

## **Crocodile Specialist Group Steering Committee Meeting**

(Varadero, Cuba; 15-16 January 2000)

The meeting opened at 2:00 pm attended by 21 Committee members: H. Messel, P. Ross, O. Menghi, S. Broad, V. Lance, D. Ashley, F. Huchzermeyer, J. Thorbjarnanson, G. Webb, H. Jenkins, J. Hutton, R. Fergusson, K. van Jaarsveldt, M. Rodriguez, P. Stobbs, A. Woodward, A. Larriera, A. Velasco, W. King, C.H. Koh, and 21 observers.: S. Mainka, E. Fernandez, T. Dacey, N. Shimaoka, N. Ishii, M. Muniz, B. Figueroa, L. Sigler, M. Lopez, A. Alba, P. Guemene, A. Britton, J.J. Perez, A. Matsuda, R. Soberon, R. Riena, Z. Campos, F. Buitago, R. de Sola, G. Villaroel, N. Mrosovsky.

**Financial Report.** P. Ross. Revenue of \$78,038 and expenses of \$54,240 were reported for 1999. A cash flow crisis in early 1999 caused by a deficit in donations was avoided by reducing expenses. A special appeal for donations has stabilized the current balance. A request was made by S. Broad and P. Stobbs for standard accounting in 'accrual' format to clarify financial obligations.

Distribution of donations by region and the possibility of raising funds for projects were discussed. A revised budget estimate for 2000 was distributed indicating anticipated expenses of \$90,864 and donations required in 2000 of \$70,712.

**SSC Red List Criteria Revisions.** The recent revision process for the IUCN Red List Criteria was summarized. There was general dissatisfaction with revisions that make the Red Listing process more complex and bureaucratic without addressing the real problem. Many difficulties result from the requirement for one-size-fits-all and replacement of dialogue on status with a rigid formulaic approach. Suggestions made by the Committee were:

- Separate criteria for rare and common species (Stobbs).
- Separate criteria for different kinds of organisms (Ross).
- Need for 'reality check' of criteria conclusions (Webb).

Sue Mainka of IUCN defended the process as transparent, quantitative and objective, noting the proposed review of controversial listings and establishment of 'Red List Authority' within SG's. Concerns were expressed about IUCN credibility if the process is not clear. No conclusion or actions were proposed.

**Veterinary Group.** Fritz Huchzermayer reviewed activities coordinating veterinary interests in CSG with the goal of facilitating exchange of ideas. Some practical difficulties were experienced keeping in contact with all the CSG vets but some exchange has occurred, resulting in a rich veterinary session at the 15th Meeting. Fritz was congratulated on efforts to date, and when responding positively to a request from the

Chairman to continue his efforts, was encouraged to do so. In additional comments the Steering Committee recommended integration of wildlife aspects and interaction with other veterinary interests in SSC such as the Veterinary SG and Conservation Breeding SG.

Adam Britton reported on his web page at <http://crocodilian.com/crocfaq.html> that contains crocodilian husbandry information coordinated with Fritz.

**Meso-American Organization.** The item was deferred and continued the following day. Alvaro Velasco introduced Fabio Buitrago of Nicaragua who described the formation and activities of AMICRO, a new grouping of crocodilian investigators in Central America. Fabio was congratulated by Professor Messel and strongly encouraged to continue activities in conjunction with CSG. Prof. Messel proposed that when AMICRO felt confidently organized he would invite an AMICRO Representative to join the Steering Committee.

**Panama** - Obdulio Menghi described recent contact with the Panamanian government which wished to conduct caiman surveys. A proposal for a survey in the Darien was recently reviewed by the CSG Executive Officer.

**Latin American Report.** Alejandro presented a report prepared by Brazilian CSG members summarizing crocodilian status in Brazil (see page 8). He also presented Volume 2 of Conservation and Management of Caimans and Crocodiles of Latin America, with 13 new papers from the region that is in press and expected mid 2000 ([see page 23](#)).

Recent meetings and contacts with Peru and Paraguay were reported in the last Newsletter. New contacts with field researchers in Uruguay were reported. Current status of the Argentina ranching program was detailed. The project produced its first skins in 1999 and is continuing activity and success. The initial production of 400 - 2000 skins in 1999-2001 will be used domestically. A brochure on sustainable use/conservation aspects of the program for attachment to products was presented. A new ranching program in the state of Chaco has been approved and is underway. Representatives of this program are attending the CSG meeting. Obdulio Menghi noted that the 'qualification rules' for accepting new ranching programs in Argentina were first articulated in the CITES App II down listing for Argentina. They are now codified as a ministerial resolution to allow national implementation and requiring review by the CSG and approval by the CITES Standing Committee to add additional programs.

Proposal for Sustainable Use of black caiman in Mamiarua Biosphere Reserve, Brazil. John Thorbjarnarson described the project to allow legal and controlled use of black caiman in the reserve by 'caboclo' local communities. Project planning continues and CSG members reviewed the proposal prepared by Ronis da Silveira but implementation will require change in Brazilian wildlife protection laws. CSG will continue to monitor, advise and support.

Current problems in Venezuela caiman harvest program. Alvaro Velasco and Roldan de Sola described the current cycle of economic events leading to reduced harvest of caiman in Venezuela. Low prices, low demand and increasing government taxes makes harvesting caiman skins unprofitable and so landowner applicants to the harvest program are greatly reduced. As a result only 10,000 skins were harvested in 1999. The caiman resource remains abundant with a potential sustainable annual harvest estimated at 80,000 skins. Reduced license revenues are affecting the management program.

Jon Hutton drew attention to a linguistic confusion between 'quota' and 'harvest' that confused overseas authorities. The estimate of the potential sustainable harvest of caiman from Venezuela remains 60,000 - 80,000 / year but the actual harvest, driven by demand for hunting licenses, is only 10,000 and there is no imposed 'quota'.

