



## CBSG Climate Change Working Group Report

### 2009 CBSG Annual Meeting, St. Louis, Missouri, USA

#### Participants

Onnie Byers, Suzanne Boardman, Frands Carlsen, Bob Cook, James Cretney, Arnaud Desbiez, Gerald Dick, Suzanne Gendron, Jo Gipps, Heribert Hofer, Bosook Kim, Phil Miller, Paul Pearce-Kelly, George Rabb, David Reed, Rebecca Seal Soileau, Edward Spevak, Rebecca Spindler, Sally Walker

#### Working Group Recommendation to CBSG

Recognizing the possibly fatal climate change impacts on the Great Barrier Reef, the working group urges that CBSG provides all assistance possible to facilitate an urgent review of the reef's viability in the face of climate change and to explore best response options.

#### Working Group Recommendation to WAZA

Zoos and aquaria can make an invaluable contribution through their ex situ and in situ program work, research and support focus and above all their unique ability to directly engage with the public. On this last key area we urge that WAZA put in place as matter of urgency a climate change response strategy as detailed in the proposal for WAZA Council consideration.

#### Review of 2008 Working Group Actions

2008 Goal: CBSG (Phil Miller/Bob Lacy) will work with Barry Brook (University of Adelaide) and others to explore meta-modelling approach to integrate climate change data, and to compare with existing RAMAS tools.

Progress made with Barry and other key collaborators and plan in place for completion. Resource issues will determine time frames. Point was made that in general, current climate models do not sufficiently incorporate biodiversity impacts into their calculations (e.g. feedback systems associated with ocean plankton, deforestation) and this needs more attention.

A review with Hadley Centre staff in January 2009 confirmed the most likely biodiversity parameters that could be incorporated into climate models (report available).

**Action and Recommendation 2009:** *Systematically review all CBSG tools for adequate incorporation of climate change relevant information. Phil Miller to review and report on time frame.*

2008 Goal: Explore revision of Vortex to be spatially explicit.

Progress as above.

2008 Goal: CBSG can serve as link between research and zoo communities to facilitate research progress (physiological tolerances etc.) Consider workshop to organize project (along the lines of the Imperial College workshop on vulnerability traits in 2008) and design a database with this information.

Most of the focus was on corals and coral reefs. Rapid scientific progress in the past 15 months, culminating in several high publications that are in agreement to revise the recognized "safe" level of atmospheric CO<sub>2</sub> concentrations down to 350 ppm. A high profile meeting at the Royal Society in London on 6 July 2009 published a crisis statement which is available on the WAZA website. The database requirements were realized through completion [www.bioclimate.org](http://www.bioclimate.org).

**Action and Recommendation 2009:** *Start a process to collate relevant data from zoos (possibly involving the envisioned task force, see below), lead by Heribert Hofer, Rebecca Spindler, liaising with Wendy Foden and others. Probably requires use of the newly developed mass collaboration tools (lead by Onnie Byers, see below).*



2008 Goal: Climate change relevant zoo and aquaria data needs to be utilized.

Still to be realized.

**Action and Recommendation 2009:** *An envisioned focus of the proposed CBSG/WAZA Climate Change Response Task Force.*

2008 Goal: Climate change impact considerations need to be sufficiently incorporated into the zoo and aquaria collection planning process. The same applies to their research and conservation program areas. How to respond to the need to rescue species from “doomed ecosystems” needs special consideration.

Species impact evaluation ability has progressed significantly over the past year (see Bioclimate database) and should enable Zoo Collection Plans to incorporate impact scores.

**Action and Recommendation 2009:** *This is seen as another ongoing issue for the Task Force. Liaison with Wendy Foden (IUCN Species Program) is needed.*

2008 Goal: Zoos and aquaria should develop/support in-situ programs with strong climate resilience parameters build into to reintroduction, habitat management etc.

Field Project Prioritization Group addressed some of these issues at this year’s meeting and a lot of relevant data is now in the Bioclimate database. This remains an ongoing Field Project Prioritization Group and Task Force action.

2008 Goal: Continue to expand and disseminate the climate change and biodiversity information network tool (the web-enabled iteration of which has been renamed Bioclimate).

Achieved and viewable on [www.bioclimate.org](http://www.bioclimate.org) We need to raise awareness of this database for both impact and response issues.

2008 Goal: Follow up video conference and workshop in next six months.

This goal was not realised but the group agrees there is a need to utilize mass collaboration tools and schedule regular review sessions. This is seen as best working approach for the Task Force.

2008 Goal: We need to move beyond the current of situation of filtering our advice (i.e. we can not pretend that the situation isn’t as bad as it really is).

This need has been highlighted by the coral reef threshold clarification along with significant statements and publications over the last year.

