



# Nuevas tendencias en restauración de suelos degradados: tecnosuelos y fitorremediación



**14.Jul - 15.Jul 2016**

**Cod. 152-16**

**Mod.:**

Face-to-face

**Edition**

2016

**Activity type**

Professional Conference

**Date**

14.Jul - 15.Jul 2016

**Location**

Casa de la Dehesa de Olárizu

**Languages**

Spanish

**Academic Validity**

20 hours

**Organising Committee**



## Description

La organización de este curso ha sido cofinanciada por el Programa Interreg Sudoe (Fondo Europeo de Desarrollo Regional - FEDER)

Descargar díptico

## Objectives

Difundir el concepto de salud del suelo y de los ecosistemas

Comprender el sistema suelo-microorganismo-planta en suelos degradados

Conocer nuevas tecnologías de restauración (fitorremediación, fitogestión y tecnosuelos) en emplazamientos degradados

Aplicar fitotecnologías de remediación a suelos degradados y contaminados (casos prácticos)

## Course specific contributors



# Program

## 14-07-2016

08:45 - 09:00	Recepción de participantes
09:00 - 09:30	Apertura institucional a cargo de Iñaki Prusilla (Concejal de Medioambiente del Ayto. Vitoria-Gasteiz), Javier Garaizar (Vicerrector del Campus de Álava) y Luis Orive (Director del Centro de Estudios Ambientales)
09:30 - 10:00	“Apertura de Jornadas: la restauración en la planificación del territorio” <b>Juan Vilela Lozano</b> Ayuntamiento de Vitoria-Gasteiz - Jefe de Zona Rural y Montes
10:00 - 10:40	“El suelo, un recurso no renovable. Concepto de Salud del Suelo y tarjetas de salud” <b>Carlos Ander Garbisu Crespo</b> Neiker - Jefe del Departamento de Conservación de Recursos Naturales
10:40 - 11:30	“Tecnosuelos, origen y el caso de Galicia: restauración de la Mina de Touro y Mina de As Pontes.” <b>Felipe Macías Vázquez</b> Universidad de Santiago de Compostela - Catedrático de Edafología y Química Agrícola
11:30 - 12:00	Break
12:00 - 12:45	“Tecnosuelos en Portugal: aplicación en la mina de Sao Domingo” <b>Erika Santos</b> Instituto Superior Dom Afonso III - Postdoctorate Researcher
12:45 - 13:30	“Fitorremediación: experiencias recientes en España.” <b>Petra Susan Kidd</b> Instituto de Investigaciones Agrobiológicas de Galicia (IIAG) - Consejo Superior de Investigaciones Científicas (CSIC)
13:30 - 14:00	Synthesis
14:00 - 16:00	Break
16:00 - 18:00	Visita a proyectos piloto. Restauración con tecnosuelos en la Cantera de Laminoria (Maeztu, Álava)

## 15-07-2016

09:00 - 09:20	“Apertura segundo día: fitorremediación del suelo.” <b>Gerardo Besga Salazar</b> Neiker-Tecnalia - Director Tecnológico
09:20 - 10:00	“Suelo, microorganismos y plantas: un relación a largo plazo” <b>Jose Maria Becerril Soto</b> EHU/UPV - Catedrático

10:00 - 11:00	<p>“Fitomanejo: concepto y experiencias recientes en Francia.”</p> <p><b>Michel Mench</b> INRA - Senior Scientist</p> <hr/>
11:00 - 11:30	<p>Break</p> <hr/>
11:30 - 12:15	<p>“Tecnosuelos: experiencias recientes en Francia”</p> <p><b>Valérie Bert</b> Institut National de l'Environnement Industriel et des Risques - Investigadora en tecnologías limpias y sostenibles</p> <hr/>
12:15 - 13:00	<p>“Fitorremediación: experiencias recientes en Portugal”</p> <p><b>Paula Maria Lima Castro</b> Universidade Católica Portuguesa, Escola Superior de Biotecnologia (UCP-ESB) - Senior Researcher</p> <hr/>
13:00 - 13:30	<p>Synthesis</p> <hr/>
16:00 - 18:00	<p>Visita a proyectos piloto: Tecnosuelos en Gardelegi / Restauración en Jundiz</p> <hr/>

## Directed by



### **Juan Vilela Lozano**

Centro de Estudios Ambientales del Ayuntamiento de Vitoria-Gasteiz, Green Lab

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Juan Vilela es Ingeniero de Montes por la Universidad Politécnica de Madrid y Master en Arquitectura del Paisaje por la State University of New York at Syracuse. Ha trabajado en numerosos proyectos de planificación y restauración del paisaje con base ecológica, tanto desde la administración pública (Centro de Estudios Ambientales (2017-actualidad), Ayuntamiento de Vitoria-Gasteiz (2009-2017) como desde el ámbito privado (POA paisajismo, 2005-2009). Ha sido responsable de la gestión forestal del municipio de Vitoria-Gasteiz. En la actualidad centra su actividad en proyectos de mejora de la sostenibilidad del territorio donde partiendo de la investigación (estudios y experiencias piloto Green Lab) se incorporan nuevas técnicas y a los proyectos municipales de infraestructura verde (itinerarios de paisaje, restauración de espacios degradados, fitorremediación entre otros).

