

# NORTHERN TERRITORY HORTICULTURAL ASSOCIATION (NTHA)

## Natural Resource Management Strategic Plan 2009-2013

Driving sustainable horticulture and responsible environmental management in the Northern Territory.



Northern Territory  
Horticultural Association Incorporated ABN 73 183 873 626

*Fostering a sustainable industry, that values the environment and the spirit of rural communities.*



Know-how for Horticulture™



Australian Government

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**NT Department of Regional Development, Primary Industry, Fisheries and Resources**  
Staff and management

**NT Natural Resource Management Board**

**Horticulture Australia Ltd**  
Project funding and support

**Australian Government National Landcare Program**  
Project funding and support

**NT Department of Natural Resources, Environment, The Arts and Sport**

# EXECUTIVE SUMMARY

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The Northern Territory Horticultural Association (NTHA) is committed to improving the sustainability and natural resource management practices of horticulture businesses in the NT. An essential foundation of that commitment has been the production of this Natural Resource Management Strategic Plan.

The plan covers all horticulture in the NT (not just NTHA industries or members) and has been produced in close cooperation with the NT Department of Regional Development, Primary Industry, Fisheries and Resources (RDPIFR) and other key stakeholder groups. Development of the plan was funded by the Federal Government's National Landcare Program (NLP) through Horticulture Australia Ltd (HAL).

Preparation of the plan was a collaborative process involving a planning committee of representatives from key stakeholder organisations; a series of workshops involving growers and other agency representatives; and individual in-depth interviews with key growers and others.

- ▶ It is intended this plan links strategically with other recently developed plans and activities, such as:
- ▶ National Horticultural NRM Strategy as developed by HAL in conjunction with national horticulture industry peak bodies.
- ▶ NT Sustainable Land Use Guidelines.
- ▶ Natural Resource Management Board's NT Integrated NRM Plan.
- ▶ Two studies currently underway at the RDPIFR – *Environmental impacts of cropping, forestry and horticulture in the Northern Territory* and *Integrated Irrigation Review*.

## Background and current situation

Horticulture in the NT is a relatively young but rapidly developing industry. With production valued in excess of \$160 million, involving more than 630 enterprises and 4100 full-time and seasonal employees, horticulture – and the flow-on business it generates – is a significant contributor to the NT economy. Similarly, horticulture enterprises are important in their interaction with the environment and natural resources, both on and off-farm.

Other relevant characteristics of the industry are:

- ▶ As a young industry, with many first-generation growers, the industry can be innovative and has the potential to quickly take-on new practices or ideas.

As a relatively small industry, industry structures and organisations are also small (and somewhat under-resourced). The smaller size means that communication and networking within and across industries can be easier.

- ▶ The industry is concentrated in relatively small pockets of suitable land often surrounded by natural bushland, providing both wildlife corridors and close proximity to feral pests.
- ▶ Horticulture is carried out in three distinct regions – the Top End, Katherine and Central Australia. Each has its own unique environmental characteristics and NRM needs.
- ▶ Businesses in the NT (including in horticulture) have adopted a 'pioneering spirit'. Business owners are often keen to have a go and willing to try new or different practices.

## Overarching issues

The planning committee identified the following overarching issues which have had influence over the development of the plan and will continue to influence its implementation. These are:

- ▶ The need to build and maintain a strong alliance and good working relationship between NTHA and the RDPIFR;
- ▶ Recognising the unique environmental characteristics and NRM needs of the NT's three main horticultural growing regions;
- ▶ Recognising also that each horticultural commodity group will have its own characteristics and needs;
- ▶ Working with the numerous organisations and groups in the NT that have a responsibility or interest in the environment and NRM;
- ▶ The potential for loss of valuable information and expertise as time goes on, people move-on and structures change; and importantly
- ▶ Ensuring that adequate resources are made available to implement the plan.

## Knowledge gaps

Through work conducted prior to and also borne out in the workshops and interviews as part of this planning process, a comprehensive list of 'knowledge gaps' (at grower level) has been drawn-up. These may be areas where more research or investigation is required; or they may be topics where the information is already available and effective extension strategies need to be employed.

A full list is provided in the plan. They are grouped under the headings of water, carbon, soils, chemicals, nutrients, ecosystem services, biosecurity, climate, waste, energy, weeds, fire and air.







## THE VISION

The proposed 'Vision for Horticultural NRM in the NT' is:

*Horticulture in the Northern Territory has embraced the challenge of environmental responsibility and is actively engaged in ensuring sustainability through improved natural resources management (NRM). The Northern Territory Horticultural Association (NTHA) has spearheaded innovative and proven programs to fill knowledge gaps, deliver information and measure the positive impact (on and off-farm) of improved practices.*

Specifically:

- ▶ *The resources and information needed to communicate NRM best practice to growers have been gathered and there is an ongoing process of updating and improving the data.*
- ▶ *More than half of the NT's horticultural enterprises have embraced improved NRM and are actively accessing relevant information via a variety of extension mechanisms, and are implementing a structured environmental management system.*
- ▶ *NTHA, RDPIFR and others have in place a sound process to measure and track changes in the on and off-farm environmental impact of horticultural activity in the NT.*
- ▶ *Over 25% of NT's horticultural producers are clearly branding their produce as of NT origin and actively promoting it as such.*

*There is a spirit of shared vision and collaboration among the various organisations involved in environmental management in the NT. Importantly, the NT Horticultural Association and the NT Department of Regional Development, Primary Industry, Forestry and Resources are working in close partnership to develop resources, implement the required extension programs and measure the positive change in on-farm natural resource management.*

*Governments, both NT and Federal, are aware of and value the environmental initiatives being implemented throughout horticulture in the NT.*

*More broadly, Territory people and the media recognise that horticultural businesses are taking real action to be responsible managers of natural resources, and that their contribution in this regard is of great value to the environment and community generally.*

## Key focus areas, objectives and strategies

To achieve the vision, the NTHA and its partners must focus their efforts in five key areas. These are detailed below, together with objectives and strategies for each:

### 1. EFFICIENT PRODUCTION (KNOWLEDGE AND RESOURCES)

*Gathering and developing the knowledge base and resources which, when adopted (and used), will drive more efficient, sustainable and environmentally sound production.*

<b>Objective(s)</b>	<i>By 30 June 2013, the Northern Territory will have at its disposal the best possible information on on-farm natural resource management practices with which to develop capacity building programs for horticulture growers.</i>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>▶ In cooperation with RDPIFR, carry out an information audit and gap analysis.</li> <li>▶ Conduct or access any relevant research to fill the identified gaps.</li> <li>▶ Develop a suite of data to convey the latest and best possible information from 1 and 2 what 1 and 2 is may not be clear to the reader?. <i>(Note: Format and presentation of the data will be dependant upon the delivery mechanisms decided under 'Skilled Growers')</i></li> <li>▶ Feed these resources into the 'Skilled Growers' component of this plan and also make them widely available through other avenues.</li> </ul>

### 2. SKILLED GROWERS

*Building the capacity and confidence of growers to take action on environmental issues and manage sustainable production systems.*

