

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).



Programme Overview 2010 - 2011

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 2010, the intensive short course will be held at CAREERI in Lanzhou, China* from 13 September to 12 October. 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 China.

The focus of the course work will be on research and practices to combating desertification and will include interdisciplinary aspects such as climate change, integrated water management, and economics.

The lectures will further cover a wide range of disciplinary and inter-disciplinary subjects on: degradation and development of arid ecosystems, including mainly aeolian desertification (status, process, mechanism, mitigation, monitoring and assessment, etc.), dryland ecology (soil and water processes in typical steppes, desert steppes, cold deserts, oases, etc.), climate change (in cold and arid regions), and dryland economics (valuation, management and strategies for investment, monitoring and evaluation).



**Please note that in order to facilitate the visa application process for studying abroad in China, applicants must hold a passport with a validity of more than 6 months.*

The course work may include, among others:

- Combating desert and aeolian desertification in China
- Wind erosion in China
- Environmental magnetism
- Glacier-related water resources change in central Asia
- Water and ecosystems in northwest China
- Glaciers, climate and water resources in arid and semi-arid regions of China
- Dryland farming practices in China's semi-arid regions
- Oasis construction and management
- Micrometeorology-study on desertification
- Ecological restoration in arid regions
- Remote sensing and GIS
- Salinity and irrigation
- Integrated financing strategies for sustainable land management
- Community-based natural resource management
- Vulnerability of drylands to climate change



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 from 13 September - 12 October 2010, CAREERI will house the students with full boarding and lodging in the CAREERI facility in Lanzhou, China. 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 to conduct 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.



Please see <http://rendai.muses.tottori-u.ac.jp/japanese/ITP/announce/index.html> for further information.

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

September 2010

Course work at CAREERI

- Arrival in Lanzhou, China on 12 September 2010
- Course work at CAREERI including field trips, practical exercises and seminars
- Finalization of research proposal
- Return home on 13 October 2010

December 2010 - October 2011

Field research and preparation of MS thesis

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

Late 2011

Graduation

- Final submission and defense of thesis

Admission

Admission is based on the following criteria:

- Applicants must already be registered in a Master's degree programme at one of the Programme partner institutes or at any other associated university.
- Applicants must have already completed their basic core course work of their programme.
- Applicants must demonstrate a proved competence in relevant research methodologies, laboratory and computer skills.
- Applicants must demonstrate proof of proficiency in English (oral and written).
- Applicants must submit a research proposal of 10 pages, whose priority aligns with that of programme partner who will host the proposed research.

Additionally, working experience in dryland management is desirable.

Please see the accompanying application form for further details.



Contact Us

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CAREERI

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How to Apply?

Please complete and sign the accompanying application form. The following supporting documents must be submitted together with the application form:

- A letter of nomination from your supervisor/university where you are currently registered in a Master's programme that certifies completion of the basic course work.
- A certified copy of academic transcripts for each institution attended.
- An original, detailed MS research proposal of 10 pages clearly outlining the problem statement, literature review, research question, methodology, expected results, workplan and timetable.
- Two (2) original supporting letters of reference, one (1) of which must be from your current supervisor.
- Evidence of English proficiency (e.g. TOEFL score, English certificate, etc.), where English is not your first language.

*Documents which are not originally in English must be accompanied by an official English translation.

Applications must be received by **10 June, 2010**.

Please send your fully completed application form and supporting materials by email, fax, or post to:

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

Incomplete applications will not be considered.

Online at:

<http://www.inweh.unu.edu/inweh/drylands/MS.htm>