GREENING UNIVERSITIES TOOLKIT

TRANSFORMING UNIVERSITIES INTO GREEN AND SUSTAINABLE CAMPUSES



Director of Publication: Nick Nuttall

Coordinator: Mohamed Atani Editor: Jonathan Clayton

Design & Layout: Virginia Njoroge

Printing: Tongji University

ISBN: 978-92-807-3345-7 Job Number: DEP/1687/NA

© United Nations Environment Programme, 2013

This publication may be reproduced in whole or part and in any form for educational or nonprofit purposes without special permission from the copyright holder provided acknowledgement of the source is made. UNEP would appreciate receiving a copy of any publication that uses this workbook as a source. No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from UNEP.

The contents of this book do not necessarily reflect the views or policies of UNEP or the editors, nor are they an official record. The designations employed and the presentation do not imply the expressions of any opinion whatsoever on the part of UNEP concerning the legal status of any country, territory or city or its authority or concerning the delimitation of its frontiers or boundaries.



UNEP promotes
environmentally sound practices
globally and in its own activities. This
report is printed on paper from sustainable
forests including recycled fibre. the paper is
chlorine free and the inks vegetable-based.
Our distribution policy aims to reduce
UNEP's carbon footprint.

GREENING UNIVERSITIES TOOLKIT

TRANSFORMING UNIVERSITIES INTO GREEN AND SUSTAINABLE CAMPUSES: A TOOLKIT FOR IMPLEMENTERS

Acknowledgements

Project Team

Mahesh Pradhan

Chief, Environmental Education and Training Unit, UNEP

Pablo Fuentenebro

Associate Programme Officer, Environmental Education and Training Unit, UNEP

Gregory Odeko

United Nations Volunteer, Environmental Education and Training Unit, UNEP

Authors

Paul Osmond

University of New South Wales

Malay Dave

University of New South Wales

Deo Prasad

University of New South Wales

Fengting Li

Tongji University

Additional acknowledgements

We would like to thank the different individuals and institutions who in way or another have contributed to the successful completion of this project. The *Greening Universities Toolkit* has been developed by the UNEP Environmental Education and Training in collaboration with the University of New South Wales, Australia. In addition to the authors listed above, we would like to thank the UNEP Publishing Board, which approved the publication of the Toolkit on 15 May 2013 and the Division of Communication and Public Information, for its assistance with the design and editing of the manuscript.

The authors are grateful for the support of the Environmental Education and Training Unit throughout the different stages of this project and review of the final draft. Suggestions for textual edits have been incorporated into this published version of the Toolkit.

Preparation of this Toolkit was inevitably and appropriately an exercise in international collaboration. The authors in particular would like to thank participants of the GUPES workshop for university leaders held at Universidad Andrés Bello, Santiago, Chile in September 2011, where the draft Toolkit framework was introduced and discussed; and those involved in the GUPES Green Room event on Universities and Sustainability in Nairobi in February 2012, where a "work in progress" version was reviewed and critiqued. A draft version of the Toolkit was presented during the GUPES launch in Shanghai in June 2012, where numerous suggestions and additional case studies were provided and incorporated.

We would like to thank as well Jean Christophe Carteron, for his suggestions and ideas on the text, and Iain Patton for his review of an earlier version of the manuscript.

In addition, the following Universities are acknowledged for providing the authors with the content and illustrations for the inspiring case studies included in this report:

- ▶ Bond University Mirvac School of Sustainable Development, Australia
- ▶ Harvard University, USA
- ▶ Middle East Technical University, Turkey
- ▶ Pontifical Catholic University of Rio Grande do Sul, Porto Alegre (city), Brazil
- ▶ Princeton University, USA
- ▶ TERI University, India
- ▶ Tongji University, China
- ▶ University of British Columbia, Canada
- ▶ University of Copenhagen, Denmark
- ▶ University of Nairobi, Kenya
- ▶ University of New South Wales, Australia
- ▶ University of Northern British Columbia, Canada
- ▶ University of Sao Paulo, Brazil
- ▶ University of Texas at Dallas, USA
- ▶ Washington University in St. Louis, Missouri, USA

Our sincere thanks also go to Bayer for their generous support to this publication.

Finally, we would like to point out that this Toolkit aims to be a "living document" that will be updated on a regular basis. For this purpose, we plan to have an electronic online version, were universities are able to incorporate and share their experiences in the greening of university campuses.

