Concept Plan SP 2019-067

Structured decision making for translocation

Animal Science

Project Core Team

Supervising Scientist	Megan Barnes
Data Custodian	Megan Barnes
Site Custodian	

Project status as of March 11, 2020, 12:54 p.m.

New project, pending concept plan approval

Document endorsements and approvals as of March 11, 2020, 12:54 p.m.

Project Team	required
Program Leader	required
Directorate	required

Structured decision making for translocation

Biodiversity and Conservation Science Program

Animal Science

Departmental Service

Service 6: Conserving Habitats, Species and Communities

Background

DBCA undertakes species translocations to support four goals: 1) improve the conservation status of threatened taxa, 2) manage genetic diversity of disjunct populations established through translocation, 3) re-establish species in areas where they have experienced local extirpation and threats have been ameliorated, 4) ecosystem restoration. Translocation is a valuable conservation tool that can yield significant benefits but is costly and high risk. Decisions on translocations must include thorough consideration of potential benefits, weighed against costs and risks of the translocation and alternative options. It is important to manage source and translocated populations holistically so that genetic diversity of all populations (within WA and nationally) is maximised, and risks to source populations are minimised. Structured Decision Making is an effective process designed to ensure transparent and effective decision making under risk and uncertainty, and where tradeoffs are present. Use of structured decision making (SDM) is recommended best-practice for managing translocation risks (IUCN SSC 2013 Guidelines for Reintroductions and other conservation translocations Version 1.0).

Aims

The project has two primary aims:

1. Develop a strategic framework for translocation decision making
2. Identify strategic priorities for translocation for case study species.

These aims will be achieved through the application of Structured Decision Making to a range of case studies to identify core principles. In each case costs, benefits and risks of proposed translocation strategies will be evaluated. The case study work will focus on a mix of single and multi-species translocations proposed over the next three years as part of national safe haven construction which have source populations in Western Australia to identify safe low-risk harvest strategies that maximise conservation benefits for all target species.

Expected outcome

An explicit approach to assessing multi-species translocation risks and benefits will be developed, supporting transparent and accountable risk management, and ultimately enhancing translocation success, source population security, and ecosystem benefits. The project will result in the development and application of novel methods, inform translocation decision making, and align DBCA practice with IUCN best-practice recommendations.

Strategic context

Translocation risks, strategic benefits and costs were raised by five of seven regions in consultation about recurring challenges where SDM could increase benefits and accountability. Using SDM as a routine method to manage translocation risks also aligns DBCA with global best practice, as recommended in the IUCN SSC 2013 Guidelines for Reintroductions and other conservation translocations (Version 1.0).

This project contributes to the following BCS strategic goals and key deliverables of the Animal Science and Species and Communities Program Plans including:

- Biodiversity, conservation and recovery programs are based on scientific knowledge – recommendations regarding conservation actions necessary to maintain sustainable populations, or recovery of, targeted species including the management of threatening processes; recommendations regarding the conservation status of targeted species; best practice guidelines that maximise translocation success; planning documents are prepared to guide the conservation of threatened species.

- Mitigation of pressures and threats to terrestrial ecosystems – strategies to enhance resilience of native fauna to habitat disturbance.
- Scientific knowledge is available to inform adaptive management and decision making – development of decision support tools to improve capacity for timely, effective decisions.
- Conservation advice based on scientific information – translation of research outputs in formats appropriate to the target audience to encourage adoption.
- Science is innovative and agile in assessing and adopting new methodologies - Identify and realise opportunities for adoption of technical advances and innovative approaches.
- Effective science partnerships enhance conservation outcomes – identification of external collaborative fauna conservation research opportunities to deliver on shared goals.

Expected collaborations

Student Paper: Network interaction model for DHI: Michael Bode (QUT), Katie Peterson (JCU) (completed ~Jan2020). Travel to convene a workshop to initiate this process (~$2000) was funded by QUT.

Student Paper: Climate forecasting to integrate stochastic risk from climate change on source populations. Michael Bode (QUT) and student - Michael Bode (QUT).

David Pannell (UWA) – student on risk assessment and value of information will evaluate the utility of monitoring information for 3 case studies (up to 3 papers if recruited).

Proposed period of the project

Sept. 15, 2019 – Dec. 15, 2021

Staff time allocation

Role	Year 1	Year 2	Year 3
Scientist	0.9	0.9	0.9
Technical			
Volunteer			
Collaborator	1.0	1.1	1.1

Indicative operating budget

Source	Year 1	Year 2	Year 3
Consolidated Funds (DBCA)	3000	2000	0
External Funding	2000	0	0