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# DEVELOPING A NEW BOTANIC GARDEN

## Membangun kebun raya baru

**Mark Richardson**

Botanical Consultant, Adelaide, Australia

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### Abstrak

Membangun kebun raya baru merupakan suatu kesempatan berharga yang harus dilaksanakan dengan sebaik-baiknya. Kebun raya baru hendaknya bukan sekedar tiruan dari kebun raya-kebun raya yang sudah mapan, tetapi hendaknya mempunyai keunikan tersendiri, misalnya dalam hal mengkoleksi jenis-jenis tumbuhan lokal. Terdapat beberapa hal yang harus dipertimbangkan agar pembangunan kebun raya baru dapat mempunyai arah dan tujuan yang jelas, diantaranya adalah misi pendirian kebun raya, keterlibatan dalam konservasi dan interpretasi, serta keberlangsungan eksistensi kebun raya di masa yang akan datang.

**Key words:** botanic garden, mission statement, conservation, interpretation, sustainability

### INTRODUCTION

Perhaps the most important thing that needs to be appreciated about developing a new botanic garden is that it is a very rare opportunity and it must not be wasted. It is very important that enough time be put into looking at what other botanic gardens are achieving in the world and what will make yours a little bit better. Once a botanic garden has been established and has been operating for some time it is very difficult to make major changes to it and your opportunity will have been lost.

While there are many underlying aspects that are similar in all botanic gardens it is what any single botanic garden is actually achieving that will make it unique. While it is important to look at what other botanic gardens are achieving, this does not mean that

they should be copied. Looking at the smaller botanic gardens that developed in the early to mid part of the last century, it is difficult to see a large difference between many of them. They were basically copying the type of botanic gardens that have existed in Europe for many centuries with usually a poor representation of the indigenous flora of their country.

Thankfully this is changing and a far greater amount of interest is being shown in indigenous floras both in terms of horticulture and the possible value of those plants and the products they might produce. Also issues such as invasive weeds have started to make people look more closely at the wisdom of introducing exotic plants. Of course, this has not banned the use of exotic plants in botanic gardens but it has made people far more thoughtful.



There are many subjects that can be discussed when talking about a new botanic garden but this paper will stay restricted to some of the issues that could make the difference between your new botanic garden being just another attractive and successful garden to being one that is among the leading gardens in the world – no matter how small it is. For the many other subjects that need to be addressed when developing a successful botanic garden, Botanic Gardens Conservation International's *The Darwin Technical Manual for Botanic Gardens* is an excellent guide.

The four subjects that covered in this paper are:

- Mission Statements
- Conservation
- Interpretation
- Sustainability

In addition, two examples of new botanic gardens will be used throughout the paper. One is the Alice Springs Desert Park in Australia which was established in 1995 and the other is the Oman Botanic Gardens near Muscat in Oman which is currently being built.

## THE MISSION STATEMENT

Much too frequently, the development of institutions is not driven by the reason for the organisation existing but by the building program. As such, there is always a danger that, in the same way as resorts are developed, the main drivers in a new botanic garden will be architecture (both buildings and landscape) and the infrastructure such as roads. Perhaps the primary reason for this, is that they are the things that will absorb the money and need to be 'sold' to whoever is funding the project. Also the sort of people that will be responsible for those aspects do not have a good understanding of what a botanic garden (as opposed to the town park) is actually trying to achieve. It can be this lack of understanding that may also mean that they can not see a good reason to fund the project in the beginning.

The Mission Statement is not something that should be developed once you have the project started. It is there to help you identify clearly what you are trying to achieve in your botanic garden by highlighting

the fundamental purpose for it. And it should not be considered as just a necessary piece of bureaucracy that you have to do. It is actually why you are doing it and it has to be fully understood before you start. This does not necessarily mean that it is only your idea and it will be valuable to get the opinion of others. However, as a part of seeking opinions it cannot be assumed that others are going to be able to tell you what you want – often it is only by introducing ideas about your new botanic garden that you will make people aware of them.

When developing a Mission Statement it should also be appreciated that what your funder wants might not always be exactly what you see is important. For example, when the Northern Territory Government in Australia proposed to fund the development of the Alice Springs Desert Park, their primary interest was tourism. However, as the Desert Park was to be a part of the Northern Territory's Parks and Wildlife Commission the primary interest for them was conservation. Although a primary mission for the Desert Park is "*to increase visitor appreciation, understanding and enjoyment of the arid region in Australia*", conservation underwrites all of the work that has been done without the word actually being written. It is a something that is understood by staff and by doing so, visitors have not only come to appreciate the arid region of Australia but understand why they must protect it.

Before finally deciding on a Mission Statement, ensure that you make good use of what other botanic gardens have already set for themselves and make sure that what you decide on is something that makes your new botanic garden in some way appear unique.

The primary mission statement for the new Oman Botanic Gardens is "*to ensure that the flora of Oman is valued by all*" and its focus on the nation's flora both ecologically and culturally is unique in the Middle East. As a part of this it is planned that the botanic garden will become "*an ambitious combination of world class botanic conservation and research facility and major educational and leisure destination*". The emphasis on conservation, research and education is to ensure that the botanic garden is viewed as more than just a tourist resort.



