientific purposes (TierSchVersV**, entered into force 01.08.2013) contains methods for killing of animals used for experimental or other scientific purposes, which are listed in annex 2, in relation to EU Directive 2010/63/EU on the protection of animals used for scientific purposes. This ordinance will be the baseline for the killing of vertebrate IAS of Union concern, since Animal Welfare is a national objective of Germany and therefore the most stringent ordinance concerning killing should be applied.

4.2. Denmark

The **Animal Welfare Act** (entered into force 25 February 2020) contains commandments and prohibitions concerning keeping, treatment and killing of animals in order to ensure their well-being. Animals are defined as fellow living beings, which therefore need to be treated responsibly and be protected from pain, suffering, anxiety and damage as best possible. The person killing an

animal must ensure that the procedure is carried out as fast and as painless as possible. Drowning an animal is prohibited.

The **Nature Protection Act** (entered into force 3 September 2018, last amendment 27 February 2019) contains rules on protection of Danish nature and environment e.g., regarding conservation of the animal and plant life. The law presents relevant statements for invasive species under §30 and §31. The law protects Denmark's nature especially through e.g. the general nature protection of habitat types (§3), the rules on the implementation of the Natura 2000 directives and rules on species protection. The presence of invasive species in protected nature areas threatens the biodiversity of the areas, worsens their natural conditions, and causes an increased pressure on funds and the need for nature conservation. Nature Protection Act § 31, act. 1 states that animals that do not occur naturally in Denmark may not be released into the wild without permission of the Minister for the Environment and Food. This applies to land, sea and fisheries. The Nature Protection Act statements on protected habitats (§3) may thus be relevant in relation to action against invasive species, since an action that can change the habitat conditions of a protected area, can require a permission.

The **Hunting and Wildlife Management Act** (entered into force 12 April 2018, last amendment 21 March 2019) ensures that wild animal species are provided with a sustainable conservation management in order to protect quantity and quality of habitat through the establishment of reserves. The order applies to mammals and birds, including migratory birds naturally present in the Danish countryside, as well as to mammals and birds released or escaped from human care and which have established wild reproductive populations. The Ministry of Environment establishes (and regulates) authorized hunting. It is forbidden to practice hunting in a way that leads to unnecessary suffering of game. While hunting, the killing of an animal must be performed with firearms. The use of raptors is prohibited. It is not allowed to use living animals as bait and hunting close to feeding places is forbidden. Baiting animals in order to hunt is also not permitted. Hunting in game reserves is not forbidden in general. The use of live decoys is prohibited.

The **Executive order on the use of weapons and ammunition that may be used for hunting** (entered into force 29 September 2020) contains specific commandments and prohibitions concerning the weapons and ammunition used for hunting. Additional to the general guidelines concerning impact forces, specific impact forces are defined for the hunting of **coyup** (at least 175 Joule impact force) and mink (at least 150 Joule impact force). In paragraph 3 numbers 3-5, it is stated that for foxes, **raccoon dogs, raccoons**, hares, **coyup, geese** and cormorants, as well as the game species mentioned in Nos. 4-5, impact energy E100 at least 175 J. For house martens, ferrets, mink, wild rabbit, **muskrat**, chickens, bliss hen, ducks and gulls, as well as the game species that are mentioned in No. 5, impact energy E0 at least 150 J; and for pigeons, **crows**, waders and catfish muzzle velocity V0 at least 200 m / sec.

The **Executive Order on hunting seasons for certain mammals and birds** (entered into force 21 March 2019, last amendment 17 June 2020) defines the hunting and closed seasons for certain mammals and birds. The hunting season for invasive alien species such as **Egyptian goose, muskrat, coyup, raccoon, raccoon dog** and American mink covers the time from 1 September until 31 January, but must be regulated throughout the year. Seasons may be regulated by geographic regions, in addition. Species on the Union list can be regulated all year without a permit. Regulation must be reported on virk website¹.

The **Executive Order on the retrieval and killing of game in distress** (entered into force 24 June 2016) is stating that, if injured game is not found in less than 6 hours, it must be searched for by dog handlers. If found, injured game must be killed as fast and as painless as possible, the use of shotguns is allowed even concerning species that usually are prohibited to be killed by shot. As IAS are considered game, this law applies to them as well and contributes to their welfare in the course of hunting.

The **Executive Order on damage caused by game** (entered into force 21 March 2019, last amendment 30 June 2020) defines rules and recommendations for action regarding damage caused by game; exemptions from hunting prohibitions are made for some of the IAS of Union

¹ https://virk.dk/myndigheder/stat/NST/selvbetjening/Indberetning_af_regulering_af_skadevoldende_vildt

concern (see below) and the construction of live traps is defined. The order explicitly mentions that in accordance with European Regulation (EU) 1143/2014, the **Egyptian goose, the ruddy duck, the muntjac deer, the coypu, the muskrat, the racoon and the racoon dog**, as well as birds and mammals listed in Annex 1 to the Regulation (EU) 2016/1141, must be regulated throughout the year.

The **Executive Order on the release of game, hunting method and hunting equipment** (entered into force 23 December 2017) presents information on the artificial hiding places for hunting, i.e. hunting ladders and hunting towers, namely the material used, the placement, the distance from the next property, etc. §1 states that mammals may not be hunted from artificial hiding places.

The **Executive Order on animal experiments** (entered into force 14 December 2020) might regulate certain measures or actions in wildlife that are considered as an animal experiment, e.g. Egg oiling, it is therefore listed in the measurement restriction section. In addition, this order contains a table of appropriate killing methods similar to the one presented for Germany above, based on Directive 2010/63/EU.

The **Executive Order on the use of chemicals** states that poison may be used for rats and mice only by authorized personnel around the building.

The **Executive Order on fisheries and Fish Farming** (entered into force 19 June 2017, last amendment 21 March 2019) has the purpose of ensuring protection and relief of living resources in salt and fresh water, also protecting animal and plant life and ensuring a sustainable basis for commercial and recreational fishing. Restriction of fishing gear used may be made by the Ministry of Fisheries and Equality. The use of nets at a distance of 100 m from the low-water line is prohibited throughout the year. Pursuant to §63 of this law, all release or transplantation of fish, as well as eggs and fry, require prior approval from the Ministry. Pursuant to §66 of the Fish Law, fish farming in Danish fishery territory may only take place after permission of the Ministry of Fisheries and Equality.

The **Executive Order on the prevention and management of the introduction and spread of invasive alien species on the EU list and on a national list with trade bans, etc. against invasive species** (entered into force 3 September 2018, last amendment 12 November 2018) is implementing, pursuant to § 31, 70, 73, 78, 89 and 90 of the Nature Conservation Act and the Executive Order no. 1122 of 3 September 2018, respectively, the EU regulation on IAS. The Danish list of IAS of national concern contains 14 species, 12 of which are plants and two of which are animals. The only vertebrate in the national list is the **muskrat**. Some invasive species that are problematic in Denmark, either for biodiversity or from a general societal point of view, e.g. health or professional interests, are not covered by EU legal obligations, but handled nationally. Exemptions according to the EU Regulation for keeping IAS in captivity are explained.

4.3. Luxembourg

The constitutional law of Luxembourg includes animal welfare as a national objective (article 11). The **Grand-ducal law on the protection of nature and its resources** (entered into force 18 July 2018) contains regulations, commandments and prohibitions in order to protect nature and ecosystems in Luxembourg. Every not justified exploitation, use, mutilation or elimination of a species of wild animals is prohibited. If, however, manipulation of these species is necessary, it must respect their biologic necessities and their well-being. Without the authorisation of the ministry, capture of wild animal species is prohibited and accidental capture or killing of an animal of a protected species must be reported to the ministry. One exemption is the capture or elimination of non-indigenous species, which is permitted in order to decrease negative impact on natural habitats, indigenous species of wildlife or human health. This is however only permitted to a list of IAS that must yet be defined and approved. Authorised captures must respect the norms of conventions, international agreements and national regulations. In nature conservation areas, it is generally forbidden to capture animals that are not regulated by hunting law. Non-indigenous species may not be imported to introduce or reintroduce them into wildlife, exemptions are possible if in line with EU Regulation 1143/2014.

The **Grand-ducal law on the protection of animals** (entered into force 27 June 2018) contains commandments and prohibitions concerning keeping, treatment and killing of animals to ensure their welfare. According to this law, the dignity, life, security and well-being of animals must be

protected. Therefore, it is prohibited to kill an animal without necessity or to cause it pain, suffering, anxiety, damage or wounds. Killing an animal is only permitted after the animal has been anaesthetised although this does not apply to hunting. Also, everybody who kills an animal must avoid unnecessary pain, distress and suffering of the animal. Furthermore, every suffering or wounded animal or animal in danger must be rescued in the best way possible. Persons keeping an animal have to avoid to restrain the natural necessities and the movement of the animal in a way that causes pain, suffering, anxiety, damage or lesions.

The **Grand-ducal law on hunt** (entered into force 25 May 2011) contains rules, commandments and prohibitions concerning hunting including the definition of species permitted to hunt, regulations on devices and ammunition used, as well as the definition of areas in which hunting is permitted. In the annex, five IAS are considered as game species, four of which of Union concern (***Procyon lotor***, ***Nyctereutes procyonoides***, ***Ondatra zibethicus***, *Neovison vison*, ***Myocastor coypus***). It is only permitted to hunt those species of wild animals that are defined as game by this law. Hunting may only be carried out from one hour before sunrise until one hour after sundown, the use of shotguns and rifles is permitted, whereas trapping and falconry are prohibited.

The **Nature conservation Act** (entered into force 9 January 2009) sets (indigenous) animals under particular protection. From 2016, the IAS ***Alopochen aegyptiaca*** and ***Oxyura jamaicensis*** stopped being under protection of this act (Tiago de Sousa, Administration de la Nature et des Forêts, pers. comm.).

The **Law on certain methods of application and penalties for Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread invasive alien species** (2 July 2018) states that the administrations of nature, forest and water management are responsible for carrying out the administrative tasks provided for by the European Regulation. They can entrust third parties with the physical performance of these tasks, when they are not able to perform them themselves.

The **Grand-Ducal Regulation** of April 16, 2003 **regulating the periods of fishing and the legal size of good catch for the different species of fish and regulating of freshwater fishing** specifies times and tools for species that may be fished and lists species that are protected. Species that are not listed may be fished all year.

In the **Grand-Ducal Regulation** of December 16, 2011 **concerning the use of arms and ammunition for hunting, the means authorized for the practice of hunting, as well as the use of hunting dogs**, it is specified that for hunting, certain firearms are prohibited: (semi)automatic rifles, weapons equipped with an artificial light source, a device for night shooting or a silencer, pistols, revolvers. For shooting **raccoon, raccoon dog, muskrat**, American mink or **coypu**, metal grain cartridges with a diameter over 4 mm or bullet cartridges with a calibre of less than .22 or 5.58 mm are prohibited.

5. Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance

5.1. Germany

In Germany, according to national legislation, for any measure that is targeted to wild living species or their habitat (such as **biological control, habitat manipulation, hand removal**), a sound reason to undertake them is needed according to §39 BNatSchG. **Habitat manipulation** is generally prohibited for particularly protected species (§44), so this has to be reflected if these species occur in habitats where the IAS also exist (see exemptions). Multiple special regulations for protected areas are possible in each federal state. For non-target species that are protected by Annex V 92/43 EWG, exemptions through §45 (7) BNatSchG or article 14 92/43 EWG might be possible. In general, if animals do experience pain, suffer or harm, a sound reason is needed according to §1 TSchG. Measures that are explicitly prohibited are subjected to BArtSchV or BJagdG (see below).

For all vertebrates, prohibitions include *to stalk, attract, capture or kill wild animals of specially protected species and vertebrate species not subject to hunting or fishing rights in the following manner: with snares, nets, traps, hooks, glue and other adhesives, using live animals as attractants, with crossbows, with artificial light sources, mirrors or other illuminating or dazzling devices, with acoustic, electric or electronic devices, by fumigation or fumigation or using poisons, poisoned or stupefying baits or other stupefying agents, with semi-automatic or automatic weapons whose magazine can hold more than two cartridges or using sights for shooting at night with electronic image intensifiers or image converters, using explosives, from motor vehicles or aircraft or from boats with a propulsion speed of more than five kilometres/hour*. Regulations on nets and traps (except for bird trapping) only apply if they can be used to catch or kill animals in large quantities or indiscriminately, while the prohibition of fumigation or using poisons shall apply only to animals of specially protected species.

