

CBSG Annual Meeting 2013 Working Group Descriptions

Integrated Data Management for Reintroductions and Conservation Translocations: Linking *In Situ* and *Ex Situ* Data Management for Conservation

Convenor: Karin Schwartz

Aim:

The overall objective is to develop scientific-based recommendations for establishing a global database system that will provide a direct link between information collected on animals under human care and on the wild population in order to enhance *in situ* conservation of these species. *Ex situ* data management processes are well documented and standardized using ISIS Zoological Information Management System. For this workshop, the objective is to identify *in situ* data management processes, data needed for monitoring and assessment of populations of threatened species that have been returned to the wild.

Process:

Explore current practices for data management of *in situ* species conservation programs and identify how critical components can be integrated with *ex situ* processes for holistic species conservation. Platforms to be discussed include ISIS Zoological Information Management System as well as data management tools used for monitoring animals in the wild, with the possibility of linking systems.

Background:

With anthropogenic factors accelerating the extinction rate of species 100 to 1000 times the natural rate, biodiversity conservation has become mandatory for sustainability of our natural world. It is imperative that species conservation strategies involve both *in situ* (in the wild) and *ex situ* (in captivity) communities for holistic, integrative conservation action planning, as outlined in the One Plan Approach (see CBSG website). Previous CBSG projects using this integration of *in situ* and *ex situ* programs include conservation planning for Okinawa rail and black-footed ferret.

Zoos and aquariums have become centers committed to biodiversity conservation, contributing through support and participation in conservation efforts for threatened species in the wild. Many zoological institutions are directly involved in such conservation programs with participation in captive breeding for reintroduction, head-starting animals to increase juvenile survival after release, wildlife health assessments, rescue/rehabilitation/release of injured wildlife or supplementation programs to increase wild populations. For all of the scenarios, there is integration of *ex situ* and *in situ* components for overall species conservation.

As stated in IUCN/SSC Reintroduction Specialist Group recently released Guidelines for Reintroductions and Other Conservation Translocations (IUCN/SSC 2013), data management processes are important to include in planning a translocation (Section 4) and monitoring programme design (Section 8), as well as in disseminating information (Section 9). Prior to implementation of a translocation, the objectives will dictate what data should be collected, where and when, to provide evidence to measure progress towards programme goals and to facilitate adaptive management of the programme. Data on the translocated individuals prior to the release event are important to integrate into the overall data management process to give a holistic view of both *ex situ* and *in situ* components of the programme.

Sophisticated records-keeping and population management tools have been developed for use in zoological conservation management programs. Globally, 850 zoological institutions use the International Species Information System – a central global database for animal records collection, compilation and analysis, all integral for scientific population management. ISIS has deployed a new system, the Zoological Information Management System (ZIMS) that will include leading-edge web-based technologies, data warehousing and veterinary care tracking functionality, enabling real-time access to animal records and veterinary history from anywhere in the world. Now, a need for managing critical populations of endangered species in the wild has emerged as more conservation translocations of captive-bred or rescue/rehabilitated animals occur. Currently, very few conservation translocation programs utilize these data management tools for holistic animal management and there is no direct link between the animal records in ISIS and databases used in monitoring and managing those animals released to the wild or for intensively managed wild populations. There is a need for information exchange and standardization between *ex situ* and *in situ* data management practices when these factions intersect in species recovery programs.

References

IUCN/SSC (2013). *Guidelines for Reintroductions and Other Conservation Translocations. Version 1.0.* Gland, Switzerland: IUCN Species Survival Commission, viiii + 57 pp.

Horizon Scanning for Zoos and Aquariums

Convenors: John E. Fa & Markus Gusset

Aim: The purpose of this working group is to conduct the first-ever horizon scan for zoos and aquariums. The aim is to identify emerging issues in biodiversity conservation of particular relevance to the world zoo and aquarium community.

Process: Working group participants will identify issues with the potential to impact upon biodiversity conservation by 2020 that might increase in importance for zoos and aquariums and thereby warrant further consideration. To this end, we will bring together experts to suggest future possible issues based on their own expertise in an interactive way. The set of suggestions will be reduced by an iterative process of discussion and voting to produce a final list of priority issues for zoos and aquariums. This final list will be actively disseminated to the world zoo and aquarium community.

