

Business Plan 2010 - 2013

November 2010



Australian Government



Tasmania

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I Executive Summary

The Save the Tasmanian Devil Program (STDP) was established in 2003 following a national workshop of specialists on the decline of the Tasmanian devil due to Devil Facial Tumour Disease (DFTD). At that time the Tasmanian and Australian Governments committed to a five year program aimed at characterising the emerging disease and its impacts on the Tasmanian devil and developing effective conservation strategies. The program successfully identified the highly unusual nature of the disease and the means of its transmission.

At the completion of the first phase of the program in 2008, the Tasmanian and Australian Governments committed to a second five year phase with the objective of securing the species and its ecological role in the wild in Tasmania. This phase commenced with a Population and Habitat Viability Assessment (PHVA) workshop facilitated by the International Union for the Conservation of Nature (IUCN). The PHVA workshop identified the establishment of an insurance population and the management of the disease in the wild as key priorities for the program, CBSG (2008).

This Business Plan lays out the key priorities, strategies and actions for the program for the next three years from 2010 -2013. This plan also sets out the timetable for reporting, review and amendment of the strategic plan and business plan. A key principle of the STDP is adaptive management and the program structure and review processes have been developed to enable the timely assimilation of monitoring and research data into management planning and decision making processes.

At this time, the program has seen a number of highlights including:

- the establishment of an effective multi-institutional partnerships to support the insurance meta-population,
- the building of significant capacity in Tasmania and on the Australian mainland to house and maintain the insurance meta-population,
- the acquisition of over 66% of the required founders for the insurance meta-population,
- significant progress in understanding and monitoring the spread of disease,
- the development of techniques to maintain effective Tasmanian devil populations in diseased areas.

As this phase of the program works towards its conclusion in 2013, the future challenges are to:

- evaluate the alternative strategies used to support the insurance meta-population to ensure the most cost effective options are identified,
- complete the establishment of an insurance meta-population that is sustainable for the next 50 years,
- consolidate the monitoring and management strategies for Tasmanian devil populations in the wild to a point that is sustainable in the longer term.

2 Program Overview

The survival in the wild of the world's largest carnivorous marsupial, the Tasmanian devil (*Sarcophilus harrisii*), is threatened. The Tasmanian devil population has been in decline since the mid-1990s due to the impacts of a transmissible cancer, Tasmanian Devil Facial Tumour Disease (DFTD), which is characterised particularly by gross tumours around the mouth, head and neck. Death by starvation and breakdown of bodily functions appears to occur in all cases, usually within 6 months of the appearance of the first tumour.

The persistence of the disease at low population densities suggests that extinction of the devil in its natural range is possible within 25 years. As a direct result of the rapid population decline due to DFTD the Tasmanian devil was listed as Endangered under Tasmanian and national legislation in 2008.

The program is guided by the Save the Tasmanian Devil Strategic Plan (STDP 2007b) and the National Tasmanian Devil Recovery Plan (DPIPWE in prep.).

The vision of the program is an enduring and ecologically functional population of Tasmanian devils living wild in Tasmania.

The Strategic Plan identifies three key objectives for the Save the Tasmanian Devil Program:

- To maintain the genetic diversity of the Tasmanian devil population.
- To maintain the Tasmanian devil population in the wild.
- To manage the ecological impacts of a reduced Tasmanian devil population across its natural range.

While this phase of the program will conclude in 2013, the effort needed to save the Tasmanian devil will need to be maintained in the longer term. This program is aimed at providing the initial investment in infrastructure and knowledge that can then be used as the foundations for the long term conservation effort needed to secure this species.

2.1 Background to the Partnership

In 2008 the Tasmanian Government committed \$15 million over the period 2008 to 2013 to support this program. At the same time the Australian Government committed an additional \$10 million over the same period. An initial Business Plan was established at that time (STDP 2008).

This business plan has been drafted assuming a program budget of \$25 million over 5 years. Donations from the general public and contributions from corporate partners may also contribute significantly, through the "Save the Tasmanian Devil Appeal" and other private fundraising efforts.

2.2 Program Vision

The vision of the program is *an enduring and ecologically functional population of Tasmanian devils living wild in Tasmania* (DPIPWE 2007b).

2.3 Program Design

A Program Governance

Using the nomenclature of the Tasmanian Government project management guidelines, the following roles are identified.

Corporate Clients are the partners in the program represented by the respective Tasmanian and Australian Government Ministers, The Hon. David O’Byrne and The Hon. Peter Garrett respectively. The Corporate Clients are the champions of the program and have ultimate authority. They promote the benefits of the program to the community.

Program Sponsor is Dr John Whittington, Deputy Secretary, Department Primary Industries, Parks, Water and Environment (DPIPWE). The Program Sponsor has ultimate accountability and responsibility for the program.

Business Owners are Penny Wells, General Manager (Resource Management and Conservation) and Alex Schaap, General Manager (Biosecurity and Product Integrity), DPIPWE. The Business Owners are responsible for managing the program outputs to realisation. Dr Howel Williams, Director (Policy & Projects) is their representative and provides executive management for the program.

Program Manager is Andrew Sharman (RMC, DPIPWE). The Program Manager is responsible to the Business Owners for the delivery of the program and provides reports to the Steering Committee on progress and issues.

The program’s governance structure is presented in Figure 1.

