CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Twenty-ninth meeting of the Animals Committee
Geneva (Switzerland), 18-22 July 2017

CAPTIVE BREEDING AND RANCHING OF CITES-LISTED ANIMALS: EU APPROACHES TO HANDLING IMPORTS OF C, F AND R SPECIMENS

This document has been submitted by the European Union and produced by the EU Scientific Review Group with the support of UNEP-WCMC in relation to agenda item 14*.

* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

Captive breeding and ranching of CITES-listed animals: EU approaches to handling imports of C, F and R specimens

Contents

Introduction

Trade in commodities of CITES-listed species has seen a general shift from being predominately wild-sourced in the early years of the Convention, to being a mixture of wild and captive-bred/artificially propagated trade, with most taxonomic groups being predominantly captive-produced[1]. For animals that have been produced in captivity, there are four potential source codes that could be applied – C, D, F or R. Consistency in the application of source codes was considered by the fifteenth meeting of the Conference of the Parties in 2010. Decision 15.52 called for a guide to assist with determining source codes to be produced, which should incorporate review and feedback from the Animals and Plants Committees. IUCN were contracted by the CITES Secretariat to produce the draft guidance, and the outputs that were developed took the form of two different types of dichotomous keys. The guidance was finalised in 2017 and can be found on the CITES website[2]

The first draft of the guide was considered at AC28, and the Animals Committee recommended that more guidance was needed in cases where there is uncertainty as to whether provisions of the relevant resolutions had been met, and recommended that Parties propose ideas for case studies on species or types of production systems to support the guide. Particular areas identified in AC28 Com.7 as requiring more scrutiny related to:

- interpretation of source code F versus codes C or W, due to the ambiguity in the definition of source code F and the different ways Parties consider parental lineage when making a determination of the source;
- differences in the interpretation of source code R versus codes W or F, particularly for Appendix II species; and
- application of source code C and D, particularly in relation to questions over the purpose of production.

To complement the existing IUCN guide, this information document summarises approaches taken by EU Member States in determining the source codes to apply to CITES import applications for specimens that are derived from different captive production systems, with a focus on the three codes C, F and R. It provides the EU interpretation of source codes, as well as some case study examples that illustrate challenges in determining source codes. Specifically it includes:

- A summary of the text of the relevant EU and CITES provisions relating to captive breeding and ranching (as laid out in articles of the EU Wildlife Trade Regulations[3] and CITES Resolutions and definitions);

- A simple flow chart to summarise the key differences in production systems to assist with determining source codes relative to the definitions in the EU Wildlife Trade Regulations;

- Four case study examples that illustrate some of the challenges in determining source codes and the approaches the EU have taken.

[1] *Harfoot et al., submitted. Unveiling the dynamics of the global trade in wildlife.*

[2] *https://cites.org/eng/prog/captive-breeding*

[3] *EC Regulation No. 865/2006; EU Regulation No. 792/2012 and EU Regulation. No. 2015/57*

Captive breeding: the EU context

It is important that the correct source code is applied to CITES permits to accurately describe the nature of the trade according to the definitions of the Convention and the EU Wildlife Trade Regulations. Applying the correct source code can ensure that accurate analyses of trade data can be undertaken, for example, to identify volumes, patterns, or determine the impact of the trade on wild populations. EU Member States are required to make a non-detriment finding and determine the correct source code to apply to all specimens of Appendix I and II imports.

Summary of relevant definitions

CITES Resolution 12.3 (Rev. CoP17) on *Permits and Certificates* provides the definitions for codes to indicate the source of specimens in trade. Regulation (EU) No. 792/2012 provides the corresponding definitions for all but one of these source codes in the EU context (Table 1), the definition of source code 'X' included in Regulation (EU) No. 2015/57. With the adoption of these Regulations, the CITES and EU definitions for the source of specimens in trade are consistent. Additional definitions for terms relevant to captive breeding and ranching, and the associated CITES and EU provisions, are provided in Table 2.