Deviating from this is *permitted to control muskrats (Ondatra zibethicus) with traps, except for cage traps with flap gates (fish traps), as far as this is necessary for the protection of endangered objects, especially for flood runoff or protection against floods or for the defence against agricultural or fishery or other significant public economic damage. The traps must be of such a nature and may only be used in such a way that the unintentional capture of other wild animals is largely excluded*.

In addition, the competent authority under state law may permit further exceptions to the prohibitions in paragraph 1 on a case-by-case basis, in so far as this is necessary to prevent significant damage to agriculture, forestry, fisheries, water or other public services; to protect native flora and fauna or; for purposes of research, teaching or reintroduction or for breeding for one of these purposes and insofar the population and distribution of the population or species concerned is not adversely affected thereby and other interests of species protection, in particular Article 9 (1) of Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7) and Article 16 (1) of Council Directive 92/43/EEC are not opposed. (4) Article 2 of Council Regulation (EEC) No. 3254/91 of November 4, 1991 prohibiting leghold traps in the Community and the importation of pelts and goods of certain wild animal species from countries using leghold traps or trapping methods not in compliance with international humane trapping standards (OJ EC No. L 308 p. 1) shall remain unaffected.

The **physical fishing methods** are restricted to certain devices, so that certain exemptions according to federal state fishing regulations may be needed. In some federal states, the enticement of caught fish is restricted, as well as the enticement of native predators.

For **electrofishing**, approval is necessary from federal state authorities according to federal state regulations (e.g. Hessische Fischereiverordnung, important for dealing with **Lepomis gibbosus**, **Percottus glenii**, **Plotosus lineatus**, **Pseudorasbora parva**).

For **fertility control - chemical (in bait) & injection**, it is unclear if it is possible for these measures to be applied or not, as §4 BArtSchV and §19 BJagd G do not explicitly mention chemicals. In any case, it does not seem that exemptions by national authorities according to BNatSchG have to be made.

The **use of poisoning or toxicants** is prohibited by several laws mentioned below, so that this measure is banned for all vertebrate IAS that are game species, although exemptions may be made by regional authorities, since IAS are not particularly protected species. Poisoning or toxicants are prohibited by SeeFischG and federal state regulations for fishing.

A **chemical treatment of the habitats** is likely banned, since gassing or smoking of habitats is prohibited by §4 BArtSchV for particularly protected species.

For **shooting**, a sound reason is necessary to shoot an animal according to §39 BNatSchG. It is prohibited for particularly protected species §44 BNatSchG, and non-target species protected by Annex V 92/43 EWG, exemptions are possible through §45 (7) or article 14 rule 92/43 EWG. Requirements made by §19 BJagdG for ammunition. It is forbidden to shoot during night for bird game species BJagdG [16; 20; 45], so this has to be reflected for mammals and birds of the IAS of Union concern.

The use of **hunting dogs** for tracking or baying may be restricted according to local and regional regulations on nature conservation and in general has to be in line with §39 BNatSchG and may therefore not disturb wild animals, especially if particularly protected species are present in the habitat.

For **trapping** any vertebrate, again a sound reason is necessary according to §39 BNatSchG, while it is prohibited for particularly protected species §44 BNatSchG and non-target species protected by Annex V 92/43 EWG, exemptions may be possible through §45 (7) BNatSchG or article 14 92/43 EWG. In addition, it is prohibited by §4 BArtSchV, exemptions made for cage trapping of **Ondatra zibethicus** by federal district administration to prevent significant agricultural, forestry, fishing, water or other public service damage, to protect native flora and fauna, or for purposes of research, education or reintroduction, or for breeding for any of these purposes. For huntable species, the requirements made by §19 BJagdG for traps are to catch unhurt or kill immediately. Multiple special regulations for protected areas are possible in each federal state (e.g. VO Landschaftsschutzgebiet Untere Haase-Niederung; VO Landschaftsschutzgebiet Natura 2000-Emsauen von Salzbergen bis Papenburg, here, non-selective traps and killing traps forbidden).

Regarding **measures for dispatch/removal only once captured**, according to §§4, 11 TSchG, killing of vertebrates is only allowed if animals are anaesthetized or without pain, only by persons with expert knowledge and skills, and this is also effective for hunting or pest control. §4b gives remission options for methods of killing and anaesthesia. For game species, killing has to be done by an expert with knowledge and skills (e.g. hunters) according to good practice of hunting (§§1,19 BJagdG).

The regulations listed here are exemplary, since they are applicable to laboratory animals, referring to EU Directive 2010/63/EU on the protection of animals used for scientific purposes. This ordinance will be the baseline for the killing of vertebrate IAS of Union concern, since Animal Welfare is a national objective of Germany and therefore the most stringent ordinance concerning killing should be applied.

5.2. Denmark

In Denmark, habitat manipulation needs permission by authorities due to protection of nature. If regulation of a species targets the prevention of undermining of dikes, dams or buildings, the Danish conservation authorities can permit the use of gas.

In the Act amending the Nature Conservation Act, Act on planning, the Watercourses Act and the Museums, the use of rotenone, as well as **stupefying bait**, is prohibited. **Poisons and toxins in bait** are prohibited.

Regarding **shooting, hunting** may only take place from sunrise to sunset (does not apply to ducks and **geese** that may be hunted from 1½ hours before sunrise to 1½ hours after sunset and to **raccoon dogs** and **raccoons** which can be hunted 24/7). Hunting and shooting requires appropriate ammunition and devices.

Apart from that, regulation of **raccoon dogs and raccoons** can take place 24/24, and a smoothbore shotgun can be brought and used in hunting ladders and hunting towers, cf. Chapter 1 of the Executive Order on the release of game, hunting method and hunting equipment.

When regulating **raccoon dogs and raccoons**, electronic light-amplified and thermally hand-held binoculars can be used to locate the game.

When regulating **raccoon dogs and raccoons** on landscaped feeding grounds, electronic light-enhancing sights can be used on fluted weapons. Thermal sieves must not be used.

In connection with buck hunting, **raccoon dogs and raccoons** may be regulated with a bow, cf. §5, subsection 1, nos. 1, 3, 4 and 5, and para. 2, nos. 1, 2, 4 and 5, in the Executive Order on weapons and ammunition that may be used for hunting.

The **laying of poison** to regulate the species mentioned shall, as far as possible, be such that other mammals or birds cannot have access to the poison.

For escaped fur animals that are wild under the Field and Road Peace Act, mink, **coypu and muskrat**, the Danish Nature Agency may grant permission for regulation in the period from 1½ hour after sunset to 1½ hour before sunrise, including for regulation from artificial hiding spots, i.e. hunting ladders and hunting towers, the use of artificial light, mirrors and other devices for illuminating the target.

Hunting dogs as a measure for application to IAS of Union of concern is not cited as prohibited or restricted. Hunting dogs are often used in relation to hunting and sometimes for luring species such as the raccoon dog (***Nyctereutes procyonoides***) out of burrows. The use of **hunting dogs for tracking or baying** has to be in line with the nature conservation act and may therefore not disturb wild animals, especially if particularly protected species are present in the habitat.

Poisons and toxins in bait are prohibited.

Live trapping is only appropriate if the animals are caught unhurt and requires regular control of the traps, further provisions for trapping have to be met according to hunting regulation:

The use of traps for regulating mammals and birds must be arranged so that captured animals are not harmed or killed. The trap must be designed so that captured animals cannot come into physical contact with each other. Captured animals must be able to be inspected in the trap when it is closed.

*The trap may be used 24/24 and must be inspected every morning and evening. When the trap is inspected, captured animals must be removed immediately. Animals which may not be regulated by trapping, or which may not be regulated by trapping in the trap in question, or at the place or time in question, must be released immediately. Animals that are not released immediately must be killed in the trap or immediately after the trap is removed. The trap must not be buried. The trap must be clearly marked with the contact information of the person responsible. The trap must be deactivated for trapping in places and during periods when trapping of the animals for which the trap is intended must not be caught. The trap must be removable and box-shaped with fixed, solid corners. Regarding traps for regulating mammals, the trap must not be larger than 60 (H) x 60 (W) x 250 (L) cm on the outside. Entrance openings must be located at the end of the trap. For traps for catching foxes and **raccoon dogs**, the entrance opening must not exceed 60 (H) x 60 (W) cm. For traps for catching other mammals, the entrance opening must not exceed 30 (H) x 30 (W) cm. In the case of bycatch of mammals, as mentioned in §8, (1), in a trap with an entrance opening of between 30 (H) x 30 (W) cm. and 60 (H) x 60 (W) cm., the requirement in §32, (2), 3rd sentence, on release, no. Traps for use in regulating mammals must be covered so that bait cannot be seen through the top and sides of the trap, but only through the ends of the trap. Regarding traps for regulating birds, the trap must not be larger on the outside than 60 (H) x 60 (W) x 250 (L) cm. Entrance openings should be located on top of the trap or inclined with a slope of 40-50 degrees. Entrance openings located on top of the trap must be a maximum of 40 (H) x 40 (W) cm, and inclined maximum 60 (H) x 40 (W) cm. Meat and carrion must not be used to catch birds. Inspection morning and evening, can be replaced by an electronic communication device (e.g. SMS sender) that gives a message as soon as the trap is triggered. From the time the message is sent, a maximum of 12 hours must elapse before the trap is physically inspected. The communication unit must carry out an electronic trap inspection morning and evening, so that it is ensured that the communication unit works as intended and the trap is not triggered (status message). If a status message is missing or reports an error, a maximum of 12 hours must elapse before the trap is physically inspected. When setting up a trap with an electronic communication*

unit, the trap must be physically inspected at least once a day for the first three days in order to ensure that the communication unit is active and functioning properly.

For **methods of dispatch/removal once captured**, a report from DTU veterinary institute is dealing with the issue of legal killing of IAS vertebrates of Union concern. It is recommended that mammals and birds should be killed according to current requirements of hunting and ammunition regulations only by legal hunters or by a veterinarian. Keeping in captivity is prohibited for game species according to national legislation.

Reptiles and amphibians should be killed by a veterinarian by anaesthetic overdose and prior sedation. Fish on the EU list should be killed immediately after capture by a stunning or lethal blow to the head followed by bleeding. Bleeding can be done by cutting the blood vessel from the heart to the gills from the abdominal side with a single incision. The killing can be carried out by private persons with a valid fishing license for angling and recreational fishing. Further details are similar to the table shown in the German national legislation on animals for scientific use, based on EU Directive 2010/63/EU.

5.3. Luxembourg

In Luxembourg, due to the Grand-Ducal law on the protection of nature and its resources, several measures are prohibited, but since these are referring to partially protected animal species, they might not be applicable for IAS of Union concern, although they might serve as a baseline for dealing with these species. For the measures mentioned, **poisons and poisoned or anaesthetic baits** are prohibited for capture and killing of mammals and birds, poison is prohibited for fishing, and the use of rotenone (broad-spectrum pesticide) is prohibited with *Pseudorasbora parva*. **Gassing or smoking of the habitat** is also prohibited and **shooting** with semi-automatic or automatic weapons which magazine can contain more than two cartridges is prohibited for killing mammals and birds, while the use of crossbows is prohibited for capture and killing of mammals and birds. The use of **non-selective traps** for the capture or killing of mammals or birds is prohibited. The use of non-selective nets is prohibited for capture and killing of mammals and birds.

Due to the Grand-Ducal regulation concerning the use of arms and ammunition hunting, certain firearms like (semi)automatic rifles, weapons equipped with an artificial light source, a device for night shooting or a silencer, pistols, revolvers are prohibited. For **shooting racoon, racoon dog, muskrat**, American mink or **coypu**, metal grain cartridges with a diameter over 4 mm or bullet cartridges with a calibre of less than .22 or 5.58 mm are prohibited.

Due to the Grand-Ducal law on hunt, the use of **traps** for huntable species is prohibited. Exemptions from the prohibition of trapping by the Grand-Ducal law on hunt are, according to each action plan for the species:

For **coypu**, live trapping in areas where there is proof of coypu presence (camera trap studies) - the set up of the traps (location, bait etc.) should be as selective as possible.

For **muskrat**, specific traps should be used, special trapping authorizations should be given to an IAS team.

For **raccoon**, trapping with selective traps is a suitable method.

