

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



Sixteenth meeting of the Conference of the Parties
Bangkok (Thailand), 3-14 March 2013

RESPONSE FROM COLOMBIA TO COMMENTS
ON AMENDMENT PROPOSAL COP16 PROP.23 (*CROCODYLUS ACUTUS*)

The attached document has been submitted by Colombia* in response to comments on amendment proposal CoP16 Prop. 23. (*Crocodylus acutus*).

* *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.*

***Crocodylus acutus* [American crocodile]- To transfer the population of Cispatá Bay, Municipality of San Antero, Department of Córdoba, Republic of Colombia, from Appendix I to Appendix II.**

This informative document is presented by the Government of Colombia in response to observations made by other parties, international organizations and the CITES Secretariat [Document No. 77].

1. INTRODUCTION

The CITES Secretariat, the European Union [EU], the Crocodile Specialist Group (CSG), the Species Survival Network-SSN - Traffic and some countries in the region have been asking about aspects which turn out to coincide, and therefore in this section will be a comprehensive and synoptic review: individual replies were sent for individual concerns expressed of each. Many of the comments to the proposal were related to the situation of the population, aspects of trade, and beneficiaries; but above all, they referred to control, and the interpretation of criteria for amending Appendices I and II. Five situations should be noted here:

[1] This is a special case, since it is a population in recovery, and with research and follow-up data for some 10 years. The other populations in this country will continue to be in Appendix I.

[2] The Form (Conf, 9.24 Rev. COP 15) used to present the proposal is very synoptic, and does not allow issues which require an explanation and complex scientific analysis to be broached. This in part explains the deficiency in the information, although there is a technical support document for the proposal with rather more extensive information, available for consultation.

[3] Since in the first instance this is a matter of a project for recovery and conservation, the proposal did not at this point request exploitation and therefore, did not include aspects of production, commercialization and control.

[4] If a community has for some years been producing more than 1,000 *C. acutus* a year, and has released more than 3,500 and holds some 3,000 more for release, it is difficult to think that this is a process of a disappearing species.

[5] Although there is technical information to support the sustainable use of the population through the ranching of eggs and raising them in community breeding facilities, it was decided that a prudent time should be made available to consolidate better infrastructure for *ex situ* management in the commercial phase, and to consolidate community training processes in matters of exports, management, uses and commerce in *c. acutus* products and by-products. The possible investment which the Government might make in this phase of the project is conditional on the results of COP 16.

In a general sense, it is important to clarify that the proposal presented does not provide for an immediate commercial request, and the information presented in this

document seeks to complement information gaps in the proposal. Further, there are some arguments in clarification, which might provide replies to matters implicit in the concerns which the proposal has raised.

2. GENERAL INFORMATION AND BACKGROUND TO THE PROJECT

- This is a pilot conservation project for the species, and has been an institutional model in its development and implementation. It is a project which has always had the participation of poor fishing communities in Cispatá Bay, committed to the generation of ecological, social and economic benefits for their families and the region.
- In order to consolidate sustainable use, it is important to develop infrastructure so that the communities can use it in a possible future commercial stage of the project; and this requires an investment which cannot be made because there is no viability for sustainable use. In general terms, Appendix I does not allow for commerce, while Appendix II does so. At the level of Colombia's national legislation, there might be investment for community infrastructure should there be a decision which in the future would allow commercial exploitation of the species.
- The historical intervention in ecosystems, high human density and traditional production systems linked to the country's development are the causes for the high level of fragmentation, and the reduction of natural habitats for this species; and this would be the reason why there could be no direct and continuous commercial exploitation of these animals, except under ecosystem schemes for recovery and management, such as those in this proposal, and through the participation of local communities and egg-ranching, this could generate economic incentives and ecological and social benefits, once the recovery and stabilization of the population has been secured.
- In Colombia, in the last 50 years or so, the species was declared in danger of extinction as a result of the international trade in skins which lasted for several decades, and which almost led to the disappearance of the species from Colombia. Since that time, commercial interest in the species has been lost, and along with social and economic development of the last few decades, most of the habitat was transformed, and the few remaining populations or individuals had almost disappeared. In a national census of Crocodylidae in Colombia made between 1994 and 1997, six individuals of *C. acutus* were found in the mangroves of Cispatá Bay, and in general in Colombia there were 70 widely-scattered sites across the country which had animals of populations of not more than 11 individuals [1-11]. There were fewer than 250 mature individuals in total [Rodríguez ed. 2002].

