

**ECLAS  
CONFERENCE  
PORTO 2014**

**LANDSCAPE:  
A PLACE OF  
CULTIVATION  
BOOK OF  
PROCEEDINGS**

**EDITED BY:  
ISABEL MARTINHO DA SILVA,  
TERESA PORTELA MARQUES,  
AND GONALO ANDRADE**

**21 TO 23 SEPTEMBER  
SCHOOL OF SCIENCES  
UNIVERSITY OF PORTO**

ORGANISERS

**ECLAS**  
EUROPEAN COUNCIL OF  
LANDSCAPE ARCHITECTURE  
SCHOOLS



FACULDADE DE CIÊNCIAS  
UNIVERSIDADE DO PORTO

SPONSORS

**FCT**  
Fundação para a Ciência e a Tecnologia

**U.PORTO**

 Taylor & Francis Group  
an informa business

 PORTO RECUA VINHOS

PEER REVIEWED PROCEEDINGS

**ECLAS 2014 CONFERENCE**

**LANDSCAPE: A PLACE OF CULTIVATION**

SCHOOL OF SCIENCES, UNIVERSITY OF PORTO

PORTO, PORTUGAL

---

## **COPYRIGHT**

Every scientific paper published in these Conference Proceedings was peer reviewed.

All explanations, data, results, etc. contained in this book have been made by authors to their best knowledge and were true and accurate at the time of publication.

However, some errors could not be excluded, so neither the publisher, the editors, nor the authors can accept any legal responsibility or liability for any errors and omissions that may be made.

© All rights reserved. No part of these proceedings may be reproduced by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

Cover Design: Studio Andrew Howard

© Copyright©2014 by the authors

ISBN 978-972-96076-7-7

Edited by the School of Sciences, University of Porto  
Porto, Portugal

Porto 2014

CULTIVATION OF NATURE

FULL PAPERS

ADAMKOVA, JANA | HAVLIS, KAREL

**Creative Approaches to Brownfields Transformation**  
257

BAT FINKE, HANNE

**The Phenomenon Denmarks Garden: New Landscape Businesses Emerging in the Rural Paradigm Shift**  
262

BATISTA, TERESA | MASCARENHAS, JOSÉ |

MENDES, PAULA | PINTO GOMES, CARLOS  
**Methodological Proposal for the Assessment of Vegetation Heritage Value: Application in Central Alentejo (Portugal)**  
266

BOUCHE-PILLON, SABINE | BONTHOUX, SÉBASTIEN

**Participatory science and Urban Ecology Issues Experienced by Landscape Architecture Students**  
271

FARINHA-MARQUES, PAULO | FERNANDES, CLÁUDIA |

LAMEIRAS, JOSÉ MIGUEL | GUILHERME, FILIPA  
**Urban Green Structure in the City of Porto: Morphology And Biodiversity**  
275

GOLOBIC, MOJCA

**Cultivation as a Nature Conservation Principle: The Ethical Paradox or Sustainable Solution?**  
280

JORGENSEN, ANNA

**Rus in Urbe: New Urban-Rural Cultural Landscapes?**  
285

LENZ HOLZER, SANDA | BROWN, ROBERT

**Climate-Responsive Positivist 'Research Through Designing'**  
288

MATOS SILVA, MARIA

**Urban Adaptation Through Flood Risk Management Infrastructure and Public Space Design**  
292

OCCHIUTO, RITA

**Lab Pay(S)Age : A Landscape Observatory for the Research Project**  
297

RECHNER DIKA, IVA | ANIČIĆ, BRANKA

**Rethinking Ecological Design**  
300

TISMA, ALEXANDRA | VAN DER VELDE, RENE |

NIJHUIS, STEFFEN | POUDEROIJEN, MICHIEL  
**Nature in the Metropolis: Mapping Biodiversity Using Metropolitan Landscape Characterization Tools**  
304

PECHA KUCHA PAPERS

BEJA DA COSTA, ANA

**Estuarine Landscape Dynamics in Urban Maputo**  
311

BOC, VLADIMIR IONUT | IONESCU, ROBERT MIHAI |

STREZA, IOANA CRISTINA  
**Conservation Premises for Văcărești Urban Wetland**  
314