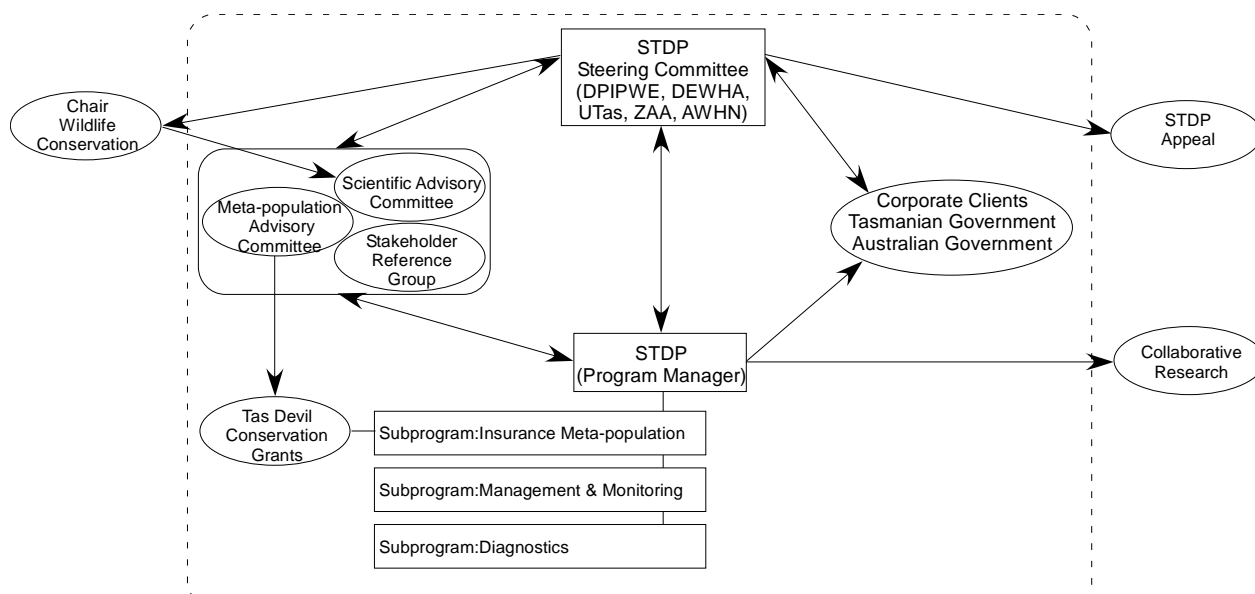


Figure 1. Governance structure for the Save the Tasmanian Devil Program (STDP)

STDP Steering Committee – is responsible for policy and resource allocation decisions essential to the delivery of the program outputs and outcomes. The Committee is also responsible for oversight of the program components in the Business Plan, including risk management. The Steering Committee is Chaired by the Program Sponsor, and has as members representatives of the Corporate Clients (DPIPWE and DEWHA), and key partners: University of Tasmania, Australian Wildlife Health Network and Zoo and Aquarium Association (ZAA).

The Steering Committee meets quarterly and has a number of subordinate committees which provide advice and recommendation regarding specific aspects of the program such as the management of the insurance population, scientific direction and stakeholder issues. The committees are:

Scientific Advisory Committee (SAC) - assists the Steering Committee with the development of science strategy, evaluation of science quality and advice on the capability required to support the program. The SAC also provides regular evaluations to the Steering

Committee of the success and effectiveness of scientific programs in meeting the program's objectives.

The SAC consists of up to nine members appointed by the Steering Committee to provide a broad range of knowledge, skills and experience in relevant areas of science. The SAC will be Chaired by the Professor, Conservation Biology at the University of Tasmania.

Meta-population Advisory Committee (MAC) - provides oversight for the development of the insurance meta-population framework and a range of strategic, management and technical advice to the STDP Steering Committee on matters relating to the establishment and maintenance of the insurance meta-population.

The MAC has members drawn from DPIWPE, DEWHA, ZAA, the IUCN's Captive Breeding Specialist Group, and an independent expert in small population management.

Stakeholder Reference Group (SRG) - provides a channel for communication between the STDP Steering Committee and the key stakeholders in the program. The SRG meets quarterly. It is Chaired by the Business Owners representative and has membership from bodies with interests in conservation, animal welfare, primary industry and tourism.

B Program Structure

The Save the Tasmanian Devil Program (STDP) is managed as a portfolio of activities grouped under sub-programs. The components of the program are:

Program management – provides for the management of the program and services that are shared across the program. Specific activities include:

- coordination and management of the program,
- scientific direction and servicing of the SAC,
- communication program including community awareness and education.

This component also provides support to the Save the Tasmanian Devil Appeal and the Chair of Wildlife Conservation at the University of Tasmania.

Insurance Population sub-program – provides for the establishment of the insurance population, the maintenance of the insurance population and the assessment of alternative strategies to build the insurance population. Specific activities include:

- meta-population framework, species coordination services and support to the MAC,
- captive management in quarantine for the production of founders,
- management of relationships with partners and potential partners,
- design specifications, construction and evaluation of Free Range Enclosures,
- evaluate and establish landscape fencing and island populations.

This component of the program also provides for the Tasmanian Devil Conservation Grants administered through ZAA.

Monitoring and Management sub-program – provides for monitoring of devil populations and the ecological impact of decline in populations, surveillance of the disease spread and disease suppression trials. Specific activities include:

- broad-scale monitoring of devil populations,
- disease suppression trials and evaluation,

- disease surveillance,
- monitoring and assessment of ecosystem impacts.

Diagnostic Services and Research sub-program – provides support across the program for diagnostics and veterinary support. The sub-program also provides investigations of the evolution of the disease and potential treatments. Specific activities include:

- development of diagnostic tests and provision of diagnostic services,
- veterinary services to the insurance population,
- investigations of the evolution of the disease,
- improved understanding of the behaviour of the disease,
- investigation of resistance, and treatment.

This component of the program also provides for the management and facilitation of collaborative research that supports the STDP.