- Therefore, there are no wild populations that could support a market for exports. It would not be possible to obtain 200 skins from a natural medium for the international market, which demands homogeneity of size, high quality, and production flow. In Cispatá Bay, it has been shown that an annual production of more than 1000 newborn animals, can be obtained from egg-ranching, and it is hoped that this amount could be increased, as part of the recovery of the population.
- Today, the best conservation strategy is based on the recovery of wild populations and in community action to generate or increase appreciation for the species, and to forge benefits and develop the poor communities which characterize Colombia, and in particular, this zone of the Colombian Caribbean.
- The social and economic conditions of the community are precarious, and therefore the basic needs of the mangrove community of the region remain unsatisfied. However, the social structure of the community shows a high degree of solidarity, and strong organization among its members, along with the interest which they show for sustainable development and community work. Health, education, housing, unemployment and lack of opportunity are all negative factors affecting the population. It is in this regard that one of the most serious structural problems exists, since there are no appropriate installations or sufficient personnel - or indeed, effective or efficient policies or development plans. In the specific area of the mangroves, while there are six population centers which have a direct relationship with the mangroves – Caño Lobo, Cispatá, Amaya, Caño Mocho, Sicará and Caño Grande - and there is a community of some 600 who live in the population center San Antero, who move out every day to the mangroves to engage in all types of extractive use, whether in forestry or in hydrobiological activities.
- The only recovered population in Colombia is that which lives naturally in the mangroves of Cispatá Bay, and this is the only population that could support egg-ranching, combined with breeding in community facilities, as a model of exploitation. This strategy would be accompanied by ongoing monitoring of the wild population, and its reproductive capacity, as part of the safeguards which would make the project viable.
- The mangrove ecosystem and the crocodylidae species in Colombia are State resources, and there is *in situ* research in these ecosystems and *ex situ* research [incubation breeding] at CIMACI Marine Research Center in the Amaya rural district, and by the Colombian government,
- The mangrove area of Cispatá Bay is part of a protection area regulated by Colombian law as an Integrated Management District for natural resources- (DMI) similar to Category VI of IUCN] [Article 310 of Legislative Decree 2811/1974 and Law 23/1973].

3. BENEFITS OF THE PROPOSAL

Approval of Proposal 23 would make the conservation activities in train in the mangroves more dynamic and allow them to continue, having involved the species since the year 2000. Initially, research into characterization and diagnosis, and subsequently since 2003, with an experimental management program, with the participation of the community group of hunters who formerly exploited this crocodile population illegally, and are today legally organized into ASOCAIMAN.

Community groups have worked for about 10 years, and have centered part of their hopes in life on the continuity of the project, since in addition to the use of the species, they work to incorporate education, ecotourism, research and other productive projects all together. All this, around a comprehensive conservation programme for the mangroves and crocodiles of Cispatá Bay. The commercial viability, which they so much desire, so that they will be able to take comprehensive advantage of the species in the future, is one of the greatest expectations of that community, since in the years of joint training and work, they define themselves as defenders of *C. acutus*, and the example to follow for other communities which also have expectations replicating this experience in their regions.

For the last nine years, members of ASOCAIMAN have, in educational and work in education and dissemination, attended to more than 10,000 tourists and students each year, from all levels of society and all parts of the country, including visitors from abroad. They act as guides and demonstrators of the project, giving technical explanations as to how the crocodiles are bred, and what the conservation project consists of. They also describe their activities as illegal hunters in the past, and complement their talks by referring to the importance of the mangrove ecosystem and in general, to the biodiversity of Cispatá Bay.

Benefits are widespread, and of great local, regional and national importance, since project has advanced harmoniously by strengthening in parallel and in synchronization, a range of sectors of actors in society: mayors, educational institutions, community associations, and private enterprise; and decision-makers in various components involved in the intervention, and through the implementation, for a long time - today marks 10 years of continuous work - of the following strategies as a guarantee of the preparation of actors in the process of sustainability of the intervention:

- Creation and strengthening of the community association for the conservation of *C. acutus*, formed by the former hunters now members of ASOCAIMAN.
- Implementation of strategies in accordance with public policy for biodiversity and ecosystems, environmental education, conservation of mangrove ecosystems, community participation, ecotourism, gender and economic solidarity.

