



PhD course on “International Forestry and Global Issues” Champenoux (France), 19-23 May, 2014

Introduction

The French **Institut National de la Recherche Agronomique (INRA)** together with **AgroParisTech**, Nancy centre and the **European Forest Institute (EFI)**, represented by its Central European Regional Office and the Observatory for European Forests (EFICENT) will conduct a PhD course on “International Forestry and Global Issues” from 19 to 23 May 2014 in Nancy, France. The course will address a **range of forest issues, topics which rank high on the international and national forest and environmental research and policy agendas**. The course will offer PhD students and young researchers an **excellent opportunity to interact with internationally renowned experts** from forest science and policy.

Rationale

Forestry makes a valuable contribution to sustainable developments in all parts of the world, but the progress towards sustainable forest management has been rather uneven (FAO, 2007). With nearly 4 billion hectares forests cover about 30% of the Earth’s land area. About 47% of the world’s forests are located in the tropical zone, 9% in the sub-tropics, and 11% and 33% respectively in the temperate and boreal zones. Despite all the efforts to protect and manage forests, the world’s forest area continues to decrease at an alarming rate. The FAO estimated that about 13 million ha of the world’s forests are lost due to intensive deforestation and degradation each year. The annual net loss of forest area between 2000 and 2005 was 7.3 million ha equivalent to a net loss of 0.2 percent of the world’s forests (FAO, FRA 2005). Such a net loss corresponds to nearly half of France’s total forest area.

Many countries have demonstrated the **political will to improve management of their forests by revising forest and environmental policies and legislation and strengthening forestry institutions**. All countries manage forest for multiple uses, and increasing attention is being paid to the conservation of soil, water, biological diversity and other environmental goods and services. However, the continuing decline in primary forests in many tropical countries but also the increasing impacts of climate change effects on forests worldwide, are a matter of serious concern.

The **world is facing increasingly complex challenges**, which call for answers in the years to come. Examples are: What will be the impact on forests caused by a continuously increasing global population, rapid economic development and globalization? In how far will forests be able to adapt to and/or help to mitigate climate change? Has continuous increase in wood demand and the growing global timber trade have positive or negative effects on the world’s forests? Are we able to halt the loss of forest biodiversity and if not what may be the consequences? Will the forest sector continue to play an important role in providing livelihoods for rural communities? Such questions will be addressed by and discussed with the experts attending the course.

Course structure, contents and objectives

During the course, the following themes will be addressed:

- **State of the World's forests and overview of international policy**
- **Production, trade and consumption of wood products in the Bioeconomy**
- **Climate change and carbon sequestration**
- **Forest Ecosystem Services**
- **Regional development, forestry and society**
- **The Science/Policy Interface**

Internationally renowned experts, representing **different fields of research and/or policy** and working at **different international/European institutions**, including NGOs, will be invited to share their knowledge and views on global forest issues and defined topics. On **each of the topics 2 presentations** will be given by the invited experts with the opportunity for the students to **engage in in-depth discussions** with the speakers. Each topic will address **different geographical scales** (global, continental/regional, national, forest management unit) **and forest types and eco-zones** (tropics, Mediterranean, temperate, boreal). Further, the role of **different fields of science** (ecology, bio-techniques, policy, social-economics) in the context of the four topics will be highlighted.

The course is set out to allow for **maximum interaction**. Presentations by invited speakers will give students insight into the themes, representing different examples of work from different parts of the world and or institutions. After each presentation a **plenary discussion** will take place. Each of the four themes will be accompanied by **targeted group work**. Each day will end with a **round table discussion** allowing students to a) present the results of their working group and b) jointly formulate concluding remarks on the addressed topics resulting from different viewpoints. **Students will learn how to represent and argument for different stakeholder views and how to solve different conflicts of interests, which emerge in a multi-complex environment, such as global forests**. The tentative programme might be change slightly, depending on speaker's availability.

Description of course sessions

State of the World's forests and overview of international policy

Forests are dynamic, intrinsically as well as through the influence of exogenous factors. In over a couple of centuries, Europe's forest area has not been as large as it stands today. This is very different in other parts of the World. However this may or may not be about to change, as the demands for products and services from our forests are on the increase and related pressures due to often competing interests, are too.

The theme ‘State of the World’s forests and overview of international policy’ addresses the following topics:

- Actual state of World Forests
- Global Forest Governance
- ...

Production, trade and consumption of wood products in the bioeconomy

Globalisation and economic growth increase international trade of wood and wood products and the flow of capitals into new investments in the forestry sector of emerging economies. Over the last 20 years international trade of forest products (including pulp and paper, solid wood products and secondary processed wood products) increased annually 6.6%. Along the last decades production and trade of wood and wood products have been mostly in the hand of European and North American countries, but this is changing. In the last 15 years China has increased its share in the international trade of wood products from 1.5% to 7.2% mainly due to exports of secondary processed wood products. Wood supply from plantations is already quite important and it is estimated that plantations are becoming the main source for wood supply in the world. In Latin America and Caribbean region, for example, the pulp and the reconstituted panel is almost entirely supplied with plantation wood, like Eucalyptus. In wooden furniture China displaced Italy, a long time leader in furniture exports. China together with Brazil and Russia are expected to continue to gain market share and most probably will be among the major players in the international market by the year 2020. The general trends and perspectives identified point out that a successful strategy to gain market will need to consider investments in fast growing plantations and value added products, with a focus in the international market.

