

Climate change impact on Australian wildlife conservation and welfare

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We are all hearing how the climate is changing: higher proportion of CO₂ in our air and water; more heatwaves, storms, and droughts; ice sheets melting; sea levels rising and seas becoming more acid; snowfields contracting etc ... so what does it all mean for Australia's wildlife and for conservation and welfare organisations?

Climate change is just the latest in the array of insults we have faced our wildlife with since Europeans first came to Australia. Climate change differs from other threats in that it impacts on the factors that underpin life as well as on the other stressors animals already face. The climate is changing at an unprecedented rate and magnitude, and is well outside the range of natural variability seen in over six hundred thousand years. Even if it were possible to turn off the human-caused greenhouse gas emissions tomorrow, inertia will mean hundreds of years before the changes to the oceans and atmosphere already set in train return to previous levels.

Conservation and welfare have traditionally different levels of focus. Conservation aims to facilitate survival of native populations, species and ecological communities and to control non-native species that affect them. Welfare focuses on the survival of individuals (both native and non-native) and ethical handling and husbandry of captive or domestic individuals.

Conservation planning needs to take account of the types of changes already happening to the environment as a result of climate change e.g. hotter (including heat waves, extreme temps), drier and when rain does come, more likely to be as a storm event or flood, or in different seasonal pattern, bigger more intense fires, changes to vegetation growth as a result of carbon dioxide fertilisation - thicker leaves, some species favoured over others, better water conservation capability and growth where nutrients aren't limiting, changes to coasts as a result of sea level rise and saline intrusion into coastal systems.

Welfare planning also needs to take into account climate change impacts - e.g. design of facilities to hold animals may need to consider likelihood of increased occurrence of heat waves, extreme heat events, more intense storms, greater risk of fire, etc. Response plans for handling aftermath of extreme events such as bushfires and floods also need to be considered.

There may be greater overlap between conservation and welfare in the future. Care of individuals may become a conservation priority as well as welfare priority as species become more endangered as climate change continues to bite.