For **Egyptian goose**, trapping of live goose should be performed by trained personnel.

For **pond slider**, trapping by selective traps is the preferred management method.

Due to the Grand-ducal law on opening of hunting for the years 2021/2022, 2022/2023 and 2023/2024-the use of **hunting dogs** is authorised throughout the year, subject to the regulations concerning the fight against rabies.

For **methods of dispatch/removal once captured**, for the species addressed with an action plan, **shooting** is the preferred method to use (fish species excluded). Similar to German and Danish Regulations, for all other species it seems to be relevant to take into account the Grand-Ducal Regulation of January 11, 2013 relating to the protection of animals used for scientific purposes.

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Appendix 40. Regional conditions for the Mediterranean East region

Greece (EL) and Cyprus (CY)

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1. Species presence in Member States from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each Member State in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)

Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopoche aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Cyprus																						
Presence	NP	P	NP	P	NP	P	NP	NP	NP	NP	NP	NP	NP	NP	F	NP	NP	NP	NP	NP	NP	P
Status		O		O		R																R
Impact		?		?		?																?
Highest impact																						
References	1	1	2	9	3	10	3	3	3	3	8	11	1	11	12	3	3	3	3	7	8	3
Greece																						
Presence	NP	P	NP	P	NP	P	P	NP	P	NP	P	?	NP	NP	NP	NP	P	NP	NP	P	NP	P
Status		O		R		W	R		W		O						W			O		W

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percocottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Impact		?		?		?	Y		?		?					Y			?			Y
Highest impact							+															+
References	1	1	2	3	3	4	5	3	5	3	5	5	1	4	4	3	4, 6	3	3	7	8	5

References:

1. Mullarney et al. (2007); 2. Masseti (2005); 3. Tsiamis et al. (2017); 4. Koutsikos et al. (2019); 5. Adamopoulou & Legakis (2016); 6. Rosocchi et al. (1993); 7. Mori et al. (2018); 8. European Commission (2017); 9. Ehlers Smith & Ehlers Smith (2020); 10. Zogaris et al. (2012); 11. Magliozzi et al. (2020); 12. Peyton et al. (2019)

2. Toolbox of measures - restrictions/bans in Member States from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in an EU Member State = * followed by MS country code

Use of measure **banned** in an EU Member State = # followed by MS country code

Category	Measure name	<i>Alopochen aegyptiaca</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Plotosus lineatus</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Trachemys scripta</i>
Biological control	Native predators											
Habitat manipulation	Aquatic barriers – physical & non-physical											
	Aquatic habitat management - Pond drying/drainage											
	Physical terrestrial barriers											
Hand removal	Hand removal	*CY *EL	*CY *EL	*CY *EL	*CY *EL				*CY *EL	*CY *EL		*CY *EL
	Physical fishing methods											
Other	Egg oiling	*CY *EL	*CY *EL									
	Electrofishing			*CY #EL	*CY #EL					*CY #EL		

Category	Measure name	<i>Alopochen aegyptiaca</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Plotosus lineatus</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Trachemys scripta</i>
	Fertility Control - chemical (in bait) & injection											
	Hunting dogs (tracking/ baying)					*CY *EL	*CY*EL	*CY *EL			*CY *EL	#CY #EL
	Judas animals											
Poisoning or toxicants	Stupefying bait	#CY #EL	#CY #EL									
	Chemical treatment of the habitats			#CY #EL	#CY #EL	#CY #EL		#CY #EL		#CY #EL		
	Poisons and toxins in bait							#CY #EL				
Shooting	Shooting	*CY *EL	*CY *EL		*CY *EL	*CY *EL	*CY*EL					*CY *EL
Trapping	Drowning traps					*CY *EL		*CY *EL				
	Goodnature self-resetting traps *EL*CY											
	Spring traps					*CY *EL	*CY*EL	*CY *EL			*CY *EL	
	Cage traps	*CY *EL				*CY *EL	*CY*EL	*CY *EL			*CY *EL	*CY *EL
	Neck-hold traps, and snares					*CY *EL	*CY*EL					
	Live decoy traps	*CY *EL	*CY *EL									

Category	Measure name	<i>Alopochen aegyptiaca</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Myocastor coypus</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Plotosus lineatus</i>	<i>Pseudorasbora parva</i>	<i>Tamias sibiricus</i>	<i>Trachemys scripta</i>
Dispatch/ removal only once captured	Cervical dislocation	*CY *EL	*CY *EL	*CY *EL					*CY *EL	*CY *EL	*CY *EL	
	Cranial depression	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL		*CY *EL	*CY *EL	
	Decapitation	*CY *EL	*CY *EL	*CY *EL	*CY *EL				*CY *EL	*CY *EL	*CY *EL	
	Electrocution	*CY *EL	*CY *EL	*CY *EL		*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	
	Freezing											
	Injection euthanasia	*CY *EL	*CY *EL			*CY *EL	*CY *EL	*CY *EL			*CY *EL	*CY *EL
	Keeping in captivity	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL		*CY *EL	*CY *EL	*CY *EL
	Modified atmospheres	*CY *EL	*CY *EL			*CY *EL	*CY *EL	*CY *EL			*CY *EL	
	Shooting - dispatch restrained animals	*CY *EL	*CY *EL			*CY *EL	*CY *EL	*CY *EL			*CY *EL	
	Slaughter (knife)	*CY *EL	*CY *EL	*CY *EL		*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	*CY *EL	
Surgical sterilisation						*CY *EL	*CY *EL			*CY *EL	*CY *EL	

3. Details of restrictions/bans of Toolbox measures in Member States from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Hand removal	It is banned to remove eggs and individuals of the species of Community concern, which include mammals, fish, reptiles and amphibians. Also, it is banned to remove eggs and individuals of any bird species in Cyprus. The Minister of Interior in Cyprus can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Cyprus	Law 153(I)/2003 Law 152(I)/2003 Law 25(I)/2012
	It is banned to remove eggs and individuals of any bird. Also, it is banned to remove eggs and individuals of the species of Community concern and the priority species which include mammals, fish, reptiles and amphibians. The Minister of Environment and Energy can allow the regulation of some species populations in cases referred to section 2.	Greece	Article 258 of the LD 86/1969 JMD 414985/1985 JMD 37338/1807/E.103/2010 JMD 33318/3028/1998
Egg oiling	The following is prohibited a) the capture or killing of all wild birds, using all means which may locally cause the extinction or disturb the population of a species, b) the destruction of nests and eggs, c) the disturbance during the breeding season and during the chick rearing period, d) the collection and possession of eggs from the wild and e) the possession of wild birds for which the hunting and capture is banned. The Minister of Interior may allow the hunting and capture of bird species and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Cyprus	Law 152(I)/2003 Law 25(I)/2012
	This Joint Ministerial Decision refers to all the wild bird species that live in Greece, their eggs, their nests and their habitats. The intended capture and killing by any mean, the	Greece	JMD 37338/1807/E.103/2010

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	destruction of the nests of all bird species and the removal of eggs and chicks and their trade are prohibited. The Minister of Environment and Energy may allow the hunting and capture of bird species and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.		
Electrofishing	This method is used only after permission.	Cyprus	Law 170(I)/2019
	It is banned to use devices that produce electric discharges.	Greece	Article 8 of the Law 2332/1995
Hunting dogs	Hunting dogs are used only during the hunting season for the hunting of game species.	Cyprus	Law 152(I)/2003
	Hunting dogs are used only during the hunting season for the hunting of game species. The use of hunting dogs is allowed 3 days a week for mammalian game species specifically, but with no restrictions for avian species.	Greece	MD 285/2020
Stupefying bait	It is banned to use any poison.	Cyprus	Law 153(I)/2003 Law 152(I)/2003 Law 25(I)/2012
	It is banned to use any poison.	Greece	JMD 414985/1985 JMD 37338/1807/E.103/2010 Article 252 of the LD 86/1969 JMD 33318/3028/1998
Chemical treatment of the habitats	It is banned to use any poison.	Cyprus	Law 152(I)/2003 Law 170(I)/2019 Law 25(I)/2012
	It is banned to use any poison.	Greece	JMD 414985/1985 JMD 37338/1807/E.103/2010 Article 252 of the LD 86/1969 JMD 33318/3028/1998

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
Poisons and toxins in bait	It is banned to use any poison.	Cyprus	Law 153(I)/2003 Law 152(I)/2003 Law 170(I)/2019 Law 25(I)/2012
	It is banned to use poison.	Greece	JMD 414985/1985 JMD 37338/1807/E.103/2010 Article 252 of the LD 86/1969 JMD 33318/3028/1998
Shooting	Each year the Ministry of Interior in Cyprus publishes the hunting regulation which includes the species, the number of individuals and the dates that the hunting with shotguns is allowed. Outside this period the use of guns is prohibited. Moreover, it is prohibited all the year the use of shotguns with night vision and glow-in-the field shotguns and semi-automatic or automatic guns that can hold more than three cartridges.	Cyprus	Law 153(I)/2003 Law 152(I)/2003 Law 25(I)/2012
	The use of any equipment and/or method that can kill bird species is banned. Each year the Ministry of Environment publishes the hunting regulation which includes the species, the number of individuals and the dates that the hunting with shotguns is allowed. Outside this period the use of guns is prohibited. The following is banned: the use of shotguns with night vision and glow-in-the field shotguns and semi-automatic or automatic guns that can hold more than three cartridges.	Greece	MD 285/2020 JMD 414985/1985 JMD 37338/1807/E.103/2010 JMD 33318/3028/1998
Drowning traps	It is banned to use any kind of traps. The Minister of Interior can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Cyprus	Law 152(I)/2003 Law 25(I)/2012
	The following is banned: the use of traps. The Minister of Environment can allow the use of traps only for scientific research. The use of non-selective traps is banned. The Minister of Environment and Energy can allow the regulation of some species populations and	Greece	Article 252 of the LD 86/1969 JMD 33318/3028/1998

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.		
Goodnature self-resetting	It is banned to use any kind of traps. The Minister of Interior can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Cyprus	Law 152(I)/2003 Law 25(I)/2012
	The following is banned: the use of traps. The Minister of Environment can allow the use of traps only for scientific research. The use of non-selective traps is banned. The Minister of Environment and Energy can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Greece	Article 252 of the LD 86/1969 JMD 33318/3028/1998
Spring traps	It is banned to use any kind of traps. The Minister of Interior can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Cyprus	Law 152(I)/2003 Law 25(I)/2012
	The following is banned: the use of traps. The Minister of Environment can allow the use of traps only for scientific research. The use of non-selective traps is banned. The Minister of Environment and Energy can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the	Greece	Article 252 of the LD 86/1969 JMD 33318/3028/1998

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	native flora and fauna and d) for scientific, translocation and reintroduction reasons.		
Cage traps	It is banned to use any kind of traps. The Minister of Interior can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Cyprus	Law 152(I)/2003 Law 25(I)/2012
	It is banned to use any kind of traps that targets to attract, kill, capture and stupefy any bird species. It is also banned to use non-selective traps. The Minister of Environment can allow the use of traps only for scientific research. The Minister of Environment and Energy can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Greece	JMD 414985/1985 JMD 37338/1807/E.103/2010 Article 252 of the LD 86/1969 JMD 33318/3028/1998
Neck-hold traps, and snares	It is banned to use any kind of traps. The Minister of Interior can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Cyprus	Law 152(I)/2003 Law 25(I)/2012
	It is banned to use traps. The Minister of Environment can allow the use of traps only for scientific research. The Minister of Environment and Energy can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Greece	Article 252 of the LD 86/1969 JMD 33318/3028/1998
Live decoy traps	It is banned to use any kind of traps. The Minister of Interior can allow the regulation of	Cyprus	Law 152(I)/2003