Table 1. Definition of codes for source of specimens in trade as outlined in CITES Res. Conf. 12.3 (Rev. CoP17) and Regulations (EU) No. 792/2012 and (EU) No. 2015/57.

Code	CITES Res. Conf. 12.3 (Rev. CoP17)	Regulation (EU) No. 792/2012 and Regulation (EU) No. 2015/57 (amending Reg. (EU) No. 792/2012)
A	Plants that are artificially propagated in accordance with Resolution Conf. 11.11 (Rev. CoP17), as well as parts and derivatives thereof, exported under the provisions of Article VII, paragraph 5 (specimens of species included in Appendix I that have been propagated artificially for non-commercial purposes and specimens of species included in Appendices II and III);	Annex A plants artificially propagated for non-commercial purposes and Annexes B and C plants artificially propagated in accordance with Chapter XIII of Regulation (EC) No 865/2006, as well as parts and derivatives thereof
C	Animals bred in captivity in accordance with Resolution Conf. 10.16 (Rev.), as well as parts and derivatives thereof, exported under the provisions of Article VII, paragraph 5.	Animals bred in captivity in accordance with Chapter XIII of Regulation (EC) No 865/2006, as well as parts and derivatives thereof
D	Appendix-I animals bred in captivity for commercial purposes in operations included in the Secretariat's Register, in accordance with Resolution Conf. 12.10 (Rev. CoP15), and Appendix-I plants artificially propagated for commercial purposes, as well as parts and derivatives thereof, exported under the provisions of Article VII, paragraph 4, of the Convention.	Annex A animals bred in captivity for commercial purposes in operations included in the Register of the CITES Secretariat, in accordance with Resolution Conf. 12.10 (Rev. CoP15), and Annex A plants artificially propagated for commercial purposes in accordance with Chapter XIII of Regulation (EC) No 865/2006, as well as parts and derivatives thereof
F	Animals born in captivity (F1 or subsequent generations) that do not fulfil the definition of 'bred in captivity' in Resolution Conf. 10.16 (Rev.), as well as parts and derivatives thereof;	Animals born in captivity, but for which the criteria of Chapter XIII of Regulation (EC) No 865/2006 are not met, as well as parts and derivatives thereof
I	Confiscated or seized specimens	Confiscated or seized specimens[4]
O	Pre-Convention specimens	Pre-Convention specimens[3]
R	Ranched specimens: specimens of animals reared in a controlled environment, taken as eggs or juveniles from the wild, where they would otherwise have had a very low probability of surviving to adulthood.	Specimens of animals reared in a controlled environment, taken as eggs or juveniles from the wild, where they would otherwise have had a very low probability of surviving to adulthood
U	Source unknown (**must be justified**)	Source unknown (must be justified)
W	Specimens taken from the wild	Specimens taken from the wild
X	Specimens taken in "the marine environment not under the jurisdiction of any State"	Specimens taken in the marine environment not under the jurisdiction of any State

[4] *To be used only in conjunction with another source code.*

Table 2. Relevant definitions relating to captive breeding and ranching based on articles of the EU Wildlife Trade Regulation and CITES Resolutions.