<b>Objective(s)</b>	<i>By 30 June 2013, 50% of NT horticultural producers will be actively accessing information and implementing a structured environmental management system.</i>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>▶ Establish benchmarks of grower NRM practice and track regularly.</li> <li>▶ Develop and implement appropriate delivery processes, training and tools. <i>(Note: Based on the data derived from strategies in 'Efficient Production' (Knowledge and Resources)).</i></li> <li>▶ Identify and promote appropriate environmental management system models</li> <li>▶ Foster an understanding within all levels of the horticulture industry of the cost-effectiveness and cost benefits of good NRM practice.</li> <li>▶ Maintain an active communications program to build and hold grower interest in good NRM.</li> </ul>

### 3. HEALTHY ENVIRONMENTS

*Planning environmentally healthy and productive regions through joint programs that engage industries and resource management agencies.*

<b>Objective(s)</b>	By 30 June 2013 industry and NRM stakeholders will have a quantified understanding of the environmental impacts (on and off farm) of horticultural activity in the NT and have a mechanism in place to regularly measure and track changes.
<b>Strategies</b>	<ul style="list-style-type: none"><li>▶ Establish and maintain collaborative relationships between Horticulture and NRM agencies.</li><li>▶ Ensure the Horticulture industry supports and is consulted in any developments of the NT NRM Plan.</li><li>▶ Establish and maintain initiatives (including projects) that measure and monitor the environmental impact of horticulture activity.</li></ul>

### 4. POSITIVE COMMUNITIES

*Generating within the community, media and decision-makers, a positive perception of horticulture and its value (including in responsible environmental management).*

<b>Objective(s)</b>	By 2013, the NT horticulture industry is seen as vibrant and resilient, and its contribution to the community (particularly in responsible natural resource management) is widely recognised, supported and valued.
<b>Strategies</b>	<ul style="list-style-type: none"><li>▶ Promote a positive environmental profile/image for the industry in the broader community and to government.</li><li>▶ Pro-actively contribute to regional NRM planning and problem solving.</li><li>▶ Participate in developing new concepts and proposing policy for sustainable communities.</li><li>▶ Foster industry integration within the local community with a healthy mix of small, medium and large horticultural enterprises.</li><li>▶ Ensure that the horticulture industry is engaged in and contributing to the process of government policy development</li></ul>

### 5. LOYAL CONSUMERS

*Maintaining ongoing consumer demand for Australian/NT produce with informed purchasers confident in the availability and quality of produce and the farming systems that grow it.*

<b>Objective(s)</b>	By 30 June 2013, 25% of growers will be actively identifying and promoting their produce as grown in the NT.
<b>Strategies</b>	<ul style="list-style-type: none"><li>▶ Conduct benchmark research in NT to measure current consumer awareness of and attitudes to NT produce.</li><li>▶ Develop branding concept and mark (including qualifications to use). Consider development of the "SustaiNT" brand.</li><li>▶ Foster local retailer (supermarket and independent) understanding of and preference for NT horticultural produce.</li><li>▶ Implement appropriate public media and stakeholder promotion/PR activity.</li></ul>

## Specific Recommendations

Finally, the planning committee developed a series of specific recommendations, designed to support the adoption and implementation of this plan. They are:

### 1. Government relations

*That NTHA put in place an active program of government liaison and relationship-building based on sound science, shared responsibility and mutual benefit from positive outcomes in natural resource management activities.*

### 2. Implementing the plan

*That the NTHA Council and other relevant organisations cooperate to establish the required resources, infrastructure and processes to ensure implementation of this plan.*

### 3. Maintaining visibility and momentum

*That the NTHA develop and implement a communications plan to build goodwill through maintaining industry and other stakeholder interest in natural resource management, this plan, and its implementation.*

### 4. Strategic alliances

*That the NTHA establish streamlined processes and systems to ensure better communication and information-sharing between the various organisations and stakeholders in natural resource management in horticulture in the NT.*

### 5. Preserving and building corporate knowledge

*That NTHA, together with RDPIFR establish protocols and processes to properly secure and store relevant existing information and information generated in the implementation of this plan.*







## INTRODUCTION

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### Initiation and support of this project

The development of this strategic plan was initiated by the Northern Territory Horticultural Association (NTHA), the peak industry body representing horticultural industries in the Northern Territory. The NTHA is confident that this plan represents a unique opportunity to set the environmental management agenda for NT horticulture, and at the same time forge strong links with the NT Government's own environmental plans and activities.

In developing this plan, the NTHA has been supported by a number of organisations and their key staff. Primary among these have been:

- ▶ NT Department of Regional Development, Primary Industry, Fisheries and Resources
- ▶ NT Department of Natural Resources, Environment, The Arts and Sport
- ▶ NT Natural Resource Management Board
- ▶ National Landcare Program

Funding for the project was provided by the Federal Government's National Landcare Program through Horticulture Australia Ltd. In addition, substantial in-kind resources (such as executive time, facilities etc.) have been allocated by the NTHA.

### Project management

The project was managed by Guy Robertson, Industry Landcare Coordinator, with the support of the NTHA. A planning committee was appointed comprising representatives of key organisations. The committee provided input, particularly at the start in establishing the planning process and scope of the plan by participation in the regional workshops (described in the next section) and in reviewing the draft plan. Committee membership is detailed in Appendix 1.

An independent consultant, Richard de Vos, was engaged to assist in the process, facilitate the workshops and work with the committee to draft the plan.

### Scope and limitations of the plan

At the outset it was determined that this plan should incorporate **all** horticulture industries and activities in the NT, not just the member sectors of NTHA. In that way maximum input from industry participants could be encouraged and the plan would have greater overall relevance.

In addition, it is recognised that while the plan is dealing with horticulture in the whole of the NT, there are definite and distinct differences between the three main horticultural growing regions.

As the title depicts this is a strategic plan focussing on *natural resource management* in horticulture in the Northern Territory. It is **not** an overall strategic plan for horticulture; and it is **not** a strategic plan for NTHA – though both of these are important and both must have links with this plan.

## Navigating this document

This document contains both the strategic plan and a considerable amount of supporting and background information, as well as a number of appendices. The structure is:

<b>Introduction</b>	
<b>Background</b>	Detailing why this plan has been prepared and by whom.
<b>The planning process</b>	Explaining, step-by-step the planning process used.
<b>The wider context</b>	Elucidates links with other natural resource management policies and plans.
<b>Overarching issues</b>	A number of key issues that have overall influence on the plan and its implementation.
<b>Identified knowledge gaps</b>	A list of NRM-related areas already identified as needing more information.
<b>The vision – 2013</b>	Setting the overall goal for the plan.
<b>Key focus areas (5)</b>	Setting objectives, strategies and other key information.
<b>Specific recommendations</b>	A number of recommendations covering implementation of the plan and NTHA management of natural resource management.
<b>Next steps</b>	Describes the process for immediate implementation
<b>Appendices</b>	

## The role of a strategic plan

In this introduction it is worth clearly defining the role of this strategic plan and its relationship with other plans and activities at NTHA and in other organisations.

At its core, a strategic plan is a guiding light for a company or organisation. It sets direction and describes what the group does, how and for whom.