Foreword

s we near the end of the United Nations Decade of Education for Sustainable Development (2005-2014), we are reminded that education is central to UNEP's mandate of "inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations." In particular we are reminded that education is not about "doing as I say", but learning to "do as I do" – given that what we do is pivotal to how the world's communities deal with the multiple challenges of climate change, resource efficiency, biodiversity protection and management of our growing legacy of waste and environmental pollution.

Universities, as the pinnacle of formal, organised education, thus have a particular responsibility both to help define and also to become exemplars of environmental best practice.

The former aspect is generally well understood. Worldwide, Universities teach, conduct research and contribute to the global knowledge base across every aspect of sustainability, from photovoltaic engineering to ecological accounting. Yet when it comes to the University's own fabric and operations, there is frequently a significant disconnect... "do as I say" all too often reasserts itself.

The focus of this Toolkit is to help address that gap – to provide University staff and students with a selection of strategies, tools and resources, gleaned from the literature, from global case studies and from practice which are intended to inspire, encourage and support Universities to develop and implement their own transformative strategies for establishing green, resource-efficient and low carbon campuses. In turn, it is hoped the "green campus" will help inform the "green curriculum", and extending beyond institutional boundaries, help to catalyse more sustainable communities.

This Toolkit is part of a wider Greening Universities Initiative established through UNEP's Environmental Education and Training Unit, in collaboration with other UN agencies, under the umbrella of the recently formed Global Universities Partnership for Environment and Sustainability (GUPES). GUPES brings together over 100 Universities from across Africa, Asia and the Pacific, Latin America and the Caribbean, West Asia, Europe, and North America. At its core is the role Universities can foster for critical thinking, for example on emerging ethics and values towards the next generation of planetary leadership.

We commend this Toolkit to our GUPES partner Universities and the wider global university community, and wish you every success in putting into practice the initiatives expounded therein – while remaining cognisant of the magnitude of the tasks ahead.

In concluding these introductory remarks, it is important to emphasise that this is a living document. Continual qualitative improvement, as distinct from unlimited quantitative growth, is the essence of sustainable development. So we welcome your feedback, examples and case studies for inclusion in the web-based version of the Toolkit, and to update future editions of the published version.

Ibrahim ThiawDirector

Division of Environmental Policy Implementation
United Nations Environment Programme

Foreword

his June marks the one year anniversary of two remarkable events. One is the officially establishment of the Global Universities Partnership on Environment and Sustainability (GUPES) by UNEP and participating universities in Shanghai, China. And the other is the UN Conference on Sustainable Development – Rio+20 – in Rio de Janeiro, Brazil.

The overall goal of GUPES is to promote the integration of environment and sustainability concerns into teaching, research, community engagement, the management of universities including greening of university infrastructure, facilities and operations, as well as to enhance student engagement and participation in sustainability activities both within and beyond universities. While contributing to the innovative education on sustainable development, reaction to climate change and further cooperation of faculty training and student exchanging within partner universities and UNEP, one of concrete work of GUPES is to promote the construction of green campus.

The Future We Want, as the outcome document of Rio+20, is a starting point of launching global processes to integrate the sustainability into economic development. Universities could play a critical role in developing metrics for measuring progress in green economy initiative, and the efforts made for greening university campus and the wider community can be seen as the pilot practice which demonstrates the intensive collaborations between different disciplinary, scholars, frontier workers and students.

This toolkit serves not only as the guidelines for green campus implementation, but also including unique cases from the real practice of universities around the world, among which most are GUPES partners. With seamless cooperation inside the campus and beyond, each case represents the differentiated approaches according to local natural and social conditions. Last year, Tongji University was honored to be awarded with Excellence in Campus Award by the International Sustainable Campus Network (ISCN) for its Living Laboratory Initiative. And all the cases included are aiming to spurring ideas and practices in local and global context.

As universities are playing more and more essential role in realizing the future we want, greener campuses will contribute greater in the wider effort for it. We hope this toolkit will bring about more successful practices and further improvement of itself.

I also want to express appreciation to Bayer AG for contributing to the publication of this toolkit.

预览已结束,完整报告链接和二维码如下:

https://www.yunbaogao.cn/report/index/report?reportId=5 13601



