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LOCAL AND REGIONAL CHALLENGES OF CLIMATE CHANGE ADAPTATION AND GREEN TECHNOLOGIES

PROCEEDINGS

THE UNIVERSITY OF WEST HUNGARY FACULTY OF FORESTRY

Editors:

Polgár, András – Bazsó, Tamás – Nagy, Gabriella – Gálos, Borbála

A KLÍMAVÁLTOZÁS HELYI ÉS REGIONÁLIS KIHÍVÁSAI, ZÖLD TECHNOLÓGIÁK

KONFERENCIA-KIADVÁNY

NYUGAT-MAGYARORSZÁGI EGYETEM ERDŐMÉRNÖKI KAR

Szerkesztők:

Polgár András – Bazsó Tamás – Nagy Gabriella – Gálos Borbála



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Preface

The proceedings include the scientific contributions of the "International Workshop on Local and Regional Challenges of Climate Change Adaptation and Green Technologies" that has been organized 19th September 2014 at the University of West Hungary, Faculty of Forestry.

The aim of the workshop was to synthetize the main results of the RECLAND (Erasmus Multilateral Projects, 526746-LLP-1-2012-1-ES-ERASMUS-EMCR, MSc Programme in Climate Change and Restoration of Degraded Land) and VITEG (Green Technology European Virtual Gateway 527296-LLP-1-2012-1-UK-ERASMUS-ECUE) projects. The wide spectrum of the presented scientific topics refers to the multi- and interdisciplinary aspects of climate change and green technologies. Successful adaptation to the projected climate change and the rise of the awareness regarding to green technologies can only be achieved in the frame of international cooperations (in both projects experts from Spain, England, Rumania, Estonia and Hungary have been involved) as well as by integration of the results of recent research projects into education.

In the first part of the proceedings the key outcomes of the two projects are introduced with special focus on the module content and accreditation of the developed MSc program and teaching methods. In the second part the underlying research activities are discussed, addressing the following topics: climate change mitigation, climate change impacts on forests and water balance, adaptation to climate change, restoration of degraded land, urban soils, life cycle assessment, green technologies.

The organisers of the workshop thank all speakers and presenters for the contributions, the Dean of the Faculty of Forestry Prof. Dr. Ferenc Lakatos for making possible to organize the workshop at the University of West Hungary in Sopron, as well as the RECLAND and VITEG projects for the financial support.

the Editors

Sopron, September 2014

Előszó

A kiadvány a Nyugat-magyarországi Egyetem Erdőmérnöki Karán, Sopronban, 2014. szeptember 19-én megrendezett „A klímaváltozás helyi és regionális kihívásai, zöld technológiák” című tudományos workshop előadásainak írásos összefoglalóját foglalja magában.

A rendezvény célja a RECLAND (Erasmus Multilateral Projects, 526746-LLP-1-2012-1-ES-ERASMUS-EMCR, MSc Programme in Climate Change and Restoration of Degraded Land) és a VITEG (Green Technology European Virtual Gateway 527296-LLP-1-2012-1-UK-ERASMUS-ECUE) projektek keretében elért legfrissebb eredmények bemutatása volt. Az elhangzott tudományos előadások sokszínűsége a klímaváltozással és a zöld technológiákkal kapcsolatos témák multi- és interdiszciplináris jellegét igazolja. A klímaváltozáshoz való hatékony alkalmazkodáshoz és a zöld technológiák iránti nyitottság növeléséhez nélkülözhetetlen a nemzetközi együttműködés (mindkét projekt spanyol, angol, román, észt és magyar kutatók bevonásával valósult meg), valamint a legfrissebb kutatási eredmények oktatásba történő beépítése.

A konferencia kötet első része a RECLAND projekt keretében kidolgozott MSc szintű képzés tananyagát és akkreditációját, valamint a VITEG projektben kifejlesztett oktatási módszereket mutatja be. A kiadvány második része az oktatás alapjául szolgáló tudományos kutatások eredményeit összegzi, a következő témák érintésével: klímaváltozás mérsékelése, klímaváltozás hatása az erdei ökoszisztémákra és a hidrológiai ciklusra, alkalmazkodás a klímaváltozáshoz, rekultiváció, városi talajok, életciklus elemzés, zöld technológiák.

