

Towards a New Social Purpose



Redefining the role of botanic gardens





Botanic Gardens Conservation International (BGCI)

BGCI is the largest international network of botanic gardens and related institutions working collectively for plant conservation and environmental education. Its mission is “to mobilise botanic gardens and engage partners in securing plant diversity for the well-being of people and the planet.” Established in 1987 and with over 700 members drawn from almost 120 countries, BGCI provides technical and policy guidance as well as regular up to date information through its newsletters, magazines, conferences and courses. From influencing government policies and priorities to encouraging grassroots action, BGCI’s global reach and professional expertise enables it to achieve real conservation milestones. For further information, go to www.bgci.org

Towards a New Social Purpose: Redefining the Role of Botanic Gardens

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Cover photograph: Members of the Shekinah Mission help gardeners prepare a vertical wall for the Eden Project’s Chelsea Flower Show display.
Picture by Sam Morgan Moore/apexapexnewsPix.com

Foreword

At a time when humankind is struggling with both the current realities and future implications of global climate change and biodiversity loss, some organisations in the vanguard of species protection are, although steeped in scientific understanding of these issues, still too introspective to engage effectively with their local communities. Botanic gardens may be numbered among such organisations.

This paradox is the working assumption behind a programme of research projects, commissioned by BGCI and supported by the Calouste Gulbenkian Foundation, to examine the social role and relevance of contemporary botanic gardens. The study reported here*, from the University of Leicester's Research Centre for Museums and Galleries (RCMG), is a cornerstone of that programme. Largely UK-based, it also draws on experience from the United States and Australia – and its conclusion that gardens possess vast untapped potential as agents of social and environmental action is, in BGCI's view, of international relevance.

In a key finding, the report recommends that botanic gardens relocate their social and environmental roles within a modern framework of values, mission and vision and urges them to work together, through partnerships and networking organisations like BGCI, to face the environmental and social challenges of the 21st Century.

Building on the Leicester study (and with the continued support of the Calouste Gulbenkian Foundation), BGCI is working with RCMG to promote the social role of botanic gardens throughout the UK.

In another strand of BGCI's social engagement programme, a parallel Cardiff University study** has explored the potential for botanic gardens to promote biodiversity conservation and ecological sustainability by collaborating with and supporting faith-based organisations and projects. The Cardiff report supports BGCI's strategy of helping botanic gardens to become more accessible and engaging spaces for Muslim and other faith or value-based audiences. It underlines BGCI's belief that the enhanced social role of botanic gardens, particularly in respect of their social inclusion initiatives, is key to delivering the sort of conservation and sustainability outcomes that are so urgently required.

To this end, through its 'Seeds of Faith' initiative, BGCI is also looking to encourage botanic gardens to broaden their education programmes to encompass the teaching of faith and plants, focusing on Christianity, Hinduism, Islam and including the non-faith based values of Humanism.

**Redefining the role of Botanic Gardens: Towards a new social purpose* (2010)
<http://www.le.ac.uk/ms/research/pub1132.html>

***Islamic Gardens in the UK: dynamics of conservation, culture and communities* (2009)
Centre for the Study of Islam in the UK, Cardiff University

Background

This groundbreaking study was undertaken by the Research Centre for Museums and Galleries (RCMG), School of Museum Studies, University of Leicester. Commissioned by Botanic Gardens Conservation International (BGCI) and funded by the Calouste Gulbenkian Foundation, its aim was to examine the social role of botanic gardens in the UK. In common with many organisations in the cultural sector, the botanic garden community is now more aware of their need for their social relevance, of working in partnership with their local communities and addressing contemporary concerns like climate change.

It is, however, fair to say that while some good work is already being done, the full potential of botanic gardens in this field remains unrealised. This study by Leicester University's RCMG is a key step towards identifying that potential. By examining the current state of play in botanic gardens and by arguing for their broader social role, the Leicester report may be seen as framing the important debate that needs to be held.

As a global networking organisation striving to ensure the world-wide conservation of threatened plants, the continued existence of which is intrinsically linked to global issues including poverty, human well-being and climate change, BGCI aims to challenge traditional thinking in botanic gardens. It supports gardens to re-examine their philosophies, values and practices in order to make more effective contributions to social and environmental awareness and change. In BGCI's view this process is essential if they are to participate in, and articulate their relevance to, wider society.

Rationale for research

Throughout the cultural sector there is a growing emphasis on social relevance, and botanic gardens are among those organisations that have made tentative steps towards broadening their audiences and engaging with their local communities on matters of social and environmental concern. Target 14 of the Global Strategy for Plant Conservation highlights the importance of understanding plant diversity and the need for conservation. However few sites have come close to achieving this goal. In the UK alone over 100 botanic gardens attract approximately 6 million visits every year. Yet UK botanic gardens are currently reaching only a narrow stratum of British society. The general perception of them is that they are exclusive and elite



Students from the Chapel College for Youth off the Streets (YOTS) help establish a new community garden at Merrylands in southwest Sydney, Australia. Pictures on this and next page courtesy of Royal Botanic Gardens, Sydney

institutions. Little long-term research is available into who uses botanic gardens and why.

