

WIDECAST Annual Meeting
2015 - Puerto Rico

Conservation Awareness

Evolving Roles in Species Conservation

Dr Claire Saladin – Veterinarian
WIDECAST in Saint Martin
IUCN SSC Wildlife Health Specialist

- Preservation of Biological Diversity: a major issue
- Mass Species Extinction

	Estimated Number of described species ⁷	Number of species evaluated	Number of threatened species ⁸	Number threatened, as % of species described ⁸	Number threatened, as % of species evaluated ^{8,9}
Vertebrates					
Mammals ¹	5,488	5,488	1,141	21%	21%
Birds	9,990	9,990	1,222	12%	12%
Reptiles	8,734	1,385	423	5%	31%
Amphibians ²	6,347	6,260	1,905	30%	30%
Fishes	30,700	3,481	1,275	4%	37%
Subtotal	61,259	26,604	5,966	10%	22%
Invertebrates					
Insects	950,000	1,259	626	0%	50%
Molluscs	81,000	2,212	978	1%	44%
Crustaceans	40,000	1,735	606	2%	35%
Corals	2,175	856	235	11%	27%
Arachnids	98,000	32	18	0%	56%
Velvet Worms	165	11	9	5%	82%
Horseshoe Crabs	4	4	0	0%	0%
Others	61,040	52	24	0%	46%
Subtotal	1,232,384	6,161	2,496	0.20%	41%
Plants³					
Mosses ⁴	16,000	95	82	1%	86%
Ferns and allies ⁵	12,838	211	139	1%	66%
Gymnosperms	980	910	323	33%	35%
Dicotyledons	199,350	9,624	7,122	4%	74%
Monocotyledons	59,300	1,155	782	1%	68%
Green Algae ⁶	3,962	2	0	0%	0%
Red Algae ⁶	6,076	58	9	0%	16%
Subtotal	298,506	12,055	8,457	3%	70%
Others					
Lichens	17,000	2	2	0%	100%
Mushrooms	30,000	1	1	0%	100%
Brown Algae ⁶	3,040	15	6	0%	40%
Subtotal	50,040	18	9	0.02%	50%
TOTAL	1,642,189	44,838	16,928	1%	38%

Table 1. Numbers and proportions of species assessed and species assessed as threatened on the 2008 IUCN Red List by major taxonomic group.

- 17 000 on 45 000: near 40% of the species evaluated by the IUCN were threatened of extinction in 2008

I/ Biodiversity , a critical fundation for Human Health and Well-being

- 11-15 february 2015: 14th World Congress on Public Health, Kolkata India

Prepared by:

- The Secretariat of the Convention on Biological Diversity
- The World Health Organisation (WHO)

« We hope this joint report will increase awareness and understanding not only of the intrinsic value of biodiversity, but also as a critical fundation for sustainable development, and for human health and well-being » WHO Director for Public Health, Environmental and Social Determinants of Health

Summary report: connecting global priorities: Biodiversity and Human Health

- International Environmental Law, The Convention on Biological Diversity 1992 (CBD)
 - With 194 parties up to now, the Convention on Biological Biodiversity has near universal participation among countries
 - Declarations of Stockholm 1972 and Rio 1992 have been fully integrated into the French Constitution, next to the Declaration on Human Rights, placing Environment therefore Species Conservation as a fundamental value.
 - Species Extinction is a political issue too
 - Governments have an obligation of results regarding Species Conservation.
 - In their National Biodiversity Strategies and Action Plans (NBSAP's), countries define their situation and their specific targets pertaining to the CBD.
- What is the place of the medical care provided to injured Wildlife in the NBSAP's?

- France: Conditions d'accueil des animaux d'espèces non domestiques saisis ou recueillis, faune sauvage exotique
 - Mission required in 2010 by 2 Ministries:
 - The Ministry of Food, Agriculture and Fishing
 - The Ministry of Ecology, Energy, Sustainable Development and Sea
 - « 4.4/ To plan financial participation of the State »: There are Europeans examples of the State's ability to support wildlife rehabilitation structures (short and long term rehab) in Great Britain and Holland
 - Advises an Annual Budget of 30 000 euros for the first year as a test, to DGAL
 - 45 wildlife care centers in France
 - Advises the adoption of Conventions between the Ministry of Ecology and the existing structures welcoming injured Wild Animals,
 - Government must join in the financial support to Wildlife medical care in a tangible manner .

II/ Injured Threatened Species, when and how does Government intervene

Rescue on Saint Martin: Day 1



- Stranding of a juvenile female green sea turtle 25 kg, Sunday afternoon August 2013
- With a 1.5 m long/1 cm diameter spear of stainless steel
- Going through the cranial area of her body
- Lungs are touched

Government

- Rescue on the beach
- Call to the Specialist Veterinarian
- Command of Euthanasia: no funds available?

- Animal alive (examination 1.5 – 2hrs after stranding)
- No bleeding visible during examination, neither during rescue
- Internal damages?
- CHOC TREATMENT: circulation stimulation
- PAIN TREATMENT
- Wound care and proofing of the spear entry (wax) to help restore pleural vacuum
 - 500 ml Glucose 5% intracoelomic
 - Dopram ND: doxapram 1-2.5 mg/kg : 2 ml (respiratory analeptic)
 - Tonarsyl ND: inosine 2.5-5 mg/kg : 2 ml (inotrope positif)
 - Solumedrol ND: methyl-prednisolone 1 mg/kg
 - Baytril ND: enrofloxacin 1 mg/kg
 - Sterdex ND (human ophtalmic ointment dexamethasone/tetracyclines 50/50) 3 capsules in the entry of the spear
 - = 2 – 3 hours of care and monitoring

