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

NOTIFICATION TO THE PARTIES

No. 2016/053 Geneva, 23 August 2016

CONCERNING:

COLOMBIA

Trade of *Caiman crocodilus fuscus* skins

This notification is published at the request of Colombia in relation to their declaration regarding trade of *Caiman crocodilus fuscus* skins, which was noted by the 66th meeting of the Standing Committee.

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Map 1. Areas of study on ***Caiman Crocodilus fuscus*** in Colombia

The range by size category of specimens captured indicated a clear absence of Class IV specimens, and those in Class III were absent or poorly represented. These classes consist of breeding males (Class IV), adult females and juvenile males (Class III). This size-based class structure in the areas studied, with the exception of the Guajira Basin, indicated that populations had been subjected to improper harvesting, which resulted in a population imbalance (Rodríguez, 2000).

2.2 Between 2003 and 2004, Fundación BIODIVERSA and the *Corporación Autónoma Regional del Canal del Dique* [Autonomous Regional Corporation of the Dique Canal] (CARDIQUE) (regional environmental authority) carried out "**Development of a project to determine the relationship between conservation and use of the species *Caiman crocodilus fuscus* by closed-cycle breeding facilities and communities to develop a mixed production system in the Dique Canal ecoregion**. Work was done with the community on various aspects, such as nest collection, incubation, raising hatchlings, etc. and social and economic components were studied, with the following results:

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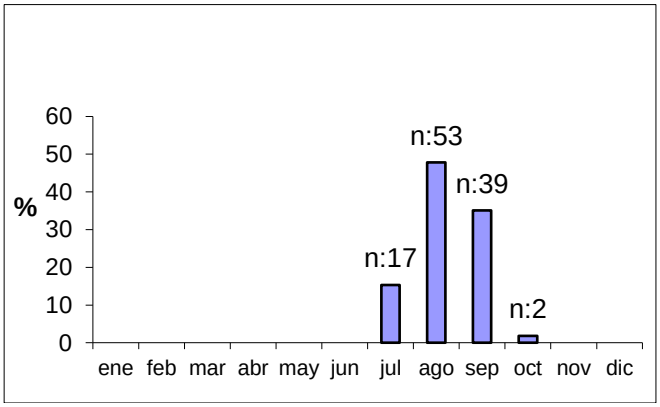
- nests were located, categorized and collected for comparison by two different leadership groups: one consisting of technicians who were project leaders and the other a group of hunters trained previously in collection

- transportation was carried out at 31 sites, where 242 nests were identified, of which the following percentages regarding condition were obtained: good nests 45.87% (qty: 111), nest plundered by man 21.07% (qty: 51), old nest 14.88% (qty: 36), nest where hatching had occurred 9.92% (qty: 24), nest abandoned by female 6.61% (qty: 16), flooded nest 0.83% (qty: 2), nest destroyed by predators 0.83% (qty: 2); nearby, 13 egg shells were found, which had possibly been eaten by the *Lobo pollero* [Gold Tegu] (***Tupinambis nigropunctatus***).

At the Dique Canal, the babilla's egg-laying season is between June and September. Pregnant females were observed in February – March, which were probably part of the group of specimens leading the laying season; the most eggs were laid in June – September and, by the months of October – November, fresh nests appeared in isolation. (Fig. 1).

Fig. 1. Percentage of babilla (*Caiman crocodilus fuscus*) nests collected by month in the Dique Canal areas (2003 Dique Canal)



In marshes associated with the Dique Canal, the babilla (***Caiman crocodilus fuscus***) laid between 2 and 41 eggs, with an average of 23.68 eggs per clutch. However, the most common range was 22-26, followed by 17-21 (Fig. 2).