It is a paradox of the modern age that many people have become disconnected from the natural world at precisely the time when the threat from climate change and species extinction, both plant and animal, has never been greater and is predicted to get progressively worse. The case for unlocking the potential in botanic gardens to help educate and re-connect their local communities with the world of plants, as well as showcasing models for sustainable living, is a powerful one and forms the working assumption behind this project.

Research objectives

Through mixed methods research, the Leicester study examines, conceptually and practically, questions of social inclusion and social responsibility in botanic gardens. It also offers a way forward for botanic gardens – mapping out how they may, as key, socially relevant agents, directly engage with the social and environmental challenges of the modern world.

Research findings

Overall, the Leicester study found that botanic gardens were well placed to educate the public on conservation

CASE STUDY: SYDNEY'S COMMUNITY GREENING PROGRAMME



Edith, Trudy and Necla introduce a new resident to the joys of gardening at Leon Lachlan Reserve community garden in the inner Sydney suburb of Rosebery. Watch them in action at http://www.rbgsyd.nsw.gov.au/education/community_greening

going to build capacity, it doesn't happen overnight, nor does learning" (Janelle Hatherly, Public Programs Manager).

Today, the scheme is flourishing with over 140 communities participating across New South Wales. Such is the success that communities now actively and constantly approach the botanic garden to be involved.

The scheme blends the ethos and values of the botanic garden with the social needs of disadvantaged communities. As a statutory body the Trust is driven by state and national policy and it is part of the garden's role to ensure that:

'All individuals in New South Wales should have the greatest possible opportunity to contribute to, and participate in, all aspects of public life in which they may legally participate' (Botanic Gardens Trust Sydney 2010).

The Public Programmes Unit at the botanic garden, who runs the scheme, aims to help the broader community appreciate their natural and cultural heritage, to learn to care for their local environment

and to adopt sustainable lifestyles.

Understanding and acknowledging that not all communities are able to visit or engage with the botanic garden, Botanic Gardens Trust Sydney began to reflect on their relationship with communities in new ways, thinking about meeting the needs of community's while building on the values and processes of the botanic garden. Inspired by initiatives in the USA, the 'Community Greening' project was developed in 1999. It encourages communities in disadvantaged areas and in neighbourhoods of social housing to develop communal gardens in unused public spaces, utilising disused, barren or vacant council land, and in the grounds of churches, hospitals and schools.

"Because of limited resources, we target the communities in most need... [Who] wouldn't come to us or [who] can't come to us because they're isolated, disadvantaged" (Janelle Hatherly, Public Programs Manager)

Staff from the botanic garden provide the horticultural expertise, advice, education and training that communities need. Groups and people in specific neighbourhoods come together to transform the redundant areas; the gardens yield a diverse range of produce, including fruit, herbs, vegetables, plants, seedlings and flowers. In keeping with the environmental aims of the Trust, community gardeners are encouraged to use sustainable practices including waste reduction, recycling, reuse of resources and organic gardening principles. These are working gardens; they are long-term urban renewal projects rather than a 'quick-fix':

"They're actually communal gardening projects and it can take up to five years to end up with something on the ground that looks good and works... So if you're

The impact of 'Community Greening' The gardens have transformed run-down areas, aesthetically improving them while also being productive by providing fresh produce for communities. The impact of the scheme however is much more profound, a combination of social and environmental impacts which directly affect people's lives, improving their confidence, developing their skills and their vocational opportunities. The botanic garden has played a key role in fostering more cohesive communities, creating a sense of community by bringing people together focused on a shared experience. The gardens have enabled interaction between those people who previously had little contact. They are valuable and valued community spaces, where people feel a sense of ownership.

The gardens have had a significant impact on crime too, reducing vandalism and anti-social behaviour - and because people are becoming more involved in their neighbourhood they are more active in reporting crime.

There have been benefits for both physical and mental health; people take part in more activity together with the restorative effect of engaging with the natural world. The gardens have created an improved and healthier environment and benefited diets through greater access to fresh fruit and vegetables.

There is also an environmental consequence, significantly improving the location, reducing food miles, reducing waste, increasing recycling and the reuse of resources, particularly water.

issues and the human role in effecting environmental change.

The 21st century has seen increasing awareness and concern about the human impact upon the environment. In 2000, BGCI estimated that two thirds of species were in danger of extinction due to human actions. The 1993 Convention of Biological Diversity commits botanic gardens to promoting education and awareness about

plant diversity and the need for its conservation.

While many botanic gardens are well established as educators in a formal sense, their role as informal learning environments is less well documented. Yet, as custodians for living plant collections that are often displayed in an informal, relaxed way, they are ideal environments in which to demonstrate how important plants and people are to each other. Modern urban

CASE STUDY: EDEN PROJECT - CLAY FUTURES

In a future which will be radically altered by climate change there will be many new challenges. Communities will need to be more resilient and more flexible to adapt to change. Those communities that are already facing difficulties are especially vulnerable and ill-equipped to deal with these changes.

What role might botanic gardens have to play in supporting communities, especially some of the most vulnerable, to become more resilient and more able to adapt to the challenges of climate change? Juliet Rose Community Development Officer from the Eden Project suggests that cohesive communities are going to be key to this future:

“When facing some significant challenges in the future, the best way for us to face them is together. We’re probably going to have to share more things, we’re going to probably have less personal freedom possibly, but equally, if we want to cope with a lack of dwindling resources or climate change, then probably our best way of doing that is to try to do that cohesively. We’re going to be more successful if we can do it that way.”

