Study Program

Basic Modules
- Environmental Economics
- International Development
- Management
- Scientific Work

Team work
- Water
- Land
- Planning
- Energy

Electives

Master Thesis
Focus Areas

- Water Management
- Environmental and Land Use Management
- Urban and Regional Management
- Renewable Energy Management
and 30 guest professors from other scientific areas of the Cologne University of Applied Sciences, the University of Bonn, the University of Cologne, Universidade de São Paulo, Pontificia Universidad Catolica de Valparaiso, Public and Private Institutions
Qualification for jobs in:

International Organisations
MSc – ENREM

Environment and Resources Management for Latin American and German young professionals
Environment and Resources Management
for Latin American and German young Professionals

International Master Program

10 German + 10 Mexican + 10 Latin American Participants

double degree in Mexico and Germany
courses, internships and technical field visits
living and learning in Mexico and Germany
training on project management and intercultural communication
insight in current projects of international cooperation
Study Program

1st Semester
- Sustainable Management
- Ecology
- Environmental Management
- Introduction to Statistics

Location: Mexico

2nd Semester
- Two Electives
- Thesis Work
- Multidisciplinary Seminar
- Thesis Seminar

Location: Mexico

3rd Semester
- Four Electives
- Special Topics (Elective)
- Thesis Seminar

Location: Germany

4th Semester
- Field Research
- Elaboration and Submission of Master Thesis
- Colloquium

Location: Germany or Mexico
## Electives (Major Areas)

<table>
<thead>
<tr>
<th>Mexico</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention and Control</td>
<td>Water Resources Management</td>
</tr>
<tr>
<td>Environmental Assessment</td>
<td>Env. And Land Use Management</td>
</tr>
<tr>
<td>Renewable Natural Resources</td>
<td>Renewable Energy</td>
</tr>
<tr>
<td>Environmental Management</td>
<td>Urban and Regional Management</td>
</tr>
<tr>
<td>Environmental Toxicology</td>
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</tbody>
</table>

**Location:** Mexico

**Location:** Germany
Qualification for jobs in:

NGO‘s
environmental and development sectors
Integrated Water Resources Management for German and Arab young Professionals
Bicultural Master Program

IWRM competencies

leadership qualifications

on the job master thesis

study in Tandems

study in Germany and in Jordan

10 Arab + 10 German Participants

blended learning

intercultural communication

MSc IWRM
MSc IWRM

Basic Modules

- Principles of IWRM
- Water Economics
- Water Policy and Legislation
- Water Resources Planning
- Project and Information Management

Specialized Modules

- Focusing on Water Technologies
- Groundwater Management
- GIS/Remote Sensing
- Transboundary Water Management
- Participation
Qualification for jobs in:
Development Cooperation
Water Management

Integrated Water Management Systems for the Watershed Region of Egypt
Land Use Systems

Potential analysis and development for an integrated processing of cashew in Ceará, Brazil.

Climate Change, Landscape dynamics, Land use and Natural Resource in the Atlantic Forest of Rio de Janeiro
Emerging Megacities: Open Spaces – Potential for Nature Orientated Living
Improvement of urban climate
Solar air conditioning in the humid tropics
Consultancy for technical, financial and scientific cooperation
Exchange programs for scientists and students in or from a partner country
Partnership

Worldwide Partners of the ITT
Establishing and broadening connections

Alumni Networks
General concept of CNRD

— Orientation towards MDG 7 targets of UN
— Integration: land, water, energy and regional management in education and research
— Competence centers in four target regions with south-to-south connection
General concept of CNRD

Target 7a
Reduce loss of environmental resources

Target 7b
Reduce biodiversity loss

Target 7c
Enable sustainable access to safe drinking water and basic sanitation

Target 7d
Improve the lives of slum dwellers
Objectives of CNRD

— Unite and expand network of expertise
— Global coverage of MDG7 master courses
— Foster innovative research
— Develop capacities for life long learning
— Provide for dialogue and knowledge transfer
— Build virtual knowledge center
The CNRD network

- Autonomous University of San Luis Potosi, Mexico
- Federal University of Fluminense, University of São Paulo, Brazil
- Catholic University of Valparaíso, Chile
- University Eduardo Mondlane, Mozambique
- University of Jordan, Jordan
- Ain Shams University, Egypt
- Tribhuvan University, Nepal
- Vietnam Academy for Water Resources, Vietnam
- University Gadjah Mada, Indonesia
- Cologne University of Applied Sciences, Germany
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Center for Natural Resources and Development
The CNRD network

- Autonomous University of San Lúis Potosí, Mexico
- Catholic University of Valparaíso, Chile
- Federal University of Fluminense, University of São Paulo, Brazil
- University Eduardo Mondlane, Mozambique
- Jordan University, Jordan
- Ain Shams University, Egypt
- Tribhuvan University, Nepal
- Vietnam Academy for Water Resources, Vietnam
- University Gadjah Mada, Indonesia
The CNRD network
The CNRD network
The CNRD network
Activities

— Establish CNRD at CUAS – CNRD chair
— Postgraduate courses network and curriculum development
— Fostering strategic research and PhD program
— Establish regional knowledge and training centers
— Communication and outreach
— Virtual Center
Network of postgraduate courses and curriculum development

Curriculum and capacity development

- Regional management & sustainable livelihoods
- Integrated water resources management
- Land use dynamics and biodiversity
- Energy efficiency and renewable resources
Communication and outreach