## Teachers



**Jose Maria Becerril Soto**

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Catedrático de Fisiología Vegetal de la Universidad del País Vasco (UPV/EHU) desde 2001. Se doctoró en la UPV/EHU en 1987. Realizó un PostDoc en USDA en Stoneville (MS, USA). Actualmente es el responsable del grupo de Investigación EKOFISKO (Ecofisiología del Estrés y de la Contaminación en Plantas) del Sistema de Investigación Vasco. Ha sido responsable del Master y del Programa de Doctorado Agrobiología Ambiental e imparte docencia de Biotecnología Vegetal, Contaminación & Recuperación de Suelos y Contaminación & Toxicología de Suelos. Ha sido director 10 Tesis Doctorales. Ha dirigido más de 40 proyectos de investigación de ámbito internacional, nacional, autonómico y con empresas. Autor de más de 140 artículos indexados (WOS, H-index=45) en temáticas relacionadas con ecofisiología vegetal, toxicología ambiental y el uso tecnologías biológicas y emergentes en la descontaminación de suelos y aguas.



**Valérie Bert**

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Dr. Bert is a researcher in the Clean and Sustainable Technologies and Processes Unit of the Institut National de l'Environnement Industriel et des Risques (INERIS). She obtained her PhD degree in Phytoaccumulation at University of Sciences and Technologies of Lille, France (2000). She has worked as a teacher at the University of Sciences and Technologies of Lille (2000), as a postdoctoral researcher at the free university of Brussels (2000-2002) and as a researcher at the National Research Centre on polluted sites and soils (CNRSSP), France (2002-2006). She has published >14 papers in more than 5 journals about phytoremediation, environmental pollution, soil biology, microbiology, environmental management, biomass and bioenergy, Botany and Soils. Nowadays, she research in the field of phytotechnologies and biomass valorization. She is a project and working group leader, the responsible for the monitoring of several field sites and the supervisor of PhD and master students.



**Gerardo Besga Salazar**

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Dr. Besga is an Agricultural Engineer (Polytechnic University of Madrid, 1980) and PhD in Soil Science (University of California, Davis, 1987). His is currently the Technological Director of NEIKER-Basque

Institute of Agricultural Research and Development. His scientific career focuses on applications of soil science to the implementation of nutrient use efficiency as well as the implementation and of good agricultural practices to gain efficiency in the use of the resources (fertilizers and pesticides) and the energy (fuel and energy), increasing the soil health while minimizing the impacts of the agrifood systems. He has worked in developing Life Cycle Analysis for various agricultural subsectors to control from a systemic approach agricultural systems impacts on environment. He has also worked in the development of technosols for restoring soil functions in degraded areas as a consequence of quarrying.



### **Carlos Ander Garbisu Crespo**

NEIKER, Director Científico

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Dr. Garbisu is the Scientific Director at NEIKER, The Basque Institute of Agricultural Research and Development (Spain), where he leads the Soil Microbial Ecology Group (<http://www.soilmicrobialecolgy.com>). He obtained his PhD degree in Biology at King's College London (1992). Then, he carried out postdoctoral studies in the Department of Biochemistry and Molecular Biology of the University of the Basque Country (1992-1993, 1996-1997) and in the Department of Plant Biology of the University of California at Berkeley (1993-1996). He has published more than 135 international papers (h-index=42), participated in more than 70 research projects, and taught a great deal of courses at the university level. He has participated in many scientific committees and acted as project evaluator for many organizations.



### **Petra Susan Kidd**

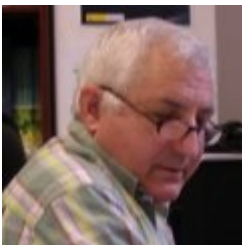
Dr. Kidd is a tenured scientist of the Consejo Superior de Investigaciones Científicas, CSIC (Spain). She obtained her PhD degree in Biology at University of Stirling (UK) in 1999. She obtained two fellowships from the European Science Foundation and worked in Plant Adaptation Programme (1999-2001) and Soil and Groundwater Programme (2001). Then, she worked as a Marie Curie postdoctoral research fellow in the University of Santiago de Compostela (Spain, 2001-2003), and in the CSIC (Spain) as an Isidro Parga Pondal (2003-2005) and Ramón y Cajal (2005-2007) postdoctoral researcher. She has published 37 international refereed scientific journals according to Scopus (h-index= 14; total number of citations: 877), >90 communications at conferences, >20 M.Sc. theses and B. Sc. projects supervised and 3 PhD student supervised till defence of thesis.