This plan:

- ▶ Shows a clear, strong ‘Vision’ for horticultural NRM in the Northern Territory from 2008 to 2013;
- ▶ Identifies the key focus areas going forward and sets measurable objectives for each; and
- ▶ Describes the strategies (or steps) that must be taken to achieve those objectives.

A strategic plan is not an annual action plan, yet annual action plans must be prepared and implemented and they must link directly with the strategies and objectives in the strategic plan.

A strategic plan is not a finance plan, a communications plan or a human resources plan. Each of these must be prepared and must be aimed at supporting achievement of the strategic plan vision and objectives.

A strategic plan is not prepared and forgotten. It is a ‘living’ document and can be used to regularly review the operations and achievements of the organisation. It can also be used as a guide when considering new or different activities – to ensure the organisation remains on-track, focussed on its vision and not diverted from its core purpose.

A strategic plan is not unchangeable. In any business or structure circumstances, markets, competition and opportunities are constantly changing, so it is important to regularly review the strategic plan, and adjust it if required. But changes to a strategic plan must only be made after thorough analysis and careful consideration.

# BACKGROUND

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## What is natural resource management?

It is important to have a shared understanding of the definition of natural resource management.

For the purposes of the report and this plan, natural resource management means:

*The management of natural resources such as land, water, soil, plants and animals relating to activities associated with a horticultural enterprise or industry. There is a focus on how that management affects the viability and sustainability of resources for present and future generations and in particular the notion of sustainable farming and development.*

Very significantly, almost all participants in the planning workshops and individual interviews (see later under 'Planning process') were able to describe NRM in terms similar to the above definition. Many said that they viewed their activities, on their farm, every day, as natural resource management. They readily agreed that with information and support, they could probably be better *natural resource managers*. There was general agreement that sustainable horticultural activity should go hand-in-hand with good natural resource management, though there was an acceptance that this was not always possible.

## Horticulture in the Northern Territory

Some key facts about horticulture in the NT are important for context:

- ▶ The industry has a gross production value of over \$164 million per year – with significant growth from just \$20 million in 1990. (Source - RDPIFR industry profile 2006)
- ▶ It is estimated that each \$1 million in production creates 3.7 jobs within the industry and a further 1.4 jobs in areas associated with horticulture. (Source - Karen White : Socio Economic Study of the Mango Industry 2004)
- ▶ There are currently approximately 630 horticultural enterprises in the Territory, some 600 permanent staff and more than 3500 seasonal workers. (Source - Tracey Leo: Labour Study 2006)

In addition, some qualitative observations are also relevant to this plan and its implementation.

- ▶ **A young industry**  
The Northern Territory first established itself as a commercial player on the national domestic market in the early 80s. Horticulture in the NT is a young but innovative industry. Many farmers also are young with little or no family background in the industry – and therefore are not held back by tradition, prejudices or long-held views.
- ▶ **Industry structures**  
NT horticulture is relatively small, so industry structures and organisations are similarly small and to some extent under-resourced, compared with other Australian growing regions and other Territory industries. This does, however, have advantages, because it means that communication within industries and across them is less complex, and joint activities are more easily organised. For example, this all-of-horticulture examination of natural resource management and resulting strategic plan might be much less possible in any other Australian State, or nationally.
- ▶ **Location**  
Horticulture in the NT is limited to relatively small 'pockets' of suitable land and water. The potential for significant growth (in farming land) is constrained by the natural resources. There are areas of grazing land that would be suitable for horticultural production but these are 'locked-up' by *The Pastoral Lands Act*, which only allows grazing on these areas. Also, increasing amounts of horticulture land are being tied up in forestry plantations



- ▶ Secondly, it is very clear that horticulture is located in three distinct regions in NT – the Top End, Katherine and Central Australia. Crops grown in each region are specially suited to the climate and conditions of that area. The regional workshops highlighted specific natural resource management needs for each region (see later under key focus areas).
- ▶ Lastly, the remoteness of horticultural enterprises and their distance from the major horticultural produce markets such as Brisbane, Sydney and Melbourne – and from production input suppliers and distributors – leads to unique environmental impacts that must be managed such as fuel usage in transport, both of production inputs and final produce, and waste disposal.
- ▶ **Pioneering spirit**  
Because of the youth of the industry, the harshness of the climate and landscape and indeed the nature of the people involved, horticulture in the NT enjoys a truly pioneering spirit. On the downside, this means that a few individuals may ‘go it alone’ with little concern for regulations, structures, or what may be considered best-practice. On the other hand, this spirit often means horticultural enterprise owners/managers are innovative, keen to have a go at something new and willing to learn.
- ▶ **Clean and green**  
There is a feeling among some in the industry that the NT’s remoteness and the horticultural industry’s relative youth present a strong opportunity to market produce with a unique branding and image. The potential is yet to be fully researched and scoped, but the concept fits well with responsible and pro-active natural resource management.
- ▶ **Language**  
In all sectors of the horticultural industry there are strong ethnic influences and associated language groups, which will need to be reflected in the strategies and communications resulting from this plan.



# PLANNING PROCESS

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Developing this natural resource management strategic plan followed an eight-step process:

1. Initial meeting with the planning committee to scope the project, agree on methodology and gather input.
2. Desk research, reviewing numerous other plan and relevant documents.
3. Three regional workshops (Top End, Katherine and Alice Springs) involving horticultural growers/managers and local RDPIFR staff plus some planning committee members (see lists in Appendix 2).
4. One workshop with key RDPIFR staff (see list in Appendix 2).
5. 12 in-depth individual interviews with selected growers and others in associated groups and organisations (see list in Appendix 3).
6. Preparation of draft plan.
7. Planning committee meeting to review the draft plan.
8. Preparation of final plan and publishing.

## Planning committee

The planning committee's involvement has been valuable. Each member brought a different perspective, both individually and from their employer organisation.

## Workshops

The three regional workshops were seen as important opportunities to gather direct grower input, identify regional differences and needs and foster initial interest in and local ownership of the plan. This proved to be the case, and participation at the workshops was strong with participants being able to express their own, and often differing views, during the discussions.

The special workshop with RDPIFR staff was an addition to the original process and proved to be very worthwhile. Input from the combined long experience of the participants provided a rich perspective on the history of horticulture in the Northern Territory.

## Individual interviews

Twelve individuals from a wide range of backgrounds were selected to undertake extended one-on-one interviews, which were conducted by Guy Robertson. This enabled the planning process to gather input from key individuals who were unable to attend the three workshops.

A structured questionnaire was used and the results collated for analysis.

## Review

The draft plan was reviewed by the planning committee on 30 June 2008 resulting in various modifications and additions being made.

## Consultant

A consultant was engaged to assist with the plan, in particular the development of the individual interview questionnaire, structuring and facilitating the workshops and drafting the plan document.

## THE WIDER CONTEXT

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It is clear that this NRM strategic plan for NT horticulture will have implications for or linkages with, NRM and environmental policy and plans in other areas. Specifically this NRM Strategic Plan will:

### **Link with the National Horticultural Natural Resource Management Strategy**

This plan links directly with the natural resource management strategy developed by Horticulture Australia Ltd (HAL) in conjunction with horticulture industries as part of the Australian Government's National Landcare Program.