Drawing on a set of values that look towards a sustainable future, Eden is working with post-industrial communities around St Austell that have been blighted by the demise of china clay industry. Here the landscape is physically shaped and scarred by extraction, and the economic focus of the community has disappeared leaving a legacy of many people who are deprived and dislocated from a thriving future. Eden is using ‘Clay Futures’, an in-depth consultation with local communities, as a real opportunity at grassroots level for communities to think about how their community could be and to shape their own future.

Instead of thinking about the future in an abstract way, the process makes it more concrete and real and specific to that place and those people. Rather than feeling that things are done to them, where people feel they have little power or influence, this is a process of communities taking hold of their own future. By framing the consultation Eden has been able to ask communities questions about their future which relate directly to sustainability.

‘Clay Futures’ draws on the experiences of interpretation at Eden’s main site, engaging people not by overwhelming them with information but through clear messaging and giving them a chance to say what they think and feel:

“So we ran a process that had the look and feel of a village fete... that created a



Eden’s ‘Clay Futures’ project had the look and feel of a village fete, to create a safe environment for people to express their true feelings. Picture courtesy of the Eden Project

convivial space in which people felt confident to put across their true thoughts and feelings. We used a lot of look and feel as part of the process, to make sure that people felt confident and familiar with what they were doing” (Juliet Rose, Community Development Manager).

The desire for green space emerged as a big issue; all sorts of green spaces like allotments, community gardens, wild spaces, trails. The community wanted lots of safe green spaces for children to play in – not just for young people but also providing accessible green spaces for elderly people and people who found it difficult to get out and about. Simple things. Juliet went on to say that:

“Actually I don’t think there’s anything surprising that came out of the whole [consultation] but what was important is that we needed to evidence it.”

What is clear is that people value green spaces and botanic gardens can play a key role in meeting these community needs. This is the most obvious link with botanic gardens - creating positive ways forward for the future.

The event ran across five parishes. Commissioned by Cornwall County Council it included the development of parish plans and was part of the consultation of The St Austell Eco town development.

society has become largely disconnected from the natural world. Botanic gardens can enable those links to be re-established, providing education and physical engagement with our surroundings. But, says the report, this direct contact has broader implications: by raising awareness of issues of social and environmental justice among their audiences and local communities, botanic gardens can also support more wide ranging action on global moral issues. Their research has a worldwide reach, concerned as it frequently is with human healthcare, nutrition, and plant management for the support of livelihoods. In this respect botanic gardens can exemplify how social and environmental responsibility is inextricably linked.

The research demonstrated that botanic gardens were particularly concerned with development in seven key areas:

- 1. Broadening audiences (audience development)**
- 2. Enhancing relevance to communities (meeting the needs of communities)**
- 3. Education**
- 4. Conducting research which has socio-economic impact locally and globally**
- 5. Contributing to public (and political) debates on the environment**
- 6. Modelling sustainable behaviour**
- 7. Actively changing attitudes and behaviour**

1. Most botanic gardens are keen to **broaden their audiences** and to challenge the perception that they are the preserve of an elite, white, middle-class, older demographic. The Leicester research uncovered extensive activity in this area – events, activities and courses designed with a range of audiences in mind, together with advertising and community outreach programmes targeted at new audiences. There was also evidence of capital development aimed at improving interpretation in botanic gardens.

However the research found that such activity was disparate and varied considerably across the sector. Although botanic gardens accepted the need to elucidate their relevance to potential audiences, their success was patchy. Work was rarely supported by in-depth research and outcomes were seldom analysed to provide the basis for further action. According to the report, few organisations pro-actively sought to target

excluded audiences and there was widespread opinion that this may actually increase exclusion and difference. Many botanic gardens are understandably concerned with maintaining their existing audiences and the quality of their collections, leading to a perception among certain social groups that they do not have appropriate skills or behaviour patterns to navigate these gardens.

2. Enhancing relevance to these hard-to-reach communities is an intensive, long term and difficult task, says the report. It requires people with specific skill sets and experience who are not always found on the staff of botanic gardens. But it also requires total organisational commitment.

In fact three-quarters of the surveyed sites were reported to be working with hard-to-reach communities, often on the premise that everyone is, in some way, connected with the plant world, whether they realise it or not. By explaining how plants are used in everyday items and medicines, as has been demonstrated successfully at the University of Oxford Botanic Garden, it is possible to help people establish direct, personal connections between their lives and the natural world around them. In many cases this type of action involves working with disabled and SEN (Special Educational Needs) groups, providing courses, opportunities to visit, and even the chance to secure a job or voluntary position. Eden Project's 'Great Day Out' gave people the opportunity to escape from problematic personal situations for a day, offering participants the potential for further voluntary activity.

Offsite, too, the study shows botanic gardens are capable of exerting meaningful social and environmental influence. It cites a programme of community gardening conducted by the Botanic Garden Trust, Sydney, as an example of the benefits that can accrue to local communities and to the garden itself through increased interaction. Sydney's 'Community Greening' programme has had a huge social and environmental impact, providing education and physical activity as well as improving public spaces and bringing communities together. Another example is the Eden Project, which has been working directly with communities through projects like 'Clay Futures', that focus on issues that challenge community well-being.

