

Climate change position statement by the World Association of Zoos and Aquariums (Formalised with supporting resolution 65.1 at the 65th annual WAZA conference, 22 October 2010)

The [World Association of Zoos and Aquariums](#) (WAZA) represents a community of over 300 member institutions with a mandate of wildlife [conservation](#), scientific [research](#) and environmental [education](#) of 700 million annual visitors. This position statement is necessitated by these responsibilities and an appreciation of the threat to the natural environment, to species and to current and future generations of humanity.

WAZA recognises the severe threat of human-induced climate change to life on Earth¹. The risk is so great because atmospheric CO₂ concentrations have already exceeded the safe planetary boundaries necessary for biodiversity and humanity alike and these urgently need returning to safe levels while it is still possible to do so.^{2, 3, 4}

The best available science supports the conclusion that there is an urgent need to restore Earth's energy balance by returning atmospheric CO₂ levels to below 350 parts per million (ppm)⁴. Fossil fuel usage, habitat destruction and agricultural practices have increased CO₂ concentrations from their pre-industrial level of 280ppm to around 390ppm and are increasing by 2ppm a year⁵. If we fail to return CO₂ levels to below 350ppm, the processes of environmental change (including sea ice, ice-sheet and mountain glacier disintegration, sea level rise, methane hydrate releases, ocean acidification, shifting climate zones, extreme weather events and biodiversity loss) will pass beyond humanity's control^{2,3, 4, 6}

Because the full impacts of current CO₂ levels will take several decades to become evident, due to climate system inertia, it is understandably difficult to appreciate the danger that CO₂ levels above 350ppm constitutes. Risk perceptions are further compromised by *widespread* understating of the dangers we are facing.

The international community must agree to take effective action to return atmospheric CO₂ concentrations to below 350ppm while it is still possible. Of crucial importance to achieving this goal is an urgent phase-out of coal emissions by 2030, reversing the destruction of natural habitats and reversing the negative net impact of agricultural practices. These actions are also essential for helping humanity and wildlife contend with the many unavoidable impacts of climate change.^{2,3,4,7}

WAZA institutions recognise the urgency of, and commit to reducing their carbon footprint and addressing climate change issues through their business practices, institutional culture, conservation and research programmes. WAZA institutions also recognise the urgency of conveying the threat issues and response imperatives highlighted in this statement through their education and training programmes and community engagement initiatives.

Supporting references:

¹ WAZA petition statement to world leaders via UN Secretary General November 2009 www.WAZA.org

² Hansen J. *et al* (2008) Target Atmosphere CO₂: Where should Humanity Aim? The Open Atmospheric Science Journal **2**: 217 – 231. <http://pubs.giss.nasa.gov/authors/hansen.html>

³ Rockström J. *et al* (2009) *Planetary boundaries: Exploring the safe operating space for humanity*. *Ecology and Society* **14**(2):32 [online] URL: www.ecologyandsociety.org/vol14/iss2/art32/

⁴ Hansen J. *et al* (2005) Earth's Energy Imbalance: Confirmation and Implications. *Science* **308**: no. 5727, pp. 1431 – 1435 www.sciencemag.org/cgi/content/abstract/308/5727/1431

⁵ National Academy of Sciences (2010) *Climate Stabilization Targets: Emissions, Concentrations and Impacts over Decades to Millennia*. www.nap.edu/catalog/12877.html

⁶ Veron J.E.N. *et al* (2009) *The coral reef crisis: The critical importance of <350ppm CO₂*. *Marine Pollution Bulletin* **58**: 1428 – 1436. http://www.elsevier.com/wps/find/L01_402.cws_home/mpb_featured

⁷ Trumper K. *et al* (2009), *The Natural Fix? The role of ecosystems in climate mitigation*. A UNEP rapid response assessment. United Nations Environment Programme, UNEP-WCMC, Cambridge, UK. http://www.unep.org/publications/search/pub_details_s.asp?ID=4027

ZSL Indicators and Assessments Unit and WAZA/CBSG Climate Change Task Force (2010) *Reference list of CO₂ threshold levels and associated climate change impact and response issues: An iterative Web-based review*. www.bioclimate.org