No "Living Will" for species

What is a "Living Will" ? A Living Will is a legal mechanism or convention which enables an individual to declare in a special document signed by him or her, witnessed by two other individuals and documented by a Notary Public that, in the event he is incapacitated beyond reasonable hope of recovery, that he does NOT want to be put on life supports. Life supports include a variety of procedures such as artificial feeding, artificial breathing, etc. which require equipment and medical oversight. The "living will" was originated in western countries I imagine and is gaining more and more currency or popularity as time goes on. People want this because they don't want to be trapped in a body that can't move or speak, or even think, and/or they don't want their loved ones to be burdened with staggering hospital bills required to keep someone who is arguably "brain dead" alive in body. It is presumed that when the brain is not working, the body will give up eventually but maybe not for years. I don't know that the "spirit" is discussed in this context.

I and my parents both signed living wills and I was comfortable with that until recently when some science news announced that it is very possible that SOME comatose persons are not brain dead at all but simply can't express their thoughts and feelings. They can't speak, blink or give any other sign -- EXCEPT what can be read on a brain scanner. Two groups of individuals were thus tested by giving them some commands ... to think about climbing stairs, playing tennis, looking for a lost object, etc. Some of them did not show any reaction at all and these are supposed to be what are really brain dead. The others showed activity in their brain -- different areas for different commands, but the same areas that normal individuals showed when they were given the same commands! Some of those supposedly comatose people can hear and understand everything that is going on around them. They embody the worst nightmare ... buried alive. This new science might raise some questions about "vegetative state" and "living wills" as they continue to study comatose patients with ever evolving technology.

It is interesting to think of the "Living Will" in context with wildlife conservation. IUCN SSC has very rigid guidelines which have to be followed before a species can be declared completely extinct. A certain number of years have to pass with no sightings at all before Extinction is declared. Even with such guidelines, it happens that a species just re-appears all of a sudden.

Something more to think about is what happens to whatever remaining habitat there may be when a species of plant or animal which used to live there is declared extinct. I'll bet there are at least a few cases where greedy developers stomped in to finish the habitat, just like impatient relatives pull the plug to avoid crippling hospital bills.

Most conservationists are, or should be, kind of like a conservative doctor or loving family which doesn't want to make a hasty decision about their patient or loved one. And zoos have, or should do, a special role to play in this context. In Zoo Outreach Organisation we formulated an aphorism that "zoos give wild animals with no chance, a last chance" and had a slogan that "captive breeding can save a species". Others have since poached these sayings and, in truth, we just stopped using them because it was starting to look like it wasn't true. Particularly in the South Asian region where zoos are not in a position to cooperate with one another due to lack of understanding of cooperation and coordination. But in fact, global coordination has not been very successful anywhere. Only a very few species have been helped and that too at enormous cost. Whatever has been going wrong is too complex and embarassing to describe here but it has now been recognised that zoos are not living up to that potential of saving species as such. A committee which was formed by CBSG many years ago (the old "Conservation Coordinators set up by Dr. Tom Foose was co-opted by IUDZG and made into CIRCC, Committee for inter-Regional Conservation Co-ordination. For some time CIRCC has been working on guidelines and policy for Global Species Management Programmes. Now this is ready and we are pleased to present it here. The following articles are 1) a report on CIRCC activities, including this document, and 2) the Global Speicies Management Program document itself.

Essentially it is a statement by zoos that they are not going to (symbolically) sign "living wills" for species! Not a bad thing that ! We hope that this new GSMP will inspire more and more of the world's zoos (particularly in high-biodiversity countries) to take up* ex situ *conservation more seriously with full knowledge of what is entailed, so that not just any random breeding, over-breeding, cross breeding, in breeding, etc. will be considered conservation. This document is a hopeful step forward. - Sally Walker

Committee for Inter-Regional Conservation Co-ordination (CIRCC)
Report: Leipzig, August 2006

WAZA's Committee for Inter-Regional Conservation Co-ordination (CIRCC) met twice this year, at Gonubie, South Africa in May and most recently in conjunction with the CBSG Annual Meeting in Halle, Germany in August 2006.

CIRCC has a history of small successes but is now poised to make a considerable contribution to conservation through establishing the **WAZA Global Species Management Program**. Committee Chair, Jonathan Wilcken, presented the outcome of the group's work at the WAZA Conference in Leipzig. This report is a summary of that presentation.