However the Leicester report argues that, notwithstanding such examples, the potential for wider

CASE STUDY: EDEN PROJECT – FINDING A WAY OUT OF HOMELESSNESS

Dave (not his real name) visited the Eden Project at Christmas time 2008 with the Shilhay Community in Exeter, which provides hostel accommodation for homeless people and offers new ways of helping them to get back on track. A series of circumstances and events had led to Dave's life becoming increasingly chaotic; he had experience of mental ill health which involved him being in the mental health care system, he had serious disputes with his family and had been in prison. At the age of 23 he was homeless, with very few prospects for the future.

Dave's visit to Eden was organised as part of 'The Great Day Out' programme, a chance for individuals to get away from everyday life and to experience something completely different, to be inspired and see things from a new perspective. 'Great Day Out' offers socially excluded groups the chance to be involved in tailor-made days which support the work of Eden's partners. The aim of the project is to break down barriers, build confidence, and encourage people to make positive steps forward (Eden 2010).

Dave really enjoyed his visit to Eden like the vast majority of people who participate in the programme (98%). It offered him a chance to be taken out for a day from the challenging and bleak situation he was in as a homelessness person. Through a personalised tour for the group and activity workshops, Dave began to get a sense of what Eden was about. He was exposed to a new environment, which was inspiring and absorbing. The environment was therapeutic; he met different members of staff and was exposed to a whole new range of jobs – gardeners, horticulturists, sky monkeys – providing him with a host of new possibilities. Like most who visited Eden as part of a 'Great Day Out' it was a memorable experience for Dave.

Here are some comments from participants in the programme:

- "My visit to Eden got me out for the day, so I didn't have my mind on doing negative things".*
- "It has helped my confidence".*
- "I did not know I could have so much fun without drink and drugs".*
- "Thank you for treating me like a human being".*

For Dave this was to be more than a visit; his imagination was sparked when the

group were offered the opportunity to volunteer at Eden. While really keen, many people in Dave's situation find the challenges of travelling by public transport to Eden thwart their intentions to even attend the volunteer induction sessions. Dave has shown real commitment however, and now volunteers regularly. He leaves Exeter at 5.30am for a two hour train journey, and stays overnight in a bed and breakfast to ensure he gets there on time. Dave is a tough guy, but needed lots of support, attention and care and lots of reassurance. Over a year after his initial

visit Dave has volunteered in a range of areas. He began by pot washing – a difficult, tough job – as well as front of house activities on-site like serving drinks in the café.

Through volunteering Dave has blossomed. He loves being part of Eden, he turns up on time, is committed and engaged. He has responded well to positive structured activities. Dave has gained an enormous amount from the experience. He has developed his customer service skills and learned to listen to other people – not just talking about himself, which he was earlier preoccupied with doing. He's made new friends and he feels valued. Dave is now much more engaged and confident and he has realistic and achievable aspirations. He is motivated and focused on the future.



'The Great Day Out' programme provides an opportunity for people from socially excluded groups to see life from a new perspective. Picture courtesy of Alex - youlookgorgeous.co.uk

Dave's circumstances are changing too. He is now living in more independent accommodation, and has had an interview with a Michelin-starred restaurant in Exeter – securing it on the strength of his experience at Eden. He has also talked to 'The Great Day Out' groups about volunteering.

The Great Day Out programme is funded by the Department for Communities and Local Government.

action remains unrealised. It points to the inherent strategic challenges of working, as many gardens have to, through short-term funded projects. It concludes that many botanic gardens lack the capacity or the motivation to engage and are often unclear about what their social roles really are or could be. Although some gardens may believe that they are socially engaged, the

evidence or evaluation supporting those beliefs is not always available.

3. The role of botanic gardens as providers of education is broadly well founded. Collectively they offer a range of educational experiences, from academic, specialist courses to lifelong learning opportunities for school and

community groups. And drawing on their inherent strengths, the learning opportunities provided by gardens frequently involve practical, multi-sensory engagement with plants and sites. Many gardens, too, welcome school groups, ranging from teacher-led visits to individual workshops.

But the study uncovers considerable variation around the extent to which education is embedded in their respective cultures and has found limited evidence of research into learning experiences. It suggests there is scope to learn from more ambitious education programmes, like Fairchild Tropical Botanic Garden's 'Fairchild Challenge'. These successful programmes have a major impact on their participants, boosting knowledge and enhancing social well-being and self-esteem. It is also worth examining the lifelong and holistic approach to learning that some gardens embrace.

4. Botanic gardens undoubtedly engage in **research** of local and global socio-economic importance. In developing medicines and hardier crops, methods of seed storage, conservation strategies and suchlike, their research is used to benefit communities directly, nationally and internationally.

5. Closely linked to the gardens' scientific and research activity is the **contribution they make to public and political debate about the environment**. They share the scientific consensus that global climate change is a real and continuing threat. Thus the Royal Botanic Gardens, Sydney, has used the experimental programmes of 'Big Answers to Big Questions' to engage in this debate, leading to some very positive evaluation feedback. The Eden Project also takes a specific, proactive stance on environmental issues, encompassing specific messages through three clear themes: 'People, Plants and Planet'. At Oxford University Botanic Garden creative storytelling and art activities are employed to get the environmental message across.

