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

Twenty-fourth meeting of the Animals Committee
Geneva, (Switzerland), 20-24 April 2009

REVIEW OF THE USE OF SOURCE CODE 'R'

1. This document has been submitted by the co-chairs of the working group Review of the use of source code 'R' (PC17/AC23 WG3)*.

Progress report of the working group to review source code 'R' (ranching)

2. The co-chairs of the working group wish to report on the progress made with the Review of the use of source code 'R'.

3. During their meetings in April 2008, the CITES Animals and Plants Committees (AC/PC) discussed the review of source code R for ranching, as directed by Decision 14.52.

4. Source code R was used originally for crocodilian species transferred from Appendix I to Appendix II. Ranching is defined in Resolution 11.16 as 'rearing in a controlled environment of specimens taken from the wild'. Source code R is currently been used by 44 countries for many animal and plant species in Appendix I and II. For a complete list of species and countries see document 9 of AC23 and PC17 (See Annex 1).

5. A working group of AC/PC studied the list of countries/species in April 2008 and identified those combinations for which the source code R had been used on a regular basis in the past 15 years (Annex 2). Decision 14.52.a, to review of the CITES trade data and to determine species and countries, has therewith been completed.

6. The working group suggested collecting information from these 27 countries through a questionnaire. This approach was adopted by the joint meeting of PC17 and AC23 in 2008.

7. A drafting group developed a questionnaire, which you will find in Annex 3.

8. The co-chairs of the working group have sent this questionnaire, in English, French and Spanish to the CITES Management Authorities and Scientific Authorities of the 27 countries with the request to answer the questions in Annex 3.

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* *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.*

Replies that source code R is not used

9. We have now received replies from 13 countries. 14 countries did not reply.

10. Seven countries replied that they have no ranching operations for the species indicated in Annex 2. Source code R was not used by them or it was used by mistake. These countries have not filled in the questionnaire.

- **Australia, butterflies**

  Australia has no ranching operation for butterflies. The use of source code "R" was attributed to data entry errors.

- **Canada, sturgeons**

  Canada reported that source code R was used in error for *Acipenser fulvescens*. Canada has no ranching operation for this species. The questions 1-3 are therefore not answered. However Canada gives her view on ranching.

  Canada's view on ranching is that they would be in favour of removal of source code R. As outlined in Resolution Conf. 11.16 on ranching, populations of Appendix I species to be considered for ranching must be deemed by the CoP as no longer endangered. Therefore, rather than approval for a non-endangered population to be ranched, we would suggest it more appropriate to transfer the population in question from Appendix I to Appendix II. Trade in specimens transferred from Appendix I to Appendix II populations should, as any other Appendix II species, require an NDF and specimens should be identified with a source code 'W'.

- **China, giant panda**

  China reported during AC23 that the use of source code 'R' for giant panda was a mistake.

- **Italy, sturgeons**

  Italy reported that source code R was used erroneously for *Acipenser baeri* (C).

- **Georgia, snowdrops**

  Georgia used source code R for *Galanthus woronowii* in 1999-2001, which was agreed by the CITES Secretariat. Since the 11th meeting of the Plants Committee in 2001 it was decided that bulbs harvested from farm fields are to be regarded as being of wild origin. Since 2002 Georgia uses source code W for *Galanthus woronowii*.

- **Malaysia, parrots**

  Malaysia only used source code R for *Psittinus cyanurus* in 2003 and *Python reticulates* in 2005. Malaysia has no ranching operations for these species and does not intend to use source code R in the future, except for specimen under Resolution Conf. 11.16.

- **Philippines, butterflies**

  The selection of the Philippines by the drafting group was apparently an error. There is no trade with code R registered for the Philippines.

Response to the questionnaire

11. We received answers to the questionnaire from 6 countries: Cuba, Ghana, Tanzania, Uruguay, Uzbekistan and Venezuela.

12. The complete text of the replies from these countries you will find in Annex 4.

- **Cuba, Caribbean Flamingo, *Phoenicopterus ruber ruber***

  In 1998 Cuba already described this ranching project. The project also returned animals to the wild in 1998 and was recognized by the CITES Secretariat. Import of ranched flamingos, treated as App I in the EU was accepted in the EU in 1998.

  Young flamingos are captured from the wild and raised at a farm. The harvest is regulated with an annual quota. The ranching operation is monitored and controlled. The population in the wild is still increasing. At the moment no animals are returned to the wild. The ranching operation has positive impacts for the conservation of the species.

  Cuba is in favor of using source code R for any species with a management program for ranching.

- **Ghana, *Python regius*, *Python sebae***

  Ghana was selected to report on ranching of several reptile species.

  Ghana reported that they do not ranch tortoises, chameleons, monitor lizards and scorpions.

  Ghana reports about ranching of *Python regius* and *Python sebae*. See Annex 4.

  Pregnant females are collected from the wild; after laying eggs these females are returned to the wild, but on other places then where the animals were collected. The sustainability of the harvest and the conservation benefit of the ranching are not known.

  Ghana reports in their views complications to distinguish between ranching and captive breeding. Ghana also observes that ranching provides opportunities for laundering specimens.

- **Tanzania, *Crocodylus niloticus***

  Tanzania was selected to report on ranching of tortoises and chameleons.

  Tanzania responded on ranching of *Crocodylus niloticus*. Young animals are caught from the wild, the harvest and trade is regulated and 5 % of the animals are returned to the wild.

  Ranching has not been very successful in Tanzania. Tanzania reports benefits for employment, tourism, education and research, but not directly for conservation.

  Tanzania reports that ranching can easily be distinguished from wild harvest but not from the captive bred (source C or F) since they both require parental stock from the wild.

- **Uruguay, the Monk Parakeet, *Myiopsitta monachus***

  Uruguay has no ranching operation for this species at this time, and does not intend to use 'R' code in the future.

  The ranching exports were done during 2003-2004, and 2.360 live birds were exported, mainly to Portugal, Italy and Japan.

  This kind of operation and therefore using source code 'R' for trade, was done only to satisfy some countries which asked for ranched specimens and not from wild.

  This kind of ranching operation has no conservation benefit, because *Myiopsitta monachus* has huge populations in whole its geographical distribution area, and sometimes is considered a plague in Argentina and Uruguay due to agricultural damage, mainly in corn crops and fruit trees.

  Uruguay's view on ranching is that they would be in favour of removal of source code 'R'.

– **Uzbekistan, Central Asian tortoise, *Agrionemys* (*Testudo*) *horsfieldii***

Uzbekistan was selected for ranching of tortoises and Boidae.

The questionnaire was answered in by the Director of the Ranching Operation Zoocomplex Ltd. on request of the CITES Management Authority.

The main egg collection is from 'pregnant' females after which these are returned to the wild. Eggs are incubated and hatchlings are reared in a nursery till the size of 6 cm in 8 months. The animals are exported at the size of 6 to 8 cm. In some years young tortoises are also released in the wild, but this seems less successful. Export of wild animals decreases and ranched animals increases over the years. Ranched and captive bred tortoises (F1) appear to well distinguishable from wild animals. The nursery reports some mostly economically positive aspects of ranching. As benefits the nursery notes minimal damage for the wild populations.

– **Venezuela, sideneckturtles, *Podocnemis unifilis*, *Podocnemis vogli*, *Podocnemis erythrocephala***

Tortoise eggs are collected from the wild and incubated at a ranch. The harvest is regulated with a quota based on population studies. The ranches are licensed and controlled. 10 to 15 % of juvenile animals are returned to the wild.

Venezuela considers ranching of tortoises a favourable measure for conservation in situ and ex situ, as it allows to maintain a genetic pool, to do research, to reduce hunting pressure, to reinforce wild populations and to generate economic resources.

Some considerations

Level of response

The questionnaire was sent on 25 August 2008 to the 27 countries selected, with the request to reply before 1 November 2008. A reminder was sent to the non-responding countries on 21 November 2008 with the request to answer as soon as possible.

Regional representatives in the AC and PC were asked to assist in obtaining response.

The questionnaire was sent by e-mail to the registered e-mail addresses of the Management Authority and the Scientific Authority, and also to participants from these countries in AC23 and PC17. For countries without e-mail address the questionnaire was sent by fax.

We received replies form 13 countries, which is 48 % of the 27 countries.

We received answers to the questionnaire from 6 countries. The co-chairs have obtained information on ranching as directed by Decision 14.52, paragraph b), but the information provided is rather limited and forms a rather small basis for review and analysis.

The working group could discuss whether more information should be collected and which method should be used. The Working Group could also decide to go forward on basis of the information received.

Literature

The review of literature by volunteers of the working group provided no information. Decision 14.52, paragraph c) to review the literature has not been completed.

Use of source code R

During the meetings of AC23 and PC17 and the working group in April 2008 it became already clear that the use of source code R had been an error for several species in several countries. This was confirmed for more countries in reply to the questionnaire.

It appeared that source code R was also used for export of several species where the country had no ranching operation. Although this is no obligation for Appendix II species, one could question whether these specimens could be considered as 'reared in a controlled environment of specimens taken from the wild' or should have been exported as wild.

Furthermore there are indications that the conservation benefits of ranching may be absent, unknown or questionable. Some ranching operations seem to have some conservation benefit and the use of source code R could be justified in line with the considerations of Resolution Conf. 11.16.