- Control and follow-up, with the participation of the National Police, Harbourmasters, the Prosecution Service, the Agrarian Inspection Service and environmental inspectors, at local, regional and national levels.
- Community participation: 15 community associations involved in the implementation of the comprehensive mangrove management plan.
- Communication and dissemination. Local, regional and national communicators.
- Implementation of research plans with universities and research institutes. The Universidad de los Andes School of Economics adds dynamism to the consolidation of knowledge on community-use goods, based on the installation of economic experiments for the assignment of value to natural resources.

In particular, the proposal for community ecotourism in the context of the conservation project has been recognized at national level as an innovative proposal, articulating science, and including technological developments in communications for social development [III Encounter of Community Tourism, Velez, Santander 2012, Ministry of Industry, Trade and Tourism].

The outreach of the process of implementation has been an overwhelming indicator of actions which imply [1] options for sustainable development for the communities;

[2] income for the conservation of the resource, [3] generation of opportunities for alliances between conservation and the commercial sector, [4] promotion of environmental awareness and [5] the assignment of economic value to protected areas.

These results define the positive aspects of the methodological system designed and led by ASOCAIMAN, whose implementation considers the articulation of the following:

1. Territories with processes of environmental regulation in progress, such as Cispatá Bay, which has installed a conservation strategy for mangrove woodland, and provides technical information about the area for the ecotourism project. This includes natural, social and cultural characterization [essential to the design of tourist products], and at the same time provides regulatory frameworks which add dynamism to the accompaniment of local and regional agencies [regional environmental authorities, Departmental governors, mayors, SENA, etc.], and naturally, provide guarantees of sustainability for ecotourism proposals.
2. The methodology and process of implementation with local communities has articulated defined strategies in the context of the following public policies [1] environmental education, [2] biodiversity and [3] protected areas, with an emphasis on the installation of participation and environmental education observatories in each case [support from the Ministry of Education].

3. The conservation projects for threatened species are the centerpiece of action for community ecotourism.
4. The methodology and the process of implementation with local communities has used the Integral Valuation Method tools for ecosystems, based on environmental economic sciences [with support from Universidad de los Andes and Universidad Externado de Colombia].
5. Specific formation and training in the matter [support from SENA, Department of Cordoba]
6. Implementers and leaders of the process, with experience in the use and handling of community use resources and community participation [Corporación Autónoma Regional de los Valle del Sinú y San Jorge – CVS].

In this vein, the intervention in the crocodile conservation project in Cispatá Bay articulates processes of land-use organization by adding thrust to conservation actions for the species under threat of extinction, based on the drive which the sustainable use and management of wild populations gives to the socioeconomic development of a fishing community.

4. AREA OF DISTRIBUTION OF THE POPULATION OBJECT OF THE PROPOSAL

In geographical terms, the distribution of the population of *c. acutus* in the proposal is demarcated by the area declared as protected in the category "Integrated Natural Resources Management District – DMI- of the mangroves in Cispatá Bay".

These ecosystems have been the object of processes of organization by the environmental authority [CVS], all being zoned, and some with management plans in implementation. This situation can to some extent secure the ecological stability of the region and the permanence of these ecosystems, and their functions and attributes.

1. The DMI is the category protected area which has a total area of some 28,000 ha [280 km²], in northern Colombia.
2. Out of this area, 11,513 ha [115 km²] corresponds to the Cispatá Bay mangroves, or the habitat of the crocodile population, and of these, 12.5% [1,436 ha or 40 km²] are identified as creeks and bodies of water.
3. Although crocodiles are in the mangroves of Cispatá Bay, in practical and administrative terms the crocodile population should refer to the protected area declared as "DMI", since in the last four years the DMI comprehensive management plan has been implemented by the competent environmental authority.
4. The specific management of the crocodile population is pursued within this legal framework, and it is probable that in the immediate future, once the

amendment is passed, the egg-ranching may be integrated by the community.