But, warns the report, such explicit engagement is not found everywhere and many botanic gardens are unwilling to bombard their visitors with what may be regarded as pessimistic messages. These gardens self-identify as havens of relaxation and enjoyment and would be unwilling to disturb this tranquil image. Nor do they want to be seen as partisan or campaigning, a challenge they would see to their status as scientific, supposedly 'objective' institutions. Such

objectivity, the report argues, is itself founded on certain sets of values and it points to the growing scientific consensus around climate change as evidence that this status quo cannot be maintained. Frank and open dialogue is called for.

6. The report urges botanic gardens to do more than merely provide information about climate change. It calls on them to offer viable and persuasive **models for sustainable behaviour** that could incorporate the personal and professional behaviour of staff as well as the sites themselves. However the report cautions that such an approach must be communicated effectively, recommending a dialogue in which visitors and garden share expertise and information.

7. If such an approach is adopted, says the report, botanic gardens would be influential in actively changing attitudes and behaviour towards the natural world across the social spectrum. Encouraging examples of this new perspective can be found in programmes like the Eden Project's 'Seeds, Soup and Sarnies' and Chelsea Physic Garden's 'Shelf Life' awareness. The report's authors argue that proactive approaches like these should be strongly encouraged across the sector and targeted at those who do not customarily visit botanic gardens.

Botanic gardens are taking action, but more can be done

If botanic gardens are to genuinely reposition themselves and redefine their social purpose, says the report, more integrated action and further evidence is required. It warns, however, that a number of factors are likely to inhibit this change.

- Historically botanic gardens have seldom examined their public roles, the implications of which are still evident in their organisational structures and staff populations today. A combination of small workforces and few staff with specialist experience in social and community-based action, connotes a lack of broader vision and an introspective focus upon collections that is not conducive to community engagement.
- Botanic garden managements have usually been dominated by people coming from backgrounds in science and horticulture, some of who may be inherently

CASE STUDY: FAIRCHILD CHALLENGE

'At Fairchild we measure success by the number of species saved and lives changed' (Lewis 2006)

The Fairchild Challenge is an ambitious, large-scale outreach education programme which aims to create environmentally aware, critical and active citizens for future. It is a competitive, multi-disciplinary programme that involves teachers and students – from pre-Kindergarten to High School - across South Florida taking part in different activities to earn points and win the 'Fairchild Challenge Award' for their school. The programme was devised and developed by Caroline Lewis, former Director of Education at the Fairchild Tropical Botanic Garden (2003-2010) in Coral Gables, Miami-Dade County, South Florida, USA. What started off as a programme only for High School students to fill a gap in the garden's educational provision, has since grown to involve students of almost every age from Elementary and Middle schools. The 'Fairchild Challenge' has been adopted by other botanic gardens in North and South America as satellite partners to Fairchild.

Targeting young people who are at a stage of development in their lives was important to the programme – they are working out who they are and who they want to be, what they want to do in life. As Caroline Lewis wrote in 2006:

'Often they are looking for something bigger than themselves to embrace, and, when their voices are heard, they feel important and needed'.

Lewis wanted to give a voice to young people, to make them feel that they could 'make a difference' around issues that are important to them. She wanted to give them the message that 'your opinion matters!' (Lewis 2006). Through the Fairchild Challenge students can choose from a menu of 'challenge options' developed around the theme of environmental awareness. These include 'fun' activities such as art, designing logos and campaign messages and performance, hands-on and practical activities like cooking, conservation work and gardening, alongside more formal education activities such as essay writing, report writing and debating. The challenge options are designed to:

'Appeal to students' sense of play and creativity, to empower them to seek information and voice opinions, and to encourage them to experiment with ideas, projects and skills' (Lewis 2006).

The optimal outcome is for the activities to stimulate young people's interest in contemporary environmental issues and encourage them to become actively engaged citizens who are not afraid to (for instance) write to their local political representatives to praise or show their concern about state environmental policy:

"We were encouraging civic engagement among these older students who are now getting into voting age and the stage where they will be making some important decisions in their communities" (Netiva Koltitz, Challenge Satellite Programs Coordinator).

In purely numerical terms the programme has gone from strength to strength. In the challenge's first year, 1400 High School students from 10 schools took part. Middle schools were added due to high demand from teachers. By 2008-2009 over

45,000 Middle and High School students from 112 schools participated. This success has prompted Fairchild to carry out a pilot programme for Elementary schools. Whilst most of the activity takes place in school, Fairchild tries to ensure that some activities are connected to the garden; winning students also receive a complimentary family pass so that they can make a return visit.

The learning outcomes evidenced from the project provide the testimony to the positive impact on students and teachers. Urban teenagers are coming into contact with nature and are thinking critically about how society should treat the natural world. Teachers have reported an increase in environmentally-minded behaviour in their students; 75% of high school and 76% of middle school students agreed that they could 'convince others to take action to help the environment' (FTBG 2009:5).