C Program Logic

The Program Logic for the Save the Tasmanian Devil Program has been developed to reflect the program across the anticipated performance spectrum. The Program Logic is a simple schematic to show how the program will transform the inputs to the program through activities into outputs of the program and ultimately into outcomes.

The Program Logic shows the inter-relationship of the various activities and their contribution to the outputs. The Program Logic also provides a foundation for evaluation of the activities of the program and their contribution toward achieving the ultimate goals of the program.

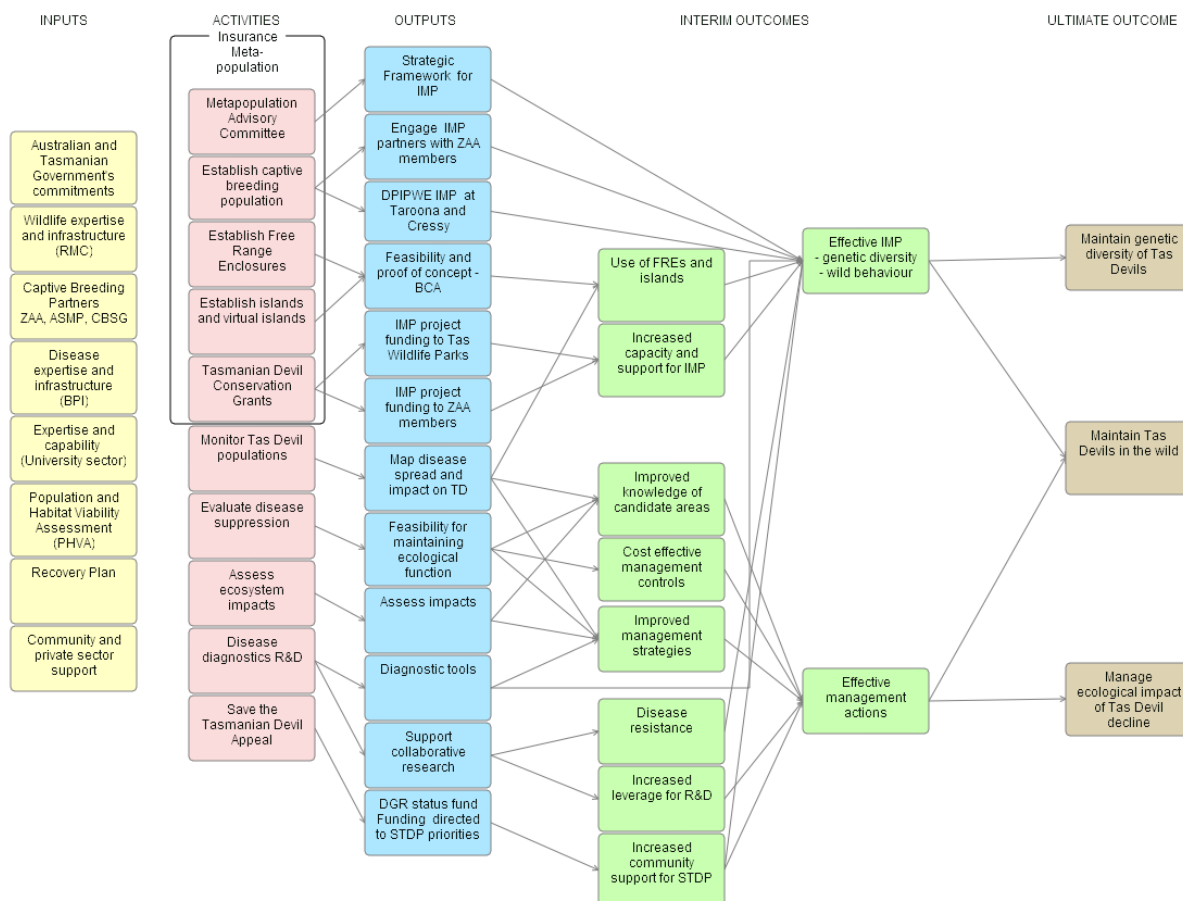


Figure 2 The Program Logic for the Save the Tasmanian Devil Program

D Relationship to Other Activities

Recovery Plan

In 2009 the Tasmanian devil went through an uplisting process under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). At that time the Threatened Species Scientific Committee recommended that a Recovery Plan be developed for the species.

The Australian and Tasmanian Governments have been collaborating in the development of the Recovery Plan and a draft is being prepared for public comment under the Tasmanian statutory process prior to adoption under the EPBC Act.

The *Recovery Plan for the Tasmanian devil* (*Sarcophilus harrisii*) (DPIPWE in prep.) will provide a broad set of actions to accomplish recovery of the species. The activities of the STDP fall entirely within the activities outlined in the draft Recovery Plan.

2.4 Program Goals and Multiyear Targets

A Program Strategic Goal

The long-term (25+ years) strategic goal of the Save the Tasmanian Devil Program is to improve the conservation status of the Tasmanian devil and maintain its ecological role, through stabilising and recovering the population (DPIPWE in prep.).

B Program Performance Goals

The Performance Goals for the program are:

By 2013, manage an insurance population that is disease-free, genetically representative of the species and able to produce animals for release into the wild (DPIPWE 2007a).

By 2013, implement demonstrably effective methods for monitoring the population and maintaining the effective ecological role of the Tasmanian devil in the wild.

C Program Multiyear Targets

The multiyear targets for the program are provided in Table I.

