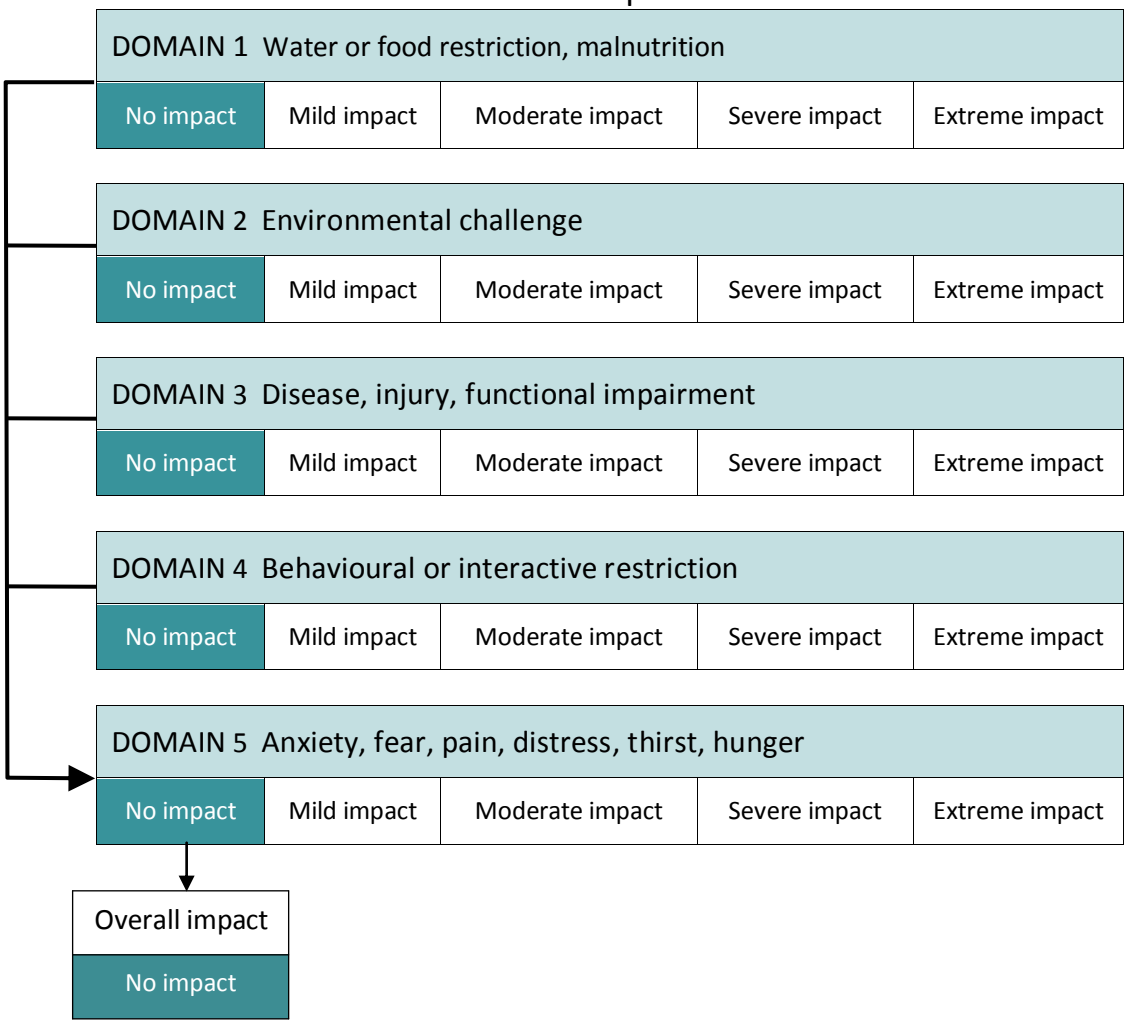
Control method: Poisoning of wild dogs with DOGABAIT® para-aminopropiophenone (PAPP) baits

Assumptions:	▪ Best practice is followed in accordance with the standard operating procedure DOG006. ▪ With PAPP, insensibility only occurs just prior to death and the period from collapse to death can be variable. During the period from collapse to insensibility, when poisoned dogs are incapacitated, they are potentially vulnerable to a range of welfare impacts such as predation, injury, environmental exposure in addition to distress resulting from not being able to perform normal behaviours. The longer this period of vulnerability the more severe the welfare impact prior to death. ▪ Note that Part A of the assessment examines the 'impact on the animal prior to the action that causes death'. Part B then looks at the 'actual mode of death' and the 'extent and duration of suffering caused'. With ingestion of toxic baits there is often little or no impact in Part A and this part is not usually assessed. However, whilst conducting this assessment the panel acknowledge that there will sometimes be significant impacts in some or all of the five domains prior to the death of the animal and recommend that the model be modified in the future to allow for a more detailed and transparent scoring of toxic baits across the five domains in Part A.

