



Master in Life Sciences

A cooperation between
BFH, FHNW, HES-SO, ZFH

Module Title	International Forestry
Module Code	MSLS_AF-41
Degree Programme	Master of Science in Life Sciences (MSLS)
ECTS Credits	5
Workload	150h: Online 84 h Group Exercise 24h; Self-study 42 h
Module Coordinator	<p>Name Dr. Claude Garcia</p> <p>Phone +41 31 848 55 72</p> <p>Email claud.garcia@bfh.ch</p> <p>Address Bern University of Applied Sciences, School of Agricultural, Forest and Food Sciences, Laenggasse 85, 3052 Zollikofen</p>
Lecturers	<ul style="list-style-type: none"> • Dr. Claude Garcia • Dr. Mariana Melnykovich • Dr. Patrick Waeber • Dr. Sebastien Boillat
Entry Requirements	Solid background in one of the following fields of study: Forestry, agriculture, natural resources management or environmental economics. The module is designed to acquire and translate knowledge in a disciplinary and interdisciplinary context.
Learning Outcomes and Competencies	<p>After completing the module students will be able to:</p> <ul style="list-style-type: none"> • assess the role of forests and forestry in a global, regional, national and local development context; • understand ecological, social and economic challenges in the principal forest biomes (boreal, temperate, humid and dry tropics); • apply concepts, methods and tools to assess and implement sustainable forest management and forest conservation at landscape level in the various forest biomes and under different socio-cultural and economic conditions; • assess main potentials and constraints of forest management implemented globally, with particular emphasis on distinguishing between forest-rich and forest-poor situations; • analyse main forest policy and governance issues at national and international levels, based on the three pillars of sustainability (inc. application of C&I); • position forestry and the forest industry in the wider national and international development context (including macro-economic policies, poverty reduction, food security, energy) and assess the industry's potentials and limitations; • link forests and forestry to the global externality agenda, including the provision of forest goods and services, poverty alleviation goals, climate change and REDD+, biodiversity conservation and the protective role of forests and trees.
Module Content	The module will focus on the analysis of the main challenges for forests and forestry in a global policy and development context. These include the role of forests and forestry under changing environmental and social conditions; the analysis of the macro-economic context to conserve and manage forests globally; an understanding of global forest resource assessment (methods, definition, results); the biophysical and socio-economic conditions of managing and conserving forests in the major biomes; the concepts of sustainable forest management (SFM) in natural and man-made forests as well as at landscape level; REDD+; and global forest institutions.

	<p>Particular attention will be given to understand the various demands on forests and forestry by society now and in the future, including:</p> <ul style="list-style-type: none"> • valuing forest goods (timber, NTFP) and services (soil, water, carbon, biodiversity); • forest resources and production of wood and non-timber forest products; • forest policy and governance; • forest and climate change with particular emphasis on REDD+; • forest and biodiversity conservation.
Teaching and Learning Methods	<p>The module will be offered in an online format using an online strategy game on logging in central Africa as introduction and central thread. Students will learn to play and discuss the outcomes during the sessions.</p> <p>Interactive lectures with input by students; exposure of students to experienced resource persons from the international forest policy context, private sector and international NGOs through a targeted seminar; learning-team coaching in selected and targeted fields in small groups based on students' requests (e.g. for students with a solid forestry background); self-study on pre-defined themes.</p>
Assessment of Learning Outcomes	<ol style="list-style-type: none"> 1) Policy brief on an emerging issue in international forestry (40%) 2) Oral exam: scientific discussion about selected themes in international forestry (60%).
Bibliography	<p>Individual search by students; at the end of the module, each student will need to submit a commented bibliography, including an overall analysis. A selected list of references will be made available on each chapter presented.</p> <p>Main guidance on the topics: www.fao.org/forestry ; www.cifor.org; www.ito.int; www.worldbank.org/forestry; www.unece/forests.org; www.fcpf.org; www.wri.org; www.unredd.org</p> <p>References providing a general overview of the issues include:</p> <ul style="list-style-type: none"> ▪ Bastin, J. F., Finegold, Y., Garcia, C., Mollicone, D., Rezende, M., Routh, D., ... & Crowther, T. W. (2019). The global tree restoration potential. <i>Science</i>, 365(6448), 76-79. ▪ Blaser, J., Sarre, A., Poore, D. & Johnson, S. (2011). Status of Tropical Forest Management 2011. ITTO Technical Series No 38. International Tropical Timber Organization, Yokohama, Japan. ▪ FAO. 2020. Global Forest Resource Assessment 2020 (fao.org) interactive and reports ▪ Garcia, C. A., Savilaakso, S., Verburg, R. W., Gutierrez, V., Wilson, S. J., Krug, C. B., ... & Waeber, P. O. (2020). The global forest transition as a human affair. <i>One Earth</i>, 2(5), 417-428. ▪ Geist, H. J., & Lambin, E. F. (2002). Proximate Causes and Underlying Driving Forces of Tropical Deforestation. <i>BioScience</i>, 52(2), 143-150. ▪ Malhi, Y., Gardner, T. A., Goldsmith, G. R., Silman, M. R., & Zelazowski, P. (2014). Tropical forests in the Anthropocene. <i>Annual Review of Environment and Resources</i>, 39, 125-159.
Language	English
Comments	The following sequences are compulsory for students: Game sessions and sequences with guest lecturers.
Last Update	January 2026