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.		Law 25(I)/2012
	It is banned to use any kind of traps that targets to attract, kill, capture and stupefy any bird species. It is also banned to use non selective traps. The Minister of Environment can allow the use of traps only for scientific research. The Minister of Environment and Energy can allow the regulation of some species populations and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.	Greece	JMD 414985/1985 JMD 37338/1807/E.103/2010 Article 252 of the LD 86/1969 JMD 33318/3028/1998
Cervical dislocation	This method is used only in poultry industry. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used only in poultry. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Cranial depression	This method is used in productive animals for their stunning. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used in productive animals for their stunning. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Decapitation	This method is used in poultry industry. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used in poultry. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Electrocution	This method is used in productive and fur animals in fur industry. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
	This method is used in productive and fur animals. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Injection euthanasia	This method is used in fur animals. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used in fur animals. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Keeping in captivity	Some species may be allowed to keep in captivity after permission.	Cyprus	Regulation 42/2019
	Some species may be allowed to keep in captivity after permission.	Greece	JMD 125188/246/22-1-2013
Modified atmospheres	This method is used in productive and fur animals. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used in productive and fur animals. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Shooting - dispatch restrained animals	This method is used in productive animals. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used in productive animals. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Slaughter (knife)	This method is used in productive animals. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used in productive animals. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996
Surgical sterilisation	This method is used in productive animals. However, after consultation, this method could be used for IAS with restrictions.	Cyprus	Law 46(I)/1994
	This method is used in productive animals. However, after consultation, this method could be used for IAS with restrictions.	Greece	PD 327/1996

Abbreviations of legislation	
JMD 414985/1985	Joint Ministerial Decision 414985/1985 (Government Gazette 757/B/18-12-1985) "Management measures for the wild avifauna"
JMD 37338/1807/E.103/2010	Joint Ministerial Decision 37338/1807/E.103/2010 – (Government Gazette 1495/B/6-9-2010) "Establishing measures and procedures for the conservation of wild birds and their habitats, in accordance with the provisions of the Directive 79/409/EEC "On the conservation of wild birds" of the European Council of 2 April 1979", as amended by the Directive 2009/147/EC".
Article 252 of the LD 86/1969	Article 252 "Hunting measures" of the Legislative Decree 86/1969 "Forest Code".
Article 258 of the LD 86/1969	Article 258 "General bans of hunting" of the Legislative Decree 86/1969 "Forest Code"
JMD 33318/3028/1998	Joint Ministerial Decision 33318/3028/1998 (Government Gazette 1289/B/28-12-1989) "Establishing measures and procedures for the conservation of natural habitats and the wild fauna and flora"
MD 285/2020	Ministerial Decision 285/2020 (Government Gazette No 3053/B/23-7-2020) "Hunting Regulation for the hunting season 2020-2021"
Article 8 of the Law 2332/1995	Article 8 "Amendment of the Legislative Decree 420/1970 "Fishing Code"" of the Law 2332/1995 "Register of Farmers and agricultural holding and other provisions"
PD 327/1996	Presidential Decree 327/1996 "Protection of animals during slaughter and/or killing in accordance with Council Directive 93/119/EC"
JMD 125188/246/22-1-2013	Joint Ministerial Decision 125188/246/22-1-2013 (Government Gazette 285/13-2-2013) "Trade of wild fauna and flora species"
Law 153(I)/2003	Law 153(I)/2003 "Protection and Management of Nature and Wildlife"
Law 152(I)/2003	Law 152(I)/2003 "Protection and Management of Wild Birds and Game".
Law 46(I)/1994	Law 46(I)/1994 "Protection and Welfare of Animals"
Regulation 42/2019	Regulation 42/2019 "Protection and Management of Wild Birds and Game (Possession of farmed species of wild birds or wild fauna)"
Law 25(I)/2012	Forest Law
Law 170(I)/2019	Fisheries Law (Ch. 135)

4. Overview of legislation, standards and guidance within Member States from the region

4.1. Cyprus

- **Law 120(I) / 2019 “Prevention and Management of the Import and Spread of Invasive Alien Species”.** This law is the harmonization of the Regulation 1143/2014 with the national legislation. For each invasive alien species of Union or national interest, an Action Plan is prepared, which includes the elements described below: (a) Analysis of the routes of unintentional introduction and spread of the species and action plans for the routes identified as "priority routes", in accordance with the provisions of paragraph 1 of Article 13 of the Regulation; (b) rapid eradication measures, applicable to the species or new populations of the species, at an early stage of the invasion in the Republic, in accordance with the provisions of Article 17 of the Regulation; (c) management measures which may be applied when the species is widely distributed in the Republic, in accordance with the provisions of Article 19 of the Regulation; (d) restoration measures that may be applied to assist ecosystems that have been degraded, damaged or extinct in accordance with the provisions of Article 20 of the Regulation.
- **Regulation 42/2019 “Protection and Management of Wild Birds and Game (Possession of farmed species of wild birds or wild fauna)”.** The Head of the Game and Fauna Service can give license for possession, farming and trade of farmed (not wild caught) birds and fauna. The possession of farmed wild birds when the owner: a) follows the law, b) all individuals are marked, c) built and secures the area that keeps the animals is permitted. Also, the owner must keep records of: a) the date of receipt the animals, the number of individuals, the species and marked numbers, b) all the medical treatment the animals receive, c) the veterinary checks, d) the checks by the Game and Fauna Service, e) the species, the number of individuals and the date of death, f) all the trade certificates (CITES, EU Regulations) and g) the species, the number of individuals and the date at which sick individuals have been detected. The owners must not capture and possess wild birds from the nature. The placement of the pre-sized rings is a prerequisite for the issuance of a possession license. Among the birds that are listed in the list of IAS of Union concern only *Corvus splendens* and *Threskiornis aethiopicus* are listed as farmed species that may be allowed to be kept.
- **Law 46(I)/1994 “Protection and Welfare of Animals”.** This law refers to the legislation on the protection and welfare of all animals (domestic, stray, captive and wild). Basic obligations towards all animals: 1) Animals should always be handled in such a way that best suited to their physiological and ethological needs, 2) A person who has in his or her ownership, possession or custody of any animal, shall ensure the health and welfare of that animal, 3) It shall be unlawful for any person to expose or induce, without reasonable cause (which includes IAS management), any animal to pain, suffering, injury or fear, 4) It shall be unlawful for any person to intentionally and without reasonable cause to permit the administration or supply, of any poison or other harmful substance to any animal. Also, without prejudice to the generality of the provisions above, the animals shall not be subjected to abuse, neglect and unnecessary overstrain. General Animal Care: 1) Any person who has in his possession or custody of any animal, shall provide it with appropriate to the species food, water and care and, where necessary, housing, 2) The necessary freedom of movement of the animal shall not be restricted permanently or unnecessarily in any way that causes pain, suffering or injury, 3) Persons who have in their ownership, possession or custody Equidae of advanced age, diseased, sick, debilitated or misbehaved shall protect and care for them until the death, unless a veterinarian decides otherwise, 4) Regulations may prescribe general or special requirements for the keeping of various animals in respect of such matters as minimum dimensions, design, lighting and ventilation of available accommodation for such animals, the population density for group housing and the means of tethering the animals.
- **Law 25(I)/2012 “Forest Law”.** The release of any alien fauna species in the national forests is forbidden. The director can give permission of the above action when this is in accordance with the Law 152(I)/2003.

4.2. Greece

- **Article 12 “Special regulations for the Invasive Alien Species” of the Law 3937/2011 “Biodiversity Conservation and other Provisions”.** National Authorities have to make a risk assessment and prepare a list of the IAS that appear on the ecosystems of the country. IAS are divided into categories according to their risk of spread and the estimated impact on the structure and functioning of ecosystems. Depending on the risk category, the Ministry of Environment and Energy prepares management plans for the respective IAS. The plans include: a) The prevention of the import of IAS, update and exchange of information, b) Early detection and eradication, including the prevention of the spread of IAS, c) Monitoring, control and long-term limiting the spread of IAS and d) The restoration of biodiversity of ecosystems affected by the establishment of IAS populations. Also, National Authorities issue guides for the identification of IAS that are assessed as particularly dangerous for the conservation status of native species and habitats.
- **Law 4470/2017 “Ratification of the International Convention for the Control and Management of Ships’ Ballast Water and Sediments”.** This Law ratifies the Convention and specifies the ballast water management. More specifically sets all the mechanical, physical, chemical and biological processes, either singularly or in combination, to remove, render harmless or avoid the uptake or discharge of Harmful Aquatic Organisms and Pathogens within Ballast Water and Sediments.
- **Ministerial Decision 40332/2014 (Government Gazette 2383/B/8-9-2014) “Approval of the National Strategy for Biodiversity for the years 2014-2029 and the Five-Year Action Plan”, General Objective 8: Protection of the biodiversity from IAS.** The General Objective is detailed in the Specific Objectives: 8.1 Prevention, early detection, control of the introduction and spread of IAS and 8.2 Addressing the impact of IAS on biodiversity. More specifically: 8.1.1 Institutional arrangements for the detection, prevention of entry, control or eradication of invasive species, for the restoration of the systems affected by them, as well as for a relevant mechanism of responsibility. Development of an invasive alien species management plan that includes arrangements for prevention, early detection, monitoring and rehabilitation according to the risk category. 8.1.2 Recording the invasive species (compiling a list of invasive species and classifying them based on their frequency of occurrence and their spatial distribution, their degree of risk to biodiversity, economy and health) located in the country and investigating how they enter and monitoring them. Recording the potentially invasive species in the country and investigating the possible ways of their entry into it. 8.1.3 National Program for informing / raising public awareness and training the executives of all the competent bodies (by region and municipality, customs, etc.) in matters of alien and invasive species. 8.2.1 Monitoring and long-term containment of the spread of invasive species (creation of a system for detection, warning and monitoring, control mechanisms at the gates of the country of invasive species). 8.2.2 Restoration of indigenous biodiversity affected by invasive species. Design and implementation of pilot actions to control populations of alien invasive species and habitat restoration. 8.2.3 Restoration of disturbed forest environments with native species.
- **Joint Ministerial Decision 125188/246/22-1-2013 (Government Gazette 285/13-2-2013) “Trade of wild fauna and flora species”.** This JMD refers to the species that are listed in the a) Convention CITES, b) EU Regulations for trade of wildlife, and c) to all the resident, migratory and endemic Greek wild fauna species. It is unclear if IAS are included under the remits of this legislation. The export, import, re-export, re-import, transit, sale, purchase, advertising, leasing, commercial exploitation, barter and general possession, disposal, storage, exhibition, transport, dispatch and movement of wild fauna and native flora as well as of their samples alive or dead, processed or not of cases a and b of Article 2, are governed by the provisions of the regulations (EC and EU) of paragraph 1 of article 1 and ratified by Law 2055/1992 (AD 105) CITES Convention. For the import, export, re-import, re-export and handling of specimens of species of wild fauna and flora of cases c and d of Article 2 which are not simultaneously included in the cases a or b of Article 2 [i.e. species not included in the CITES Convention and related regulations (EC and EU) of the European Union], it is required special permission in compliance with the relevant provisions for the protection of those species provided by the relevant Management Authority CITES. Also, according to the implementing regulation 2016/1141/13-07-2016, the import, export, reimport, sale, transport, leasing etc. for the species *Callosciurus erythraeus*, *Sciurus*

carolinensis, *Sciurus niger*, *Oxyura jamaicensis*, *Trachemys scripta elegans*, *Lithobates catesbeianus* is banned.