Metric	2010/11	2011/12	2012/13
Inputs			
Funds committed (\$ million)	5	5	5
Funds leveraged (targets to be developed)	tba	tba	tba
Funds raised STDP Appeal (\$ million)	1	tba	tba
Monitoring and management			
Population Monitoring (targets in development)	tba	tba	tba
Disease front monitoring- trap nights	200	200	200
Long term monitoring sites	3	6	10
Insurance –Population			
Founders included (n)	110	130	150
% genetic diversity	>95	>95	>95
% risk of extinction	<2	<2	<2
sex ratio	50:50	50:50	50:50
Average cost/devil in IMP (\$ thousands)	<8	<8	<8
FREs established	3	5	7
Island and semi-wild populations	1	2	3
Funding to IMP partners (\$ thousands)	500	tba	tba
% IMP genotyped	10	50	90
Program Management			
Persistence of devils in LTM sites (%)	≥90	≥90	≥90
Retain genetic diversity of devils (%)	>95	>95	>95
Ecological impact indicators (in development)	tba	tba	tba
% STDP Appeal funds invested in program priorities	>80	>80	>80

Table I Save the Tasmanian Devil Program, multiyear targets

3 Deployment Plan

3.1 Sub-program Plan - Monitoring and Management

A Sub-program Support of Program Strategic Goal

The Monitoring and Management sub-program supports the program's strategic goal mainly through activities that contribute to the maintenance of its ecological role and the stabilisation of the population. These are achieved through:

1. Understanding the progression and impact of DFTD on the wild Tasmanian devil population.
2. Developing measures to manage the impact of DFTD on Tasmanian devil populations.
3. Understanding the ecological consequences of a reduced Tasmanian devil population over the natural range and developing management strategies to minimise negative impacts, including those associated with feral predator populations such as cats and foxes.

B Sub-program Support of Program Performance Goals

The Monitoring and Management sub-program supports the program's performance goals associated with monitoring of the populations and maintaining the effective ecological role. This is achieved through:

1. Determining disease distribution and rate of disease spread by undertaking extensive 'snap-shot' and roadkill surveys across the disease free area, focussing on the suspected disease front.
2. Monitoring the status of devil populations and understanding the progression and impact of DFTD on the wild Tasmanian devil population.
3. Assessing the ecological impacts of a reduced Tasmanian devil population across their natural range.
4. Assessing the performance of disease suppression by culling diseased animals within an isolated population.

C Sub-program Challenges and Barriers

The development and implementation of a broad scale monitoring program for a cryptic species such as Tasmanian devils across the extensive range of habitat in which they occur presents significant challenges. These include:

- *Detection of diseased animals when disease prevalence is low* – the program is working on novel monitoring techniques which allow for greater opportunities to detect devils in the environment.
- *Access to land to conduct monitoring and management activities is dependent on agreements with land owners or managers* – the program has an extensive communication strategy and also uses the Stakeholder Reference Group to communicate issues to peak bodies such as the Tasmanian Farmers and Graziers Association and Private Forests Tasmania, both of which represent significant land owners.
- *Physical, financial and human resource requirements of traditional trapping involving physical examination of animals are significant.* – the program is investing in the acquisition of

monitoring equipment and the development of monitoring strategies that should significantly reduce the cost of monitoring programs in the future.

D Sub-program Milestones and Decision Points

The STDP is conducting a review of the milestones and decision points for all activities in sub-programs. The review will be completed by the end of 2010 and incorporated into planning documents.

The current milestones for the Monitoring and Management sub-program in 2010/11 are:

- Complete population surveys (i.e. 200 trap nights each survey) at 10 sites along the disease front.
- Extend the roadkill project to volunteer groups to check for disease at key locations thought to be disease free.
- Establish sentinel camera monitoring stations in disease free areas.
- Conduct broad scale population surveys across multiple sites throughout the natural range of Tasmanian devils.
- Maintain a GIS layer of records of diseased and disease-free Tasmanian devils.
- Monitor the population and determine sub-population trends to identify or detect local extinctions, potential resistance, and factors that may affect rate of spread of DFTD.
- Provide tumour samples from across the geographical range of DFTD to support the Diagnostic Service and Research sub-program.
- Establish permanent plots and collect baseline data on key ecological parameters in core habitat across diseased and disease free Tasmanian devil populations.
- Design and implement a monitoring program to detect changes in these parameters as Tasmanian devil numbers decline.
- Scope and commence preparation of an assessment of options to address ecological impacts resulting from reduced Tasmanian devil populations.
- Monitor and respond to changes in the contribution of other threats to the conservation of the Tasmanian devil.
- Conduct a frequent, systematic trapping program to find, remove and euthanase infected devils and to estimate the prevalence of DFTD in a relatively isolated devil population.
- Estimate the proportion of devils in the diseased target area that are not being trapped, and if justified, develop alternative strategies to detect and remove diseased individuals - possibly involving remote cameras and alternative capture methods.
- Develop epidemiological and population modelling of the efficacy of disease suppression strategies on prevalence of the disease and population vital rates, including population growth and disease transmission rates.
- Complete a cost-benefit analysis of the effect of disease suppression strategies on short and long term extinction risk and on population growth rates.

The current decision points for the Monitoring and Management sub-program in 2010/11 are:

- Review disease suppression activities for effectiveness and cost-benefit.

3.2 Sub-program Plan - Insurance Population

A Sub-program Support of Program Strategic Goal

The Insurance Population sub-program supports the program's strategic goal mainly through activities that contribute to recovery of the population. This is achieved by:

1. Implementing a comprehensive insurance population strategy including husbandry and management practices to minimise the risk of DFTD.
2. Evaluating the feasibility and providing proof of concept for Free Range Enclosures, landscape fencing and island populations as part on an insurance meta-population.