### **Paula Maria Lima Castro**

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Paula Castro is Senior Researcher and Assistant Professor with Habilitation at Universidade Católica Portuguesa, Escola Superior de Biotecnologia (UCP-ESB). She holds a PhD in Biochemical Engineering from University College London. She takes currently the position of Member of the Direction Board of UCP-ESB. She is the Leader of the Group “Environmental Mitigation Tools and Strategies” of the Research Center CBQF-Center for Biotechnology and Fine Chemistry of UCP-ESB. She is actively involved in research in environmental science and engineering, especially biotechnology, including soil requalification and phytoremediation and sustainable practices in agro-forestry, among others, having more than 150 scientific publications in indexed journals. She has wide experience in the coordination of national and international research programmes as well as several programmes with industrial partners.



### **Felipe Macías Vázquez**

Universidad de Santiago de Compostela en el Departamento de Edafología y Química Agrícola de la Facultad de Biología (USC), Catedrático

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El Dr. Macías es catedrático de Edafología y Química Agrícola de la Universidad de Santiago de Compostela (USC). Ha sido profesor interino (1971), Adjunto (1978), Agregado (1980) y Catedrático de Edafología y Química Agrícola de la USC (1984). En 2005 y 2006 impartió clases del curso de Geoquímica ambiental en el Tercer Ciclo Universitario de Sao Paulo (Brasil). También ha sido profesor del programa de postgrado “River restoration: Principles and Practices” en la universidad de Minho (Braga, Portugal) en 2010-2011, 2012-13 y 2014-15 y profesor de cursos de master y doctorado en las Universidades de Santiago, Murcia, Oviedo, Nancy, París, Rennes, Sao Paulo, Minho y Vigo. En total, ha realizado 6 quinquenios de docencia universitaria reconocida y 6 sexenios de investigación reconocidos, donde ha sido autor de más de 250 publicaciones, investigador principal de más de 100 proyectos de investigación financiados por administraciones y empresas y director de 34 Tesis Doctorales.



### **Michel Mench**

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Dr. Michel MENCH is a tenured senior scientist of the National Institute of Agricultural Research (INRA), in the Dept of Forest, Grassland and Freshwater Ecology (UMR BIOGECO). He has the ability to



supervise researches and is qualified on the list of professor (Biology of populations). He started to work in 1983 on trace elements in the soil-plant system. He obtained his PhD degree in Agronomic sciences at National Polytechnic Institute of Lorraine, France (1985). He has published 123 peer-review papers in scientific journals (h-index: 37; number of citations: 3817), more than 300 oral communications at international conferences and supervised 13 PhD thesis. Since 1992, he is working on the phytoremediation and phytomanagement of trace element-contaminated soils. He was WP leader in the FP7 Project, GREENLAND (Gentle Remediation of Trace Element Contaminated Land, 2010-2014).



### **Erika Santos**

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Dr. Santos is a researcher of the Linking Landscape, Environment, Agriculture and Food Research Unit (Instituto Superior de Agronomia - Universidade de Lisboa). She obtained her PhD degree in Environmental Engineering at Instituto Superior de Agronomia/Universidade de Lisboa (Portugal) in 2016 which was also co-supervised by Universidad de Santiago de Compostela. She worked as a researcher and lecturer in BSc of Environmental Management, BSc of Bio-Resources Management, BSc of Sustainable Tourism and/or BSc of Touristic Management (2004-2015) and in MSc of Environmental Management (2009-2011) at the Instituto Superior Dom Alfonso III (INUAF). She also was coordinator of BSc of Bio-resources Management and Sustainable Tourism in 2007-2014 and Member of the Pedagogical Council of the INUAF (2007-2015). In 2006-2014, she was executive coordinator of the Office of Environmental Assessment and Planning (2006-2015).

## Registration fees

<b>REGISTRATION</b>	<b>UNTIL 31-05-2016</b>	<b>UNTIL 14-07-2016</b>
GENERAL	60,00 EUR	70,00 EUR
<a href="#">REGISTRATION EXEMPTIONS</a>	20,00 EUR	20,00 EUR
<a href="#">Special registration</a>	-	40,00 EUR
<a href="#">INVITED COLLABORATOR</a>	-	0 EUR

## **Place**

### **Casa de la Dehesa de Olárizu**

Olarizu Hiribidea, s/n, 01006 Vitoria-Gasteiz,

Araba