**Summary of crocodile conservation issues and progress in Africa since the 14th CSG meeting.** Reported by Richard Ferguson

Egypt. The request to CSG for assistance with surveying the *C. niloticus* population of Aswan dam arose about 2 years ago - help was offered but there has been no further communication. Reports from fisheries scientists from Zimbabwe who have been in the area in the last 2 years indicate that the population density is probably similar to that found in Lake Kariba, Zimbabwe. It is apparently a highly productive lake with large fish populations and there are increasing reports of conflict between crocodiles and fishermen.

Sudan. Despite the interest by the Sudanese government in a national crocodile survey reported at the Singapore meeting there has been no response to the letter from the Chairman of CSG or to 3 letters sent by the VC (Africa). Presumably this is because the bulk of the crocodile population is in the south. Richard will continue to make contact with the Wildlife authorities - next attempt at COP11 in Nairobi. At the same time it may be possible to get an unofficial (i.e. not IUCN or CSG) visit to the south, possibly using the missionary network in existence there.

Ethiopia. We are aware of no new wild surveys. The government farm at Arba Minch is still operating despite having been flooded for several months. Some large skins are now being harvested but their aim is apparently to close the farm down.

Kenya. D. Haller, Executive Officer of newly formed Crocodile Producers Association of Kenya, reported that the Kenya Wildlife Service is still relatively active regarding wild crocodile populations and problem crocodiles. The wild population is increasing in many areas with consequent conflict problems because human populations are also expanding. The major problem area is Lake Turkana, where the shoreline has been divided up into fishing concessions and there has apparently been a deliberate effort to reduce the population from the levels known in the past. It is not clear if the skins of these animals have been entering trade. There are 4 farms remaining and there has been considerable success recently (through a cash incentive) in promoting local custodianship and collection of eggs for the farms, particularly along the Tana river.

Uganda. Some surveys (aerial and spotlight) were carried out with CSG assistance in 1998 but these were beset by logistic problems. These showed that significant populations remain in protected areas and probably in some swamps. A workshop to discuss crocodile management in captivity and in the wild was held in September 1999. This was attended by representatives from the farm, Uganda Wildlife Authority, Makerere University, and other wildlife bodies, with tutors from U.K. The conclusions of the workshop included the need for a survey of the wild population, attending to problem crocodile areas, establishment of a captive breeding stock, defining areas suitable for reintroduction of crocodiles and recommendations regarding health, veterinary management and humane slaughter of the farmed animals.

Rwanda. The Vice Chairman was approached in early 1999 about the prospects for farming crocodiles. He provided basic information and nothing heard since. This group intended to get their adult stock from Uganda.

Tanzania. Another aerial survey of the wild population in protected areas has just been completed, showing a stable population in most areas. Some training and experience in spotlight surveying was also provided to staff of the Wildlife Division. A small area on the lower Rufiji river was surveyed and WD staff were detailed to carry out a survey of Nyumba ya Munga in northern Tanzania, an area in which they have major human / crocodile problems. A single spotlight survey was carried out on the Wami river in late 1999 by the GTZ project in Sadaani Reserve. There are also reports of human / crocodile problems along this river. The density ranged up to 20 animals of all sizes per km, concentrated in the section above the tidal estuary and downstream of human habitation. The CITES proposal from Tanzania is discussed in detail below.

Mozambique is becoming more active following political stability but information is fragmentary. Crocodile populations in the lower Zambezi and in lake Korabassa are thought to be extensive. A total of 350 'problem' animals were removed and their skins exported in 1999 but some had small sizes (20 cm belly width) suggesting this harvest is poorly controlled. Reports of transfer of eggs and hatchlings from lake Korabassa to South African and Zimbabwe farms persist.

In South Africa the small wild populations remain well protected. Live exports of Nile crocodiles to China by one operator have apparently been suspended due to high mortality. Information from other southern African countries remains poor.

Several new information sources for West Africa were reported. In Cameroon and Gabon, Chris Wild of San Diego Zoo is collecting information. An Italian group has made recent reports from Nigeria and Bruce Shwedick and Ekke Waitkuwait recently renewed activities in Cote de Ivoire. These reports all suggest that despite intense pressure from human occupation and the bush meat trade, *Osteoleamus tetraspis*, remains widespread and in many places, common. In contrast, populations of *C. cataphractus* and Nile crocodile are fragmented and small.

**Current issues in Madagascar.** John Hutton reported on a recent inspection visit to assist evaluation of problem farms by CSG members Hutton, Jelden and Jenkins. In December 1999 a proposal was made in the Madagascar Parliamentary Committee to remove protected status of *C. niloticus*, apparently in response to increased reports of human-crocodile conflicts. The Management Authority (Eaux et Forêts) is reluctant. The CITES Animals Committee has responded discouraging removal of protected status. The Management Authority has proposed an alternative request to increase 'nuisance' quota from 200 to 500 hides. This request was seen by the committee as yet another example of the problem of human-crocodile conflicts being manipulated politically to promote increased wild harvests without adequate regulation, and serious misgivings were expressed. After extensive discussion, a working group (Hutton, Jelden, Ferguson, Webb, Velasco) was asked to draft guidelines for wild harvest. The working group later returned the following draft for adoption by the Steering Committee.

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#### BRIEF REPORT FROM A WORKING GROUP TO ADVISE ON THE APPROPRIATE CSG RESPONSE TO PRESSURES FOR NEW HARVEST PROGRAMS BASED ON THE HUNTING OF WILD CROCODILES.

The working group quickly compiled a list of problems which historically have accompanied the harvesting of juveniles, subadult and adult crocodiles directly from the wild. These may broadly be divided into **biological, institutional** and **economic** problems.

#### **Biological**

- Direct off-take from the wild is less precautionary than the collection of eggs / hatchlings for ranching.
- Hard to set biologically meaningful offtake quotas.
- Sustainability can be achieved without a knowledge of absolute numbers through adaptive management, provided appropriate monitoring systems are designed and adhered to.