Further work

It is now the task of the working group to propose a definition of ranching and the use of source code R, as directed by Decision 14.52, paragraph d).

The working group could also discuss several options for the use of source code R.

a) Delete source code R completely. 'Ranched' specimens should be exported as wild with a proper NDF.

b) Maintain source code R only for crocodilian and sea turtle species transferred from Appendix I to Appendix II, in conformity with Resolutions Conf. 9.20 and Conf. 11.16.

c) Use source code R for animal species of Appendix II and develop criteria for the use of this source code.

d) Not to use source code R for plant species.

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15 January 2009

Annexes

Annex 1 List of documents

Annex 2 Countries and species selected by the working group

Annex 3 Ranching questionnaire

Annex 4 Replies to the questionnaire:

a) Cuba, Caribbean Flamingo, *Phoenicopterus ruber ruber*
b) Ghana, *Python regius*, *Python sebae*
c) Tanzania, *Crocodylus niloticus*
d) Uruguay, the Monk Parakeet, *Myiopsitta monachus*
e) Uzbekistan, Central Asian tortoise, *Agrionemys* (*Testudo*) *horsfieldii*
f) Venezuela, sideneckturtles, *Podocnemis unifilis*, *Podocnemis vogli*, *Podocnemis erythrocephala*

DOCUMENTS

- Resolution 11.16 (Rev. CoP14) Ranching and trade in ranched specimens of species transferred from Appendix I to Appendix II
  http://www.cites.org/eng/res/11/11-16R14.shtml

- Decision 14.52 Production systems for specimens of CITES-listed species
  http://www.cites.org/eng/dec/valid14/14_52.shtml

- PC17 Doc. 9 (Rev. 2) Review of the use of source code 'R'
  http://www.cites.org/eng/com/PC/17/E-PC17-09.pdf

- AC23 Doc. 9 (Rev. 2) Review of the use of source code 'R'
  http://www.cites.org/eng/com/AC/23/E23-09.pdf

- Summary Record of PC17, page 17-18
  http://www.cites.org/eng/com/PC/17/E-PC17_summary_record.pdf

- Summary record of AC23, page 16-17
  http://www.cites.org/eng/com/AC/23/E-AC23-Sum-Rec.pdf

COUNTRIES AND SPECIES SELECTED BY THE WORKING GROUP

Mammals
Ailuropoda melanoleuca: China

Birds
Phoenicopterus ruber: Cuba
Psittacines: Nicaragua, Uruguay, Malaysia
Ramphastos spp.:Nicaragua

Reptiles
Tortoises, turtles: Benin, Burundi, Macedonia, Mozambique, Tanzania, Togo, Uzbekistan, Venezuela, Ghana
Chameleons: Burundi, Benin, Ghana, Madagascar, Togo, Tanzania, Madagascar
Phelsuma spp.: Madagascar
Monitor lizards: Burundi, Benin, Ghana, Togo
Boidae spp.: Benin, Ghana, Honduras, Malaysia, Togo, Uzbekistan

Amphibians
Mantella spp.: Madagascar
Dendrobates spp.: Nicaragua
Amphibians: Peru

Fish
Sturgeons: Canada, China, Italy, Republic of Korea
Arapaima gigas: Peru

Invertebrates
Pandinus spp., scorpions: Benin, Ghana, Togo
Butterflies: Australia, Indonesia, Papua New Guinea, Philippines, Solomon Islands
Strombus gigas: Turks and Caicos Islands

Plants
Galanthus woronowii: Georgia

RANCHING QUESTIONNAIRE

Party:.....
Species:.....

1. Harvest of wild specimens for ranching (source code R)

Please describe the means by which wild specimens are harvested for rearing in a controlled environment (i.e. ranching) focusing, in particular, on the following:

a) the life stage (egg, larvae, juvenile, neonate, adults) which is taken from the wild;
b) the methods of capture or harvest of these specimens;
c) the way in which the size of the wild harvest is regulated and/or limited (e.g. quotas);
d) the way in which the ranching program determines the sustainable level of off-take;
e) whether there is any monitoring of the impacts on the wild population;
f) the means by which you regulate the trade.

2. Methods for rearing wild specimens in a controlled environment

Please describe the techniques for keeping and rearing of the wild-taken specimens including details of:

a) the controlled environment in which the specimens are reared and husbandry details;
b) the age and life stage (e.g. adults, juveniles etc) at which the specimens are exported;
c) the means, if any, by which these specimens are marked (e.g. close or open rings for birds; tags for skins).

3. Benefits

Please describe what benefits or difficulties, if any, you encounter when using ranching as a production method as opposed to other forms of wild harvest or captive production, considering the following:

a) whether ranching provides incentives for the conservation of the wild population or their habitat, providing examples (if any is available);
b) whether the ranching operations release any animals to the wild (indicating numbers or proportion of captive stock and whether IUCN guidelines on translocations are followed) or engage in other means to enhance wild production;
c) whether a shift to ranching has generated any difficulties for the management of the trade or for conservation purposes.

Your views on ranching overall and the CITES definition?

Please describe any other views you have on ranching as a production technique and any difficulties you have had with the definition of ranching by CITES, for example, do you find it simple to understand and to distinguish ranching from a straightforward wild harvest (source code W) or from other forms of captive production (source codes F and C)?

Please return answers to mcalvar@mgap.gub.uy; joseal@orasen.co.cu; schurmann@nnm.nl before 1 November 2008.

REPLIES TO THE QUESTIONNAIRE
(in the language in which they were submitted)

CUBA (ENGLISH)

Ranching questionnaire

Party: CUBA
Species: **Flamenco Rosado, Caribbean Flamingo (*Phoenicopterus ruber*)**

1. Harvest of wild specimens for ranching (source code R)

Please describe the means by which wild specimens are harvested for rearing in a controlled environment (i.e. ranching) focusing, in particular, on the following:

a) the life stage (egg, larvae, juvenile, neonate, adults) which is taken from the wild;
Neonate (less than 60 days of age)

b) the methods of capture or harvest of these specimens;
Capture is by shepherding toward temporary corrals and then, the birds are carrying by tractor to the farm at no more than 3 kilometres.

c) the way in which the size of the wild harvest is regulated and/or limited (e.g. quotas);
Quotas: 550 flamingos/year

d) the way in which the ranching program determines the sustainable level of off-take
The area it is established as Protected Area ("Río Máximo") and includes in the List of Wetlands of International Importance (Ramsar). The area is considered the biggest nesting site of the Flamingo rubber in the Caribbean (more than 45 000 nest/years).
It is also observed increase in the number of nest in other nesting sites in Cuba.

a) whether there is any monitoring of the impacts on the wild population
Yes, by annual census in the principals nesting sites.

b) the means by which you regulate the trade
All operations are regulated by licensing system and inspections (quota, export and internal commerce).

2. Methods for rearing wild specimens in a controlled environment

Please describe the techniques for keeping and rearing of the wild-taken specimens including details of:

a) the controlled environment in which the specimens are reared and husbandry details;
Juveniles are sorted by size or weight, into quarters measuring 20 x 30 metres, each with a capacity for 250, Quarter are bounded on all side by palm tree trunks and nets. Those birds requiring special attention for wherever reasons are hosed in special corral designated for this propose. The animal are periodically weighed and measured, with those in need of a special diet being separated from the rest or put in the corral corresponding to their weight.
Food takes the form of special concentrates and additional vitamin supplements. Food is distributed via communal feeding boxes (*Ad líbitum*)

b) the age and life stage (e.g. adults, juveniles etc) at which the specimens are exported;
Adult, one year or more than age

c) the means, if any, by which these specimens are marked (e.g. close or open rings for birds; tags for skins).
Open Rings for birds and some times by microchips too.

3. Benefits

Please describe what benefits or difficulties, if any, you encounter when using ranching as a production method as opposed to other forms of wild harvest or captive production, considering the following:

a) whether ranching provides incentives for the conservation of the wild population or their habitat, providing examples (if any is available);
Ranching operations of flamingos in Cuba produces much better conservation results than farming in captivity. Cuba in the past have been obtained captivity- farming of flamingos with second-generation birds being produced relatively easily, however, the Administrative Authority has chosen not to encourage it (or only in zoo) as it is seen as prejudicing the ranching programme
The studies carried out in the protected area Río Máximo show that not only have flamingos increased , their number but crocodiles (*Crocodylus acutus*) and birds such as spoonbills (*Ajaia ajaia*), caracara (*Caracara plancus*) , Pelicans and other species are benefited.

b) Whether the ranching operations release any animals to the wild (indicating numbers or proportion of captive stock and whether IUCN guidelines on translocations are followed) or engage in other means to enhance wild production.
No release any animals to the wild, at present.

c) whether a shift to ranching has generated any difficulties for the management of the trade or for conservation purposes
No

Your views on ranching overall and the CITES definition?

Please describe any other views you have on ranching as a production technique and any difficulties you have had with the definition of ranching by CITES, for example, do you find it simple to understand and to distinguish ranching from a straightforward wild harvest (source code W) or from other forms of captive production (source codes F and C)?

