

## 4. Trade

### 4.1 Jurisdiction Relating to Wildlife and its Exploitation in Togo.

#### Domestic Legislation.

Following independence in 1960, the main laws regulating hunting and the protection of wildlife came into force on the 16<sup>th</sup> of January 1968 with ordinance number 4 which is still in effect. The ordinance categorises wildlife species for different levels of protection and provides for wildlife protection through: nature reserves, faunal reserves and national parks; limitations on hunting; restrictions of hunting techniques; and education. Hunting techniques and a system of hunting permits are further defined and the procedure for prosecutions, fines and punishments is established (see IUCN/GSUDESAO 1999; Anon, 1993).

Protected species are divided among three annexes: Annex 1 - protected species; Annex 2 - predatory species and Annex 3 – small grazers.

Annex 1, listing protected species, is further divided into Classes A and B. Class A includes completely protected animals, whose capture and hunting is completely banned unless on scientific grounds and mainly includes mammals such as elephants and pygmy hippopotami, plus two species of bird. Class B animals are partially protected, and are further split into groups 1 and 2. Group 1 includes mammals and birds that can only be hunted by bearers of trophy hunting permits. Group 2 includes mammals that can only be hunted by bearers of a sport-hunting permit; females are not allowed to be taken.

Annex 2 lists predatory species, the killing of which is normally permitted in inhabited and agricultural areas as part of traditional hunting or self defence, though not in protected areas. This annex includes reptiles such as the three crocodile, two monitor lizard and two python species present in Togo.

Annex 3 lists animals as 'small grazers', which are allowed to be taken for traditional use and by bearers of a hunting permit. This section includes all chelonian species.

These lists were compiled before January 1968, and many of the species listed are have been extirpated from Togo, if they were ever present. Lions, Cheetahs, Chimpanzees and African Wild Dogs are amongst the species no longer encountered and it is evident that full review of both Togo's fauna and species legislation is required.

The two chameleon species that are the subject of this project are not listed in any of the annexes, indicating that there are no specific domestic laws regulating killing or capture of these animals. However, a presidential decree forbids hunting at night, with or without a permit. This should in theory offer some protection to species such as chameleons, which are much easier to find at night by torchlight.

Modification of the Ordinance on the 7<sup>th</sup> of November 1990 lays out prices of hunting permits and taxes on the heads of various animals, together with bag limits. Hunting permits cost from Fcfa 80 000 for commercial, non-resident hunters to Fcfa 20 000 for basic hunting permits for local consumption. The tax per head for individual animals ranges from Fcfa 300 000 for elephant and hippopotamus to Fcfa 2 000 for monkeys, small mammals and birds. The only reptiles listed in this

Table 4.1 CITES Quotas and Recorded Exports from Togo, 1997 – 2000, CITES Authority Togo, 2000.

spp	CITES Quotas and Recorded Exports from Togo, 1997 – 2000, CITES Authority Togo, 2000															
	1997				1998				1999				2000			
	Ranch		Wild		Ranch		Wild		Ranch		Wild		Ranch		Wild	
Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	Quota	Export	
Pr	4000	25810	1500	1500	52500	26030	1452	47500	33236	1500	1350	47500	18825	1500	350	
Ps	1000	810	150	110	2000	65	122	2000	1095	150	70	2000	210	150	15	
Kb	2000	1260	1700	1694	3000	1525	601	3000	2955	700	25	3000	2175	700	100	
Ke	300	290	-	-	1500	85	-	1500	485	-	-	1500	320	-	-	
Kh	100	990	600	600	2000	1130	420	2500	2295	500	405	2500	1560	500	0	
Cs					2000	1960	2900	6000	5485	5000	2937	6000	4055	-	-	
Cg					1000	860	415	2500	1930	500	475	2500	920	500	50	
Gs					500	180	-	500	52	-	-	500	130*	-	-	

Pr = Python regius,

Ps = Python sebae,

Kb = Kinixys belliana nogueyi,

Ke = Kinixys erosa,

Kh = Kinixys homeana,

Cs = Chamaeleo senegalensis,

Cg = Chamaeleo gracilis,

Gs = Geochelone sulcata,

“Quota” is the export quota for that year,

“Export” is the quantity of animals exported for that year\* ,

“Ranch” refers to the quota and export of ranch specimens,

“Wild” refers to the quota and export of wild-caught specimens,

“-” means data not available and/or zero quota,

\* Exports suspended in August 2000,

\*\*Numbers recorded as exported on CITES exports certificates, not taking into account cancelled or unfilled exports (estimated 30 – 50%).

section (listed under mammals), are crocodiles and the African Rock Python *Python sebae*. A tax of Fcfa 50 000 is levied per head of each of these.

Various other taxes for hunting permits are levied in further decrees up to 1984, though these amount to no more than Fcfa 1 000 each.

Punishment for transgression of wildlife laws were listed in decree no. 84-61 of the 23 March 1983, and modified in ordinance No. 84-03 of the 7<sup>th</sup> of February 1984. These punishments start with a fine of Fcfa 500 000 and five years in prison, plus confiscation of the animals concerned as well as any vehicles traps and arms used to capture or kill them. The fine and prison sentences are doubled if the transgression took place in a classified area such as a classified forest, or was at night, or if the original fine was not paid. Fines and sentences are further tripled if the offence was at night and in a national park, faunal reserve or nature reserve.

Following civil unrest in the early 1990's the draconian nature of these punishments may have contributed to a backlash against wildlife authorities. As a form of protest villagers cleared and burned land and killed wild animals beyond those needed for food. As a deterrent against hunting, these laws probably have more effect for larger mammals, and ad hoc interviews suggested that most people are aware of the illegality of hunting mammals without permits. The same cannot be said of reptiles, which are probably regarded with less importance. The reptile hunters interviewed did not have hunting permits.

#### **International Agreements.**

Togo is signatory to several international agreements relating to the environment, such as CITES (ratified in 1978), the African Convention on the Conservation of Nature and Natural Resources (ratified in 1979), the Convention on Biological Diversity (signed in 1992), a convention relating to internationally important wetlands particularly with respect to aquatic birds (RAMSAR?), and an accord on the conservation of migratory aquatic birds of Africa and Eurasia ( Under CMS?). There are no specific domestic laws designed to ensure the implementation of these agreements.

#### **Legislation relating to CITES implementation**

Insofar as the focal species of this project are concerned, CITES is the most relevant and came into force in Togo on the 21<sup>st</sup> of January 1979. Togo participates in Conferences of the Parties (CoPs), and communicates on an annual basis with the CITES Secretariat. However, no formal legislation exists to implement CITES regulations in Togo, and the management of CITES export permits etc is based on an interpretation of the original 16<sup>th</sup> January 1968 ordinance, along with later precisions such as the 4<sup>th</sup> of June 1980 and the 4<sup>th</sup> of September 1984 decrees after the ratification of CITES by Togo, though the latter applies to body parts and trophies only.

## **4.2 Review of DFC Management of the export trade**

The current CITES Management Authority in Togo is the *Direction des Parcs Nationaux, des Reserves de Faune et de Chasse*, i.e. the Department of National Parks, Faunal Reserves and Hunting. This is a department of the *Ministere de l'Environnement et de la Protection Forestiere*, i.e. the Environment and Forestry protection Ministry. The personnel involved in CITES management include:

All of the focal species, be it whole dead animals, skins or bodily parts, have been noted for sale on market stalls in town and village markets, as well as those at the main *Marché des Fetiches* (fetish or voodoo market). Articles for sale on these stalls are used for traditional medicines and animist religious practices.

**Python regius.** This species is subject to a high level of exploitation in Togo according to CITES export figures (see Table 4.1) being exported. This exportation is a mixture of wild-caught, ranches and captive-bred animals. These figures do not directly reflect quantities of animals effectively removed from the wild, however. Many of the juvenile pythons ranches would otherwise have died in the wild due to natural causes such as predation etc., so this serves to reduce the number of animals effectively removed. Many hunters collect gravid females for themselves and then incubate the resulting eggs. Often, however, they are unable to sell these, and the animals are released into the wild. The survival rate of these and animals released by the farms themselves is not determined at present.

As the legal exploitation of this species is great, it can be assumed that the illegal exploitation is also correspondingly high. Seizures and reports of illegal dealing in reptiles usually relate to *Python regius*. Depending upon their ethnic group, many Togolese will eat *Python regius*; this practice seems more predominant with northern ethnic groups, especially Kabyé and Losso. The level of this offtake for food will be difficult to estimate, but is reported by the Director of National Parks and Game to be increasing, with “bars” selling meals containing python, accompanied by traditional beer, becoming more commonplace.

**Python sebae.** This species is now hunted much less for the reptile trade, seemingly due to a drop in demand. Illegal trade has been reported by the Wildlife Department in both live animals and skins, though there is no skin trade on Togo as in other African countries. Leather goods containing the skin of this and other reptile species are usually imported from Niger or Mali.

Most ethnic groups eat this species, and the oil obtained from the fat of the animal is used in traditional medicine. This species’ preference for aquatic habitats suggests that local people might encounter it less often, and thus less often removed opportunistically. Furthermore, its intimidating size and aggressive nature, compared with *Python regius*, means that fewer people would be prepared to try to capture it.

**Kinixys spp.** There is a much lower demand for *Kinixys erosa* and *K. homeana*, compared with *K. belliana nogueyi*. EU trade restrictions on *Kinixys* species, amongst others, and USFWS restrictions on certain tortoise species including *K. belliana* spp., mean that this genus is now exploited very much less in Togo for international trade. Seizures of illegal exports often include *Kinixys* species.

All species appear to be eaten by all ethnic groups questioned and is thus vulnerable to local consumption, being by their nature easy to catch. These animals are routinely collected if encountered in fields and plantations, especially during the dry season, when villagers traditionally clear their field of the dying vegetation to make way for the following season’s crops. Animals caught are either eaten, sold in local markets to be eaten or used for traditional medicine, or sold to an agent of one of the reptile farms or to the capturers linked to one of these farms.