- **Presidential Decree 98/2004 “Establishment and operation of zoos in compliance with the Council Directive 1999/22/EC”**. This Presidential Decree refers to the legislation associated with the establishment and operation of zoos. Holders of zoo licenses are required to: 1) Participate in at least one of the following activities: (a) research, if this is in the interest of the conservation of the species, including the exchange of information on the conservation of the species, (b) training to acquire special skills in the field of conservation of species, (c) reproduction in captivity, renewal of the animal population or reintroduction of the species into the wild, where appropriate, 2) to promote, under the supervision of the supervisory authority, the information, awareness and education of the public on the conservation of biodiversity, natural habitats and the species on display, 3) to ensure that the living conditions of the animals meet the biological requirements of the species and their conservation requirements, to take care of the special enrichment of their enclosures, the maintenance of a high level of animal husbandry with a developed program of preventive and therapeutic veterinary education and nutrition, 4) take the necessary measures to ensure the non-escape of animals and the introduction of noxious animals and pests, 5) take the necessary measures to protect staff and visitors, 6) to keep complete and up-to-date records of the species they maintain.
- **Law 4039/2012 (Government Gazette 15/2-2-2012) “For domestic and stray pets and the protection of animals from exploitation or use for profit.”** This law includes legislation on animal welfare, however, it is unclear how it can affect the management of IAS: 1) It is prohibited to keep any kind of animal in a circus or a circus troupe with a varied program, provided that the animals are used in any way; and for any purpose in their program, perform or parade or appear before the public, 2) It is prohibited to keep any kind of animal in amusement game operations, automobile racetracks, music concerts, shows, demonstrations, fairs or other artistic or entertainment events, so long as such animals are used in any manner and for any purpose in their program, 3) The breeding, training and use of animals for any kind of duelling is prohibited. It is also prohibited to breed and use dogs and cats for the production of fur, leather, meat or for the manufacture of medicinal or other substances. Of the prohibitions provided above (1) and (2) shall not apply to legally operating zoos, aquariums, pet shops, wildlife care centers and game farms, which are governed by specific provisions, provided that the aforementioned premises do not also host any kind of performances involving animals. Also, provisions on animal abuse are: a) The torture, ill-treatment and other cruel, inhuman or degrading treatment or punishment, abuse of any kind of animal, as well as any act of violence against it, in particular poisoning, hanging, drowning, burning, crushing and mutilation shall be prohibited. The sterilisation of the animal as well as any other veterinary act for therapeutic purposes shall not be considered as mutilation, b) Except in the case of cinematographic films and audiovisual material of an educational nature in general, the sale of such material is prohibited, marketing and presentation - distribution via the Internet of any audiovisual material, such as videos or any other kind of cinematographic or photographic material in which any act is depicted violence against an animal, including sexual intercourse between animals or between an animal and a human being for the purpose of the profit or sexual gratification of persons who watching or participating in them. In the above prohibition includes the case of duelling between animals, c) In case of injury to a pet animal in a traffic accident, the person responsible for this act, shall immediately notify the municipality concerned, in order to provide the injured animal with necessary veterinary care.

5. Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance

5.1. Cyprus

- **Law 153(I)/2003 “Protection and Management of Nature and Wildlife”.** The capture or killing of fauna of Community interest listed in Part A of Annex IV is prohibited, using all means which may locally cause the extinction or disturb the population of a species of Community interest. For mammals it is prohibited to use: a) blind or mutilated animals as baits or decoys, b) tape recorders, c) electric or electronic systems that can kill or confuse, d) artificial light sources, e) mirrors and other dazzling devices, f) target light means, g) devices for night shooting, h) explosives, i) nets, j) crossbow, k) any kind of poison, l) gas and smoke and m) shooting guns. For fish it is prohibited to use: a) poisons and b) explosives.
- **Law 152(I)/2003 “Protection and Management of Wild Birds and Game”.** It is prohibited a) the capture or killing of all wild birds, using all means which may locally cause the extinction or disturb the population of a species, b) the destruction of nests and eggs, c) the disturbance during the breeding season and during the chick rearing period, d) the collection and possession of eggs from the wild and e) the possession of wild birds for which the hunting and capture is banned. It is prohibited to use: a) all kind of traps, b) blind or mutilated animals as baits or decoys, c) tape recorders, d) electric or electronic systems that can kill or confuse, e) artificial light sources, f) mirrors and other dazzling devices, g) target light means, h) devices for night shooting, i) silencers in guns, j) baits with explosives, k) explosives, l) nets, m) any kind of poison, n) shooting guns, o) sound-producing devices, p) chemicals, q) feeding and r) hunting with the use of birds of prey. According to this law the hunting is allowed for a number of species, for a specific period of the year. The law makes no distinction between native and alien species.
- **Law 46(I)/1994 “Protection and Welfare of Animals”.** It is prohibited to abuse, neglect and unnecessarily distress the animals. The slaughter of productive animals (livestock, poultry, fish) as well as the urgent killing of animals that are ill, injured, too old, aggressive etc must take into account all the measures so the animals are spared any avoidable pain, distress or suffering and the use of anaesthesia is mandatory. The part of the Law for the protection of animals during the slaughter or killing has been replaced by the Regulation 1099/2009/EC. Animals are defined as any mammal, bird, fish, reptile, amphibian, insect that are domestic, stray, captive and wild (then including IAS).
- **Law 25(I)/2012 “Forest Law”.** The disturbance, collection and killing of any fauna species, the degradation of its habitat and the destruction of the nests or eggs are prohibited. Also, it is forbidden to release any alien fauna species in the national forests. The director can give permission of the above actions when these are in accordance with the Law 152(I)/2003.
- **Law 170(I)/2019 “Fisheries Law (Ch. 135)”.** Any fishing activities are allowed after permission. It is banned to take, stupefy or kill or any attempt to take, stupefy or kill any fish by the use of dynamite or other explosive substance or by the use of any noxious or poisonous matter. Moreover, spearfishing with Scuba gear is banned.

5.2. Greece

- **Article 252 “Hunting measures” of the Legislative Decree 86/1969 “Forest Code”.** The following is prohibited: the placement and use of traps, poisons, nets, neck-hold traps, snares, special mirrors, hooks and any means of attraction (plants, organs, equipment etc.) that aim to kill, capture and stupefy any wild mammal and bird. Moreover, the trade, manufacture and import of this equipment is prohibited. Also, the use of any decoy (live, voices) and dummy is prohibited. The Minister of Environment and Energy can allow the use of traps only for scientific research.
- **Article 258 “General bans of hunting” of the Legislative Decree 86/1969 “Forest Code”.** The destruction of the nests of all bird species and the removal of eggs and chicks and their trade is prohibited, except those species according to the provisions of article 257, identified by a decision of the Minister of Environment and Energy as harmful.

- **Joint Ministerial Decision 414985/1985 (Government Gazette 757/B/18-12-1985) “Management measures for the wild avifauna”.** The following is prohibited: the placement and use of traps, poisons, nets, neck-hold traps, snares, special mirrors, hooks and any means of attraction (plants, organs, equipment, etc.), shotguns with night vision, glow-in-the field shotguns, explosives and electric shot devices that targets to attract, kill, capture and stupefy any bird species. Also, the use of any decoy (live, voices) and hunting dummies are prohibited. The Minister of Environment and Energy may allow the hunting and capture of bird species, including IAS, and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.
- **Ministerial Decision 285/2020 (Government Gazette 3053/B/23-7-2020) “Hunting Regulation for the hunting season 2020-2021”.** Each year the Ministry of Environment and Energy publishes the hunting regulation which includes the species, the number of individuals (hunting quotas) and the period during which the hunting is allowed. The use of hunting dogs is allowed 3 days a week for mammalian game species specifically, but with no restrictions for avian species.
- **Joint Ministerial Decision 37338/1807/E.103/2010 (Government Gazette 1495/B/6-9-2010) “Establishing measures and procedures for the conservation of wild birds and their habitats, in accordance with the provisions of the Directive 79/409/EEC “On the conservation of wild birds” of the European Council of 2 April 1979”, as amended by the Directive 2009/147/EC”.** This Joint Ministerial Decision refers to all the wild bird species that live in Greece, their eggs, their nests and their habitats. The following are prohibited: the intentional capture and killing by any mean, the destruction of the nests of all bird species and the removal of eggs and chicks and their trade. The Minister of Environment and Energy may allow the hunting and capture of bird species (including IAS) and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons. Also, Article 50 in the Decision 8353/276/E103 (Government Gazette 415/B/23-2-2012) that amended and supplemented this JMD concerns the protection of avian species in Special Protection Areas of the Natura 2000 network by controlling the population of the species that are competitive to the protected bird species.
- **Joint Ministerial Decision 33318/3028/1998 (Government Gazette 1289/B/28-12-1998) “Establishing measures and procedures for the conservation of natural habitats and the wild fauna and flora”.** The following is prohibited: (I) any form of intentional capture or killing of species of community interest (species that are listed or could potentially be listed in the Annexes II, IV and V) in the wild. For mammals it is prohibited to use non selective means: a) blind or mutilated animals as baits or decoys, b) tape recorders, c) electric or electronic systems that can kill or confuse, d) artificial light sources, e) mirrors and other dazzling devices, f) target light means, g) devices for night shooting, h) explosives, i) nets, j) crossbow, k) any kind of poison, l) gas and smoke, m) shooting guns and n) traps. For fish it is prohibited to use non selective means: a) poisons and b) explosives, (II) to deliberately disturb the species, in particular during the breeding season, the period during which the newborns are dependent on the mother, the hibernation and the migration, (III) the deliberate destruction or collection of eggs in natural habitat, (IV) the damage or destruction of breeding and resting habitats, and (V) the possession, trade, sale, or exchange and offer for sale or exchange of specimens of species caught in the wild. The Minister of Environment and Energy may allow the hunting and capture of mammal, fish, reptile and amphibian and bird species, including IAS, and define the means, the methods or the equipment that must be used only when those species: a) threaten the public health and security and the air transports, b) cause economic damages in agriculture, forestry, game, fishing and aquaculture, c) threaten the native flora and fauna and d) for scientific, translocation and reintroduction reasons.
- **Article 8 “Amendment of the Legislative Decree 420/1970 “Fishing Code”” of the Law 2332/1995 “Register of Farmers and agricultural holding and other provisions”.** It is banned to fish with: a) dynamite or other explosives, b) toxic, narcotic or corrosive substances, c)

electrical discharge devices, d) any vegetative, chemical or other substance which may numb, paralyze, kill or render incapable of reaction the aquatic animals. This applies to any fish species, including IAS.

- **Presidential Decree 327/1996 “Protection of animals during slaughter and/or killing in accordance with Council Directive 93/119/EC”.** This decree refers to animals breeding for meat, fur and other products production. The methods that are used to kill animals (except fur animals) are applied after the anaesthesia of the animals and are: a) shooting, b) electrocution, c) exposure to CO₂ and d) slaughter. The methods used to kill fur animals are: a) mechanic equipment that penetrates the brain, b) injection euthanasia, c) electrocution to heart attack, d) exposure to CO, e) exposure to chloroform, and f) exposure to CO₂.
- **Joint Ministerial Decision 323/4883/2015 (Government Gazette 163/B/22-01-2015) “Simplification and Standardization of the administrative procedures for notification of the establishment and operation of companies for the professional use of biocides in order to control insects and rodents in residential areas. Integration of the procedures in the Citizens' Service Centers (KEP) that operate as Unified Service Centers (CSR).”** The Company may carry out insect and rodent control in residential areas only under the supervision of a responsible scientist and after permission from the relevant Regional Unit. The scientist is responsible for the effective and safe implementation of the control, including the preparation of a relevant technical report evaluating the non-chemical methods (traps) suitable for the control of rodents on a case-by-case basis and informing the locals on protective measures after applying the biocides.

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- Joint Ministerial Decision 33318/3028/1998 (Government Gazette 1289/B/28-12-1998) “Establishing measures and procedures for the conservation of natural habitats and the wild fauna and flora”.
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Appendix 41. Regional conditions for the Mediterranean West region

Italy (IT), Malta (MT), Portugal (PT) and Spain (ES)

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1. Species presence in Member States from the region

Table 1. Presence, status and impact of the 22 vertebrate IAS of Union concern for each Member State in the region.