- Reform Master Curriculum
- Initiate Research Educate PhDs
- Design Training Centre + Learning Material
- "Science for Development" Workshop I
- Annual CNRD and Regional meetings
- "Science for Development" Workshop II

Regional Partners
Governmental Institutions
Development Cooperation (BMZ, GTZ, KfW, InWEnt)
Virtual Center

Objectives

— Publications by partners
— E-journal
— Access to learning material for all CNRD partners
— Communication tools / videoconferencing
— Dissemination of results of CNRD

Benefits

— Publications by partners
— Storing and sharing the knowledge
— Easy to use / simplify the sharing
— Students know the web
— Students need the web
CNRD team during first network meeting in November 2009 at CUAS
Thank you for listening!
www.tt.fh-koeln.de
www.cnrd.info
### MSc TERMA

#### Study Program

<table>
<thead>
<tr>
<th>1st Semester</th>
<th>2nd Semester</th>
<th>3rd Semester</th>
<th>4th Semester</th>
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<tbody>
<tr>
<td>Natural Environment</td>
<td>Three Electives</td>
<td>Four Electives</td>
<td>Thesis / Field Work</td>
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<tr>
<td>Human Environment</td>
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<tr>
<td>Environmental Economics</td>
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<tr>
<td>International Development</td>
<td>Team Project</td>
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<tr>
<td>Management</td>
<td>Research Methods</td>
<td>Special Topics (Elective)</td>
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<tr>
<td>Scientific Work</td>
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<td>Thesis Preparation</td>
<td>Colloquium</td>
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</tbody>
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**MSc TERMA**

**Elective Modules**

<table>
<thead>
<tr>
<th>2nd Semester</th>
<th>3rd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Management</strong></td>
<td><strong>Principles of Water Resources Management</strong></td>
</tr>
<tr>
<td>Hydrology and Water Resources Management</td>
<td><strong>Modeling of Hydrological Systems</strong></td>
</tr>
<tr>
<td>Water Resources Quality</td>
<td>Water Sector and Institutional Analysis</td>
</tr>
<tr>
<td>Water Supply and Demand Management</td>
<td><strong>Participation Analysis and Stakeholder</strong></td>
</tr>
<tr>
<td>Water Economics</td>
<td>Watershed Management</td>
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<tr>
<td></td>
<td>Water Resources Planning, Implementation and Monitoring</td>
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<td></td>
<td>Irrigation and Drainage</td>
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<td></td>
<td>Urb. drainage, Sanitation and Public Health</td>
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<td></td>
<td>Flood and Drought Risk Management</td>
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<tr>
<td></td>
<td>Dams, Channels and Hydropower</td>
</tr>
</tbody>
</table>
# MSc TERMA

## Elective Modules

### 2nd Semester
- Environmental and Land Use Management
- Land Use and Environment
- Res. Economics and Land Use Management
- Soil and Water

### 3rd Semester
- Landuse Systems
- Global change and food security
- Landuse and water resources
- Sector modeling and environmental policy
- Ecosystem and Conservation Manag.
MSc TERMA

Elective Modules

2nd Semester
- Urban planning
- Regional planning
- Integrated Planning I
  Efficiency/Environment

3rd Semester
- Integrated Planning II
  urban infrastructure
- Integrated Planning III
  Housing/Social Issues
- Urban and Regional
  Management
- Procedures, Methods
  and Tools

Urban and Regional Management
## MSc TERMA

### Elective Modules

#### 2nd Semester
- Energy Resources and Energy Systems
- Electrical and Systems Engineering
- Energy Technology:
  - Wind Energy Systems
  - Photovoltaic Systems
  - Solar Thermal Systems
  - Biomass / Bioenergy Systems
  - Emerging Technologies

#### 3rd Semester
- Integrated Energy Planning
- Energy Economics and Society
- Energy Efficiency:
  - Energy and Water
  - Energy Efficiency in Transport
- Energy and the Environment
- Energy Life cycle Assessment

### Renewable Energy Management
Network of postgraduate courses and curriculum development

Network of master courses (MSc)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Course Description</th>
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<tbody>
<tr>
<td>USP</td>
<td>Graduate Program in Hydraulics and Sanitary Engineering</td>
</tr>
<tr>
<td>PUCV</td>
<td>Magister in Producción Agrosustentable (Master of Sustainable Agroproduction)</td>
</tr>
<tr>
<td>ASU</td>
<td>Urban Planning and Environmental Science and Building Technology</td>
</tr>
<tr>
<td>CUAS</td>
<td>Technology and Resources Management in the Tropics and Subtropics</td>
</tr>
<tr>
<td>UGM</td>
<td>Planning and Management of Coastal Area and Watershed</td>
</tr>
<tr>
<td>UJ/CUAS</td>
<td>Integrated Water Resources Management</td>
</tr>
<tr>
<td>UASLP</td>
<td>Programa Multidisciplinario de Posgrado en Ciencias Ambientales</td>
</tr>
<tr>
<td>VAWR/CUAS</td>
<td>Technology and Resources Management in the Tropics and Subtropics</td>
</tr>
<tr>
<td>UEM/TU</td>
<td>Master in Geography</td>
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</table>

Lecturer Exchange / Student Exchange / Curriculum Development/ Regional Workshops