The Fairchild Challenge plays an important role in encouraging young people (the citizens of tomorrow) to become socially and environmentally responsible citizens. As a socially responsible programme in that it specifically targets 'Title 1' schools as they are called by the US Department of Education – schools that may be under-resourced, located in disadvantaged areas, with high numbers of students eligible for free school meals. Pupils may lack parent support or have low academic records. Fairchild provides additional support for these schools, providing additional resources which would otherwise exclude them from taking part in the programme. The range of activities is also designed to ensure that it appeals to students with 'diverse interests, abilities, talents and backgrounds' (FTBG 2010).

Activities are placed in a real-world context that is meaningful to young people, using contemporary environmental issues that are both local and global. The seriousness with which the competition is carried out – the panel of 'experts' who judge the young people's entries; the celebration around the ceremony at the end of the annual programme when the winners are announced – suggests that the young people's contributions are valued by the botanic garden as well as by their teachers. Community involvement is also integral to some of the activities, and young people are encouraged to share their environmental awareness with their families and wider community.



The Fairchild Challenge aims to stimulate young people's interest in environmental issues and encourage their active engagement. Picture courtesy of Fairchild Tropical Botanic Garden, Florida, USA



A local resident helps sort plants donated by Community Greening's major supporter, Eden Gardens, for propagation in the community-run nursery and distribution to other tenants on the Bidwill social housing estate. Picture courtesy of Royal Botanic Gardens, Sydney

resistant to change. The report also argues that a management system dependent upon a single individual may be problematic, locating them as the sole potential axis of change rather than spreading leadership and inspiration throughout the organisation as a whole. Staff diffidence is also identified as a difficulty, with botanic gardens seen as 'nice' places to work, attracting 'reserved' staff who may be reluctant to take overtly campaigning stands on issues such as climate change. This inertia, the report suggests, may impact on public attitudes to socio-environmental problems that may be energised by more proactive and outward-looking institutions.

- Governance is another potential pitfall. Historically, because of their largely specialist nature, botanic gardens have rarely been required to demonstrate their social worth to their governing bodies, even when these are publicly funded. Indeed some have become remote from the organisational priorities or *raison d'être* of their governing bodies. If change is to occur, says the report, then they need to achieve congruence around the same goals, while recognising the different benefits they each can bring. A successful case in practice is the University of Oxford Botanic Garden.

- Botanic gardens also find themselves distanced from wider national and international policy contexts. Even government-backed institutions such as the Royal Botanic Gardens at Kew and Edinburgh struggled to articulate their relevance in governmental terms. An alternative frame of reference, however, is provided by the Eden Project, which prioritises its social role and is

frequently in the vanguard of policy development. The report suggests that botanic gardens are more likely to enhance their influence if they become directly involved with policy development.

- Funding is also a problem. The absence of a central revenue source means that it is sometimes difficult to motivate botanic gardens to work with, for example, excluded communities. Funding for social agendas tends to be linked to organisations that are directly supporting projects in the community, such as regeneration or housing. And access to this funding is usually contingent on it being embedded in partnership working and prioritising social agendas. For most botanic gardens this would require a very different and more challenging organisational structure.

The paucity of evidence available to botanic gardens about their impact on actual and potential visitors is a serious impediment to any development of their social role, concludes the report. Without this understanding, gardens will be unable to evaluate their work, or be able to communicate this value to external audiences and funding bodies.

Forces for change which can motivate gardens to consider their social role

Reviving the human connection with the natural environment is now largely accepted as axiomatic, not least because of a growing appreciation of the benefits that will accrue, but it remains a concern how this may be achieved in the urbanised West. As publicly-funded organisations, many botanic gardens are also waking up to the reality of greater public accountability and social engagement. The challenge for them, particularly in straitened economic times, is to find the evidence to support their funding applications.

This report suggests that there is less available evidence of their policy relevance than exists for other, competing, cultural institutions. But as the report points out, the vocabulary of social policy, sustainability and environmental justice is becoming increasingly prevalent in the language of government and funding bodies, and the pressure is on botanic gardens to engage with this discourse if they are to be seen as relevant – and viable.

By embracing this wider theme of social relevance,

CASE STUDY: SYDNEY'S 'BIG ANSWERS TO BIG QUESTIONS'

For Botanic Gardens Trust Sydney, 'Big Answers to Big Questions' was an innovative and experimental programme of open-air debates, dinner debates and associated activities, exhibitions and information around contemporary environmental issues. For six months in 2005, visitors were invited to the botanic garden as "a safe place to explore contentious ideas"; over 1400 people participated in a diverse programme of activities that focused on the use of water; the management of heritage landscapes (inspired by the garden's locally controversial decision to cut down an avenue of trees); and genetically modified plants. The issues were chosen for being relevant and up-to-the-minute:

"The value behind Big Answers to Big Questions is what are the environmental issues that people are talking about now? How can we help them make their mind up better by providing them with sound knowledge, understanding, of what's out there" (Janelle Hatherly, Public Programs Manager)

Activities themed around these topics included weekly public, open-air Debates in the Domain at lunchtimes, which looked back to when public debates were held there regularly before the advent of radio and television. A range of speakers were invited and the public were invited to join in with the debates as they passed through the park. A programme of evening Dinner Debates was aimed at adults who wanted to 'join in the dialogue in a relaxed atmosphere, facilitated by entertainers as well as experts' (Botanic Gardens Trust Sydney 2007). There were day and evening lectures, weekend family fun days temporary displays school workshops, outdoor theatre and a whole host of online resources to accompany the programme.