Presence: P = present/ NP = not present / ? = unsure / F = not yet present but may become so in the near future (through natural dispersal across borders)
Status (for Present only): W = established and widespread distribution / R = established restricted distribution or early stage invasion / O = not established, but occasional records

Impact (for Present only): Y = evidence of impacts to biodiversity in the country / N = no impacts to biodiversity in the country / ? = unknown

Highest impact: + = species that are having the highest impact upon biodiversity in the country

References: citation numbers refer to citations directly under this table; PC = personal communication, EO = expert opinion

	<i>Acridotheres tristis</i>	<i>Alopoche aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Percottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Italy																						
Presence	P	P	P	NP	NP	P	P	NP	P	NP	P	P	P	NP	NP	P	P	P	NP	P	P	P
Status	R	R	W			R	R		W		R	O	O			R	W	W		R	W	W
Impact	N	N	Y			Y	Y		Y		?	N	N			?	Y	Y		N	N	?
Highest impact			+			+	+		+								+	+				
References	16	16	5, 10			17	18, 19, 20		6, 7, 8, 9		10	10	16			10, 11, 12	17	1, 2, 3, 4		10, 13, 14	15	20, 21, 22
Malta																						
Presence		NP	NP	NP	NP		NP	NP	NP	NP		NP	NP	NP	F	NP	NP	NP	NP	NP	NP	P

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Perccottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
Status																						W	
Impact																							
Highest impact																							
References															45								21, 46
Portugal																							
Presence	P	P	NP	NP	NP	P	F	NP	F	NP	NP	F	P	NP	NP	P	F	NP	NP	NP	P	P	
Status	R	R				W							O			O					O	W	
Impact	Y	Y				Y							Y			?						Y	
Highest impact						+							+									+	
References	44	42, 44	43, 44	44	43, 44	44	42, 44	42, 43, 44	42, 43, 44	42, 44	42, 43, 44	42, 43, 44	42, 44	44	44	42, 43, 44	44	43, 44	43, 44	43, 44	42, 44	42, 44	
Spain																							
Presence	P	P	F	P	NP	P	P	NP	P	P	P	P	P	NP	NP	P	P	NP	NP	NP	P	P	
Status	R	O		O		W	R		R	R	O	R	O			R	R				O	W	

	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Herpestes javanicus</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Muntiacus reevesi</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Perccottus glenii</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Sciurus niger</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Impact	Y	Y				Y	Y		Y	Y		Y	Y		Y	Y					Y	Y
Highest impact						+	+								+	+						+
References	23,44	24, 42, 44	25, 44	26, 44	27, 44	28, 44	29, 42, 44	30, 44	31, 42, 44	32, 44	33, 42, 44	34, 42, 44	35, 42, 44	36, 44	37, 44	38, 42, 44	39, 44	25, 44	25, 44	25, 44	40, 42, 44	41, 42, 44

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2. Toolbox of measures - restrictions/bans in Member States from the region

Table 2. Legal restrictions and/or bans for measures that are (potentially) available to eradicate, control and contain populations of the vertebrate species of Union concern present in the region. Note that not all measures (potentially) available to eradicate, control and contain populations of these species are shown here, only those for which there are restrictions and/or bans in place (for the full suite of measures please refer to the main Toolbox of the Manual). Where a measure is not (potentially) available for any species, restrictions and/or bans are shown next to the measure's name. Also note that the restrictions/bans shown here should not be taken as legal guidance, might not be the only ones existing for these species and might change with time.

Use of measure **restricted** in an EU Member State = * followed by MS country code

Use of measure **banned** in an EU Member State = # followed by MS country code

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopochen aegyptiaca</i>	<i>Collosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Platanus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
Biological control	Native predators					*IT *MT *ES *PT	*IT *MT *ES *PT								*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT	
Habitat manipulation	Aquatic barriers – physical & non-physical					*IT *MT *ES *PT									*IT *MT *ES *PT					
	Aquatic habitat management - Pond drying/drainage					*IT *MT *ES *PT	*IT *MT *ES *PT								*IT *MT *ES *PT					*IT *MT *ES *PT
	Physical terrestrial barriers																			
Hand removal	Hand removal	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT						*IT *MT *ES *PT		*IT *MT *ES *PT			*IT *MT *ES *PT	*IT *MT *ES *PT	
	Physical fishing methods					*IT *MT *ES *PT	*IT *MT *ES *PT						*IT *MT *ES *PT		*IT *MT *ES *PT					*IT *MT *ES *PT

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alopoche aegyptiaca</i>	<i>Collosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Plotopus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
Other	Egg oiling		*IT *MT *ES *PT		*IT *MT *ES *PT							*IT *MT *ES *PT						*IT *MT *ES *PT	
	Electrofishing					*IT *MT *ES *PT	*IT *MT *ES *PT								*IT *MT *ES *PT				
	Fertility Control - chemical (in bait) & injection			*IT *MT *ES *PT			*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT		
	Hunting dogs (tracking/baying)			*IT *MT *ES *PT				*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT		
	Judas animals	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT			*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT
Poisoning or toxicants	Stupefying bait	#IT #MT #ES #PT	#IT #MT #ES #PT		#IT #MT #ES #PT													#IT #MT #ES #PT	
	Chemical treatment of the habitats					#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT			#IT #MT #ES #PT				#IT #MT #ES #PT				
	Poisons and toxins in bait										#IT #MT #ES #PT					#IT #MT #ES #PT			
Shooting	Shooting	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT		*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	
Trapping	Drowning traps							#IT #MT #ES #PT			#IT #MT #ES #PT								

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alouatta aegyptiaca</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>	
	Goodnature self-resetting traps															*IT *MT *ES *PT				
	Spring traps			#IT #MT #ES #PT				#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT			#IT #MT #ES #PT		#IT #MT #ES #PT	#IT #MT #ES #PT			
	Cage traps	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT				*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	
	Neck-hold traps, and snares							#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT				#IT #MT #ES #PT						
	Live decoy traps	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT															
Dispatch/ removal only once captured	Cervical dislocation	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT						*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT		
	Cranial depression	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		
	Decapitation	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT							*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	
	Electrocution	#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #M T #ES #PT	#IT #ES #PT	#IT #ES #PT			#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT		#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT	#IT #MT #ES #PT	
	Freezing					*IT *MT *ES *PT	*IT *MT *ES *PT								*IT *MT *ES *PT					*IT *MT *ES *PT

Category	Measure name	<i>Acridotheres tristis</i>	<i>Alouatta palliata</i>	<i>Callosciurus erythraeus</i>	<i>Corvus splendens</i>	<i>Lepomis gibbosus</i>	<i>Lithobates catesbeianus</i>	<i>Myocastor coypus</i>	<i>Nasua nasua</i>	<i>Nyctereutes procyonoides</i>	<i>Ondatra zibethicus</i>	<i>Oxyura jamaicensis</i>	<i>Plotosus lineatus</i>	<i>Procyon lotor</i>	<i>Pseudorasbora parva</i>	<i>Sciurus carolinensis</i>	<i>Tamias sibiricus</i>	<i>Threskiornis aethiopicus</i>	<i>Trachemys scripta</i>
	Injection euthanasia	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT
	Keeping in captivity	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT
	Modified atmospheres	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	
	Shooting - dispatch restrained animals	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	
	Slaughter (knife)	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT	
	Surgical sterilisation			*IT *MT *ES *PT					*IT *MT *ES *PT	*IT *MT *ES *PT	*IT *MT *ES *PT			*IT *MT *ES *PT		*IT *MT *ES *PT	*IT *MT *ES *PT		*IT *MT *ES *PT

3. Details of restrictions/bans of Toolbox measures in Member States from the region

Table 3. Details of measures presented in the Toolbox that are restricted or banned due to welfare or other legislation.

Measure name	Details on restrictions / ban	Member State where applied	Name of legislation
All measures	Every IAS control plan, using any measure, needs to be checked and authorised (granted a permit) by the responsible National/regional Authority or technical body (Italy – ISPRA; Malta – ERA; Portugal – ICNF; Spain – regional authorities from each of the autonomous communities).	Italy/Malta/Spain/Portugal	
Non-selective methods in general (evaluated by ISPRA)	According to law 157/1992, ISPRA should evaluate if any method proposed to control IAS is selective for the target species.	Italy	Law 157/1992, Rules for the protection of homeothermic wildlife and for hunting; Legislative Decree 230 of 15 December 2017, which adapts national legislation to the provisions of Regulation 1143/2014
Stupefying bait	Being not completely selective (see Annex VI of Habitats Directive and National transpositions for the prohibition of use with native species), the use of stupefying bait is not allowed to be used in Italy (Law n. 157/1992) and it is not compliant with the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (Malta), and with S.L. 549.44 (Malta), Ley 42/2007 and 47/2007 (Spain), and Decreto-Lei n.º 92/2019 (Portugal).	Italy/Malta/Spain/Portugal	National transposition of the EU Habitats Directive Italy: D.P.R. 8 settembre 1997, n. 357; Malta: S.L. 549.44; Spain: Law 42/2007, of December 13; Portugal: Decreto-Lei n.º 140/99 Law 157/1992 Italy; Ley 47/2007 Spain; Decreto-Lei n.º 92/2019 Portugal
Chemical treatment of the habitats	The chemical treatment of the habitats is not selective (see Annex VI of Habitats Directive and National transpositions for the prohibition of use with native species), it is not compliant with the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (Malta), and with S.L. 549.44 (Malta), Ley 42/2007 and 47/2007 (Spain), Decreto-Lei n.º 92/2019 (Portugal), and Law 157/1992 (Italy).	Italy/Malta/Spain/Portugal	National transposition of the EU Habitats Directive Italy: D.P.R. 8 settembre 1997, n. 357; Malta: S.L. 549.44; Spain: Law 42/2007, of December 13; Portugal: Decreto-Lei n.º 140/99 Law 157/1992 Italy; Ley 47/2007 Spain; Decreto-Lei n.º 92/2019 Portugal
Poisons and toxins in bait	The use of bait with poisons and toxins is prohibited with native species (see Annex VI of Habitats Directive and National transpositions for the prohibition	Italy/Malta/Spain/Portugal	National transposition of the EU Habitats Directive Italy: D.P.R. 8 settembre 1997, n. 357; Malta: S.L. 549.44; Spain: Law 42/2007,

	of use with native species), and it is not compliant with the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (Malta), and with S.L. 549.44 (Malta), Ley 42/2007 and 47/2007 (Spain), Decreto-Lei n.º 92/2019 (Portugal) and Law 157/1992 (Italy).		of December 13; Portugal: Decreto-Lei n.º 140/99 Law 157/1992 Italy; Ley 47/2007 Spain; Decreto-Lei n.º 92/2019 Portugal
	The Ministry of Health provided the authorisation to use biocides and toxicants (e.g. for rat eradications on islands) notwithstanding the EU Regulation 528/2012 (art. 55).	Italy	EU Regulation 528/2012
Drowning traps	These traps are lethal and not completely selective (see Annex Vi of Habitats Directive and National transpositions for the prohibition of use with native species), therefore they are not allowed to be used in Italy (Law n. 157/1992) and are not compliant with the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (Malta), and with S.L. 549.44 (Malta), Ley 42/2007 and 47/2007 (Spain), and Decreto-Lei n.º 92/2019 (Portugal).	Italy/Malta/Spain/Portugal	National transposition of the EU Habitats Directive Italy: D.P.R. 8 settembre 1997, n. 357; Malta: S.L. 549.44; Spain: Law 42/2007, of December 13; Portugal: Decreto-Lei n.º 140/99 Law 157/1992 Italy; Ley 47/2007 Spain; Decreto-Lei n.º 92/2019 Portugal
Spring traps	These traps are lethal and not completely selective (see Annex Vi of Habitats Directive and National transpositions for the prohibition of use with native species), therefore they are not allowed to be used in Italy (Law n. 157/1992) and are not compliant with the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (Malta), and with S.L. 549.44 (Malta), Ley 42/2007 and 47/2007 (Spain), and Decreto-Lei n.º 92/2019 (Portugal).	Italy/Malta/Spain/Portugal	National transposition of the EU Habitats Directive Italy: D.P.R. 8 settembre 1997, n. 357; Malta: S.L. 549.44; Spain: Law 42/2007, of December 13; Portugal: Decreto-Lei n.º 140/99 Law 157/1992 Italy; Ley 47/2007 Spain; Decreto-Lei n.º 92/2019 Portugal
Neck-hold traps, and snares	These traps are lethal and not completely selective (see Annex Vi of Habitats Directive and National transpositions for the prohibition of use with native species), therefore they are not allowed to be used in Italy (Law n. 157/1992) and are not compliant with the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (Malta), and with S.L. 549.44 (Malta), Ley 42/2007 and 47/2007 (Spain), and Decreto-Lei n.º 92/2019 (Portugal).	Italy/Malta/Spain/Portugal	National transposition of the EU Habitats Directive Italy: D.P.R. 8 settembre 1997, n. 357; Malta: S.L. 549.44; Spain: Law 42/2007, of December 13; Portugal: Decreto-Lei n.º 140/99 Law 157/1992 Italy; Ley 47/2007 Spain; Decreto-Lei n.º 92/2019 Portugal

Electrocution	Electrical and electronic devices capable of killing or stunning are prohibited by the EU Habitats Directive (see Annex VI of Habitats Directive and National transpositions for the prohibition of use with native species), they are not compliant with the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (Malta), and with S.L. 549.44 (Malta), Ley 42/2007 and 47/2007 (Spain), Decreto-Lei n.º 92/2019 (Portugal), and Law 157/1992 (Italy).	Italy/Malta/Spain/Portugal	National transposition of the EU Habitats Directive Italy: D.P.R. 8 settembre 1997, n. 357; Malta: S.L. 549.44; Spain: Law 42/2007, of December 13; Portugal: Decreto-Lei n.º 140/99 Law 157/1992 Italy; Ley 47/2007 Spain; Decreto-Lei n.º 92/2019 Portugal
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4. Overview of legislation, standards and guidance within Member States from the region

4.1. Italy

Legge n. 157/1992 “Norme per la protezione della fauna selvatica omeoterma e per il prelievo venatorio” (Rules for the protection of homeothermic wildlife and for hunting) and subsequent amendments. Art. 2 of Legge n. 157/1992 was changed after **Legge n. 221/2015 “Disposizioni in materia ambientale per promuovere misure di green economy e per il contenimento dell'uso eccessivo di risorse naturali”** (Environmental provisions to promote green economy measures and to limit the excessive use of natural resources) in force since 2/2/2016, and in particular Article 7, paragraph 5 letter a) amending Article 2 paragraph 2 of Law 157/92 providing that for alien species the management is aimed at eradication or otherwise to the control of populations.