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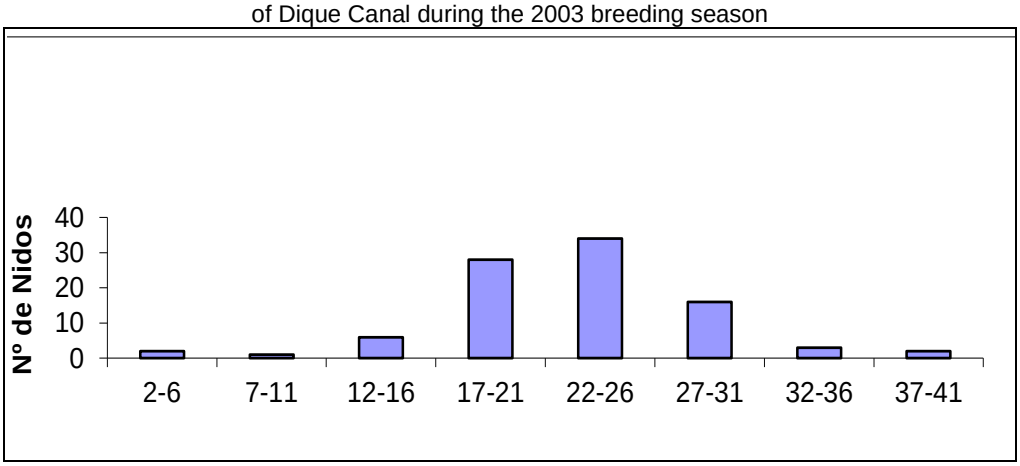
Fig 2. Number of eggs per clutch (n=92) of *Caiman crocodilus fuscus* found in the ecoregion of Dique Canal during the 2003 breeding season



Clutches taken to the incubator were managed by a family group consisting of two women selected by a competition. The mortality rate for incubated eggs obtained by the biologists was lower (65.95%) (qty: 1358) than that of the hunters collaborating in egg collection (75.45%) (qty: 372) who had previously trained in techniques for collecting and transporting the clutches. Hunters became involved two months after the group of biologists began collecting eggs; therefore, they had fewer clutches. The total number of hatchlings born and marked was 815, to which were added 727 hatchlings that were also marked and formed part of the project because some hunters voluntarily gave them to the project after learning later about the programme. However, they reported the sites where the hatchlings were collected, which were captured near the nest where the hatching had taken place (Table 1).

Table 1. Data on clutches collected by biologists and hunters, managed in the incubator during the nest collection phase for the Dique Canal area in 2003.

	No. of Nests	**No. of Eggs**	**No. of Infertile Eggs**	**No. of Dead Eggs**	**% of Dead Eggs**	**No. of Hatchlings**	**% of Hatchlings**	**No. of Dead Hatchlings**	**% Hatchling Mortality**
Biologists	90	2099	40	1358	65.95	701	34.02	50	7.13
Hunters	21	493	7	372	75.45	114	26.0	10	8.77
Total	**111**	**2592**	**47**	**1730**	**66.74**	**815**	**60.02**	**60**	**15.9**

By 2003, the babilla's status in the Dique Canal areas suggested that breeding specimens were in Classes II and III (90 cm to 130 cm), taking the place of larger specimens due, among other reasons, to the reduced food supply for those with larger biomasses (specimens larger than 150 cm), together with the accelerated destruction of habitat and pressure from hunting throughout this area.

The project concludes, stating that, based on Law 611 of 2000, the industrial breeding facilities in Colombia may be supplemented by a system of community participation based on sustainable use. This would begin after the third year of releases, where it is possible to record eggs laid by released specimens. By this time, mothers from the communities raising the babillas in their yards would obtain a marketing permit from the environmental authority with a green stamp that would identify the source of the specimens.

Based on this system, the greatest beneficiary would be the wetlands because strong arguments for their conservation would be made, since part of the economy of the communities in the Dique region and associated wetlands would depend on their well-being. Likewise, the babilla would serve as a flagship species because, through its conservation, other wetland species would be protected that also form part of the regional economy,

such as the *icotea* [Colombian slider], the *tortuga* [turtle], the iguana, the *ponche* [capybara], the duck and other species that identify the wetlands as an ecosystem.

2.3 In July 2004 and April 2005, Agudelo and Vergara (2005), carried out degree work on the **Status of the population of babilla (Caiman crocodilus fuscus) and some aspects related to the ecology of the species north of the reservoir El Guájaro, La Peña – Arroyo de Piedra, department of Atlántico, Colombia**. A total of 333 specimens were seen 29.5 km from the sampling line over a period of eight (8) months, with the babilla population estimated at 160 (±50) specimens with an absolute density of 5.42 specimens/kilometre for the entire area with densities estimated per visit ranging between 11.8 specimens/kilometre and 0.75 specimens/kilometre. The population structure was primarily represented by specimens from Class II at 47.61% (50- 100 cm) with few specimens from the actively breeding Classes III at 30.32% (101-150 cm) and IV at 6.92% (<151 cm).

