



GREAT BARRIER REEF
foundation

Annual Report 2013

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Chairman's message

The Foundation and its partners are passionate about protecting and preserving our national treasure for the benefit of the world community. However, the investment required to deliver this vision is substantial.

As we reflect upon 2013, it is clear that it was a year of significant growth for the Great Barrier Reef Foundation. We have expanded our scope of funded research, marked important milestones in understanding threats to the Reef, and continued to strengthen our network of support. Since our inception 14 years ago, the Foundation has raised over \$40 million to fund research for the future of our iconic Great Barrier Reef.

Comprised of 3,000 reefs along 2,300km of the Queensland coastline, the Great Barrier Reef is the world's largest coral ecosystem and one of the most renowned World Heritage Sites. As the Reef faces a worrying future, the Foundation remains committed to research that will help reef managers, users and policy makers respond to this challenge.

We celebrated a number of important milestones this past year. Among them, the Foundation received the first tranche of a \$12.5 million grant from the Commonwealth Government which will fund research into reef responses

to climate change and new tools for reef managers; the first phase of eReefs was completed, providing new tools for reef management; and an ocean sensor system was installed and commissioned on the Rio Tinto vessel RTM Wakmatha for data collection under the Future Reef MAP initiative.

I would like to sincerely thank our Board, staff, investors and supporters across business, philanthropy, government and research for their generous contributions, time and commitment to the Foundation's vision. We look forward to working with you in 2014 and beyond as we work towards a more resilient Reef for future generations.

A handwritten signature in black ink, appearing to read 'J Schubert'.

Dr John Schubert AO

Year in Review

Research Development

The ReFuGe 2020 Consortium, which brings together national and international experts in coral reef, medical and terrestrial genomics and reef management, continued to meet in 2013 to advance knowledge of coral genomics and map future research pathways.

New Research Investments

Under the Australian Government's 'Resilient Reefs Successfully Adapting to Climate Change' program, 14 new Foundation projects commenced. Utilising the latest tools and technology, these new investments will provide concrete data on reef response to climate change over the next three years.

Future Reef MAP

Under the Future Reef MAP project, the ocean sensor system installed on the vessel RTM Wakmatha, was officially commissioned for data collection. For the next two years, the sensor system will collect ocean chemistry information along the Reef as it travels from Gladstone to Weipa.

Reef Forums

In July, the Foundation hosted Reef Forums in Sydney, Melbourne and Brisbane. Dr Russell Reichelt, Chief Executive and Chairman of the Great Barrier Reef Marine Park Authority presented the latest knowledge on the Reef to almost 200 guests from 30 companies.

eReefs

The first phase of eReefs was completed in 2013, with the development of the Marine Water Quality Dashboard. eReefs is a collaborative project that uses the latest technologies to collate data along with new and integrated modelling to produce powerful visualisation, communication and reporting tools for reef managers.

Citizen Science

In August, Boeing Australia and the Great Barrier Reef Foundation announced a partnership to boost community-based 'Citizen Science' efforts to develop a deeper understanding of the Great Barrier Reef and the species that live there.

Chairman's Panel & ZooX Ambassador Program

Members of the Chairman's Panel met to receive updates on research progress and the current state of the Reef. Two highly successful ZooX Ambassador Programs were also held to recruit new ambassadors. After 6 years, our ZooX Ambassador Alumni now totals more than 175 passionate individuals from all around Australia.

Sea-quence

Work on this project focused on preparing sample genome sequences for coral host species and commencing pilot studies. This year, the first genome was sequenced – a common Great Barrier Reef coral *Porites lutea*. The data generated from the Sea-quence project will ultimately drive research into the capacity of corals to cope with stress and adapt to a changing environment.

Bommies Award

To inspire and encourage the next generation of researchers, a new format Bommies Award was launched in September 2013, which saw 12 young researchers compete for two prestigious prizes by profiling their research in a creative and engaging format through video.

Smart State Fellowship

The five year Smart State Fellowship of Professor Ove Hoegh-Guldberg came to a close in 2013. The landmark research program has made important advances in climate change knowledge, and the forthcoming report will help guide further research investment.

