



St Helena
Government

Towards Improved Weed Management on St Helena
WEED MANAGEMENT ACTION PLAN 2016-2017

The Community deriving benefits from shared weed management responsibilities



DRAFT - MAY 2016

1. SUMMARY

This Weeds Management Action Plan has been developed to help the St Helena community manage and minimise the spread of existing weeds, and prevent the introduction of new weeds to the Island.

No research information is available in relation to the economic significance of weeds to the agriculture sector but it is clear that weeds cost in respect of control methods and lost production (pastures and field crops) is more significant than it was 10 years ago. Additionally, significant resources in St Helena terms (though presently unquantified) are expended annually in controlling weeds in a range of other situations, including along roadsides, on private land not related to agriculture and in Crown forests.

There are also issues of social and environmental significance. Whilst the spread of weeds from one property to a neighbouring property, is not a significant source of community conflict at present, the rapid spread of weed currently experienced could potentially mean this becomes a significant source of community conflict in a short space of time. Environmentally, weeds are one of the greatest threats to the Island's biodiversity.

Development of a Weed Management Action Plan for St Helena is therefore seen as a weed management action of high priority. By identifying actions that can realistically be achieved from a national level, this Action Plan aims to:

- Build awareness of the importance of weed management in St Helena.
- Reduce opportunities for new weeds to enter the Island.
- Minimise or help prevent the spread of existing weed occurrences.

The Action Plan details 37 *quick-win* actions, with a large proportion of them to be initiated by end of 2016. Recommended actions are grouped under sector stakeholder groups in Table 1 to demonstrate commitment to the actions. A number of priority medium term actions are proposed by all stakeholders in Table 2 towards establishing a strategic framework for weed management on the Island.

Significant on-ground progress will only be achieved with increasingly strategic and co-ordinated management of weeds, and the concerted effort by a number of key people involved with various aspects of weed control.

2. BACKGROUND

An invasive species is defined as “a *species that causes, or has the potential to cause, harm to the environment, economies, or human health*”. When this species is a plant we call it a weed. Globally, there are around 8,000 species of weeds in agriculture, but a few species are responsible for most of the problems. About 200 species are involved in 95% of agricultural weed problems worldwide, and about 80 species are primarily weeds. These species are mostly deliberately introduced to new countries, as ornamental plants and flowers, agricultural crops or forestry species.

On St Helena, a weed survey was carried out in 2008 (Phil Lambdon and Andrew Darlow 2008¹). A total of 431 higher plants were recorded growing in the wild, of which 85% have been introduced to the island by people since its discovery and only 15% can be considered native or endemic. The top 12 most abundant weeds are: wild mango, lantana, blueweed, red tungi, saltbush, African fountain grass, fleabane, creeper, wild coffee, Bermudan cedar, kikuyu grass, and smooth sow thistle. Most of our weeds are garden escapes, and there can be a long lag between introduction and escape. This makes it hard to predict which species will become a problem in the future and which can be ignored. For example, whiteweed was deliberately introduced in the 1800s and has become invasive only in the last decade or so.

Invasive species differ from other environmental problems in that impact increases over time. For example, an oil spill has an immediate big impact which then falls off, while a newly introduced invasive species such as a weed may not even be spotted at first, but gets worse and worse with time as it increases in numbers and range. The only chance you have to stop a new weed problem is to catch it early. Once plants have become widespread it is very difficult to eliminate them and it becomes increasingly costly to control or contain the spread of a weed once it reaches a critical mass.

The best weed management is through intensive land use. Unfortunately, St Helena now has fewer farmers and farms, and abandoned land breeds both weeds and pests. Some previously useful weeds are no longer used, such as gorse, this was once widely used for kindling and fodder, and this kept it under control.

¹ Botanical Survey of Ascension Island and St Helena 2008. Phil Lambdon and Andrew Darlow, SAIS Project 2008

The risk of an introduction of a new potentially bad weed species is getting greater. About 25,000 of flowering plants are available to gardeners and farmers on-line, many as seeds which can be bought off the internet. Internet shopping is increasing, so there is a good likelihood that a new potential weed will be imported.

Between January and February 2016 a number of key stakeholder groups were consulted and results were summarised as a background document for a stakeholder workshop which was held on 9th March 2016 with a total of 19 participants.

3. OUR ENVIRONMENTS IMPACTED BY WEEDS

Residents and visitors and their vehicles access all our local environments. The Island is known for its rugged cliffs, wilderness areas and valleys. It is celebrated for its unique and diverse environment. It contains modest natural heritage areas including the Peaks National Park which provide protection for numerous flora and fauna species.

Agricultural production and forestry activities involve the use and management of large areas of land on the Island, and their assets are impacted by weed invasion.