**Chamaeleo spp.** These animals are exported from Togo in great quantities, more so *senegalensis* than *gracilis*. Shipments to Ghana and Benin that are seized at the borders do not generally contain chameleon species; perhaps their delicate nature means that they are less able to survive

the Director; the Chef de Division de la Conservation des Reserves de Faune et de l'Organisation des Activites Synegetiques; the Chef section CITES; 6 personnel stationed at Aflao, the Border control point with Ghana; 3 personnel stationed at Aneho (Hilakondji) the Border control point with Benin; 6 personnel stationed at Lome International Airport; and various other forestry division personnel involved in CITES monitoring in the interior as well as local police and gendarmes.

The following procedures are used to issue CITES export permits:

1. The exporter receives an order for animals.
2. The exporter presents a written demand for an export permit to CITES Management Authority at least 2 weeks before the date of export.
3. The presence and condition of animals in the exporter's quarantine quarters are checked, and quantity of animals to be exported checked against that establishment's remaining share of the quota.
4. The CITES export permit is typed up and a copy given to the exporter on payment of a 1000 Fcfa stamp.
5. The exporter communicates the CITES export permit to the importer.
6. The CITES Management Authority is informed of the date of export.
7. On the day of export, the CITES Management Authority inspects the animal export crates.
8. The export leaves Togo.

Recently, the CITES Management Authority have decided to inspect the animals for which a CITES permit has been requested two weeks before the shipment is due to leave, presumably to ensure that the farm genuinely seeks to export the animals, and not simply to sell the permit.

Of the 12 farms licensed to operate, only four are functioning at the present time. Each of these four must pay an annual capture permit fee of 300 000 Fcfa. (Originally it was Fcfa 500 000, but not all companies were able to pay). In addition, a tax per animal of between 100 and 200 Fcfa is also paid for each export.

According to HODOYALI (1997), there is an additional 5000 Fcfa to be paid for each CITES export permit. This report also mentioned the need for a state veterinarian to provide a certificate of health for each shipment.

Carbon copies of export permits are kept on file and records of numbers of animals by species in each export are kept in a ledger. A further running record of current levels of export for the year in total and by farm are kept in a separate, smaller ledger. Following several changes in the incumbent of the post of CITES Section Head, this latter ledger has been improved and clarified to make information about ongoing levels of export easier to extract.

### **4.3 Level of Trade**

All of the focal species are subject to exploitation, legal and illegal, for domestic and international markets. For legal international trade, see Togo CITES trade figure for last few years for all species (Table 4.1). Many hunters and possibly some the reptile farms sell animals to traders from Ghana and Benin, who then smuggle them across the respective frontiers. Occasionally, such movements are seized by the CITES authorities at the border posts, but unfortunately data from these captures such as frequency of occurrence and numbers of animals seized is never recorded by the Wildlife Department. The current project has produced a one-page form for border authorities to complete whenever a seizure is made, however this has not as yet been implemented.

the road journey. This species has not been reported to be eaten by anybody interviewed. They are difficult to find during the day, and so are less likely to be opportunistically collected. They are, however, extensively used for traditional religious and medicinal practices, with dried specimens being found for sale in most markets.

### Patterns of CITES reported exports of the Focal Species

The net exports of *Python regius* from Togo peaked in the early 1990s and from 1994, the exports reported from Benin increased (Figure ). However by 1998 the net exports from the three major exporters, Togo, Ghana and Benin were all decreasing, at the time of the trade reviews undertaken by CITES and the European Commission

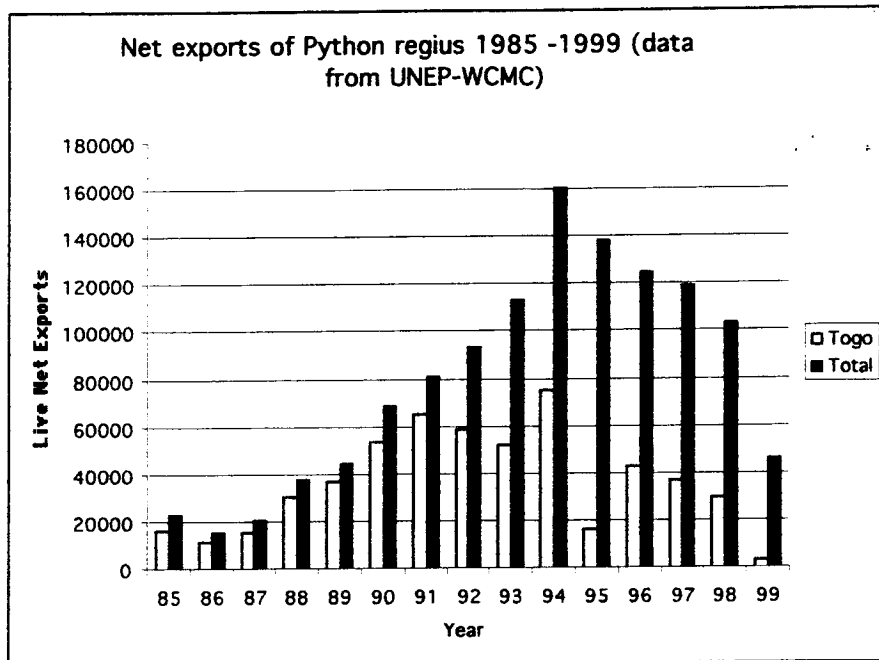


Figure - Comparisons of Net Exports of *Python regius* from the major exporting countries .

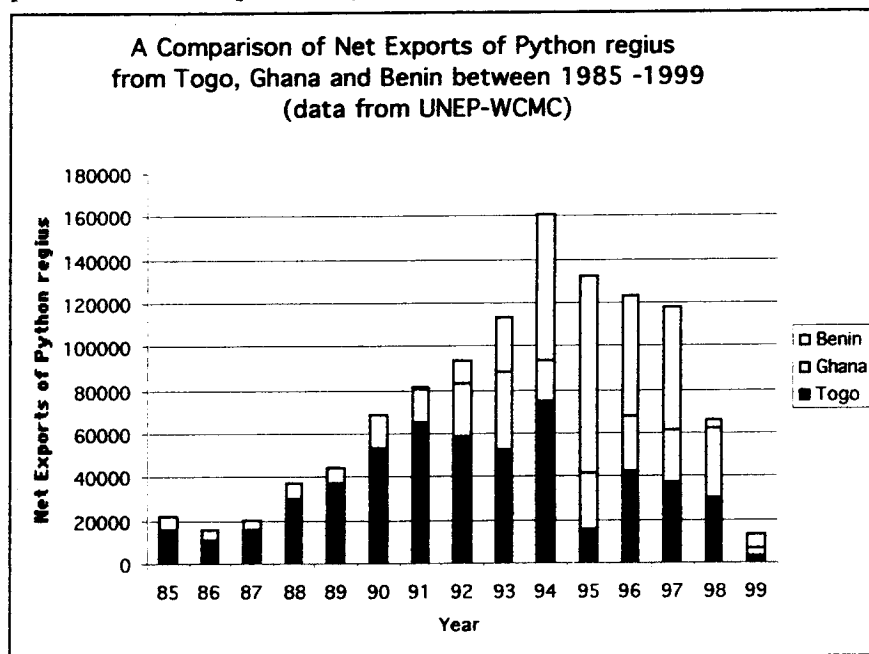
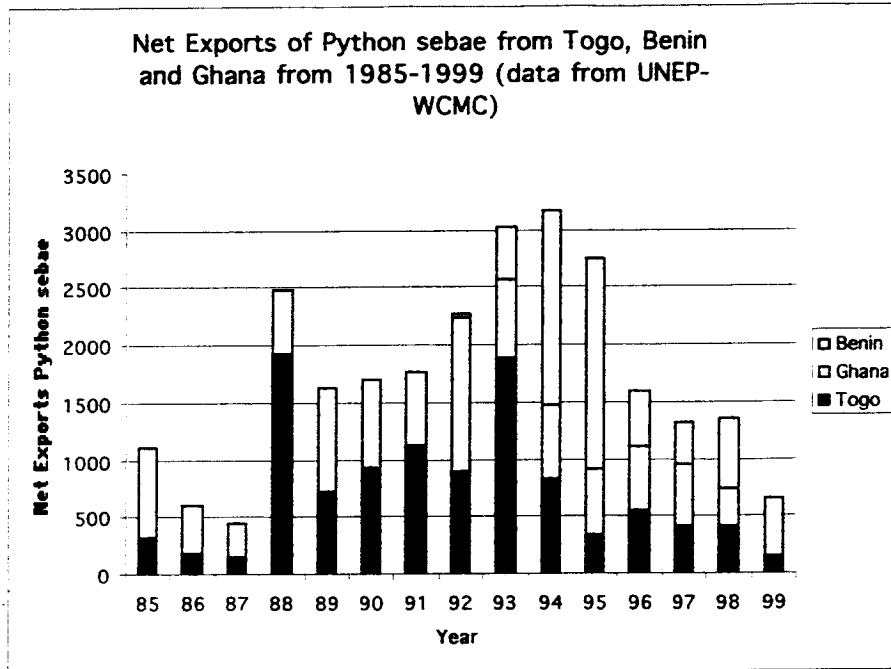
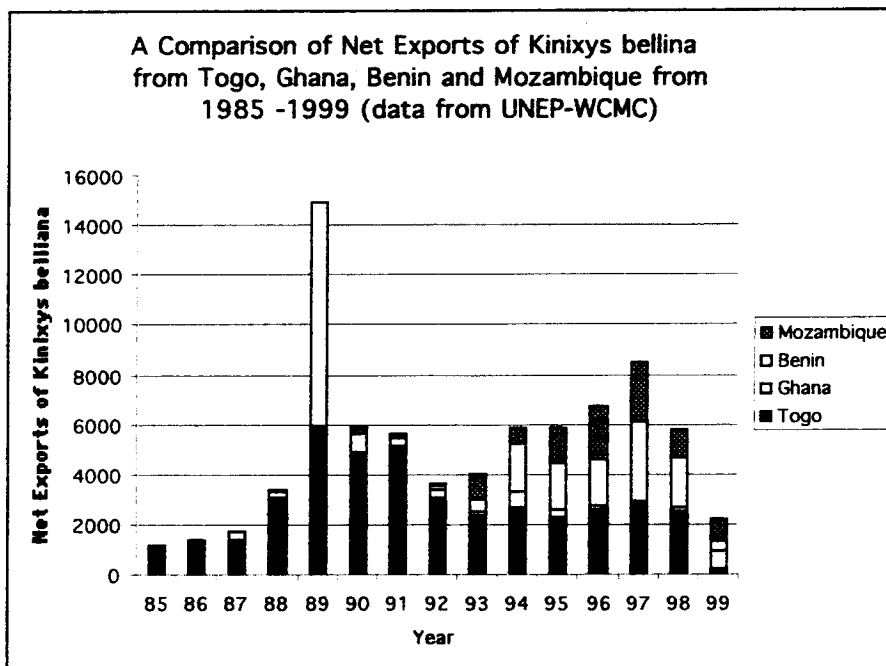
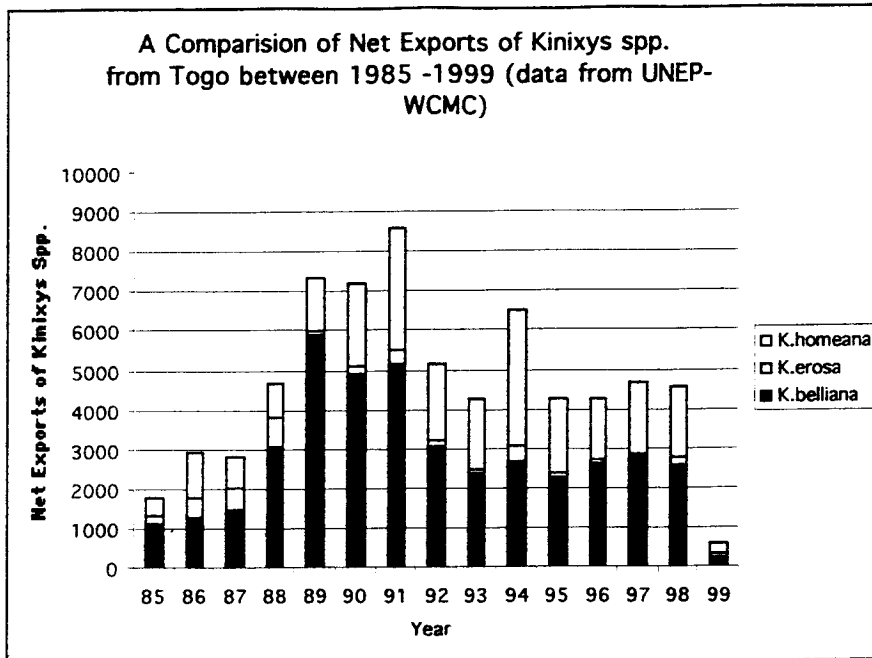


