













## INTERNATIONAL CONFERENCE

Tackling climate change: the contribution of forest scientific knowledge

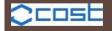
21 - 24 May 2012, Tours (France)



















### **Background**

Climate change is emerging as the major concern for society in the 21<sup>st</sup> century and beyond. This is particularly true for forest management and the forest-based sector. Forests will be impacted by climate change but the forest-based sector has the capacity to react through both adaptation and mitigation measures.

Although many scientific activities have been initiated in this field, uncertainties remain as to tested strategies for moving forward. Several recent scientific approaches aim at helping decision makers in their elaboration of strategies for action regarding climate change and forest impacts, including adaptation and mitigation management. Among them, the European intergovernmental COST Action ECHOES, the European research project MOTIVE, the European research project BACCARA, the Interreg European project REINFFORCE, the international research project TRANZFOR, the international research project FOREADAPT and a new IUFRO working group on adaptation to climate change (see page 8 for details about the above projects).

Climate change frames forestry in a new light. Forests are impacted by and influences socioeconomic development at the global level, atmospheric chemistry and physics and global and regional climatic parameters. Despite the inertia of the processes involved and the uncertain future, actions must be taken from now on in order to avoid adverse effects. The probability that a species is adapted to both present and future conditions diminishes with increasing climate change, and thus understanding how to compensate through improving knowledge on forests and forestry is crucial. Not only timber production should be maintained but also many other forest ecosystem services, particularly carbon sequestration, which plays a major role in mitigation, and biodiversity, which could facilitate adaptation of forest ecosystems to climate change.

## Objectives and target audience

This international conference will focus on the current state of knowledge on climate change impacts on forest ecosystems, services and activities. It will highlight methods and challenges to mitigate or tackle climate change impacts, both before they arise and once they have occurred. It will show how climate change and forest sciences address the issues facing forest managers.

The conference will essentially focus on temperate forests, obviously European ones, but also those of North-America, Asia and South hemisphere.

The conference also provides a forum for stakeholders where the key issues of climate change will be presented and discussed by a panel of stakeholders and scientists working on climate change adaptation and mitigation.

200 to 350 scientists, policy makers, planners, managers, specialized journalists, including representatives of a wide range of socioeconomic, ecological and institutional contexts are expected.

The official language of this conference is English. The plenary sessions may be translated in French and German.

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### **Topics**

Climate change is expressed by its impacts which need to be analyzed before the implementation of efficient and effective actions. Two broad topical categories are:

- the assessment of the current knowledge and understanding of climate change impacts;
- the identification of appropriate measures that are likely to reduce the impacts, exploit beneficial opportunities, increase the adaptative capacities or reduce the forcing of the climate system.

The description and understanding of climate change impacts addresses several kinds of questions:

- 1. How to analyze observed and expected impacts of climate change? How to link observations of the past and expectations for the future? How to deal with certainty and uncertainty, between disturbances and trends? What are the current development of monitoring, experimental manipulations and modelling activities in that field?
- 2. How are forests affected by a change in the disturbance regime? What is the magnitude of threats to forests in a climate change context such as storms, fires, drought and heat waves, pest and pathogen outbreaks?
- 3. What are the recent and future trends in forest productivity and species distribution? What is the contribution of climate change in recent trends?
- 4. How and how much does ecosystem resilience buffer climate change impacts? What are the regeneration success, adaptive capacity of ecosystems, and plasticity of trees in response to climate change?
- 5. How does climate change affect forest ecosystem services? What consequences can be expected for biodiversity, carbon sequestration, timber and non wood forest products, water quality and regulation, recreation, protection against erosion, rockfall, avalanches, landslides, flooding?

Due to the complexities and uncertainties of the future socioeconomic development, climate responses and ecosystem functioning, forest decision makers face many issues to adapt to climate change:

- 6. How could forest management integrate risks and uncertainties? How to prevent catastrophic disturbances through forest management measures, risk sharing and insurance procedures? What main aspects have to be taken into account in contingency operations and plans? How to take into account reversibility and irreversibility of forest decisions?
- 7. What strategies would be suited for adapting forests to climate change? What kind of adaptive management should be implemented? Does biodiversity insure forest ecosystem against decline in their functioning under climate change? What does it mean in terms of decision support tools? What are the risks of mismanagement?
- 8. How and how much does the forest-based sector mitigate climate change? What is the carbon budget of forests, forestry and the whole forest-based sector? What is the best compromise between sequestration and substitution? What is the greenhouse gas balance of adaptation and mitigation measures?
- 9. How to tackle the economic and social consequences of climate change? What are the costs and benefits of climate change impacts, adaptation and mitigation? What are the trade-offs between adaptation and mitigation? How is climate change perceived by forest owners and users and how far are they willing to change their behaviour?
- 10. How to make information exchange faster and more transparent? Which are the main gaps of knowledge? How should they be bridged? How to transfer knowledge in the context of climate change (training, education, information, communication)? How to develop interactions among stakeholders and between them and scientists?

