



31st August
Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600
via website submission

Dear Committee,

Re: Senate inquiry into Australia's faunal extinction crisis

Please accept this updated submission (previously referred to as Submission 176) to the inquiry into Australia's faunal extinction crisis.

Warddeken Land Management Ltd (WLML) is an Indigenous organisation responsible for management the most biodiverse region of the Northern Territory (the Warddeken Indigenous Protected Area) and invest considerable efforts and funding into monitoring the responses of threatened species to our management interventions.

Below we make general comments for the Senate Inquiry into Australia's faunal extinction crisis with respect to the following issues listed in the Terms of Reference.

(a) The ongoing decline in the population and conservation status of Australia's nearly 500 threatened fauna species

WLML and its traditional landowner members recognise that there have been widespread faunal declines across northern Australia, including within the Warddeken IPA. The Arnhem Land plateau has been recognised as an important ecological community which is susceptible to threatening processes and was therefore listed under the Environmental Protection and Biodiversity Conservation Act 1999. Landowners have been concerned about the overall health of faunal populations that inhabit their estates and have observed declines in mammals, reptiles, and birds. It has been recognised that the most marked decline observed on estates has been small to medium sized mammals.

Drivers of the northern Australian decline has been difficult to identify, despite being one of Australia's most pressing biodiversity conservation challenges. However, it is currently thought that the decline of native mammals reflects the interaction between habitat degradation (through overgrazing by feral herbivores and inappropriate fire regimes) and predation processes (namely by feral cats). The invasion of cane toads has certainly had severe impacts on large reptiles and medium-sized carnivorous marsupials (i.e., northern quolls and northern brushtail phascogale).

(b) The wider ecological impact of faunal extinction

The loss of species is significant for landowners as there are strong connections and knowledge to biodiversity. The biocultural heritage of the region (i.e., components and values of the natural environment) are inherited from the past, define the present and which needs to be handed onto future generations. "Native animals are important in our country because they have a connection with us, and we have a connection with them and to the land. We want our native animals to come



back – to maintain our cultural knowledge and pass this onto our children” – Sarah Nabarlambarl Billis. Even the decline of species has created an impact on intergenerational knowledge transfer as many animals are not being observed in the landscape that have been in the past. “When we, Bininj people, see animals, we get excited because they play a big role in our life through ceremonies. This year we have seen lots of animals we love [through monitoring cameras], but we hope this number increases so we can physically show our children rather than relying on rock art to tell the stories” – Terrah Guymala.

(g) the use of traditional knowledge and management for threatened species recovery and other outcomes as well as opportunities to expand the use of traditional knowledge and management for conservation

Of the 272 threatened species in Australia the proportion of their current habitat that is within Indigenous estates is over 50%, therefore, traditional landowners and Aboriginal land management organisations carry an important responsibility in caring for threatened species as they have cared for endemic fauna over the millennia. Country without people has arguably caused perverse outcomes for both people and in the overall health of country. Indigenous managed lands in both developed and developing nations support a higher species richness than existing protected areas. The future health of biodiversity and critical environments globally may be contingent on Indigenous occupancy, use, and stewardship. In the last five years there has been a significant increase in consultation and collaboration with Indigenous rangers and traditional landowners in incorporating traditional knowledge into threatened species recovery. However, much involvement is limited to consultations and the opportunity to participate in western data collection. Much knowledge has been freely shared namely due to the dire circumstances of species decline, though, the assumption all knowledge is free and open can ignore important cultural protocols. Indigenous ranger groups and traditional landowners can have the strongest impact on threatened species recovery and management through their caring for country activities. But there is much resourcing and support that needs to be provided to achieve these goals. Threatened species recovery projects to expand the use traditional knowledge and management for conservation need to be managed and owned by Indigenous people. Through

- a) ownership of their traditional estates
- b) control of their estates through Indigenous ranger programs and
- c) economic independence and resourcing

In these circumstances Indigenous people are afforded the greatest ability to utilise their traditional knowledge for the preservation of threatened species. The ownership of conservation projects is key for management and long-term outcomes. Since 2017 WLML has delivered the Warddeken Biodiversity Monitoring Program and the Mayh (animal) Species Recovery Program with rangers and traditional landowners on their estates to monitor biodiversity and implement on-ground works to support threatened species. Co-designed with landowners’ long-term sites were selected across the IPA in a range of habitat types. Time and resources are allocated into supporting the right people for the right country to participate in the data collection and informed consent is received from landowners on an annual basis. Warddeken rangers are further involved in the processing and reporting of data. This is achieved in a bilingual database to tag images of species in both English and kunwok names. This is important as many young people have only seen these species through camera traps images. This facilitates the biocultural knowledge of species, their names, their stories,



and the traditional ecological knowledge associated. Finally, Warddeken rangers also create reports of species detected within clan estates to provide essential feedback to landowners so they can make informed land management decisions for their estate. There is a strong desire to be involved in the collection, management, and curation of data to accurately assess the health of species populations. Access, training, and involvement with digital technologies to collect, manage, analyse, and use data empowers landowners in directing and making decisions for threatened species. Paramount is the control and protection of cultural knowledge and intellectual property rights of data collected by Indigenous people to ensure best practice operational and research protocols.