Figure Net Exports of *Python sebae* from the three major exporting range States from 1985 - 1999.



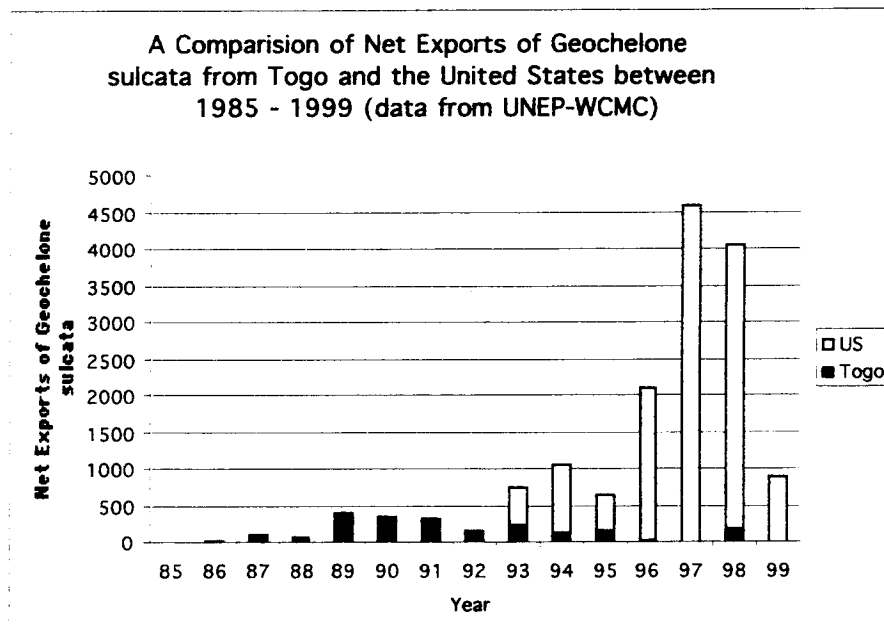
The exports of *Python sebae* show a similar pattern to those for *Python regius*, namely that exports from Togo decreased in the mid 1990s as the numbers exported from Benin increased. The numbers of *P.sebae* in the export trade are at least an order of magnitude lower than the numbers of *Python sebae*. Exports of *P.sebae* from the three major exporters peaked in 1994 at just over 3000 specimens whilst *P. regius* exports also peaked in 1994, net exports from the same three range states numbered 160,000 specimens.





**Figure - Comparisons of Kinixys export trade**

Exports of Kinixys species from Togo peaked in the early 1990s and remained relatively stable from 1992-1998. *Kinixys belliana* is the major species ion trade from Togo, with net exports fluctuating between 2000-3000 specimens annually from 1992-1998. The second most important species in trade from the genus in Togo is *Kinixys homeana*, exported in numbers of around 1000 per annum. Reported exports of *Kinixys erosa* from Togo are lower generally numbering between 100-200 per year. Figure A comparison of reported net Exports of *Geochelone sulcata* from Togo and the United States of America.



There is some controversy over the distribution of *Geochelone sulcata*, and whether or not the species occurs in Togo. Since the mid 1980s Togo has reported exporting a few hundred specimens each year. However, somewhat surprisingly, the net export data indicate that exports of this species from a non-range state, the US, started to appear in 1993. Closer inspection, shows that these exports are largely of captive bred individuals.

This example of captive breeding *Geochelone sulcata* in non-range States seems to be indicative of a similar trend for a number of species targeted for the pet market that are now captive bred outside the range states.

#### **Development of Export Quotas**

As the use of export quotas to regulate trade became more common, the Secretariat started in 1994 to compile information on export quotas and to circulate this to all Parties by Notification. Information on the quotas in place in various range States for the focal species is presented in Table 4.2 .

In the majority of cases the quotas established by Togo have remained fairly constant since they were first instituted, the only exception being for the *Kinixys* tortoises. In contrast, quotas instituted by Benin, increased dramatically for several species in the years 1997 and 1998.

**Table 4.2 A Comparison of export quotas for the focal species**

	95	96	97	98	99	2000
<b><i>P. regius</i></b>						
Benin - wild	0	0	0	0	2100	2500
Benin - ranched	136000	75000	139000	139000	74000	73730
Ghana - wild	7000	7000	7000	7000	7000	7000
Ghana - ranched	28000	28500	28500	28500	28500	28500
Togo - wild	1500	1500	1500	1500	1500	1500
Togo - ranched	40000	46000	40000	52500	47500	47500
<b><i>P. sebae</i></b>						
Benin- ranched	1775	2000	3350	3350	750	700
Cameroon - skin						3500
Chad - skin						10000
Ethiopia - wild						100
Ghana - wild	50	360	360	360	360	360
Ghana - ranched	1000	1000	1000	0	1000	1000
Ghana - skins	0	50	50	50	50	50
Guinea- Skin	3100	3100	3100	3100	0	3100
Mali - skin			3500	3500		
Mozambique		10	5000	5000	5000	5000
Togo - wild	150					
Togo - ranched	1500	1000	1000	2000	2000	2000
Taznaia - wild	209				200	200
Tanzania- F1				200	20	20
<b><i>K. belliana</i></b>						
Benin - ranched	3840	2000	15000	15000	4500	2500
Ghana		140	140	140	140	140
Mozambique- wild		9000	7000	7000	7000	7000
Mozambique- ranched	3000		3000	3000	3000	3000
Tanzania			450r	450fl	450fl	
Togo -wild	1700	2900	1700	700	700	700
Togo -ranched	300	3000	3000	2000		
<b><i>K. erosa</i></b>						
Ghana		120	120	120	120	120
Togo			300	1500	1500	1500
<b><i>K. homeana</i></b>						
Benin	3500	2000	15000	15000	3000	2000
Togo - wild	600	1600	600	500	500	500
Togo- ranched	2500	2500	2000	1000		
Ghana - wild		340	340	340	340	340

**Table 4.2 A Continued, Comparison of export quotas for the focal species**

	95	96	97	98	99	2000
<i>C. gracilis</i>						
Benin- ranched	9965	2000	19700	19700	3500	3000
Ghana			1500	1500	1500	1500
Tanzania	5499	1000	1000	1000	1000	1000
Togo - wild	1000	1000	1000	500	500	500
Togo - ranched				1000	2500	2500
<i>C. senegalensis</i>						
Benin - ranched	11480	9000	21200	21200	4500	6500
Ghana			1500	1500	1500	1500
Togo - ranched				2000	6000	6000
Togo - wild		5000	5000	5000	5000	5000

#### 4.4 Capture and Transport Methods

The focal reptile species are caught either by hunters specifically searching for the animals, by hunters searching for other animals and coming across the focal species incidentally, or by villagers who find the animals whilst cultivating or engaged in some other activity. All seven species can be potentially hunted throughout the year. However, the dry season is most productive for capturing pythons and tortoises as the vegetation is less dense or has been burned or cleared off, making detection of animals easier. The wet season is better for chameleons as they are more active and thus more easily detected during this time. All of the focal species are captured by hand, and only accidentally by traps laid for other animals.. None of the animals are dangerous, with the possible exception of *Python sebae* and capturing them poses no technical problems. The various techniques for detecting and capturing the animals are indicated below.

***Python regius*.** These animals are most commonly searched for by day, despite being nocturnal. Pythons may inhabit old rodent burrows, decaying tree trunks or lie under rotting vegetation. The palm, *Elaeis guineensis* is extensively cultivated in the south of the country and once felled the trunks rot leaving a tough shell with a hollow interior that provides a refuge for pythons, tortoises, and a variety of other animals. During the wet season, breaking open these trunks is an efficient way of finding *Python regius*. In addition, after rain, or on sandy soils, hunters can detect and follow tracks left by the pythons. The width of the track indicates the size of the python, and hunters have reported that they can tell a gravid female by the width of its track. Similarly hunters recognise burrows inhabited by pythons by the smoothed burrow entrance where the female rests in front of the burrow to bask and to defecate, thus smoothing over the surface with her ventral scales. Some hunters claim not to disturb gravid females as digging out the burrow can destroy the incubation conditions inside. Others actively search for these holes to harvest and incubate the eggs. *Python regius* are most commonly hunted in the dry season (approximately December to April), when the vegetation has died down or been burned off by bushfires which may be set by the hunters to facilitate detection of animals.

