Concept Plan SP 2020-008

Horizon scanning priority social science research needs to support DBCA Corporate Strategic Directions

Ecosystem Science

Project Core Team

Supervising Scientist	Andrew T Knight
Data Custodian	Andrew T Knight
Site Custodian	

Project status as of May 20, 2020, 3:55 p.m.

New project, pending concept plan approval

Document endorsements and approvals as of May 20, 2020, 3:55 p.m.

Project Team	granted
Program Leader	required
Directorate	required

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Biodiversity and Conservation Science Program

Ecosystem Science

Departmental Service

Service 7: Research and Conservation Partnerships

Background

Strategic planning of science is undertaken by Biodiversity Conservation Science (BCS) to support the Strategic Directions of DBCA. This ensures that the science delivered is usefully directed through BCS scientific programs to support DBCA business process, such as those of Regions and Districts. This approach contributes to ensuring effective delivery of biodiversity and conservation science that is collaborative, innovative, ethical and outcome driven. Useful science provides timely information upon which DBCA decisions can be based and defended and enhances the return-on-investment of DBCA funding and resources for core business activities (e.g., ensures each dollar invested returns the greatest outcomes).

Many business processes within DBCA occur at the intersection of ecological, economic and social systems. For example, management of conservation reserve requires understanding: the ecology of species and communities within and surrounding the reserve (i.e., ecological science); drivers of pressures upon the reserve, which often may result from commercial activities, including pastoralism or urban development (i.e., economics), and; the ways in which people, such as visitors, respond to, and interact with, biodiversity within the reserve (i.e., social science). BCS is well recognised for delivering excellent ecological science that informs biodiversity conservation. Social science is recognised by BCS as an important complement to ecological science for supporting the strategic directions of DBCA.

Social science can usefully inform DBCA business processes in the immediate and short-term. For example, it can provide information on socially acceptable species management strategies on land identified for urban development. Meeting *current* information needs ensures contemporary issues can be managed effectively to the satisfaction of stakeholders. However, current biodiversity conservation information needs are not necessarily an accurate and precise guide to *future* information needs, as the places and issues that DBCA manage (e.g., conservation reserves) or have influence over (e.g., lands under assessment for future development) can change rapidly across multiple spatial and temporal scales. For example, places targeted by proponents for urban development shift in response to factors over which DBCA has little or no control, for example, demands for housing. An ability to make robust predictions as to what social science may be required in the future allows DBCA to anticipate needs; allocate time, funding and resources; and plan for the implementation of core business processes, including for research.

Horizon scanning is a methodology widely used to identify priority research directions for organisations and the individuals within them. It applies scientific techniques to systematically anticipate, identify and examine *current* information gaps usefully filled by research (resources permitting), as well as *future* information needs. Social science prioritised through horizon scanning can provide information that enhances evidence-based decision-making, program cost-efficiency, better targets conservation actions, and, ultimately, a positive perception of DBCA by the public. Horizon scanning is used by conservation organisations to identify research priorities that inform the work plans of individual scientists, including Department for Environment, Food and Rural Affairs (DEFRA) in the United Kingdom; the United States Forest Service; and the German Federal Environment Agency.

Aims

The proposed research aims to Identify priority social science research needs that most usefully support delivery of DBCA business processes; and 2) deliver a small number of Science Concept Plans for consideration by the BCS Leadership Team that can form the basis of a work plan of social science needs for DBCA, in the first instance to inform Andrew Knight's work plan.

By delivering on these two aims, the research can simultaneously; 3) trial an horizon scanning methodology to determine if it is useful for future research prioritisation processes; 4) present to staff an approach that harnesses

their expertise, providing them a sense of contributing towards DBCA business processes; 5) providing another process through which BCS can link with Parks and Visitor Services (PVS), notably for aligning complementary research directions.

Ultimately, this work provides an opportunity to enhance the evidence-base, effectiveness and cost-efficiency of activities delivering DBCA Corporate Strategic Directions through the provision of timely, useful and scientifically robust social science that meaningfully engages the values of key stakeholders.