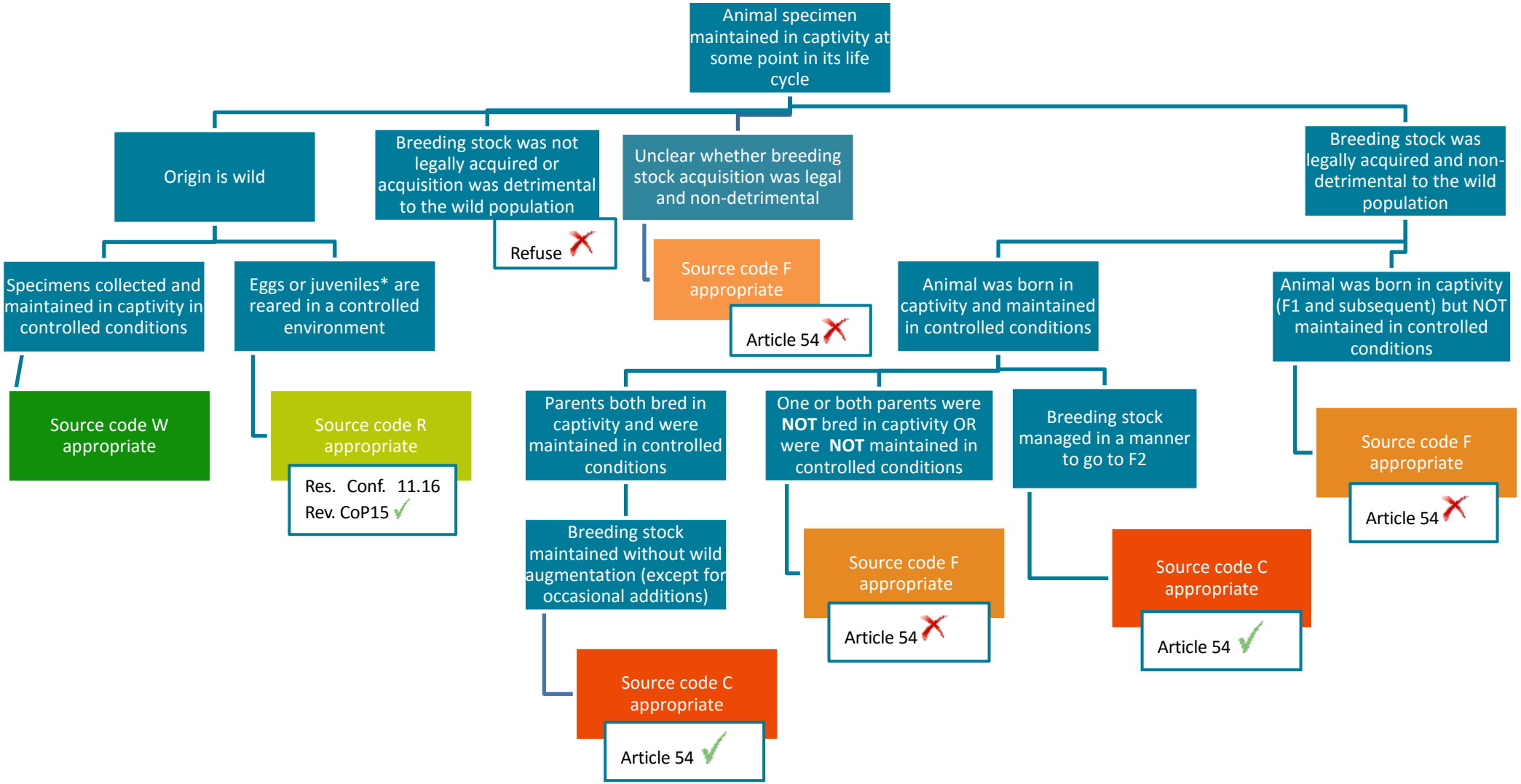
Description	Definition	Relevant provisions
Breeding stock	All the animals in a breeding operation that are used for reproduction.	Article 1 of Regulation (EC) No. 865/2006*
Controlled environment	An environment that is manipulated for the purpose of producing animals of a particular species, that has boundaries designed to prevent animals, eggs or gametes of the species from entering or leaving, and the general characteristics of which may include but are not limited to artificial housing, waste removal, health care, protection from predators and the artificial supply of food.	Article 1 of Regulation (EC) No. 865/2006*
Generation of offspring	'Second-generation offspring (F2)' and 'subsequent generation offspring (F3, F4, and so on)' means specimens produced in a controlled environment from parents that were also produced in a controlled environment, as distinct from specimens produced in a controlled environment from parents at least one of which was conceived in or taken from the wild (first-generation offspring (F1)).	Article 1 of Regulation (EC) No. 865/2006*
Ranching	The term 'ranching' means the rearing in a controlled environment of animals taken as eggs or juveniles from the wild, where they would otherwise have had a very low probability of surviving to adulthood. Note: Resolution Conf. 11.16 (Rev. CoP15) does indicate that a ranching programme must be primarily beneficial to the conservation of the local population (i.e., where applicable, contribute to its increase in the wild or promote protection of the species' habitat while maintaining a stable population); however this requirement appears to relate only to proposals to the transfer of populations from Appendix I to II for the purposes of ranching.	Resolution Conf. 11.16 (Rev. CoP15)
Specimens born and bred in captivity	Without prejudice to Article 55, a specimen of an animal species shall be considered to be born and bred in captivity only if a competent management authority, in consultation with a competent scientific authority of the Member State concerned, is satisfied that the following criteria are met: 1) the specimen is, or is derived from, the offspring born or otherwise produced in a controlled environment of either of the following: (a) parents that mated or had gametes otherwise transferred in a controlled environment, if reproduction is sexual; (b) parents that were in a controlled environment when development of the offspring began, if reproduction is asexual; (2) the breeding stock was established in accordance with the legal provisions applicable to it at the time of acquisition and in a manner not detrimental to the survival of the species concerned in the wild; (3) the breeding stock is maintained without the introduction of specimens from the wild, except for the occasional addition, in accordance with the legal provisions applicable and in a manner not detrimental to the survival of the species concerned in the wild, of animals, eggs or gametes exclusively for one or more of the following purposes: (a) to prevent or alleviate deleterious inbreeding, the magnitude of such addition being determined by the need for new genetic material; (b) to dispose of confiscated animals in accordance with Article 16(3) of Regulation (EC) No 338/97; (c) exceptionally, for use as breeding stock; (4) the breeding stock has itself produced second or subsequent generation offspring (F2, F3 and so on) in a controlled environment, or is managed in a manner that has been demonstrated to be capable of reliably producing second-generation offspring in a controlled environment. [see case study 2].	Chapter XIII, Article 54 of Regulation (EC) No. 865/2006*