We consider that the definition of ranching by CITES (R) can apply to any species (no only to crocodiles) whenever it exists a management program which wild specimens are harvested for rearing in a controlled environment have a lest possibility of survival in controlled facility than in the wild, independent of the age of the specimens. The Ranching program can to increase the number of specimens harvest and benefits, with lest negative impact to the wild populations, taking advantage of the difference of the rate of survival obtained with rearing in a controlled environment.

The ranching program generally provides additional positive impacts when maintaining a habitat or ecosystem protected and it requires of maintaining a monitoring of the populations

Please return answers to mcalvar@mgap.gub.uy; joseal@orasen.co.cu; schurmann@nnm.nl before 1 November 2008.

Encuesta sobre Cría en Granjas ("*ranching*")

Parte:CUBA
Especie: Flamenco rosado (*Phoenicopterus ruber*)

1. Uso de especímenes silvestres para crianza en granjas (código de origen "R")

Por favor describa los medios por los cuales especímenes silvestres son obtenidos para crianza en un ambiente controlado (ej. cría en granjas), destacando en particular:

a) la etapa en la que son extraídos del medio silvestre (huevo, larva, neonato, juvenil, adulto):
Polluelos (entre 45 y 60 días de nacidos), individuos atrazados o abandonados en el sitio de anidación una vez concluía la etapa reproductiva de la colonia.

b) los métodos de captura de estos especímenes:
Agrupando los individuos aislados y acorralándolos. El agrupamiento se hace por personal a pie conduciendo los polluelos cuidadosamente hasta corales y de ahí se trasladan a la granja en carretas a poca distancia.

c) la manera como se regula o limita el tamaño de captura silvestre (ej. cupos):
Está establecido un cupo de 550 individuos anuales, antes de 1997 el cupo era de 500.

d) la manera como el programa de cría en granjas determina el nivel sustentable de remoción silvestre:
Existe un manejo adecuados de la población objeto de la extracción el área está establecida como Área Protegida de Significación Nacional y declarado Sitio Ramsar "Desembocadura del Río Máximo, Camaguey", El área es considerada el mayor sitio de anidación del Flamenco Rosado en el Caribe.
Se monitorea la población y se ha observado un aumento (hasta 8,5 veces) en el número de individuos (anteriormente los pichones eran cazados ilegalmente para consumo humano por las comunidades locales) hoy no se registran incidencias graves de este tipo y la comunidad está comprometida con la conservación.
Se observa además aumento en el número de individuos que anidan en otras áreas de anidación en la isla.

e) si existen evaluaciones de los impactos en las poblaciones silvestres:
Si. Se mantiene monitoreo de la población, tanto del área como otros sitios de anidación en la isla.

f) los medios por los cuales es regulado el comercio:
Tanto el comercio nacional (para zoológicos y otras instalaciones similares), como el comercio Internacional está regulado por la Autoridad Administrativa CITES. Se otorgan licencias Ambientales

2. Métodos para criar especímenes silvestres en un ambiente controlado

Por favor describa las técnicas de confinamiento o crianza de los especímenes capturados del medio silvestre incluyendo detalles sobre:

a) el ambiente controlado (cautiverio) en el cual los especímenes son criados y los detalles de las formas de confinamiento; **Se mantiene en cuartones cercados con redes, alimentados con concentrados aviar, se van reagrupando de a cuerdo a la talla y la edad. Se mantiene control sanitario.**

b) la edad y etapa (ej. juveniles, adultos, etc.) en los que los especímenes son exportados; **Mayores de un año de edad en cautividad, normalmente se exportan todos al año de ser capturados a lo sumo dos años pero pueden quedar algunos por mas tiempo.**

c) los medios, si los hay, mediante los cuales los especímenes son marcados (ej. anillos abiertos o cerrados para aves; marcas para pieles). **Anillos abiertos para aves y presillas.**

3. Beneficios

Por favor describa los beneficios o dificultades, si los hay, que usted haya encontrado al usar la cría en granjas como método de producción en vez de otras formas de explotación de fauna silvestre o de producción en cautiverio, considerando lo siguiente:

si la cría en granjas provee incentivos para la conservación de poblaciones silvestres o de su hábitat, dando ejemplos (si los hay):

La cría en granja de flamenco (R), en nuestro caso, es considerada por la Autoridad Administrativa mas beneficiosa que la cría en cautividad (D) porque obliga al productor a conservar, monitorear y monitorear la población y el hábitat, se beneficiando otras especies, como por ejemplo otras aves y el cocodrilo americano (*Cocrodylus acutus*) que han aumentado también sus poblaciones. Se garantiza una gestión del agua evitando que se produzcan avenidas que puedan poner en peligro a toda la colonia (que era uno de los principales problemas que afectaba la población). Se realizan acciones de restauración del Hábitat, como reforestación y se logra una protección adecuada.

Cuba se ha visto perjudicada por las medidas mas estrictas de la UE que impide el comercio de *Phoenicopterus ruber* que no sean criados en cautividad, a pesar de ello y que se ha logrado reproducción en cautiverio de algunos especimenes en la granja de forma experimental, la Autoridad Administrativa no ha autorizado la cría en cautividad con fines comerciales considerando que pudiera ser un desestímulo para mantener la cría en granja afectando los beneficios indirectos que con ella se logran.

Los beneficios económicos que se obtienen de la venta de los flamencos se revierten, una parte en la conservación del área Desembocadura del Río Máximo y otros en la protección de otras especies o áreas protegidas que no pueden ser aprovechadas económicamente. El área protegida y la granja de flamenco está administrada por la Empresa Nacional para la Conservación de la Flora y la Fauna del Ministrito de la Agricultura que es a su vez la encargada de la administración de la mayoría de las Áreas protegidas del país, tanto terrestres como marinas.

a) si las operaciones de cría en granjas liberan ejemplares al ambiente silvestre (en cuyo caso por favor indique el número o proporción en relación al número de especímenes cautivos, y si las directrices sobre translocación de la UICN son utilizadas) o si usa otro método para incrementar la población silvestre:
No, cuando se inició la granja el objetivo primordial era el rescate, rehabilitación y posterior liberación de individuos al medio, aunque algunos individuos se exportaban o se trasladaban a zoológicos, pero una vez alcanzado el nivel de la población con mas de 90 000 aves anidando se considero improcedente liberar al medio los individuos.

b) si el cambio a crianza en granja ha producido alguna dificultad para la gestión del comercio o para la conservación:
No

Su punto de vista en general sobre la cría en granjas y su definición en CITES?

Por favor describa cualquier otro punto de vista que tenga sobre la cría en granjas como técnica de producción y cualquier dificultad que haya tenido con la definición utilizada por la CITES para esta actividad. Por ejemplo, le parece fácil entender la definición de cría en granja y diferenciarla de la explotación directa de ejemplares silvestres (código de origen "W") o de otras formas de producción en cautiverio (códigos de origen "F" y "C")?

Consideramos que la expresión cría en Granja (R) se puede aplicar a cualquier especie siempre que exista un programa de manejo o gestión concebido de tal manera que se tomen, para llevar a un ambiente controlado, especímenes del medio silvestre que su taza de supervivencia sería inferior en el medio silvestre a la que se logra con la cría en granja, sin perjuicio de la población silvestre, independiente incluso de la edad de los especímenes.

Review of use of source code R (ranching)

Party: Ghana
General Comment

Ghana does not ranch chameleons, tortoises, monitor lizards, and scorpions as indicated.

Species: *Python regius, Python sebae*

1. Harvest of wild specimens for ranching

Ranching of the above species involves the collection of pregnant females at the beginning of the dry season(November to March). The females are dug out of burrows in farmlands.

- The ranching programme as it is now is not related to sustainable of take of the harvest
- There is no monitoring of the impact of ranching on the wild populations.
- The trade in the species is regulated through issue of permits.

2. Methods of rearing wild specimens in a controlled environment

- The females are kept in individual ventilated plastic boxes in racks to lay the eggs.
- The eggs are either incubated by the naturally by the female or artificially using moist sawdust in wooden or plastic boxes.
- The hatchlings are either exported or kept.
- Some ranching facilities have mice rearing facilities
- All facilities receive veterinary support to ensure quality products.
- The spent females are released to the wild as a means of replenishment however in most cases the they are not released at the locations where they were collected.
- The specimens are not marked in any way.

3. Benefits

Ranching is a practical way of producing large number of babies to meet market demands deplete the resource. Though the return of spent females to the wild may serve as a means of replenishing the wild stocks the conservation benefit of this is not known as in most cases they are not released at where they were collected furthermore one is not sure of the fate of the released animals.

Views on Ranching

In reality, ranched specimens are wild . There are situations in which species have been harvested from the wild and exported to areas far away from their range for ranching purposes. Under such conditions it is not possible o return any adults or young to the wild and when these specimens are kept and bred over many years such operation cannot be regarded as ranching but rather a form of captive breeding.

For example Ghana has a large number *of Geochelone sulcata* originally imported from Mali. These have been kept for over twenty years and have bred successfully over these years. The offspring according to the CITES definition are ranched but in reality should be considered as captive bred with considering the rearing conditions and the time lapse. Ghana therefore designates the offsprings as 'C '.

Ranching provide opportunities for laundering specimens from a range state using permits from other range states .These permits enable the re-export of the specimens.

Therefore true level of export originating from these states is distorted.