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### Structure of the meeting

Hours	Monday 21 May	Tuesday 22 May	Wednesday 23 May	Thursday 24 May
8:00 - 9:00				
9:00 - 10:00		Session 3 (plenary or parallel)	Session 7 (plenary or parallel)	
10:00 - 11:00		Coffee break	Coffee break	
11:00 - 12:00		Session 4	Session 8 Panel of Stakeholders	
12:00 - 13:00	Welcome / Registration	(plenary or parallel)	Discussion with Scientists	Parallel Field trips
13:00 - 14:00	Buffet Lunch	Lunch	Lunch	
14:00 - 15:00	Opening and	Session 5	Session 9	
15:00 - 16:00	Opening and Session 1	(plenary or parallel)	Panel of Scientists Discussion with Stakeholders	
	Coffee break	Coffee break	Coffee break	
16:00 - 17:00	Session 2	Session 6	Synthesis and outcomes	
17:00 - 18:00	(plenary or parallel)	(plenary or parallel)	Closing	
18:00 - 19:00	Poster Session		ECHOES	
19:00 - 20:00	(with fresh drinks and snacks)		Management committee / evaluation panel	
20:00 - 21:00				
21:00 - 22:00		Official Dinner		
22:00 - 23:00				

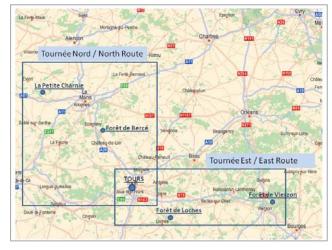
### Field trips

North Route : Bercé Petite-Charnie

- Silviculture of oak
- Genetic resources
- Species/provenance test
- Mitigation (bioenergy)

#### East Route: Loches -Vierzon

- Silviculture of oak
- Genetic conservation
- Forest decline management
- Mitigation (bioenergy)



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#### Call for contributions

The conference will comprise:

- Invited presentations from keynote speakers,
- Voluntary oral and poster presentations selected by the Advisory Committee of the Conference

#### Deadline for submissions is Monday September 19, 2011

This abstract must include:

- a very comprehensive title
- a preference between oral presentation and poster
- an indication of the topic(s) addressed by the contribution
- the names and affiliations of all contributors (mentioning ECHOES, MOTIVE, REINFFORCE, BACCARA or TRANZFOR if necessary)
- up to 400 words,

Fill in the application form here below or fill it online following this link: application form

The acceptance of contributions by the Advisory Committee of the Conference will be notified to voluntary contributors by the end of October 2011.

Contributions will be definitively accepted after registration of one of their authors.

## Proceedings of the conference

An agreement is under negotiation with the *Annals of Forest Science* in order to edit a special issue of this journal on forests and climate change. A first draft of the paper should be available before the conference. The journal will apply its usual acceptance criteria. Manuscripts will have to be presented according to the journal guidelines. Additional information will be provided to the contributors with the acceptation mail.

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#### **Conference Venue**

VINCI Centre International de Congrès de Tours 26 Boulevard Heurteloup 37042 Tours Cedex 1

### How to get there

#### By plane - Arrival at :

- *Tours-Val-de-Loire airport*:located 10 minutes by car from the city center and conference venue, it is served by Ryanair from London Stansted, Dublin, Marseille and Porto.
- Paris-Roissy Charles de Gaulle airport (see here below for access to Tours)
- Paris-Orly airport (see here below for access to Tours)

#### By train:

Tours is served by two TGV (high-speed train) SNCF railway stations: Tours Centre, in the heart of the city (in front of the conference venue) and Saint-Pierre-des-Corps, located at 5 minutes by train shuttle from the city center and the conference venue.

