

The Royal Botanic Gardens, Kew: for people and plants worldwide

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In 2009, the Royal Botanic Gardens Kew celebrates 250 years as a plant science powerhouse and much-loved botanic garden of global reach and impact. This anniversary provides a significant opportunity both to celebrate the past and look to the future. Here I would like to present an update on contemporary work and planning for Kew.

A new mission

Recently, following my arrival as incoming Director succeeding Professor Sir Peter Crane, the organisation has developed a new mission: *to inspire and deliver science-based plant conservation worldwide, enhancing the quality of life.*

This mission statement has several key elements. First, Kew's primary purpose is to conserve and enhance plant and fungal life, as well as the World Heritage assets, collections and programmes in its remit – caring for and respecting significant natural and cultural heritage, and ensuring improvements are of lasting universal value.

Second, it recognises that the most effective way Kew might have global impact is to inspire others. Inspiration embodies many ideas, including leadership, discovery, teaching, partnering, and enabling.

Third, Kew delivers services and runs programmes: through excellence in the care and enhancement of collections, World Heritage buildings and landscapes; through science, horticulture, visitor services and education; through UK and overseas partnerships; and through world-class

approaches to biodiversity conservation and sustainable living (eg the Millennium Seed Bank).

Fourth, the point of all of the above is to secure plant and fungal conservation worldwide. As an organisation whose existence has always revolved around plant life and people, Kew must ensure the future of the organisms that are its primary focus. And this is especially important in times of rapid climate change and global threat to wild biodiversity.

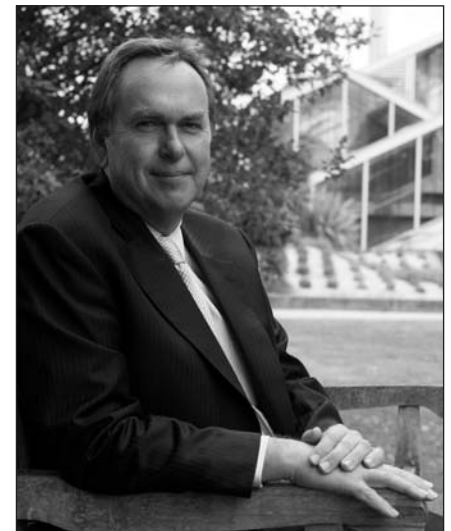
Fifth, Kew has a proud history as a centre of excellence in plant science. One-third of its 700 staff is involved in research. Science-based plant and fungal conservation, therefore, is a significant hallmark and makes Kew unique.

Last, but not least, Kew does all this to make things better for people, plants and fungi – to enhance the quality of life on earth. As a species we remain inextricably linked to other forms of life on our planet, plants especially. Plants, as major assimilators of carbon, play a vital and relatively inexpensive role in moderating impacts of climate change. We must care for them, for self-interest if nothing else. It's one of the practical things each one of us can do to make life better.

So how might Kew best make its contribution towards improving the quality of life for people and plants in today's world?

Kew's Global Conservation Partnership Programme

The recently released Stern Review on the economics of climate change and reports of the Intergovernmental Panel



on Climate Change call for immediate action to mitigate and adapt to climate change. These reports conclude that climate change will affect all countries. The most vulnerable – the poorest countries and populations – will suffer earliest and most, even though they have contributed least to the causes of climate change. The worst impacts of climate change can be avoided, if we take strong action now. The costs of stabilising the climate are significant – 1 per cent of global GDP – but manageable. Delay would be dangerous and much more costly. Failure to act could create risks, for our children and grandchildren, of major disruption to economic and social activity, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century.

Plant-based solutions are a critical part of sensible, sustainable strategies to cope with the significant environmental challenges facing us all, especially climate change. The Trustees of the Royal Botanic Gardens, Kew resolved in March that Kew will work with partners and supporters both nationally and internationally to develop Kew's Global Conservation Partnership Programme, a strategic and business plan for a greener world rich in plant and fungal life. The Programme will identify and seek the resources necessary to begin implementation by 2009 against agreed targets. Kew's Global Conservation Partnership Programme will be a key element in commemorating and celebrating RBG Kew's 250th anniversary. Our actions in response to accelerating climate change and loss of plant biodiversity

will help make the UK an international leader in this field.

