



Massive Open Online Course

Disasters and Ecosystems: Resilience in a Changing Climate

In 2015, the United Nations Environment Programme (UNEP), through its Global Universities Partnership on Environment for Sustainability (GUPES), and Cologne University of Applied Sciences (CUAS), Germany, will launch the **first Massive Open Online Course (MOOC)** on *Disasters and Ecosystems: Resilience in a Changing Climate*.

The MOOC is an outcome of the long-standing collaboration between UNEP and the Center for Natural Resources and Development (CNRD), a consortium of 11 universities from around the world that is coordinated by CUAS.

MOOC Features

- ✓ **First MOOC featuring ecosystem-based solutions for disaster risk reduction and climate change adaptation**
- ✓ **Case studies from around the world**
- ✓ **Expert Faculty and distinguished Visiting Lecturers**
- ✓ **No specific pre-requisites to take the MOOC**
- ✓ **Open to all, no restrictions**
- ✓ **Participants will be linked to a global network of disaster management and climate change adaptation experts and policymakers**
- ✓ **It is FREE of charge**

“Development cannot be sustainable if the disaster risk reduction approach is not fully integrated into development planning and investments.”

Ban Ki-moon
United Nations Secretary General



MOOC

Disasters and Ecosystems:
Resilience in a Changing Climate



Fachhochschule Köln
Cologne University of Applied Sciences



CNRD

Center for Natural Resources
and Development

Why a Course on Disasters, Ecosystems and Resilience?

Disasters kill people, destroy infrastructure, damage ecosystems and undermine development. With climate change, the impacts of disasters are expected to grow. It is now well understood that in a world with a changing climate, no development can be sustainable if it has not factored in disaster risk reduction and climate change adaptation.

Since the adoption of the Hyogo Framework for Action (HFA) by world nations in 2005, there has been significant progress in our knowledge about potential impacts of disasters and also about policies and instruments for reducing disaster risks. The Inter-governmental Panel on Climate Change (IPCC) has also enhanced our understanding about the possibility of extreme and hazard events resulting from climate change.

There is need for increased awareness amongst both policymakers as well as practitioners on the latest advances in disaster risk reduction (DRR) and climate change adaptation (CCA). One significant advancement is promoting ecosystem-based approaches for reducing disaster risks and adapting to climate change, either as natural protective buffers or as supporting local livelihoods, food and water security for increased resilience against disaster impacts. Ecosystem-based approaches for disaster risk reduction and climate change adaptation (or Eco-DRR/CCA) are considered by the IPCC as a “no-regrets solution”, providing multiple social-economic benefits regardless of disasters, including carbon storage, biodiversity and poverty alleviation.

This MOOC enhances knowledge and skills for tackling complex issues such as resilience and transformation and how sustainable development, ecosystem management, disaster risk reduction and climate change adaptation are linked and can be operationalized. It would benefit disaster managers and practitioners, climate change adaptation professionals, development planners and project implementers, and policymakers.

Why MOOC?

UNEP and its partners have developed over the past decade a number of training courses focusing on disasters, ecosystems and resilience. Our efforts have reached hundreds of people in over 30 countries. However, based on the continuous demand for our training packages, there is great public interest for capacity-building on these topics, far exceeding our capacity to deliver within reasonable time and resources.

Massive Open Online Courses (MOOCs) are a revolutionary new concept in higher education, whereby course content is delivered online and free of cost to participants from around the world. UNEP is therefore collaborating with CUAS to harness this new approach, in order to reach a much wider audience within a shorter time span.

Our target is to reach 1,000,000 people over the next five years, regardless of their academic or professional background and their location.



“Healthy, natural or modified, ecosystems have a critical role to play in reducing risks of climate extremes and disasters.”

Special Report on Managing Risks of Extreme Events and Disasters to Advance Climate Change Adaptation by the Inter-governmental Panel on Climate Change (IPCC), 2012

MOOC

Disasters and Ecosystems:
Resilience in a Changing Climate

What will you learn in this course?