In geographical terms, the population is separated by man-made processes, since the DMI of the Cispatá Bay mangroves could be considered as an oasis of natural life, being surrounded by human productive activities, characterized by cattle ranging and several kinds of crop-farming. Indeed, the presence of this population and its recovery is a surprising fact, and internationally recognized.

5. SIZE OF THE POPULATION AND CITES.

With regard to the size of the population, it is estimated that the population of *C. acutus* in Cispatá Bay could be between 1000-4000 individuals, if it is considered that the visible fraction would represent 5-20% of the total population, as some crocodile specialists have proposed; and in the proposal, it should be clear that in crocodiles, as in other wildlife, a count will be far from the truth of real numbers, but to the extent that the visible fraction increases, it is to be assumed that there is a real and proportional increase in the wild population.

Therefore, and under these conditions, in which the follow-up has been permanent, it is most important to place a value on the structure of the visible fraction and trends, which also show recovery. Some of the limitations in producing values close to reality are due to the complexity of the habitat, and the difficulty in counting crocodiles, especially the smaller ones, which usually camouflage themselves in the vegetation, and in shadow wetlands, which is where it is not easy to gain access to count them.

If the definitions of Annex 5 [Conf. 24 Rev. COP 15] are accepted, it is very difficult to be certain of the small population of crocodiles, although the fact that more than 1000 of them a year are being obtained from egg-ranching, and the reproduction and population parameters have been improving since the beginning of the project, this might suggest that there is a viable population which could be used through adaptive management. Nonetheless, it should be noted that the production projections have been tested, and that the intention is not to provide skins for international trade, but to leave only a small quota exclusively obtained from the egg harvest and subsequent incubation and breeding in community breeding facilities. But it should be made clear that the direct use of the animals of the population established for the obtaining skins has never been part of the intention.

6. ANNEX I, BIOLOGICAL CRITERIA, AND APPENDIX 1

With regard to Annex I, we provide an answer to the European Union's question below - How does Colombia show that the population does not now meet the criteria for inclusion in Appendix I? It should be noted that the request for the amendment is exclusively for the population of *C. acutus* in Cispatá Bay, since that is different from the populations in the rest of the country, which should continue to be in Appendix I, since the status and process of deterioration is evident, and in

many cases, is worsening.

Supported by Resolution. 9.24, and interpreting Rev. Cop15 [i], only the populations of Appendix I, which have data or information available to show that they do not meet the criteria of Annex I, can be amended and transferred to Appendix II. In this sense, the Cispatá Bay population has been the object of a conservation project with community participation, and has technical information with some 10 years uninterrupted monitoring, indicating stability and recovery of the population.

The analysis of Annex I.C to interpret the exclusion of the Cispatá population is based on criteria [ii], which are contrary to the current situation.

PAST SITUATION AND JUSTIFICATION FOR APPENDIX I	CURRENT SITUATION AFTER 10 YEARS RESEARCH
C. Accentuated reduction of size in the population in natural surroundings. Observation of six individuals in 1994, this could be a an underestimate	c. Increased population. Visible fraction of 231 individuals established in 2012, which could corresponds to 1000-4000 individuals
ii deduced or foreseen	ii. Proved, deduced or foreseen
Reduction in the surface of the habitat. In the past [up to 1990]. Mangroves were the object of use and destruction. A reduction in the quality of the habitat. Change of use of the mangrove, and and therefore loss.	The mangrove habitat of one of the ecosystems with the highest degree of management in Colombia, with a national conservation program and regulatory rules for conservation. Equally, since it has been declared protected area, its stability and quality are in constant improvement
Historically, commercial exploitation. Establishment of groups of specialized hunters in the exploitation of eggs and animals up to 2003.	The commercial use of wild populations is taking the band has been totally bound for the last 50 years, but today, conditions allow a model of egg-ranching, and breeding in the in facilities, after 10 years of recovery of the population
High vulnerability, either due to intrinsic or extrinsic factors	Stability of the habitat, improvement of population structure, increased density, improvement of coexistence with the communities, permits environmental control, management plans with conservationist principles being implemented.
Reduction in recruitment	Increased recruitment as a result of releases, noting that in 2012, there were the first three recruitments of egg-bearing females seven years of age, and four years after being released

The other Sections A and B of Annex 1 of Conf., 9.24 Rev COP 15 are more complex in their relationship, since they are based on two conditions which, applied to the national and transactional context, make analysis difficult, because the species is widely distributed and populations are very scattered, and indeed, they form several geographically isolated subpopulations. Nonetheless, when adjusting the analysis with reference to these sections of Annex 1, in Cispatá Bay, some of the criteria also justify the transfer to Appendix II of this population, since they are contrary to inclusion. There may be a structural weakness by considering the exacerbation of the natural phenomena and specifically, the increase in sea levels, which may affect mangroves significantly, and cause local disappearances or migrations of crocodiles which live there, amongst other components of biodiversity.

