

OIE Draft Chapter 7.14 on Killing of Reptiles for their skins, meat and other products

Paolo Martelli, DVM, CertZooMed, Dipl ACCM

Director Veterinary Services, Ocean Park Hong Kong

Vice-Chair Veterinary Science, IUCN-SSP-Crocodile Specialist Group

OIE Animal Welfare Focal Point Seminar,
November 11-14 2019.

Bali, Indonesia

Chapter 7.14, KILLING OF REPTILES FOR THEIR SKINS, MEAT AND OTHER PRODUCTS

Overview of the presentation

- Background – the ad hoc group
- Terms of reference for the ad hoc group
- Challenges when drafting the chapter
- Scope
- Measurables for the humane killing of reptiles
- Recommendations summary
- Closing remark

Background

Justified Concerns about humane source of reptile products, more particularly in the Luxury Brands Fashion Industry.

The OIE *ad hoc* Group on « Killing Methods for Farmed Reptiles for their Skins and Meat » met at the OIE Headquarters on 22–24 August 2017.

Skype sessions before and after the meeting in Paris



Ad hoc group composition

MEMBERS OF THE AD HOC GROUP

 **Dr William B. Karesh**
(Chairperson)
Executive Vice-President for
Health
and Policy EcoHealth Alliance
460 West 34th St., 17th Floor
New York, NY 10001
UNITED STATES OF AMERICA
Tel: (1-212) 380 4463
karesh@ecohealthalliance.org

 **Dr Leisha Hewitt**
Livestock Welfare
PO Box 143
Franklin
Tasmania 7113
AUSTRALIA
leisha.hewitt@gmail.com

 **Dr Mathias Lötscher**
Head CITES MA Switzerland
Office fédéral de la sécurité
alimentaire et des affaires
vétérinaires
Schwarzenburgstrasse 155
3003 BERN
SWITZERLAND
mathias.loertscher@blv.admin.ch

 **Paolo Martelli**
Director Veterinary Services
Ocean Park
HONG KONG
paolo.martelli@oceanpark.com.hk

 **Dr Christopher Middleton Foggin**
(apologies)
Wildlife Veterinarian
Victoria Falls Wildlife Trust
ZIMBABWE
cfoggin@zol.co.zw

 **Dr Javier G Nevarez**
Professor of Zoological Medicine
School of Veterinary Medicine-
Veterinary Clinical Sciences
Louisiana State University
Skip Bertman Dr, Baton Rouge, LA
70803
UNITED STATES OF AMERICA
Tel: (1-225) 578 9657
jnevarez@lsu.edu

 **Dr Slamet Raharjo, DVM., MP**
(apologies)
Lecturer at Internal Department of
Veterinary Faculty
University of Gadjah Mada
Jogjakarta
Fauna Street No. Karangmalang
Jogjakarta 55281
INDONESIA
raharjo_vet19@yahoo.com

 **Dr Clifford Warwick**
Consultant Biologist and Medical
Scientist
Riverside House, River Lawn Road
Tonbridge, Kent TN9 1EP UK
UNITED KINGDOM
cliffordwarwick@gmail.com

OIE HEADQUARTERS

Mrs Ann Backhouse
Head of Department
Standards Department
E-mail: a.backhouse@oie.int

Dr Leopoldo Stuardo
Chargé de mission
Standards Department
E-mail: l.stuardo@oie.int

Dr Patricia Pozzetti
Chargé de mission
Standards Department
E-mail: p.pozzetti@oie.int

Terms of reference

- Review draft chapter
- Focus on commercial scale aspects
- Take into account - CITES, - rest of *Terrestrial Code* including guiding principles for animal welfare and general principles for the welfare of animals in production systems, -existing practices in OIE regions
- Prioritize crocodiles, lizards and snakes
- Based on science and animal-based outcomes
- A Report and Revised Draft in structural harmony with other chapters

Challenges encountered

Time zone and physical distance of members of ad hoc group

Extremely diverse group of animals (Reptiles)

Differences in practices and perceptions of animal welfare

Source ranging from Wild collection to Ranching to Farming, with or without middlemen

Limited available publications/science

scope

The recommendations in this chapter address the need to ensure the welfare of chelonians, crocodilians, lacertilians and ophidians, during the process of *killing* them for their skins, *meat* and other products.