The NRM strategy's five key areas are used as the structure for part of the planning workshops and are reflected in the five key focus areas detailed in this plan:

1. Efficient production
2. Skilled growers
3. Healthy environments
4. Positive communities
5. Loyal consumers

### **Working with the NT Sustainable Land Use Guidelines**

The recently-launched and very comprehensive *NT Sustainable Land Use Guidelines* are an outstanding resource for horticultural growers. They do not duplicate, but complement the strategic plan. The guidelines have practical tools which will assist horticulture growers in on-farm, natural resource management.

### **NT Natural Resource Management Board Integrated NRM Plan**

The NT Natural Resource Management Board's *Integrated Natural Resource Management Plan* was prepared in March 2005. This plan describes a vision for NT-wide natural resource management and details the current situation and forward planning for five core assets of terrestrial biodiversity; land; inland waters; coastal and marine; and communities, institutions and knowledge.

The NT horticultural strategic plan has been aligned with the *Integrated Natural Resource Management Plan* to highlight areas of synergy and to minimise conflict. Functionally those responsible for the implementation of the horticulture plan will work systematically with those driving the implementation of the integrated NRM plan.

### **RDPIFR study – 'Environmental impacts of cropping, forestry and horticulture in the Northern Territory'**

This comprehensive study aims to inform a wider RDPIFR objective of obtaining "a clear understanding of the paddock-level impacts of cropping, forestry and horticultural practices". The project seeks to determine knowledge gaps or work required relating to this objective, and then develop strategies to address the gaps.

There is a close connection between this plan and the RDPIFR study. This NRM strategic plan for horticulture in the NT identifies various knowledge gaps and work needed and therefore will provide valuable input to the RDPIFR project.

### **RDPIFR study – 'Integrated irrigation review'**

Review and collate all relevant information on irrigation in the NT, identify knowledge gaps and develop an accessible user-friendly database.

## OVERARCHING ISSUES

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This section details a number of important and overarching issues that are having or will continue to have impact on delivery and implementation of this plan. Some issues are mentioned later under the *strengths and challenges* analysis, or within the specific *key focus* areas, but are listed again here for emphasis.

### **Building a strong alliance with the NT Government and RDPIFR.**

The development and implementation of this plan represents a valuable opportunity to build a strong working partnership between NTHA and the NT Government and specifically with the RDPIFR. This plan shows that NTHA is a peak industry body committed to sustainable land use and wise management of the environment, values shared by RDPIFR.

The process of identifying the industry's needs and priorities gives clear messages to government and helps set the agenda for funding research and extension services in natural resource management.

### **Three distinct areas**

As mentioned earlier, horticulture in the Territory is not homogenous. The three identified areas (Top End, Katherine and Central Australia) have different circumstances, crops, issues and needs. While there are many common areas, it will be important to always consider the ways they are different and the particular regional issues.

### **Separate commodity group needs**

While this is a plan covering the whole of the horticulture industry in the NT, it is recognised that there are distinct commodity group needs and that they must be understood and addressed within the strategies and relevant action plans.

### **Numerous organisations, structures and plans**

There are numerous national and Territory organisations which have an interest or responsibility in the area of environmental management systems – RDPIFR, NRETAS, NRMB, National Landcare, Landcare Northern Territory, the Australian Government departments of the Environment and DAFF; HAL – and many others.

Added to this, each of the national horticultural industries has its own strategic plan which, to a greater or lesser degree, deal with natural resource management and environmental issues.

It is a complex picture which can lead to duplication, crossover and confusion. It would be valuable to establish a process whereby in the NT there is regular and formalised exchange of information, ideas and plans.



## Resources to implement this plan

This plan will be effective and deliver outcomes for both horticulture and the NT provided adequate resources are dedicated to:

- ▶ Implement the strategies identified in the plan; and
- ▶ Manage the implementation process, including communication and liaison.

Making available or securing those resources must be a priority for the NTHA.

## Loss of valuable information/expertise

On a number of occasions concern was expressed that the NT may lose or already has lost valuable information and expertise. For example, studies may have been conducted into some of the areas now considered priorities or knowledge gaps, but due to the passage of time, poor record keeping or loss of key personnel, this information is lost or disappearing.

It is understood that the current RDPIFR project looking at knowledge gaps will address this to some extent, however this issue is raised here again for emphasis.

Additionally, the proposed closure of the CSIRO Tropical Horticulture Research Laboratory in Darwin at a time when horticulture in the NT is at a critical development stage could mean a loss of valuable expertise.





## NT Horticulture – strengths and challenges

The following schedule of NT Horticulture's strengths and challenges was developed from input at the workshops and individual interviews.

### Strengths

- ▶ **Katherine Water Advisory Committee**  
A valuable and productive grower network.
- ▶ **Water use**  
Generally considered to be more efficient users of water.
- ▶ **Younger**  
Overall, younger participants and therefore possibly more open to EMS messages and implementing change.
- ▶ **Integrated pest management (IPM)**  
Some evidence that use of IPM is increasing.
- ▶ **Conservation farming**  
Increase in use of more sustainable practices.
- ▶ **Katherine Best Practice Group**  
A valuable and productive grower network.

### Mosaic development

That is, mosaic nature of farm locations with reduced environmental impact and substantial native vegetation between (i.e. buffer zones). Also farming restricted areas, easier for communication etc.

- ▶ **Peat**  
Local use of peat in some areas (Katherine).
- ▶ **Collaboration**  
Prepared to work together, form small groups, learn from each other.
- ▶ **Stable environment**  
Stable and predictable climate.
- ▶ **Associations active**  
NTHA and some sectors (eg nursery) are pro-active in the EMS area.
- ▶ **Younger, smaller industry**  
Therefore less existing environmental damage.
- ▶ **Opportunity to learn**  
Chance to learn from the mistakes of others in larger states.
- ▶ **National interest**  
National commodity groups, PIBs and government are recognising role and potential of NT horticulture.
- ▶ **Urban encroachment**  
Less potential for urban encroachment into valuable production areas.

## Challenges

- ▶ **Marketing**  
Limited, coordinated good marketing of produce.
- ▶ **Distance**  
From major wholesale markets (Syd, Bris, Melb).
- ▶ **Animal management**  
Proximity to bushland leads to difficulties with management of native and feral animals.
- ▶ **Biosecurity practices**  
Biosecurity practices on farm may be poor.
- ▶ **Biosecurity risk/advantage**  
Location and trade make the NT an international biosecurity risk. However also, the industry's relative isolation could be seen as a barrier against incursion.
- ▶ **Awareness of NRM**  
Possibly lower awareness at farmer level of NRM and related issues.
- ▶ **Non English speaking background growing**  
Disengaged – opportunity.
- ▶ **Water value disagreement**  
Horticulture versus urban living.
- ▶ **Soil quality**  
Overall, poor.
- ▶ **Water quality**  
Poor in some areas.



## IDENTIFIED KNOWLEDGE GAPS

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Through a number of processes and consultations (undertaken before this project began) a list of *perceived* knowledge gaps in relation to horticultural NRM were identified by the NTHA. They are listed here in bullet-point form to provide further background and context for the plan.