#### From Paris-Charles de Gaulle airport:

- Direct connection to Saint-Pierre-des-Corps railway station by high-speed train (5 trains/day 1h35)
- Indirect connection to Saint-Pierre-des-Corps or Tours Center through TGV Paris-Montparnasse railway station by:
  - o RER B + subway (see map on: www.ratp.fr) or
  - o Air France Shuttle (www.lescarsairfrance.com) or
  - o Taxi

#### From Paris-Orly airport:

- Indirect connection to Saint-Pierre-des-Corps or Tours Center through TGV Paris-Montparnasse railway station by:
  - o RER B + subway (see map on: www.ratp.fr) or
  - o Air France Shuttle (www.lescarsairfrance.com) or
  - o Taxi
- Indirect connection to Saint-Pierre-des-Corps through TGV Massy-Palaiseau railway station by:
  - o Bus + RER C (see map on: www.ratp.fr) or
  - о Тахі

More information on TGV (high-speed train) connections: www.voyages-sncf.com

#### By car:

Tours is the heart of the highway junction of A10 (Paris-Spain), A28 (Calais-Bayonne) and A85 (Nantes-Lyon). Five car parks are available within walking distance of the conference venue.

#### **Accomodation**

Practical information will be given on the conference website after registration opening.

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## Registration and fees

The registrations will open October 1<sup>st</sup> on conference website (see below). Pre-registrations are possible on conference website following this link: <u>pre-registration</u>.

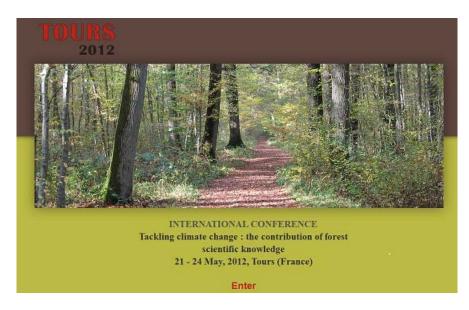
Fees are established according to the following table (in €, all taxes included).

	Regular Fees	Fees for students	Fees for accompanying people
1 day	100	25	1
2 or 3 days	200	50	1
Official diner	40	40	40
Field trip	50	25	50

N.B.: ECHOES participants are informed that their fees will be adapted to COST rules and that they will receive a special invitation.

### **Website**

### http://www.gip-ecofor.org/tours2012/



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#### What's ECHOES (<a href="http://www2.gip-ecofor.org/echoes/">http://www2.gip-ecofor.org/echoes/</a>)

The main objective of the European intergovernmental COST Action ECHOES (Expected Climate Change and Options for European Silviculture) has been to mobilize and integrate the existing scientific knowledge for European forest policymakers and managers who have to make decisions on adaptation to and mitigation of climate change. It is also part of a continuous improvement process that leads to develop monitoring systems and identify research priorities for the future. ECHOES is funded by the COST Office in partnership between the European Commission and the European Science Foundation.

#### What's MOTIVE (http://www.motive-project.net/)

MOTIVE (MOdels for adapTIVE forest management) investigates adaptive management strategies that address climate and land use change. It also examines the impacts of these changes with respect to a broad range of forest goods and services. The project focuses on a wide range of European forest types under different intensities of forest management. Specific attention is given to uncertainties and risks and how they can be considered in improved decision support tools.

MOTIVE is funded by the European Community's Seventh Framework Programme for Research and Technological Development (FP7).

#### What's BACCARA (http://www.baccara-project.eu/)

BACCARA (Biodiversity And Climate Change, A Risk Analysis) has as main goal to build scientific foundations for developing tools allowing forest managers and policy makers to evaluate risk of European forest biodiversity and productivity loss under climate change. The scope of BACCARA encompasses forest composition at multiple trophic levels, i.e. assemblages of forest symbionts (mycorrhiza), producers, consumers and their predators. This 4 year project will construct a 3-dimensional risk assessment model linking climate change, functional diversity, and forest productivity. BACCARA gathers 15 European organisations and the University of Beijing. It is funded by the European Community's Seventh Framework Programme (FP7/ 2007-2013).

#### What's REINFFORCE (http://reinfforce.iefc.net/)

The purpose of REINFFORCE (REsource INFrastructures for monitoring, adapting and protecting european atlantic FORests under Changing climate) 4 years project is to pool capacities of 11 institutes to face a transnational issue that is adaptation to climate change impacts on Atlantic forests. This project will set up tools for monitoring climate change and its impacts on the Atlantic coast and demonstrate efficiency of adaptive measures. The coordination of the project is done by the Regional Office EFIAtlantic hosted at IEFC office in Bordeaux (France).

It is co-financed by the European Union program ERDF-INTERREG IV Atlantic Area.