The number of *Caiman crocodilus fuscus* specimens estimated based on the means of observation used for the counts in this research (160 ± 50 specimens) was very similar to the mean (140 specimens) of the counts made by Rodríguez (2000b) for the entire Dique Canal area during the 1994-1997 period.

2.4 In 2006, Balaguera-Reina and González conducted the study **Population structure, abundance, range and use of habitat of *Caiman crocodilus fuscus* in the Isla de Salamanca Park, Colombian Caribbean**, which is considered to be an important area for this species in Colombia, supported by the Special Administrative Unit of the System of National Natural Parks of the Ministry of Environment and Sustainable Development and the breeding facility Reptiles de Bolívar Ltda. A total of 82 specimens in 12 marshes and three streams were recorded, with 119.02 km covered per monthly sampling with an average observation of 21.50 ± 7.12 specimens per sampling. The average density was 0.063 ± 0.057 specimens/hectare-l for marshes and 1.37 ± 1.218 specimens/hectare-l for streams. The population structure was 36.59% in Class I, 53.66% in Class II, 8.54% in Class III and 1.22% in Class IV.

The population structure was found to be related to drastic changes caused by the lack of adults, which can affect population growth. Therefore, it can be supposed that, in both marshes and streams, the population may be in imbalance, given the distribution by classes, thereby resembling the assertion made by Ayarsagüena (1983) regarding over-exploited babilla populations in the Venezuelan flood plains.

2.5. In the second half of 2008, the *Corporación Autónoma Regional del Sur de Bolívar* [Autonomous Regional Corporation of the South of Bolívar] (CSB) (regional environmental authority), within the framework of the **ACTION PLAN FOR CONSERVING THE SPECIES BABILLA (*Caiman crocodilus fuscus*)** assessed the B15 Marsh Complex, comprising the Municipalities of Achi, Altos del Rosario, Barranco de Loba, Pinillos, San Martín de Loba and Tiquisio, finding the following:

2.5.1 Abundance index for breeding females in the B15 Complex. The results show that the Chimí Marsh Complex, with an evaluation perimeter of 24.6 km-l, is most important with regard to adult breeding females remaining in the area since it contains 35% of the nesting females reported for the B15 Complex (Table 2); the Vieja Marsh shows similar statistics in terms of the density of females breeding in the area, with 11 specimens, even though it has a smaller perimeter than Chimí, with 12.5 km-l. These wetlands are most directly subjected to the hunting of adult animals, the plunder of babilla eggs by hunters from Barranco de Loba and adjacent areas and the predation of babilla eggs by the *Lobo pollero* [Gold Tegu] (*Tupinambis nigropunctatus*), which makes the babilla more vulnerable to the permanent changes in the area that it can use for nesting as a survival strategy, which in turn reduces their stay in the wetlands.

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Table 2. Total density of nests reported during the study by linear kilometres covered in the five wetland areas studied in the B15 Marsh Complex within the jurisdiction of the CSB.

Marsh complex	Nests reported	km-l covered	No. Nests/k-l covered
Mico Marsh	3	10.9	0.275
La Vieja Marsh	11	12.5	**0.88**
Chimí Marsh	11	24.6	**0.447**
Matatigres Marsh	5	17.3	0.289
Escobillal Marsh	2	23.2	0.086
Total Reported	**32**	**88.5**	**0.361**

It must be noted that the number of mature or laying females may be greater if one considers that the percentage of wetland areas evaluated was not complete, ranging between 29% for the Matatigres Marsh Complex and 100% for the Mico and Vieja Marshes. Moreover, the evaluation was carried out in the middle of the rainy season, when laying decreases and hatching increases, signalling the end of the breeding season for the B15 Complex.

2.5.2 Total number of nests. A total of 44 nests identified in the wetlands were assessed, spanning an area of 88.5 km-l (Table 3), of which 32 are those contributing information about the density by wetlands evaluated, including: good nests (NB) (abbreviations for the phrases in Spanish), nests plundered by man (NS), nests damaged by predators (NP), nests abandoned by the female (NDB), flooded nests (NH), nests under construction (NEC) and nests where hatching has occurred (NE). *Nidos antiguos* [old nests] (NA) do not apply because they do not provide information about the presence of the female babilla during the study year. Nests are categorized as follows:

Table 3. Condition of nests reported in wetlands studied within the B15 Marsh Complex within the jurisdiction of the CSB in 2008.

