

The Mohamed bin Zayed Species Conservation Fund and the conservation of species

The Advisory Board of the Mohamed bin Zayed Species Conservation Fund first met in Abu Dhabi in December 2011 to review applications submitted to the Fund for grants. The Fund's Board of Directors had decided that independent experts with significant experience of both active species conservation and the global species conservation community would be best suited to help the difficult funding decisions which the Fund's board and administration faced.

In addition to having the expertise in the relevant taxonomic field, the members of the Advisory Board also share the Fund's philosophy and ethos as relates to species conservation priorities.

In its first white paper published in 2008ⁱ the Mohamed bin Zayed Species Conservation Fund outlined a brief history of species conservation (including that of the International Union for the Conservation of Nature (IUCN) and its largest commission the Species Survival Commission (SSC)). The white paper also briefly discussed the decline of species conservation as a discipline within the evolving conservation and environmental movement, and provided some recommendations to reverse this, culminating in the establishment of the Fund to implement some of those recommendations.

Why the focus on species?

This is an expansion on the thoughts and positions presented in that white paper with the intention of outlining why the Mohamed bin Zayed Species Conservation Fund sees its role as promoting the cause of the conservation of species in their natural habitat. The Fund's philosophy is that all species are important – at the very least in ethical and biological terms, and furthermore that it is our responsibility to protect the planet's natural biodiversity – all of it, usually from ourselves.

However species conservation does not have the same prominence in the environmental/conservation sphere as it once did. Many of the original conservation organisations were established with strong species focus (The Nature Conservancy, World Wildlife Fund, Wildlife Conservation Society, Conservation International and others), but over time much of the emphasis (and funding) has moved to other environmental priorities and grown in scope to include other disciplines. During the "golden era" of species conservation in the 1960s and 1970s – as the Fund sees it, the primary activities of species conservationists (many of whom were originally hunters, animal lovers or simply enthusiastic naturalists) involved many weeks and months in the field, collecting data and information, spending time with the species and really getting to know them in their natural habitat. Many of the "greats" of that time have now aged and too many of their conservation descendants have less direct connection with the species. For all too many species the field data collected all those years ago is still the most up to date available about that animal or plant in its natural habitat. A significant portion of conservation work today is lab work, conservation planning and analysis work, that is done in offices. This is all important work, and arguably the species themselves are far rarer than they once were and consequently harder to work with in nature, but the Fund wants to help those

conservationists for whom it is important to get back out into the field and keep that connection with nature alive. Furthermore, in an era when industrial and artisanal extraction of wildlife or the destruction of its habitat is increasing rapidly, the presence of people interested in the welfare of local wildlife plays an important role in conservation.

From this perspective, species conservation has become involved in sustainable development, ecosystem services, landscape scale conservation and natural resource management – as well as climate change issues. Other disciplines have become involved and have altered funding and operational priorities so that conservation now involves economists, development specialists and social scientists. Again, these are important concerns, but these additions unintentionally create a shortfall – in funding and effort for species. At best there appears to be an inherent belief that this large scale and expensive work will have trickle-down effects for the benefit of species conservation, or that it is “luxury” activity, and at worst that species conservation diverts resources from bigger and more overarching environmental issues. But the Fund’s concern is that even the trickle-down effect will not have an impact until too late (by which time too many species will have gone extinct), or only to a limited degree – if at all. The Fund is concerned that without support to actively promote species conservation in nature the planet will all too soon be left with not much more than protected landscapes, partially adapted for human use, and with some token, managed species. This would be an unconscionable tragedy caused by extreme negligence on our part.

Even worse, not only will have most species gone – most of them probably quietly slipping away into extinction, but so will the knowledge, expertise and enthusiasm of species conservationists, which will have been left to wither through loss of interest in species conservation. There is also the risk that potential scientists or field conservationists find they cannot pursue their career, and are forced down a different path. As the original white paper from the Fund stated “species conservation as a whole” is endangered. This can be avoided or mitigated with small-scale, targeted support to the right people, doing the right work at the right time. Small grants can provide rangers with equipment, or enable a scientist to spend a month in the jungle observing frogs. The very presence of conservationists – as opposed to that of hunters, oil company employees or illegal loggers, conveys the message of conservation interest.

Naturally some species require more and larger-scale work in order to prevent their extinction. The Fund recognises that elephants, for example, will not be safe with a few modest grants, but that is not the purpose of the Fund. The Fund enables a reconnection with nature at a species scale – and believes this can be done with small grants. Moreover, small grants often enable long-term programmes that have a lasting impact.

Which species?