PART A: assessment of overall welfare impact



DURATION OF IMPACT				
Immediate to seconds	Minutes	Hours	Days	Weeks

SCORE FOR PART A:	**1**

Summary of evidence:

Domain 1	No impact in this domain.
Domain 2	No impact in this domain.
Domain 3	No impact in this domain.
Domain 4	No impact in this domain.
Domain 5	No impact in this domain.

PART B: assessment of mode of death

Time to insensibility (minus any lag time)				
Very rapid	Minutes	Hours	Days	Weeks
Level of suffering (after application of the method that causes death but before insensibility)				
No suffering	Mild suffering	Moderate suffering	Severe suffering	Extreme suffering

SCORE FOR PART B:	**C-D**

Summary of evidence:

Duration –

After a wild dog has ingested a bait containing PAPP there is a lag period before signs of toxicosis such as lethargy, ataxia (difficulty maintaining balance), vocalising (whimpering to howling), drooling and increased heart rate are observed. As the toxicoses progresses, dogs become unresponsive and cannot move voluntarily, but they still show signs of awareness and generally do not become unconscious (as measured by palpebral/pupillary reflex) until the toxicosis has progressed to agonal breathing (i.e. around 1 to 5 minutes prior to death). Before death there are also episodes of foreleg extension with an arching back of the neck (opisthotonus), urination and straining to defecate.

The duration of the lag phase, duration and severity of symptoms and time to death can be variable. In a pen study of 5 wild dogs that ingested 1000mg PAPP baits, the average time from bait consumption until signs of poisoning was 70 minutes (range 40 to 120 minutes). Average duration of symptoms was 56 minutes (range 27 to 113 minutes) and average time to death was 110 minutes (range 67-233 minutes)[1].

Suffering –

The lag period is likely to be associated with minimal suffering, however after the onset of clinical signs when dogs cannot coordinate body movements it is likely that they will experience some distress, confusion and anxiety as they cannot perform normal behaviours (e.g. standing, moving, feeding, drinking, defensive and escape behaviours). Lethargy and weakness are also potential sources of distress.

In addition—during the later phase of toxicosis when dogs are unable to move but are still conscious—if they were not able to seek appropriate shelter prior to becoming incapacitated, they are at increased risk of predation (e.g. from crows, other wild dogs), aggression (e.g. from other wild dogs) and environmental exposure, which could lead to further distress and suffering.

Summary

CONTROL METHOD:	**Poisoning of wild dogs with DOGABAIT® para-aminopropiophenone (PAPP) baits**
OVERALL HUMANENESS SCORE:	**1C-D**

Comments

In human cases of methaemoglobinaemia, 'chocolate brown' blood and clinical cyanosis are seen at methaemoglobin concentrations of 15 to 20%, but there are usually no symptoms at this stage. When concentrations fall between 20 and 45%, dyspnoea, fatigue, lethargy, dizziness, headache and occasionally syncope (fainting) occur. At concentrations between 45 and 55% there is a reduction in the level of consciousness and with concentrations of 55 to 70%, oxygen-carrying capacity is reduced sufficiently to cause major hypoxic symptoms. Circulatory failure, cardiac arrhythmias, seizures and coma may then be seen. With greater than 70% methaemoglobin, there is a high incidence of mortality[2].

Bibliography

1. Animal Control Technologies (Australia) Pty Ltd (2012). Submission to the Australian Pesticides and Veterinary Medicines Authority for Registration of DOGABATE® Wild Dog Bait: Part 8 Efficacy & Safety. (ACTA: Melbourne, Victoria).
2. Hall, A.H., Kulig, K.W. & Rumack, B.H. (1986). Drug- and Chemical-Induced Methaemoglobinaemia. Med. Toxicol. **1**, 253–260