Savannah and dry woodland, especially in areas with sandy soil, are reportedly the best areas for finding *Python regius*. Agricultural areas, even close to towns and villages, are also productive, possibly because the crops provide food for rodents which in turn provides an increased prey and burrow density for the *Python regius*. Pythons are rarely hunted in forest as fallen leaves conceal rodent burrows and the complex habitat makes detection of pythons more difficult. Low-lying areas prone to waterlogging are also reported by hunters to be less frequented by *Python regius*.

Hunters generally work in groups of 2 - 5, up to as many as 15. The use of dogs was not reported by any of the hunters questioned, and never observed during the research, although it is apparently common in Ghana. Individual hunters will have a series of preferred zones, or of areas that they know to be especially productive. Hunters generally do not reveal these locations to others. A hunter generally collects 10-15 pythons per outing.

**Python sebae.** This species is searched for by day or by night. Low-lying wet areas may be searched, as may the banks of a water body, either on foot along the banks or by boat. Animals are caught whilst basking, active or hiding in holes. These holes may be in the banks of the waterbody, or in adjacent land, including agricultural land. Hiding burrows are necessarily larger for this species than for *Python regius*. Basking animals may be found on riverbanks, at the water's edge, on rafts of floating vegetation or in shallow water. Early morning, when temperatures start to rise and the snakes are obliged to bask in order to raise their body temperature to optimal level, is reported to be the best time to detect this species. December and January are the best times to search for this species when the female is particularly active as she searches for suitable egg-laying sites. On one hunting trip a dog was used to aid in detecting animals.

**Kinixys species.** These species are found by searching rodent burrows, under piles of vegetation and fallen leaves. *K. belliana*, a savannah species, is often searched for at the same time as *Python regius*. Hunting is more efficient in the dry season (Roughly December to April), when both the animals and their hiding places are more easily detected. *K. erosa* and *homeana* are reported to be much more rare, and searching for the animals may not be efficient for a hunter. Farmers routinely collect these animals as they cultivate their fields and plantations, and as Togo is extensively cultivated, this represents an enormous search effort. Hunters may visit farms and villages within the known range of the species, to buy animals already held captive, which would otherwise be eaten, used for traditional medicine or for religious purposes. The animals would then be sold on to reptile farmers for a profit.

**Chameleon species.** Due to their generally secretive nature and cryptic camouflage, chameleons are not easily detected during the day, and certainly not in enough numbers to make hunting efficient. At night however they roost in prominent positions on plants and in trees. As they sleep they assume a pale yellowish colouration, which appears to glow under torchlight. Thus hunters search at night with torches from about 20h00 to 04h00 to collect these animals. *C. senegalensis* are caught by hand whilst the higher roosting *C. gracilis* are dislodged from their perch with a long stick. Hunters generally search in groups of 2 – 4 and search mainly along the sides of roads, tracks or paths.

#### **Post capture mortality**

Whilst no-one keeps hard records of mortality between the moment of capture and sale to a reptile farms, all hunters interviewed indicated that the rate of mortality is very low. Most deaths occurred from heat stress if the animals could not be delivered to the buyer quickly and gravid female pythons are generally most vulnerable and may lay their eggs prematurely.

Figures on mortality obtained from the reptile farms in Lome indicates that the pythons suffer least mortality at around 1% but for the chameleons mortality can be quite significant ranging from 1 to 25% (see Table 4.3).

**Table 4.3 Percentage mortality at the reptile farms, as quoted by their directors.**

	Farm 1		Farm 2				
	1999	2000	1996	1997	1998	1999	2000
Pr	1	0.8	0.8	1.25	0.8	0.85	2
Ps	0	6	-	0	0	0	0
Kb	0	1.3	0	2.66	5.3	6.29	4.7
Kh	3.3	2.3	0	13.33	5.3	8.92	9.92
Ke	2.2	2	0	10	0	0	2.38
Cs	3	1.1	-	-	-	18.75	17.82
Cg	5.5	1.7	-	-	-	11.66	25.51

Some data for mortality during shipping were given by the reptile farmers, but these are based on reports from importers, who reportedly often falsify this data to increase profit (see below).

	Farm 1	Farm 2
Pythons	0% - 5%	1%
Tortoises	5.3%	0%
Chamaeleons	7.5%	5%

#### 4.5 Socio-economic aspects of trade

Traditional animist religious beliefs are still extant in Togo and may result in some species being revered and protected whilst other species may be culled for rituals or religious practices. The largest ethnic group, the Ewe, and closely related groups such as the Mina, Ouatchi and Aja, regard the royal python *Python regius*, as sacred and forbid its killing. Some regard the royal python as the embodiment of their ancestors, as reflected in the Ewe name for the royal python, *Togbui Dangbé*, (sometimes shortened to *Dagbui*) which can be translated as 'ancestral snake' or 'elder in the form of snake'. Others say that the python led Ewe group when they fled to centres around Tsévié, Kpalimé and Vogan, or that the python crawled over their tracks as they fled, so that they could not be followed. Whatever the reason, these southern ethnic groups consider killing or harming the royal python to be a blasphemy. Although many Ewes still uphold these beliefs, a combination of the current economic crisis and the financial value attached to these animals by international trade, means that many will now capture live animals for sale to the reptile farms. However, the traditional authorities (the village chief and village elders) have to be convinced that the animals are not to be killed.

Other ethnic groups within Togo do not traditionally eat the royal python, even if they do not consider it a deity as such. Also, migration of families or groups means that in some territory occupied by the Ewe ethnic group, non-Ewes have settled, bringing with them their own traditional beliefs. An example is the large number of the Kabyé ethnic group, from the region of Kara in the north, who have settled in Ewe territory to the east of Kpalimé and that the royal python can be eaten.

In contrast, the northern groups' name for this snake is *Bilgre*, which roughly means 'stupid snake', perhaps referring to the fact that it does not defend itself by biting, and is thus easy to catch.

In the far north, the tortoise *Geochelone sulcata* is apparently considered fetish and so is generally protected, though it is not clear by which ethnic group. The only specimen found during the

research was as Bombouaka in the Savanes region in the far North. The traditional chief of this village reported the species to be their fetish. It was reported that many people keep these animals in their garden, though this was never observed. Cultivators interviewed in the region were ambiguous as to whether they knew the species when shown photographs; some claimed to know the species, others denied ever having seen it. However, during interviews, many people will deny knowledge of their “fetish” species in order to protect it, fearing perhaps that the interviewing team might have come to hunt the animals.

#### Domestic trade

During a visit to the largest market in Togo which sells dead animals and animal parts for traditional medicine and religious purposes, the following reptile species were noted on a total of 26 market Stalls.

- Toads (Unid.) 30 – 50 on each of approx 5 stalls,
- Crocodylus niloticus 4 – 10 on each of approx 13 stalls,
- Kinixys belliana approx 10 shells on each stall,
- K.erosa 1 – 2 on approx 13 stalls,
- K. homeana 1 – 2 on approx 13 stalls,
- Pelusion niger approx 10 shells on each stall,
- Sea turtle shells approx 3 – 4 on each of 10 stalls,
- Cobras (Unid.) 5 – 10 on each stall,
- Bitis arietans 5 – 10 on each stall,
- Psammophis spp 5 – 10 on each of approx 13 stalls,
- Varanus spp. 5 – 10 on each stall,
- Agama agama approx 5 on each of approx 10 stalls,
- Chamaeleo spp. 20 – 30 on each of approx 5 stalls,
- Python sebae 1 – 2 skins on each stall,
- Python regius 1 – 2 on each stall.

Thus, on this particular day it was estimated that the total numbers of the focal species for sale would be as follows:

Species	Total Numbers Observed
Python regius	26 – 52
Chamaeleo spp.	100 – 150
Kinixys belliana	260
Kinixys homeana	13 – 26
Kinixys erosa	13 – 26
Python sebae	26 - 52

No estimate of turnover was obtained. Some articles were clearly very old and in a state of decay, whereas others were freshly preserved. The low numbers of *Python regius* seen may reflect its status as a “fetish” animal. On the whole, “venomous” animals such as cobras, puff adders and toads seemed to predominate among reptiles and amphibians. Chameleons can be included in this category as they are considered by many people to be venomous.

**Price Structure of Trade.**

The following Table 4.4 indicates the range of prices reported by the four main reptile exporters for buying reptiles from hunters and then selling them on to foreign contacts

**Table 4.4 Price structure of the reptile trade**

Species	Buy from hunters etc				Sell to foreign traders				Sample of US dealers' prices, sourced from internet	
	Young	Young	Adult	Adult	Young		Adult		Young	Adult
	000 Fcfa	USD	000 Fcfa	USD	USD	FF	USD	FF	USD	USD
<i>P. regius</i>	0.5 – 5		1.2 – 3		2 – 10	40 – 50	5 – 12	35	Mean \$46 (n=12)	
<i>P. sebae</i>	4 – 10		12 – 20		10 – 25				Mean \$54 (n=6)	
<i>K. belliana</i>	1.5 – 2.5		0.5 – 2		4 – 6	45 – 60	4 – 6	45 – 60	Mean \$39 (n=4)	
<i>K. hermiana</i>	1.5 – 2.5		0.8 – 2		4 – 6	45 – 60	4 – 6	45 – 60	Mean \$28 (n=2)	
<i>K. erosa</i>	1.5 – 2.5		0.8 – 3		4 – 6	45 – 60			-	
<i>C. senegalensis</i>	0.6 – 1		0.6 – 0.7		2 – 4	15 – 35				Mean \$23 (n=5)
<i>C. gracilis</i>	1.2 – 2		1.2 – 1.5		2 – 4	40 – 50				Mean \$37 (n=3)
<i>G. sulcata</i>						400			Mean \$66 (n=10)	

**Notes.**

1. Prices given are usually indicative only.
2. Ranges reflect seasonal variation in prices, plus other factors.
3. Distinction criteria between “young” and “adult” were not given.
4. Most data are from interviews with directors of reptile farms in September 2000. Where data from other sources are used, this is indicated.
5. Absence of data in a given table cell do not necessarily indicate that this stage of this species is not traded by the company concerned. Data was not given for all stages of all species.
6. Within a given range, the mean price may be heavily biased towards the upper or lower limit.
7. Pr = Python regius, Ps = P. sebae, Kb = Kinixys belliana, Kh = K. homeana, Ke = K. erosa, Cs = Chamaeleo senegalensis, Cg = C. gracilis and Gs = Geochelone sulcata.
8. Fcfa = French West African Francs, USD = United States Dollars and FF = French Francs.