Background: Policy makers and practitioners in most fields, including the zoo and aquarium industry, often make decisions based on insufficient evidence. One reason for this is that issues appear unexpectedly, when with hindsight, many of them were foreseeable. A solution to the problem of being insufficiently prepared is routine horizon scanning, described as the systematic search for potential threats and opportunities that are currently poorly recognised. However, no horizon scan has ever been conducted for zoos and aquariums. The novel output of this working group will consist of a list of emerging issues in biodiversity conservation of particular relevance to the world zoo and aquarium community. This list will afford zoos and aquariums the opportunity to prepare in time for forthcoming potential threats and opportunities in biodiversity conservation.

Preparation: Working group participants may become familiar with horizon scanning by reading the two publications referenced below (see briefing material). Furthermore, participants are asked to submit future possible issues in biodiversity conservation worth considering for zoos and aquariums to Markus Gusset (markus.gusset@waza.org) in advance of the working group session.

Sutherland, W. J. & Woodroof, H. J. (2009) The need for environmental horizon scanning. *Trends in Ecology and Evolution* 24: 523–527.

Sutherland, W. J., Fleishman, E., Mascia, M. B., Pretty, J. & Rudd, M. A. (2011) Methods for collaboratively identifying research priorities and emerging issues in science and policy. *Methods in Ecology and Evolution* 2: 238–247.

Greening Your Portfolio

Convenors: Onnie Byers, Phil Aroneanu

Aim: To explore the use of fossil fuel divestment as a tool to make our organizations greener; to communicate to governments, colleagues, and visitors about the urgency of addressing climate change; and to help move the world toward a clean energy future that provides a livable planet for all species.

Background: At the 2012 Annual Meeting, the Climate Change Action Planning Working Group called for **a social movement that leads to government policies that address the threat of climate change**. Ramping up climate change education and green initiatives at our zoos is important, and many zoos and aquariums have led the charge with these initiatives. But beyond greening individual institutions, how can zoos and aquariums become involved in a movement to bring about policy changes, and what is our role in that movement?

One way is for zoos/aquariums to choose to pull any investments they have in fossil fuel companies and reinvest in solutions that reflect their conservation mission. We've long known that we need government to act in favor of the environment. Yet coal, oil and gas companies maintain a strong grip on our government and financial markets, funding voices of doubt and restricting progress. This has spurred a movement around the globe for institutions like universities, businesses, state and city governments, and zoos and aquariums to divest their investments from fossil fuel companies. Divestment empowers zoos to send a powerful message to governments demanding policy change to incentivize the development of clean alternative energies and a return to the safe level of 350 parts per million of CO₂ in the atmosphere. It assures zoo visitors and donors that the money they spend or donate will not be used to fund companies who actively contribute to environmental risks to animals that they love and the planet we, and future generations, depend on.

Preparation:

- Read through the briefing material provided at the working group site.
- Do some research about your institution's finances. What kind of investments does the zoo/aquarium have, if any? Most well performing mutual funds include fossil fuel companies. Consider how divestment might become part of your institution's greater plan to address climate change.
- Prepare questions for fellow zoo/aquarium staff, CBSG, and Phil Aroneanu from 350.org.

The Aquariums of the Future: One Plan Approach

Convenor: Brad Andrews

Aim: To introduce participants to a framework of present, near term, and the future of sustainable aquariums.

Process: To provide workshop participants an opportunity to discuss the vital role of the global aquarium community in these ex situ / in situ conservation efforts.