Criteria (or measurables) for the outcome of the stunning and killing of reptiles

Definitions, differ from Glossary and Chapter 7.5, adapted to reptiles

- **Restraint:** means any acceptable physical or chemical method of reducing, or eliminating, voluntary or reactive movement of the reptile, to facilitate efficient stunning or *killing*.
- **Stunning:** means the procedure that causes immediate loss of consciousness until the reptile is dead, or causes the absence of pain, distress and suffering until the onset of unconsciousness, according to the outcomes defined in this chapter for the species covered.
- **Pithing:** means a method carried out by inserting a rod or probe through the foramen magnum (or the hole from a penetrative captive bolt or gunshot), into the brain to ensure thorough brain destruction.
- **Unconsciousness:** means the state of unawareness caused by temporary or permanent disruption of brain function

General Considerations (1)

- Facilities in which reptiles are killed should have an ***animal welfare plan and associated procedures***. The purposes of such a plan should be to maintain good *animal welfare* at all stages of handling of reptiles until their *death*.
- **Competency and training of the personnel**, gained through formal training or practical experience and verified by the *Competent Authority* or an independent body accredited by it.

General Considerations (2)

- **Considerations for handling, restraining, stunning and killing. Handling, restraining, stunning and *killing* methods should take into account the following characteristics of reptiles:**
 - sensitivity and responsiveness to visual, tactile, auditory, olfactory and vibrational stimuli;
 - ability to escape handling and restraint because of their agility and strength;
 - ability to inflict significant injuries to handlers, via bite wounds, wound infection, constriction, blunt trauma or envenomation;
 - slow movements, torpor and reduced responsiveness due to low body temperatures or slow metabolic rates, which should not be regarded as indicators of quiescence or unconsciousness;
 - absence of vocalisation, which is typical in reptiles, even in highly traumatic situations;
 - propensity to regurgitate and choke when restrained inappropriately.

Article 1.14.4

Source and transportation of reptiles

- Reptiles should be acquired legally, in accordance with all national legislation, including those of the importation and exportation countries, and with international treaties, including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- Reptiles should be accompanied by relevant documentation related to their source.
- When moving reptiles, capture and transport techniques should not compromise human and animal health, welfare and safety.

Selection of Killing process (1)

Criteria which may influence the choice of methods used in the *killing* process include:

- species and size of the reptile
- the extent to which movement of the reptile can be restricted during the *killing* process;
- level of knowledge and skill required to perform the procedure effectively;
- safety of the operator;
- compatibility with processing requirements and reptile product purposes;
- in the case of the use of drugs, the drug availability, licensing and use requirements, possible human abuse, and implications for other product uses such as consumption by a reptile, animals or humans;
- ability to maintain equipment in proper working order.

Selection of Killing process (2)

While economic or cost factors may influence the choice of the method used for stunning or *killing*, these factors should not compromise the welfare of the reptiles and the outcomes described in this chapter.

- minimize agitation, fear, stress and pain to the reptiles;
- be appropriate for the species, size, age and health of the reptile;
- be reliable and reproducible;
- include the use of a stunning method (in accordance with Article 7.14.2.) followed by a *killing* step, or alternatively a one-step direct *killing* method; and
- when it includes a stunning step, ensure that *death* occurs during unconsciousness.

Criteria (or measurables) for the outcome of the stunning and killing of reptiles

Whilst multiple criteria are preferable for the verification of unconsciousness or *death*, the presence of any of the following criteria should be regarded as sufficient to establish suspicion of consciousness:

- pupillary response to light or moving objects;
- eye movement in response to objects or movement;
- blink or nictitating membrane responses to touch or contact of the cornea in species where eyelids are present;
- spontaneous eyelid opening or closing in species where eyelids are present;
- intentional defensive responses;
- tongue movement;
- jaw tone (except crocodilians).

In addition to the absence of all the criteria above, *death* may be inferred by confirming permanent cessation of the following:

- response to stimuli applied to the head, indicating brain activity;
- respiration;
- cardiac activity (while presence of a heartbeat does not necessarily mean that the reptile is alive, permanent cessation of a heartbeat indicates *death*). Cardiac activity should not be used as the sole indicator of *death*.

7.14.7 Physical restraint

Physical restraint is most often required in the process of stunning and *killing* of reptiles. Special considerations for the restraint of reptiles are needed due to the physical and behavioral characteristics of this taxonomic group. The method of restraint should:

- **avoid injuries** due to excessive pressure applied by equipment or personnel;
- **be applied rapidly** to avoid excessive or prolonged struggling of the reptile;
- **exclude** features that may cause **pain or injury**;
- **not hoist or suspend animals** by the feet, legs, tail or head;
- **not restrain only one area of the body** (e.g. head or neck) leaving the rest able to move excessively;
- **ensure animals can breathe freely** through the nostrils **where the mouth is restrained**;
- adequately support the animal's body when moving it;
- avoid taping or binding the legs or feet of the reptiles as the sole method of restraint, and, where required, the method should not cause injuries or pain.