It is understood that some of these perceived gaps are in fact opportunities for extension of information. That is, the knowledge may be available and just needing a suitable process to communicate it to the horticultural producers.

Through the workshops and interviews during the development of this plan, the issue of knowledge gaps/needs was again canvassed. It was reassuring that much of the feedback confirmed what was already known. To provide a comprehensive background, some comments related to the feedback received are provided in each section in italics.

### **WATER:**

- ▶ Water resource capability for agricultural regions – what actual allocations can be assigned to sustainable agricultural production?
- ▶ How does this resource allocation interact with catchment planning?
- ▶ What are the actual off-farm impacts of sustainable agricultural production in the different regions, and how do we effectively minimise them?
- ▶ Irrigation system design – what actually constitutes a sustainable generic design in the arid / tropical zones that can be easily modified for specific crop requirements?
- ▶ What are the most efficient delivery systems/products for the range of NT crops?
- ▶ What are the actual water requirements for NT crops – could a matrix be developed to interpret climatic, soil type variations that affect scheduling requirements?
- ▶ How do we effectively increase and sustain the water-holding capacity of NT soils?
- ▶ What constitutes a functional riparian buffer zone in the NT regions?
- ▶ Irrigation system operation – what basic skill set is required to efficiently operate an automated system in the NT?
- ▶ What is actually required to monitor your water resource to ensure its integrity and sustainability?

*Most comments from growers relating to water indicated that their biggest knowledge gap was understanding the water requirements of their crops, particularly under different soil types. Growers indicated that they would like to have a greater understanding of irrigation scheduling in relation to crop quality and quantity. They would also like to see more information on the cost effectiveness of different water treatments. Growers indicated that they do not have an understanding of the moisture holding capacity of their soils and do not know how to relate it to irrigation scheduling. Growers would like more information about the physical properties of soils in the NT so they can carry out more efficient irrigation. Other suggestions indicated that growers require more assistance with using and interpreting soil moisture monitoring devices.*



*Growers also wanted to learn more about how aquifers worked and the effect of their water utilisation on the water levels in aquifers. Other issue raised is that growers were not sure if there was any leaching of nutrients into water ways and aquifers.*

*Assistance with back flow prevention when fertigating has been raised as an issue, particularly by arid area growers. They needed support and information on appropriate design. Arid growers would also like to research the benefits of using irrigation water to grow green manure crops to help create mulch which would assist with organic matter and water holding capacity.*

#### **CARBON:**

- ▶ What are the best crops to maximise soil carbon input in the regions?
- ▶ What are the soil additives that enhance carbon uptake in NT soils?
- ▶ What are the best crops for biofuel production?
- ▶ What are the most efficient slow release fertilisers on the market?

*Additional issues raised during this project included:*

- ▶ *What are the appropriate mulches to use under a tree orchard enterprise?*
- ▶ *Is it possible to build carbon under mango and other tree crops by reducing the use of herbicides and growing a prostrate, ground covering plant that self mulches. (The plant species chosen would have to be able to cope with heat, use little water or nutrients, would not require spraying and require little other maintenance.*

*Not only would growers like to know about different sources of local mulches that could be used, they also would like to know more about how they could grow or prepare their own mulches, and ways to cost effectively apply them to soil to raise carbon levels.*

*Growers are becoming more interested in the carbon status of their crops and whether the crops release carbon to or sequester carbon from the atmosphere. They also seek more information on the carbon footprint of their enterprises.*

#### **SOILS:**

- ▶ Detailed soil mapping for agricultural soils in the NT.
- ▶ What are the biological properties of soils in the regions and how should they be sustainably managed and/or enhanced?
- ▶ What biota is required to sustain productive soils for particular crops?
- ▶ What is the most cost effective means of increasing soil organic matter (SOM) in NT soils?
- ▶ What pesticides are likely to cause soil degradation, and how?
- ▶ What arable NT soil types are susceptible to erosion? (soil erosion susceptibility matrix required)
- ▶ What native grass species best increase soil structure in the different regions?



*Growers in this project indicated that they require more information on properties of the soils that they use, not only on their biological properties but also on their physical and chemical attributes. Some growers queried the effectiveness of using soil additives (to improve soil biology and health) when they have originated from a southern climate. Growers would like more research carried out on these products in the tropics. Many growers would also like to learn more about soil health and soil biology so they can reduce their dependence on fertilisers.*

*Growers also expressed their concerns about soil erosion and how to manage it. They said that there is a lack of extension in this area and that they do not always have access to information on how to control erosion.*

#### **CHEMICALS:**

- ▶ Requirement of regional IPM pro-forma for NT crops.
- ▶ What are the impacts? Investigate and disseminate impacts of chemicals on sensitive areas within and surrounding agricultural areas.
- ▶ How do we reduce our dependency on chemicals?
- ▶ What constitutes a functional buffer – species selection, width, location, design?
- ▶ Adequately trained operators.

*The biggest issue with chemicals is that growers don't feel like they have sufficient knowledge to effectively practice IPM. Growers felt that they don't have enough knowledge to identify all bugs so they can use that information to apply the appropriate chemicals at the appropriate times. Most felt that it was beyond their capabilities and they required external help to assist them practice IPM.*

*Growers also expressed their concerns on their reliance on non-selective herbicides under trees, and that more growers should be slashing instead. Growers from the non English speaking background sector were identified as a group that required assistance with best-practice chemical management.*

*One of the biggest issues raised by growers was that many growers required assistance with best practice application of chemicals and required assistance in the field to set up spray equipment and to effectively apply different products using different spray nozzles etc.*

*Growers and stakeholders also indicated that they thought that there should be more testing of soils and produce to see if chemicals were being used appropriately. They also wanted to learn more about the impact chemicals such as glyphosate have on soil biology.*



### **NUTRIENTS:**

- ▶ What are realistic goals for sustainable crop production in the NT?
- ▶ What manure sources are available in the NT and which is best suited to particular crops?
- ▶ How do we reduce our dependency on inorganic nutrient sources?
- ▶ What is the real fate of nitrogen and phosphorus in NT soils?
- ▶ What are the best species for maintaining ground cover in the regions?
- ▶ What are the best species for nutrient trapping buffers or wetland filters?
- ▶ What are the best nitrogen fixing plants for the regions?
- ▶ What are the best and most appropriate soil additives that enhance nutrient uptake in regional soils?

*Similar to water, growers felt that they needed more information on the nutrient requirements of crops under different soil types and the relationship fertilising has with produce quantity and quality. Growers were not aware if they were leaching nutrients or applying nutrients in the most effective way to maximise crop uptake and avoid nutrient wastage. Growers would like to build up soil health to reduce their dependence on fertilisers.*

*Growers would also like to see some research carried out to determine whether significant levels of leaching of nutrients and chemicals is occurring and entering waterways and aquifers. They don't know if they are having an environmental impact off farm.*

### **ECOSYSTEM SERVICES:**

- ▶ What are our (NT agricultural) ecosystem services?
- ▶ How do we identify and maintain these ecosystem services?
  - Soil biota
  - Pollinators
  - Predatory insects
  - Birds
  - Bioindicators
- ▶ What are the threatening processes within the regions?
- ▶ What constitutes, and how do we maintain or develop functional corridors of native vegetation within the NT bioregions?