Ranching questionnaire

Party: United Republic of Tanzania
Species: *Crocodylus niloticus*

1. Harvest of wild specimens for ranching (source code R)

Please describe the means by which wild specimens are harvested for rearing in a controlled environment (i.e. ranching) focusing, in particular, on the following:

a) the life stage (egg, larvae, juvenile, neonate, adults) which is taken from the wild;
Normally permits are issued for capturing of juveniles who have attained the body length of 27 – 50 cm.

b) the methods of capture or harvest of these specimens;
Juveniles are captured by the use of special nets and sometimes hand captured depending on the type of habitat.

c) the way in which the size of the wild harvest is regulated and/or limited (e.g. quotas);
Newly established crocodile farms are issued with specific number of juveniles to be harvested from the wild population as seed stock depending on the size of farm

d) the way in which the ranching program determines the sustainable level of off-take
In order to ensure sustainable level of off-take, 5% of the hatchlings from ranching operations are returned to the wild to replenish the wild population

e) whether there is any monitoring of the impacts on the wild population
Monitoring of the impacts on the wild population is done through aerial census and quarterly reports from the operations.

f) the means by which you regulate the trade
– **Trade is regulated through a well structured licensing system involving quota allocation, issuance of capture permits, certificate of ownerships, CITES permits and skin tags.**
– **Ranching operations are inspected on regular basis and inspection is also done at exit points before export.**
– **Ranching operators are required to produce quarterly reports, which among other things reflect, current number of stocks as well as the level of mortality and natality for that particular period.**

2. Methods for rearing wild specimens in a controlled environment

Please describe the techniques for keeping and rearing of the wild-taken specimens including details of:

a) the controlled environment in which the specimens are reared and husbandry details;
Juveniles are reared in special constructed small dams which have different compartment designed to keep juveniles of different sizes.

b) the age and life stage (e.g. adults, juveniles etc) at which the specimens are exported;
Export of skins is done when crocodiles have attained more than 1.5 m in body length.

c) The means, if any, by which these specimens are marked (e.g. close or open rings for birds; tags for skins).
Skin tags are used to mark the specimens in accordance to the national export quota of 1600 specimens.

3. Benefits

Please describe what benefits or difficulties, if any, you encounter when using ranching as a production method as opposed to other forms of wild harvest or captive production, considering the following:

a) whether ranching provides incentives for the conservation of the wild population or their habitat, providing examples (if any is available);
Ranching operations have not been very successful in Tanzania due to lack of capital and increased production costs. However, benefits from the ranching operations include employment opportunities, promotion of local tourism and education and research.

b) Whether the ranching operations release any animals to the wild (indicating numbers or proportion of captive stock and whether IUCN guidelines on translocations are followed) or engage in other means to enhance wild production.
To maintain sustainable off -take 5% of the hatchlings from the ranching operations are returned to the wild.

c) whether a shift to ranching has generated any difficulties for the management of the trade or for conservation purposes
The Shift from the wild harvest to ranching has not generated any difficulties in management of trade or for conservation purposes

Your views on ranching overall and the CITES definition?

Please describe any other views you have on ranching as a production technique and any difficulties you have had with the definition of ranching by CITES, for example, do you find it simple to understand and to distinguish ranching from a straightforward wild harvest (source code W) or from other forms of captive production (source codes F and C)?

Ranching can easily distinguished from wild harvest but not from the captive bred (source C or F) since they both require parental stock from the wild.

Please return answers to mcalvar@mgap.gub.uy; joseal@orasen.co.cu; schurmann@nnm.nl before 1 November 2008.

Encuesta sobre Cría en Granjas ("*ranching*")

Parte: URUGUAY
Especies: Cotorra común *Myiopsitta monachus*

1. Uso de especímenes silvestres para crianza en granjas (código de origen "R")

Por favor describa los medios por los cuales especímenes silvestres son obtenidos para crianza en un ambiente controlado (ej. cría en granjas), destacando en particular:

g) la etapa en la que son extraídos del medio silvestre (huevo, larva, neonato, juvenil, adulto):
Adultos, utilizados como parentales para cría en cautiverio.

h) los métodos de captura de estos especímenes:
Trampas redes, cebadas con maíz.

i) la manera como se regula o limita el tamaño de captura silvestre (ej. cupos):
No existe cupo y no se regula el número de ejemplares capturados. La especie es considerada de libre caza y comercio por Decreto 164/996 de 02.05.96, y fue declarada Plaga Nacional por daños a la agricultura por Decreto de 08.05.1947.

j) la manera como el programa de cría en granjas determina el nivel sustentable de remoción silvestre:
La fuente del WCMC arrojó los datos de especimenes comercializados por Uruguay con código de origen "R", en el período 2003-2004, según AC23 Doc. 9 (Rev.2).
Actualmente no existe un programa de cría en granjas; se trató de una experiencia de cría y exportación de juveniles. No se llegó a la F2, por lo tanto los especimenes no podían ser considerados con código de origen "C" como procedentes de cría en cautiverio.
Esta experiencia fue llevada a cabo por una de las empresas exportadoras -hoy en día la única existente- ante la solicitud de compra de los países importadores (Portugal, Italia y Japón) durante el año 2003, cuando se realizaron seis transacciones comerciales, de un total de 2.360 individuos.
La Unión Europea y Oriente, prometían ser un mercado interesante para la exportación de cotorras, puesto que se pagaban mejores precios por ejemplar. Sin embargo, se exigía que las aves comercializadas no procedieran del medio silvestre, por tanto, debían ser con código de origen "C" o "R".
Posteriormente, ante la aparición de brotes de influenza aviar altamente patogénica (VIAAP) en el Sudeste asiático y Europa, ocasionadas por la cepa H5N1, los países importadores cancelaron en forma precautoria todas las importaciones de aves vivas, a pesar que la cepa nunca fue diagnosticada en Sudamérica.
La cría de ejemplares de cotorra no reviste ninguna ventaja, puesto que se trata de una especie sumamente abundante en toda su área de distribución (Argentina, Bolivia, Brasil, Paraguay y Uruguay). Sólo Argentina y Uruguay realizan, desde hace décadas, exportaciones de importantes volúmenes de esta especie procedentes del medio silvestre "W" sin que se afecten las poblaciones naturales.
La abundancia de la especie no justifica la cría en cautiverio, o el "*ranching*", por lo que la experiencia solamente fue realizada por exigencia de los países compradores.

k) si existen evaluaciones de los impactos en las poblaciones silvestres:
La metodología con red "medio mundo" es selectiva, cuando se utiliza cimbeles o "llamadores", y por tanto la captura incidental de otras especies protegidas es prácticamente despreciable. Si ello ocurriera, las aves de otras especies son liberadas, por tratarse de animales de caza, tenencia y comercio prohibido por la legislación nacional vigente.

l) los medios por los cuales es regulado el comercio:
El comercio se regula a través del Ministerio de Economía y Finanzas, quien expide por medio de la Dirección Nacional de Aduanas, el Documento Único Aduanero (DUA) y posteriormente da cuenta al Banco Central del Uruguay.

Asimismo, el Ministerio de Ganadería, Agricultura y Pesca, expide el certificado sanitario a través de la División de Sanidad Animal, y el permiso CITES correspondiente por la Dirección General de Recursos Naturales Renovables (Autoridad Administrativa CITES), previa consulta con la Autoridad Científica (Departamento de Fauna).
Posteriormente la Autoridad Científica avala la exportación en el puerto de salida. Todas las exportaciones salen a través del Aeropuerto Internacional de Carrasco (Montevideo), y las referidas oficinas nacionales competentes realizan los controles durante la salida del país.

2. Métodos para criar especímenes silvestres en un ambiente controlado

Por favor describa las técnicas de confinamiento o crianza de los especímenes capturados del medio silvestre incluyendo detalles sobre:

La metodología comprendía la captura los ejemplares adultos con redes, los cuales eran utilizados como parentales. Las aves eran mantenidas en naves jaulas de grandes dimensiones donde se les proporcionaba un nido natural confeccionado por un entramado de ramas con muchas bocas de acceso.

Los pichones eran mantenidos en cautiverio hasta alcanzar la etapa de juveniles en unos tres meses, cuando eran exportados.

Durante esta etapa y en tanto realizaban las gestiones ante la Autoridad CITES y de Sanidad Animal, se llevaba a cabo la cuarentena con dosificación de antibiótico y antiparasitario indicados por la autoridad sanitaria mencionada. En este período se proveía a las aves de agua, granos de maíz y frutas en un espacio suficiente como para evitar el hacinamiento.

Las aves eran exportadas con anillos metálicos cerrados, que llevaba la inscripción del nombre de la empresa y un número correlativo.

d) el ambiente controlado (cautiverio) en el cual los especímenes son criados y los detalles de las formas de confinamiento;
e) la edad y etapa (ej. juveniles, adultos, etc.) en los que los especímenes son exportados;
f) los medios, si los hay, mediante los cuales los especímenes son marcados (ej. anillos abiertos o cerrados para aves; marcas para pieles).