The theme ‘Production, trade and consumption of wood products in the Bioeconomy’ addresses the following topics:

- Trends in demand and supply of wood products and geographical shifts in production, consumption and trade
- The position of Europe in global timber markets
- Energy scenarios and their impact on forests
- Plantations versus Sustainable Forest Management
- Combating illegal logging, by the means of FLEGT and Certification
- ...

Climate change and carbon sequestration

The increasing frequency and extent of climate related events (drought, heavy precipitation, changes in wind patterns) and associated disturbances (fires, storms, insect and diseases) have been affecting forests at a more extensive scale in the recent past and will do so in future. Changing environmental conditions will increase the vulnerability of forests and result in adaptation processes. Forests,

sustainable forest management and wood products play a vital role in climate change mitigation. Growing forests sequester carbon, while wood products store carbon through their life time. Wood is an important source of renewable energy, and can be a substitute for energy-intensive materials with higher greenhouse gas emissions.

The theme 'Climate change and carbon sequestration' addresses the following topics:

- The role of forests in the wake of climate change
- Potentials of carbon sequestration
- Mitigating green house gas emissions by reducing deforestation and degradation (REDD)
- Forest adaptation towards climate change and its impacts
- The role of forests within international climate change negotiations
- ...

Forest Ecosystem Services

The forest ecosystem delivers an abundance of life-important services, which are often taken for granted, and free or without explicit monetary value, until the point when these services become scarce or under threat. While some would see that all ecosystem services should be preserved at the smallest forest management unit, there are also advocates for a functional separation of forests which should each fulfill in demand for different ecosystem services.

The theme 'Forest Ecosystem Services' addresses the following topics:

- Forest protection versus forest management
- The role of biological diversity for forests
- Threats towards biological diversity and its possible consequences
- Payments for Ecosystem Services
- Forest and the water protection issues
- Conclusions of the INTEGRATE project
- ...

Regional development, forestry and society

In many parts of the world, land area has a predominantly rural character. It is particularly diverse with a natural environment shaped by human occupation and activity. Agriculture and forestry, as major land users, play a key role in determining the health of the rural economy as well as the rural landscape. Sustainable supply of renewable goods, the provision of protection and other environmental services, the promotion of recreation and tourism, and safeguarding of income are a prerequisite of rural development and moderation of rural migration. Society's relationship with natural resources, including forests, is changing rapidly due to multiple factors, like demographic, economic, social and technological developments and the attendant changes in values and society perceptions. Most societies have tried to redefine their objectives and approaches to resource management and land use, determining the tradeoffs between competing demands and emerging conflicts of interests. Globalisation, increasing

demand for energy and wood supply, climate change, conservation of biodiversity, continuing land degradation and desertification, growing water deficit etc. have become critical issues in many rural areas, which require immediate appropriate responses.

The theme 'Regional development, forestry and society' addresses the following topics:

- The role of forests and forestry to society-perceptions from different world regions
- Stakeholder interests and emerging conflicts
- Forests and Innovation – relevance for rural areas/communities and society perception
- Forests and Wood Energy - relevance for rural areas/communities and society perception
- Regional Development and its relevance for the forest sector
- ...

The Science/Policy Interface

The attention for forest policy has infiltrated also the more bio-physical sciences, possibly as an effect of the all-round impact of environmental policy in the setting of research priorities. For scientists, not to ignore the relevance of their research for policy makers might only increase the societal benefit of their research. For policy makers, to base their discourse on sound science might also be of their best interest, even if policy in the end may still be decided by a lowest common denominator amongst parties. This session will look into how science and policy-making interface with each other, taking into account that there are more actors in both research and policy-making, than just researchers and policy makers.

The theme 'Science/Policy Interface' addresses the following topics:

- Position and role of NGOs
- Forestry in Brussels
- Research and Policy Support
- ...

Credits and recognition by universities and doctorate schools

The course is recognized by RP2E doctorate school (Nancy – University of Lorraine). A list will be sent to RP2E secretariat by the Organising Committee at the end of the course with the names of the students who have attended the course.

Students registered in other doctorate schools or universities will receive a certificate issued by the Organising Committee (INRA, AgroParisTech and EFI) with the course theme and duration. This course is equivalent to 3 ECTS credits.

Timetable and location

The duration of the course will be 5 days, from 19 to 23 May 2014. The course will take place at INRA campus, in Champenoux/Nancy, France. For further details see course agenda.



Participants

The course is addressed to PhD students and young scientists from all nationalities doing their research on forest related topics. Within the course, trans-disciplinary approaches will be discussed, and students with different research backgrounds are welcome to participate (e.g. biologists, ecologists, economists, sociologists etc.). Students and young scientists working at INRA, related research units in France, students from NFZ.forestnet institutions (Nancy-Freiburg-Zurich) as well as students from other European universities and institutions are strongly encouraged to apply.

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