MARSHES	NB	NA	NS	NP	NDB	NH	NE	NEC	Total
Mico Marsh	1	3	2	0	0	0	0	0	6
Vieja Marsh	1	7	6	4	0	0	0	0	18
Chimí Marsh	7	1	0	2	1	0	0	1	12
Matatigres Marsh	0	1	0	1	0	2	1	1	6
Escobillal Marsh	1	0	0	0	0	0	1	0	2
GRAND TOTAL	**10**	**12**	**8**	**7**	**1**	**2**	**2**	**2**	**44**
PERCENTAGE (%)	**22.72**	**27.27**	**18**	**15.90**	**2.27**	**4.54**	**4.54**	**4.54**	**100**

2.5.3 Estimated density values. Monitoring in four of the selected wetlands (Mico, Vieja, Chimí and Matatigres) indicates partial babilla density values that must be supplemented by monitoring during the dry season (not the rainy season) (Table 4).

These results indicate that the Chimí Marsh Complex was the most important because it indicates greater density (0.253 specimens/kilometre-l) than the other wetlands evaluated, despite the smaller area covered (38.2 km-l) compared to the Matatigres Marsh Complex (59.9 km-l), which has the largest area of all of the marshes evaluated.

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Table 4. Population density of babillas established by nocturnal monitoring at the B15 Marsh Complex within the jurisdiction of the CSB.

Marsh Complex	Density/km-l				Total density /marsh	km-l Covered
	Night 1	Night 2	Night 3	Night 4		
Mico Marsh	0.256	**0.128**	0.128	**0.256**	0.192	7.8
Vieja Marsh	0.137	0.068	0.275		0.16	14.5
Chimí Marsh	0.168	0.336			0.253	11.9
Chimí Marsh			0.874			26.3
Matatigres Marsh	0	0.016	0.016		0.011	59.9
Escubillal Marsh	Monitoring not possible					

To analyse the information obtained from monitoring the babilla population in the wetlands of the B15 Marsh Complex, the Ayarzagüena class system was used, modified by the group of biologists because it did not conform to the biometric characteristics of the subspecies in question. Animals categorized as INDT are those whose size could not be determined (Table 5).

Table 5. Population density of babillas, established by nocturnal monitoring in the B15 Marsh Complex in 2007 - 2008, within the jurisdiction of the CSB.

Marshes	**Mico**		**Vieja**		**Matatigres**		**Chimí**		**Escubillal**	
Evaluation year	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
No. of animals sighted	**Not evaluated**	6	Not evaluated	7	22	2	16	29	5	**Not evaluated**
Density of specimens/ kilometre-l		**0.192**		**0.16**	**0.367**	**0.011**	**0.474**	**0.253**	**0.213**	

2.6 In 2009, with support from the *Corporación Autónoma Regional de Cundinamarca* [Autonomous Regional Corporation of Cundimamarca] (regional environmental authority), the Universidad Nacional de Colombia conducted the project "**Formulation of the conservation plan for the babilla species *Caiman crocodilus fuscus* in the municipalities of Girardot, Nariño, Guataquí, Beltrán, Pulí, San Juan de Rioseco, Guaduas and Puerto Salgar** in the Magdalena River Basin, where 464 babillas were detected throughout all samplings in all areas of the River: 152 in the first sample, 147 in the second and 165 in the third (Table 6).

Table 6. Number of babillas observed by sampling by zone and ecosystem. (Ardila et al, 2009)

ECOSYSTEM	*SAMPLING*	*ZONE*			*TOTAL*
		HIGH	*MIDDLE*	*LOW*	
LENTIC	*1*	*14*	*56*	*29*	*99*
	2	*10*	*38*	*36*	*84*
	3	*14*	*71*	*26*	*111*
	TOTAL	38	165	91	294
LOTIC	1	21	28	4	53
	2	19	42	2	63
	3	9	43	2	54
	TOTAL	49	113	8	170

In the lentic environments to the north, higher values for the density of babillas and amount of forest were recorded than in the south. This tendency is also associated with human activity in these environments (Table 7).