#### **Institutional**

- Sophisticated systems of control exist in many countries (e.g. USA) but these can never realistically be applied in much of the rest of the world.
- It is commonly the case that, even where monitoring takes place, there is no feedback to the offtake quota.
- While monitoring is fundamental to success, experience has shown that monitoring programs often quickly deteriorate for a range of reasons.
- Where taxes are derived according to the size / value of harvested skins, details of the harvest may be distorted or misrepresented.
- In many developing countries, crocodiles are not seen as a conservation priority, or there may be no mechanism to reinvest funds from the harvest and trade back into management.

- Crocodile/human problems are often highest where crocodile densities are lowest, and commercial hunting does not always solve nuisance crocodile problems.

### **Economic / Commercial**

- Where offtake quotas cannot be achieved in designated areas, it has been known for poaching to take place in protected populations.
- Where wild harvests and ranches / captive breeding co-exist, it is not unusual to see wild skins laundered through the farms.
- It is not uncommon for hunters to accumulate skins only to be told that these are not the size required by the buyer. When combined with inefficient harvesting techniques the number of animals killed may greatly exceed the "quota".
- There is often a high degree of wastage due to inappropriate preservation techniques.

The group recognised that this list can and should be expanded to demonstrate that the CSG appreciates the issues and difficulties involved.

Despite the many problems, the working group recognized that there are many cases where direct harvesting from the wild will be the most appropriate strategy, and that it is likely the next decade will see a rapid evolution of management programs in this direction.

Accordingly the group considered the essential elements for achieving sustainability. It was quickly recognized that habitat, density, sex ratio and country / locality related differences vary enormously, even within any particular species, and therefore the group suggests that the CSG will find it unproductive to focus at too-fine-a-level of resolution. Instead, the group suggests that the CSG should focus on a few simple but fundamental factors which will require tailoring for each situation, as follows:

- Offtake from the wild should be conservative unless comprehensive population data are available.
- There should be an effective ongoing monitoring system with quality control.
- There must be built-in mechanisms to reduce or stop harvesting based on monitoring results or other changed circumstances.

It is strongly recommended that the CSG increase its proficiency and capacity in the area of monitoring, possibly by organizing conceptual and training seminars on this subject (amongst other things) with a view to providing candidate programs with functional monitoring together with the necessary quality control. It is suggested that as various programs for wild harvesting are put forward, the CSG adopt a position as follows:

1. That the CSG insist on adherence to the three points above.
2. That the CSG offer technical cooperation for monitoring and its quality control.
3. That if any particular Party doesn't wish to involve the CSG (through its Chair) in the monitoring and feedback process, and if the Parties to CITES accept proposals

on this basis, then FINE. But - the CSG cannot support programs under these conditions, and indeed may oppose them. Furthermore the CSG will scrutinize Article IV non-detriment findings within CITES, actively opposing harvest programs if data presented or other available information indicates that harvests are unlikely to be sustainable.

Finally, the group suggests that the CSG should find the means to examine as a case study the many harvesting programs that already exist amongst crocodilians in order to identify those factors which have contributed to success or failure.

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Hank Jenkins reported that Animals Committee advice to Madagascar will be that removal of protected status is inappropriate and it would be better to address need for problem control by wild harvest. The following letter was drafted to support the Animals Committee advice.

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Madame Fleurette, Director Generale

Direction Generale des Eaux et Forêts

Ministère des Eaux et Forêts

BP243, 101 Antananarivo

MADAGASCAR

Dear Madame Fleurette:

The Steering Committee of the IUCN/SSC Crocodile Specialist Group was held in Varadero, Cuba, on 15-16 January 2000 immediately prior to the 15th Working Meeting of the Group.

At this meeting, Hank Jenkins reported on discussions with the Ministry of Eaux et Forêts concerning the management and sustainable use of *Crocodylus niloticus* during his recent visit to Madagascar in December 1999. The issues raised by Hank were also reported in correspondence from the Vice-Chair for Africa of the Crocodile Specialist Group. The Steering Committee was advised that there is some political pressure from within the General Assembly of Madagascar to remove legislative protection on crocodiles. This move, we understand, is in direct response to increasing conflict between people and crocodiles that is resulting in unacceptable injury and loss of property, including in some cases, loss of human lives. The IUCN Crocodile Specialist Group is gravely concerned that such an action by the Government of Madagascar would have a profoundly negative affect on the conservation of crocodiles in Madagascar and applauds your efforts to resist such a move in favour of other less drastic management measures.

The management regime for *Crocodylus niloticus* in Madagascar that was accepted by the 10th meeting of the Conference of the Parties enables the CITES Management Authority of Madagascar to authorize the removal each year of a maximum of 200 "nuisance" crocodiles. The removal of "nuisance" crocodiles is a common management strategy employed by many countries that possess a wild crocodile resource. This provides the necessary flexibility to respond to individual cases of crocodile/human interaction or to apply practical management of specific areas in the interests of public safety.

In principle, the Crocodile Specialist Group supports the need for practical management of a species such as *C. niloticus*. In situations where there are increasing interactions between crocodiles and the general public, the most appropriate response by governments is to modify the management program by increasing the number of "nuisance" animals able to be legally removed from the wild population. In this regard, the Crocodile Specialist Group was advised that the Government of Madagascar has advised the CITES Secretariat that the number of "nuisance" crocodiles able to be killed in 2000 under the management program has been increased to 500 animals.

If the skins of the additional crocodiles killed as "nuisance" animals are to be exported, this will effectively mean that the annual export quota of *C. niloticus* for Madagascar that was approved by the 10th meeting of the Conference of the Parties will be similarly increased. In order to allay any concerns that the additional animals are not simply a means of providing additional skins for export, but represent a need for the Management Authority to respond to increasing incidents of interaction between crocodiles and humans, detailed information on the following should be provided to the CITES Secretariat in support of the increase:

- i) frequency, nature and geographic extent of interactions, and
- ii) abundance of crocodiles in the areas of conflict.