GILL, KAMNI

**The Redress of The Grove**  
317

JANKEVICA, MAIJA

**Cultivating Nature in Urban Areas According to Wilderness and Naturalness**  
319

MARTÍNEZ DIZ, MARÍA DEL PILAR | IGLESIAS DÍAZ,

MARÍA ISABEL | LAMOSA QUINTEIRO, SANTIAGO  
**Using Native Species in Extensive Green Roofs in Galicia by Different Planting Methods**  
322

PONTE E SOUSA, CLARA

**Wildflower Meadows Management in Mediterranean Climate**  
325

RIBEIRO, RICARDO | LOPES, JOANA

**Landscape Process: Coastal Area Transformation**  
328

TAHVONEN, OUTI

**Water for Vegetation – Knowledge Base for an Integrated Approach to Sustainable Stormwater Management in Site Scale**  
331

VAN MERRIËNBOER, J.A.A.T (JAN)

**The rise, Significance and Legacy Concerning the theories about nature of Louis G. Le Roy**  
334

VOISIN, LOLITA | SERVAIN-COURANT, SYLVIE |

FÂCHE, ARNAUD  
**Landscape as a Revealing Tool of the Tensions in Territory Planning Policies**  
337

ZLENDER, VITA

**The accessibility Factors Influencing the Use of Peri-Urban Green Open Spaces**  
340

# Rethinking Ecological Design

---

**RECHNER DIKA, IVA** Department of ornamental plants, landscape architecture and garden art, Faculty of Agronomy, University of Zagreb, Croatia

**ANIČIĆ, BRANKA** Department of ornamental plants, landscape architecture and garden art, Faculty of Agronomy, University of Zagreb, Croatia

landscape design | ecological concepts | ecological design principles | ecological design theory

Ecological approaches to landscape design emphasize the importance of ecology and advocate a direct application of knowledge from ecology as science in design. The basis of this research is based on the belief that thorough knowledge of many natural, social, artistic and technical disciplines is needed for successful landscape design, and ecology is only one of them. In that context the objective of research was to clarify the possibilities of direct application of ecology as science in landscape design.

The obtained results to a large degree dispute the critical or significant influence of ecological factors (concepts and principles of ecological design) on landscape design and therefore it can be claimed that the examined principles of ecological design have always been, to certain extent, the subject of landscape design.

## 1. INTRODUCTION

Sustainability signifies a primary and fundamental goal of contemporary society and likewise a basic orientation for urban planning and landscape design. In that respect different landscape design approaches have been formulated: ecological design (Van der Ryn and Cowan, 1996), sustainable landscape design (Calkins, 2005; Franklin, 1997), green building (Calkins, 2005), design for ecological democracy (Hester, 2006), eco-design (Shu-Yang et al., 2004), even ecological engineering and eco-revelatory design are considered new design sub-disciplines (Johnson and Hill, 2001).

In spite of using different terms for the new design approach, these approaches emphasize the importance of ecology in design or even consider ecology as the point of origin (Forman, 2001; Nassauer, 2001) and not just another factor that affects design. Although ecological awareness has always had a fundamental role in landscape design, ecological design advocates for direct application of knowledge from ecology as a science in design, and therefore represents the basic difference between contemporary (ecological) approach to landscape design and previous approaches.

Designed landscape can be defined as a physical space structure adapted to demands that come out of needs to solve social, spatial, political and other different problems. Accordingly, the basis of this research is based on the belief that, due to issue complexity, thorough knowledge of many natural, social, artistic and technical disciplines is needed for successful landscape design, and ecology is only one of them. In that context the objective of research was to clarify the possibilities of direct application of ecology as a science in landscape design. Even though quite a bit has been written on this subject in the past few decades (e.g. Corner, 1997) and many contradictions and shortcomings of applying ecology in landscape design are already known, ecological approach to landscape design is still (even more than before) promoted and advocated as a new (paradigmatic) and better approach to landscape design. In that