Procedures or practices unacceptable on *animal welfare* grounds are:

- causing any unnecessary injuries, for example, severing the spinal cord, breaking limbs, cutting limb tendons or damaging eyes, whether for immobilization or any other reason;
- pulling or probing sensitive body parts, other than for the purposes of verifying some reflex such as the cloacal reflex.
- excessive struggling, excessive movements, excessive vocalization, trauma and injuries.

7.14.8 Introduction to Stunning and Killing methods

Stunning may be used to facilitate the *killing* of reptiles. Stunning methods may result in the *death* of the reptile following unconsciousness, or may require an additional *killing* step

If stunning is used, the method should:

- be appropriate for the species, size, age and health of the reptile;
- be reliable and reproducible;
- minimize agitation, stress and pain to the reptile;
- avoid or minimize restraint in accordance with Article 7.14.7.;
- result in the immediate onset of unconsciousness or the absence of pain, distress and suffering until the onset of unconsciousness that lasts until the reptile is dead;
- be followed by a *killing* method if stunning does not result in *death* of the reptile during unconsciousness.

If the primary method of stunning fails to produce unconsciousness as described in Article 7.14.6. and, in accordance with this article, a back-up stunning or *killing* method should be used immediately (Articles 7.14.9. to 7.14.16.)

7.14.9 Electrical stunning (Crocodilians)

Electrical stunning is the application, through the brain, of an electric current of sufficient strength and duration, at a suitable frequency to cause immediate unconsciousness that lasts until *death*

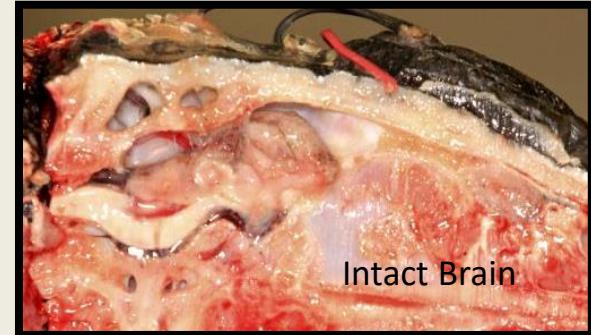
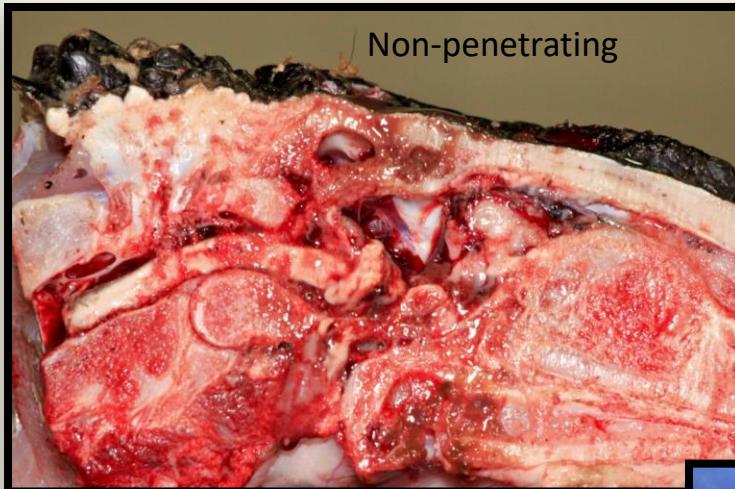
minimum electrical parameters (current, voltage and frequency) should be applied. Parameters may vary with size, age, weight, etc., within a species;

- minimum length of time of application of the current should be achieved. Duration may vary with size, age, weight, etc., within a species;
- reptiles should be killed in accordance to Articles 7.14.10. to 7.14.16. without delay following confirmation of effective stunning to avoid recovery of consciousness;



7.14.10 /11 Penetrating and non-penetrating captive bolt

The aim of these method is to produce a state of unconsciousness and cause severe damage to the brain



7.14.12 Percussive Blow to the head

A cerebral concussion can be achieved manually to achieve a sudden loss of consciousness. If the severity of the blow is sufficient it will result *death*. If *death* does not occur following the application of the percussive blow, then an additional *killing* method in accordance with Articles 7.14.10. to 7.14.16. should be used immediately to ensure *death*.