The IUCN/SSC Crocodile Specialist Group encourages the Government of Madagascar to continue developing its crocodile management program to ensure that the wild resource is conserved and used on a sustainable basis. To this end the Group remains available to offer, as requested, technical assistance and advice to the Ministère des Eaux et Forêts.

Yours sincerely,

Professor Harry Messel

Chair IUCN/SSC Crocodile Specialist Group

cc. Malan Lindeque, CITES Secretariat

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**S.E. Asia report.** G. Webb presented a summary report from Papua New Guinea, Australia, Cambodia, Burma, Laos, and Sri Lanka, indicating little new information or change in status.

Queensland, Australia developments in crocodile management Tom Dacey. Plans to hold a CSG Regional Meeting in Queensland to promote crocodile management there have not progressed since discussions by the Chairman with Queensland interests in late 1998. The Qld. Dept. of Environment has undergone restructuring that has delayed redrafting of the Qld. Crocodile management Plan. Some field surveys have been completed and a successful 'trial management zone' (a euphemism for a crocodile exclusion zone) has been implemented in an area of high human crocodile conflict. However a reluctance to kill the removed crocodiles has resulted in a bottle neck with the available capacity of commercial farms to accept removed crocodiles exceeded. A CSG meeting would help address these issues and continued contacts with Queensland farmers and government will be pursued.

**China - crisis situation of Chinese alligator:** John Thorbjarnarson. New field work during 1999 revealed serious deterioration of the wild population.

SUMMARY REPORT ON CHINESE ALLIGATOR. John Thorbjarnarson, Wildlife Conservation Society

While there is a large captive population, the Chinese alligator is on the verge of becoming extinct in the wild as a result of the virtually complete loss of natural low-elevation wetlands along the lower Changjiang valley. The current situation for these wild populations can be summarized as follows:

1. Alligators are only known from a small region in southeastern Anhui province, a tiny fraction of its former distribution.
2. While an alligator reserve of 433 km<sup>2</sup> has been declared, it only contains 13 officially designated sites that total 41 ha.
3. None of these sites offers what can be termed natural habitat, but consist of small ponds that are located either within or adjacent to villages, are completely surrounded by rice fields, or are biologically marginal oligotrophic water bodies set in low hills.
4. While considered to be alligator refuges administered by the Anhui Province Forest Department, the ponds remain under the control of the local villages which use them for a variety of activities (crop irrigation, buffalo wallows, fish farms, duck rearing).
5. Alligators are only present at 10 of the 13 designated sites, and the total population of alligators at these sites is estimated to be 60, with the largest groups being 10-11 animals and a maximum of one adult female.
6. Reproduction is only taking place at two of the designated sites, but these eggs are routinely collected and the hatchlings retained in the Anhui alligator breeding center.

7. Alligators are still found in a small number of areas outside the designated sites, including one area where nesting is still taking place, but the situation in these areas is even worse than at the designated sites.
8. The total population of wild Chinese alligators is estimated to be 130-150 and is declining at an annual rate of 4-6%.

The present Chinese conservation program is based on the legal protection of alligators and captive breeding. A successful breeding program has been developed by the Anhui Forestry Bureau, and in excess of 5,000 alligators are currently maintained at its center in the town of Xuancheng. However, while the number of alligators in captive breeding centers in China has boomed, the wild population has continued its steady slide towards extinction. The existing National Chinese Alligator Reserve is inadequate to ensure the long-term survival of alligators at any of the 13 designated sites. The future of wild alligators will hinge on efforts to rehabilitate habitat to create reserves where viable alligator populations can be established by releasing captive-bred individuals. A draft management plan for alligators, which places considerable emphasis on alligators re-introductions, has been developed by the Chinese government. We urge that this plan be refined, incorporating IUCN guidelines for re-introductions, and be undertaken as part of a larger program to conserve wetlands in the lower Changjiang valley.

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Intense concern was expressed by the Steering Committee and many actions were examined to address this emergency situation.

- Continue ecological/habitat studies with local Chinese colleagues.
- Identify sites for potential re-introduction.
- Recognize and implement the existing draft national alligator conservation plan presented to the 14th CSG Working Meeting in 1998.
- Develop value added and sustainable use incentives for protection of the remaining habitats and populations.
- Remove the remaining wild population to captivity in the expectation of later re-introduction (following California Condor, blackfooted ferret and Arabian Oryx models).
- Purchase and protect remaining habitat or new habitat for reintroduction.
- Initiate contacts and discussions at the local and provincial level to discuss locally acceptable options.
- Alert other Specialist Groups and cooperating organizations.
- Work with other conservation organizations already active in China, e.g. WCS, WWF, TRAFFIC.
- Contact a wider suite of wetland and biodiversity interests, e.g. Ramsar, Biodiversity Convention.
- Develop global response from conservation interests similar to Panda and Tiger programs.
- Develop large scale funding through donor organizations such as WWF, GTZ.
- Pursue through CITES Standing Committee to UNEP/UN.

- Initiate highest level diplomatic and political contacts (possibly through IUCN and national diplomatic channels) to contact Chinese national authorities.

From this wide suite of options several important factors emerged. The large captive population of Chinese alligators in China provides some insurance and a time buffer to develop well considered and effective action. While loss of the remaining wild remnant and its highly disturbed habitat would be a setback, the species is unlikely to become extinct if protected habitat and reintroduction measures can be initiated long term. There was a need to approach the problem with great sensitivity to Chinese cultural perspectives and a global public outcry might be counterproductive at this stage.

The problem involves two different lines of approach:

How to best develop Chinese and international support and funding for the necessary action?

What the eventual conservation strategy might be?

