MSc International Land & Water Management

To address the world’s major human challenges, such as poverty alleviation, achieving food security and preventing or mitigating conflicts, natural hazards and disasters, sound international land and water management is essential.
Focus MIL

• Interdisciplinary – combining insights from different disciplines
• Transdisciplinary – valuing knowledge from all actors
• Different conceptual and theoretical approaches

MIL students learn to integrate insights from natural sciences, social sciences and engineering when analysing land and water problems, such as drought, flooding or erosion. Technical and physical aspects as well as socio-economic and political aspects need to be taken into account to properly understand the situation and to effectively contribute to solutions. Knowledge from all stakeholders is included in this process.
An assessment of data quality of soil quality parameters and soil threat indicator values.

Students verified whether the practices recommended by the app are appropriate/technically possible and acceptable to farmers.

Sustainable Land Management is one of the MIL-specializations. In the 'Sustainable Land and Water Management in Spain' course (period 6) students assessed data on soil characteristics generated by an app on their mobile phone. They interviewed farmers to find out how farmers were thinking about the practices recommended by the app.
Drip or gravity?
Farmers making a key decision in Carcaixent (Valéncia)

Not all farmers are willing to implement drip irrigation; different perceptions between farmers on water management exist.

Drip irrigation is an interesting technique, but is it also suitable in this area for these farmers? What are the reasons farmers do or don’t want to use the technique. MI students learn about technical and social consequences of interventions and therefore look into existing perspectives and interests of stakeholders involved. This case was also studied by MI students during the course in Spain.
Adapting Finca Foyeta to increasing rainfall variability

Monitoring of vegetation and water flows and advice on regreening measurements to regenerate soils and improve the infiltration and retention capacity.

A third example studied in Spain is about adapting a farm to increased rainfall variability due to climate change. Students investigated possibilities to make the farm more climate resilient to both drought and heavy rainfall.
During their first year, all MIL students take 3 core courses: 1) Issues and Concepts in Land and Water Management, 2) Research Approaches to Land and Water Management, 3) Sustainable Land and Water Management in Spain. In addition, every student selects two skills training modules (such as 'Academic writing' or 'Interviewing techniques').
The academic schedule in Wageningen consists of courses, scheduled in 6 periods. Apart from the core courses, students take courses in line with their specialization (at least 18 credits) and electives (18 credits). In the second year, you work on your major thesis in the field of your specialization, and you do either an internship, second thesis or a minor in courses. Your final programme will be tailor made, depending on your background and interest. It comprises 120 credits according to the European Credit Transfer System (ECTS).

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Four specialisations

- **A. Sustainable Land Management**
  - Specialization A, Sustainable Land Management: you are trained to develop solutions to land degradation problems and you learn how to optimize current and future land use in different regions of the world.

- **B. Water, Society & Technology**
  - Specialization B, Water, Society & Technology: focuses on water use and technology in agriculture and in other sectors. Topics include analysis and design of irrigation systems, improving existing irrigation systems and practices and the interface of technical and socio-economic, legal and political aspects of water flows and division.

- **C. Adaptive Water Management**
  - Specialization C, Adaptive Water Management: Students in this specialization acquire the knowledge, skills and capacity to analyze future-oriented issues in water management and propose and critically assess management strategies and innovations.

- **D. Flexible Configurations for Innovative Minds**
  - Specialization D: This option is meant for students who seek new connections within the programme and/or with other disciplines. They combine courses of the existing specialisations with new courses, leading to a thesis research project of their interest and relevant for the MIL programme.
Thesis by Thijs van der Zaan

Farmer-Managed Natural Regeneration (FMNR) in Rural Tanzania: Risks and Opportunities

An evaluation study in central Tanzania, focussing on the adoption and implementation of FMNR by smallholder farmers.

A household survey was used to cover a wide range of farm characteristics – regarding motivation, land management and farm resilience.
Thesis by Coen Wisse

A case study on land and water distribution during dry season

Bwanje Valley Irrigation System, Malawi

1. The relation between water shortage and the way in which land and water are being distributed among farmers

2. How farmers respond to water scarcity

Specialisation B
Thesis issue
Mapping flooding patterns in the Upper Mekong delta

In Vietnam, numerous water control infrastructures for flood control led to the creation of intensive agriculture polders. In Cambodia, few infrastructures are found and large areas flood, supporting fishery-based livelihoods.

How has water control infrastructures development impacted flood patterns?

Specialisation C
MIL-students

• Come from different social and technical science backgrounds and parts of the world
• Have been exposed to realities in the field
• Some bring work experience
Wageningen University is well known for the informal and easily approachable staff; the interaction between staff and students makes studying much more interesting.

WUR educational environment

- You are in the lead: personal learning path
- Team work
- Informal and approachable staff
- Intercultural setting

- New perspectives and profound discussions, enriched with new insights from research
Over the last ten years, finding a suitable job was not difficult for graduates of the MLI Programme; more than 70% had found a job before graduation and more than 90% within 6 months after graduation.
Distribution of occupations

- (Applied) Researcher (including PhD), 25%
- Consultant, 24%
- Project manager, 18%
- Director/Coordinator, 7%
- Expert international development, 4%
- Policy officer, 4%
- Technical specialist, 4%
- Teacher, 2%
- Other, 10%
Josselin Gauny, a MIL graduate from France, is currently working for the FAO as an Agriculture and Livelihoods assessments team leader. Before he got this position, he worked several years as an adviser for the international networking organisation Action Contre la Faim in West and Central Africa.
Jasper van der Woude, a Dutch MSc graduate, is working for a consultancy company Infram in the Netherlands. Commissioned by the Ministry of Infrastructure and Water Management, he is currently involved in developing a strategy for long term water supply from the main fresh water lakes and rivers in the Netherlands, taking into account developments like climate change. The strategy is part of the Dutch Delta Programme on freshwater supply.
MSc graduate Chris de Bont obtained a PhD degree from the Stockholm University. She is working as a Postdoctoral Researcher, posted at African Centre of Excellence WISE-Futures in Arusha, Tanzania. She is involved in the project "Transformations to groundwater sustainability", focusing on farmers' initiatives for the development and governance of groundwater resources.
Admission requirements

- All applications are screened by the Admission Committee
- Relevant BSc level degree
- GPA > 70% and a good command of English
- Try to accommodate linkage courses into your BSc programme!

If you are not sure whether you are granted admission to the MIL Programme, it is best to apply online and upload the required documents. Your files will be checked by the admission committee and they will soon reply and make clear whether you can be admitted to the programme or whether you will need to take a linkage programme. Questions can be sent to mil.msc@wur.nl.
More information

- Student for a day: on appointment
- Programme: www.wur.eu/mil
- Study association: www.nitocra.nl
- Programme Director: bert.bruins@wur.nl
- Study advisers: didi.stoltenborg@wur.nl
  maaike.breedveld@wur.nl
- Questions? mil.msc@wur.nl

- Movie:
  https://www.youtube.com/watch?v=E9_LaCTTzkM=39s
What else can you do at this open day?

- Chat with study advisers and students
- Check our FAQ’s about application, housing, scholarships, visa, costs, introduction days, Wageningen, student for a day, corona and more
- Take a virtual tour with one or more of our students who will show you their life
- Watch videos with tips for choosing a study programme, about student life and study experiences