B Sub-program Support of Program Performance Goals

The Insurance Population sub-program supports the program's performance goals associated with managing an insurance population that is disease-free, genetically representative of the species and able to produce animals for release into the wild (DPIPWE 2007a). This is achieved through:

1. Establishing an insurance meta-population consisting of a group of populations housed across a number of sites or facilities (CBSG/DPIPWE/ZAA 2009).
2. Coordinating breeding and animal transfers within and between populations managed as part of the meta-population with the aim of controlling population size, retaining genetic diversity and managing disease risk.
3. Building the capacity of partners and potential partners to contribute to the insurance population.
4. Investigating the feasibility and providing proof of concept for alternative captive breeding facilities such as Free Range Enclosures, landscape fencing and island populations.

C Sub-program Challenges and Barriers

The Insurance Population Sub-Program represents a major component of the Save the Tasmanian Devil Program. Significant challenges are:

The multiple partnerships involved in delivering husbandry facilities creates problems with establishing basic requirements – the STDP has used Memoranda of Understanding, agreed guidelines and standards and is developing Service Level Agreements to spell out the minimum requirements needed for the integrity of the program.

The cost of captive breeding is high and may not achieve the best results in terms of breeding success and the maintenance of wild behaviours – the program is actively evaluating alternative strategies such as Free Range Enclosures, landscape fencing and island populations.

D Sub-program Milestones and Decision Points

The STDP is conducting a review of the milestones and decision points for all activities in sub-programs. The review will be completed by the end of 2010 and incorporated into planning documents.

The current milestones for the Insurance Population sub-program in 2010/11 are:

- Establish and maintain three free-range enclosures containing up to 60 Tasmanian devils.
- Complete an assessment of the risks, potential impacts, and feasibility of establishing a sub-population of Tasmanian devils on an island.

- Complete an assessment of the feasibility of installing large-scale fences to control disease spread across the entire natural range of the Tasmanian devil.
- Isolate a free-ranging sub-population of healthy Tasmanian Devils from diseased Tasmanian Devils on an island or through the installation of barriers within natural habitat.
- Maintain DPIPWE quarantine facilities as effective components of the insurance population and coordinate animal movements as part of the insurance population.
- Provide healthy devils from the wild as founders for the insurance population when required.
- Develop standards and guidelines for the management of Tasmanian devils in free range enclosures.
- Manage the husbandry and breeding of Tasmanian devils within free range enclosures in Tasmania as part of an insurance meta-population.
- Provide technical advice, veterinary support and coordination of a Tasmanian captive management group consisting of wildlife parks and DPIPWE population managers.

The current decision points for the Insurance Population sub-program in 2010/11 are:

- Assess the feasibility of establishing a sub-population of Tasmanian devils on an island.
- Assess the effectiveness of FREs for cost, breeding success and maintenance of wild behaviours.

3.3 Sub-program Plan – Diagnostics Services and Research

A Sub-program Support of Program Strategic Goal

The Diagnostic Services and Research sub-program supports the program's strategic goal through activities that contribute to the stabilisation and recovery of the population. This is achieved through:

1. Understanding DFTD transmission to ensure that husbandry and management practices minimise transmission risk.
2. Understanding the nature of DFTD and its relationship with the genome and the biology of the Tasmanian devil throughout the natural range of the species.
3. Developing and applying vaccines and treatments for DFTD.

B Sub-program Support of Program Performance Goals

The Diagnostic Services and Research sub-program supports the program's performance goals associated with management of the insurance population, ensuring that it is genetically representative and demonstrating methods to maintain effective ecological role. This is achieved through:

1. Providing diagnostic support for the field program and insurance population.
2. Monitoring and understanding DFTD and its evolution.
3. Conducting research into disease prevention and treatment.
4. Providing laboratory support for collaborative research.

C Sub-program Challenges and Barriers

The planning and delivery of diagnostic services and research for a program of this scale and diversity presents significant challenges. These include:

The unique nature of DFTD as a transmissible cancer – there is only one other known disease of this type. DPIPWE laboratories were responsible for the work that identified DFTD and this together with an actively managed collaborative research program has resulted in significant leverage with internationally recognised disease and genetic research groups.

The lack of a DFTD pre-clinical diagnostic tests creates challenges in determining disease status – this is a key focus for research within the program and for collaborative research. Work on vaccine development and disease resistance may also prove diagnostic tools.

Ensuring that knowledge from collaborative research is available to the program independent of the publication cycle - the program has developed data and sample sharing agreements with moderate success. A manager for the program's science program is being appointed to actively manage this need.

Support for collaborative research is demanding and competes with other priorities of the program -. the program recognises the value of effective collaboration. A rigorous selection process for projects that seek support ensures that support is focused on those projects that best support the research priorities of the program.

D Sub-program Milestones and Decision Points

The STDP is conducting a review of the milestones and decision points for all activities in sub-programs. The review will be completed by the end of 2010 and incorporated into planning documents.

The current milestones for the Diagnostic Services and Research sub-program in 2010/11 are:

- Develop monoclonal antibodies against Devil Facial Tumour cells, check the specificity of these monoclonal antibodies and explore the possibility of using DFTD cell specific monoclonal antibodies for diagnosis and treatment of DFTD tumours.
- Develop a diagnostic test for pre-clinical identification of DFTD for application in captive breeding and disease control strategies as an early diagnosis for the disease.
- Investigate and monitor the genetic diversity of wild and captive devils and provide this information to the insurance population captive breeding managers for evaluation of options for genetic management.
- Develop several DFTD tumour cell vaccines using fused DFTD-chicken (or other) cells.
- Immunise DFTD devils to investigate if vaccines will have significant treatment effects on tumours of DFTD devils.
- Conduct and support research on the nature of DFTD and its relationship with the genome and the biology of the Tasmanian devil.
- Provide data for modelling disease risk and impact on populations currently outside the known diseased area.

3.4 Cross-cutting issues (whole of program)

A Communication

The STDP Communications Strategy (Feb. 2009) outlines key areas of activity as:

- Media Management,
- Marketing, Sponsorship and Fundraising,
- Education and Community Awareness,
- Stakeholder Management,
- Program Governance and Team Building.