The programme was funded by a \$50,000 grant from the Environmental Trust; most activities were free of charge and centrally located to ensure accessibility. Capitalising on the expertise of staff and trust invested in botanicgardens by the public, the programme of activities aimed at facilitating public participation in discussion and debate, providing access for visitors to good quality environmental information, encouraging critical thinking and enabling visitors to explore contemporary issues in a relaxed, informal environment and make informed

decisions about their lifestyle behaviours and attitudes towards environmental issues. They found that some activities were more popular than others, for instance they achieved larger audiences for debates with local relevance. The programme asked whether it was possible for botanic gardens to tackle the big, contentious and complex questions that are connected to the environment. For Botanic Gardens Trust Sydney the answer was 'YES!' A summative evaluation found that:

- 94% of visitors thought the venue was suitable
- most visitors thought speakers got their message across effectively
- 75% of visitors thought the speakers presented balanced viewpoints
- 68.75% of visitors made changes to their lifestyles following their participation in the programme including water reuse or became more active
- 100% of visitors felt they had the opportunity to participate in the discussions, and 50% felt confident enough to express an opinion (Hatherly 2009).

What contributed to the programme's success was the perception of the botanic garden by the public as authoritative institutions with integrity in environmental matters. They are grounded in scientific research and horticultural expertise:

"As a botanic garden, we are an ideal venue, we're an ideal group of people, this group of scientists... who are perceived as objective and impartial. We have people who could give people knowledge. We have an environment where we can hold fun things... And we had an education team who could facilitate the exploration of these ideas in a safe way".

They are safe, non-threatening venues that are accessible to the public:

"We value people's opinion. We believe everybody will make up their own minds and have their own opinions about things."

As a result of the programme the 'best' interpretive strategies were incorporated into wider programmes.

beneficial networking opportunities also arise. Working with partners and key networking organisations like BGCI, enables gardens to escape isolation and jointly develop new ideas and approaches – as has been demonstrated at Oxford and Eden. Collaboration is also imperative because of the sheer scale, connectivity and complexity of the social and environmental challenges we are facing. Environmental and social justice are global concerns, argues the report, and inextricably connected. It is only by treating them as part of the same problem, and by involving themselves in both ecological and social issues, that botanic gardens can really help to combat what have been called the 'five tectonic stresses' of population, energy, environment, climate and economics.

The passion for social engagement that researchers found so evident at the Eden Project is less visible and more narrowly focused in many botanic gardens – and understandably directed more at plants than people. But the Leicester study supports BGCI's conviction that change is possible. BGCI itself is working towards raising awareness and promoting social engagement through its education programmes, its publications, conferences and congresses. As a networking hub and conduit for new ideas and partnerships, BGCI plays a crucial role in the potential renaissance of botanic gardens. By championing the Global Strategy for Plant Conservation (GSPC) it improves the potential for collaboration towards shared targets inside the botanic garden community and with external partners. And it is

through the work of organisations like BGCI that botanic gardens are becoming increasingly aware of their own social roles and responsibilities.

BLUEPRINT FOR ACTION

In supporting BGCI's contention that, if botanic gardens are to be seen as socially and environmentally relevant, they must change, the Leicester study offers a blueprint for action.

1. Redefining their purposes: values, mission, vision

Repositioning an organisation requires a re-evaluation of its mission, values and vision. In order to change, botanic gardens should ask themselves:

- why do we exist?
- what do we believe in?
- who do we do it for?
- what do we want to achieve?

The answers to these questions need to be clear, targeted, specific, and embedded throughout the whole organisation.

Clarity of purpose and flexibility in action will enable

botanic gardens to successfully navigate through a complex modern world and instil confidence when engaging with their social roles and responsibilities.

2. A lengthy process of change across the whole organisation

Effective attitudinal and organisational change takes time. It involves discussion and debate within individual organisations and across the entire sector. The imperative for increased collaboration will require long term shifts in attitudes and behaviour.

The whole organisation must sign up to the process of change, overcoming individual and institutional anxiety about change, otherwise a successful outcome would be jeopardised

3. Botanic gardens are uniquely placed to address climate change, but they are not taking a visible and active role

Crammed with expertise and knowledge, botanic gardens are eminently capable of explaining the interconnectedness of people and plants and the potentially devastating consequences of climate change. But despite this, they are failing to achieve large-scale impacts in this area. They are often unclear and tentative about exploiting the full potential of their role, perhaps

CASE STUDY: EDEN PROJECT – 'SEEDS, SOUP AND SARNIES'



In Eden's 'Seeds, Soup and Sarnies' project, families learn about the small scale growing of fruit and vegetables. Picture courtesy of Eden Project

The 'Seeds, Soup and Sarnies' project is a three-year Big Lottery funded project working with families who live in post-industrial communities around the Eden Project and in Middlesbrough. Families will work together to 'learn to grow their own', sharing knowledge of what to grow, when to plant and how to use the produce through food preparation and healthy eating.

The aim of 'Seeds, Soup and Sarnies' is to develop the families' skills and knowledge around small scale growing of fruit and vegetables, supporting healthy food choices and food preparation. The project began in the autumn of 2009, running hands-on courses how to 'plant, grow, cook, share and eat'.