Due to anatomical differences between species, this method may be difficult to apply and in such cases, other stunning and *killing* methods should preferentially be used.

Requires effective restraint, skilled operator, appropriate tools

7.14.13 Gunshot

An effective gunshot, where the projectile enters the brain, can cause immediate unconsciousness and *death*. A gunshot to the heart or neck does not immediately render a reptile unconscious and therefore should not be used. If *death* does not occur following the gunshot, then an additional *killing* method in accordance with Articles 7.14.10. to 7.14.16. should be used immediately to ensure *death*.

Manual restraint of the reptile should not be used due to safety concerns for humans in the line of fire.

Recommendations for effective use of gunshot in relation to *animal welfare* are:

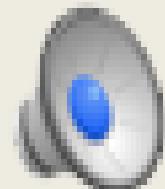
- accurate targeting of the brain should be ensured;
- selected firearm and projectile should be suitable for the species, size and type of the reptile;
- equipment should be cleaned and stored following manufacturer's recommendations.

Country regulations differ

7.14.14 Pithing

Adjunct method to ensure *death* by destruction of brain tissue. Insertion of a rod or probe into the brain, through the foramen magnum or shot hole from a penetrative captive bolt or gunshot. Recommendations in relation to *animal welfare* are:

- pithing should only be used in unconscious reptiles;
- movement of the pithing implement should ensure maximum destruction of brain tissue.



7.14.15 decapitation or spinal cord severance

Recommendations for effective use of decapitation or spinal cord severance in relation to *animal welfare* are:

- decapitation or spinal cord severance should only be used on unconscious reptiles;
- decapitation or spinal cord severance should always be followed immediately by physical destruction of the brain

Method	Time to death
Cord severance	34-99 <u>minutes</u>
Severance + Pithing	+/- Within 3 seconds of severance
Penetrating bolt	immediate
Non-penetrating bolt	immediate

7.14.16 Chemical agents

There are a number of chemical agents whose nature and use are subject to different regulatory approvals by the *Competent Authority*. If *death* does not occur following administration of the agent, then an additional *killing* method in accordance with Articles 7.14.10. to 7.14.16. should be used immediately to ensure *death*.

The effectiveness of the chemical agent will vary according to the metabolic rate of reptiles.

Recommendations for effective use of chemical agents in relation to *animal welfare* are:

- ensure proper physical restraint is used for administration;
- ensure chemicals and doses used are appropriate for the species and size of the reptile;
- ensure the route of administration is appropriate for the reptiles.

7.14.17 Methods that are unacceptable for stunning and killing reptiles

Due to particular anatomical and physiological characteristics of reptiles the use of any method other than those described in Articles 7.14.10. to 7.14.16., is considered inappropriate and unacceptable. Some examples of unacceptable methods are:

- exsanguination,
- freezing or cooling,
- heating or boiling,
- suffocation or drowning,
- inflation using compressed gas or liquid,
- live evisceration or skinning,
- constriction bands to induce cardiac arrest,
- inhalation of asphyxiating gases: carbon dioxide (CO2), carbon monoxide (CO) or nitrogen (N2),
- use of neuro-muscular blocking drugs,
- cervical dislocation.

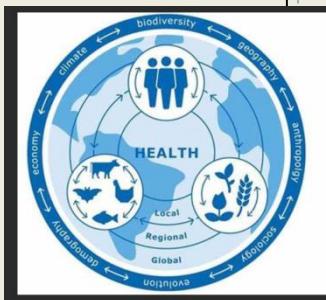
Closing remarks

The draft chapter is based on scientific evidence and the input of the ad hoc group with special expertise in this field.

Environmental justice
Conservation?
Traditional hunters?



Photo Eric Langelet
09/02/2006



Terms of reference

- Review draft chapter
- **Focus on commercial scale aspects** (An arrow points from this text to the word 'commercial' in the list.)
- Take into account - CITES, - rest of *Terrestrial Code* including guiding principles for animal welfare and general principles for the welfare of animals in production systems, -existing practices in OIE regions
- Prioritize crocodiles, lizards and snakes
- Based on science and animal-based outcomes

A Report and Revised Draft in structural harmony with other chapters

Thank you for listening

Ad hoc group OIE 2017



THANK YOU



A. sinensis