Background: The majority of the freshwater fishes in the ornamental trade now originate from captive-bred sources, as do a large proportion of the freshwater species exhibited in public aquariums. In contrast, commercial operators who also supply marine specimens to the ornamental trade remove directly from the wild approximately 98% of the marine fishes and invertebrates exhibited in public aquariums. The common perception prevails that captive propagation is inherently a better alternative to obtaining animals from the wild. Although captive propagation has been shown to have many benefits for terrestrial species, there are a number of features unique to marine species that challenge the idea that every species should be bred in captivity. Some of the key issues relating to the development of widespread conservation-oriented captive propagation programs include: 1) the high taxonomic diversity in marine animals; 2) the resultant variety in their reproductive methods; 3) their ecological, behavioral, physiological, and nutritional needs; and 4) our general lack of knowledge on their husbandry and medical care. There are several characteristics of marine fish and invertebrate populations that make them suitable candidates for sustainable harvest. For instance, marine teleosts are “r-selected,” meaning that they have an extremely high fecundity, and most marine teleosts have a wide distribution and the ability to disperse over long distances. In locations considered for fish collection, appropriate management techniques should be employed to ensure that fishes and invertebrates are collected with as little impact on the ecosystem as possible. The collection of marine fishes and invertebrates for public aquariums and the hobby trade should be managed like a fishery to ensure long-term sustainability. The public aquarium community should support marine organism certification initiatives, such as the Marine Aquarium Council (MAC). Marine organism certification will create market incentives that encourage and support quality and sustainable practices by creating consumer demand and confidence for certified organisms, practices, and industry participants. The creation of refuges that supply propagules to harvested areas, the rotation of areas fished, species-specific size limits and seasons, and standardization of collecting, handling, and transportation techniques should be used to manage these fisheries and harvest areas. Zoo Biol 22:59-527, 2003. © 2003 Wiley-Liss, Inc. [D.A. Thoney, D.I. Warmolts, and C. Andrews]

Prioritizing for Conservation: Zoos Working Together to Save AZE Species

Convenors: Onnie Byers, John Fa

The Alliance for Zero Extinction (AZE), a consortium of biodiversity conservation organizations, focuses on species that face extinction either because their last remaining habitat is being degraded at a local level, or because their tiny global ranges make them especially vulnerable to external threats and imminent extinction if no appropriate conservation action is taken.

AZE can offer zoos an excellent prioritization platform on which to base their species conservation choices. This approach is attractive, compelling and takes full advantage of the skills, experience, and unique value the zoo and aquarium community can provide while assisting the most endangered species and sites worldwide.

At last year’s CBSG Annual Meeting, 26 people from 9 countries discussed this approach. It was agreed that there is a need for action by zoos on behalf of species in imminent danger of extinction and that collaboration with AZE would offer a favorable cost-to-benefit ratio for conservation action.

Initial actions were identified including determining where, within the zoo and aquarium world, there are current programs (*ex situ* population management or *in situ* field conservation programs) for AZE species. Information on preliminary numbers of *ex situ* population management programs were compiled and presented to the AZE Board meeting in Washington, D.C. on 25 October 2012 as part of a proposal for a connection with the zoological community. The AZE Board is extremely interested in the potential for collaboration with the zoo and aquarium community.

This year we will build our case and begin defining how to operationalize this concept and how CBSG can assist in the implementation of these collaborations. We will outline, and perhaps begin drafting, a white paper describing to the zoo community the AZE prioritization process and the value of their participation in conservation efforts for AZE sites and trigger species.

An Institutional Application of the 'One Plan Approach' to Conservation Planning

Convenors: Christoph Schwitzer, Bryan Carroll

Aim: To determine the most effective ways for individual institutions, and in particular zoos and aquariums, to implement CBSG's 'One Plan Approach' to species conservation planning, and to compile guidance for such institutions wishing to participate in/implement OPAs.

Process: Starting with an example for an institutional application of the 'One Plan Approach' that Bristol Zoo has developed over the last year, this workshop will engage participants in brainstorming further ideas on how individual institutions can effectively participate in and/or implement OPAs for the species they are concerned with. We will do this in a structured way in order to be able to compile the outcome of the brainstorm into written guidance on OPAs for zoos and aquariums.

