BLENDED LEARNING PLATFORM

Advancing a Nexus Approach to the Sustainable Management of Environmental Resources

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1. The Blended Learning Platform

The Nexus Observatory will serve as an online platform for consolidating and translating science into relevant information and evidence, which will empower decision-makers to develop strategies, policies as well as management, planning and implementation frameworks for environmental resources. The Nexus Observatory will be composed of the following four inter-connected windows that advance the policy-relevant research agenda of UNU-FLORES:

1. Linked Databases
2. Blended Learning Platform
3. Nexus Repository
4. Nexus Laboratory

Window 2 of the Nexus Observatory will host the Blended Learning Platform. The Blended Learning Platform will focus on consolidating knowledge that emerges from teaching and learning activities that relate to: (a) classroom or face-to-face teaching, (b) thematic online courses and (c) tailor made training programmes that respond to demands of decision-makers, practitioners and students with an interest in the planning and management of environmental resources. Integrating blended learning into the Nexus Observatory permits the formation of synergies between its four windows. In this way the Blended Learning Platform advances the nexus approach through transdisciplinary approaches that promote robust interfaces between

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1 Kurian, Mathew and Kristin Meyer. 2014. UNU-FLORES Nexus Observatory Concept Note. Dresden: UNU-FLORES

2 The classroom teaching component could be defined by mandatory courses offered as part of the UNU-FLORES & Technische Universität Dresden (TUD) joint doctoral programme on integrated management of environmental resources or specially designed workshops (country specific or regional) as part of a tailor made training programme. Discussions on ECTS credit transfer can be undertaken as part of this framework.
education, research and policy dialogue. Towards this end the following outcomes are envisaged:

- Assignment archives – e.g. case studies, which focus on the science (links between research and capacity development/training) and policy domains (dissemination of institutional practice).

- Final portfolios – achieved through reflections and learning objectives relating to transdisciplinary approaches that advance the nexus approach.

- Possible research proposal identified by the course tutor – in the form of clearly defined research questions that can become the basis for future nexus oriented research or PhD projects.

2. Structure of Online Courses hosted on the Blended Learning Platform

- Online course participants will have access to general information, including details about UNU-FLORES, courses offered, modes of course delivery, assessment methods, terms and conditions of delivery, assessment regulations, etc.

- There will be opportunities for interactions between participants and course tutor. The platform will consist of an online repository of lecture presentations, videos, notes, etc.

- Throughout the delivery of online courses statistical data, including time spent by course tutor towards clarifying student questions and dealing with assessments will be captured.
3. Delivery of Online Courses hosted on the Blended Learning Platform

- The online courses will run for a period of approx. 3 months. The first round of online courses will take place from March to May 2015.

- Each online course is divided into 3 modules with 3 lectures (30 minutes in length) per module, adding up to 9 lectures in total.

- The cost of participation in online courses will be $250, which includes the textbook, mailing of DVDs containing course lectures and costs for course administration.

- A Springer brief serves as the textbook for the courses. These will be sent to participants together with DVDs of lecture PowerPoint presentations, videos and reading material.

- Online course participants will prepare a portfolio that will constitute the basis for the final assessment.

MINIMUM ADMISSION CRITERIA

- MA/MSc in engineering, natural sciences, social sciences or other closely related fields

- Good command of the English language

- Work experience related to management of environmental resources - water, soil and/or waste; experience with local government/non-governmental agencies and think tanks in developing/emerging economies would be an asset
TECHNICAL REQUIREMENTS

Delivery of online courses and submission of assessments will take place through the Blended Learning Platform. Participants should have access to an internet connection that is stable enough to support the following: uploading assessments (Word, PDF documents, PowerPoint presentations, etc.), correspondence with tutor (this will be done predominantly using e-mail, but may also include the use of the Moodle discussion board or face-to-face interactions using applications, such as Skype).