Table 7. Number of specimens observed, visible percentage, estimated population and density of babillas at sites in the Magdalena de Cundinamarca River Valley. (Moreno et al, 2013)

SITE	Specimens observed	Visible percentage (%)	Estimated population (specimens)	Density (specimens/km) or (specimens/hectare)
Chaguaní	23	80.3	28.7	4.3
Cambao	90	65.8	136. 7	9.1
Puerto Salgar	3	38.0	7.9	0.4
Girardot	45	60.5	74.4	3.5
Nariño	5	32.9	15.2	0.9
Lago El Peñón	38	77.1	49.3	1.2
Laguna San Marino	105	65.8	159.6	11.6
Laguna El Cinco	60	43.8	137.0	9.8
Laguna El Coco	65	68.8	94.5	5.7
Laguna Montecristo	25	77.0	32.5	4.9

2.7 In 2010, **in an initial report on some population characteristics of and threats to *Caiman crocodilus* in the middle and low basins of the Atrato River**, with support from the *Corporación Autónoma Regional del Choco* [Autonomous Regional Corporation] (CODECHOCÓ) and Fundación OMACHA, Balaguera-Reina S. A. took 21 nocturnal samplings between November 2007 and February 2008 in bodies of water in 18 sites throughout the middle and lower basin of the Atrato River and its tributaries. A total of 226 sightings were recorded in 15 of the river's 27 tributaries and 20 of the 28 marshes visited throughout the basin. Of the total sightings, 23.8% belonged to Class I (≤ 50 cm), 64.6% to Class II (50,1 – 120 cm), 22.1% to Class III (120.1 – 180 cm) and only 0.004% to Class IV (≥ 180.1 cm). An aggregate distribution was observed throughout the two basins evaluated, the lower of which demonstrated the greatest aggregate representativity. The fishing community living in the basins was recorded to be harvesting the species using hooks and harpoons.

2.8 In July 2001, Sergio Balaguera-Reina (2012) conducted **a socio-cultural and ecological study of the Zapatosa and Costilla Marshes for the *ex-situ* re-introduction of *Caiman crocodilus fuscus***. In the Zapatosa Marsh, 89.34 km were covered, finding 35 specimens, of which 17 were in Class II (48.6%; 51 to 120 cm), 16 in Class I (<50 cm; 45.7%) and two in Class III (121 to 180 cm; 5.7%). Most of the specimens recorded were in floating vegetation (57.1%), followed by zones with submerged vegetation (37.1%) and the water mirror with no surrounding vegetation (5.7%). In an area of 33.35 km in the Costilla Marsh, 81 specimens were observed, of which 41 (50.6%) were in Class II (51 to 120 cm), 32 in Class I (<50 cm; 39.5%), six in Class III (121 to 180 cm; 7.4 %) and two in Class IV (>181 cm; 2.47%). Most of the specimens recorded were in submerged vegetation (48.1%), followed by areas with floating vegetation (30.9%) and the water mirror with no surrounding vegetation (21.0%). A relative abundance ratio of 0.91 specimens/kilometre was recorded for route one, 4.30 specimens/kilometre for route two, 3.68 specimens/kilometre for route three and 1.52 specimens/kilometre for route four, with a total average of 2.60±1.64 specimens/kilometre (Balaguera-Reina, 2012).

2.9 In 2015, the Ministry of Environment and Sustainable Development held a joint meeting with the Universidad Nacional de Colombia, as Scientific Authority, for the **"Evaluation of the demographic and biological parameters of the populations of *Caiman Crocodilus fuscus* subject to management in two zones of the Mompox Depression (municipalities of Magangué and Barranco de Loba) and the Guájaro and Luruaco Marshes (Atlántico)**."

2.9.1 Determining the size variation of the *Caiman crocodilus fuscus* populations suitable for management.

In August, 260 specimens were recorded and, in November, 179. Fifty-nine specimens were captured and marked, of which 2 were recaptured in August and, in November, 58 were captured and 5 were recaptured. The population size estimated in August using the nocturnal count method (Chabreck 1966) showed that the Guájaro Marsh population was the most abundant, followed by the populations of the Matatigres, Ciénaga Grande and Luruaco Marshes. The population size estimated in November using the nocturnal count method was the lowest for all marshes except Luruaco; these numbers showed the population of the Matatigres Marsh to be the most abundant, followed by the populations of the Guájaro and Ciénaga Grande Marshes. Using the capture-mark-recapture method, the population found to have the most specimens was Guájaro, followed by Matatigres and Ciénaga Grande (Table 8).