*Note that definitions in Reg. (EC). No.865/2006 are consistent with those in Res. Conf. 10.16 (Rev.) on *Specimens of animal species bred in captivity*).

Flow chart for the determination of source codes

Figure 1 provides a flow chart to summarise how source codes can be determined based on the relevant CITES resolutions and definitions, and the provisions of the EU Wildlife Trade Regulations as described above in Tables 1 and 2. This flow chart provides a simple guide to aid decision-making in the EU; however, it must be noted that the considerations in Article 54 (3) and (4) that relate to whether the breeding stock is being maintained without augmentation of specimens from the wild, and whether it is being managed in a manner that is capable of producing second generation offspring [see 'Specimens born and bred in captivity' in Table 2 above], are taken into account **on a case-by-case basis**. Examples to illustrate how Article 54 (3) and (4) are applied in the EU can be found in case studies 1 and 2 respectively.

Figure 1. Flow chart for the determination of source codes based on articles of the EU Wildlife Trade Regulations and CITES definitions, with an indication of where the relevant provisions have been met (✓) or not met (✗). (* Refers to eggs or juveniles with high mortality life stages only).



Challenges to implementation: case studies

There are often factors which make determining source codes more complex, which might relate to, for example, a specific management regime for an individual species or taxonomic group. This section provides some case study examples to illustrate some of the challenges faced by EU Member States in determining the source code to apply when assessing import applications.