3. Beneficios

Por favor describa los beneficios o dificultades, si los hay, que usted haya encontrado al usar la cría en granjas como método de producción en vez de otras formas de explotación de fauna silvestre o de producción en cautiverio, considerando lo siguiente:

Reiteramos, que la utilización del código "R" fue por exigencia de los países importadores. Tomando en consideración es estatus que goza la especie en toda su área de distribución y en el país en particular, el emprendimiento no redundó beneficio alguno.

c) si la cría en granjas provee incentivos para la conservación de poblaciones silvestres o de su hábitat, dando ejemplos (si los hay):
No existieron incentivos. Se trataba de un emprendimiento por voluntad del empresario, y a consecuencias de exigencias del mercado comprador.
La actividad realizada no supuso alivio a las poblaciones silvestres, ya que éstas son de por sí muy abundantes.

d) si las operaciones de cría en granjas liberan ejemplares al ambiente silvestre (en cuyo caso por favor indique el número o proporción en relación al número de especímenes cautivos, y si las directrices sobre translocación de la UICN son utilizadas) o si usa otro método para incrementar la población silvestre:
No se usan métodos para incrementar la población, ya que la especie es suficientemente abundante en la naturaleza, y por ello fue declarada de libre caza y comercio, e incluso considerada plaga para la agricultura. Por tanto, la autoridad competente entendió que no correspondía el reintegro de especímenes vivos al medio silvestre.

e) si el cambio a crianza en granja ha producido alguna dificultad para la gestión del comercio o para la conservación:
En este caso en particular la experiencia de "cría en granja" no representó una dificultad para la conservación, y fue desarrollada a fin de cumplir con exigencias de países compradores.

Su punto de vista en general sobre la cría en granjas y su definición en CITES?

Por favor describa cualquier otro punto de vista que tenga sobre la cría en granjas como técnica de producción y cualquier dificultad que haya tenido con la definición utilizada por la CITES para esta actividad. Por ejemplo, le parece fácil entender la definición de cría en granja y diferenciarla de la explotación directa de ejemplares silvestres (código de origen "W") o de otras formas de producción en cautiverio (códigos de origen "F" y "C")?

Entendemos que la definición dada por la CITES desde sus inicios por la Res. Conf. 3.15, hasta la actual Res. Conf. 11.16 (Rev. CoP14), ha sido y sigue siendo confusa para la mayoría de los países que utilizan el código "R" en sus transacciones comerciales. En la mayoría de los casos, como en las escasas transacciones que realizó Uruguay durante el año 2003, no existe una clara diferenciación con los especímenes procedentes del medio silvestre "W".

La definición primeramente redactada para contemplar las especies de cocodrílidos fue posteriormente extrapolada a otras especies animales. Tal como se ha reflejado en diversas reuniones del Comité de Fauna, la definición de "*ranching*" no ha sido correctamente interpretada y por ende mal aplicado el código de origen en gran parte de las transacciones comerciales realizadas amparadas por esa anotación.

En atención a lo anteriormente expresado surge la Dec. 14.52, en donde se preceptúa que el Comité de Fauna debe expedirse sobre la aplicación de esta decisión ante la 15ª Reunión de la Conferencia de las Partes. A nuestro entender, este es uno de los códigos de origen que debería suprimirse a fin simplificar la expedición de permisos y certificados, para ser sustituido por los correspondientes códigos "W" o "C", según la procedencia de los especimenes.

Cabe destacar que un estudio más detallado sobre la gestión de la especie en Uruguay, ha sido objeto de una investigación para la Maestría en Gestión, Conservación de Especies Sometidas a Comercio Internacional: "Efectos de la inclusión de una especie plaga: Cotorra (*Myiopsitta monachus monachus*) en el Apéndice II de la CITES", Calvar, M. 2000. Publ. Universidad Internacional de Andalucía, España, 195 pp.

Por favor envíe sus respuestas a mcalvar@mgap.gub.uy**;** joseal@orasen.co.cu**;** schurmann@nnm.nl **antes del 1 de Noviembre de 2008.**

Answers to the CITES concerning ranching of the Central Asian tortoise *A. horsfieldi* in Uzbekistan

Since 1997, when Uzbekistan joined the CITES, the export of the above-mentioned tortoises both reared and withdrawn from the wild has been controlled by the CITES administrative and scientific authorities. Measures are developed and applied on the territorial protection, rearing, ranching and reintroduction. The use of tortoises as the object of sustainable economic use is one of priority directions of the National Strategy and Action Plan for the conservation of biological diversity in the Republic of Uzbekistan. Since December 1999, the European Union delayed the export of tortoises *Agrionemys* (*Testudo*) *horsfieldii* Gray withdrawn from the wild to all states. This measure was taken in compliance with article 4.6 (c) of the Regulations Council No 338/97, after the discussion of the question of a high mortality of this species in the wild and a necessity of its raring in captivity. Therefore, in 2000 the Zoocomplex (Tashkent, Uzbekistan) initiated the realization of the scientific-industrial program on the rearing and ranching of this tortoise species at commercial levels. The studies have been conducted at this Zoocomplex since 1997; by that time the associates of the Zoocomplex had gained certain experience in the breeding of this tortoise under conditions of a nursery. To obtain more information on the ranching of this tortoise, a consultant of TRAFFIC EUROPE (the organization carrying out the control of the adequate maintenance of animals), Dr Andrey Zatoka, a herpetologist with the experience of working in Central Asia for more than 15 years, visited the Zoocomplex. In his article Ranching and breeding of *A. horsfieldi* in Uzbekistan (Radiata, 2002, v.11, No 4, p. 21-42) he provided a positive opinion on the ranching of *A. horsfieldi* in Uzbekistan. In the same year, the CITES Uzbekistan reported to the European Union about an opportunity of rearing these tortoises in captivity and asked for a permission for the import of these animals. At the 17th conference of Scientific Review Group - SRG held in July 2000 a decision was taken to change a negative attitude towards the export of these tortoises from Uzbekistan. After discussions and consultations between the European Commission and CITES, the European Union gave the permission to import ranched tortoises sizing 6 to 8 cm from Uzbekistan. This permission was limited to *T. horsfieldii* restrictedly reared and grown in captivity.

The program developed by the associates of the Zoocomplex on the rearing and ranching of *A. horsfieldi* at commercial levels includes the following: collection of eggs, their incubation and growing of young individuals. Three ways of the obtaining of eggs were used in this program:

1. From tortoises permanently living in captivity, in open enclosures in the territory of the Zoocomplex – “permanent breeding stock” (fig. 1);

2. According to the license, in specific areas the collectors from the Zoocomplex carry out the collection of tortoises at the age of 12 years for the export – “wild”;

   The collected tortoises are brought to the Zoocomplex, where they are kept in enclosures expecting the shipment from 1 to 3 months. During this time, these animals may start mating or some females may already be pregnant and subsequently lay eggs in the Zoocomplex. These animals are referred to as “in transit”;

3. Besides eggs laid in the enclosures, eggs are collected in areas with a high density of populations (according to the regulations on egg collections, which is issued according to the CITES permission). This is the main source of egg collection. This kind of work is carried out by the expedition of collectors from the Zoocomplex during the mass egg-laying. All mature females (more than 13-13 cm in size) caught within this expedition are examined for the presence of eggs ready for ovipositon. They are consequently shipped to the field basis, where enclosures adjusted for the maintenance of pregnant females are set up.

   For the development of the technology of oviposition, we use the short-term gonadotrpic device, which produces the contraction in smooth muscles of the uterus. This device is in wide use in the veterinary practice to make eggs pass through the oviduct, if they are delayed in it (Vasiliev, 2003). The dose of the preparation is adjusted so that females lay only those eggs that are ready for oviposition. After the oviposition, the females were labeled and released into the wild. In the period of seven years we used labeled and repeatedly injected females. The reproductive capacity remained in the norm; we obtained from 1 to 6 eggs. Thus, we may conclude that the stimulation of pregnant

females does not produce an adverse effect on these animals, which is consistent with the findings of other authors (Ewert *et al*. 1978; Nazarova 1983; Vasiliev, 2003; Lapid, Robinzon 2003).

After collection, the eggs are packed into cardboard boxes and the latter are filled with sawdust. The transportation is carried out at night to avoid overheating, at a low speed in side a car. When transported to the Zoocomplex, the eggs are placed into the incubators, onto the seven-tier shelves and covered with sand. The eggs obtained from the own and transit stock are also placed into the incubator (Fig. 2). Inside the incubation facility the temperature is maintained at 28-32°; humidity, 70-80%. The hatching occurs in 90-100 days (Fig. 3). The embryonic survival rate reached 75%. This can be evaluated as a minimal mortality of individuals before hatching, taking into consideration a certain number unfertilized eggs.

The rearing of young individuals was carried out in specifically designed enclosures – three-tier wooden shelves with the area of 0.75 by 1.5 m, which were divided into two parts, with the covers and incandescent lighting. The temperature in the daytime was 28-30 °; at night, 24-26° (Fig. 4, 5). In the second week of their life, the tortoises were given food. To that end, we prepared a mixed feed with prevailing grass, vegetables and fruit enriched with proteins, vitamins and minerals additives. The food was given once a day, five times a week.

For an additional stimulation of the feeding activity and prevention of the dehydration of the organism, during the first month after hatching the young tortoises were regularly (2-3 times a week) given a bath in warm water at 32-35° and kept in the sun rays for 30-40 min. The tortoises did not hibernate.