Background: To achieve the vision of the World's zoos becoming effective conservation organisations, *ex situ* populations must be integrated closer into global species conservation planning and implementation. The 'One Plan Approach' proposed by the IUCN SSC Conservation Breeding Specialist Group promotes such integration through the joint development of one comprehensive conservation plan for a species, covering all populations inside and outside its natural range. The 'One Plan Approach' aims to: establish new partnerships; ensure that intensively managed populations are as useful as possible to species conservation; increase the level of trust and understanding among conservationists across all conditions of management of a species; accelerate the evolution of species planning tools; and ultimately lead species conservation towards the aspirations embodied in the Aichi Biodiversity Targets. Bristol Zoo has developed an institutional framework for implementing the 'One Plan Approach', integrating its *ex situ* collection planning with its own *in situ* conservation, research and behaviour change programmes. These programmes are guided by national and global species conservation strategies and action plans. Since there surely are other zoos and aquariums who have developed similar frameworks, we would like to know what others have done, brainstorm what can be done even better, and ultimately compile written guidance to zoos and aquariums on how an OPA can be implemented for the species they are concerned with.

Preparation:

Byers O, Lees C, Wilcken J, Schwitzer C. 2013. The “One Plan” Approach: The Philosophy and Implementation of CBSG’s Approach to Integrated Species Conservation Planning. *WAZA Magazine* 14: 2–5.

Lees C, Andrew P, Sharman A, Byers O. 2013. Saving the Devil: One Species, One Plan. *WAZA Magazine* 14: 37–40.

Mickelberg J, Ballou JD. 2013. The Golden Lion Tamarin Conservation Programme’s One Plan Approach. *WAZA Magazine* 14: 27–29.

Schwitzer C, Simpson N, Roestorf M, Sherley RB. 2013. The African Penguin Chick Bolstering Project: A One Plan Approach to Integrated Species Conservation. *WAZA Magazine* 14: 23–26.

Traylor-Holzer K, Leus K, McGowan P. 2013. Integrating Assessment of Ex Situ Management Options into Species Conservation Planning. *WAZA Magazine* 14: 6–9.

CBSG NORTH AMERICA WORKING GROUP SESSION

Convenors: Anne Baker and Philip Nyhus

The recently-formed CBSG North America regional network (inclusive of the USA and Canada) will make its debut at the CBSG Annual Meeting in Orlando. The mission of CBSG North America is fairly lofty, and we hope that discussion within this working group will form the foundation for an exciting start to this new CBSG regional network.

The mission of CBSG North America is to increase the effectiveness of species conservation efforts by:

- facilitating and promoting collaboration among conservation stakeholders: North American zoos and aquariums, the IUCN/SSC Specialist groups, conservation NGO’s, the academic community, and government entities;
- assisting in the assessment of risks to threatened and endangered populations;
- increasing awareness of the PHVA process and facilitating its use in conservation planning;
- expanding participation of North American zoos and aquariums, the academic community, wildlife agencies, SSC taxon specialist groups, and other interested parties in the work of CBSG;
- providing training in facilitation and modeling for species risk assessments and conservation planning;
- providing assistance to the CBSG staff that supports their efforts to develop and test new conservation management tools;
- working collaboratively with other CBSG regional networks.

The conveners (Anne Baker and Philip Nyhus) would like to take advantage of the location of the CBSG Annual Meeting in North America to hear from members in this region about their needs and wants with respect to conservation activities and how CBSG North America might assist them. If you are from the North American region we hope you will plan to attend this working group session, think about the following questions, bring your own set of questions, and share your thoughts with others in the community.

1. Conservation planning has emerged as a topic of considerable interest. The co-conveners of CBSG North America are interested in facilitating and developing opportunities to promote more effective conservation planning, including building on prior work by CBSG and other IUCN entities.

Questions:

- *In what ways have you, your organization, or your networks engaged in conservation planning?*
 - *When you begin conservation planning for your organization, who is usually involved?*
 - *How do you evaluate potential conservation initiatives?*
 - *Which conservation efforts at your organization (your zoo or aquarium, your NGO, your SSP, etc.) have been successful, and why? Which have been less successful and why? What would have made a difference in those less successful efforts*
 - *Apart from funding, what is the main challenge to your organization to becoming involved in a conservation effort?*
 - *In what ways could CBSG North America contribute to promoting opportunities or tools to support more effective conservation planning and action?*
2. CBSG North American hopes to facilitate and promote collaboration among conservation stakeholders, including North American zoos and aquariums, the IUCN/SSC specialist groups, conservation NGO's, the academic community, and government entities. One idea the co-conveners have discussed is to host a small meeting to learn about, discuss, and brainstorm: (1) examples of existing collaborations that have worked well, (2) ideas for how to strengthen current collaborations, and (3) opportunities to develop novel collaborations to promote the effectiveness of species conservation efforts. Another idea would be to focus more specifically on the role zoos as catalysts for conservation.

