



Irreversibilities, Uncertainties, and Real Option Values

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Environmental Economics and Natural Resources Group
Wageningen University

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De Leeuwenborch
Hollandseweg 1
6706KN Wageningen

Organised by:

- **Mansholt Graduate School of Social Sciences**
- **Research School for Socio-Economic and Natural Sciences of the Environment**

Course summary

Irreversible effects do play an important role in private as well as public decision making. The basis for the Precautionary Principle, an important principle in environmental policy, is uncertainty about irreversible costs of particular actions (e.g. the release of GMOs).

This course will address the issue of irreversibility from an economic point of view. Different approaches dealing with irreversibilities have emerged in the economic literature. The two most prominent ones are the quasi option and real option value theory. Application of both approaches requires technical skills most students find difficult.

The objective of the course is to introduce the origins of the quasi option value and real option values, to teach the methods most commonly used (discrete methods such as decision trees, continuous time, continuous state models using stochastic processes), and to discuss and practice various applications including non-renewable resources, technology adoption, climate change, forestry, and food- and bio-safety.

The course will include two parts. One week of lectures and exercises with assignments and a course paper. For passing the course students need to participate in lectures and exercises (min. 90%) and submit the course paper within six months after the course.

A limited number of 20 participants can enroll for the course.

Dates

The lectures of the course will be held in **week 16, 2010 (19-23 April)**.

The deadline for submitting the course paper is October 31st, 2010.

Course fees

For PhD-students of Maastricht Graduate School of Social Sciences and WIMEK/SENSE with an approved training and supervision plan there is a fee of 300 Euros; for MG3S and WIMEK/SENSE fellows a fee of 400 Euros; for other participants, there is a fee of 600 Euros for the whole course (including drinks, lunches, course material and a course dinner).

The course fee includes the reader. Participants need to buy the book by Dixit and Pindyck: Investment under Uncertainty. Princeton University Press.

Requirements

Students need to have a solid background in microeconomics and standard calculus and be familiar with MS-Excel. The course will introduce the additional mathematical skills needed.

Registration

Registration is possible electronically via the Mansholt Graduate School courses page: http://www.mansholt.wur.nl/UK/education/courses/upcoming_ongoing/ . The maximum number of participants is set at 20, the minimum at 10. PhD candidates of Mansholt Graduate School have preference if they register before 19th March, 2010. Please make sure that you provide the most recent contact details so that in case of any changes you will be notified promptly. After your internet registration you will receive a short notification that your name has been registered. At least two weeks before the course you will receive a confirmation about the location and the schedule. MG3S will also send an invoice to the address indicated in the registration form.

Please e-mail to Marcella.Haan@wur.nl in case you have not received the second confirmation two weeks before the course.

Cancellations

Cancellations may be made free of charge until 1 month before the start of the course. Cancellation fee of 100 % applies if participants cancel the course less than 1 month prior to the course. The organisers have a right to cancel the course not later than 1 month before the course starts. The participants will be notified of any changes at their e-mail addresses.

Further information

On course content: justus.wesseler@wur.nl

On MG3S: www.mansholt.wur.nl

For details about the logistics, accommodation, registration, fees, study materials, etc. please contact Marcella Haan, Tel +31 317 484126, Marcella.haan@wur.nl

Contact addresses:

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6706 KN WAGENINGEN
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Web-site: <http://www.enr.wur.nl/uk/>

Useful information for participants from outside Wageningen

Hotels:

Wageningen International Centre (Hof van Wageningen): 75 euro for 1 persons room, 98.50 euros for 2 persons room, both prices are including breakfast. Details:

<http://www.hofvanwageningen.nl/>

Hotel de Wageningseberg: 62.50 euro 1 person room, 97.50 euro for 2 persons room, also including breakfast; www.wageningseberg.com

Hotel Nol in 't Bosch: 83,50 euro for 1 person room, 110 euro for 2 persons room, also including breakfast; <http://www.nolintbosch.nl/>

Hotel de Nieuwe Wereld (Hotel School): 50-60 euro for a 1 person room.

<http://www.denieuwewereld.nl> (only in Dutch)

Bed&Breakfast:

B& B De Heksenspeeltuin: 25 euro for a 1 person room

Address: Einthovenstraat 15, 6706JA Wageningen, Phone: +31 317-418161

E-mail: callyd@zonnet.nl, Website: www.heksenspeeltuin.nl (only in Dutch)