Owing to stable conditions, most tortoises grow from 25,2-48,6 mm (average 40 mm) in length and 20 g in weight when hatched to 60 mm in length and 60 g in weight in eight months of rearing. When they reach this size, the tortoises are exported. In the wild, the tortoises reach this size at the age of 3-4 years. Juvenile tortoises obtained from our own stock (F1), transit stock (in transit) and from eggs collected in regions with a high density of population (R) significantly differ from the wild tortoises (W) of the same age. As time passes this gap grows. The sizes and weight of tortoises reared and ranched in the nursery are significantly higher on average; their shells are more convex with sharp edges, not worn by the sand. Besides, the coloration is more vivid and the growth zones are clearly seen. However, there are no differences between the tortoises F_1, in transit and (R). Clear differences rule out the possibility of exporting the tortoises withdrawn from the wild as those reared in the nursery (Fig. 6).

About 3% of individuals die during the rearing (6-8 months from the hatching to attaining the commercial size of more than 60 mm). Most of the tortoises that subsequently died in the first weeks of their life had hatched from the eggs smaller in size and weight. Work is constantly carried out on the optimization of conditions of maintenance and specific attention is focused on the diet of tortoises.

On 28 March 2000, 700 young tortoises were released into the wild in Farish district of Jizzak province. However, in 2001 we failed to record them in sufficient numbers. Perhaps, most of them were lost to predation. This is confirmed by other authors – young tortoises mainly die in the first three years of their life. According to different authors (Brushko, Kubykin, Bogdanov and others), in the first ten days of August, 60% of young tortoises hatch from of oviposited eggs, while ca. 40% die to mechanical damages and are lost to various predators. In favorable years, the natural mortality of young tortoises constituted ca. 45.5% of their total number. The observations by Brushko Z.K. indicate that during the epizootics of rodents, birds and mammalians start feeding on reptiles. The shells of tortoises of the current-year (33-37 mm); one-year-old (41-47 mm); two-year-old (55-57 mm); 3-4 year-old (63-68 mm) were found in the colony of the rooks. Individuals overwintering in upper layers of the ground awaken from hibernation on warm days and then die during the cold spells. During spring counts, the offspring of the last year, according to Brushko Z.K., constituted only 8% of all tortoises. There are data showing that the mortality of the individuals of *A. hosrfieldi* of the first year of life due to predation may reach 70-90% (Kashkarov R.D., Mitropolsky O.V., Brushko Z.K., Kubykin R.A., 2000). Besides, grazing cattle also affect the population numbers of tortoises, which, first and foremost, damages laid eggs and juveniles with soft shells. Thus, proceeding from the above-stated it is clear that most young tortoises are doomed to die.

On 4 April, 212 young tortoises *A. horsfieldi* were released into the wild in Navoi province.

According to O.V. Mitropolsky and R.D. Kashkarov (2000), during the mass oviposition, a large number of eggs remain on the surface. The authors believe that the collection and incubation of these eggs doomed to death is very reasonable. A negative effect of various factors resulted in the observed decline

of the population of this species and dwindling of its range. This warranted for inclusion of this species in the CITES Annex II and IUCN Red Lists 2000 as vulnerable **(**Hilton-Taylor, 2000).

In this connection, the inventories of tortoise populations are regularly carried out in the areas of their long-term exploitation. Since 1990, annual counts and monitoring of tortoise numbers have been conducted in five sites, where permanent points of counts were established. This enables to carry out the monitoring of the state of a population in the area where 15.5-16 million individuals are concentrated. On average, the population density of tortoises depending on conditions of habitation is 0.5-2 individuals per ha; only in some places it can be as high as 43 individuals per ha (Bondarenko *et al.*, 2000). The total expert assessment of the numbers of this species in the plain land is determined at more than 20 million individuals, while the aggregate numbers can reach 30 million individuals. Thus, in the long-term aspect the numbers of the *A. horsfieldi* in Uzbekistan are stable and the reproductive potential is high enough.

The experience of the rearing of *A. horsfieldi* at commercial levels in the territory of the Zoocomplex is the first one officially registered in Uzbekistan.

In 2005, a scientific department was established in the nursery, which was aimed at the study of problems relating to the maintenance, feeding and ranching of animals both reared in the Zoocomplex Ltd., and caught in the wild. The certified experts (both masters and PhD) carry out considerable scientific work. The results of the work on rearing and ranching of the tortoises are regularly reported at international conferences, to which the associates of the Zoocomplex Ltd. are invited every year:

1. E. Peregontsev, G. Sorochinsky. The Central Asian Tortoise, Resources and Utilization in Uzbekistan. The third world congress of herpetology, Prague, 1997.

2. E. Peregontsev. Horsfield tortoise in Uzbekistan. Congress International sur le genre Testudo, France, 2001, pp.233-300.

3. A. Golenkevich, E. Peregontsev, G. Sorochinsky, I. Sorochinskaya and V. Sorochinsky. Some data of the Steppe tortoise Ranching programme in Uzbekistan, Senegal, Saly Second International Congress of Chelonion Conservation Senegal, Saly (near Dakar) – June 18-22, 2003, 58 p.

4. A. Golenkevich, E. Peregontsev, G. Sorochinsky, I. Sorochinskaya and V. Sorochinsky. Ranching of Horsfield's tortoise in Uzbekistan. The Fifth World Congress of Herpetology, South Africa, Stellenbosch – June 20-24, 2005, 130 p.

5. E.V. Bykova, V.G. Sorochnsky, A.V. Golenkevich, E.A. Peregontsev, G.Ya. Sorochinsky, I.N. Sorochinskaya. Rearing and ranching of the tortoise *Agrionemys (testudo) horsfieldii* Gray. The fifth congress of the Nikolsky Herpetological Society, Pushchino, 6-10 October 2000.

6. Elena V. Bykova, Valentin G. Sorochinskiy, Georgiy Ya. Sorochinskiy, Irina N. Sorochinskaya, Evgeny A. Peregontsev, Alexei V. Golenkevich. On establishment of a farm hatching and rearing Agrionemys (Testudo) horsfieldii Gray in Uzbekistan. The 6th International zoo and wildlife research conference on behavior, physiology and genetics, Germany, Berlin – October, 2007, 56 p.

The following works have been published:

2. V. Sorochinskiy, I. Sorochinskaya, E. Bykova, G. Sorochinskiy. The maintenance and ranching of the Central Asian tortoise Agrionemys (Testudo) horsfieldii gray under conditions of a nursery. Ekologicheskiy Vestnik uzbekistana [The ecological bulletin of Uzbekistan], 2007, (73), 4.

3. Elena V. Bykova, Valentin G. Sorochinskiy, Georgiy Ya. Sorochinskiy, Irina N. Sorochinskaya, Evgeny A. Peregontsev, Alexei V. Golenkevich. Ranching as a method of conservation of the wild population of horsfield's tortoise, *Agrionemys horsfieldii* Gray. The Russian herpetology journal, 2007, vol. 4, No 3, pp.232-236.

A patent for invention (IAP 3676 published in the Patent Bulleting of the Republic of Uzbekistan No 6, 2008) entitled "The way of rearing of the Central Asian tortoise" was obtained.

In May 2007, a well-known herpetologist, the most prominent expert in this species of reptiles, Dr Bernard Devaux, provided a positive appraisal of activity of the Zoocomplex Ltd. in rearing, ranching and maintaining *Testudo horsfieldii* Gray in the journal La Tortue, No 78, p. 54-75.

Before shipment, all tortoises are subject to a 30-day quarantine carried out by the service of Gosvetnadzor [State Veterinary Surveillance Service] according to the norms and regulations, about which a veterinary certificate was issued. For the transportation, live animals are placed into species boxes (cages) in compliance with the instruction of the international agreement on the transportation of live animals (IATA). All boxes are provided with special labels indication the position and conditions of transportation, storing and maintenance in transit points as well as conditions of reloading to other types of transport.