Case study 1. Ranching (R) vs. captive-born (source F) or captive-bred specimens (source C) – birdwing butterflies from Indonesia

Indonesia has established a number of ranching facilities for birdwing butterflies (predominantly *Ornithoptera* spp.) and has also successfully bred birdwings in captivity. The EU SRG has discussed the application of source codes on export permits for these specimens from the country. In relation to imports of *Ornithoptera croesus* and *O. rothschildi*[5], the SRG determined that in certain cases, wild specimens had been regularly added to the parental stock of the breeding facilities. The EU considered that source code F should be applied, as the production system that had been described did not appear to meet the definition of ranching outlined in Res. Conf. 11.16 (Rev. CoP15) or meet the requirements in Conf. Res. 10.16 (Rev.) or Article 54(3) of Regulation (EC) No. 865/2006 for source code C.

Whilst exports from these facilities are regularly in trade with source F, there are no general 'blanket' rules for source codes to apply on import permits for birdwings; EU Member States are required to scrutinise origin details to determine the most appropriate source code is applied on a case-by-case basis. Where facilities are breeding in controlled conditions, Member States consider whether or not there has been regular augmentation of the breeding stock with wild-taken individuals. If additional wild-taken specimens are added only very occasionally and are not comprising a large proportion of the breeding stock, then Article 54(3) could still be met and source code C may therefore be applied (assuming that all other aspects of Article 54 are met). How frequently augmentation can be considered as 'occasional' may be dependent on the reproductive capacity of the species and its rarity.

It is not the case that source code F is applied for species bred outside of the species range and source R is used for species bred inside the species range. Ranching facilities need to demonstrate that eggs or caterpillars collected from the wild in accordance with the definition in Res. Conf. 12.3 (Rev. CoP17) and Res. Conf. 11.16 (Rev. CoP15).

Case study 2: Interpretation of "*managed in a manner that has been demonstrated to be capable of reliably producing F2*" - Source code C or F?

Where an importing Member State has determined that an application for captive-bred specimens (source code C) does not met the criteria in Article 54, and the specimens are in fact only F1 generation captive-bred (source F), they may request that the export permit be changed to F to accurately reflect the actual source code. There is, however, a provision in Article 54 (and identical language in Res. Conf. 10.16 (Rev.) on *Specimens of animal species bred in captivity*) that indicates it is not necessary for a breeder to actually produce second generation offspring to meet Article 54 (and qualify for source code C). A competent authority should, however, be satisfied that the breeding stock is "*managed in a manner that has been demonstrated to be capable of reliably producing second-generation offspring in a controlled environment*."

[5] *Ornithoptera croesus and O. rothschildi are considered in AC29 Doc 13.2 Annex 1 in relation to the Review of Significant Trade following CoP16*

In document AC28 Doc 12, the Animals Committee concluded that additional guidance on what is meant by the language "[*managed in a manner…*]" was needed. The EU Scientific Authority guidelines[6] (in Attachment G) provide some guidance on this issue, indicating that each application should be assessed on its own merits on a case-by-case basis, taking into account a number of factors, such as:

- the number of individuals in the breeding stock
- access to unrelated F1 specimens
- genetic management (*i.e.* considering subspecies)
- previous breeding success
- sex ratio
- age at sexual maturity
- species rarity in captivity

An assessment against Article 54(4) therefore needs to include the details of the management of the current breeding group and the potential for breeding the species to F2 and beyond. It is possible that a breeder may not have previously demonstrated that they have bred the species in question to second-generation, but, for example, they are part of a coordinated breeding programme such as a European Endangered Species Programme (EEP) and the species is therefore being managed in a manner that has been demonstrated to be capable of reliably producing second-generation offspring in a controlled environment.

The assessment for an individual species/breeder can also change over time, dependent on breeding stock management practises. For example, in the early 2000's, EU Member States did not allow source code C for applications of first-generation *Haliaeetus albicilla* from Almaty Zoo in Kazakhstan. On the basis that Almaty Zoo's breeding stock was considered sufficiently large to be self-sustaining, the presence of unrelated pairs and the practise of retaining F1 offspring for future breeding, source code C was subsequently accepted for first-generation specimens of the species. However, it is considered that to be in a position to judge whether breeding is 'managed in a manner that has been demonstrated to be capable of reliably producing second-generation offspring in a controlled environment', a substantial amount of information is required about the breeding methods and the individual species concerned, and therefore this provision is used only in exceptional circumstances.