On a strictly biological level every species has as much “right” to exist as any other, as they have all evolved from the same starting point around 4.28bn years ago. Some have changed more than others in that time, but essentially an ape is just as “evolved” as a sea squirt – they have just had different environmental and natural selection forces pushing them into

their respective niches in their ecosystems, and the planet's biodiversity as a whole. The Fund of course recognises the different functions of different species in their ecosystems and the relative roles of species termed "keystone species", "umbrella species", "foundation species", "flagship species" and others, but believes that this does not diminish the importance of conserving other species that do not benefit from such a moniker. As a result, the granting mechanism of the Fund does not prioritise certain species over others (other than through guidance on conservation status from the IUCN Red List of Threatened Species and in response to applications received) but instead provides the limited support available to species and projects where the small grants will in fact have an impact. It is not in the interests or mandate of the Fund to assess species priorities, but to assess the impact that a suggested project will have on the conservation of a given species – whatever its role in an ecosystem or relationship to humans. It is the Fund's belief that all species are priceless and none are worthless.ⁱⁱ

Furthermore, in 2015 the Fund and its Advisory Board published a paper which highlighted the overall importance of species, and in particular advocated use of the "precautionary principle" and the "option value" when it comes to conservation priority and effort.ⁱⁱⁱ In the case of species conservation this would mean that no species can be left aside as unimportant or a lesser priority for conservation and allowed to go extinct. Some species obviously benefit from a greater resonance than others – charismatic megafauna, cute and cuddly, provide an ecosystem service of direct benefit to humans, support eco-tourism, have medical benefits or enable bio-mimicry. Without doubt these are important contributions to humanity and should not to be disregarded, but conversely this does not mean that simply because a species is not currently seen as "useful" means either that it will not be so in the future, or that its condition should be ignored.

Whatever the service to humanity a species provides, the Fund believes that it is fundamentally impossible to put an economic monetary value on the non-extinction of that species. Whilst it can be a useful tool for economists or social scientists to advocate for conservation using the implied benefit to a country's GDP or a community's fiscal well-being, the implications of this are that human economics are more important than natural wealth. As society progresses through the current extinction crisis however, the hidden benefits of individual species are becoming more apparent – as is also discussed in the Fund's 2015 paper, and these benefits cannot necessarily be monetised. In addition, the role of most individual species in ecosystems, entirely separately from any potential benefit to humans, is generally poorly understood. The beneficial role of rare species is sometimes greater than their numbers would imply (rare species in high-diversity ecosystems), and that the role of particular species can sometimes be far larger in contributing to human well-being than we generally appreciate.^{ivv}

The Fund also believes that conservation triage, as a term, is a misnomer and an oversimplification of focused, highly concentrated priority setting in species conservation. Naturally the Fund must operate and make funding decisions using conservation priorities (primarily the IUCN Red List but also considerations such as EDGE (Evolutionarily Distinct and Globally Endangered) species or AZE (Alliance for Zero Extinction) species), but the

triage concept with its military history, would imply that only species that can be both predicted to become extinct without action *and* predicted to survive as a result of that action would be worth the conservation effort and money. However, the kind of comprehensive data available to doctors in a battlefield situation is not analogous to the information available in species conservation, and species extinction is a far longer process than a conflict fatality. In reality the Fund focuses its financial attention on species that are Critically Endangered (CR) or Endangered (EN), or about which very little is known (Data deficient - DD) – the kind of species that under a military triage system would not receive attention. Certainly species that are listed as Extinct in the Wild (EW) or any effort to find species that are listed as Extinct (EX) (but for which there is still some hope), or species that have not been seen in decades would not qualify for funding support in such a system. In fact the thrill and “romance” of rediscovery or bringing a species back from certain extinction is the kind of passion that the Fund seeks to encourage.

There is certainly no reason to ever write a still extant species off as a lost cause to conservation or a waste of effort. A very large number of species had been (almost) written off, but have managed to make significant recoveries – such as the Black robin, Southern white rhino, Mauritius kestrel, Arabian oryx and others, showing that patience, persistence and passion in conservation pays off. Although the overall biodiversity situation is getting worse^{vi} species conservation does work and there have been notable successes. A significant number of species would have gone extinct without conservation action, and the world would be a far poorer place.^{vii, viii, ix, x}

Certainly there are numerous examples where support from the Fund has prevented extinction – such as the Petzeu rudd (*Scardinius racovitzai*) in Romania and the Carbonera pupfish (*Cyprinodon fontinalis*) in Mexico, where grants from the Fund helped their translocation before their freshwater habitats dried out. Furthermore, grants have helped in the rediscovery of “lost” species. Examples of these would be the Cave squeaker frog (*Arthroleptis troglodytes*) in Zimbabwe or the plant, *Tortuella abietifolia*, in Haiti.

Conservation actions focussed on a single species often have cascading beneficial impacts on other species as well. Conversely, no species has gone extinct following conservation action successfully (by definition) addressing the threats to that species. The overall problem in species conservation is not what is being done, but that not enough is being done. The IUCN Red List has around 1,000 species that are believed to be extant but have populations of less than 100 individuals, and the Fund would advocate that every one of these is worthy of conservation attention and funding.

Between June 2009 and September 2017 the Fund has awarded \$12,574,125 to species that are in the Red List as EX, EW, CR or EN, out of a total of \$15,992,639. The total grants have supported 1,133 different species or sub-species in 819 genera in 413 families.

References:

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^{vi} WWF's Living Planet Index of 2016, in collaboration with ZSL and the Global Footprint Network.

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