



EFI ATLANTIC



International Summer School June 2017

Forest Planning and Management

Training in New Tools and Techniques



Waterford Institute of Technology

Waterford, Ireland

19-23 June 2017

For all enquiries, please send an email to [barry.gardiner @ efi.int](mailto:barry.gardiner@efi.int)



Waterford Institute of Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LAIRGE

PROGRAMME OVERVIEW

Sunday, 18/06	Evening	Arrival (Bus from Dublin airport at 20:00)
Monday, 19/06	Morning Afternoon	Concepts in forest management planning Talks on forest and property level tools
Tuesday, 20/06	All day	Field training: Measurements and demonstrations: <ul style="list-style-type: none"> • Group 1: planning and forecasting • Group 2: stand and tree tools
Wednesday, 21/06	Morning Afternoon	Talks on stand and tree level tools Laboratory training: <ul style="list-style-type: none"> • Group 1: planning and forecasting • Group 2: stand and tree tools
Thursday, 22/06	All day	Laboratory training: <ul style="list-style-type: none"> • Group 1: planning and forecasting • Group 2: stand and tree tools
Friday, 23/06	Morning Afternoon	Discussion, feedback and group work Depart (Bus to Dublin airport at 13:30)

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Photo: Nick McCarthy (WIT)

DETAILED PROGRAMME

Sunday 18 June

AFTERNOON/EVENING

Arrival. Free bus in evening at 20:00 from Dublin airport to Waterford.

Dinner (own plans)

Monday 19 June

MORNING: 8:30-12:00 (Chair: Liam Malone)

8:30-8:40: Address by Head of the School of Science and Computing Dr. Michael Harrison

8:40-9:00: Welcome by Eugene Hendrick (Department of Agriculture, Food and the Marine)

Concepts in forest management planning

Tutors

9:00-9:40: Forest planning (strategic)

Felipe Bravo
(University of Valladolid)

9:40-10:20: Forest growth modelling background

Margarida Tomé (ISA)

10:20-10:40: Coffee/Tea

10:40-11:20: Risk management and modelling

Céline Meredieu (INRA)
Barry Gardiner (EFIATLANTIC)

11:20-12:00: Data collection in support of forest planning (tactical)

Glen Murphy
(GE Murphy & Associates Ltd.)

12:00-13:30: Lunch

AFTERNOON: 13:30-17:10 (Chair: Eugene Hendrick)

Talks on forest and property level tools:

Tutors

13:30-14:10: Economic tools and support systems

John Casey (Teagasc)

14:10-14:50: Modelling risk from wind, processionary moth and heterobasidion

Barry Gardiner (EFIATLANTIC)
Céline Meredieu (INRA)

14:50-15:30: Decision support for licencing and regulation of the forest sector in Ireland (e.g., GIS, visualisation tools)

Myles MacDonncadha (Silvalytics)
Frank Barrett/Fergus Moore (DAFF)

15:30-15:50: Coffee/Tea

15:50-16:30: Integrated management systems (optimisation and planning)

Henry Phillips (Forest Solutions)

16:30-17:10: Landscape tools (e.g., CAPSIS-SIMMEM)

Christophe Orazio (EFIATLANTIC)

Summer School Dinner: Kindly sponsored by



Tuesday 20 June

MORNING & AFTERNOON 8:00-18:00 (times of departure and return)

GROUP 1 Field Training: Planning and forecasting

Strategic (data collection for forest planning and management)

Tutors

National Forest Inventory (establishing plots and measuring trees)

John Redmond (DAFM)

GIS and planning tools in the field (ARCWEB smartphone application with aerial photography, LiDAR and satellite data)

Myles MacDonncadha (Silvalytics)
 Daniel McInerney (Coillte)
 Juan Suarez (Forest Research)

Forest management systems using aerial LiDAR, satellite imagery and drone data

Enda Keane (TreeMetrics)

Forest surveying (drones with RGB/Multispectral/thermal camera, laser scanning, hand-held scanner)

Enda Nolan
 (Coastway Surveys Ireland)

GROUP 2 Field Training: Stand and tree tools

Operational (tariffs, measuring & valuing stands pre-harvest, assessing species suitability):

Tutors

Tree measurements (hypsonometers, digital calipers, smart phone application)

Michael Pedini & Nick McCarthy
 (WIT)

Standing tree assessment and forest planning (Terrestrial Laser Scanner assessment of standing timber and tree form; electronic calipers & vertex managed on smartphone)

Enda Keane (TreeMetrics)
 Glen Murphy
 (GE Murphy & Associates Ltd.)