While these two questions must be developed simultaneously, the conservation strategy must be developed with funding and Chinese inputs at every level and therefore the immediate need was to activate Chinese and international support. After extensive discussion through the CSG Working meeting the Steering Committee approved the following three pronged approach:

The immediate goal is to hold a meeting with senior Chinese government officials at the Nairobi CITES COP in April from which additional discussion could be developed. To achieve this the Chairman will write to David Brackett Chairman of SSC (attached) alerting him to the situation and requesting his help to pass a letter over the signature of the IUCN Director General to the Chinese Forestry Commission (draft letter attached). These letters were discussed with the Chinese representative of CITES Management Authority present at the CSG Working Meeting. At the same time, CSG Steering Committee members with direct contact in China at the local and ministerial levels would quietly prepare the ground for the acceptance of the DG-IUCN letter. CSG would also continue to support and advise the existing cooperative program between Wildlife Conservation Society, Anhui Forestry Dept. and East China Normal University, working directly on the problem in Anhui province to develop the biological basis for effective conservation. The following letters were approved to initiate this action.

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David Brackett, Chairman SSC

Re. Critical situation of the Chinese Alligator

Dear David:

At the Crocodile Specialist Group Steering Committee Meeting, 15-16 January 2000 we received disturbing new information from China indicating that the conservation status of the Chinese alligator has deteriorated and the species is in imminent danger of extinction in the wild. The CSG assigned an IUCN Red List category of Critically Endangered to this species in 1996 based upon its extremely restricted distribution and small population size. The efforts in China to expand captive breeding of the species were encouraged and the protection of the remaining wild population identified as a priority. Information collected in 1999 by a group of researchers from the Anhui (China) Forest Department, East China Normal University and the Wildlife Conservation Society (US) indicate that the area of occupancy and numbers of the wild population appear to have declined since CSG members last evaluated its status in the field in 1991. A summary report of the current dismal situation is attached. This situation is critical and current efforts to prevent further decline are clearly inadequate.

We are aware of the complexity of conducting conservation efforts in China and also the need for great sensitivity in raising the alarm about this situation. We do not want to alienate the Chinese authorities who must eventually resolve the situation. We need a combination of funding and both short term and long term efforts developed in close consultation with the Chinese authorities. We need your help to develop the necessary levels of concern in China that we hope can lead to a coordinated effort to prevent the loss of this species. The moment is singularly appropriate as the Chinese Year of the Dragon Commences in February 2000. We feel that all conservation interests and the Chinese would be appalled if the last symbolic wild dragons in China disappear during the Year of the Dragon.

Our immediate goal is to convene an informal meeting with Chinese representatives at the 11 COP of CITES in Nairobi. We will also continue to advise the ongoing project conducted by Wildlife Conservation Society and also pursue some leads through direct contact that our members have with Chinese colleagues. Can I ask you to coordinate with me on a direct approach to the appropriate Chinese authorities to begin this process. I have attached a draft letter that we have developed in conjunction with Sue Mainka that we would like you to pass to the Director General of IUCN to assist this process. Can we also ask for your advice and assistance on any other avenues we should pursue. Best wishes.

Sincerely,

Professor Harry Messel, Chairman CSG

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Draft letter for transmittal through Director General IUCN to Chinese Forestry Ministry.

Wang Zhibao

Minister of Forestry

Beijing, China

Dear Minister Wang:

The SSC/IUCN Crocodile Specialist Group (CSG) has recognized that the Chinese alligator is the most critically endangered crocodylian worldwide. Despite the success of Chinese efforts to prevent the killing of alligators and to breed them in captivity, wild alligators face a variety of problems as a result of widespread habitat loss. Today the species has been reduced to a tiny fraction of its former distribution, where it lives in small, artificial ponds in the midst of an agricultural landscape. While the CSG has for some time known that the species faced an uncertain future, recent information presented at the 15th meeting of the CGS held in Cuba from 17-20 January, indicates that the situation is even more critical than previously believed. While a large captive population exists the species appears to be facing certain extinction in the wild unless significant actions are taken soon.

A 1999 survey conducted by the Anhui Province Forestry Department, the East China Normal University, and the Wildlife Conservation Society (US) covered virtually all the known sites where alligators are believed to remain, and estimated the total number of alligators in the wild to be less than 150, and declining at an annual rate of 5%. A National Chinese Alligator Reserve has been established with 13 sites in Anhui Province. However, in reality these areas provide very limited habitat protection and are incapable of supporting viable populations. Today, the largest known groups have only 10 individuals, and a maximum of one adult female.

Nevertheless, there is some cause for hope. A draft management plan has been drawn up by representatives of the Anhui Forestry Department and the CITES Management Authority of China. This plan addresses the need to protect wild populations of Chinese alligators and would include the establishment of new alligator populations using alligators from the Anhui captive breeding center. Chinese alligators have relatively small habitat requirements and it would not be necessary to establish large reserves to support viable populations. However, given the state of wetlands degradation in the lower Chang Jiang valley any efforts to maintain viable alligator populations may, of necessity, involve restoring wetlands systems from areas currently in agricultural production. We realize that efforts to protect and restore wetlands habitat can be costly, and that the Chinese government may require assistance in this matter. In this matter the IUCN is committed to work with the Chinese authorities to seek funding alternatives.

Time is of the essence and decisive actions are needed to avoid this looming conservation disaster. This is a particularly auspicious time, as China enters the year of the Dragon, to save what is a living symbol of the Chinese dragon and the Chinese culture. We hope that you can address this urgent matter, and to this end the IUCN/SSC Crocodile Specialist Group would be happy to work with you towards seeking viable solutions in consultations with the relevant government authorities in the PRC. To further discussions, we would like to suggest the possibility of following up on this matter with the Chinese delegation at the 11th CITES COP in Nairobi in April.

Sincerely,

Director General IUCN

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**West Asia.** Rom Whitaker submitted a copy of the special issue journal 'Envis' recently produced by Wildlife Institute of India. The volume contains updated reports from several Indian CSG members on current crocodylian status and is a useful source for this information. Unfortunately, a feature article by Dr. R. Bustard at the beginning of the volume makes a strong statement against use of crocodylians in India that appears to be unaware of recent developments. Although active in early developments in crocodile conservation in India and Australia, Dr. Bustard has not been associated with crocodylian affairs for nearly two decades and the article reflects this out of date approach. The Steering Committee thought it important that Indian crocodile conservation interests should be made aware of this and the following letter was drafted.