#### What's TRANZFOR (http://www.tranzfor.eu/tranzfor)

The objective of TRANZFOR (Transferring Research between E.U. and Australia-New Zealand on FORestry and climate change) is to promote knowledge exchanges in the general domain of Forests and Climate Change between Australia, New Zealand and the European Union. Work programmes have been developed around the following areas: Genomics and tree breeding, Forest Models, Environmental Services, Risk Assessment, Bioenergy. It is based on a 4 years coordinated joint programme of exchange of researchers for short periods (2 to 12 months), thus providing mobility possibilities to individual researchers and support to research organisations to establish and reinforce long-term research co-operation. Each partner funds its own outgoing coordinator.

#### What's ForEAdapt (http://www.isa.utl.pt/cef/pub/foreadapt)

ForEAdapt (Knowledge exchange between Europe and America on forest growth models and optimization for adaptive forestry) is an exchange project supported by a Marie Curie International Research Staff Exchange Scheme within the 7th European Community Framework Programme (FP7-PEOPLE-2009-IRSES). The project focuses on forestry and climate change interactions, including the development of adaptive forest management tools. It provides a unique opportunity for the exchange of researchers and scientific knowledge related to forest modeling (WP1), mathematical optimization (WP2) and decision support systems (WP3) among the 7 countries (Portugal, Finland, Spain and Sweden, and 5 organizations from Chile, Brazil and USA). It aims to strengthen research collaboration through active networking, staff exchange and dissemination activities.

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### **Advisory Committee**

The Advisory Committee of the conference is consulted at each important stage of the organization: announcements; selection of presentations, programme, and outcomes. It provides advices at any stage of the process and helps in the dissemination of the information. It is made of members of the Steering Committee of ECHOES, the Exective Committee of BACCARA, the coordinators of TRANZFOR and REINFFORCE projects, the members of the Project Management Team of MOTIVE and other eminent scientists with a strong experience on climate change and forestry.

Battisti Andrea, University of Padova, Italy (b) Bernier Pierre, Canadian forest service, Quebec, Canada Blennow Kristina, SLU, Sweden (m) Bugmann Harald, Swiss Federal Institute of Technology, Switzerland (m) Diez Casero Julio, University of Valladolid, Spain (r) Freer-Smith Peter, Forests Research, UK (t) Garcia-Gonzalo Jordi, Instituto Superior de Agronomia, Portugal (f) Hanewinkel Marc, Forest Research Institute of Baden-Württemberg, Germany (m) Jactel Hervé, Inra, France (b) Jellesmark Thorsen Bo, University of Copenhagen, Denmark (m) Keenan Rodney J., University of Melbourne, Australia Kenis Marc, CABI Europe, Switzerland (b) Lexer Manfred, BOKU, Austria (e) (m) Lindner Marcus, EFI (e) (m) Nabuurs Gert-Jan, EFI (e) (m) Niinik Maria, James Hutton Institute, UK (e) Orazio Christophe, Inra, France (f) Payn Tim, NZFRI, New Zealand (t) Peyron Jean-Luc, ECOFOR, France (e) Scherer-Lorenzen Michael, University of Freiburg, Germany (b) Seeland Klaus, ETHZ, Switzerland (e) Spiecker Heinrich, University of Freiburg, Germany (e) Valladares Fernando, CSIC, Spain (b)

Zimmermann Niklaus E., Swiss Federal Research Institute, Switzerland (m)

(b) BACCARA Executive Committee

(e) ECHOES Steering Committee

(f) For EAdapt

(m) MOTIVE Project management Team

(r) REINFFORCE

(t) TRANZFOR

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## **Partnership**









Other partners will join us soon.

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## **Call for oral or poster presentations - Application form**

To be filled preferably online following the link here below: application form

(or to fill here below and send to: <a href="mailto:echoes@gip-ecofor.org">echoes@gip-ecofor.org</a>)

Titl	le:							
Oral presentation				☐ Poster				
То	pic(s) :	<ul> <li>☐ 1. Observed and expected impacts</li> <li>☐ 2. Disturbances</li> <li>☐ 3. Recent and future trends in forest productivity and species distribution</li> <li>☐ 4. Ecosystem resilience</li> <li>☐ 5. Climate change and ecosystems services</li> <li>☐ 6. Management of risks and uncertainty</li> <li>☐ 7. Management for adaptation</li> <li>☐ 8. Mitigation</li> <li>☐ 9. Socioeconomic aspects of climate change</li> <li>☐ 10. Knowledge management</li> </ul>						
Authors:								
	Title, first name, SURNAME		Organisation	n	Country	Email		
1:								
2:								
3:								

## Abstract (maximum 400 words):

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