(h) the adequacy of existing funding streams for implementing threatened species recovery plans and preventing threatened fauna loss in general

Dealing multiple threats at the landscape scale requires funding from multiple revenues, however, current levels of government funding and grants are insufficient to carry out programs to the level they are required to make desirable impacts. For more than 10 years Warddeken has been involved in an innovative and highly regarded project of fire management – the West Arnhem Land Fire Abatement (WALFA) project. Led by traditional landowners to reinstate customary fire regimes, WALFA was initially funded through a partnership with a global oil and gas company to offset their greenhouse gas emissions. The revenue from carbon credit income is critical in funding the long-term success and ownership of the program for traditional landowners. The WALFA carbon fire management program does directly manage the threat of large-scale, high intensity, late dry season fires. A significant proportion of the fire management program is also firefighting wildfires in the late-dry season to mitigate their impact. In a changing climate this threat will only become more endangering to northern Australia biodiversity. This project has been successful in reducing the frequency and extent of severe fires as well as facilitating more heterogeneous patches of vegetation and managing long-unburnt patches in the landscape.

Managing feral herbivores is also a costly landscape challenge with limited government funding and grants available to make substantial impacts. WLML conducts an annual aerial cull of feral herbivores across clan estates with landowner approval. To achieve the outcomes required of the program (including the training of Warddeken rangers to conduct the cull and consultation with landowners) this program is also supplemented by carbon credit funds. WLML has been an active partner with the IUCN in scoping the potential for the carbon credit market to support feral herbivore culling. With this potential revenue to support the program it would provide the opportunity for expansion and to designate more efforts in priority areas (e.g., threatened species populations and culturally important areas).

From our biodiversity monitoring program, we have been able to establish that threatened species in rocky outcrops and sandstone shrubland complex are faring better than savanna woodland fauna. To date WLML efforts at the landscape scale have supported the persistence of threatened species in the Arnhem Land Plateau, however, it is evident that more interventionist action is required to conserve threatened species particularly with ongoing and emerging threats applying consistent pressure on native populations. Being able to implement threatened species recovery plans and prevent fauna loss in general requires a thorough understanding of where threatened species are persisting in any given environment. Although the threats that are operating across northern Australia may be the same the impact of this will vary between ecosystems. The ability to implement recovery plans is therefore contingent on long-term monitoring data for which there is little to no funding available outside of government or university institutions. The Warddeken IPA Biodiversity



Monitoring Program has been funded through philanthropic funds generated through the Karrkad Kandji Trust and reinvested of carbon credits generated through the WALFA project.

When given additional funding for interventionist works that is beyond 'business as usual' is where direct on-ground works can be supported for threatened species work. Finally, one of the most significant threats to native fauna is the impact of feral cats. There are currently little to no funding avenues available to trail methods or to explore options or to undertake the management of feral cats at the landscape scale. Without appropriate funds the ability for land management organisations to tackle this threat is near impossible and there is little doubt declines and further extinctions will occur without a strong commitment and support from the Australian Government to mitigate the impacts of feral cats in priority regions.

(i) the adequacy of existing monitoring practices in relation to the threatened fauna assessment and adaptive management responses

Broad scale fauna monitoring is undertaken by the NT Government in eight NT National Parks, Kakadu NP, Charles Darwin University on the Tiwi Islands, and by Warddeken Land Management in the Warddeken IPA. Data on most threatened species is collected through these monitoring programs but is generally inadequate for assessing population trends or adaptive management responses. There have been several threatened species projects in the Northern Territory often in partnerships with NRM groups and many land management organisations. However, many of these threatened species' projects are still trying to establish the best methods available to successfully survey for these species. Some of the strongest tools are species distribution models/habitat suitability models where traditional landowners are then able to utilise their traditional ecological knowledge and consider the ecological requirements of these species and then factor this into management for the area. Though this is difficult to achieve with limited data sets. The longer-term responses of threatened species do require longer term funding to support projects. Currently projects are usually only funded for approximately 2 years which is insufficient to determine any trends or responses and therefore long-term monitoring is only viable option.

(l) any related matters

The WALFA project evolved into the landscape-scale model upon which the approved Savanna Burning Methodology was based, enabling registered fire projects to earn and sell Australian Carbon Credit Units (ACCUs). There has been criticism of the savanna burning method, however, it is important to note that fire management in the vast and remote landscapes of northern Australia is incredibly resource intensive and beyond the scope of "business as usual" for Aboriginal ranger groups and traditional owners. Rather than receiving broad criticism Aboriginal land management organisations should be supported to monitor and evaluate these programs as recovering threatened species and maintaining biodiversity is critically important to traditional landowners. We do acknowledge there are gaps in understanding surrounding fire management for biodiversity, for this reason, Warddeken landowners decided to reinvest income from carbon credits into establishing their own long-term monitoring network (Warddeken Biodiversity Project) to understand the impact of our management in the IPA. The investment into this program and the Mayh Recovery Program has occurred over the last six years. Recent research in northern Australia has indicated that the presence of long-unburnt vegetation at the appropriate scale is more important for fauna than heterogeneous patches. It is impossible to manage for long-unburnt patches in northern Australia without strategic fire management, therefore, improvements to the



program can be made through substantial support and access to threatened species data for landowners and Aboriginal land management organisations in the consultation and planning process. Finally, it is important to note that inappropriate fire regimes are not the only threat to biodiversity and without integrated threat management plans (i.e., managing feral herbivores and feral cats) many faunal populations will not adequately recover.

Should any members of your committee wish to explore any of these points further our organisation would be more than happy to assist. We can be best contacted by direct email to: ecology@warddeken.org.au.

Yours sincerely,

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Warddeken Land Management Ltd