Measuring timber quality (e.g., acoustic tools)

Elsbeth Macdonald (UHI)
 Luka Kranjz (Teagasc/NUIG)

Site characterisation training (e.g., Ecological Site Classification)

Duncan Ray & Alice Broome
 (Forest Research)

Lunch: 12:00-13:00

Barbecue Dinner: 19:30

Wednesday 21 June

MORNING: 9:00-12:00 (Chair: Christophe Orazio)

Talks on stand and tree level tools:	Tutors
9:00-9:40: Use of existing stand growth simulators	Margarida Tomé (ISA)
9:40-10:20: Wood quality assessment (e.g., acoustic tools)	Elspeth Macdonald (UHI) Luka Kranjz (Teagasc/NUIG)
10:20-10:40: Coffee/Tea	
10:40-11:20: Pre-harvest data collection and optimisation software (e.g., terrestrial LiDAR)	Enda Keane (Treemetrics) Glen Murphy (GE Murphy & Associates Ltd.)
11:20-12:00: Tracking harvest material (e.g., bar-coding or genetic tagging)	Glen Murphy (GE Murphy & Associates Ltd.)

12:00-14:00: Lunch

AFTERNOON 14:00-17:00

GROUP 1 Laboratory Training: <i>Planning and forecasting</i>	Tutors
National Forest Inventory	John Redmond (DAFM)
Planning & Forecasting Ireland's Private Forest Estate	Frank Barrett and Fergus Moore (DAFF), Edwin Corrigan (Silvalytics), Cian O'Connor (Teagasc)
GROUP 2 Laboratory Training: <i>Stand and tree tools</i>	Tutors
Site quality, yield and species choice	Duncan Ray & Alice Broome (Forest Research)
Growth modelling and risk analysis (CAPSIS)	Celine Meredieu (INRA)
Dinner (own plans)	

Thursday 22 June

MORNING 9:00-12:00

GROUP 1 Laboratory Training: *Planning tools*

Tutors

Accessing satellite and airborne data and GIS mapping

Daniel McInerney (Coillte)
 Juan Suarez (Forest Research)

Wind risk modelling (ForestGALES)

Barry Gardiner (EFIATLANTIC)

GROUP 2 Laboratory Training: *Stand and tree tools*

Tutors

Stand growth simulation (e.g. GROWFOR)

Paddy Purser
 (Purser Tarleton Russell Ltd.)

Harvester operations and harvest monitoring (SATMODO project)

Liam Malone (Coillte)

12:00- 14:00: Lunch

AFTERNOON 14:00-17:00

GROUP 1 Laboratory Training: *Planning tools*

Tutors

Economic planning

John Casey (Teagasc)
 John Landy (Coillte)

Optimisation tools, artificial intelligence, and heuristic techniques

Ola Eriksson (SLU)

GROUP 2 Laboratory Training: *Stand and tree tools*

Tutors

Assessment of volume and product output from LiDAR

Enda Keane (TreeMetrics)

Assessment of timber quality

Elsbeth Macdonald (UHI)
 Luka Kranjz (Teagasc/NUIG)

Dinner (own plans)

Friday 23 June

MORNING 9:00-12:00 (Chair: Elspeth Macdonald)

Final Session

Facilitators

9:00-10:30: Discussion, evaluation, and practical application of topics, tools and training presented during the course (group work)

Nick McCarthy (WIT)
 Daniel McNerney (Coillte)

10:30-11:00: Coffee/Tea

11:00-12:00: Report back from group work and general feedback from participants

Barry Gardiner (EFIATLANTIC)

12:00-13:30: Lunch

AFTERNOON

Depart: Free bus available to
 Dublin airport at 13:30