

# RESTORING FORESTS:

What Constitutes Success in the 21st Century?

October 14-16, 2014

LAFAYETTE, INDIANA, USA



## FIRST CIRCULAR

CONGRESS

SCIENTIFIC PROGRAMME

WORK GUIDELINES

REGISTRATION

FEES

### OVERVIEW AND MAIN OBJECTIVES

Forest restoration is a multi-step process that can be complex and difficult depending upon management objectives and conditions of the site being restored. During the past several decades, a pronounced evolution has occurred in both the characteristics of the restoration areas and the objectives of restoration programs. Many areas that had been converted to agriculture have since been afforested. Intensive management practices, such as surface mining and road construction, yield extremely harsh sites requiring restoration.

Increasing public concern for ecological sustainability demands that restoration counteract environmental impacts, while simultaneously rehabilitating forest species, structure, and function, and enhancing the carbon sequestration capacity of the land. These tasks must now be accomplished under the dynamic nature of global change that implies higher water demand in most areas, but threats of inundation from flooding and other extreme climatic events in others.

To meet these demands, new advances are needed, especially to account for the almost unlimited number of new species desired for forest restoration activities, nursery cultural practices must focus on overcoming planting stress on harsh restoration stress by enhancing the ability of seedlings to escape from frost, drought, nutrient deficits, vegetative competition, and even grazing, and planting designs and site treatments must be reconsidered to fulfill expectations for forest functionality.

In 2011, we held the 1<sup>st</sup> Restoring Forests Congress in Madrid, Spain to address recent advances in forest restoration techniques and theory. Selected papers from this symposium were published in **New Forests (Vol 33, Issues 5-6)**. This 2<sup>nd</sup> Congress will continue to communicate advances in these themes. Yet, we will also explore what constitutes restoration in the 21<sup>st</sup> Century by re-defining the scope of forest restoration and narrowing our vision of restoration success in relation to a realistic, achievable end result. This conference will also highlight the need to continually integrate genetics into forest restoration, especially in relation to re-defining species selection and seed zones in relation to global change.

### IUFRO DIVISIONS AND UNITS

- 1.01.00 – Temperate and Boreal Silviculture
- 1.06.00 – Silviculture. Restoration of degraded sites
- 2.01.00 – Physiology and Genetics. Physiology
- 3.02.00 – Forest Operations Engineering and Management. Stand establishment and treatment

### INFORMATION

[www.restoringforestsuiufro.org](http://www.restoringforestsuiufro.org)  
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## THEMES AND TOPICS: SCIENTIFIC PROGRAMME

The overall theme of the Conference is *Restoring Forests - What Constitutes Success in the 21<sup>st</sup> Century?* The conference will be structured according to the following topics:

### ECOSYSTEM RESTORATION: STRATEGIES AND NEEDS

- Defining the scope of forest regeneration
- Public demand and trends in policy making for restoration
- New opportunities for restoration: counteracting environmental impacts
- Advances in ecological theory affecting restoration strategies
- Prioritization: what should be restored first?
- Monitoring restoration success

### PREDICTION OF FIELD PERFORMANCE: ECOPHYSIOLOGICAL BASIS

- Seedling nutrient and carbohydrate dynamics during establishment
- Water relations and seedling establishment
- Identifying components of stress and assessing planting stress
- Soil properties and root growth

### PRODUCING PLANT MATERIAL TO RESIST STRESS

- Promoting cold and drought hardening
- Role of mineral nutrition in improving stock quality
- Plant crop and mycorrhizae interactions
- New/alternative stocktypes
- Seedling quality assessment

### THE ROLE OF GENETICS IN PRODUCING RESILIENT ECOSYSTEMS

- Molecular genetics: application to selecting traits of interest
- Breeding for insect and disease resistance
- Developing seed zones to counter global change
- Species selection and population genetics

### SITE PREPARATION FOR RESTORATION: EFFECTS ON SITE MICROCLIMATE AND SUBSEQUENT PLANT RESPONSE UNDER HARSH CONDITIONS

- Weed control: mechanical procedures, herbicides, and alternative methods
- Tube shelters and other protection methods
- Biotic facilitation
- Field fertilization
- Soil preparation to enhance root growth capacity and proliferation

## ORGANIZING COMMITTEE

**Douglass F. Jacobs.** Purdue University (USA)

**Juan A. Oliet.** Universidad Politécnica de Madrid (Spain)

**Charles H. Michler.** USDA Forest Service (USA)

**Liz Jackson.** Purdue University (USA)

## SCIENCE COMMITTEE

**James Aronson.** Center for Functional and Evolutionary Ecology, CNRS (France)

**Andreas Bolte.** Johann Heinrich von Thünen-Institute (Germany)

**James Bullock.** Center for Ecology and Hydrology (UK)

**Pablo Donoso.** Austral University (Chile)

**Simon Landhäusser.** University of Alberta (Canada)

**Palle Madsen.** University of Copenhagen (Denmark)

**Shaolin Peng.** South China Institute of Botany (Guangzhou, China)

**José M. Rey-Benayas.** Alcalá University (Spain)

**John Weber.** World Agroforestry Center (Mali)

## OTHER DETAILS

- Authors willing to submit a communication for an **oral presentation** or a **poster** must send an ABSTRACT written in English, of no less than 300 words, but not exceeding one A4 page (including title, authors, and affiliations) before 15 June 2014. The abstracts will be refereed by the Science Committee of the Conference. Style of presentation (oral/poster) will be assigned according to relevance of topic and authors' preferences. Presentations are, however, not compulsory for participation.

- All oral sessions will be plenary sessions held in **English**.

- A selection of the communications presented will be published in a special issue of the international journal, *New Forests* (published by Springer)

- Website will be updated regularly with details about registration, call for papers, deadline for abstracts submission.

[www.restoringforestsuiuro.org](http://www.restoringforestsuiuro.org)

## IMPORTANT DATES TO REMEMBER

|   |                         |
|---|-------------------------|
| Opening registration date                         | <b>1 June 2014</b>      |
| Deadline for abstracts submission                 | <b>1 June 2014</b>      |
| Notification of abstract acceptance               | <b>1 July 2014</b>      |
| Deadline for early registration with reduced fees | <b>15 July 2014</b>     |
| Deadline for registration with regular fees       | <b>1 September 2014</b> |

## REGISTRATION FEES (US DOLLARS)

|  | NON STUDENTS (\$) | STUDENTS (\$) |
|--|-------------------|---------------|
| EARLY REGISTRATION<br>(BEFORE JULY 15) | 300               | 200           |
| LATE REGISTRATION<br>(AFTER JULY 15)   | 400               | 300           |

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