In relation to Annex 4, Section 2, we should mention that the idea is that with the observations on the proposal, there should be compliance with precautionary measures, and that these will be consolidated in COP 17, when the management model is presented, and the procedure for exploitation is argued.

7. COMMERCE AND CONTROL

Although on several occasions it has been mentioned that for the time being there is no request for any trade or quotas for exploitation, this issue will definitely be broached when the amendment proposed is passed, and a proposal will be made for approval by the parties in COP 17, for a program for use and exploitation, and a procedure for commercialization.

Nonetheless, we should mention some of one of the replies to the questions of the parties in the region, which would also serve to introduce some of the matters projected for the immediate future, and give more context to the proposal.

The community group is comprised of persons with the minimum level of schooling and indeed, they are illiterate, and will find it difficult to understand issues of international trade, such as those which are proposed for the final consolidation of the project. Nonetheless, the Colombian State would be interested in looking for advisory services on the point, and in training community groups in mechanisms for obtaining commercial products and by-products from these animals. That is, once the animal is inside Appendix II, its commercial uses, in addition to being of specific benefit to the communities, must also be subject to socialized and concerted schemes with those communities, such that the definitive management plan will describe them. There are two points which must be made clear on this in this matter:

A] The commercial part will contain local actions in terms of training for obtaining high-quality products and by-products, and management action for commercial advisory services, calling on international experts [e.g., CSG], and the experience and knowledge of local people engaged in this activity.

[B] The notes, recommendations and safeguards will be built into the Colombian regulations, provided that they do not go against the rule of law, and are in accordance with the principles of international policies and accords. Likewise, it must be clear that there should be no international concern at the exploitation of wild populations, since it has been shown that these do not exist, and that the small group detected does not permit any commercial activity.

With regard to control, a reply was given to several concerns expressed on the point.

1. What control mechanisms are proposed to guarantee that they are not going to “launder” individuals from other locations?

The fact that the project is and will always be under the control of Colombia's environmental institutions, and that it involves the local communities of fishermen and in general, hundreds of mangrove users in Cispatá Bay, will make it extremely difficult to mount any fraudulent operation. If the question is dimensioned into its real scenarios, skin-laundering through the project could be considered totally impossible for the following reasons:

In Colombia, there are no wild populations which could be commercially exploited, even once. In the national census of crocodiles in Colombia, six individuals were counted in the members of Cispatá Bay, and in general in Colombia there were 70 sites scattered across the country with populations of not more than 11 in number [1-11]. There were fewer than 250 mature individuals in the whole country [Rodriguez ed. 2002].

For skin-laundering, a number of government institutions would have to agree with each other, including the CITES and the communities, since the interests of this project are of national importance, and do not relate to any private situations.

The international market for crocodile-skins in general contains figures for hundreds or thousands of units, of homogeneous size, special quality, and constant flow. Therefore, the animals will have to be bred in captivity, or there must be very large wild populations to provide some stable form of trade.

The introduction of contraband skins into Colombia to be laundered in the project is something which would not be expected, and it would need a source of supply in other countries, and a very complex network of traffickers.

In Colombia, there are six commercial breeding facilities authorized by CITES which have a closed cycle to produce this species. For more than 25 years, these establishments have been structuring themselves and today some of them export skins of *c.acutus*, whose genetic origin corresponds to a maximum of 10 specimens authorized for development. As one of the recent control measures,

these breeding facilities have a legal obligation to map the DNA of the parent population, as part of the genetic tracking required to control each of the breeding facilities. In other words, with this analysis, it could be established whether a skin is or is not from one of those breeding facilities.

With high levels of investment in the breeding facilities, and with CITES export permits, it is not consistent - and would indeed be nonsense - to think that these skins would be transferred to a community project in Cispatá Bay to be laundered, when they can be sold directly.