It is envisaged that tourism will become a major Island industry and the Island's special and protected areas are a major attraction for international tourism.

The further spread of existing weeds within the Island and the introduction of new weeds to the Island, threaten key land assets and industry. The establishment of effective weed management, weed spread prevention and biosecurity practices is therefore seen by weed stakeholders as a very high priority for the Island going forward.

4. CURRENT SITUATION

At present the application of weed management practices in St Helena varies significantly between land owners and managers. For some stakeholders in SHG, industry and the community generally, weed management procedures is in place and are implemented, some have none in place, others have but they are infrequently enacted, and some have yet to embrace the principles of weed management.

Most landowners deal with weeds on some level, and in both rural and residential areas there are many who appreciate the importance of good weed management. However, good preventative weed management practices remain a significant problem.

There is no national Invasive Species Strategy or Plan that would provide a framework to align the Aim of this Action Plan to. The National Biosecurity Policy and National Agriculture Policy, both briefly establish a context for this Action Plan, as in a different way, does the heightened public consciousness of biosecurity issues generally.

There is also no specific weed management legislation for the Island that provides a strong legal foundation to support weed management. The St Helena Noxious Weeds Rules of 1974 provides a legal basis for plants to be declared by Governor-In-Council as a noxious weed and where found to be occupying land, should be cleared and eradicated. However, the list of species is limited and there are many weed species now thriving on the Island that have not been declared a noxious weed. The Environmental Protection Ordinance of 2016 makes provision for control of potentially harmful non-native species through biosecurity measures as it applies to conserving biodiversity.

Weed management has not had a high national planning profile in recent times and though some significant on-ground progress has been made, much remains to be done.

5. MAJOR WEED SPREAD ISSUES

Consultations with weed stakeholders identified the following modes of weed spread on the Island related to *human activity*:

- Vegetation management practices (inappropriate practices).
- Transport and utilisation of materials contaminated with weeds (stock, fodder, grains, seeds, soil, quarried materials, mulch, primary produce, vehicles, machinery, boots etc.).
- Inappropriate disposal and management of weed materials and garden waste (including inappropriate dumping of green waste).

Controlling weed dispersal by *natural means* such as birds, water and wind and animals is far more difficult, and points to the importance of managing source populations in order to minimise spread by natural means.

The spread of weeds along roadside verges is a significant avenue for increasing weed distribution throughout the Island and a key area of concern as they then may then provide a source of infestation for neighbouring properties.

The activities of all individuals may contribute to the introduction of new weed species, or the spread of existing weeds. All land managers have a role to prevent the spread of weeds to

neighbouring properties and to work co-operatively to strive to ensure optimal weed management is achieved.

Biosecurity St Helena regulates the importation of plant material to the Island, and this Action Plan supports opportunities for ongoing monitoring and improvement of procedures and facilities at our borders, particularly in view of increased access to the Island, increasing globalisation, heightened local biosecurity concerns and weed threats present in adjacent Islands and countries that we have access to.

6. SCOPE

The need for urgent action has driven development and publication of this National Action Plan. The Action Plan recognises that the recommended actions are of relevance to the entire Island.

For the purpose of the Plan, the following definition of a weed is used:

'A weed is considered to be a plant that requires some form of action to reduce its harmful effects on the environment, economy, human health and amenity'.

7. PARTNERSHIPS

Weed management strategies generally impact on a range of stakeholders. Partnership approaches can have significant benefits for effective weed management to all involved on the Island and a key focus of the Action Plan is to develop mutually beneficial partnerships.

Actions proposed in the Action Plan will be initiated, monitored and evaluated by the Weed Management Action Plan Working Group. However, in most cases co-operative partnerships with stakeholders are required to translate these actions into actual on-ground improvements.

Potentially there are substantial benefits to the Island from implementing actions within this Action Plan. The extent to which those benefits will be realised, will directly correlate with the level of active and positive involvement of weeds stakeholders.

8. OVERALL AIM

The Action Plan aims to build awareness of the need to ensure weed management on St Helena is a high priority, so that by 2021 weed management will be:

Coordinated across sectors through implementation of a national Weed Management Strategy which is adequately resourced, supports holistic land management, and is legally enforced through the Environmental Protection Ordinance.

Key components will include:

- Containment of existing weeds
- Prevention of entry of new weed species
- Weed management plans in place which include:
 - Best practice guidance
 - Weed management training
- Wider public awareness and engagement

Ultimately, this Action Plan aims to achieve a shift in community thinking with regards weed management in St Helena. The aim is move from low or moderate awareness of weed management practices, to fully complaint work practices established through increased education and awareness, strategic co-ordination of weed management, the development of community responsibility and the strategic enforcement of legal provisions.