Legge n. 157/1992 is the law that established the protection of birds and mammals in Italy and regulated the hunting activity. According to art. 2 paragraph 1, all mammal and bird species living in the national territory with self-regulated populations are protected. In the past no distinction was present between native and alien species, and therefore introduced species were also considered protected. A population control was possible (Art. 19), but it was not clear if eradications were allowed. The amendment in 2015 (Legge n. 221/2015) of Art. 2.2, clarified that the management of alien mammals and birds aims to reduce and, when possible, eradicate introduced populations. These management purposes do not apply to those alien species introduced in Italy before year 1500 AC and identified by the Decree of the Ministry of the Environment and the Protection of the Territory and the Sea of January 19, 2015 (G.U. 31, 7/2/2015), which state that these species should not be managed as non-native species. None of the mammal and bird species included in the IAS list of Union Concern are affected by this decree and therefore all must be managed for control or eradication.

According to Art. 21 of law 157/1992, it is prohibited to privately sell and hold nets for fowling and wildlife traps; however, ISPRA could authorize their use.

The management of fish, amphibians and reptiles is also regulated by regional legislation, which revision is not relevant for this manual.

Legge n. 394/1991 “Legge Quadro sulle Aree Protette” "Framework Law on Protected Areas" and in particular art. 11, paragraph 4 for National Parks and art. 22, paragraph 6 for Regional Parks and Regional Reserves, which provide that the control of species necessary to 'recompose ecological imbalances,' take place under the direct supervision of the management body of the Park or Reserve and must be implemented by the staff employed or by persons authorized by the body. Therefore, the control or eradication of IAS (all vertebrates) in protected areas is in charge of the protected area management unit.

Decreto Legislativo 230 del 15 dicembre 2017 (Legislative Decree 230 of 15 December 2017) which adapts national legislation to the provisions of Regulation 1143/2014 containing provisions aimed at preventing and managing the introduction and spread of invasive alien species. According to Art. 3 the Ministry of the Environment and the Protection of the Territory and the Sea (MATTEM), is the competent national authority designated for relations with the European Commission and for the coordination of the necessary activities. ISPRA is the technical and scientific body supporting the Ministry for the application of the regulation.

Article 27.5 provides that Regions and Autonomous Provinces identify permanent detention centres where citizens can entrust their pets if they can no longer guarantee their correct detention. In these centres, individuals found in urban parks or natural areas can also be accommodated abandoned.

The **Decreto del Presidente della Repubblica 8 settembre 1997, n. 357**, modified and integrated by **Presidential Decree no. 120/2003**, concerning the implementation of the Directive 92/43 / EEC (Habitat Directive), in art. 12, paragraph 3, provides for the prohibition of reintroduction, introduction and repopulation in nature of non-indigenous species and populations.

Decreto del Ministero dell'ambiente e della Tutela del Territorio e del Mare 2 aprile 2020 'Criteri per la reintroduzione e il ripopolamento delle specie autoctone di cui all'allegato D del decreto del Presidente della Repubblica 8 settembre 1997, n. 357, e per l'immissione di specie e di popolazioni non autoctone' (Criteria for the reintroduction and repopulation of native species referred to in Annex

D of the Decree of the President of the Republic 8 September 1997, n. 357, and for the introduction of non-native species and populations) defines the criteria for the release into nature of non-native species, pursuant to art. 12, paragraph 1 of the decree of the President of the Republic n. 357 of 1997. It regulates requests for derogation from the ban on the introduction of non-native species, e.g. for biological control or for other reasons (such as the introduction of fish for sporting activities).

The Presidential Decree 102/2019 amended art. 12 of Presidential Decree 357/97. This Decree at Art. 4 states: The release into nature of non-indigenous species and populations may be authorized for motivated reasons of relevant public interest, related to environmental needs, economic, social and cultural, and in any case in a way that is not caused no harm to the natural habitats in their area natural distribution to local wild fauna and flora.

The Decree of the Environmental Ministry 02/04/2020 establishes the criteria for the introduction of non-native species as specified by the Presidential Decree 102/2019.

The **Legge 7 febbraio 1992, n. 150** discipline the crimes relating to the application in Italy of the Convention on International Trade in Endangered animal and plant Species, signed in Washington on March 3, 1973, pursuant to law no. 874, and of Regulation (EEC) no. 3626/82, and subsequent amendments, as well as rules for the marketing and possession of live specimens of **mammals and reptiles that can constitute a danger to public health and safety**. The law lays down procedures for the registration of dangerous animals and their keepers, as well as the proper keeping of such animals. Such regulations also include provisions to prevent the escape of dangerous animals and prohibit their deliberate release or disposal into the environment. In the event that an animal belonging to a species included in the list of dangerous animals is confiscated for violation of CITES provisions, the confiscated specimen is sent to special facilities.

In Italy there is no specific legislation regarding the welfare of wildlife during control activities. However, every control plan should receive advice from ISPRA, which has the task of verifying the effectiveness, selectivity and applicability of the proposed techniques, including impacts on animals to be removed. According to **Legge n. 157/1992 “Norme per la protezione della fauna selvatica omeoterma e per il prelievo venatorio”** an evaluation of any control plan for birds and mammals from ISPRA is mandatory. According to **Decreto Legislativo 230 del 15 dicembre 2017** which transposes the provisions of Regulation 1143/2014, in case of rapid eradication at an early stage of invasion (Art. 19), having notified the European Commission, the Ministry of Environment (MATTM) orders rapid eradication measures, with the support of ISPRA. In the same way, the Ministry, after consulting ISPRA, establishes with its own decree, the management measures of the specimens of invasive alien species of Union or national importance whose widespread diffusion has been ascertained (Art. 22).

La **legge 20 luglio 2004, n. 189** ‘Disposizioni concernenti il divieto di maltrattamento degli animali, nonché di impiego degli stessi in combattimenti clandestini o competizioni non autorizzate’ (Provisions concerning the prohibition of mistreatment of animals, as well as their use in clandestine fights or unauthorized competitions). It defines the penalties for anyone who, for cruelty or without necessity, causes an injury to an animal or subjects it to torture or to unbearable behaviour due to its ethological characteristics or administers narcotic or prohibited substances or subjects them to treatments that cause damage to health. Accordingly, the procedures for the capture and killing of animals must not cause unnecessary suffering.

Decreto Legislativo 4 marzo 2014, n. 26: provides basic rules applicable to the protection of animals used in experimentation and other scientific purposes. It also reports measures of the cages where to keep the animals.

Decreto Legislativo 21 marzo 2005, n. 73: ‘Attuazione della direttiva 1999/22/CE relativa alla custodia degli animali selvatici nei giardini zoologici’ is the transposition of the EU Zoos Directive (**Council Directive 1999/22/EC**). Article 3 describes the Zoo Requirements, including: hosting animals in conditions to ensure their well-being and to meet biological needs (Annex 1); adopt suitable measures to prevent the escape of animals, also to avoid any ecological threats to indigenous species and to prevent the spread of alien species (Annex 3).

4.2. Malta

National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands, 2020

The National Strategy on Invasive Alien Species establishes a proactive framework for dealing with biological invasions. It does this by proposing coordinated measures and cooperative efforts, from prevention of harmful introductions, risk assessments, early detection, rapid response, and factors to consider for effective management and follow-up. Linked with this strategy are eight National Codes of Good Practice, which provide various recommendations for sectors utilising non-indigenous species; they are on Pets, Fishing, Gardens, Horticulture, Animal-aided Hunting, Landscaping & Forestation, Protected areas, Zoos & Aquaria.

The **Environment Protection Act (Cap. 549)** (EPA) holds various provisions for the protection of the environment, as well as the establishment of the Environment and Resources Authority (ERA). The Act further allows the Minister for the Environment to make regulations for the better carrying out of the provisions of the Act, which in relation to the protection of biodiversity may include the declaration of species to be invasive, establish rules for their assessment, monitoring, control and/or eradication and other preventive and management mechanisms to control the introduction and spread of such species.

The **Control of Invasive Alien Species of European Union Concern Regulations, 2017 (S.L. 549.119)** includes provisions for the implementation of Regulation (EU) No. 1143/2014 on the prevention and management of the introduction and spread of invasive alien species in Malta. Such provisions include the designation of competent authorities for the implementation of EU IAS Regulations, supplementary provisions on permitting and adequate penalties.

Regulations emanating from the Animal Welfare Act (Cap.439): The Protection of Animals Offered in Pet Shops (Minimum Standards) Subsidiary Legislation, 2014 (S.L.439.16) lays down the standards for the keeping of animals in pet shops and includes provisions to prevent their escape, as well as contingency measures for their re-capture. Under Part. III, the Minister may make provisions providing for the conditions under which animals shall, in each case, be kept. Under Part VI, the Minister may make provisions providing for the conditions specifying the cases in which it shall be permissible to kill animals, and the manner in which such killing may take place; this applies to animals kept in captivity. The Regulation provides a positive list of species that can be sold in pet shops (subsidiary legislation 439.16); it also reports measures of the cages where to keep the animals.

The **Owning and Keeping of Dangerous Animals Subsidiary Legislation, 2016 (S.L. 439.19)** lays down procedures for the registration of dangerous animals and their keepers, as well as the proper keeping of such animals. Such regulations also include provisions to prevent the escape of dangerous animals and prohibit their deliberate release or disposal into the environment.

Action Plan to Address the Escape of Invasive Alien Species (IAS) from Confinement

In line with the provisions of Article 13 of the EU IAS Regulations, ERA has conducted a comprehensive analysis on the pathways of unintentional introduction of the IAS of Union concern and identified 'escape from confinement' as the primary pathway of such species. The aim of the published 'Action Plan to Address the Escape of Invasive Alien Species (IAS) from Confinement' is to control the latter pathway into and within Malta. Such Action Plan also includes a number of objectives aimed at reducing the escape and discard of IAS of Union concern with particular reference to pet, aquarium and terrarium species.

Trachemys scripta is the only vertebrate IAS reported in Malta. Listed species could not be traded anymore. The Action Plan to Address the Escape of Invasive Alien Species (IAS) from Confinement is relevant for those species maintained in captivity (e.g. Zoos, private owners, etc.).

4.3. Portugal

Lei 8/2017

This law establishes a legal status for animals, recognizing their nature as living beings endowed with sentience and subject to legal protection due to their nature. However, this regulation refers to pets and does not state specific provisions for the control of invasive alien species.

Decreto-Lei 565/99

A general regulation was developed in Portugal to fight against invasive alien species with the approval of the Decreto-Lei 565/99. This decree regulated for the first time the use and introduction into the environment of non-native species of flora and fauna. Specifically, article 18 established the need of developing national action plans aiming at the control or eradication of invasive alien species that are present in Portugal. Although no National Plan was developed under this Regulation, in practice some species have been subject to control measures (plant species, non-vertebrate species (*Vespa velutina*), and some vertebrate species (freshwater species such as exotic turtles and amphibians, exotic fish) and also some mammals in Madeira (such as goats, rabbits, mice)).

In the last decade, significant progress has been made within the Portuguese IAS Regulation. A **National Strategy for the Conservation of Nature and Biodiversity (2018)** and a **Forest National Strategy (2015)** were both approved by Resolutions of the Council of Ministers (n°55/2018, and n° 6B/2015 respectively), and both consider the threat of invasive alien species and the need to put control measures in place to fight IAS.

Another related Regulation recently approved is the **Order n°86/2019, 27 of March**, that regulates the possession of live specimens of a wide list of animal taxa, mostly exotic species, considered potentially dangerous, and establishes provisions for scientific institutions, zoos, rescue centres (in Annex 1), and private owners (in Annex 2).