*In this project stakeholders believed that they didn't have enough information about all the beneficial species involved in horticulture and the habitat they require. The issue was raised that if growers knew which plants are habitat for beneficial species; they could be grown next to crops in the form of windbreaks etc. The economic benefit of ecosystem services is also not known in the NT.*

## **BIOSECURITY:**

- ▶ What are our threats?
  - To our crops
  - To the environment
  - To human life
- ▶ How do we manage these in a coordinated and effective manner?

## **CLIMATE:**

- ▶ Understanding of climate and relevant practices to manage climatic risks need to be developed as a more integral tool in NT agriculture
- ▶ How will climate change really affect agriculture in the regions?
- ▶ What are true greenhouse emissions – how do we manage individual and industry mitigation?

*Climate change was acknowledged as an issue by growers, many were not sure of ways that they could reduce their impact, but some indicated that they would like more information about the carbon footprint of their various inputs. Information needs include:*

- ▶ *Which crops and species could be grown that would tolerate more effectively a changing climate?*
- ▶ *What is the tolerance amongst our existing species to changing climatic conditions? For example is there a cultivar that is more resistant to heat stress, or could cope with higher levels of disease pressures?*
- ▶ *Will climate change make our normally predictable seasons less predictable or take away our ability to produce southern produce out of season?*

## **WASTE:**

- ▶ How do we sustainably manage waste within the confines of a dysfunctional system that doesn't work because of economies of scale and the tyranny of distance?

*Growers wished that they had an alternative to using plastic mulch for weed control, such as some sort of biodegradable material that also produced some mulching benefits.*

## **ENERGY:**

- ▶ A pro-forma for rural/farm energy audits is required.
- ▶ Ability to access energy efficient agricultural equipment/machinery/systems.
- ▶ How can NT agricultural enterprises best capitalise on renewable energy sources?

*Growers were concerned about the increasing cost of energy and practical ways that they could become more efficient with their energy use. Some suggestions were sharing resources, equipment and learning how to apply inputs more efficiently.*

## **WEEDS:**

- ▶ Identification of weed threat.
- ▶ Appropriate management of weed threat.
- ▶ Impacts of weeds on sustainable agricultural production.

## **FIRE:**

- ▶ Ignorance of basic bushfire laws.
- ▶ Ignorance of fire regimes/impact on the environment (beneficial/detrimental).
- ▶ Ignorance of fire preparedness.

## **AIR:**

- ▶ How do we most effectively reduce agricultural air pollutants?

## **VISION FOR NT HORTICULTURAL NATURAL RESOURCE MANAGEMENT – 2013**

A vision describes how an organisation or process looks and operates at some point in the future. It should be realistic and achievable, yet inspire management, staff and other stakeholders, and be the overall goal for all planning, structure and operations.

The vision for horticultural natural resource management in the NT in 2013 is:

*Horticulture in the Northern Territory has embraced the challenge of environmental responsibility and is actively engaged in ensuring sustainability through improved natural resources management (NRM). The Northern Territory Horticultural Association (NTHA) has spearheaded innovative and proven programs to fill knowledge gaps, deliver information and measure the positive impact (on and off-farm) of improved practices.*

*Specifically:*

- ▶ *The resources and information needed to communicate NRM best practice to growers have been gathered and there is an ongoing process of updating and improving the data.*
- ▶ *More than half of the NT's horticultural enterprises have embraced improved NRM and are actively accessing relevant information via a variety of extension mechanisms; and are implementing a structured environmental management system.*
- ▶ *NTHA, RDPIFR and others have in place a sound process to measure and track changes in the on and off-farm environmental impact of horticultural activity in the NT.*
- ▶ *More than 25% of NT's horticultural producers are clearly branding their produce as of NT origin and actively promoting it as such.*

*There is a spirit of shared vision and collaboration among the various organisations involved in environmental management in the NT. Importantly, NTHA and the NT Department of Regional Development, Primary Industry, Fisheries and Resources (RDPIFR) are working in close partnership to develop resources, implement the required extension programs and measure the positive change in on-farm natural resource management.*

*Government, both NT and Federal, are aware of and value the environmental initiatives being implemented throughout horticulture in the NT.*

*More broadly, people in the NT and the media recognise that businesses in the horticultural industry are taking real action to be responsible managers of natural resources; and their contribution in this regard is of great value to the environment and community generally.*



# KEY FOCUS AREAS

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For consistency and national uniformity, it was agreed that the five key areas of the *National Horticultural NRM strategy* form the foundation of this plan. In that way:

- ▶ NT strategies and activities can be seen to be contributing to the national plan.
- ▶ National strategies and activities can, where appropriate, be easily incorporated into the NT program.

The five key areas are:

**1. Efficient production**

Advancing efficient and sustainable production systems for profitable and environmentally sound produce.

**2. Skilled growers**

Building the capacity and confidence of growers to understand and manage sustainable production systems and environmental issues.

**3. Healthy environments**

Planning environmentally healthy and productive regions through joint programs that engage industries and resource management agencies at all levels.

**4. Positive communities**

Providing positive business environments for growers through informed planning and policies to help growers invest wisely and add value to regions and communities.

**5. Loyal consumers**

Maintaining ongoing consumer demand for Australian produce with informed purchasers confident in the availability and quality of produce and the farming systems that grow it.

In each of the following key focus areas are listed:

**Objective(s)**

By which achievement of the strategies will be measured.

**Strategies**

That must be employed to achieve the objective(s).

**Drivers**

That will assist achievement of the objective(s).

**Issues and considerations**

Relevant to this specific area and as raised in the workshops or interviews.

## 1. Efficient production (knowledge and resources)

*Gathering and developing the knowledge base and resources which, when adopted (and used), will drive more efficient, sustainable and environmentally sound production.*

### **OBJECTIVE**

By 30 June 2013, the Northern Territory will have at its disposal the best possible information on on-farm natural resource management practices with which to develop capacity building programs for horticulture growers.

### **STRATEGIES**

1. In cooperation with RDPIFR, carry out an information audit and gap analysis.
2. Conduct or access any relevant research to fill the identified gaps.
3. Develop a suite of data to convey the latest and best possible information from 1 and 2.  
*(Note: Format and presentation of the data will be dependant upon the delivery mechanisms decided under 'skilled growers')*
4. Feed these guidelines into the 'skilled growers' component of this plan and also make them widely available through other avenues.

### **DRIVERS**

- ▶ Government and industry commitment to the task.
- ▶ Sound understanding in government of the value of horticulture to the NT as a whole and to individual communities (including existing positive case studies).
- ▶ Allocation of adequate resources (both human and operational).
- ▶ A well-coordinated approach.
- ▶ Clarity of needs, gaps and issues.