CIRCC discussed issues related to exchange of information between the regions, skills transfer supported by the annual WAZA Training Grant, policy development, and regional zoo association input to ISIS and CBSG. However, the majority of the time and energy of the group was dedicated to further developing a process for linking regional species management efforts. Shortly after, IUDZG (now WAZA) established CIRCC with a primary focus on linking regional species management programs and in 2003 WAZA adopted CIRCC's proposal to develop inter-regional *ex situ* management programs.

In the period since the earliest of these efforts in the 1970s, many regions have developed robust models for managing populations at a regional level (EEP, SSP, ASMP, APP, etc.). However, very few models exist of programs at a truly global level. Examples such as the Partula snail or Lion tamarin programs are notable exceptions, but in reality little global cooperation on species programs currently exists.
This is despite the fact that the need for conservation insurance programs is apparent and urgent.

There are an increasing number of threats to wild populations which essentially leave ecosystems superficially intact. These are threats which do not involve wholesale habitat destruction, but rather threats targeted at species. In recent years we have seen an increasing understanding of the threat posed by hunting wildlife for food. Much attention has been directed at the problems caused by the bush meat trade, but there is also a growing realisation that the problem is more widespread (e.g. the Asian turtle crisis). Poaching remains a significant threat to a number of species of great public interest.

The unregulated collection of live wildlife, for instance by hobbyists, is known to threaten the viability of wild populations, with species such as parrots and tarantulas notable examples. The impact of invasive species, such as non-native predators, has proved devastating to whole cohorts of species, in particular on islands but notably also in countries like Australia.

More recently, the devastating effect of chytrid fungus on amphibian species has brought to the fore the issue of emerging diseases as a threat to wildlife. However, there are an increasing number of examples of the potential for novel or newly introduced diseases to threaten the viability of a wide variety of species, with significant concerns in recent times about the impact of distemper on a number of African carnivore species, the threats to bird species from avian flu, and the recent precipitous decline of Tasmanian devils in the face of the devil facial tumour disease.

It is also becoming apparent that impending climate change will have an overwhelming impact on the viability of many populations of wildlife. Among the expected effects of climate change is the shift in the distribution of vegetation assemblages, often either longitudinally (towards or away from the equator) or altitudinal (with colder climate habitats forced higher). Where such shifts result in vegetation types crossing significant geographic barriers (e.g. mountain ranges, plains, water bodies) there remains a significant risk that dependent wildlife species will effectively be stranded.
In all such cases, the threats are to particular species, rather than to the habitats they are dependent upon. History has already demonstrated examples where, as a result of a species-targeted threat, species have disappeared from otherwise viable habitat: the dodo, the thylacine, the passenger pigeon and others.

Where habitat remains, so too does the opportunity for future re-introduction but only if we have viable, genetically healthy, captive populations. For most species, Global Species Management Programs are necessary to sustain a captive population over a long period while avoiding substantial inbreeding, retaining adaptive potential (high levels of gene diversity), and without relying on supplementation from the wild.

For long term sustainability of most species, a captive population would need to be made up of about 250 - 350 animals and to be intensively managed. In the over 180 International studbooks (ISBs) that include species designated as of global significance, the average living population is about 300 animals. Approximately 95% of all ISBs contain less than 350 living animals. While many international studbooks record populations large enough to be managed as insurance programs, few have sufficient populations to provide the basis for separate long-term regional programs.

This is borne out by a review of European and North American regional studbooks for artiodactyls. This indicates that the average regionally-managed population for these species is based on less than 20 founders, retains less than 90% of the gene diversity in wild populations, and shows more than 10% shared ancestry across the population. In artiodactyls, over 70% of regional populations have less than the generally accepted target gene diversity needed for an effective insurance program. Therefore, while most species probably can be managed globally, they certainly can't be managed at a regional level for any length of time.

A Global Species Management Program involves the management of a particular taxon with a globally agreed set of goals, to a globally agreed strategy, across more than one region (initially) and with the aim of involving all regions in the program

Examples of successful multi-region programs include the Partula snail program which is centrally coordinated and the Okapi program which is an EEP/SSP collaboration with strategic links between semi-autonomous regional programs but which agreed common goals/strategy, regular communication and periodic meetings to manage the populations. It is programs like these that WAZA is looking to foster and promote.

CIRCC has developed key resources needed to support global programs. The main document provides program information highlighting the reasons for, and implications of, global management, different approaches to global management, respective responsibilities, etc. Other resources include application processes, program documentation templates, and reporting formats.

CIRCC's next steps include the development of tools for assessing and encouraging program readiness. We will address issues such as species prioritization, quality of program coordination, communication, and evaluation.