

Master's Degree (MSc) Programme on Integrated Drylands Management

Programme Partners

The Joint Master's Degree (MSc) Programme on Integrated Drylands Management is offered jointly through the partnership between the United Nations University (UNU), Institut des Régions Arides (IRA), Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI), the International Center for Agricultural Research in the Dry Areas (ICARDA), Institut National Agronomique de Tunisie (INAT) Tottori University (TU), and the Global Mechanism (GM) of the United Nations Convention to Combat Desertification (UNCCD).



THE GLOBAL MECHANISM

UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

Programme Overview 2009 - 2010

The Joint Master's Degree (MSc) Programme on Integrated Drylands Management brings together different expertise and scientific resources of the partner institutes to build advanced human capital, generate and adapt global knowledge for local solutions in drylands. The programme provides young professionals and scientists an international perspective on integrated resources management approaches in drylands and allows them to gain practical experience in different dryland countries.

The MSc Programme will offer two components: 1) a short intensive course and 2) field research leading to the development of a Master's thesis. Throughout the programme, a strong emphasis will be placed on multidisciplinary approaches.

The four weeks course work will focus on the international dimension of dryland management and a range of research methods. An international team of selected experts from all partners and their networks will provide a balanced mix of lectures and seminars.

The six month field and laboratory research will be conducted under the supervision of one of the programme partners. Upon completion of the MS Programme, students will receive a Master's Degree from their home university and a Certificate from UNU.

Typically, the graduates from the MS Programme serve in government departments and agencies (eg., those dealing with agriculture, forestry, natural resources management, and combating desertification), teaching positions in institutions of higher learning, research institutions and doctoral research programmes.



Course Work

In 2009 the intensive short course will be held at ICARDA in Aleppo, Syria from 1-26 November, 2009. International experts from all partner organizations and their networks, representing different disciplines in drylands management, will facilitate an interesting mixture of lectures, seminars, laboratory applications and field visits to the arid zones of Syria.

The focus of the course work will be on integrated water resources management and will include cross-disciplinary aspects of water management as an important component of sustainable land management.

The lectures will further cover a wide range of disciplinary and inter-disciplinary subjects on: climatology, dryland ecology (rangeland, hot and cold deserts, etc.), desertification (aeolian process, salinity, sodicity, monitoring and assessment), environmental governance, management of natural resources (soil, water, rangeland, wildlife), agriculture (crop growth simulation, animal husbandry, etc.) dryland economics (valuation, strategies for investment, monitoring and evaluation), and socio-economics. Special lectures will be provided on global research priorities in rangeland and global (climate) change and its impacts on drylands.



The topics of the course work may include, among others:

- Water resources in drylands.
- The looming problem of global water scarcity.
- Improvements in water management technologies.
- Indigenous water management technologies and their future.
- Productivity of water in drylands.
- Water policies and governance issues.
- Financing strategies for greater investments in dryland improvements.
- Monitoring of financial flows and impacts of investments.
- Complexities of natural resources management with a focus on water.
- Community-based management of water resources.



Field Research and Dissertation



As part of their application, students will submit research proposals with recommendations of their supervisors to the MS Programme Committee for approval. Upon approval of the

research proposal and satisfactory completion of the course work, the student will carry out the research with support of the partners and other collaborators.

The student will need to demonstrate that the proposed field research involves in-situ field work and gives due consideration to community involvement. The partners will provide limited funds for the students to carry out the field research by involving them in ongoing research programmes.

In addition to a principal supervisor from their home university, the MS Programme student will have an associate supervisor from that partner organization that will host his or her field research work.

Tuition Fee and Scholarships

Tuition fee for the MS Programme is US \$5,000 including costs of course delivery, supervision and examination. The tuition fee does not include costs of travel between the country of the student's origin and locations of the MS Programme partners, and costs of living at the MS Programme partners. The information on local food, accommodation, health insurance for travel and other logistical matters will be available from the MS Programme partners. The tuition fee will be waived for those students who are recipients of a Fellowship.

A limited number of Fellowships will be provided to qualified candidates from developing countries on a competitive basis. These fellowships will cover the travel costs between the country of origin and IRA, CAREERI, ICARDA and TU, as needed. Japanese students may only apply for TU fellowships.

During the course work in November 2009, ICARDA will house the students with full boarding and lodging in the ICARDA facility in Aleppo, Syria. During the laboratory research work, TU will provide non-Japanese students with allowance for accommodation and meals in Tottori, Japan.

**N.B. No financial provisions, logistical assistance or housing facilities will be made available for family members of the participants.

Research Topics and Facilities



IRA accepts a few students for their field and laboratory research work. The field and laboratory research work can be supervised on topics such as desert agriculture, soil and water management, monitoring and combating desertification, rangelands ecology, livestock and wildlife, agro-economy and rural societies. Duration of the research work will depend on availability of funding.

Tottori University accepts a few students for their laboratory research work with a focus on topics such as environmental soil science, water use engineering, plant breeding, plant physiology, crop agronomics, plant production, conservation informatics, climatology and meteorology. The student has to be registered at the Tottori University as a research student of the Graduate School of Agriculture.



ICARDA offers a wide range of topics in germplasm improvement and natural resources management. ICARDA has extensive field and laboratory facilities at its headquarters in Aleppo, Syria that are suitable for MSc work of varying duration depending on funding availability. ICARDA also provides an inter-disciplinary and multi-cultural environment that students find stimulating.



CAREERI accepts a few students for their field and laboratory research work on topics such as soil erosion and dust monitoring, water-saving practices, plant physiology and water balance, and meteorology or desertification control. Duration of the research work will depend on availability of funding.



Programme Schedule

November 2009

Course work at ICARDA

- Arrival in Aleppo, Syria on 31 October 2009
- Course work at ICARDA including field trips, practical exercises and seminars
- Finalization of research proposal
- Return home on 27 November 2009

December 2009 - October 2010

Field research and preparation of MS thesis

- Data collection and analysis
- Submission of draft thesis to supervisor

Late 2010

Graduation

- Final submission and defense of thesis

Admission

The applicants shall have:

- Registered in the Master's Degree programme of one of the programme partners or associated universities in Asia and Africa.
- Completed basic core course work at the registered university.
- Proved competence in relevant research methodologies, laboratory and computer skills.
- Provided evidence in English proficiency.
- Submitted a research proposal, which should match with the priority of a programme partner to host the proposed research.

Additionally, working experience in dryland management is desirable.



Contact Us

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How to Apply?

An application form must be completed and submitted by email or fax. Application forms are available online, and can be downloaded at <http://www.inweh.unu.edu/inweh/drylands/MS.htm> or can be requested by email at contact@inweh.unu.edu.

The following supporting documents must be submitted together with the application form:

- Certified copies of academic transcripts
- Detailed MS research proposal
- Two letters of reference
- Evidence of English proficiency (eg. TOEFL score or certificate)

*Please note that for those documents not originally in English, they must be accompanied by an official English translation.

Deadline for submission is 31 July, 2009.

Please send your fully completed application form and supporting materials to:

MS Programme Committee
United Nations University - International Network on Water,
Environment and Health
175 Longwood Rd. South, suite 204
Hamilton, Ontario L8P 0A1 Canada
Fax: +1 905 667 5510
Email: contact@inweh.unu.edu

Online at:

[http://www.inweh.unu.edu/inweh/drylands/
MS.htm](http://www.inweh.unu.edu/inweh/drylands/MS.htm)

or email us at:

contact@inweh.unu.edu