Questions:

- *Do you think such a meeting would be worthwhile to pursue?*
 - *What possible focus areas (thematic, geographic, institutions, or other) do you think might generate the most enthusiasm?*
 - *Would you, your institution, or your network be interested in collaborating in this effort?*
3. As the newest CBSG regional network, CBSG North America is interested in promoting awareness about CBSG North America and encouraging new "membership" among diverse stakeholders in the United States and Canada, particularly among groups (like academic and research institutions, government agencies, and other conservation organizations) that may be less familiar or have had less experience interacting with CBSG.

Questions:

- *What strategies do you think might be effective to increase awareness and participation in CBSG North America?*
- *How might you or your institution contribute to these efforts in 2013-2014?*

We look forward to seeing you in Orlando!

Education is not enough: using a community-based social marketing approach to change behaviours and benefit the planet

Convenors: Dr Lesley Dickie (EAZA) and Dr Deborah Luke (AZA)

There is little evidence that information intensive campaigns or isolated education programmes lead to changes in behaviour. In addition even if positive attitudes in relation to pro-environmental behaviours have been stimulated, this attitude change on its own should not be relied upon to lead to automatic behaviour change. This workshop will look at using the discipline of community-based social marketing (CBSM) approaches in conjunction with more traditional forms of information to lead to real and lasting behaviour change in conservation behaviours. Taking the example from the EAZA and AZA Pole to Pole initiative it will introduce the ideas and thinking behind CBSM, how it applies to the Pole to Pole campaign and thereafter to other conservation activities. The workshop will switch between introduction of the steps and asking delegates to apply the steps to a change in behaviour they want to stimulate. At the end of the workshop the delegates will have the beginnings of a protocol to develop a more in-depth CBSM project for their conservation action of choice. This workshop will also look at the thinking behind 'Common Cause' messages and the findings of that research. CBSM has been pioneered by the Canadian social scientist Dr Doug McKenzie-Mohr and more information can be found on his Fostering Sustainable Behaviour website (<http://www.cbsm.com/public/world.lasso>)

Collaborating to Improve Species Recovery Planning

Convenor: Madelon Willemsen

Introduction and Background:

From my own experience (working on zoo based recovery projects and as part of government recovery teams over the last 13 years) I know that the actions on prevention of extinction of (Australian) species, through recovery projects, are unfortunately not as effective as they are intended. Why is this?

I am hoping to provide an insight in how we can enhance biodiversity recovery project successes by integrating conservation science and project management principles (I am a PhD student at the University of Technology in Sydney).

All kinds of projects or programs*, such as construction projects, IT programs, change management, human aid programs and recovery programs/projects, go through a project life cycle. For recovery projects we can use a project life cycle with five different phases (see figure 1). Some large (and costly projects) may have some extra phases in initiation and planning – but taking these five main project phases will work well for our discussions.

There are tools and processes, and software such as the Miradi program (<https://miradi.org/>), available, to assist recovery project teams addressing, managing and moving through each of these project phases. But even with software packages and other tools and process in place, we appear not to be able to increase recovery success rates.