9. KEY TO ACTIONS TABLES

ANRD will seek to work co-operatively with partner stakeholders in to implement actions. Those stakeholders consulted in preparation of this Action Plan are detailed in Appendix 1. Dates in the timing column refer to the Financial Year in which actions are to be initiated.

ACTIONS

Quick win actions proposed by the stakeholders within their sectoral areas which can make an immediate improvement on weed management on the island are listed in below.

Table 1: Quick-win actions

Agriculture: Stakeholders were made of agricultural officers from ANRD and representation from the Farmers Association Committee.

| Action We will implement the following action | Partner Stakeholder Who is responsible? | Timing By when? |
|---|--|---|
| Use land lease agreement and rent reviews to encourage and enforce good land management through a deposit system, or raising rents. Penalties will apply in the case of non-compliance. | ANRD, Crown Estates | Review/implement revised land lease license policy before end of 2016 |
| Develop Best Practice Guidelines for early management of weeds (managed before they seed in order to restrict spread), including clearance and disposal, and ensure their use | ANRD, Crown Estates, Roads, Environment | By August 2016 |
| Produce a weed control calendar for farmers, growers and merchants so they enough and the right pesticide can be sourced on-island in time | ANRD and Farmers Association | May 2016 |
| Develop a black-list of known potential weed species which don't already occur on the island | ANRD – Biosecurity Section | June 2016 |
| Establish a system of electric fencing for loan to livestock owners, to allow area grazing. | ANRD - Farmer Support Section | 2016 |

Environment: Stakeholders included officers from EMD, the LEMP project, a private Environment Contractor (Andrew Darlow), SNCG and St Helena National Trust

| Action We will implement the following action | Partner Stakeholder Who is responsible? | Timing By when? |
|---|--|--|
| Discuss and propose actions for managing weeds adequately as part of a landscape management approach | All stakeholders to discuss with SHNT and agree action against this approach | By August 2016 to enable funding issues to be aligned with SHG budgeting process |
| Map invasive problems in dryland Sandy Bay area (Annually) | SNCG | Start May 2016 |
| Target removal of African fountain grass in Sandy Bay as part of containment programme for this species | SNCG (also possibly EMD, LEMP, to be confirmed) | ASAP |

| | | |
|--|--|------------------|
| Map the entire island for invasive species as an update of the 2008 survey | GIS Darwin project will cover some of this?? | Initiate in 2016 |
| Change nurseries on Island to sterilised media – buy sterilised, or sterilise once here | LEMP, EMD | ASAP |
| Carry-out chemical control in certain instances, especially to stop seed set for specific weeds | EMD, LEMP, (SHNT) | ASAP |
| Establish boot washing stations in some areas, where have single access roads, and/or aware raising campaign | EMD, SHNT, Tourism | ASAP |
| Provide support on best practice for weed control (technical advice, sharing knowledge, etc) | EMD | Ongoing |
| Species identification training – and when to control it, and how to do this | EMD, ANRD, SHNT | Ongoing |

Landowners: Stakeholders included the Crown, Solomons, Thorpe & Sons and Cairns-wicks

| Action | Partner Stakeholder | Timing |
|--|--------------------------------------|------------------|
| We will implement the following action | Who is responsible? | By when? |
| Tighten up on terms of tenancy for leased lands – the land has to be clear of invasive species | Solomons, ENRD | Initiate in 2016 |
| Include a clause in tenancy Lease/License document specifying how weeds should be cleared by tenants | Solomons, ENRD (Thorpes, C-Wicks) | Initiate 2016 |
| Carry-out chemical control in a timely manner, to stop seed set for specific weeds | Solomons, ENRD (Thorpes, C-Wicks) | Initiate 2016 |
| Make land available for food gardening and livestock raising – marginal land currently not seen as productive, bring it under management | Solomons, ENRD | Initiate in 2016 |

Roads Section:

| Action | Partner Stakeholder | Timing |
|--|---------------------|--------------------|
| We will implement the following action | Who is responsible? | By when? |
| Coordinate land owners to clear weeds simultaneously by location. Contact landowners | Roads | ASAP |
| Create a database of land owners and keep it updated. Information from the GIS project, local knowledge, and other sectors | All | Initiate 2016 |
| Include obligations on weed management programme for leases and purchase agreements for land. | ESH, all | From now |
| Produce tool box talks and training on weed recognition | ANRD | Ongoing |
| Introduction of national weed clearance day – get paid for area cleared? Fundraising, sponsorship, etc | Roads, Councillors | Agreed by end 2016 |

| | | |
|--|---------------------------|--------------------|
| Annual weed education programme (along the lines of “making march marine”) | Roads | Agreed by end 2016 |
| Collaborative working, with SHNT contribute to compost heap at Millennium Forest | Roads | ASAP |
| Get the use of a quad bike for more efficient chemical spraying | Roads to liaise with ANRD | ASAP |
| Get the use of wood chipper/mulcher | Roads to liaise with SHNT | ASAP |