Engaging with Government

The Great Barrier Reef Foundation continued to engage with the Australian and Queensland Governments to build the needs of reef managers and policy makers into research frameworks, and encourage adoption of the latest research.



Managing Director's report

The Great Barrier Reef Foundation is privileged to collaborate with Reef Managers, research partners, and a committed science team, who bring together diverse skill sets and expertise to identify gaps and develop innovative solutions, and who share a passion for securing the long term future of the Reef.

This strategic, collaborative and coordinated approach to research is also underpinned by our partnerships with business, government, philanthropy and the scientific community. This powerful network is instrumental in identifying, shaping, funding and overseeing research that will help reef managers protect and preserve the Great Barrier Reef.

2013 was a monumental year for the Great Barrier Reef Foundation. Through greater engagement activity and increased funding, our research investments more than doubled from 13 to 28 projects. We are proud to report strong financial performance, with an operating surplus of \$988,680. By year end, the Foundation had allocated more than \$3.7 million to science investments, with 11 influential research institutions as the primary beneficiaries.

These new investments are pivotal in the Foundation's 'path to impact' – and cover the use of new tools and technology to measure

indicators of reef response to climate change, the processing of genomics data gathered through the Sea-quence project, measuring and managing ocean acidification, and citizen science programs.

Undoubtedly, the release of the draft Great Barrier Reef Strategic Assessments was one of the most important milestones this year. These reports represent the most comprehensive review of risks to the Reef and the management and policy arrangements required to protect it and will guide research and management into the future.

I would also like to acknowledge all of the Foundation's partners who have contributed to a successful 2013.

Claire Hanratty

Our research, vision and strategy

The Foundation has responded to the environmental and economic challenge of climate change on the Reef with leadership and innovation, committing to a Research Vision of 'A resilient Reef successfully adapting to climate change'.

The Challenge

Spread across 109 countries, the world's coral reef communities are a storehouse of biodiversity and a source of livelihood for an estimated half a billion people. Since reef-building corals are the cornerstone of these coral reefs, climate change places corals at great risk through warmer temperatures and more acidic oceans. The Great Barrier Reef contributed an estimated \$5.7 billion annually to the Australian economy and generated almost 69,000 jobs in 2012.

The Great Barrier Reef Foundation is faced with a number of threats including climate change, poor water quality, coastal development (and associated shipping) and residual effects from fishing activities. Individually and cumulatively these threats have the potential to detract from the Reef's natural, cultural and economic value. However, it is climate change that poses the greatest risk.

Our Solution

The Foundation has responded to the environmental and economic challenge of climate change on the Reef with leadership and innovation, committing to a Research Vision of 'A resilient Reef successfully adapting to climate change'.

The Great Barrier Reef Foundation is passionate about promoting a strategic, collaborative and coordinated approach to reef research. Leveraging the power of our strong network, we will support adaptation concepts, a framework to measure their effectiveness, and communication and implementation tools for reef managers.

As a world-leading organisation, the Foundation is committed to outcomes that will benefit coral reef communities globally, providing a platform for coral reef resilience in the face of climate change.

Our research

Two examples which illustrate the progress of our research program in 2013:

Sea-quence project

An initiative of the ReFuGe 2020 Consortium, the Sea-quence project aims to deliver core genetic data for corals from the Great Barrier Reef and Red Sea. Recognising the need to better understand coral resilience and their capacity to adapt, the pioneering project will bridge this knowledge gap to help guide management responses in the face of climate change.

To date, only two coral species in the world have had their DNA sequenced. This research project will provide five times the data currently available by sequencing the genomes of 10 coral species and their symbionts. This important first step in research will provide a core genomics dataset and drive further studies into the capacity of corals to cope with stress and adapt. To be delivered in two parts across Australia and the Red Sea – the Sea-quence project will provide critical comparative information that will enhance our understanding of how and why some corals are more resilient.

Following the collection of samples in 2012, the first genome was sequenced this year – a common Great Barrier Reef boulder coral *Porites lutea*. This is the third coral genome to be sequenced worldwide and the first of 10 proposed for this project. Two symbionts were also sequenced and additional trips were also undertaken to collect remaining samples from newly spawned coral.