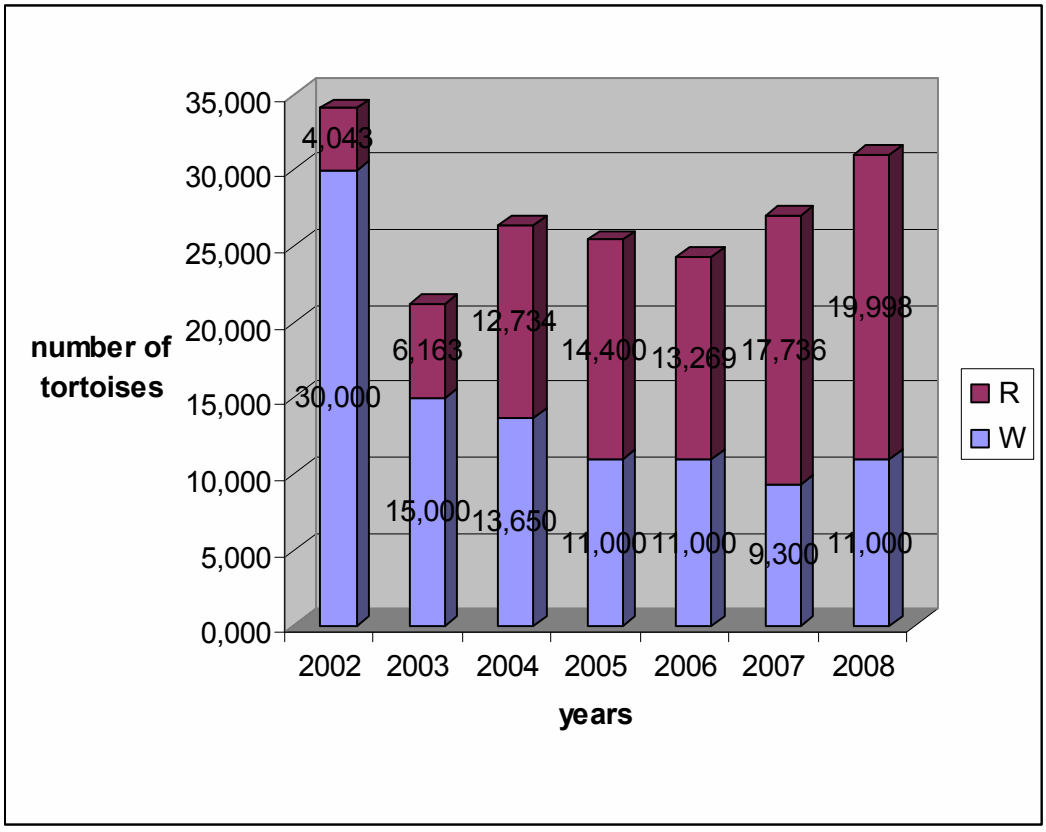
Every year, the export of wild tortoises from Uzbekistan decreases. This became possible owing to the application of the Program of ranching of A. tortoise and replacement of tortoises withdrawn from the wild by those bred in captivity, for the export (Diagram1).

Besides the nature-protecting importance of this program, there are other positive aspects in it. Hence, the bred and ranched tortoises have more chances to survive in the conditions of a terrarium, than those collected from the wild, as they are already accustomed to artificial conditions. They less frequently have diseases, including the infectious ones, and endo-parasites (Frolov, 1988).

The ranching method is less labor-consuming and more economically sound, as it does not require the maintenance of a large number of reproductive individuals during the year, as well as creation of favorable conditions for mating and oviposition. Considering that one female lays three eggs, to get a need number of eggs (in our case more than 25,000), taking into consideration the males) we would have to maintain 13,000 individuals in the brood stock.

In our view, the ranching is a real alternative of obtaining animals for the zoological trade with a minimal damage for wild populations.

Diagram1. Data on the numbers of caught (W) and ranched (R) tortoises by the associates of the Zoocomplex from 2002 to 2008.



W- Wild; R – Ranched

We hope we have been able to answer all your questions in Annex 3. We share your concern about the problem of import of wild tortoises under the pretense of those reared and ranched in captivity. In European states we frequently observed the tortoises Agrionemys (Testudo) horsfieldii (W) obviously withdrawn from the wild but sold as ranched through the pet shops. In this connection, we systematically focus attention on this fact, which remains very urgent now. В – South Africa (Stellenbosch 2005 - Fifth world congress of herpetology), в Германии (Berlin 2007 - 6th International zoo and wildlife research conference on behaviour, physiology and genetics). Together with the main reports, we also presented poster reports which provide insights into this problem, namely, "How to differ wild Horsfield tortoises Agrionemys (Testudo) horsfieldii from those bred and reared in captivity?"

In conclusion, we would like to ask you about the following: we will be very grateful to you if you find it possible to give us any formation concerning the rearing, maintenance and ranching of terrestrial tortoises in other regions, including the CIS states.

We need this information for the improvement of the ranching method. The exchange of expertise with other nurseries could be useful for both sides and contribute to the achievement of best results.

If you wish to become familiarized with the work of our nursery in person, we will be glad to see you at any time convenient for you. We guarantee the visa support and accommodation at a hotel.

With kind regards

Georgy Sorochinskiy,
Director, Zoocomplex Ltd. E-mail: sorochin@mail.ru ; **Contact phone: +998973303501**

Elena Bykova,
Head, Scientific Department
Zoocomplex Ltd. E-mail: bykovi-7@mail.ru

(31-10-2008, Dear colleague!

Our nursery, the Zoocomplex, is the only officially registered organization involved in cultivation, maintenance and ranching of the Central Asian tortoise in Uzbekistan. In this connection, the CITES administrative authority requested us to answer the questions pertaining to the ranching of this tortoise species in Uzbekistan. In addition to the information that you received during your questionnaire survey from the official CITES representatives, we would like to inform you about the following:

19-11-2008
Dear Mr Sorochinskiy and Mrs. Bykova,
Thank you very much for the information you have provided for the working group.
Best regards,
Chris Schurmann
NL CITES SA

Ranching questionnaire

Party: **Venezuela**

Species: *Podocnemis unifilis*, *Podocnemis vogli*, *Podocnemis erythrocephala*

1. Harvest of wild specimens for ranching (source code R)

Please describe the means by which wild specimens are harvested for rearing in a controlled environment (i.e. ranching) focusing, in particular, on the following:

m) the life stage (egg, larvae, juvenile, neonate, adults) which is taken from the wild;
egg

n) the methods of capture or harvest of these specimens;
It collects by hand

o) the way in which the size of the wild harvest is regulated and/or limited (e.g. quotas);
Quotas, established individually to each owner of ranch by licenses and populations' studies

p) the way in which the ranching program determines the sustainable level of off-take
The percentage of turtles to liberate is between the 10 to the born individuals' 15%, in conformity with that settled down in the Authorization of Operation of each Ranch, in reason that the signal species are of strategy "r". The liberations are supervised by the national environmental authority.

q) whether there is any monitoring of the impacts on the wild population
The incubation of the eggs, in controlled environment, free of predation and of contingencies of the environment, and with permanent attention and care, it guarantees a high percentage of rate of the incubation and survival, being that the quota of signal liberation overcomes the reproductive success that can get starting from the same one numbers of eggs in the natural means.
With base in these premises, it is considered that the low modality of "ranching" of the species *Podocnemis unifilis, Podocnemis vogli* and *Podocnemis erythrocephala*, believe a positive impact and population increment.

r) the means by which you regulate the trade
Yes by licensing system and inspections (quota, transport, export by CITES permit.

2. Methods for rearing wild specimens in a controlled environment

Please describe the techniques for keeping and rearing of the wild-taken specimens including details of:

g) the controlled environment in which the specimens are reared and husbandry details;
The collected eggs are incubated in plastic recipients with cover that they are placed in closed enclosures, and devices are used to control humidity and way temperature of likening the incubation under natural conditions.
The neonates receives treatment in the navel to avoid infections, they stay in pale slightly bowed with water, which is constantly redrawn to maintain their quality.
In the first days of born the neonates doesn't receive food. Subsequently the food is given in such a way that everything is consumed to avoid decomposition of the same one. Later on they feed with diet regime every three days.
The juvenile ones stay in tanks of concrete, metallic or of Fiberglas, open and shady where they stay the sanitary conditions and of feeding, until reaching the commercialization size or release.

h) the age and life stage (e.g. adults, juveniles etc) at which the specimens are exported;
Juveniles.

i) The means, if any, by which these specimens are marked (e.g. close or open rings for birds; tags for skins).

No

3. Benefits

Please describe what benefits or difficulties, if any, you encounter when using ranching as a production method as opposed to other forms of wild harvest or captive production, considering the following:

g) whether ranching provides incentives for the conservation of the wild population or their habitat, providing examples (if any is available);
It is a necessity for the Ranch operators to conserve the populations of the species with which work, and the habitat, in the places where they carry out the collections, this form of operating favours the sustainable use of these species, and it guarantees the estimation of the species for the people.

h) Whether the ranching operations release any animals to the wild (indicating numbers or proportion of captive stock and whether IUCN guidelines on translocations are followed) or engage in other means to enhance wild production.
A 10 to 15 % of animals are release in olden to de IUCN guidelines. The animals are realise in the locality when the egg was colleted.

i) whether a shift to ranching has generated any difficulties for the management of the trade or for conservation purposes
No

Your views on ranching overall and the CITES definition?

Please describe any other views you have on ranching as a production technique and any difficulties you have had with the definition of ranching by CITES, for example, do you find it simple to understand and to distinguish ranching from a straightforward wild harvest (source code W) or from other forms of captive production (source codes F and C)?

We considered the Ranching like favourable measure for the conservation *ex situ* and *in situ*, as it allows to maintain a genetic pool in confinement, to investigate on biological aspects and animal management of the species, to reduce the hunt pressure on the wild populations, to reinforce the wild populations through the liberations and to generate economic resources for the population.

In relation to the Ranching definition by CITES whose meaning is the "breeding in a controlled environment of specimens captured in the wild" means, this agrees clearly with that carried out by the zoocriaderos (Ranch) of Venezuela that operate under the "ranching" modality, where the specimens are collected in the egg phase, contrary to what is made in other countries, where the copies are captured in neonatos.

Para: Grupo de trabajo sobre la revisión del código "R" (cría en granjas o "ranching") CC08/596S.

Encuesta sobre cría en granjas ("ranching")

Parte: Venezuela
Especies: *Podocnemis unifilis*, *Podocnemis vogli*, *Podocnemis erythrocephala*

Estas especies se encuentran en el Convenio CITES, apéndice II, con el código "R". En nuestro país se permite la cría de estas especies bajo la modalidad de "ranching", pues se extraen los huevos del medio silvestre, como única fuente para obtener los individuos para el aprovechamiento.