For the criterion "species rarity in captivity", the SRG consider that it would be useful to share information on ease of captive breeding of Appendix II/Annex B species. This could be based on the volume of captive-bred specimens traded globally or within the EU, the reported ease of breeding success and recorded reproductive capacity for each species, with expert input as necessary. Developing a shared understanding of rarity of species in captivity may assist Member States and other Parties in determining whether it may be appropriate to use the provision "*managed in a manner that has been demonstrated to be capable of reliably producing second-generation offspring in a controlled environment*" in Article 54 of the EU Wildlife Trade Regulations as an exceptional case. Such information could also assist the Animals Committee in prioritising species for consideration under Resolution Conf. 17.7 *'Review of trade in animal specimens reported as produced in captivity'*.

[6] *Duties of the CITES Scientific Authorities and Scientific Review Group under Regulations (EC) No. 338/97 and (EC) No. 865/2006.* http://ec.europa.eu/environment/cites/pdf/srg/guidelines.pdf

Case study 3: Non-range State exports of animals kept in wild or in controlled environments

Assessing imports of wild-taken hunting trophies from countries that are not range States for the species provides a challenge for EU Member States in determining the correct source code to apply. South Africa, for example, exports a number of non-native ungulate species that have been introduced to the country, including: *Oryx dammah* (extinct in the wild, with a former range of northern Africa only), *Ammotragus lervia* (native to northern Africa only), and *Kobus leche*, which is found in South-Central Africa. These species are typically maintained on private ranches and are hunted and exported to the EU as trophies, yet various source codes are used for international exports. Trophies of *Oryx dammah* originating in South Africa and exported 2005-2014, for example, included sources C, F and W[7].

Where such animals are held with adequate fencing so that they cannot escape and are maintained with access to food when it is scarce and are treated by veterinarian surgeons where necessary, for example, source code F may be appropriate (or even C where the individuals meet the definition of captive-bred in accordance with Res. Conf. 10. 16. Rev. and Article 54). In contrast, some of the South African game ranches are extremely large and the animals are essentially in the wild, with no provision for food or care. Whilst source code W may not meet the definition of "wild" in the context of the actual range of the species, imports for source code W have been accepted by EU Member States based on the source code applied on the South African export permit (W), and as the import has been assessed to be non-detrimental to the conservation of the species in the wild. Similarly, *Ammotragus lervia* and *Antilope cervicapra* have also been imported to the EU from the United States as non-native hunting trophies with source code W from introduced populations. In these specific cases this approach has been taken by the EU.

Non-native species are recorded within the distribution section of Species+ as 'introduced' if the population is documented in the literature as introduced and as self-sustaining. Currently, this information has been located for *Kobus leche* in South Africa, and for *Ammotragus lervia* and *Antilope cervicapra* in the United States, and is reflected in Species+ as such.

Case study 4: Mixed production systems

For some taxa, breeders are simultaneously producing offspring that are:

- second generation captive bred (and therefore potentially could meet the criteria in Article 54 and Res. Conf. 10.16 (Rev.) for source code C);
- first generation captive-born individuals (source code F); and
- individuals through ranching methods (R).

If these production systems are not managed separately and resulting offspring are mixed, this presents a significant challenge for importers to determine the source code to apply. The EU has received import applications from a number of facilities that are breeding Appendix II species and are clearly not segregating individuals as F2/F1 etc. or marking individuals, as well as augmenting the breeding stock with individuals from the wild.
Facilities that are not clearly segregating specimens derived from different production systems could be encouraged to improve their management to facilitate the accurate determination of CITES source codes. Resolution. Conf. 17.7 on '*Review of trade in animal specimens reported as produced in captivity*' adopted at CoP17 may assist with identifying and addressing such issues relating to mixed production systems.

[7] *Source: CITES Trade Database; data downloaded 02/01/2017.*