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Mr. S. K. Mukherjee

Wildlife Institute of India and Editor, Envis

Dear Mr. Mukherjee:

At the Crocodile Specialist Group Steering Committee Meeting, 15-16 January 2000 we received a copy of ENVIS, Vol 2., No. 1, June 1999, featuring Indian Crocodylians. This is a marvelous source of current information from Indian authorities and CSG members and very useful update of the Crocodile Strategy produced at the Indian Regional Meeting in Gwalior in 1998. We congratulate you on producing this valuable work.

We have a concern about the article authored by Dr. R. Bustard in which quite strong views opposing any consideration of sustainable use of crocodylians in India are expressed. We of course respect Dr. Bustard's right to express his own opinions. We are also aware of the high regard Dr. Bustard is held among our Indian colleagues due to his early efforts in crocodylian conservation in India 2-3 decades ago. However, we do feel obliged to point out that much has changed both in India and throughout the world over the last two decades of crocodylian conservation. Therefore the views expressed by Dr. Bustard are not in consonance with the general view of most active crocodylian experts today, either within India or elsewhere.

At the CSG Regional Meeting in Gwalior in 1998 this sensitive topic received careful discussion and the formula developed at that meeting by Indian crocodylian biologists reflects a balance of Indian perspectives and the needs to find economic support for crocodylian conservation. The CSG fully supports your policy of very cautious evaluation of both consumptive and non-consumptive sustainable use of crocodylians in India. This perspective is also reflected in several of the papers in the ENVIS volume by currently

active Indian researchers. We are therefore confident that the rather outdated views expressed in one article are not generally representative of the current thinking in India on this topic. We continue to support with great enthusiasm the efforts of our Indian CSG members to develop nationally appropriate methods to conserve crocodylians in India and we are grateful for the sympathetic consideration of their views by your office.

We look forward to continued cooperative interaction. Best wishes.

H. Messel, Chairman CSG

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**North America.** Allan Woodward reported on recent production levels in USA. Total new hatchling production was estimated from egg collection data, captive breeding estimates, and incubation success rates reported for Louisiana and Florida (the two major producers) with a small adjustment made for additional producer states. Approximate live hatchling production was estimated as 360,000 in 1997, 285,000 in 1998 and 325,000 in 1999. About 15% of these are returned to the wild and approximately 75% can be expected to reach markets as skins. In addition, approximately 44,000 wild alligator skins (average length 7 feet) were produced in the US in 1999. Alligator skin prices are demonstrating a very small increase. Don Ashley reported that a Louisiana delegation was working with the US Management Authority to streamline permitting and tagging requirements and redesign the current alligator tag that was damaging skins during tanning. US was also developing a request to CITES to facilitate temporary import and re-export of skins used as trade samples. Expansion of this proposal to include skin pieces and products was recommended by CSG. Some progress in improving accuracy of airport displays in US and Europe was reported. In response to a question, the Executive Officer reported no additional information on new Caiman yacare regulations that were alleged by US Fish and Wildlife Service to be drafted and approved but delayed since mid-1998 in the signature approval process.

Following the meeting a short report was received from Ruth Elsey on significant changes in Louisiana's alligator management program.

Close monitoring and extensive research tracking of alligators released to the wild showed good survival after release, with thousands being recaptured as adults in annual harvests. Louisiana Dept. of Fisheries and Wildlife staff are now developing protocols to require a lower percentage of hatched alligators to be released.

The Louisiana Alligator Marketing Cooperative was formed in 1998. This is a group of landowners working with trappers and processors to improve the quality and value of wild Louisiana alligators. This group handled approximately 7,000 wild skins in 1998 and 8,250 in 1999.

A resolution in the 1999 State Legislature established a seven member Alligator Task Force to examine issues in the industry. After several meetings reviewed data by staff biologists and administrators, the Task Force concluded that the return rate of ranched

alligators to the wild should be reduced from 17% to 14%; a CITES tag fee of \$4.00 should be maintained to fund the alligator program; and support should continue for marketing and promotional efforts in cooperation with the Louisiana Fur and Alligator Council.

An experimental 'bonus tag' program was used in the September 1999 wild harvest. Trappers were issued with 10% more tags than their land would usually qualify for. The bonus tags were to be used on smaller alligators (4'- 5', i.e. up to 180 cm TL) as these occur in higher numbers than the normally targeted 6'-7' (183-213 cm) TL class. Drought conditions in 1998 led to low egg collection, but excellent water levels in 1999 led to one of the highest nesting years on record.

Rockefeller Refuge staff hosted a representative from US Fish and Wildlife Service in September 1999 to review problems with current CITES tag use. Emphasis was again placed on the need for bar codes on CITES tags and Department staff traveled to Washington DC in October to follow up on these issues.

**Science.** Val Lance announced plans for a DNA workshop at San Diego Zoo in 2001 and briefly summarized current DNA work in the US. Dietrich Jelden reported that Mr. Mark Auliya of Bonn Museum, Germany, was starting a DNA examination of relationships of SE Asian crocodiles. Integration and communication between new DNA researchers and the existing well developed network of cooperating DNA researchers was recommended.

Roberto Soberon of Cuba presented a short description of development and plans for the research station at Monte Cabaniguan in eastern Cuba and their desire to establish this station as a research center for *C. acutus*. Several potential sources of funding support for this were suggested, through SSC to IUCN and WWF, direct to the Spanish and Canadian Government and to the European Community. The Chairman then thanked Roberto for his efforts organizing the CSG 15th working Meeting in Cuba.