Despite the foregoing, and adding that Colombia has regulations to govern the movement of fauna or their parts, the permanent marking of animals and skins, through the amputation of the verticils of the caudal peduncle or scar buttons generated immediately by eclusion, seems to be the most practical mechanism for identification and control. This has been done in Cispatá Bay since the beginning of the project [10 years ago] as a mechanism for identification and research, but it could act as a control as well. It is also effective and economical for community projects. It is also proposed that the DNA of the population be mapped, this could supply another mechanism of control and be a deterrent to potential traffickers or fraudulent operators in the future.

2. What are the problems today which could impede implementation of this project?

There is an institutional interest in the consolidation of the sustainable use of the population of *C. acutus* by the community; but this requires that at this stage, there be an investment in infrastructure so that the communities can reach a commercial stage and use appropriate logistics. At the same time, training is required for the handling of export products, and the management of marketing strategies. All of this could be made viable with the change of Appendix.

Therefore, if the change is rejected, this would delay the project, and would entail the latent danger that the community would become discouraged, and, when it sees or feels no economic benefits for the conservation of *C. acutus*, it would go back to its practice of extermination, on grounds that the animals are dangerous, or due to the competition for resources, or for survival.

3. What are the best and most practical methods to be used by inspectors responsible for verifying goods, in order to identify individuals, parts and by-products, specific to this locality?

With genetically-characterized populations, a DNA analysis could be used to dispel doubts. Nonetheless, the scar button due to amputation of scales, recommended by CSG, is a practical measure for use. The identification code which should be mandatory and supported by regulations, should indicate and allow differentiation of the individual, that is, year and individual number. For the case of byproducts and derivatives, there would have to be innovation with codes which refer to the

animals and to the scale design, which in qualitative and quantitative terms could mark individual differences.

4. What is the process for marking, control and internal transport and export of specimens captured under the program proposed?

Although this should be the object of a more judicious analysis when trade becomes consolidated, and commercialization permits are obtained in 17COP [2015], for the time being, the marking of skins with a scar button and the seals would be the most practical markings. Internal transport would be effected with the accompaniment of State institutions. We note that only animals obtained in community breeding facilities would be commercialized, based on egg-ranching, and no animals would be captured, since the programme does not provide for the hunting of wild animals.

5. What type of seals would be used? What institution would supply them?

In Colombia, for the last 20 years, Babilla [*caiman crocodiles fuscus*] skins have been exported, and different types of seals have been used. At the appropriate time, a system would be legally adopted, and adjusted if necessary. In general, these seals are made by private enterprise. The government and the communities would have to buy them.

6. What is the capacity of institutions for management? Do the institutions have technical training to analyze the data for exploitation for effective control?

During almost 11 years of the project, and with the coordination of two expert biologists in this area, for some years, we have been able to train a community group in five scientific techniques for the standardized management of the project. The Alexander von Humboldt Research Institute, the CITES scientific authority and co-author of this proposal would be involved in the technical decisions and follow-up of the project, and in the evaluations.

7. FUTURE PLANS IN THE CONTEXT OF CITES AND THE NATIONAL LEGISLATION.

- The national and local environmental authorities will review and make sustainable use of the population viable for the local communities to use, since at the moment, the law allows it but the law has not been regulated. With viability, or the change of Appendix, adjustments and relevant additions could be made, and regulations structured to form part of the specific management plan, to be presented to the CITES Fauna Committee.
- A petition will be sent to CITES for the project to be engaged as a pilot experience in the context of the CITES Working Group, and MEANS OF SUBSISTENCE for the poor.

- It is expected that COP 17 [2015], when the project has been shown to be commercially viable, would present and support this scheme for the management of the population, in which the model for use and exploitation would be established, along with actions of management, supervision and control by the Colombian Government. All of this, in the context of three documents for organization and planning: the National Plan for the Conservation of the Species in Colombian territory, and the specific management plan for the population of *C.acutus* in the DMI in Cispatá Bay, and the integral management plan for mangroves in the DMI.
- Individual markings of newborn crocodiles will continue, as obtained from harvesting or egg-ranching, through the method of amputation of the verticils of the caudal scales, to indicate the number of the animal and the year of production.