### **ISSUES AND CONSIDERATIONS**

- ▶ Must be relevant to identified knowledge gaps.
- ▶ Industries (and enterprises) must be profitable to be able to invest profits in NRM.
- ▶ There may be differing NRM practices on neighbouring properties – impacting upon each other.
- ▶ Can we find improved transport to the major markets?
- ▶ Need to address – water management and use; energy efficiency and reducing energy use; nutrient efficiency and management; IPM; feral pest management; erosion control; soil development and enhancement; stubble management; mulching and ground cover; weed management; nutrient leaching; increasing soil carbon.
- ▶ Important to quantify the on-farm benefits of NRM.
- ▶ Greater grower awareness of NRM and its importance is critical.

## 2. Skilled growers

*Building the capacity and confidence of growers to take action on environmental issues and manage sustainable production systems.*

### **OBJECTIVE**

By 30 June 2013, 50% of NT horticultural producers will be actively accessing information and be implementing a structured environmental management system.

### **STRATEGIES**

1. Establish benchmarks of grower NRM practice and track regularly.
2. Develop and implement appropriate delivery processes, training and tools.  
*(Note: Based on the data derived from strategies in 'efficient production' [knowledge and resources]).*
3. Identify and promote appropriate environmental management system models.
4. Foster an understanding within all levels of the horticulture industry of the cost-effectiveness and cost benefits of good NRM practice.
5. Maintain an active communications program to build and hold grower interest in good NRM.

### **DRIVERS**

- ▶ Adequate funding and human resources.
- ▶ Grower interest and active engagement.
- ▶ Promotion of success stories.
- ▶ Government commitment to the concept and process (of building growers' capacity in this area).

### **ISSUES AND CONSIDERATIONS**

- ▶ Can the internet be used as a knowledge delivery platform?
- ▶ Must ensure growers have access to the relevant information to increase skills. Not just access but ability to use it.
- ▶ Consider the use of specialist consultant services.
- ▶ Growers need information/support on crop water use, nutrient requirements to match crop outputs; weed management; pest management; IPM, chemical use/requirements; fire management; mulching and ground cover; energy usage; waste management.
- ▶ Opportunity to engage local and federal government (in training and delivery).
- ▶ Information delivery/training needs to work hand-in-hand with attitude change by growers.
- ▶ Consider mentoring programs.
- ▶ Integrated landscape. Look at landscapes as linked social-ecological systems and managing for multiple land uses and values.
- ▶ Training and education, together.
- ▶ Consider continuous improvement programs.
- ▶ Field-days on sustainable practices.
- ▶ Active monitoring and evaluation to check progress.
- ▶ Recognition of growers following best practice is important.
- ▶ Educate on integrating crop trees with natural vegetation.
- ▶ Look at on-farm machinery efficiency and energy use.
- ▶ Complete property environmental audits and management plans.
- ▶ Leads to greater grower acceptance of the need for change.
- ▶ Identify new crops most suited to NT natural resources and climate.

### **3. Healthy environments**

*Planning environmentally healthy and productive regions through joint programs that engage industries and resource management agencies.*

#### **OBJECTIVE**

By 30 June 2013 Industry and NRM stakeholders will have a quantified understanding of the environmental impacts (on and off farm) of horticultural activity in the NT and have in place a mechanism to regularly measure and track changes.

#### **STRATEGIES**

1. Establish and maintain collaborative relationships between horticulture and NRM agencies.
2. Ensure the horticulture industry supports and is consulted in any developments on any updates of the NT NRM plan.
3. Establish and maintain initiatives (including projects) that measure and monitor the environmental impact of horticulture activity.

#### **DRIVERS**

- ▶ Adequate funding for projects.
- ▶ Good project management and across-project co-ordination.
- ▶ Growers engaged and interested.
- ▶ Positive community perception of horticulture and its value to the environment, its extended community (i.e. the supply chain) and communities generally.

#### **ISSUES AND CONSIDERATIONS**

- ▶ Need evidence-based data on actual impact of horticultural activity.
- ▶ Need to better understand the whole area of slow-leaching of nutrients.
- ▶ Off-farm environmental impacts of horticulture are not well understood.
- ▶ Consider whole-of-catchment impact models.
- ▶ Serious lack of solid information about ground water volumes and trends, including sustainable yield from bore; and aquifer recharge rates.
- ▶ Understand emerging carbon markets and any costs and opportunities for horticulture.
- ▶ Is there a place for generic environment management plans?
- ▶ Practical guidelines are needed for IPM (including natural predators and beneficial insects), biosecurity, weed management, water-use minimisation, maintaining natural biodiversity; managing nutrient run-off.
- ▶ Consider and promote alternative, affordable fuel and energy options (including biofuels if appropriate).
- ▶ Care needed to ensure known water resource is not over-allocated.
- ▶ Full cost accounting of production could include NRM costs.
- ▶ What options are there for use of recyclable mulch or alternatives to plastic mulch?



## 4. Positive Communities

*Generating within the community, media and decision-makers, a positive perception of horticulture and its value (including the industry's responsible environmental management).*

### **OBJECTIVE**

By 2013, the NT horticulture industry is seen as vibrant and resilient; and its contribution to the community (particularly in responsible natural resource management) is widely recognised, supported and valued.

### **STRATEGIES**

1. Promote a positive environmental profile/image for the industry in the broader community and to government.
2. Pro-actively and positively contribute to regional NRM planning and problem solving.
3. Participate in developing new concepts and proposing policy for sustainable communities.
4. Foster industry integration within the local community with a healthy mix of small, medium and large horticultural enterprises.
5. Critical to ensure that the horticulture industry is engaged in and contributing to the process of government policy development.

### **DRIVERS**

- ▶ Value in a united approach and everyone communicating the same messages.
- ▶ Strong media and communication skills for key executives.
- ▶ Working closely with government and the media.
- ▶ This area and the advocacy role are seen as priorities by the NTHA and by its board.
- ▶ Growing community and government interest in food security.
- ▶ Other stakeholders and groups keen to have horticulture contributing to policy development.

### **ISSUES AND CONSIDERATIONS**

- ▶ Horticulture industry, as well as land use and land development forward planning must take account of environmental impacts.
- ▶ Better regional planning to allow for off-reserve biodiversity conservation through preservation of remnant vegetation sections and corridors.
- ▶ Ensure stakeholder participation in land-use planning.
- ▶ Can we contribute in developing environmentally sustainable indigenous communities?
- ▶ Build community interaction through farmers markets etc.
- ▶ Horticulture needs to develop stronger ties and allies with the broader community.
- ▶ Effective government support and leadership is needed to progress community attitude change.
- ▶ There is an information gap regarding alternative land use opportunities (e.g. environmental services, carbon sequestration).
- ▶ Horticulture resource security needs community and government support.

## 5. Loyal consumers

*Maintaining ongoing consumer demand for Australian and particularly Territory produce, with informed purchasers confident in the availability and quality of that produce and the farming systems that grow it.*

### **OBJECTIVE**

By 30 June 2013, 25% of growers will be actively identifying and promoting their produce as grown in the Northern Territory.

### **STRATEGIES**

1. Conduct benchmark research to measure current consumer awareness of and attitudes to NT produce.
2. Develop branding concept and mark, including qualifications to use it. Consider development of the "SustaiNT" brand.
3. Foster local retailer, both supermarket and independent, understanding of and preference for NT horticultural produce.
4. Implement appropriate public media and stakeholder promotion and public relations activity.