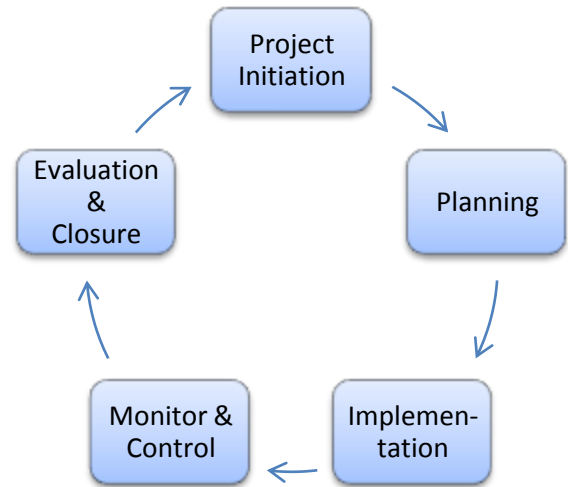


Figure 1: Project Life Cycle

It would be valuable to know what specific recovery problems or issues in each of the project life cycle phases could arise or if there are more general problems concerning recovery project management. These problems/issues could be based in biology (such as threats, small population management etc.) and/or could arise from sociology and/or business management (such as stakeholder management, budgeting etc.). Identifying these issues would give us the opportunity to adapt the recovery project management (i.e. managing and moving through the recovery project life cycle accordingly).

To find out about these problems and issues, recovery experts are the key. Your ideas, knowledge and experiences will be used to shape theories or scientific explanations on success and problems of recovery projects, through data analysis with the Grounded Theory Method ([Glaser & Strauss 1967](#)). The theories and (scientific) explanations arising from this method will form the foundations for a recovery project management framework, which will be informed by the project management literature, pm models and experts. This framework is aimed to increase the project management and therefore the success of recovery projects.

Brainstorm session:

For this session we will focus on two of the project phases, 'planning' and 'evaluation / closure' as this is where CBSG's work is mostly concentrated.

The questions we will investigate and brainstorm:

- What is your definition of recovery success? Is there a general definition of recovery success?
- What are the problems generally encountered in these two phases?
- What is the worst or main problem?
- What do you think could resolve the problems and increase success?

There are no wrong or right answers for these questions, I am very interested in the experts' views on all levels and stages in a recovery project or program. The international perspective

will help me to broaden the horizon and identify if these problems are the same in Australia and other countries.

Attendance & Administration:

Participation in this workshop is valuable if you have been part of a recovery project/program (in whatever position or role – such population modelling, managing a recovery team, implementing recovery action, monitoring in-situ or prioritisation of species etc.) This session may be valuable as part of my data set for my PhD so will ask you to fill out the consent form. I will also provide you with participant information sheet for your information.

Literature:

Glaser, B.G. & Strauss, A.L. 1967, *The discovery of grounded theory: Strategies for qualitative research*, Aldine Publishing Company, Hawthorne USA.

* Definitions: A program combines several projects to reach an overarching objective

Greening Your Institution

Convenors: Gerald Dick and Jo Gipps

Background:

In response to growing awareness of the human impacts on climate change, and of the need for all organisations to give central consideration to their environmental sustainability, many zoos and related institutions have developed individual Environmental Sustainability Strategies over the last few years, as have Regional and National Zoo Associations, and WAZA. CBSG has drafted its own Climate Change Movement Handbook, with recommendations, and has been working on a proposal for a joint CBSG/WAZA Carbon Offset Initiative (see 4. below). The purpose of this working group is further to develop key aspects of this initiative.

Workshop agenda:

This workshop will consider past progress in this area (there will be links to substantial amounts of on-line material circulated before the meeting in Orlando), and will consider ways in which our community can increase both the effectiveness of its actions, and how these can be promulgated most widely to our visitors and others.

As well as reviewing the well-rehearsed steps of:

1. Measure, Audit and Analyse your environmental impact(s)
2. Stop, Avoid and Reduce wherever possible
3. Find renewable alternatives,

we shall focus on proposals for:

4. a WAZA/CBSG Carbon and energy offset scheme

Intended outputs:

- Providing guidance on developing and implementing an institutional Environmental Sustainability Strategy
- Developing and refining the design of the 'Zoos and Aquariums for 350' Carbon Offset initiative, for use by CBSG and WAZA member institutions (to include working up a tender document to send to a selection of Offset Providers).

A page of weblinks to Environmental Sustainability pages on zoo, Regional and National Association, CBSG and WAZA websites is available on the working group webpage:

<http://www.cbsg.org/greening-your-institution>