1. Uso de especimenes silvestre para crianza en granjas (código de origen "R")

a) la etapa en la que son extraídos del medio silvestre (huevo, larvas, neonatos juvenil, adulto).
Para las tres especies, es decir: *Podocnemis unifilis*, *Podocnemis vogli*, *Podocnemis erythrocephala,* se extraen del medio silvestre en la etapa de huevo.

b) los métodos de captura de estos especimenes:
La captura se efectúa mediante la colecta manual de los huevos, los cuales son colocados en recipientes de anime o plástico, recubiertos con arena para evitar giros, la posición de los huevos en el recipiente es la misma que tenían en el nido, para lo cual se hace en cada huevo una pequeña marca en la cara superior, así se identifica en cada momento la posición que debe tener. Los recipientes poseen tapas herméticas que evitan la exposición al sol y la entrada de insectos. En esos recipientes se mantienen para su traslado desde los sitios de colecta, hasta el zoocriadero o sitio de incubación y posterior cría.

c) la manera como se regula o limita el tamaño de la captura silvestre:
Para determinar la cuota de captura, el propietario del zoocriadero debe presentar un informe técnico que incluya censo, estructura poblacional de la especie silvestre objeto de zoocría y área geográfica donde se efectuarán las capturas, de esta forma, mediante Licencia de Caza se establece la cantidad de especimenes a ser colectados y las condiciones para realizar esa actividad.

d) la manera como el programa de cría en granja determina el nivel sustentable,
El programa de zoocría de animales silvestres, obtenidos bajo la modalidad de "ranching" establece la liberación en el área de distribución de la especie de un porcentaje de los especimenes nacidos en el zoocriadero de la especie objeto del aprovechamiento. Los individuos se liberan en la fase juvenil, una vez que el ejemplar alcance un desarrollo, que favorezca su supervivencia en el medio silvestre.
El porcentaje de ejemplares a liberar está entre el 10 y 15% de los individuos nacidos, de conformidad con lo establecido en la Autorización de Funcionamiento de cada zoocriadero, en razón que las especies señaladas son de estrategia "r". Las liberaciones son supervisadas por la autoridad ambiental nacional.

e) si existen evaluaciones de los impactos en las poblaciones silvestre:
Las especies *Podocnemis unifilis*, *Podocnemis vogli* y *Podocnemis erythrocephala* basan su sobrevivencia en estrategias reproductivas densodependientes tipo "r", la cual se fundamenta en la producción de un número significativo de huevos en cada evento reproductivo, que garantiza la sobrevivencia a pesar de la ausencia de cuidado parental, un entorno ecológico impredecible y elevada tasa de depredación.
Por otra parte la incubación y levante de los huevos de las referidas especies, en un ambiente libre de depredación y de contingencias del medio ambiente, y bajo condiciones controladas, con permanente atención y cuidado, garantiza un elevado porcentaje de éxito de la incubación y sobrevivencia, resultando que la cuota de liberación señalada supera el éxito reproductivo que se puede lograr a partir del mismo numero de huevos en el medio natural.
Con base en estas premisas, se considera que la zoocría bajo la modalidad de "ranching" de las especies *Podocnemis unifilis*, *Podocnemis vogli* y *Podocnemis erythrocephala,* crea un impacto positivo por cuanto favorece el incremento poblacional.

f) los medios por los cuales es regulado el comercio:

La implementación de un zoocriadero en Venezuela requiere de Autorización de Funcionamiento emitida por la Autoridad Ambiental Nacional, donde se establecen una serie de condiciones. Para el caso del comercio de los ejemplares objeto de cría, se requiere una guía de movilización para trasladar los ejemplares comercializados internamente.
Si los ejemplares son de especies que están en el Convenio CITES, su exportación requiere de un permisos CITES.

2. Métodos para criar especimenes silvestres en un ambiente controlado.

a) el ambiente controlado (cautiverio) en el cual los especimenes son criados y los detalles de la forma de confinamiento.
Los huevos colectados son incubados en recipientes de anime o plástico con tapa, que son colocados en recintos cerrados, puesto que así se evita la entrada de insectos y otros animales indeseados, y se utilizan dispositivos para controlar humedad y temperatura de manera de asemejar la incubación en condiciones naturales.
Una vez eclosionado los huevos, los neonatos reciben tratamiento en el ombligo para evitar infecciones, se mantienen en cubetas levemente inclinada con agua, la cual se recambia constantemente para mantener su calidad.
En los primeros días de nacidos los neonatos no reciben alimento, pues requieren reabsorber el vitelo. Seguidamente el alimento se suministra de tal forma que todo sea consumido para evitar descomposición del mismo. Posteriormente se alimentan con régimen de dieta cada tres días.
Los juveniles se mantienen en tanques de concreto, metálico o de fibra de vidrio, abiertos y sombreados donde se mantienen las condiciones sanitarias y de alimentación, hasta alcanzar la talla de comercialización o liberación.

b) la edad y etapa (ej. juveniles adultos) en lo que los especimenes son exportados.
Los especimenes son exportados en la fase juvenil, la talla de exportación depende de cual sea su destino, por ejemplo los despachados para el continente asiático por lo general requieren de menor talla, que aquellos despachados para los Estados Unidos de América, donde legalmente se requiere que los especimenes posean talla mínima de 10 centímetros, la cual se alcanza casi al año.

c) los medios, si los hay, mediante los cuales los especimenes son marcados.
Los especimenes exportados de las especies *Podocnemis unifilis*, *Podocnemis vogli*, *Podocnemis erythrocephala* no son marcados debido a su condición de juvenil y que los medios de marcado tradicional causan muescas en sus placas, la cual ocasiona perdida de la estética y desfavorece el mercado.

3. Beneficios:

a) si la cría en granjas prevee incentivos para la conservación de la poblaciones silvestre o de su habitat, dando ejemplos (si los hay).
La instalación y funcionamiento de zoocriaderos o granjas de cría de fauna silvestre en Venezuela, requiere de una serie de permisiones. El ente emisor de permisos no tiene establecido incentivos económicos ni fiscales. Por disposición de la Ley de Timbre Fiscal se contempla el cobro de Tasas, sin exoneración alguna hasta el momento para la actividad de zoocría de las especies *Podocnemis unifilis*, *Podocnemis vogli* y *Podocnemis erythrocephala.*
Es una necesidad para los operadores de zoocriaderos conservar las poblaciones de las especies con las cuales trabajan, al igual que los habitat, en los sitios donde realizan las colectas, esta forma de operar favorece la sustentabilidad de las especies en el espacio-tiempo, y garantiza la valoración de las especies para los lugareños.

b) si las operaciones de cría en granja liberan ejemplares al ambiente silvestres (en cuyo caso por favor indique el número o proporción en relación al número de especimenes cautivo, y si las directrices sobre translocación de la IUCN son utilizadas) o si usa otro método para incrementar la población silvestre:
En la autorización de funcionamiento de los zoocriaderos que tienen a *Podocnemis unifilis*, *Podocnemis vogli* y *Podocnemis erythrocephala* como especies objeto, la Autoridad Ambiental Nacional, establece con carácter de obligatoriedad la liberación de entre 10y 15% de los neonatos nacidos sanos, cuya liberación al medio silvestre se debe realizar a una talla que favorezca su supervivencia.

La translocación de las especies *Podocnemis unifilis*, *Podocnemis vogli* y *Podocnemis erythrocephala* que se realiza en Venezuela, corresponde a la clase denominada reforzamiento según la definición IUCN (año 1987) debido a que son poblaciones sometidas a aprovechamiento, lo cual contempla liberaciones para compensar la extracción que se hace en fase de huevos. Para ello las liberaciones se realizan en la misma área de extracción donde la especie sigue estando presente, sin problemas de sensibilidad poblacional.
Los ejemplares liberados corresponde a la misma variedad genética sin selección endogámica, por lo cual no se interfiere con los procesos de selección natural.
Por lo antes señalado, se cumple con las directrices de la UICN sobre translocación de organismo.

b) si el cambio o crianza en granja ha producido alguna dificultad para la gestión del comercio o para la conservación.
Desde el inicio de los programas de cría de las especies *Podocnemis unifilis*, *Podocnemis vogli* y *Podocnemis erythrocephala*, la actividad se ha realizado bajo la modalidad de "ranching". No se ha presentado dificultades en la gestión de comercio o para la conservación.

c) su punto de vista en general sobre la cría en granjas y su definición en CITES
Se considera la cría en granja como medida favorable para la conservación ex situ e in situ, ya que permite mantener un pool genético en confinamiento, investigar sobre aspectos biológicos y zootécnicos de las especies, disminuir la presión de caza sobre las poblaciones silvestres, reforzar las poblaciones silvestre a través de las liberaciones y generar recursos económicos para la población.
En relación a la definición de cría en granja establecida por CITES, cuyo significado es la "cría en un medio controlado de especimenes capturados en el medio silvestre", esto concuerda claramente con lo realizado por los zoocriaderos de Venezuela, que operan bajo la modalidad de "ranching", donde los especimenes son colectados en la fase de huevo, a diferencia de lo que se hace en otros países, donde se capturan los ejemplares en fase de neonatos.