The STDP website is a key communication tool and identifies the program as the official response of the Tasmanian and Australian Federal Governments to the Devil Facial Tumour Disease. The website (www.tassiedevil.com.au) provides information, research and management updates, technical reports, newsletters as well as key strategic documents and communiqués from the Steering Committee. It provides links to relevant websites including access to the Save the Tasmanian Devil Appeal, STDP volunteer registration and links to participants in the insurance meta-population (such as ZAA members and Tasmanian wildlife parks).

The STDP produces quarterly newsletters featuring all key partners in the program (including DPIPWE, UTAS, zoos and wildlife parks) and it is distributed in hard copy and electronically to stakeholders. The program has established social networking sites on *facebook* and *twitter* to provide updates on activities to a wide range of people interested in the program.

B Information Management

Data and information from a number of the STDP's activities, is lodged on the Natural Values Atlas (NVA), a web-based collection of DPIPWE's principal natural values data holdings on more than 20,000 species. The NVA can be accessed at www.naturalvaluesatlas.tas.gov.au.

Collaborative research activities are managed through data and specimen sharing agreements that require collaborators to provide information to the program for inclusion on the NVA. Laboratory and diagnostics data from all testing is retained within a separate database however information is regularly transferred to the NVA to enable access to the STDP.

Ongoing enhancement to the NVA will provide for the inclusion of information on genetics obtained from physical samples and data for all devils trapped or maintained in captive populations.

A Bacterial Artificial Chromosome (BAC) library is maintained and managed by the STDP. The BAC library consists of a population of host bacteria (clones), each of which carries a specific gene from the Tasmanian Devil DNA that was cloned (inserted) into a bacterial artificial chromosome (BAC), such that the collection (array, library) of cloned DNA represents the entire genome of the Tasmanian Devil.

Key publications such as the STDP technical report series and citations to collaborative research articles are available on the STDP web site www.tassiedevil.com.au.

C Other Issues

Partnership Management

The Program has a number of key strategic partners including the University of Tasmania and ZAA. Both of these partners are represented on the Steering Committee and a number of formal agreements exist between the Program and these partners for the delivery of key activities.

Day to day communication and coordination and reporting on partnerships is through the Program Manager to the Steering Committee. Annual review of partnership agreements,

contracts or service level agreements is conducted by Program Manager and the Director Policy and Projects (RMC) DPIPWE. The Steering Committee is responsible for the final approval of budgets and resource allocations associated with any such agreements.

Collaborative Research

Day to day communication and coordination and reporting on collaborative research is the responsibility of the Science Manager (STDP). This position works closely with the Program manager and Director Policy and Projects (RMC) DPIPWE. The Science Manager provides updates and reports to the Steering Committee and the SAC. Collaborative research projects require formal data and specimen sharing agreements with the Program. Agreements require collaborators to provide regular (quarterly) progress reports for the Steering Committee and general communication to stakeholder and the public.

Save the Tasmanian Devil Appeal

The Save the Tasmanian Devil Appeal is the official fund-raising arm of the Save the Tasmanian Devil Program. The Save the Tasmanian Devil Appeal Committee was established in 2009 to provide strategic direction and make recommendations to the University Foundation as directed regarding expenditure of Appeal funds for research and non-research purposes. The fund has DGR status and has the capacity to collect donations from overseas.

4 Program Portfolio Management

4.1 Program Portfolio Management Process

During 2010 the program will be implementing a formal process of sub-program review. A schematic of the annual process and its links to the program management cycle is given in Figure 3. As an output of this review process, each of the sub-programs will be detailing the milestones and decision points for each of the projects. This information will be used to detail the anticipated review process in subsequent years.

A detailed account of the evaluation and decision points for each of the program’s projects is needed in order for the Steering Committee to review the allocation of the program’s resources across the portfolio of activities.