All Sectors agreed to the following actions:

| Action | Partner Stakeholder | Timing |
|--|----------------------------------|---------------------|
| We will implement the following action | Who is responsible? | By when? |
| Coordinate weed control and management so that weeds are removed before seed set, in National Conservation Areas, headlands, productive land and road verges. Each sector needs to know when others are spraying so can work together. | All | From now |
| Establish ownership and responsibility for “no-mans land” which act as sources of weeds for neighbouring land. | ENRD – Crown Estates with GIS | From now |
| Make bulk orders of herbicides to help to bring down the cost and ensure adequate supplies on-island (but note need to ensure responsible use) | Solomons, ENRD Thorpes, C-Wicks) | Discussion required |
| Share information on herbicide use and weed management: what works best for which species, how best to use it etc. | All | Ongoing |
| Investigate alternative uses for weeds, as food, etc. | All | Ongoing |
| Include the churches and French Properties in future stakeholder consultations to raise their awareness of weed problems, with specific reference to control of species such as pheasant tail fern. | Church, French properties | Ongoing |
| Include public awareness and education actions in work plans as far as possible. | All | Ongoing |
| Create habitats for wirebirds, other endemics, and bees by planting wildlife corridors in marginal land. | All | Initiate in 2016 |
| Make endemic plant species available to farmers at reasonable cost. | Environment | Initiate in 2016 |
| Investigate potential sources for additional resources for longer-term actions which are otherwise not possible | All | Ongoing |

Medium-term priority actions proposed by all stakeholders to improve strategic management of weeds on the Island are listed below.

Table 2: Priority medium-term actions

| Action | Partner Stakeholder | Timing |
|--|--|-------------|
| We will implement the following action | Who is responsible? | By when? |
| Establish a dedicated resource to manage weeds nationally: Weed control officer to coordinate work across sectors in conjunction with a team of mobile weed rangers and implement a public awareness and education programme | ENRD to investigate options for delivery | August 2016 |
| Develop a national weed management strategy, based on the SAIS strategy through: <ul style="list-style-type: none"> a. Identifying high priority weeds for each area or area b. Developing a management plan for each species or site c. Implementing annual programmes of weed control | ENRD lead if successful for resources for an ENRD dedicated weed management resource | 2017 |
| Secure funding and other resources to implement the strategy. Explore funding options such as <ul style="list-style-type: none"> a. International Climate Fund, RSPB, BEST, Darwin b. Introduce an environmental levy for visitors ("green tax") led by an NGO such as SHNT to keep funds ring-fenced c. Involve the voluntary sector through ecotourism whereby visitors pay to work. | ANRD/EMD/SHNT SHNT SHNT | From 2017 |
| Get more marginal and set-aside land under management. Grow fodder crops, which will also lower imports and reduce the island's carbon footprint | ENRD to investigate | 2016 |

APPENDIX 1

STAKEHOLDERS INVOLVED IN DEVELOPING THIS ACTION PLAN

Agriculture

SHG - Andrea Timm, Agriculture Development Officer

Fred Green, Farmer Support Officer

Rosalie Peters, Pest Control Officer

Darren Duncan, Head of ANRD

Farmers Association – Liz Johnson (Chair), FA Committee Members

Forestry

Myra Young, Forestry Officer

Larry Stevens, Forestry Services Officer

Environment

Derek Henry, Deputy DoENRD and Acting Head of EMD

Mike Jervois , Terrestrial Conservation Officer

Andrew Darlow, Environment Contractor

Lourens Malan, Environment Project Officer

Mikko Paajanen, LEMP Ecologist

Biosecurity

Dr Jill Key, Pest Control and Biosecurity Officer (TC)

Julie Balchin, Biosecurity Officer

Landowners

The Crown – Trevor Graham, Director of ENRD

Solomon & Co PLC – Obinna Dean Okali, General Manager (Productions) and

Arthur Williams, Production Manager

Thorpe & Sons – Henry Thorpe

Cairns-Wicks – Greg Cairns-Wicks

St Helena National Trust

Dr Rebecca Cairns-Wicks – Head of Operations

Roads Section

Ben Hathaway, Roads Manager

Darren Francis, Roads Inspector

Elected Members

Dr Corinda Essex (ENRC Committee Member)

Pamela Ward-Pearce (EDC Committee Member)