A szervezők köszönik a résztvevőknek, hogy előadásaikkal, poszttereikkel gazdagították a rendezvényt, Prof. Dr. Lakatos Ferenc dékánnak, hogy helyet adott a workshopnak az Erdőmérnöki Karon, valamint a RECLAND és VITEG projekteknek az anyagi támogatás biztosításáért.

a Szerkesztők

Sopron, 2014. szeptember

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Proceedings / Előadás összefoglalók

Accreditation Description of a MSc Programme in Spain Developed Under the Erasmus Multilateral Programme

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Abstract

In Spain, there are several possibilities for the accreditation of a Lifelong learning Master Degree. One option is the internal accreditation, through the Technical University of Madrid (UPM) post-graduate degree, as MASTER, SPECIALIZATION, EXPERT, and CONTINUOUS TRAINING. These degrees lead our students to be successful in the labour market, so as the enhancement and reorientation of their professional careers, because all degrees have a clear professional orientation.

The second option is given by the “National Agency for Quality Assessment and Accreditation of Spain”, ANECA, which is a Foundation whose aim is to provide external quality assurance for the Spanish Higher Education System and to contribute to its constant improvement. In order to perform its activities (evaluation, certification and accreditation), ANECA has developed several evaluation Programmes with the purpose of integrating the Spanish system into the European Higher Education Area (EHEA).

UPM is leading the Lifelong Learning Master Degree RECLAND (MSc Degree on Climate Change and Restoration of Degraded Lands), which is currently accredited as UPM post-graduate degree, and in the future it will be accredited as an official degree by ANECA.

Keywords: competences / accreditation / masters programme / aneca / certification / degree

INTRODUCTION

The first part in accreditation process involves the justification and objectives of the Master RECLAND.

The United Nations Climate Change Conference, Durban 2011, delivered a breakthrough on the international community's response to climate change. In the second largest meeting of its kind, the negotiations advanced, in a balanced fashion, the implementation of the Convention and the Kyoto Protocol, the Bali Action Plan, and the Cancun Agreements. The outcomes included a decision by Parties to adopt a universal legal agreement on climate change as soon as possible, and no later than 2015.

One of the decisions adopted by COP 17 and CMP 7 regard to the land use, land-use change and forestry, and invites the Intergovernmental Panel on Climate Change to review and, if necessary, update supplementary methodologies for estimating anthropogenic greenhouse gas emissions by sources and removals by sinks resulting from land use, land-use change and forestry activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol.

Monitoring And Evaluation

The evaluation will be on-line in each module. In line with the innovative nature of the master, the evaluation strategy used a mix of assessment methods. Evidence of achievement of learning outcomes will be as follows:

- Written and practical work
- Participation in discussions and exercises
- Production of a portfolio of case studies
- Review
- Approximately 20,000 words Dissertation (with 10% tolerance).

Both assessment methods, learning and continuous training will be used throughout the programme. Learning assessment creates a meeting point for both students and tutors in order to evaluate the development, learning consolidation and planning ahead.

Continuous evaluation allows recognition of progression to other studies, reports to participants the level of achievement, and validates learning processes.

Each module requires students' participation in a two days' workshop. The first day will be used for applied modeling science and then, on the second day the student will remain in the center of residence to work in practical cases, group assignments, reports and debates.

Students are expected to apply theoretical understanding in a variety of different scenarios and employing a variety of approaches to the expression and distribution of tasks. At the end of the programme, students will have developed the necessary knowledge and skills to improve employment opportunities in the field of climate change.

The specialist and expert degree do not require a final dissertation. Shall be deemed to have been approved after passed each module exams.

Master will require the completion of a graduation report about subjects programme, written in English and must report copyright in favour of UPM, if the work has been performed in part or all in their facilities. In case that students do their Master thesis in Climate Change and Restoration of Degraded Land with a company, the student will retain his/her own copyright but must ensure that the information provided does not create a conflict of interest with that company, being responsible for the effects caused in this case. If the copyright remains the student property, he/she must perform an automatic transfer of rights to UPM for teaching and research only.

As part of the monitoring methodology of the programme, each student will have a mentor assigned according to their own profile. The student is expected fluid and frequent contact with their tutor in order to discuss the different aspects of their training.

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