Eden is working in some of the most deprived and run-down areas, including social housing estates, where unemployment is high, aspirations low and opportunities limited, and there is little community activity. This project focuses on families learning together, learning to make and create spaces to eat, in a structured way at a table. They are learning across generations about food, experimenting with new recipes, and also learning to grow the food they eat, by developing vegetable gardens, for example, on land which is currently wasteland at the back of a parade of shops.

Part of the aim of the project is to build community spirit; to give people something purposeful to do, to learn new skills, and to motivate people and encourage communities to move forward in positive sustainable ways. The project sets out to actively change behaviour, for people to experience and be part of the process of growing food and learning how to cook it, so that diets are fresh and healthy.

CASE STUDY: OXFORD BOTANIC GARDEN – HOSTILITY TO NEW APPOINTMENT



Waste-free lunch at Oxford Botanic Garden. Education is embedded across the organisation. Picture courtesy of Oxford Botanic Garden

In 1993 the Director/Superintendent of Oxford Botanic Garden created a new post of Education Officer, an addition to the staff which would enable them to work in new ways with new audiences, bringing a new direction and new possibilities to the organisation. It was with that sense of optimism for the future that the first post holder, Louise Allen, took up the post, but the reality could not have been more different. Instantly she found herself working in what she describes as “a pretty hellish kind of environment” with only the Director offering support. She was joining staff who were a long-standing group of people, the majority had been in post for 20 years plus.

“[On] my first day I went to have my coffee and I was told there wasn’t a seat... there wasn’t space... some members of staff didn’t speak to me for 18 months.”

The group mentality was to resist change and in continuingly challenging ways, leading to considerable personal unpleasantness. The staff did not like children and they had come to work in a botanic garden to get away from people. Some members of staff thought the introduction of an education post was the worst thing in the world that could have happened.

At the time, there was very limited diversity of any kind in the staff. People were focused specifically on curatorial and horticultural roles and it had led to staff who were very inward-looking, resistant to change and deeply confrontational to the needs of a public organisation.

Change did happen. The Director made it very clear that the garden was for the public and this was not a negotiable position. Some staff who most resisted the change, reacted by choosing to leave. Today, education is embedded across the organisation and all staff have education in their job descriptions.

The organisation welcomes a great breadth of audiences and the workforce is much more diverse. Moreover, significantly Louise Allen with her background in education is now the Curator.

because of different priorities. As pressure for greater social relevance mounts, the report urges gardens to be bolder in engaging beyond their customary audiences. This is a sector-wide concern, says the report, which recommends that they debate their roles and future plans under the auspices of organisations like BGCI.

4. Botanic gardens should examine their social and environmental roles

Global climate change is both an environmental and a social issue, agrees the report. It follows that for people to understand their own impact on the environment, it needs to be explained to them as a social issue. Embracing the concept of social and environmental justice is therefore critical if botanic gardens are to reinvigorate their fundamental purpose. Gardens have a unique opportunity to reposition themselves as authoritative commentators on climate change, offering solutions through articulating and enacting sustainable behaviour and responding to community needs.

5. Communicating, evidencing, advocating

Having decided to reposition themselves, botanic gardens need to communicate this change, both internally and to the wider world. Their new values and objectives must be embedded throughout their

organisation and staff must work together to achieve success.

Effective external communication is essential. Botanic gardens must improve their visibility to other cultural organisations, public bodies and the government. They need evidence that demonstrates their utility and value and communicate all this cogently and persuasively.

6. Finding a middle way between the traditional botanic garden model and the Eden Project model

While the Eden Project model is a highly effective alternative to the traditional garden, it may not be appropriate for all gardens to emulate it. Every garden is unique, encountering different challenges, communities and responsibilities. Moreover their historically important roles as centres of scientific enquiry and education must also be protected. The Leicester study recommends that gardens search for a middle way between the Eden and orthodox paradigms, safeguarding what is customary and invaluable, while ensuring their contemporary relevance across the social spectrum. Establishing the defining characteristics of a truly socially relevant botanic garden is a sector-wide task that would be best achieved by active discussion and debate.



Research Centre for Museums and Galleries (RCMG)

Research Centre for Museums and Galleries (RCMG), School of Museum Studies, University of Leicester, Based in the School of Museum Studies at the University of Leicester, The Research Centre for Museums and Galleries (RCMG) researches into the social role, impact and agency of museums and galleries, focusing on themes of disability, representation, education and learning. The Centre works closely with cultural organisations to reflect on practice, report on the impact of practice, and, ultimately, improve practice. Its vision is to make museums inclusive, challenge prejudice, inspire learning and be relevant in contemporary society. The RCMG works with a range of organisations, museums, galleries, libraries, archives, and botanic gardens.

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The Calouste Gulbenkian Foundation is an international charitable foundation with cultural, educational and social interests. Based in Lisbon with offices in London and Paris, the Foundation is in a privileged position to support national and transnational work tackling contemporary issues. The purpose of the UK branch in London is to connect and enrich the experiences of individuals, families and communities, with a special interest in supporting those who are most disadvantaged. Its current work focuses on three areas: cultural understanding, fulfilling potential, and the environment. Its aim for the environment is to help in the development of a society which benefits from a more sustainable relationship with the natural world and understands the value of its resources. For further information, go to www.gulbenkian.org.uk

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