Drawing upon the expertise of leading researchers from Australia and Saudi Arabia, and utilising funding support from Bioplatforms Australia and Rio Tinto, the Sea-quence project is truly a world first. Continuing to invest in this landmark project, the Foundation and it's Partners are hopeful of progressing genome sequencing for the remaining nine priority coral species, and providing an innovative suite of data for future adaptation research.



eReefs project

The eReefs project is collaboration between Australia's leading operational and scientific research agencies, government, corporate institutions and Reef managers. This ground-breaking project forms the first step in building comprehensive coastal information systems for Australia, and will generate advanced integrated and interactive information to help protect and preserve our iconic Great Barrier Reef.

eReefs will provide a platform to accurately assess and predict the cumulative effects of stressful events such as climate change, floods, cyclones and land run-off. In particular, eReefs will measure the quality of water flowing from catchments into the Reef, and

quantify the impact of nutrients, pesticides and sediments.

A key achievement for the eReefs project this year was the completion of the Marine Water Quality Dashboard. The Dashboard is a tool to access and visualise timely data on water quality indicators including sea surface temperatures, chlorophyll levels, sediments and light. Through real-time data analysis and interpretation of over ten years of water quality information, the Dashboard will be used to identify changes over time and help predict coral bleaching events.

The unique information provided by the Marine Water Quality Dashboard will have broad

application benefiting government agencies, Reef managers, policy makers, researchers, industry and local communities.

Over the next three years, the Foundation, and its partners in eReefs will continue to deliver powerful modelling, visuals, reporting and communication products with a view to providing for the Reef information akin to that provided for the weather.

Our finances

Finance Summary:

Statement of profit or loss and other comprehensive income For the year ended 31 December 2013	2013 \$	2012 \$
Revenue	6,655,255	3,650,688
Science investments	(3,717,207)	(1,520,761)
Operating Expenses	(1,949,368)	(1,557,306)
Operating surplus before income tax	988,680	572,621
Income tax expense	-	-
Operating surplus for the year	988,680	572,621
Other comprehensive income for the year	-	-
Total comprehensive income for the year	988,680	572,621

The principal beneficiaries of research expenditure by the Foundation in 2013 were:

Institution	2013 \$
Australian Institute of Marine Science	662,351
Australian National University	121,000
Bioplatforms Australia	341,000
Bureau of Meteorology	330,000
CRC for Polymers	106,700
CSIRO	1,297,201
Griffith University	132,000
James Cook University	281,965
Southern Cross University	11,000
Sydney University	211,200
University of Queensland	937,196
Total	\$4,096,893*

* All amounts include GST

Thank you to our partners and sponsors

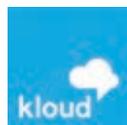
The Foundation is most grateful to have a wide range of partners and supporters and we thank them all for their contributions and support throughout 2013.

Pro Bono Partners

The Foundation recognises that it is very fortunate to have assembled such a prestigious group of pro bono partners and greatly appreciates the value and quality of service provided by these organisations.

The Australian firms and companies who have provided pro bono services, for which the Foundation would otherwise have to pay cash in 2013, include:

Allens & Linklaters **ROBERTSON BURNS** **booz&co.** **Deloitte.**



In the last twelve months, these firms and businesses have together provided pro bono services and support services valued at over \$485,000.

Government Partners



Australian Government



Patrons

The Foundation is grateful to all our major donors to the ZooX Fund. Patrons of the fund invest in projects which contribute to the overall Research Vision of the Foundation.



Major Donors

We also gratefully acknowledge donations of over \$1,000 from the following organisations:

- The Myer Foundation
- Andyinc Foundation
- Pacific Coast Eco Bananas
- Mulpha Australia
- Queensland Tissue Products
- Count Charitable Foundation
- BHP Billiton Pty Ltd Matched Giving Program
- Bluesand Foundation
- Fitzgerald Family Foundation

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PETER YOUNG AM

Chairman Australia and
New Zealand, Barclays



GREAT BARRIER REEF
foundation

P: +61 7 3252 7555

E: info@barrierreef.org

Unit 1, 9 Longland St, Newstead, QLD