While every effort is required to reduce carbon emissions, an equal focus on safeguarding and increasing carbon uptake by plants is necessary. A fifth of current carbon emissions are due to ongoing destruction and burning of wild vegetation and associated land use changes. This amounts to more than the world's transport systems combined. Increased plant productivity and conservation of wild vegetation will deliver economic long-term solutions to mitigating and adapting to climate change. In addition, these approaches will help achieve the UN's Millennium Development Goals – the set of targets, including environmental sustainability, to reduce global poverty and improve living standards by 2015.

Increased carbon uptake by plants is best achieved by four key strategies:

- (i) conserving existing forests, woodlands and other wild vegetation that remain the world's major carbon sinks – a moratorium on further extensive destruction is desperately needed now;
- (ii) banking seeds and accelerating the science of restoration ecology so that major repair and re-establishment of damaged wild vegetation can be fast-tracked – Kew's Millennium Seed Bank is a world leader in this vital area;
- (iii) acquiring knowledge through science and practical experience to enable the necessary and urgent cultivation of locally-appropriate plant species under changing climatic regimes on agricultural, urban and suburban lands and;
- (iv) informing and inspiring people world-wide about mitigation and adaptation strategies to cope with climate change, loss of plant biodiversity and other significant environmental challenges facing us all.

The Royal Botanic Gardens Kew and its global partners are well placed to make significant contributions in this urgent programme to create a greener world in the face of rapid climate change, accelerating loss of wild biodiversity and of the degrading of

productive lands. The organisation is positioned and poised to adapt and expand its international scientific leadership and extend its global partnerships and capacity building in developing countries.

Kew's Global Conservation Partnership Programme embraces seven key actions:

three actions collectively help retain our major remaining carbon sinks such as rainforests and temperate woodlands using Kew's science powerhouse and collections data;

two help recover lost plant productivity and carbon sequestration through expanding the Millennium Seed Bank's programmes and increasing Kew's role in targeted restoration ecology;

one facilitates successful plant-based adaptation to climate change by growing locally appropriate plant species on agricultural, urban and suburban land;

and the last gives visitors to the Gardens and to our digital media greater understanding of individual, national and global actions needed to overcome these threats.

Together the seven key actions of Kew's Global Conservation Partnership Programme will help maintain and build the resilience of plant ecosystems that are the essential precursor for successful human adaptation to climate change and other environmental challenges.

Resourcing in times of significant environmental challenge

Since it became a Non-departmental Public Body in 1984, the Royal Botanic Gardens Kew has gone from 95% Government funding to about 50% today. It is sponsored by Defra, and raises additional funds through entry fees (while still remaining free to children), a diverse and inspiring events programme, retail and food, and with increasing support from the corporate sector and Foundation supporters. Previous Directors Professor Sir Ghillelan Prance and Professor Sir Peter Crane led a series of initiatives to place Kew on its contemporary financial footing.

This transition has meant that Kew has engaged with its supporters and audiences much more than ever before, to ensure it remains relevant and valued locally, nationally and internationally. The momentous inscription on UNESCO's World Heritage register in 2003 signalled international recognition of its enduring value as an organisation and cultural site. Moreover, Kew is the only World Heritage site that has attained accreditation for sustainable practices under ISO 14001.

Kew and its partners around the world have demonstrated the power of collaborative global action for plants and people, most recently through the success in securing a billion seeds for the future in safe storage in-country and at Kew's Millennium Seed Banks in Wakehurst Place, West Sussex. This programme established an international network of thousands of people working together to enhance the quality of life through plant-based solutions to the serious environmental challenges and loss of biodiversity we all face.

Over the next ten years, Kew will work hard to realise an order of magnitude increase in its essential global programme for people and plants. Business as usual for Kew is no longer feasible, just as business as usual in other walks of life needs to change and change soon if we are to adapt to and mitigate future outcomes of climate change and loss of biodiversity. We have to apply much more substantial thinking and investment in environmental science and solutions, as the Stern Review emphasized. Kew and partners realise this and are focusing on the escalation of projects, training and science needed to really make a difference in areas of their expertise.

Significant announcements and events are planned for the 250th anniversary year in 2009. It is hoped that the UK and international community, private and Government, will respond to the demonstrable potential for plant-based solutions to climate change, and continue to support and collaborate with Kew and its partners so that they can escalate to necessary levels science-based plant conservation worldwide.

Kew's website is <http://www.kew.org/>