Villaria Bed en Breakfast: 32-38 euro for a 1 person room

Address: Nassauweg 21, 6703CG Wageningen, Phone: +31 317-419636

Email: villaria@hari.demon.nl

Ons Bakhuus Bed & Breakfast: 25 euro for a 1 person room

Address: Dolderstraat 64, 6706 JG Wageningen, Phone.:+31 317-411994

E-mail: janny.wijbo@chello.nl

Knollywood Bed & Breakfast: 35 euro for a 1 person room

Address: L. Roggeveenstraat 39, 6708 SL Wageningen, Phone: +31 317-420970

E-mail: Knollywood@hetnet.nl

De Herbergh Bed & Breakfast: 45 euro for a 1 person room

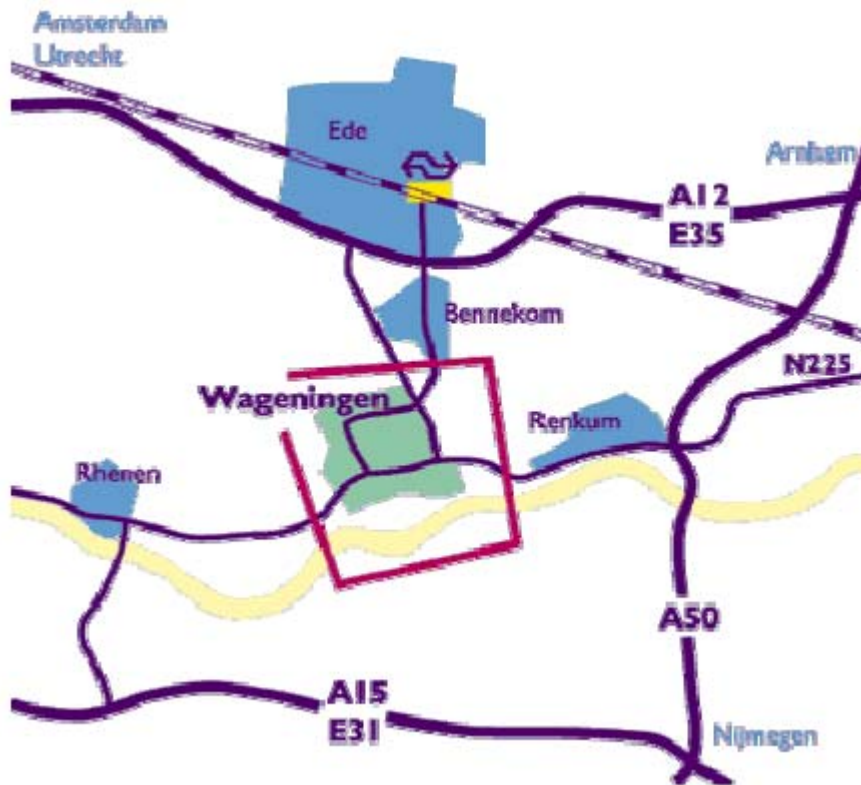
Address: Generaal Foulkesweg 8, 6703 BR Wageningen, Phone: +31 317-410747

E-mail: glindenbergh@wanadoo.nl

From Schiphol Airport Amsterdam to Wageningen

At the Airport you can buy a train ticket in the 'arrivals' area. You will see the sign "Train tickets" near the exit. Then follow the signs 'Nederlandse Spoorwegen' (www.ns.nl) or 'Trains and busses' to the railway station. Purchase a one-way ticket to the Ede-Wageningen train station, this will cost €13,40 (plus €0,50 service charge if you buy the ticket at the ticket counter). It is also possible to buy the ticket from the ticket vending machines in the station. There will be a train leaving every 15 minutes from Schiphol. Every there are direct connections to Ede-Wageningen, usually leaving from platform 3 (twice an hour). Also, twice an hour there is a connection via Utrecht (where you have to change trains). At Schiphol, the train usually departs from platform 1-2. At Utrecht, you have to change trains from platform 15 to 14. On the platform, you will see signs hanging from the ceiling with all names of the different stations where the train will stop. Check for the names Ede Wageningen or Utrecht and board the train. The trip from Schiphol to Ede-Wageningen takes you a bit more than one hour.

For Dutch train connections use www.ns.nl, www.thalys.com, www.db.de



Wageningen has no railway station. This lack is fully compensated by accurate means of buses and taxis, as described next. For information about tickets to some 1400 European destinations and to order them, call Teleservice NS Internationaal: +31 (0)900 92 96 (0.35 euro per minute). You can pay by credit card (EuroCard, MasterCard, VISA or American Express), or by remittance. [On-line booking](#) for NS trains (choose station Ede-Wageningen): pre-registration with NS electronic system is required. Prices are mentioned there as well.

From railway station Ede-Wageningen you can take a taxi (approx. 15 min.) Taxis leave at the north side of the station. You can also come by bus (bus 86 (direction Arnhem) or bus 88 (Valleilijn, direction Wageningen). Bus 86 leaves at the north side of the station, bus 88 leaves at the South side of the station. You have to purchase a bus "strippenkaart" at the Kiosk (in the bus itself the "strippenkaart" is more expensive). Those coming to the Wageningen International Centre have to get off the bus at the bus stop "Busstation". The WIR hotel is situated next to the bus terminal and the WICC hotel approximately 250 meters to the west.