The prices given in the "Buy" column above, i.e the amount of money that a given reptile farm gives to a hunter or capturer for an animal, are broadly corroborated by the amounts indicated by the hunters and capturers during interview.

When these price structure data are combined with export figures for 1999, the total value of the trade in these eight species in this year is between US\$ 131196 and 457983. If all other reptiles, amphibians, insects, mammals and birds were added into this calculation, the maximum value of the export trade could reach US\$ 1 million in one year.

When considering the price structure of the trade from capturer to farmer to importer, the relative profit made at each stage should be compared to the per capita GDP of the country. As an example, the most numerous reptile traded by Togo, is the baby Royal Python. The final retail value of the snake is about 46 \$US. Out of this \$46, the hunter may have received between \$0.5 and \$5, whereas the reptile farmer in Togo sell for a net profit of between \$1.5 and \$9.5, leaving between \$36 and \$41 net profit received by the dealers in the United States. Though it may seem from these comparisons as though the reptile traders in the West may a disproportionate amount of profit, these sums per snake should be viewed in the light of the Per Capita GDP of each country involved (see Table 4.5). The relative profits made at each stage of the trade process for hatchling *Python regius* is shown in Table 4.6.

**Table 4.5 Shows some examples of Per capita GDP in \$US, sourced from the CIA WorldFactbook 2000.**

Country	Per Capita GDP (\$US)
USA	33900
UK	21800
Togo	1700
Ghana	1900
Benin	1300

**Table 4.6. The relative profits made at each stage of the trade process for hatchling *Python regius***

	Country	Net profit per snake (\$US) based on mean retail price per snake, as above.	Per capita GDP (\$US)	Net profit relative to Per capita GDP x 1000	% relative value of profit made per snake in relation to Per capita GDP.
Reptile hunter	Togo	0.5 - 5	1700	0.29 - 2.94	3 - 30
Reptile farmer/exporter	Togo	1.5 - 9.5	1700	0.88 - 5.59	9 - 57
Reptile retailer	USA	36 - 44	33900	1.06 - 1.30	11 - 13

It can be seen from these calculations that the profit made per snake is relatively more valuable to the reptile farmer than it is to either the hunter or the retailer in the US. Furthermore, for a given life-stage/species the reptile farmer will sell more animals than the hunters or retailers. Animals from a large number of hunters will be funnelled towards a relatively small number of farmers (four in Togo, approximately 20 in the region as a whole), who will then sell on to a large number of importers. Thus, not only do the reptile farmers make more relative profit per animal, they sell more animals as well.

What should be taken into account is that the reptile farmers are liable for overhead costs such as airfares and shipping crates, which serve to diminish their relative profit.

Data on retail prices were obtained from the websites of the following companies in the United States. BHB Enterprises MI, Xtreme Reptiles FL, Harford Reptile Breeding Centre MD, HISS TX, LLL Reptile and Supply CA, Mark Lucas Reptiles FL, New England Reptile Distributors NH, Reptile Haven CA, Tim Richards PA, Regal Reptiles RI, Reptile Shack GA, Abbott's Turtle Farm FL, Central Florida Reptile Farm FL, Seaside Reptiles FL, Munjy Squamata SC, Kammerflage Kreations CA, Reptile Depot CA, Bob Clark Ok, International Reptile TX.

#### **Other factors affecting survival of wild populations.**

Following political troubles starting in 1990, up to 20% of the protected areas (See section 2.1 above) had been invaded by settlers by 1994. An ongoing study of settlement of protected areas, as yet unpublished, may show that up to 37% of protected areas have been invaded by agriculture and human settlement. The Keran has lost 70 % of its surface area to agriculture, and the Fosse aux Lions has lost 100%. The only National Park to avoid large-scale encroachment is Fazao-Malfakassa, which is managed by the Swiss Franz Weber Foundation. The Oti-Mandouri, Kpessi and Akaba are no longer classified as faunal reserves. The Abdoulaye faunal reserve is being rented out for a hunting-tourism project.

#### **4.6 Community Surveys.**

To assess the relative value attached to the focal reptile species and their importance in local economies, a questionnaire was developed, in collaboration with Togolese students working on the project. Interviews were generally conducted by project collaborators in native languages. Generally, interviewees were working near a research site, a hunter accompanying the research team or a local guide. Efforts were made not to bias the study towards any particular social or age group, and interviewees were most often the first unaccompanied person seen when arriving at a research site. For cultural reasons, random sampling, is difficult because village society is often highly structured. To interview one person in front of another observer who is of higher standing would lead to the latter interrupting. Also, the arrival of the research team in a village attracted enormous attention, and it proved impossible to interview one person at a time without a crowd of people contributing answers or trying to influence the answers of the interviewee.

Questions were asked openly, and the response placed into multiple-choice pre-determined categories in a tick-box format. The questionnaire comprised a section for the personal details of the interviewee, a section for all interviewees regarding the focal species and finally a section for hunters only, to assess their methods and level of activity. For questions regarding the animals themselves, tick boxes were available for all eight focal species, i.e. *Python regius*, *P. sebae*, *Kinixys belliana*, *K. homeana*, *K. erosa*, *Chamaeleo senegalensis*, *C. gracilis* and *Geochelone sulcata*. Many people do not distinguish between the three species of *Kinixys* tortoises in Togo, so where interviews were conducted outside the known range of *K. homeana* and *K. erosa*, the *Kinixys* species in question was assumed to be *K. belliana*. A similar situation occurs with the chameleons, whereby only chameleon hunters can distinguish between *C. senegalensis* and *C. gracilis*. In this case, as the two species occur sympatrically, reference to "chamaeleon" in the questionnaire was taken as meaning both *C. senegalensis* and *C. gracilis*.

#### **Results**

For various reasons responses were not always available for all questions and in some cases, it seemed that the interviewee responded by saying what they thought the interviewer wanted to hear. For example in response to question 11 (see below), many interviewees tried to associate the photographs of the non-indigenous species with animals that they recognised..

Most interviewees reported their ages as between 11 and 70 years of age (see figure for question 7 below). There was a slight (53%) bias towards male interviewees. The majority of interviewees originated from three ethnic groups, 40% being Ewe, 33% Ouatchi, around 7% Moba and the remainder from other groups. This ethnic grouping reflected the bias of research towards the south of the country. Of the focal animals, only *P. regius* was considered sacred by some Ewe and Ouatchi people. The majority of interviewees were crop farmers (see figure for question 9).

**Figure xxx. Question 7: Age class distribution of interviewees**

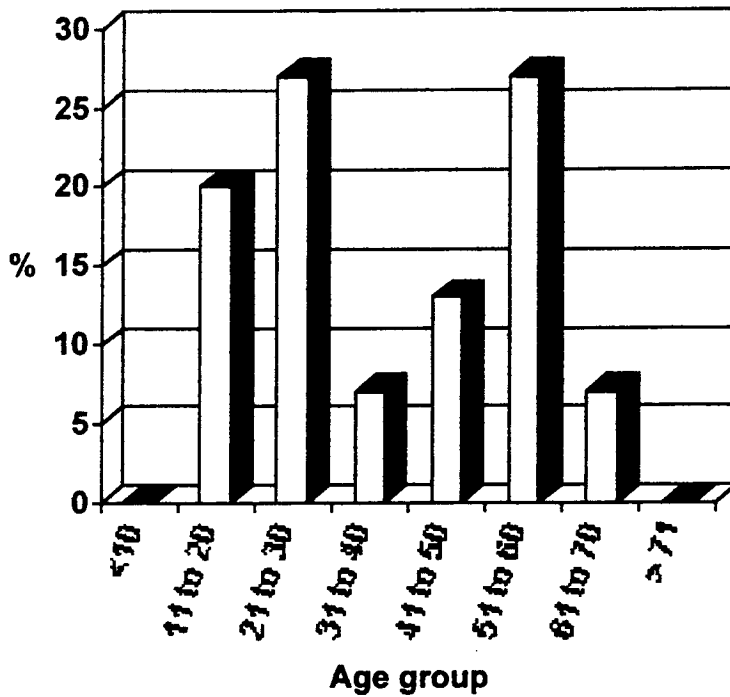


Figure xxx. Question 9: Employment profile of interviewees



All interviewees were shown a series of 15 photographs, containing images of the eight focal species for the project, plus a random selection of non-indigenous species. Notably, the two least common tortoises in Togo, *Kinixys erosa* and *Geochelone sulcata*, were rarely recognised possibly reflecting their rarity. Of the *Kinixys* tortoises, *K. belliana* was most commonly recognised, followed by *K. homeana* and *K. erosa*, and this probably reflects their relative abundance. The majority of interviewees (9 in total) recognised the Royal Python.

To help assess people's perceptions of herpetofauna, they were asked what they did when they found or saw these animals. Whenever tortoises were encountered they were caught. In contrast, in the majority of instances where *P. regius* and *C. senegalensis* were encountered interviewees reported doing nothing, but on about one third of occasions they reported catching the individuals. *Python regius* is sacred to the most populous ethnic group in Togo, the Ewe, as well as other ethnic groups. *Python sebae*, although rarely encountered were reportedly either killed or caught. This species is feared because of its size and its aggressive nature and is thought to prey on goats and chickens, and may be killed either to safeguard livestock or for its meat or fat; the latter is used to make an oil for traditional medicine. The potential value of *Kinixys belliana* for sale or for food might explain why they were always reported as being caught, mostly for sale to be eaten or to be used in traditional religious or medicinal practices or sale to reptile farms.