**Working Group on Market Driven Conservation.** Dietrich Jelden briefly summarized the extensive report produced by this task force that was distributed electronically and by mail to CSG Vice Chairs. Concrete outputs of the Task Force to date were a draft CSG policy on promotion of trade (see page 21 below), a series of action recommendations in the report and a proposal for an analysis of the crocodilian trade by the Organization for Economic Coordination and Development (OECD) in Paris. Additional ideas discussed by the Committee included the need to address the economic disincentives created by stricter domestic measures restricting import of personal effects. The Executive Officer was directed to begin the process of developing a proposal on this issue for transmittal through CITES Animals Committee for the next cycle of CITES resolutions in 2002. Overall, the Task Force considered that the activities required for coherent attention to this issue were more complex and time consuming than previously thought and would require full time qualified professional assistance. The potential of obtaining help from IUCN Economists was proposed. After discussion, Steering Committee members were invited to forward comments, changes and objections to Dietrich by 31 January, after which the report would be taken as accepted and approved.

One item of intense scrutiny by the Task Force was accuracy of trade data. Don Ashley described his recent activities with WCMC to carefully review and correct CITES crocodylian trade statistics. Numerous well recognized sources of error and confusion have been identified including double counting, reporting permits issued not exports, end of year and late report problems. John Caldwell of WCMC had carefully corrected these errors and produced the current IACTS Trade report (included as an annex to the Task Force report) being the most accurate to date. Steven Broad announced that TRAFFIC was starting an illegal reptile trade analysis and would coordinate to provide any croc trade reports.

In discussion of the potential for trade endorsements by CSG, the models adopted by other conservation organizations including WWF and Forest Steward Council were noted. Endorsements at a distance through an independent subsidiary are recommended. The Task Force was asked to continue its work.

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**CITES Issues.** The draft proposal of USA to allow temporary import and re-export of trade samples was discussed. Expansion of this proposal to include small pieces and products was recommended. The prior attempts and failures to address this issue in CITES were noted. The US proposal calls on CITES to examine this issue (Doc 11.52) and the CSG endorses this move and will pursue it at the 11th COP in Nairobi in April.

Tanzania Proposal. The proposal was circulated to most Steering Committee members prior to the meeting and received extensive detailed review. Discussion centered on the effects this proposal would have on subsequent requests to initiate wild harvesting in Africa and elsewhere. The existence of several very well regulated wild harvests was noted (USA, Papua New Guinea, Venezuela) and the economic forces driving these requests recognized. After extensive discussion it was decided that CSG should assist Tanzania set up a model program that could be the precedent and model for subsequent wild harvest proposals. The guidelines developed on this topic (see above) served as the foundation for a detailed set of recommendations to Tanzania reflected in the following letter.

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Mr. E. Severre, The Director of Wildlife

Ministry of Natural Resources and Tourism

Ivory Room, Nyere Rd.

P.O. Box 1994

Dar es Salaam

United Republic of Tanzania

Dear Mr. Severre:

At the Steering Committee Meeting of the Crocodile Specialist Group held 15-16 January 2000 the CSG recognized that there is an increasing trend toward direct wild harvests for crocodiles in many parts of the world. As a result, the CSG reviewed the experiences of its members to give guidance on the conditions under which such wild harvests are most likely to be sustainable. The members of the Group were unanimously of the opinion that wild harvesting presents some problems that require such management strategies to be approached with great caution. The Group went on to develop a general policy on this important matter to give guidance as to the circumstances under which the CSG will be able to offer support to downlisting proposals of this sort.

The CSG has identified the following three considerations to be fundamental to successful harvesting from the wild and will be unable to support proposals where these matters are not fully addressed:

- Offtake from the wild should be conservative unless comprehensive population data are available.
- There should be an effective ongoing monitoring system with quality control.
- There must be built-in feedback mechanisms to reduce or stop harvesting based on monitoring results or other changed circumstances.

We also examined the proposal of Tanzania to downlist its population of *Crocodylus niloticus* to Appendix II under Resolution Conf. 9.24 with these considerations in mind. Your proposal has many positive aspects reflecting the work of your department and, we believe, some inputs from the CSG. After the very long interaction between your department and the CSG on this issue we feel that the document is now approaching a form and substance that the Parties at COP 11 will consider favorably.

To assist your preparations and to enhance the acceptability of the proposal to the Parties, we would like to suggest several areas where clarification or expansion might be helpful. Your proposal is the first submitted for a crocodylian under Res. Conf. 9.24 and also the first wild harvest under CITES proposed in Africa. We therefore expect that the proposal will receive specially stringent scrutiny by the Parties, and possibly by organizations opposed in principle to animal use. For this reason we suggest that presenting the most stringent and precautionary proposal that incorporates our policy above will enhance the probability of approval. The following suggestions are therefore offered in this constructive sense.

REGULATIONS. The draft regulations appearing in the proposal as Appendix 6 are based upon our earlier recommendations and should form the basis of a system of control that is effective and feasible in Tanzania. These regulations should be enacted and implemented so that the proposed mechanisms can be in place to begin harvest. Aware of the continuing tragedy of human mortality by crocodiles we suggest that this should be done as a matter of urgency before the COP and certainly prior to initiation of harvest and export of wild crocodiles.

QUOTA FOR RANCH PRODUCTION. We understand from the proposal that negligible production from ranches in Tanzania has been achieved and none can be expected for at least two or three years. We suggest that Tanzania should itself recommend a self imposed zero quota for ranch products until such time as any ranches come into production. We suggest that such an action would be very reassuring to the Parties, as it would eliminate any possibility of wild harvested skins entering international markets as ranch skins in excess of the wild export quota. At such time as any ranches achieve production a quota for those skins can be instituted to match the demonstrated production.

MONITORING CROCODILE POPULATIONS. A key element in every approved wild harvest system is a program of regular monitoring to ensure that the harvest is not having detrimental effects on populations that we agree should be maintained. Monitoring is also a valuable indication of effectiveness of control programs near human habitation where the approved goal is to reduce, or even eliminate crocodiles that threaten people. In the proposal Tanzania demonstrates its capacity to monitor crocodile populations. We therefore strongly recommend that a regular monitoring program be instituted as an integral part of the wild harvest scheme. We suggest that this should be approached in three parts:

Effective monitoring of the wild harvest noting the exact locality, size and disposition of wild animals killed. This will be valuable both to assess the effectiveness of the program and to estimate the ratio of crocodiles killed to skins exported. As some crocodiles are inevitably killed and not recovered or their skins are unsuitable for export, this ratio is an important management tool. The collection of biological data (e.g. sex) from some of the sample is also valuable.