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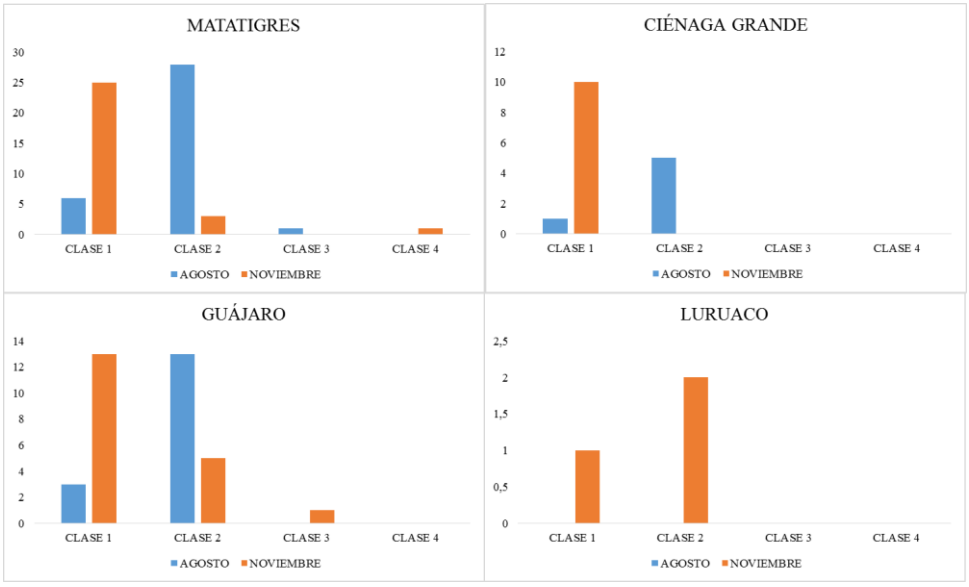
Table 8. Number of *Caiman crocodilus fuscus* specimens observed, marked and recaptured during sampling and estimated population size of each marsh based on the nocturnal count and capture-mark-recapture methods (Ardila-R, 2016).

Marsh	Observed		Captured and marked		Recaptured		Estimated population size		
							Nocturnal counts Estimated No.		Petersen estimated No. (standard error)
Sampling period	**AUG**	**NOV**	**AUG**	**NOV**	**AUG**	**NOV**	**AUG**	**NOV**	**N/A**
Matatigres	148	95	36	29	0	2	108.5	70.9	360 (+/- 171)
Ciénaga Grande	47	43	6	10	0	1	119.9	37.7	66 (+/- 44)
Guájaro	57	33	17	16	2	0	84.9	61.3	289 (+/- 198)
Luruaco	8	8	0	3	0	1	12.1	20.9	-

Captures were less successful in August than in November: Matatigres (0.24 vs. 0.33), Ciénaga Grande (0.13 vs. 0.23), Luruaco (0 vs. 0.37) and Guájaro (0.23 vs. 0.35). These figures show that the methods used did not affect the animals' behaviour. These figures and the animals' decline observed in the samples show that that the populations studied, with the exception of that of Luruaco, decreased in November.

In terms of population structure, based on specimens captured, specimens from all size classes were found in the Matatigres Marsh while only three size classes were found in Guájaro and only two size classes were found in Ciénaga Grande and Luruaco Marshes, (Figure 3). Between August and November, more Class 1 specimens were found in the Matatigres, Ciénaga Grande and Guájaro Marshes while fewer Class 2 specimens were found in the Matatigres and Guájaro Marshes (Figure 3). The sexual ratio for the Matatigres population was 0.7 females per male in August and 0.25 in November; for Ciénaga Grande, it was 0.7 in August and 0.4 in November; for Guájaro, it was 0.6 in August and 1.5 in November. In Luruaco, the sexual ratio was 1:1.

Figure 3. Population structure of ***Caiman crocodilus fuscus*** in marshes studied



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For the Matatigres, Grande and Guájaro Marshes, both abundance and density of specimens indicated a clear pattern of decline between August and November. Although there is evidence of population recruitment, this appears insufficient to replace specimens in some populations because it probably depends on a single class of adults (Class III). The decline in specimens in Class II (> 120 cm) observed in some populations warrants attention, precisely because it is the size most suitable for the region's illegal hide trade. This decline is serious for populations because fewer new adults are replaced to contribute toward recruitment and keep populations healthy.