The course will cover the following topics:

- ◆ Disaster trends and statistics;
- ◆ Fundamentals of disaster risk reduction;
- ◆ Climate change, disasters, and environmental linkages;
- ◆ Tools for ecosystem-based disaster risk reduction and adaptation; and
- ◆ Global, national and local processes of disaster risk reduction.

The course will be delivered through a series of lectures and case studies, along with substantial additional study materials provided to the students. Lectures will be available through videos as well as online documents, and will be geared for students who may not have access to high speed internet so they can also follow the course.

Course Options

The MOOC is composed of two tracks;

Leadership Track: 6 learning modules geared towards policymakers, decision makers and senior professionals who need to obtain an overview of the topic and enable them to factor this concept into their planning and programming.

Experts Track: 14 additional instruction modules for professionals and students who seek more in-depth learning and skills development in applying Eco-DRR/CCA tools. Students undertaking the Experts Track must also complete the Leadership Track for a total of 20 hours of instruction.

The MOOC will start in mid-January 2015, with the leadership track first taking place over a course of two weeks. Those who wish to continue with the course will move on to the Experts Track which will be completed over a period of three months.



“Ecosystem-based approaches and related efforts to reverse environment and land degradation should be reinforced as a means to manage disaster risks and deliver multiple socio-economic benefits.”

Africa Regional Platform on Disaster Risk Reduction
Outcome Document, May 2014

More than a MOOC

UNEP/ GUPES and CNRD will leverage their global presence to provide additional support to the participants in the course, going beyond what traditional MOOC courses offer. There will be 10 regional centers around the world who will follow the MOOC's delivery and provide tutorial support to students. The course will also have a 24/7 virtual center which will be active throughout the course, facilitating discussions and providing opportunity for participants to interact with real professionals.

What will you get if you participate in the course?

1. Certificate of participation;
2. Access to all course materials;
3. Access to the weekly newsletter from UNEP on disasters, ecosystems and resilience;
4. Membership and access to a large network of experts who work in the area of disasters, ecosystems and resilience;
5. Invitation to events organized by UNEP and its partners in the field of disasters, ecosystems and resilience.



Course leaders



Dr. Karen Sudmeier-Rieux

Dr. Sudmeier-Rieux leads the thematic group on disaster risk reduction for IUCN's Commission on Ecosystems Management. She is also a senior researcher at the University of Lausanne, Institute for Earth Science, where she manages projects on landslide risk reduction and bio-engineering in Nepal. She is an education and training consultant with the United Nations Environment Programme, developing training and teaching modules on ecosystem-based disaster risk reduction. She holds a PhD in Environmental Science from the University of Lausanne and Masters' degrees in international development and forest ecology. She has authored a number of publications and scientific articles, and is a co-editor of a recent book, entitled "The Role of Ecosystems in Disaster Risk Reduction".

Dr. Udo Nehren

Dr. Nehren is a senior researcher and lecturer in Physical Geography and Ecosystem Management and the Scientific Coordinator of the Center for Natural Resources and Development (CNRD) at Cologne University of Applied Sciences, Germany. He holds a PhD in Geography, a diploma in Physical Geography/Geosciences, and a Master's of Engineering in Resources Management. He has worked in the field of environmental and traffic planning. In his academic career, he works on ecosystem management in tropical and subtropical environments, with a particular focus on ecosystem-based disaster risk reduction, environmental change, and ecosystem services. He has published multiple scientific articles on these topics.



Ms. Simone Sandholz

Dipl.-Ing. Simone Sandholz, M.Eng., is a researcher and lecturer at the University of Innsbruck, Institute of Geography, Austria. After graduating from architecture and urban planning, she completed postgraduate degrees in conservation and resources management. She has expertise in urban and regional planning and sustainable management of natural resources, with a focus on good governance and livelihood approaches. She has published on cultural landscapes and the upgrading of development strategies and risk management in urban areas, and has managed an international research project on urban green spaces.

More information

If you are interested in enrolling for the course or require additional information, please contact us at:

the.mooc@unep.org or go online: themoooc.net



CNRD

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Federal Ministry
for Economic Cooperation
and Development



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Deutscher Akademischer Austausch Dienst
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