Turtle stabilised, prognosis reserved, have to see if Turtle will pass the night

Government

- Medical decisions remain in the hands of Veterinarian
- Turtle stabilised, prognosis reserved, have to see if Turtle will pass the night

Day 2:

- Animal alive
- Intensive Care on Site continues:
 - Dexamethasone 0.5 mg/kg
 - Enrofloxacin 5 mg/kg
 - Spasmogluinol 4 ml
 - Dopram 1 ml
 - Tonarsyl 1 ml
 - **Morphine 1 microgramme/kg**
 - Perfusion Glucose 5% + vitamine B12 500 mL
 - Ornipural ND (aminoacids and vitamins)
: Intracoelomic 1 ml + in the fluid 5 ml
 - liver protection (toxines released)
 - Intestinal absorption improvement (vitamin B12/iron/B6)
 - Diuretic

Government

- **Team on Site named the Turtle « Gaia »**
- Organisation of the section of the spear (fretsaw)
- Immediate reduction of
 - The weight on Gaia's thorax
 - The oscillations created at each inspirations (when thorax moves of 2-3 cm, spear moves of 10-15 cm at its highest extremity)
 - Immediate reduction of the pain

1 hour after the section of the spear, Gaia

-moves

-breathes significantly better (higher amplitude and higher frequency)

-**poops**

Day 3, 4, 5:

- Transfer to Guadeloupe
 - Endoscopy of the upper part of the intestinal tract : integrity checked
 - Removal of the spear
 - Wound left opened 3 days : no infectious complications checked
 - Resine



Government

- CITES
- Flight organisation
- Rehab center availability for a few weeks
- Sparked an intense Email conversation
Day 1 and 2: no financial involvement
agreed by DEAL



Rehabilitation and Release in Guadeloupe

- Rehab time: 3 weeks in Guadeloupe
- Until Gaia eats by herself
- Release: Réserve Cousteau, Malendure Guadeloupe, with a lot of turtle friends

- www.youtube.com/watch?v=WJRHuO6mJZ8
- www.youtube.com/watch?v=pTgaiFwRnFQ
- www.guadeloupe.franceantilles.fr/actualite/environnement/gaia-la-tortue-miraculee-233661.php
- www.domtomnews.com/v1/gaia-la-tortue-miraculee/

Gaïa, la tortue miraculée - L'info en continu des DOMTOM, Martinique, Guadeloupe, Guyane, Réunion, Mayotte, Nouvelle Calédonie, Saint-Pierre et Miquelon, Wallis et Futuna, Polynésie Française

- www.guadeloupe.francetilles.fr/actualite/environnement/gaia-remise-en-liberte-sur-la-plage-de-malendure-234075.php
- www.sxmfaxinfo.com/La-tortue-Gaia-retrouve-sa-liberte-aujourd-hui-4731.html

Government

- Rehab center unavailable
- Organisation of an alternative solution
- No satellite track/ no transfer back to Saint Martin
- Massive awareness campaign in the French overseas departments and territories: newspapers, TV (Guadeloupe 1^{ère}, Walprodtv), schools and foundations of Guadeloupe



- Thanks to the information campaign organised, **poachers**, who couldn't be identified, were publically put at their place of **criminals**
- Also Great Positive impact on children and adults in the French Caribbean

III/ Discussion: Species Conservation, an integrative and interdisciplinary approach

- The awarded and benevolent (bienveillante) protection from the Government representatives on Saint Martin, supervising the rescue/rehab/release mission were vital for a successful outcome.
- Efficient communication, real time assessments of the situation, associated with a constant support in parallel to the urgent medical decisions that had to be taken, definitely put Gaia back on her path to the Ocean.
- Marine Turtles are an iconic threatened species, other cases happen where « not as charismatic » threatened animals strand. They must benefit from the same attention (Marine Birds).
- « When Governments take action to reduce biodiversity loss, there are some conservation successes but we are still a long way from reversing the trend »
Jean Christophe VIE, Deputy Head of IUCN's Species Programme
- To take a decisive large scale action to support rescue/rehab/release missions is to help the Public to reconnect with Nature, it is to help Species and Biological diversity Conservation : « One Health approach ».
- Wildlife, Conservation Experts, Public need the *appropriate and in good faith Cooperation of Governments.*

- « One element of social relations is boundary work, or the actions of scientists, non scientists, and institutions to patrol and defend the realm of what counts as science. Boundaries are not static but products of process: what science « is » at a given time and place results from complex negotiations among scientists and those allies whose allegiances they would enroll, or who would enroll them », Lisa Campbell, IUCN SSC MTSG

Conclusion

- 14th World Congress on Public Health, Kolkata India 11-15/02/2015

« The report suggests that the solution lies in writing work in social and natural sciences through integrative and interdisciplinary approaches: Ecosystem, Ecohealth, One Health approach, in order to develop cooperation and mutual understanding that can lead to the production of knowledge and recommendations that can be used by policy makers and practitioners »



THANK YOU VERY MUCH!

References:

- * Campbell LM. Seeing Red: Inside the Science and Politics of the IUCN Red List. Conservation Soc 2012;10:367-80
- * Summary report : Connecting global priorities, Biodiversity and Human Health
www.cbd.int/en/health/stateofknowledge
- * IUCN, Wildlife crisis worse than economic crisis
www.iucn.org/wildlife-crisis-worse-than-economic-crisis--IUCN
- * IUCN, Wildlife in a changing World: an analysis of the 2008 IUCN Red List of threatened species
www.iucn.org/about/worse/programmes/species/our_work/the_iucn_red_list/review_11012012_1607
- * Rapport: Conditions d'accueil des animaux d'espèces non domestiques saisis ou recueillis – faune sauvage exotique 2010, 55 pages
www.agriculture.gouv.fr/.../rapport1822_conditions_daccueil-faune_sauvage_...