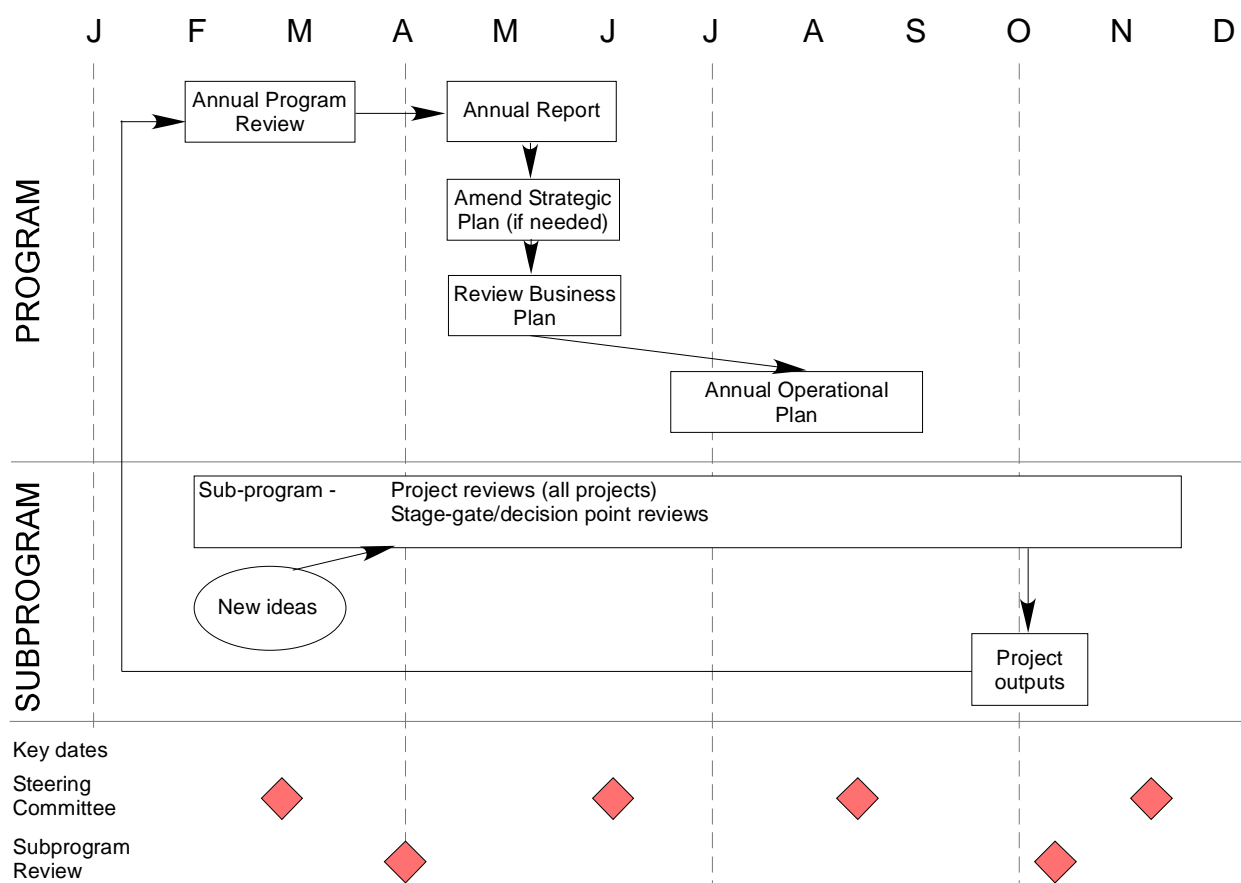


Figure 3 The program and sub-program review process for the Save the Tasmanian Devil Program

A Program Budget

The total annual budget and planned expenditure for the STDP is provided in Table 2. Also included is the allocation of funds in the preceding years as approved by the Steering Committee.

Income in each year (2008/09, 2009/10 and 2010/11) has been \$3 m (Tasmanian Government) and \$2 m (Australian Government).

Sub-program (activities described in section 2.3)	2008/09 (\$'000s)	2009/10 (\$'000s)	2010/11 (\$'000s)
Program Management	933	998	750
Monitoring & Management	1 064	1 172	1 220
Insurance Population	2 173	2 100	2 180
Diagnostics Services & Research	830	830	850
Total	5 000*	5 000	5 000

* Note – actual expenditure in 2008/09 was \$4.6 m with \$0.4 m Tas Govt

Table 2 STDP annual budget and allocation to sub-programs.

B Performance Assessment Strategy and Plan

The performance assessment reviews that will be undertaken on the STDP are detailed in Table 3. The Stage-Gate review points are an initial set and it is anticipated that they will be refined and added to as the formal sub-program review processes is established through 2010/11.

Performance assessment	2010	2011	2012	2013
<i>Performance Monitoring</i>				
Internal, quarterly (report to SC)	✓	✓	✓	✓
<i>Stage-Gate</i>				
Population monitoring		✓		
Disease suppression	✓			
Landscape and habitat utilisation methods		✓		
Ecosystem monitoring		✓		
Remote monitoring methods		✓		
Roadkill mitigation			✓	
Tas Devil Conservation Grant Round 1 evaluation		✓		
FRE evaluation		✓		
Maria Island translocation proposal		✓		
Landscape fencing feasibility studies		✓		
<i>Peer Review</i>				
Management and monitoring sub-program		✓		✓
Insurance Population sub-program		✓		✓
Diagnostic Services and Research sub-program		✓		✓
<i>Technical Review</i>				
Program Review	✓	✓	✓	✓
MAC Review	✓	✓	✓	✓
SAC Review		✓		✓
<i>General Program Evaluation</i>				
CBA/impact/process		✓		✓

Table 3 STDP performance assessment reviews

A more detailed statement of outputs by project is attached at Annex I.

5 REFERENCES

With the exception of the initial Business Plan, all publications are available on the Program's website www.tassiedevil.com.au.

CBSG (2008) *Tasmanian Devil Population and Habitat Viability Assessment Workshop Final Report* IUCN/SSC

CBSG/DPIPWE/ARAZPA (2009) *The Save the Tasmanian Devil Program: Strategic Framework for an Insurance Meta-population*. DPIPWE, Tasmania

DPIPWE (in prep.) *The Recovery Plan for the Tasmanian devil (Sarcophilus harrisii)*

STDP (2007a) *Save the Tasmanian Devil Program: Insurance Population Strategy*. DPIPWE, Tasmania

STDP (2007b) *Save the Tasmanian Devil Strategic Plan*, DPIPWE, Tasmania

STDP (2008) *Save the Tasmanian Devil Program Business Plan July 2008 – June 2013*. DPIPWE, Tasmania.