The horizon scanning methodology is founded upon an expert elicitation technique known as the Delphi method. It comprises a structured approach to decision-making in complex contexts where documented data and information (or opportunities for gathering these) is lacking, but where expert knowledge is available. The Delphi method has been refined and applied in a diverse range of contexts. It is proposed to apply a methodology refined from the approach of Gluszek et al. 2020, which uses a remote, internet-based platform for eliciting knowledge using Qualtrics software. This is important because of the vast distances across which DBCA staff are dispersed across WA.

The horizon scan methodology comprises four primary stages: 1) scoping the policy context through a document analysis so as to understand the bounds of DBCA core business; 2) framing the horizon scanning activity within DBCA to identify objectives, experts, research questions and appropriate methods by seeking insights from senior staff; 3) developing strategic intelligence to identify, synthesize and rank priority social science research topics undertaking the Delphi technique with a wide range of staff; and 4) finally, sense-making I will qualitatively assesses the feasibility, importance and complementarity of topics for application within DBCA.

These four stages are followed by stages that define 'applied' research and are implemented to mainstream the project outputs into DBCA activities. These include 1) returning the findings to staff who've participated in the horizon scan through 'topic summaries to ensure that they are fully-informed about the outcomes of the horizon scan; 2) interpreting the topics as a small number of Science Concept Plans (SCP) for approval by the BCS Leadership Team, which in turn form the basis of a research plan by Dr Andrew Knight; 3) developing partnerships and funding applications to initiate projects guided by the SCPs; and finally 4) evaluating the horizon scanning methodology is evaluated and refined, so that the pros and cons of the methodology can be identified, and a decision made as to the utility of the overall approach.

Expected outcome

A small number of Science Concept Plans (perhaps three, depending on the research directions identified) founded in social science that strategically assist in supporting the delivery of Department of Biodiversity, Conservation and Attractions (DBCA) Corporate Strategic Directions and the Science Strategic Plan 2018-21. These SCPs will form the basis of the workplan of Andrew Knight, Social Scientist, BCS for the next three years.

Strategic context

The importance of social science to DBCA permeates through both the 'DBCA Strategic Directions 2018-21' and the 'DBCA Science Strategic Plan 2018-2021'. People and their communities are directly or indirectly relevant to most of the business processes of the department, as people either implement, fund or are affected by both internal and/or external DBCA activities. As such, social science can directly and indirectly support delivery of departmental strategic directions.

The development and implementation of an horizon scanning activity (as one specific example) to identify priority social science research topics supports achievement of five 'Strategic Directions' including : 'Biodiversity and conservation'; 'Natural and cultural values'; 'Attractions'; 'Fire management'; and 'Our community and partners'. Such social science can be enacted in many ways, including, for example, social science can be used to inform: 1) the building of partnerships between DBCA and stakeholder groups such as Traditional Owners, resource user groups and the public; 2) the design and evaluation of volunteer, citizen science and community engagement programs that can educate and inspire the broader public, and; 3) the management of conservation reserves as tourism sites.

The proposed research aims to complement, and not duplicate, the social science research currently being undertaken in the Parks and Wildlife Service, and other groups within DBCA. For the past 13 years, social science has been, and continues to be, undertaken by Dr Amanda Smith and her group with a primary focus on core strategic areas relating to Parks and Visitor Services. For this reason, Dr Smith has been invited to be a part of the project team.

Ultimately, social science can assist with ensuring resources are invested for the best public outcome and value, which is a core responsibility of DBCA.

Expected collaborations

Research relationships that underpin the effectiveness of this research are internal to DBCA. In the first instance, Dr Andrew Knight will lead the project in collaboration with Dr Amanda Smith (PVS). This partnership will ensure coordination across the social science activities of BCS and PVS. As Executive Director, BCS, Dr Margaret Byrne will play a key role given her oversight of BCS activities. Key DBCA staff 'experts' responsible for directing or implementing business activities will be sought to provide their insights. These will include Executive Directors, Regional Managers, District Managers, members of the BCS Leadership Team and Conservation Leaders Working Group, and other staff identified as involved in activities with potential relevance for social science during the research process

Proposed period of the project

June 1, 2020 – July 31, 2020

Staff time allocation

Role	Year 1	Year 2	Year 3
Scientist	0.4	N/A	N/A
Technical	N/A	N/A	N/A
Volunteer	N/A	N/A	N/A
Collaborator	N/A	N/A	N/A

Indicative operating budget

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