At a regional level, some decrees have been also approved for islands: **Decreto n°15/2012/A**, 2nd of April, establishing the legal regime for the conservation of the nature in the Azores Islands, including provisions for preventing biological invasions (chapter 6, article 84 to 101 and annex 9 to 12), and **Decreto n°27/99/M**, 8th of August, regulating the possession, importation and introduction of non-native species of fauna into the territory of Madeira.

The IAS Regulation has been recently updated in Portugal, to comply with the European IAS Regulation (Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species), with the approval of the Decreto-Lei 92/2019. This is, therefore, the most updated and current regulation applying to IAS, which establishes the legal regime for the control, possession, introduction into the environment of exotic species and implements the European IAS regulation into the national legal system. Some action plans have been developed, or are under development at the moment, for some invasive species included within the Portuguese IAS list (*Eichhornia crassipes*, *Procambarus clarkii*, *Vespa velutina*, *Xenopus laevis*, *Silurus glanis*, *Cortaderia selloana*, *Acacia*, *Hacked*, *Ailanthus*), but none of them for the vertebrate IAS of Union concern.

Decreto-Lei 92/2019

The decree creates an invasive alien species list to which appropriate management measures should be applied, and establishes the prohibition to return to nature specimens captured or collected while hunting or fishing.

Chapter 3 of this Regulation (articles 16-39) refers to the management of IAS that are present in the Portuguese territory, and specifically, article 28.10 states that control measures must take into consideration animal welfare, in a general manner.

“Whenever specimens of fauna species are involved, during the eradication, containment or control processes, the necessary measures must be taken to minimize their pain, anguish and suffering.”

The **Decreto-Lei 113/2013** transposed Directive 2010/63/EU, on the protection of animals used for scientific purposes, into a Portuguese Regulation.

Technical guidelines for the capture of IAS

No recent documents with specific guidelines have been published for the capture and/or killing of invasive alien species in Portugal.

A Practical manual for management of invading vertebrates was developed in 2003, within the framework of the LIFE Project 'Invasive vertebrate control on Islands of Spain and Portugal' (LIFE/2002 NAT CP/E/000014), but it only includes recommendations.

Portugal has made an analysis of priority pathways of introduction of IAS. 11 priority pathways of introduction of IAS are covered by 7 different action plans. Regarding vertebrates, the most relevant plans will be those referring to Pets, aquariums and terrariums, aquaculture and natural dispersal of invasive species (especially those that are present in Spain).

4.4. Spain

Royal Decree 118/2021: Basic rules applicable to the protection of animals used in experimentation and other scientific purposes.

Law 42/2007, of December 13, on Natural Heritage and Biodiversity: Basic legislation on biodiversity has been developed by Law 42/2007. To prevent the threat of IAS, this basic law creates the Spanish list of IAS in article 64. The IAS list is fully developed in the Royal Decree 630/2013.

Royal Decree 630/2013 regulates de Spanish List of Invasive Alien Species

Articles 10, 11, 12 of this regulation state that control measures must consider animal welfare, in a general manner.

Art.10. 5. Taking into account criteria of selectivity and animal welfare, the competent authorities will authorize the most appropriate capture methods and conditions for the control, management and possible eradication of animal species included in the catalogue. Hunting and fishing may be considered as methods of control, management and eradication of the species included in the catalogue whose introduction occurred prior to the entry into force of Law 42/2007, of December 13, when this objective remains included in the regulatory instruments for hunting and fishing and is limited to the range occupied by these species prior to that date (Article 10. Measures to combat IAS in the catalogue).

Art. 11. 6. In the case of animals, they must be kept under animal welfare conditions, in accordance with Regulation (EC) 1/2005, of December 22, 2004, on the protection of animals during transport and operations related and amending Directives 64/432 / EEC and 93/119 / EC and Regulation (EC) No. 1255/97 (Article 11: Control measures in the consignments presented for inspection at the Border Inspection Posts).

Art. 12. 5. In the case of animals, they must be kept under animal welfare conditions, in accordance with Regulation (EC) 1/2005, of December 22, 2004, on the protection of animals during transport and operations related and amending Directives 64/432 / EEC and 93/119 / EC and Regulation (EC) No. 1255/97 (Article 12: Control measures in the specimens detected in the passenger terminals of the ports and airports).

According to the National IAS Regulation, the Ministry for Ecological Transition, together with the autonomous communities, will develop strategies for the management, control or eradication of the IAS included in the catalogue. Articles 15 and 16 refer to the characteristics and content of strategies for management, control and eradication of invasive alien species, and they include guiding criteria for the management of IAS.

The Spanish Catalogue includes around 200 species, and priority has been given to those species that pose a greater risk to biodiversity and also those that present greater possibilities for eradication. Therefore, as of the date of preparation of this document, only 6 strategies have been developed, and two of them apply to vertebrate IAS (American mink and snakes on islands), but none of them correspond to any IAS of Union concern.

Regarding IAS of Union concern, some of which are present in Spain, are or have been subject to control measures, but there is no common strategy approved at national level applying to these species (*Threskiornis aethiopicus*, *Trachemys scripta*, *Pseudorasbora parva*, *Procyon lotor*, *Oxyura jamaicensis*, *Ondatra zibethicus*, *Nasua nasua*, *Myocastor coypus*, *Lithobates catesbeianus*, *Lepomis gibbosus*, *Alopothen aegyptiaca*, *Acridotheres tristis*) and, therefore, there are no harmonized methods for the control of these species, and different methods could be used in different regions applying different standards on animal welfare.

In any case, according to the basic law, the competent authorities (autonomous communities) will grant authorization for the control of IAS considering the most appropriate capture methods.

Technical guidelines for the capture of hunting species

The Spanish Ministry of Environment, together with the regional governments of autonomous communities, have developed technical guidelines for the capture of hunting species, including the approval of certain capture methods and a reference document for the accreditation of users. There are specifications on methods for predator control (within hunting and or wildlife regulations), but they do not refer specifically to IAS.

This document reviews international agreements and EU Regulations regarding capture methods and establishes criteria for the accreditation as users for hunting predator capture methods. Although invasive carnivore species are mentioned in the reference document for the accreditation of users, there are no further details on the methods that should apply to their control, beyond the general rule which is already included within article 10.5 of the Spanish IAS Regulation (*Taking into account criteria of selectivity and animal welfare, the competent authorities will authorize the most appropriate capture methods and conditions for the control, management and possible eradication of animal species included in the catalogue*).

In chapter 6.2. of this document, which refers to handling target animals (hunting species) once captured, it is mentioned that slaughter can apply occasionally to non-target species such as IAS, because once captured they cannot be returned to the environment.

When controlling invasive species of fish, Standards are recommended by the Spanish Ministry and are being used to control and to kill fish (UNE 173300:2016 and EN ISO 14011:200).

In practice, when dealing with IAS management, options to be carried out by the practitioner should be agreed with the competent administration and described in the authorisation.

5. Overview of management measures that are restricted or banned from use due to the different legislation, standards and guidance

5.1. Italy

In Italy, the **Decreto del Presidente della Repubblica 8 settembre 1997, n. 357** (concerning the implementation of the Directive 92/43 / EEC Habitat Directive), lists methods of capture and killing, as well as transport that is prohibited according to Directive 92/43 / EEC.

According to **Law 157/1992 art. 19** for birds and mammals and **Decreto Legislativo 230 del 15 dicembre 2017** for all IAS of Union Concern control plans are evaluated by ISPRA, which gives indications on which techniques can be adopted, based on the principle of selectivity and reduced impact on animals. Some techniques are therefore restricted according to the provision of Birds and Habitats Directives and more in general because they are not selective.

National action plans for every species of Union Concern are in draft or preparation, but the Ministry has officially adopted none. These action plans will provide indications on the techniques that can be adopted for each species.

5.2. Malta

The Technical document of the National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands (2020) establishes that the control or eradication of IAS animals may involve lethal and non-lethal means. Methods of eradication also differ depending on the taxonomic group to which the species targeted for eradication belongs. The ecological feasibility of a method intended to eradicate a target IAS needs to be assessed according to the biological characteristics of that invasive species and its ecological relationship with the area it has invaded. Methods may involve physical means, chemical means or a combination of both. In the case of animals, animal welfare considerations need to be made by ensuring that the means of eradication spares the animal avoidable pain, distress and suffering during the process, taking into account as far as possible the best practices in the field, for example the “OIE Guiding Principles on Animal Welfare”. Non-lethal methods should be considered and any action taken should minimise the impact on non-targeted species.

The EU Nature Directives have been transposed into Maltese law via the **Flora, Fauna and Natural Habitats Protection Regulations (S.L. 549.44)** which provides a list of methods of capture and killing, as well as of transport, which are prohibited for mammals and fish. The EU Birds Directive has been transposed into subsidiary legislation 549.42 ‘Conservation of wild birds’ regulations’, which prohibits the use of certain methods in bird hunting/trapping.

5.3. Portugal

According to the Portuguese IAS Regulation **Decreto-Lei n.º 92/2019**, control plans and control measures are evaluated by the ICNF (Instituto da Conservação da Natureza e das Florestas), which gives indications on which techniques can be used, based on the principle of selectivity and reduced impact on animals. National action plans are in draft or preparation for some species included in the Portuguese IAS list, but none of them are vertebrate IAS of Union concern. These action plans once developed, will provide indications on the techniques that can be adopted for each species (Carmo 2021).

National regulation includes general provisions for avoiding the use of massive and non-selective methods when managing vertebrates, following the transposition of the Birds and Habitats Directives. Therefore, the use of poisons and toxins in bait and the chemical treatment of the habitats are non-selective techniques and, for this reason, not authorized by ICNF. Lethal traps are not permitted due to the risk of non-target catches.

5.4. Spain

In Spain, there are no control methods that are prohibited by legislation applied to Invasive Alien Species. The Ministry of Ecological Transition must approve Strategies at a national level and

Autonomous Communities can also approve management plans to control IAS that are present in their territories, and this document will provide indications on which methods are recommended.

National Law (Ley 42/2007) includes general provisions for avoiding the use of massive and non-selective methods, when managing vertebrates, following the transposition of the Birds and Habitats Directives. Banned methods are specified in Annex VII of the Law 42/2007, including: blind or mutilated animals used as claims, tape recorders, electrocuting devices, electrical and electronic devices that can kill or stun, artificial light sources, mirrors, devices to illuminate targets, sighting devices, including an image converter or electronic image amplifier for night shooting, semiautomatic or automatic weapons whose magazine can hold more than two cartridges, non-selective traps, nets, ropes (only for birds), snare traps, poisons, poisoned baits or tranquilizers, leagues, explosives, suffocation with gas or smoke, crossbows, hooks (except for fishing). Regarding transportation, aircraft, motor vehicles and motorboats are prohibited as a general rule.

Standards are recommended by the Spanish Ministry and are being used to control and to kill fish (UNE 173300:2016 and EN ISO 14011:200).

Animal welfare must be considered in any case while capturing/killing wild animals, and there are restrictions for hunted species. This means that, in Spain, methods that are commonly used to control invasive species are not allowed for other purposes, such as hunting or fishing, considering the provisions of Habitat and Birds Directives, which has been transposed through the Law 47/2007. Some examples of exceptions to control invasive alien species are shotguns, rifles, small arms and light weapons (that have been used for invasive alien species of birds such as ruddy duck in the Iberian Peninsula), air guns and pistols (that have been used for invasive alien species of birds such as minas and Argentinian parakeets), or the use of toxicants). In any case, administrative authorizations apply for both the control activity itself, as well as for the method used, especially in the cases of methods that are restricted by regional, national or international regulations. Each administration, when selecting the method, must demand to the practitioner on the field the maximum selectivity and the minimum risk for non-target species (Gomez 2021).

Control methods for vertebrate species are regulated in more detail by the hunting and wildlife conservation regulations developed by the different local, regional competent authorities (Autonomous Communities). The use of any of these methods for handling IAS must be subject to strict control, both technical (to prevent collateral effects to non-target species) and administrative (through the capacity and knowledge of the people involved and the methods used).

The strategy for American mink control (the only strategy approved for invasive mammals in Spain) establishes in a very detailed manner the kind of cage traps that are recommended and how to proceed while trapping (including the frequency for the revision of the trap, which has to be done on a daily basis, etc.) and transporting the animal, etc.

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