Many of the interviewees are farmers who effectively lead a subsistence existence and so cannot calculate how much they produce per year in monetary terms. Only three interviewees were able to put a figure on their earnings: a mechanic reportedly earned 12 000 Fcfa per year, a farmer earned

about 3 000 Fcfa per harvest, with two harvests a year and another woman cultivating her fields said she could earn between 2 500 and 5 000 a year 1 000 Fcfa is equivalent to 10 French Francs, or just over 1 GBP.. (This could be compared with the national minimum wage for civil servants of 16 500 per month.).

The study reptiles were most commonly reported as being encountered near homes and in the "bush" ("bush" refers to anywhere outside the village, including both fields and natural habitats). Observations for all species were much more numerous in cultivated area than in natural habitats except for *Python sebae* which was most often seen in association with water bodies, corresponding to the known ecology of this species. Species encountered in agricultural land were most commonly encountered in fields of maize and manioc, the two most commonly grown crops in the south of the country. Observations in "natural habitats" i.e. areas not under cultivation were most common in open forest and shrubby savannah. *Python regius* was distributed more or less equally between burrows, the leaf litter and surfaces covered with vegetation. *P. sebae* was also reported as being found in burrows, though not in the water. Surprisingly many people reported seeing *C. senegalensis* on the ground, even though this is generally an arboreal species.

Interviewees generally reported the impression that the frequency of sighting of these animals had decreased in the last five years, with the majority saying that the frequency had decreased greatly.

#### **Conclusions from questionnaires**

Relatively few people questioned saw the rarer species such as *K. homeana*, *K. erosa* and *C. gracilis*.

The financial benefit obtained from selling reptiles compared favourably with earnings from other sources, and can only increase as the economic situation of Togo continues its downward trend. Overall, people see animals around their homes or in their fields, and generally ignore them, though occasionally capturing them. Animals were caught for a mixture of reasons, but with no consistent pattern. Only rarely were animals killed on sight, reflecting the respect for *Python regius*, and the value attached to other species.

There was a clear perception among interviewees that the frequency of sighting of the focal species was decreasing, reflecting a decrease in the abundance of these animals. Though not formally asked on the questionnaire, people generally blamed this increase on the expansion of villages and the intensification of agriculture.

## 5. Recommendations

### 5.1 Proposed Recommendations

#### General

1. All farms should be required to maintain record of catch-per-unit effort for each individual hunting site, in order to detect trends in capture rates.
2. Until the survivability or surplus juveniles released into the wild can be verified, reptile farmers should aim to avoid over-production, by correlating production more closely to the allotted quota
3. The reptile farms in Togo have tended towards ranching in favour of captive breeding in recent years, and this trend should be encouraged. Ranching provides an annual income for large numbers of hunters, thus dispersing the some of the profits of the trade among the rural community. Captive breeding, on the other hand, offers benefits for the reptile hunters only during the capture of the founding stock, but from then on, hunters would be required only to supply small numbers of animals each year to replace individuals that have died or are no longer reproducing optimally.
4. Though reptile farms now keep records as a result of recommendations by Jenkins (1997), many of these tables do not contain all the information needed by the Wildlife Authorities, all of the tables are of different formats, making comparison of information difficult, and few of the data therein are verified by the wildlife department, due to lack of resources. This report proposes a common stocktable, to be used by all reptile farms, which would contain all the information needed by Wildlife Authorities to correctly manage the reptile trade
5. A review of release policy should be instituted to assess whether the benefits to the population in terms of survival of the released individuals outweigh the risks of disease transmission. If release is to continue, Wildlife authorities should verify all releases and ensure that releases take place in offtake zones, relative to level of offtake.
6. If release is to continue, Wildlife authorities should ensure that releases take place in suitable areas of habitat, within the known range of the species concerned..
7. The four licensed reptile farms in Togo, as the main financial beneficiaries of the reptile trade, should contribute at least in part to conservation efforts and to research into the sustainability of their trade. The nature of this contribution should be both financial and practical. Technical assistance could be sought from the wildlife management authorities and scientific authorities of Togo. This assistance could take the form of advice on methodology and data analysis, publication of results, issuance of hunting permits for scientific research, mitigation with local populations, and choice and protection of study zones.
8. A system of licensed reptile hunters, in operation in Ghana but now abandoned in Togo, should be re-instigated. Given the current adverse economic climate in Togo, many more people are looking to become involved in reptile hunting. This leads to a large surplus capture of animals, as individual hunters compete with each other to sell to the reptile farms. Not all of these animals are bought by the reptile farms, and so are released back into the wild. However, it is not known whether these animals survive the stress of capture, transport, unnatural levels of contact with congeners and eventual release into unfamiliar areas. Limiting the numbers of hunters through a system of licenses, would allow control of the numbers of animals harvested and so avoid surplus capture.

9. The dialogue and co-operation between the local reptile traders and Wildlife Authorities of Togo, Benin and Ghana evidenced in the workshop supported by this project in September 2000 should be continued to finalise a regional export policy and pricing structure for the trade.

#### *Kinixys erosa*

10. Although the project was unable to estimate density for this species in Togo, it is apparently the most widely distributed of the three *Kinixys* species in Togo. As with the other species, when it is encountered, it is likely to be taken as food if not for sale for international trade. Hence some work with local communities to raise awareness of the role of these species in the ecosystem and their relatively slow rate of reproduction would be useful. In addition, the Wildlife Authorities should explore with traders and local communities, means of giving a value to this species, whilst encouraging local communities to conserve the species.

#### *Kinixys erosa and homeana.*

11. These species have specific habitat requirements and this habitat is limited in Togo. The habitat is further under pressure from clearance for agriculture and wood. These animals are automatically captured when encountered, and either eventually eaten, used for making traditional medicines or sold to reptile farms. Thus, populations of these species are being impacted by habitat destruction, domestic consumption and international trade, probably in order of decreasing importance. Whilst export quotas limit exploitation for export, stricter protection of habitat and sensitisation of local people are needed to conserve populations. This sensitisation would involve education as to the role and importance of tortoises in the ecosystem and the pressures facing tortoise populations. As the distribution of these two species in Togo is limited to forested areas around the towns of Kpalime and Badou, such a programme need not be on such a large scale and could be practical to conduct within this region.
12. People should be encouraged to take only male specimens and to leave adult females, provided they could be taught simple techniques for distinguishing males from females.
13. Furthermore, according to interviews the majority of tortoises are collected during the dry season when land is cleared and burned for cultivation. According to most of the reptile farmers this is the season when females are gravid, so potentially many gravid females are collected. If cultivators could be encouraged not to take females until after the egg-laying season, during May or June for example, this would at least help to preserve the season's reproduction.

#### *Python regius.*

14. The specified quota vastly exceeds the numbers of animals actually sold each year, and competition between exporters is exploited by importers as a way of reducing prices. A reduced quota, with a system of prices fixed by all exporters in collaboration would:
  - Increase the value of the individual animal, so for a given level of profit accrued by the exporters, the number of animals exported could be reduced.
  - Shift the balance of profit obtained from the reptile trade away from the importer towards the exporter. At present, the level of profit is heavily biased in favour of the importers, resulting in an undervaluing of the resource in the range states.
  - Reduce competition between exporters and stop the aggressive price-cutting (to appropriate customers) that is a feature of the export trade at the moment.
  - Encourage closer cooperation between exporters across the exporting states, including exchange of techniques for more efficient husbandry, incubation and packaging of reptiles.

15. Reptile farmers should adopt a strict policy of dealing only with known reptile hunters and with family groups that they have trained in incubation techniques. This would avoid the indiscriminate capture of pythons by random individuals in the hope of selling some to the reptile farms.
16. Known reptile hunters, though keeping their favoured hunting areas secret, should be encouraged to seek out new hunting areas so as to avoid local extirpations. The establishment of new hunting areas may lead to cultural difficulties, especially in areas where *P.regius* are venerated, and the Wildlife department may need to arbitrate in these situations.
17. Reptile hunters should be encouraged to hunt these sites in rotation leaving time for at least one reproductive generation (a minimum of 2 to 3 years based on reproductive data ) between successive hunts on the same site.
18. According to the density estimates from this project – it appears that *Python regius* may be commensal with humans, and that populations may be encouraged in agricultural areas by the ready supply of rodents foraging in the farm lands. Further comparative studies would be useful to corroborate this evidence. In the meantime, the Wildlife Department could institute some relatively simple field surveys measuring abundance indices such as the numbers of occupied borrows per hectare of search area in hunted and non-hunted habitats.

#### ***Python sebae***

19. The project was unable to measure density for this species, however, the live trade in this species does not appear to be high, nor does it appear to be in high levels of demand for the live trade as it is fairly aggressive and difficult to keep in captivity.

#### **Chameleon species**

20. Chameleon species in general are difficult to breed in captivity and suffer relatively high levels of transport mortality. This project found that use of the Distance method for assessing chameleon density was not particularly satisfactory or simple to use in the field. Thus it would be useful to investigate other possible indirect indices of abundance, so that Togo could in future assess the impact of trade on population status.,

#### **Farm Stock tables**

Each of the four farms has taken a slightly different approach to record keeping, making analyses of these data difficult for the Wildlife Department. All farms do, however, have access to computers..

Thus, it seems sensible to propose a universal table to be used by all farms, distributed electronically or on paper, which would allow full compilation and comparison of data. The essential elements of such a table, including the Jenkins 1997 recommendations above, would be as follows.

- Stock tables should be maintained on a yearly basis, and preferably submitted to the Wildlife Department in December, before the next year's reproduction and before the reptile farmers start buying gravid female *Python regius*, in January.
- Each species kept in captivity should be listed on a separate row.
- The stock table should clearly present the initial stock levels and inputs to the farm, the reproduction occurring and finally the disposal of stock and bred animals.
- The stock present at the start of the year should be clearly indicated, preferably divided into male, female and young, to allow calculation of the captive breeding capacity of the farm.
- The intake of new animals for the year should be separately presented, to allow calculation of the increase in the general stock level and breeding capacity. Importantly, the intake of gravid females for ranching should also be made clear, so as to enable comparisons between captive breeding and ranching.
- In terms of reproduction, breeding for captive-held stock should be kept separate from that for ranched stock, to enable comparison of the relative importance and efficiency of these two methods.