Having covered 1764 km in 192 hours, this work represents the most intense population sampling of babillas in the country. Therefore, estimated abundance and density closely represent the attributes of the portion of the population observed in the covered areas, but not the attributes of the total population. The density data indicates that the populations studied are very low in abundance and density, much lower than those found in other sites within the species' range (e.g., Balaguera-Reina & González-Maya 2009, Balaguera-Reina *et al*. 2010, Moreno-Arias *et al*. 2013).

2.9.2. Evaluating habitat quality and availability for the breeding of *Caiman crocodilus fuscus.*

Habitat attributes were quantified and evaluated that have been suggested as important elements in activities such as breeding, foraging, thermoregulation and protection from predators (Moreno-Arias *et al.* 2013). In particular, the following were studied: 1) types of plant cover on the marsh banks, 2) structure of the forest covers on the marsh banks and 3) structural elements:

In general terms, the habitat of the marshes studied is in a precarious state of conservation. Most of the marsh banks have been converted to pastureland for livestock, which is currently the predominant cover at all sites studied. Although there are some forest remnants in the Matatigres Marsh that provide the babillas with nest-building materials, most of these sites are far from the water mirror, which has a direct impact on their use by babillas. In the other marshes, although there are brushland formations, these offer nest-building materials of greater quantity, but lower quality than forests (decomposing plant matter and leaf litter), which restricts the babilla's nest-building. In the Ciénaga Grande, Guájaro and Luruaco Marshes, the babilla's breeding habitat has been considerably reduced and restricted to semi-submerged plant formations, which the babillas use as a last resort.

Although the country has not conducted ongoing monitoring of the wild populations of *Caiman crocodilus fuscus* throughout its natural range, the studies conducted since 1990 to the present indicate the presence of wild populations with variable density and age structure. The age structure recorded in the visible portion shows evidence of unbalanced populations, possibly due to the removal of habitat indicated by the absence of specimens of commercial size, which affects population stability and recruitment.

Moreover, there have been some experiments on the ranching strategy with this species, which has made it possible to demonstrate the possibility of improving hatch rates and identify the option of involving local communities in taking hatchlings from wild specimens. However, no further studies have been conducted to develop these processes or their sustainable use as an immediate-term strategy.

- **Perspectives and developments for establishing a ranching programme, beginning with the selected pilot sites**

The robust experimental design established at the start of the project for evaluating the four pilot sites required at least three events for capturing and marking over two seasons. As explained earlier, the third sampling was not possible due to the weather conditions caused by the El Niño phenomenon. Therefore, neither the number of specimens nor the survival rates for the total population of each marsh could be estimated, and it was therefore not possible to estimate the size and dynamic of the populations for the pilot sites.

These attributes for each population are essential in quantitatively evaluating exploitation, whether through calculations for the maximum sustainable harvest or for the elasticity analysis of population projection. However, the high number of babillas captured and marked as well as the systematic and standardized sampling represent the beginning of a serious study of babilla populations in these four zones. Therefore, the Ministry of Environment and Sustainable Development will continue this great effort to obtain the data necessary to make proper decisions for the rational management of this resource.

In this regard, Colombia remains firm in its vision of establishing a combined-use programme for the species based on the captive breeding and farming models, to which end it continues to develop administrative, regulatory and technical aspects to enable implementation of this programme within the framework of CITES and Colombian law. To this end, it is important for Colombia to continue developing the following:

- In 2016, we will continue monitoring the pilot sites initiated by the Universidad Nacional in order to obtain population parameters essential to future inclusion in ranching programmes aimed at the sustainable use of the species, after launching a conservation strategy based on actions to restore populations and their habitat.
- Likewise, we will monitor additional pilot sites to gain more information about the species.
- With support from the Scientific Authorities, as of 2017, we will set up a programme for the ongoing evaluation and monitoring of *Caiman crocodilus fuscus* populations and their habitat throughout the species' range to define population structure and trends and other demographic aspects essential to the species' inclusion in the commercial ranching programme and to set a regional overall quota.
- The Ministry of Environment and Sustainable Development (MADS) is establishing the programme to monitor and control the use of ranching quotas to be applied by regional environmental authorities.
- The MADS is developing the mechanism for the distribution of ranching quotas set for among closed-cycle breeding zoos.
- As a means of efficiently monitoring the production capacity of captive breeding farms of *Caiman crocodilus*, the CITES Management Authority, the CITES Scientific Authorities, the *Autoridad Nacional de Licencias Ambientales* [National Authority of Environmental Licences] and the union are working together to design a system of criteria and indices that will be ready for implementation by the end of 2016, based on the following criteria: 1. status of closed-cycle farming activity, 2. status of the management of impacts associated with closed-cycle farming activity, 3. status of actions involving compensation for conservation by the breeding facility.
- The MADS is developing and will have ready by the end of 2016 a system for the civilian population and communities to participate as part of the post-conflict process. Establishing the ranching programme seeks to involve the local population as active parties in the use and conservation of the species in order to enhance their livelihoods.
- The MADS will order, based on supporting studies, the lifting of the ban mentioned in Article 221 of Decree 1608 of 1978 "Governing the National Code on Renewable Natural Resources and Environmental Protection" and Law 23 of 1973 "Granting special authority to the President of Colombia to issue the Code on Renewable Natural Resources and Environmental Protection and establishing other provisions" concerning wildlife, with regard to commercial hunting and the closed season for wildlife in order to apply ranching quotas for *Caiman crocodilus fuscus*.
- Colombia, with support from the CITES Secretariat, will define the code of origin that will be used in exporting specimens from Colombia's mixed-cycle programme.
- The MADS is establishing instruments for paying compensation for the use of wild populations through ranching quotas, whose funds, together with those from the compensation obligations of closed-cycle breeding zoos within the framework of Law 611 of 2000, are a financial contribution towards work to evaluate, monitor and conserve wild populations of *Caiman crocodilus fuscus.*
- Colombia will continue working towards preventing the illegal trade of *Caiman crocodilus fuscus* specimens by controlling and monitoring both closed-cycle farms and exports at ports of embarkation.

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POINT 3. By 31 May 2016, Colombia will set the relevant export quota based on a non-detriment finding (NDF) for farm-raised specimens from the pilot sites described in Recommendation 2

Demographic data for the four pilot sites compiled to date do not provide sufficient input to make inferences about the potential commercial exploitation of the babilla populations studied.

Data compiled during the study indicated that, in a four-month period, populations at the four pilot sites had low densities with signs of recruitment, but a low rate of replacement and low abundance of breeding specimens. The demographic characteristics, together with the current state of the marsh habitat and the presence of threats, such as improper fishing practices, illegal trade, the building of infrastructure and changes in land use mean that these populations are vulnerable to local extinction.

The current state of these populations at the four pilot sites warrants urgent action for their recovery and they are not suited, at least in the short term, to ranching or direct exploitation for commercial purposes. Therefore, no harvesting quota is recommended, by stage or sex. Consequently, a zero export quota is set for the four pilot sites, and we recommend implementation of a ranching programme for conservation, which must be defined with the assistance of the CITES Scientific Authorities of Colombia.

After monitoring the nine additional pilot sites, we hope to have sufficient information to prepare the NDF and, if possible, to set an export quota. The time estimated for this work is 12 to 18 months, subject to available resources.

POINT 4. Colombia will establish and implement a marking system for farm-raised specimens to differentiate between farm-raised and captive-bred specimens

Currently, the specimens reared in Colombia's captive breeding programme involving *Caiman crocodilus* are traced within the framework of *Resolution 0923 of 29 May 2007, which amended* Resolution 1172 of 7 October 2004 "Establishing the National System for the Identification and Registration of Wildlife under *Ex Situ* conditions", which establishes the marking of the verticils of *Caiman crocodilus* by making a clean, straight, deep cut at the single verticil or scale number ten (10), limited by the borders of scales 9 (anterior) and 11 (posterior), in a straight line and at approximately 90º degrees between the adjacent scales, in order to avoid partial scale regrowth. The scale must be completely removed, leaving a flat, semi-pyramid-shaped base so that the extraction is done from the base, intersecting the muscle.

Likewise, when the commercial ranching quotas are set, a resolution will be issued for wild and farm-raised specimens of *Caiman crocodilus* to establish marking by cutting the verticil of a single caudal scale other than that established for specimens produced by captive breeding, which may be scale 8 or scale 12.

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