## CONSERVATION

For the past 30 years, conservation has become increasingly important in terms of the role of botanic gardens, with Botanic Gardens Conservation International having played an important role. The involvement by botanic gardens has been in terms of the development of *ex situ* collections of threatened plants, the reintroduction of threatened plants to the wild and research that relates to both activities.

Initially the idea of having threatened plants in cultivation was seen as a primary role of botanic gardens. While this is something that many botanic gardens have done, the actual result in terms of the conservation of individual species has been small and it has failed to generate a lot of respect or interest from *in situ* conservation groups. In some ways it was seen to be in competition. As a result, the nature of *ex situ* conservation has changed with there now being a lot more interest in holding seed collections that provide good genetic samples of individual species and populations. This resource has proved to be of greater interest to the *in situ* conservation groups as it has a real worth for such programs as reintroduction.

For any new botanic gardens, an involvement in conservation is of value but it is important that what the botanic garden actually wants to achieve is well defined. Doing this helps to avoid being accused of not knowing how the new botanic garden is going to make a real contribution. Further information to assist the development of a significant program can be obtained from the Botanic Gardens Conservation International website.

One of the ways that many botanic gardens are now conducting conservation is by making the gardens very prominent in their education programs. This can be both through the formal education of, for example, school groups or through informal education or interpretation.

## INTERPRETATION

For new botanic gardens, the effective use of interpretation is probably one of the most important things to be considered if it wishes to be seen as an up to date botanic garden.

Interpretation is one of the things that most botanic gardens do most poorly. Although the idea of plant labeling is very strong, the number of people that they actually benefit is unfortunately very small with the biggest user of the labels being the botanic gardens themselves as a way of managing a collection. However, signage is starting to be used more frequently in botanic gardens all over the world as is the use of audio visual and face to face interpretation. However, in most established gardens this is still very patchy and it is another unique opportunity that is offered by a new botanic garden.

In looking at how to decide on an interpretation plan for a new botanic garden it is important to be sure on the garden's mission statement. The interpretation must never be considered separately to the mission statement as it is the interpretation that is there to sell the garden's mission. As a part of this, it is valuable to determine what you think is the main message that you want people to get from the botanic garden. For example, the primary message for the Alice Springs Desert Park is "*despite its very poor soils and low rainfall, the desert is not as empty as it looks*". This message fits very closely with the Desert Park's goal to increase visitor's appreciation, understanding and enjoyment and provides a very large opportunity to tell the stories that will make people receive it.

The interpretation plan in a new botanic garden should always be done either before or in unison with the development of the living collection. Too often a botanic garden decides on a new display of plants, does the planting and then asks for interpretation to be done not knowing whether there are any good or relevant stories. In many situations it should be the interpretation plan that directs the living collections. By doing this you are able to check whether you are keeping to the mission of the garden as opposed to just developing a collection.

## SUSTAINABILITY

Perhaps one of the most recent aspects that new botanic gardens must seriously consider is sustainability. Until fairly recently, sustainability for most botanic gardens was referring to whether they had the funding to keep functioning. Whereas financial sustainability is



still a reality for all botanic gardens, the concept of environmental sustainability is now of real importance and in the case of both fuel and water is also becoming an aspect of financial sustainability as well.

For both the Alice Springs Desert Park and, to a greater extent, the Oman Botanic Garden, environmental sustainability plays a major part in the thinking behind the operation and development of the botanic gardens. A major concern for both gardens has been water and both have looked at ways of recycling water from the site for irrigation. However, the importance of it has still not been fully appreciated by designers and while it is thought to be a good idea, easy ways of using potable water are always favoured. Similarly with power production, the ideas of wind power and solar power were considered in the early stages of the development, but they sometimes are not considered a priority.

For any new botanic garden to be looked upon as one that is leading the way in the future it is going to be vital to maintain a commitment to environmentally sustainable practices. Botanic gardens are uniquely placed to play an important role in both setting the example and in educating others about the process and practical realities, from eco-friendly gardening to helping teachers set up a school garden to feed the pupils, from the latest in advanced eco-building design to selling compost from the garden.

With the real concerns that now exist in relation to climate change and the very strong link between that

climate change and plants, botanic gardens are in a very good position to develop an important role as a major 'shop front' to present conservation messages. It is a strong message that every new botanic garden should consider in terms of what role it wishes to take.

## SUMMARY

Every year somewhere around the world, people are having the unique opportunity of developing a new botanic garden. It is a chance to not only have the pleasure of creating an attractive asset for future visitors but it is also the chance to have a look at what has been done elsewhere and try and go one step further. With the effective incorporation of the important aspects of conservation, interpretation and sustainability in a new botanic garden there is a good chance of being able to do this. And by starting off by looking seriously at why the garden is being developed at not just how, it will make the chance of success even greater.

## REFERENCE

- Leadlay, E. and J. Greene. 1998. *The Darwin technical manual for botanic gardens*. Botanic Gardens Conservation International (BGCI), London, U.K.
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