#### **Working Group Recommendation to CBSG**

Recognizing the possibly fatal climate change impacts on the Great Barrier Reef, the working group urges that CBSG provides all assistance possible to facilitate an urgent review of the reef’s viability in the face of climate change and to explore best response options. The recent review initiative detailed in the Royal Society’s report Climate change and the fate of the Amazon is a guide for how such a review might be realized.

Major Royal Society working group review confirmed viability threshold levels for coral reefs to be < 350ppm CO<sub>2</sub>. Associated working group statement (including the President of WAZA and Head of IUCN/SSC Groups) and justification documents produced. Professor Veron’s summary presentation is viewable on Royal Society website.

#### **Working Group Recommendation to WAZA**

Zoos and aquaria can make an invaluable contribution through their ex situ and in situ program work, research and support focus and above all their unique ability to directly engage with the public. On this last key area we urge that WAZA put in place as matter of urgency a climate change response strategy as detailed in the proposal for WAZA Council consideration.



## WAZA Global Climate Change Response Strategy

In any but the early and rapid emissions reduction scenario there are no realistic conservation response options capable of contending with the profoundly altered environmental states our planet will have entered.

### Responding to the urgent climate change challenge

Following up on WAZA's 2006 climate change resolution, the dramatically increased severity of the global warming threat (as clarified at the 2008 CBSG and WAZA briefing and review sessions) requires the international zoo community to realize its tremendous engagement potential. To this end, all necessary assistance should be provided to the Conservation Committee and IZE colleagues to produce the most appropriate engagement response for the zoo community.

### A Key Message

The international zoo community needs to convey the message that the climate change threat highlights that sustainable living and the conservation of the natural world are key to ensuring human survival.

Through close collaboration with the regional zoo associations this task can most effectively meet local issues and associated responses. The opportunity now exists for greatly improved collaborations with subject matter specialists and access to associated information, via the WAZA tool kit and other reference tools.

To help realize this task it is proposed that a climate change task group be established of a composition reflecting the relevant skills and drawing from the WAZA membership. Additional specialists are to be co-opted as necessary.

This unparalleled global environmental threat demands an unprecedented response in the short time we have left to make a difference.

Limited progress has been realized

### Putting Climate Change Response Into Practice at WAZA

Implement an urgent WAZA campaign to influence the December Copenhagen meeting and the enviable post-Copenhagen engagement needs. Main action needs are:

- WAZA membership director's < 350ppm statement, agreed, signed and disseminated with associated press release. [Suggested wording](#)

### Engagement Issues

1. Use the WAZA network and wider social networking tools to get the same urgent message out to the WAZA public with associated ability to register their support for the statement via electronic petition addressed to United Nations.
  2. Provide supporting materials. These are all available in addition to the bioclimate database.
  3. Increase coordination with other NGOs and associated specialists
- Establish a joint WAZA/CBSG climate change engagement task force to be established as a matter of urgency and with frequent communication – using mass collaboration tools.

### Most Urgent Needs

Communicate recognition of <350ppm CO<sub>2</sub> as the safe threshold level and not the politically accepted level of 450 being discussed at Copenhagen.

Need to ensure engagement across the WAZA committees. Members therefore suggested but need to be confirmed include Gerald Dick, Jo Gipps, Heribert Hofer, Dave Morgan, Jörg Junhold, David Jones; plus Bob Cook, Caroline Lees, Paul Pearce-Kelly, Onnie Byers, Suzanne Bordman, Phil Miller, WAZA President, and possibly Steven McKay.



## Summary of key actions

- Need to make the utmost pervasive case for urgent action by the WAZA membership (see above). *WAZA council and Task Force*
- CBSG and WAZA to set up and facilitate task force and associated communication system (uyel.com). *Onnie Byers and Gerald Dick*
- Address research needs and design process for collating and analyzing and disseminating data from zoos (using the regional associations). *Task Force*
- Address research needs and design process for collating and analyzing and disseminating data from zoos (using the regional associations). ARASPA is beginning a climate change research strategy. Need to bring the other regions into this process with WAZA engagement. *Heribert Hofer, RSP ?, Task Force.*
- Incorporate climate change into zoo collection planning (focusing on the clarification of vulnerability of species to climate change) *Task Force*
- Ensure zoo conservation projects adequately address issues of climate change resilience. *Field Project Prioritization Group and Task Force*
- Clarify extent of current endorsement of the 350ppm target. *Paul Pearce-Kelly (see below)*
- We need to ensure that different engagement levels are available for zoos depending upon their circumstances. *Task Force.*
- Task Force needs to agree mind map process (working core remit: Aim to avoid the unmanageable and manage the unavoidable), informed by HH proposed road map for putting climate change into WAZA. *Task Force*

The group agreed the overriding urgency of the active engagement process with the focus on the WAZA statement and associated dissemination through its membership and public.

[Immediate evidence of powerful support for the <350ppm target](#)