### **DRIVERS**

- ▶ Adequate funding.
- ▶ Adequate research and information.

### **ISSUES AND CONSIDERATIONS**

- ▶ Consumer loyalty needs high quality produce – as well as support of NT sustainable production.
- ▶ May be benefit in consumers understanding the level of the carbon horticulture footprint compared with other land uses.
- ▶ Is there a place for parochial promotion within the local market – "NT is best!"?
- ▶ Need to build broader community confidence in and support for horticulture and its environmental credentials.



# SPECIFIC RECOMMENDATIONS

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This section addresses a number of matters that are related to the plan and important to its successful delivery. For each, a brief rationale is provided, together with a specific recommendation.

## 1. Government relations

Natural resource management is an area of increasing importance to both the NT and Australian governments. They will develop policy to encourage more responsible environmental management and where necessary, pass legislation to support desired outcomes. It is therefore critically important that NT horticulture be seen as positive and pro-active, and keen to work with government.

### ***Recommendation***

***That NTHA put in place an active program of government liaison and relationship-building based on sound science, shared responsibility and mutual benefit from positive outcomes in NRM activities.***

## 2. Implementing the plan

This plan is a bold, new and an important initiative for the NTHA. It represents a clear step into the environmental agenda and a willingness on the part of the horticultural industry to be active participants. Developing and then launching and publishing the plan will naturally set expectations that it will be implemented and objectives achieved. People and organisations will be keen to see that the NTHA can and will deliver.

Implementing this very considerable plan will only happen if the NTHA and others dedicate the resources to make that happen. That is, the executive time and expertise; the infrastructure and systems and the NTHA council and other governing committees' dedication must be forthcoming and maintained. Without them, the plan's actions and expectations will remain unrealised.

### ***Recommendation***

***That the NTHA council and other relevant organisations, together, establish the required resources, infrastructure and processes to ensure implementation of this plan.***

## 3. Maintaining visibility and momentum

Some initial interest in NRM and its future in NT horticulture has been stimulated in a number of quarters by this planning process. This is positive and provides a foundation upon which further awareness and goodwill can be built.

### ***Recommendation***

***That the NTHA develop and implement a communications plan to build goodwill through maintaining industry and other stakeholder interest in NRM, this plan and its implementation.***

#### 4. Strategic alliances

As highlighted earlier in this document, there are many Territory organisations with an interest in NRM. However co-ordination and communication across them is not as good as it might be.

This shortcoming represents a wonderful opportunity for the NTHA to take the lead and to be the facilitator of a process and systems for better communication and information sharing. It should not be onerous but will have immense value and promote the association as a pro-active and positive organisation.

***Recommendation***

***That the NTHA establish simple processes and systems to ensure better communication and information-sharing between the various organisations and stakeholders in natural resource management in NT horticulture.***

#### 5. Preserving and building corporate knowledge

There is a significant body of information already generated and about to be created through implementation of this plan. Without appropriate, formalised protocols and procedures there is a risk that information may not be retained or utilised.

***Recommendation***

***That the NTHA, together with RDPIFR, establish protocols and processes to properly secure and store relevant information generated already and in the implementation of this plan.***







## **NEXT STEPS**

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It is important that the momentum and interest created through the development of this plan is built upon. To implement this plan, the critical next steps are:

### ***NTHA ENGAGEMENT***

The plan should be reviewed by the NTHA council and formally adopted. The association then needs to actively promote its initiative in developing the plan, the planned process, and the timetable for implementation.

### ***GOVERNMENT LIAISON***

This plan provides the ideal, positive mechanism for strong engagement between NTHA and the NT Government both at a ministerial and department level. This should be planned and carried out in close consultation with RDPIFR.

### ***ACTION PLANS***

Annual action plans are needed to ensure the strategies in this plan are implemented. The NTHA and RDPIFR should open discussions about the mechanism and responsibility for development of these action plans and how they might be funded.

# APPENDICES

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## Appendix 1 Steering committee

<b>Maree Domelow</b>	<i>Facilitator</i> Natural Resources Management Board
<b>Libby Doney</b>	<i>Project Manager</i> NT Department of Regional Development, Primary Industry, Fisheries and Resources
<b>Tracey Leo (chair)</b>	<i>Executive Officer</i> Northern Territory Horticultural Association
<b>Ian Linley</b>	<i>NT Industry Landcare Coordinator</i> National Landcare Program
<b>Guy Robertson</b>	<i>Industry Landcare Co-ordinator</i> Northern Territory Horticultural Association
<b>Stuart Smith</b>	<i>Research Scientist – Sustainable Agriculture,</i> NT Department of Regional Development, Primary Industry, Fisheries and Resources
<b>Tim West</b>	<i>Environmental Development Officer</i> Northern Territory Horticultural Association



## Appendix 2 Workshop participants

### *TOP END (DARWIN)*

Stuart Smith	Jerry Hemphill
Tim West	Melanie Bradley
Tracey Leo	Maree Domelow
Ian Linley	Mini Lay
Jane Dellow	Jacinto Lay
Ben Hoffmann	Guy Robertson
Ian Baker	Julian Springham
Jan Hintze	

### *KATHERINE*

Bob Dennis	Di Renfree
Anne Beech	David Higgins
Murray Linton	Peter Sinnott
Peter Marks	Tim West
Jon Shaw	Emma Dennis
Maree Domelow	Guy Robertson
Austin McLennan	

### *ALICE SPRINGS*

Ron Miliado	Allen Cooney
Edd Mouktren	Michelle Walker
Miranda	Michelle Rodrigo
Ritchie Hayes	Karen May
Mo McCosker	Alan Penaluma
Joanne Coulthard	Guy Robertson
Glen Buddle	

## Appendix 3 Individual interviewees

<b>Haig Arthur</b>	<i>Mango Grower</i>
<b>Denise Batten</b>	<i>NRETA</i>
<b>Stuart Blanch</b>	<i>World Wildlife Fund</i>
<b>David Boehme</b>	<i>Grower of organic produce</i>
<b>Jane Dellow</b>	<i>Nursery and Garden Industry NT</i>
<b>Stephen Garnett</b>	<i>Charles Darwin University</i>
<b>Julian Gorman and Trish Rigby</b>	<i>Northern Land Council</i>
<b>James Gorrie</b>	<i>Charles Darwin University</i>
<b>Scott McDonald</b>	<i>Charles Darwin University</i>
<b>Fergal O’Gara</b>	<i>RDPIFR</i>
<b>Stuart Smith</b>	<i>RDPIFR</i>
<b>Chris Wicks</b>	<i>Water Planning, NRETA</i>



**NORTHERN  
TERRITORY  
HORTICULTURAL  
ASSOCIATION  
(NTHA)**

**Natural Resource  
Management  
Strategic Plan  
2009-2013**



**Northern Territory  
Horticultural Association** Incorporated ABN 73 183 873 626

*Fostering a sustainable industry, that values the environment and the spirit of rural communities.*



*Know-how for Horticulture™*



**Australian Government**