- The number of eggs laid should be tabulated, to allow calculation of the number of eggs per female. If space allows, a separate column with mean number of eggs per female could be introduced.
- The proportion of eggs hatching is important for estimating the efficiency of the reproduction and incubation processes. Infertile and fertile but dead-in-shell eggs could be lumped together, as for the wildlife department calculations, it is the proportion of eggs hatching (or otherwise) that is important, not the specific causes of failure to hatch. However, from a technical point of view, the reasons for failure to hatch would be important for the farmers themselves, in order to improve the efficiency of their operations.
- The disposal of stock, intake and breeding production for the year should be separated into the categories: sold locally, export, mortality, release and those animals left in the farm. Some animals are sold locally for food, and others are sold from one farm to another if, for example, the buying farm has an order to supply but not enough animals, or if the selling farm has surplus animals but has used up its quota for the year.
- In each category, the animals should be separated into male, female and young. This is especially important for the stock remaining in the farm at the end of the year, as the sex ratio has important implications for captive breeding.

It is not possible to indicate on these sheets are the movements of individual animals which have been marked and given an individual reference number. However, this marking is important to follow the fate of individuals breeding in captivity and a marking system agreed and administered in conjunction with the Wildlife Department should be developed. The implementation of such a marking system was proposed by de Buffrenil (1995)

EXAMPLE STOCK RECORD TABLE.

Sp	Stock Level						Reproduction						Disposal										
	Initial Stock			Intake			Eggs Initial Stock		Eggs Intake		Sold Locally		Export		Mortality		Release		Remaining				
	M	F	Y	M	F	Y	Laid	Hatched	Laid	Hatched	M	F	Y	M	F	Y	M	F	Y	M	F	Y	
Pr																							
Ps																							
Ke																							
Kh																							
Kb																							
Gs																							
Cs																							
Cg																							
Ve																							
Vn																							



## Selected References

- Anon, 1993. *Recueil des Principaux Textes Relatifs à la Protection de l'Environnement au Togo*. La Direction de la Protection et du Contrôle de l'Exploitation de la Flore. Lomé 1993.
- de Buffrenil, V., 1995. Les Elevages de reptiles Du benin, Du Ghana et Du Togo. CITES project.
- IUCN/GSUDESASO 1999. *Etudes Documentaires sur l'Amélioration de la Gestion des Espèces Sauvages Commercialisées Dans Quelques Pays de l'Afrique de l'Ouest*. A report by the IUCN/SSC West Africa Sustainable Use Specialists Group to the European Commission. Washington.. Washington 1999.
- Jenkins, H, 1977. Management and use of *Python regius* in Benin and Togo. Report prepared for DG XI of the Commission of the European Union.
- Gorzula, S., Nsiah, W.O. and Oduro, W. 1997. Part 1. Survey of the Status and management of the Royal Python (*Python regius*) in Ghana. CITES project.
- Shine, R., Ambariyanto, Harlow, P.S. and Mumpuni. 1999. Reticulated pythons in Sumatra: biology, harvesting and sustainability. *Biological Conservation*. 87 349-357
- WCMC IUCN TRAFFIC 1993. Significant Trade in Wildlife A review of Select Animals Species – Draft report to the CITES Animals Committee.
- WCMC IUCN TRAFFIC 1996. Significant Trade in Wildlife A review of Select Animals Species – Final report to the CITES Animals Committee.
- WCMC IUCN TRAFFIC 1998. Significant Trade in Wildlife A review of Select Animals Species – Final report to the CITES Animals Committee.

## ANNEX 1 National Parks and Faunal Reserves of Togo

National Parks	Area	Location	Habitat
Keran	163 640 ha	North	Sudanian savanna
Fosse aux Lions	1 650 ha	Far North	Sahelian savanna
Fazao-Malfakassa	192 000 ha	Central	Dry forest/wooded savanna
<b>Faunal Reserves</b>			
Aledjo	765 ha	North central	Dry forest/wooded savanna
Djame	1 650 ha	not known	
Galangashie	7 500 ha	Far North	Sudanian savanna
Togodo-Nord	13 000 ha	South	Wooded savanna
Togodo-Sud	18 000 ha	South	Wooded savanna
Haho-Yoto	18 000 ha	South	Wooded savanna
Kpessi	28 000 ha	Central	Guinean savanna
Akaba	25 626 ha	Central	Guinean savanna
Abdoulaye	30 000 ha	Central	Guinean savanna
Oti-Mandouri	147 840 ha	Far North	Floodplain/sudanian savanna

## ANNEX 2

Main sites for searching for gravid *Python regius* with reptile hunters are given in table XXX below. Each site was visited only once; where the same zone name appears twice or more, this represents different areas being surveyed within this zone. Surface area is calculated as described above, i.e., distance travelled is multiplied by the search width per hunter (assumed to be 4 metres), and then by the number of hunters. The numbers of hunters varies, but is on average 5.

Date (year 2000)	Zone	Surface area (ha)
25/01	Agbakope	3.552
26/01	Kpévégo	0.738
31/01	Kouvé	2.904
01 /02	Kouvé	1.536
02/02	Kouvé	3.372
03/02	Havé	2.988
04/02	Kovié	3.42
08/02	Lilikopé	2.484
11/02	Fongbe.	0.984
14/02	Gapé	1.71
17/02	Gapé	1.74
18/02	Tsévié	1.296
21/02	Davie	2.976
22/02	Tsévié	3.756
23/02	Havé	1.14
24/02	Tsévié	1.2696
25/02	Douvé	2.676
28/02	Kovéto	5.274
29/02	Vodje	5.94
01/03	Animabio	5.166
03/03	Dalavé/Ledikopé	4.044

Main sites at which night transects for chamaeleons were carried out:

Site	Distance (In metres, equivalent one-sided transect)	Sampling method	Vegetation Type
51 Tsevie	1270	Path	
NR2 Lilikope	1728	Transect	
Bombouaka	800	Transect	
Yokele	1134	Path	
Assahoun Fiagbe	1330	Path	
NR2 Lilikope	1178	Transect	
51 Tsevie	1270	Path	
NR1 Dzogbepime	400	Transect	
Vokpeyidji	400	Transect	
Agamaxe	2920	Path	
Game	3280	Path	
Agbelouve	1920	Path	
Agbelouve	4480	Path	
Notse	1360	Path	
Notse	2280	Path	

Baloe cope	960	Path and Transect	
Wahala	1480	Path and Transect	
Elevagnon	3780	Path	
Langabou	2960	Path	
Glei	2320	Path	
Adodjololo	3620	Path and Transect	
Yeboua cope	1520	Path and Transect	
Yeboua cope	1360	Path and Transect	
Badou	1100	Path	
Badou	1180	Path	
Tohoun	2000	Path	

Under "Description", "Path" refers to search efforts following paths, tracks and roads. "Transect" refers to formal transects laid out at random sites using ropes as guides. For "Path and Transect", a formal transect as before was employed, followed by searching along an adjacent road or path

## RAPPORT DE SYNTHESE

### REUNION SUR L'ELEVAGE ET LE COMMERCE DES REPTILES DANS LA SOUS-REGION ( BENIN , GHANA ET TOGO)

Lomé du 28 au 29 Septembre 2000

L'an deux mille et les 28 et 29 Septembre, s'est tenu à Lomé au Togo la réunion sur l'élevage et le commerce de reptiles dans la sous-région sur le financement de l'Union Européenne à travers le Projet UICN/CSE Recensement du Statut des reptiles au Togo.

La réunion a regroupé les représentants d'éleveurs du Bénin, du Ghana et du Togo, des organes de gestion et des autorités scientifiques de la CITES, les représentants de l'UICN et du Groupe de Spécialistes l'Utilisation Durable des Espèces Sauvages de l'Afrique de l'Ouest et du Coordonnateur du Projet UICN/CSE Recensement du Statut des reptiles au Togo.

L'objectif de la rencontre est d'échanger sur les possibilités d'élaboration d'un plan de gestion sous-régional pour l'exploitation rationnelle et durable des reptiles du Bénin, du Ghana et du Togo.

La mise en route de la réunion a été assurée à travers l'allocution d'ouverture, prononcée par le Directeur de la faune et de la chasse, Mr Moumouni Abdou-Kérim ; des informations générales et dispositions pratiques pour la tenue de la réunion et des exposés introductifs successivement sur la présentation du Projet UICN/CSE Recensement du Statut des reptiles du Togo, les animaux faisant l'objet du commerce, la présentation de l'UICN et du Groupe de Spécialistes de l'Utilisation Durable des Espèces Sauvages de l'Afrique de l'Ouest (GESUDESASO) et de la Théorie de l'utilisation durable , et enfin le plan de gestion du commerce de Python regius au Ghana.

#### **1. Le Projet UICN/CSE Recensement du Statut des reptiles du Togo**

Il s'agit d'un travail de recherche effectué sur quinze mois et qui arrive à son terme à la fin du mois de Septembre de cette année. Python regius, Python seba, Kinixys belliana, Kinixys homeana, Kinixys érosa, Chamaleo senegalensis, Chaméléo gracilia et Geochelone sulcata sont les espèces concernées par l'étude.

Le Coordonnateur du Projet Mr H. Matthew, après avoir présenté la méthodologie de collecte des données, a fait part des résultats obtenus. L'analyse de ces résultats, aboutit aux recommandations suivantes :

- La nécessité de plan de gestion pour
- L'importance du suivi des lâchers

- La nécessité de sensibiliser les populations sur la valeur environnementale des différentes espèces afin qu'elles contribuent efficacement à la sauvegarde de ces espèces.
- La contribution des exportateurs pour la mise en œuvre de projets de ce type
- La nécessité de recherche de financement pour la poursuite des travaux du Projet
- L'importance d'une étude socio-économique

## **2. Les animaux faisant l'objet de commerce au Togo**

Poto de Bosman, Galago du Sénégal, Galago de Demidoff, Singe vert, Patta au nombre des mammifères ; Inséparable à tête rouge, Perroquet vert à calotte rouge, Perroquet du Cap, Perroquet youyou, Perroquet jaco, au nombre des oiseaux ; Tortue sillonnée, Tortues du genre Kinixys, Caméléon gracile, Caméléon du Sénégal, Varan du nil, Varans de savane, Python régius, Python seba, au nombre des reptiles ; sont les espèces animales faisant l'objet de commerce au Togo.