Continuation of the current regular aerial survey program to maintain comparative data on selected population. It is probably possible to reduce the scope of aerial surveys to a selection of indicator populations to reduce the costs, but continued aerial surveys will be a vital tool for estimating future population trends.

A limited program of spotlight surveys to calibrate the aerial surveys and also provide size class data. We are advised that CSG members Ian Games and Richard Ferguson have initiated training in the survey techniques with your staff and some limited surveys have been conducted and we recommend that this valuable practice continue.

Future harvest levels should be based on the results of this monitoring.

These monitoring activities will involve expenses and we recommend that you establish a mechanism for obtaining the necessary funds directly from the revenues obtained from skin exports. Many countries impose levies or tagging fees for this purpose, often assigning between 5% and 15% of the market value of skins to a special fund to support management activities. We recommend that you institute such a system at the beginning of the program.

Finally, we suggest that the precautionary sections of Res. Conf 9.24 can be satisfied if Tanzania invites an objective external review of the program at appropriate intervals where your harvest and monitoring data can be examined by independent experts who could also provide additional technical advice to the program. The appropriate body through which such review should be requested is the CITES Secretariat and Animals Committee. The CSG remains available to provide technical assistance at your or CITES invitation.

Adoption of these suggestions by Tanzania would further enhance the quality of the proposed program.

Sincerely,

Professor Harry Messel, Chairman CSG

cc. Malan Lindeque, CITES secretariat, Alison Rosser SSC, Robert Jenkins CITES Animals Committee.

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Mexico Proposal. The proposal of Mexico to downlist its population of *C. moreletii* to App II was circulated to many Steering Committee members prior to the meeting. In addition early drafts of this proposal received extensive review and input from the Vice Chair for Latin America and other Spanish speaking members. Great dismay was expressed that the final proposal as submitted to CITES was very different from the drafts upon which we had been commenting. Regrettably, the final submitted proposal omitted information on the status of the species in Mexico or throughout its range, instead presenting detailed data and a proposal for community ranching from a single restricted area. While the meeting was sympathetic to Mexico's development of crocodilian use, it concluded that the submitted proposal failed to meet the standard for information required by a proposal under Res. Conf. 9.24. The continuation of the proposed community egg collection and ranching program and the further development of detailed information and quantitative population surveys at several locations throughout Mexico was encouraged, noting that these can continue in the absence of downlisting. The general policy reflected in the proposal was approved. Development of ranching with community involvement and regular monitoring was seen as a useful direction for the Mexican program. Mexican representatives were urged to withdraw their proposal and a letter expressing these recommendations drafted.

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Director General de Vida Silvestre (INE/SEMARNAP)

Av. Revolucion No. 1425, Col. Tlacopac

Del. Alvaros Obregon, CP 01040

Mexico DF

Dear Sir:

At the Steering Committee Meeting of the Crocodile Specialist Group held 15-16 January 2000 we examined the proposal of Mexico to downlist its population of *Crocodylus moreletii* to Appendix II under Resolution Conf. 9.24 with a limited ranching program in Sian Ka'an. Prior to the meeting the proposal was reviewed by a number of CSG members. As you are aware our recommendation to you after extensive review and discussion was that you should withdraw the proposal and revise and resubmit to a later COP.

We understand that this might be a disappointment to you and we wish to reassure you of our continuing high regard for Mexico's National Program for Crocodilian Management and Conservation and our confidence that *C. moreletii* populations are widespread and in places abundant in Mexico. Unfortunately a proposal under Conf. Res. 9.24 requires you to document the status of the species on a national basis and such information was absent from the final version of the proposal as submitted. It seems unfortunate that the final proposal was modified significantly from earlier drafts that we reviewed and commented upon. We have assisted the development of your proposal for several years and continually advised you that quantitative survey data from several locations in Mexico would be valuable to demonstrate that *C. moreletii* has a wide distribution and abundance that disqualify it from inclusion in Appendix I of the convention. The addition of the published data on the population status in the other two range states, Guatemala and Belize, would further strengthen this conclusion.

We would like to comment favorably on several aspects of your proposal. The data submitted on the status of a small population restricted to a small area of Quintana Roo demonstrate that that population could probably be the basis of a small ranching program based on egg collection. The detailed analysis of that population is also admirable. We particularly encourage you to continue the community development aspect of this program. As the production of skins for the international market will require several years to achieve, we strongly recommend that you continue your development of this project as a pilot ranching program. This can be achieved without a downlisting and including the successful results of a program will enhance future proposals. We are also most favorably impressed with the process developing in Mexico to bring government, private and business interests together to consult on crocodilian management and conservation. We are very confident that this process will lead to a balanced and effective crocodile conservation program. We hope you will join us in viewing the present situation as an opportunity to collect additional data and strengthen your proposal so that its approval at a future CITES COP can be achieved. We certainly intend to continue our assistance at every level to your efforts.

Sincerely,

Professor H. Messel, Chairman CSG

cc. CITES Secretariat

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**Next CSG Meeting.** In the absence of an invitation to hold the 16th Working Meeting, the Chairman proposed the meeting should be held in 2002 in Florida, USA, where logistic complications and costs could be minimized. Subsequent discussion suggested that the CSG Working Meeting could also be used to promote important CSG issues and that currently China and Mexico presented such issues. However, without an invitation the Florida location remains the current candidate. The meeting ended at 1830hrs, 16 January 2000.

A short follow-up meeting of members of the Steering Committee was held 4.30 p.m. - 5.30 p.m. 20 January, 2000, to approve draft letters and the following policy statement (pages 21-22) on market driven conservation.