6 ACRONYMS

ASMP	Australasian Species Management Program
AWHN	Animal Wildlife Health Network
BCA	Benefit-cost analysis
BPI	Biosecurity and Product Integrity Division (DPIPWE)
CB	Captive Breeding
CBSG	Captive Breeding Specialist Group
DEWHA	Department of Environment, Water, Heritage and the Arts
DFTD	Devil Facial Tumour Disease
DGR	Deductible Gift Recipient
DPIPWE	Department of Primary Industries, Parks, Water and Environment
EPBC	Environment Protection Biodiversity Conservation Act
FRE	Free Range Enclosure
IMP	Insurance meta-population
IUCN	International Union for the Conservation of Nature
MAC	Meta-population Advisory Committee
PHVA	Population Habitat and Viability Assessment
RMC	Resource Management and Conservation Division (DPIPWE)
SAC	Scientific Advisory Committee
SRG	Stakeholder Reference Group
STDP	Save the Tasmanian Devil Program
ZAA	Zoo and Aquarium Association

ANNEX I Timing of outputs from individual projects by sub-program

Monitoring and Management

	2010/11				2011/12				2012/13			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Disease Front Monitoring <ul style="list-style-type: none"> November Trapping Surveys Annual Report , including senitinal monitoring 		✓				✓				✓		
Population Monitoring <ul style="list-style-type: none"> Monitoring strategy including evaluation of techniques Long Term Monitoring site survey, (include spotlight survey data) 			✓				✓				✓	
Disease Suppression <ul style="list-style-type: none"> Review of disease suppression for Steering Committe Impliment recommendations from SC 		✓										
Landscape and Habitat Utilisation <ul style="list-style-type: none"> Abundance and distribution of Woolnorth population Trial GPS collars and remote tracking techniques Evaluate influence of landscape features on movement 			✓				✓			✓		
Ecosystem Monitoring <ul style="list-style-type: none"> Desktop review (incl multi sp. data within NVA and external) Impliment long term monitoring program at key sties Validation and comparison at introduction sites (islands, peninsulas) 			✓									
Roadkill Project <ul style="list-style-type: none"> Annual Report Establish review to identify mitigation strategy 				✓				✓				✓
Remote Monitoring <ul style="list-style-type: none"> Evaluate techniques to id individuals (incl hair snares and scats) Remote microchip readers trialled in FRE's 				✓								✓

<ul style="list-style-type: none"> Student project on morphometrics using cameras 	✓		
Contingent Activities <ul style="list-style-type: none"> Translocation to Freycinet Peninsula Fence construction at Tasman Peninsula Translocation to Tasman Peninsula Alternatives to disease suppression Roadkill mitigation projects 		✓	✓
		✓	✓
			✓

Insurance Population

	2010/11				2011/12				2012/13			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Managing the Insurance Meta-population (IMP) <ul style="list-style-type: none"> Captive Management Group Annual Report Annual review of IMP for Steering Committee. 		✓				✓				✓		
Tasmanian Devil Conservation Grants (TDCG) <ul style="list-style-type: none"> Evaluate proposals Allocate funds Report on projects Evaluate TDCG Round I 	✓	✓										
<ul style="list-style-type: none"> Evaluate proposals Allocate funds Report on projects Evaluate TDCG Round I 		✓										
Tasmanian Captive Management <ul style="list-style-type: none"> Strategy for managing Tas based devil populations Strategy for engaging Tasmanian wildlife parks Strategic Asset Management Plans for DPIPWE sites Evaluate Free Range Enclosures (FRE) in Tas and mainland Australia 			✓									
<ul style="list-style-type: none"> Strategy for managing Tas based devil populations Strategy for engaging Tasmanian wildlife parks Strategic Asset Management Plans for DPIPWE sites Evaluate Free Range Enclosures (FRE) in Tas and mainland Australia 		✓										
Contingent Activities <ul style="list-style-type: none"> Translocations to Islands Construction of FRE's (ongoing evaluation) Translocation to Tasman Peninsula (IMP) 				✓			✓			✓		
				✓			✓		✓			

Diagnostic Services and Research

	2010/11				2011/12				2012/13			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Monoclonal antibodies against devil facial tumour cells <ul style="list-style-type: none"> • Growing DFTD tumour cells • Inactivation of DFTD tumour cells • Making monoclonal antibody hybridomas • Screening of monoclonal antibody • Development of immunofluorescence using MABs 			✓		✓		✓		✓		✓	
DFTD tumour cell vaccine <ul style="list-style-type: none"> • Fusion of DFTD strain 3 cells with Vero cells • Cloning and identification of fusion cells • Testing of the fusion cell vaccine in DFTD devils 				✓		✓		✓				
Genetic Research of DFTD and the Tasmanian devil <ul style="list-style-type: none"> • Mapping of DFTD oncogenes in DFTD cells • Cloning and sequencing of retroviral gene in DFTD tumour cells • Mapping oncogenes using BAC library 						✓			✓		✓	
Diagnostic support <ul style="list-style-type: none"> • Veterinary services • DFTD diagnosis by pathology and cytogenetics 				✓				✓				✓
Modelling of disease risk and impact on DFTD-free area <ul style="list-style-type: none"> • Collection of data for modelling • Computer modelling 				✓				✓				✓
Investigation of genetic diversity <ul style="list-style-type: none"> • AC5 project • Telomere project • MHC project (Kathy Belov) 						✓				✓		
Collaborative research projects <ul style="list-style-type: none"> • Updates and reports 		✓		✓		✓		✓		✓		✓

Whole of Program

	2010/11				2011/12				2012/13			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Annual Report			✓				✓				✓	
Program Review		✓				✓				✓		
Review business plan												
• Revised plan endorsed				✓				✓				
Annual operational plan												
• Service Level agreements			✓			✓				✓		
Science and research management												
• Collaborative research agreements and reporting			✓		✓		✓		✓		✓	
• Data management review				✓								
Scientific Advisory Committee												
• Annual review research priorities				✓				✓				✓
Communication Strategy												
• Review Communication Strategy				✓				✓				✓
• Stakeholder Reference Group meetings		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Save the Tasmanian Devil Appeal												
• Annual Report		✓				✓				✓		
• Evaluation of Appeal								✓				
Strategic Policy Development and Projects												
• Translocation policy			✓									
• Maria Island assessment and translocation proposal			✓									
• NW fencing feasibility and options paper			✓									
• TasmanPeninsula fencing feasibility				✓								
• Policy on export arrangements		✓										