Le communicateur, Dr Bowessidjao, a présenté ces différentes espèces à travers l'importance des exportations et les quotas.

L'importance des exportations varie d'une année à une autre et selon les espèces. D'une façon générale, les plus grandes exportations annuelles sont enregistrées au niveau du Python Régius (15000), du Kinixys belliana (2900), du chamaeleo senegalensis (5000) et du varannus exanthematicus(3000).

Les quota d'exportation sont en général respectés aussi bien au niveau des fermes qu'au niveau national.

## **3. L'UICN, l'Initiative de l'Utilisation Durable et le Groupe de Spécialistes de l'Utilisation Durable de L'Afrique de l'Ouest (GSUDESAO)**

Pour situer la constitution du Groupe de l'Utilisation Durable des Espèces Sauvages de l'Afrique de l'Ouest dans son contexte, Mr Sani Massalatchi a présenté l'UICN en Afrique de l'Ouest à travers sa vision et son programme d'activités.

L'UICN est une ONG internationale, fondée en 1948 et qui rassemble des états, des organisations de droit public et un large éventail d'organisations non gouvernementales (elle compte présentement quelques 1000 membres). Son objectif est d'influer sur les sociétés du monde entier, de les encourager et de les aider pour qu'elles conservent l'intégrité et la diversité de la nature et veillent à ce que toute utilisation des ressources naturelles soit équitable et écologiquement durable.

La vision de l'UICN en Afrique de l'Ouest est d'encourager un environnement politique, économique et social favorisant une gestion et une utilisation durable

des ressources naturelles, tant terrestres que maritimes, la conservation des sols et de la diversité biologique avec et au profit des populations.

L'UICN de l'Afrique de l'Ouest mènent ses actions suivant six (6) grands axes du Plan Stratégique Régional :

- Contribution au renforcement de politiques environnementales nationales et régionales cohérentes
- Promotion des mécanismes alternatifs de financement pour l'environnement, accessibles aux membres et partenaires de l'UICN
- Application des processus participatifs aux approches écosystémiques pour la gestion des ressources naturelles
- Renforcement de l'Education, la Communication et l'échange d'information sur l'environnement dans la région
- Promotion du réseautage et entretien des relations plus efficace avec les membres et partenaires
- Renforcement des capacités institutionnelles et organisationnelles du personnel de l'UICN et de ses membres

C'est dans le cadre de la promotion du réseautage et de l'entretien des relations avec les membres et partenaires que l'Initiative pour l'Utilisation Durable des Espèces Sauvages de l'UICN a pris corps en Afrique de l'Ouest. Elle a pour mission la conservation de la biodiversité pour le bénéfice de population humaine. Elle vise principalement à faciliter le travail des groupes des spécialistes dans les régions.

La genèse du GSUDESASO ainsi que ses objectifs et les activités menées jusque là, sont présentés par Mme KOUDENOUKPO B. Juliette.

En effet les premiers contacts, initiés par le Dr Ouattara Mamadou (PNUD, NIGER) en 1995 puis le Dr Ambouta Karimou, ont aboutit à la mise en place du « Groupe des Spécialistes de l'Utilisation Durable des espèces Sauvages de l'Afrique de l'Ouest (GSUDESASO) en 1997 à Niamey, NIGER.

Le GSUDESASO compte actuellement 18 membres confirmés et couvre les 16 pays de l'Afrique de l'Ouest plus le Tchad. Actuellement, 11 pays sont représentés au sein du Groupe. Ce sont : Bénin, Burkina Faso, Côte d'Ivoire, Guinée Bissau, Ghana, Mali, Niger, Nigéria, Sénégal, Tchad et Togo.

Le travail du Groupe est sous-tendu par le développement d'équipes nationales. Trois thèmes prioritaires ont été identifiés :

- Commerce national, régional et international des espèces
- Gestion concertée des ressources transfrontalières
- Rôle des aires protégées comme réservoirs des ressources biologiques cruciales.

Depuis la réunion constitutive de Niamey, plusieurs activités ont été menées par le Groupe aussi bien au niveau de l'Initiative globale, qu'au niveau régional à travers sa participation aux diverses réunions du Comité Directeur, et à l'organisation d'ateliers d'échanges au nombre desquels on peut citer l'atelier régional sur le commerce des animaux sauvages inscrits en annexe II de la CITES en Afrique de l'Ouest tenu à Accra (Octobre 1997), la participation à la réunion panafricaine sur l'utilisation durable à Limbé au Cameroun et la mise en place de groupe national au Bénin en décembre 1998.

Le Groupe est dirigé par un Bureau Exécutif composé de 4 membres :

- Président : Dr Ambouta Karimou (Niger)
- Vice-Président : Prof. S.S Ayayi (Nigéria)
- 1<sup>er</sup> membre : KOUDENOUKPO BIAO Juliette
- 2<sup>ème</sup> membre : NOMOKO Moriba

et des points focaux dans chacun des 11 pays couverts.

#### **4. Le plan de gestion du commerce de Python regius au Ghana**

Le Ghana est le premier pays de la sous-région (Bénin, Ghana, Togo) qui dispose d'un plan de gestion en matière d'exploitation des reptiles. Ce plan de gestion est caractérisé par quelques dispositions qui permettent de garantir la durabilité de l'exploitation. Il s'agit de la fermeture de la saison de chasse et de la fixation de quota.

L'exploitation des animaux sauvages au Ghana est régie par des instruments législatifs qui exigent que l'on dispose de permis de capture d'animaux sauvages et que l'on respecte la période de fermeture de la chasse qui est du 1<sup>er</sup> Août au 1<sup>er</sup> Décembre.

Au début de chaque période de fermeture de chasse, les exportateurs déclarent au Département de la Faune et aux autorités de gestion les espèces disponibles dans les quarantaines. Un contrôle est ensuite effectué par une équipe de technicien de la Faune, ce qui permet au Département de la Faune d'être informé des effectifs réels dont dispose chaque éleveur avant la délivrance des permis de capture.

A l'exception du Python Régius sur lequel des études scientifiques sont disponibles, la détermination de quota d'exportation au niveau des autres espèces animales est basée sur des précautions particulières appliquées notamment sur les caméléons, les tortues du genre Kinixys et le Python seba.

Le quota d'exportation du Python régius est de 7000 pour les sauvages et 28 500 pour les « Ranching »

L'Institut des Ressources Naturelles Renouvelables et l'Université des sciences et technologies sont les autorités scientifiques de gestion de la CITES.

## **5 Vers un plan de gestion sous-régional, pour l'exploitation rationnelle et durable des reptiles du Togo, Bénin et du Ghana**

A la suite des divers exposés les participants ont procédé à des échanges d'expériences en vue de jeter les bases d'un plan d'action sous-régional entre les trois pays pour une meilleure valorisation des espèces commercialisées.

Les échanges et discussions se sont cristallisés autour des questions suivantes :

- Possibilités de création d'une association sous-régionale des éleveurs
- Nécessité d'harmonisation des prix
- Suivi des lâchers
- La prolifération des fermes entraînant une hausse de l'offre par rapport à la demande
- Les formes de collaboration entre les éleveurs des trois pays

### **⇒ Par rapport à la création d'une association**

Il est retenu :

1. La tenue d'une première rencontre des exportateurs pour la constitution de leur association le 26 Octobre 2000 à Lomé au Togo. Il est recommandé qu'avant cette rencontre des cellules embryonnaires de cette association existent au niveau de chacun des trois pays, d'une part, et qu'une proposition de statuts soit faite par pays et échangée sur internet afin de disposer d'un document de base pour les discussions à l'assise du 26 Octobre.

2. Les éleveurs discuteront entre eux et conviendront d'une participation financière par exportateur pour leur prise en charge par eux-mêmes pour la tenue de la rencontre.

3. Les autorités essaient de coordonner les échanges entre les éleveurs

4. Le Groupe Régional assurera la coordination des échanges au niveau régional

5. La Direction de la Faune et de la Chasse, à travers son Directeur accordera des facilités, notamment par la mise à disposition de moyen de transport, de salle de réunion et de pool d'interprétariat.

### **⇒ Par rapport à l'harmonisation de prix**

Des prix- planchers provisoires de vente du Python régius à l'export ont été retenus en attendant une analyse beaucoup plus approfondie au des assises des exportateurs. Il se présentent comme suit :

- Bébé :10 dollars
- Moyen :8 dollars

### ⇒ **Par rapport au Suivi des lâchers**

Le suivi des lâchers est indispensable si nous tenons à la durabilité de cette activité. Le suivi des lâchers ne nécessite pas obligatoirement une assistance technique, scientifique et financière lourde. Rien qu'en adoptant un système de marquage avec la collaboration de l'organe de gestion, les éleveurs peuvent organiser leurs captureurs dans le cadre de la mise en œuvre du suivi des lâchers.

Il suffit qu'une méthodologie soit bien élaborée sur trois ans et proposée par Mr Harris.

### ⇒ **Par rapport à la prolifération des fermes**

Il revient à l'organe de gestion de limiter les agréments en fonction des potentialités en ressources naturelles, d'un niveau minimum de connaissance (car on ne peut s'improviser éleveur), et en fonction des quotas nationaux

### ⇒ **Par rapport aux relations entre les éleveurs des trois pays**

Pour le moment les échanges d'animaux ne se font pas encore. Les contacts notés jusque-là sont surtout facilités par la proximité des différents pays ou les aptitudes linguistiques. Ainsi on peut des échanges techniques pour améliorer l'activité noter des entre le Ghana et le Togo sur. Entre le Bénin et le Togo les contacts sont plus favorisés par le fait que les deux pays sont francophones.

## **Vers un plan de gestion pour le commerce de reptiles au Togo**

### La législation

La législation au Togo est favorable aux activités menées par les éleveurs de reptiles. Toutefois il est souhaitable que l'organe de gestion instaure la délivrance de carte d'identité pour les captureurs ou autres employés des éleveurs pour un meilleur suivi des captures à des fins commerciales.

Contribution au coup par coup des éleveurs dans le financement de programme relatif à la sauvegarde des espèces sauvages.