INDICATIVE STUDY LOAD

<table>
<thead>
<tr>
<th>Constituent Parts of an Online Course</th>
<th>Workload (hours/wk)</th>
<th>Examination/assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Lecture 1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Lecture 2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Lecture 3</td>
<td>11</td>
<td>Literature Review</td>
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<tr>
<td>Lecture 4</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Lecture 5</td>
<td>11</td>
<td>Short paper</td>
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<tr>
<td>Lecture 6</td>
<td>9</td>
<td></td>
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<tr>
<td>Lecture 7</td>
<td>11</td>
<td>Policy memo</td>
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<tr>
<td>Reading Week</td>
<td>16</td>
<td>Revise Portfolio</td>
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<tr>
<td>Lecture 8</td>
<td>16</td>
<td>Presentation</td>
</tr>
<tr>
<td>Lecture 9</td>
<td>12</td>
<td></td>
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<tr>
<td>Lecture 10 (Review)</td>
<td>10</td>
<td>Portfolio Submission</td>
</tr>
<tr>
<td><strong>12 weeks</strong></td>
<td><strong>130</strong></td>
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</tbody>
</table>
PROPOSED PARTNER CONTRIBUTIONS

UNU-FLORES will explore the possibility of joint delivery of online courses hosted on the Blended Learning Platform. Where applicable, the following partner contributions are envisaged:

- **Preparation of PowerPoint slides**: course tutors may divide the course as they see fit, taking account of the developed course materials and Springer Brief.

- **Lecture recording**: for the recording of the 9 lectures for the online course, UNU-FLORES will contract an agency to carry out the filming. Each lecture can be up to an hour.

- **Participants’ questions**: it is envisioned to give online course participants an opportunity to pose questions and have them answered on a regular basis. Staff time contributions of approx. 30 minutes per week (if possible on Thursdays or Fridays) are anticipated to adequately respond to such questions and queries.

- **Assessment** of assignments and final portfolios.

4. Assessment of Online Courses

Online courses will be assessed on the basis of a portfolio prepared by participants. The portfolio will be composed of the following items: policy memos, short papers, portfolio reviews and presentation. To be able to create high quality portfolios, students must organise, synthesise and clearly describe their learning outcomes and effectively communicate what they have learnt. The final portfolio, besides being a testimony of a gradual process of learning for the individual student, could also provide outputs for stakeholder groups involved in the development of research ideas or topics, creating links to Nexus Observatory windows.
## PORTFOLIO ITEMS

<table>
<thead>
<tr>
<th>Description of portfolio item</th>
<th>Indicative weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short paper: 2 page essay on a given question/hypothesis</td>
<td>Total of 20 points</td>
</tr>
<tr>
<td>Literature review: Compilation and critical analysis of papers on a selected topic, major similarities and differences examined</td>
<td>Total of 20 points</td>
</tr>
<tr>
<td>Policy memo: 2 page description of a development problem, proposal statement and justification outlining assumptions &amp; risks, timeline and financial and human resources required for implementation of a proposed action/reform plan</td>
<td>Total of 20 points</td>
</tr>
<tr>
<td>Individual presentation: Plan for outcomes monitoring, communication strategy</td>
<td>Total of 20 points</td>
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<tr>
<td>Final course portfolio: Maximum 40 page folder of revised course outputs (described above) with clear explanation of how and why revisions were undertaken</td>
<td>Total of 20 points</td>
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**100 points**

The following grading scale is used:

- 90 – 100  Excellent
- 80 – 89   Very Good
- 70 – 79   Good
- 60 – 69   Satisfactory
- 50 – 59   Pass
- 49 and below Fail
5. Titles of Online Courses

The nexus approach to management of environmental resources emphasises the importance of concepts such as trade-offs, synergies and methods that capture the potential for resource optimisation. Based on research on governance aspects of the nexus approach and two regional Nexus Observatory workshops organised in Asia and Africa, titles for three online courses were developed. The curricula for the courses draw upon case studies that highlight important dimensions of the nexus approach to management of environmental resources and have been published by Springer. In keeping with the objectives of the Nexus Observatory, which are to facilitate cross-fertilisation of ideas, the courses will target decision-makers in developing countries and will be delivered by UNU-FLORES jointly with partners worldwide:

Green Economy and the Life-Cycle Cost Approach

Upon completion of the course, participants will be able to:

▶ Understand the rationale and relevance of LCCA in the context of developing countries
▶ Identify the framework and concepts of LCCA
▶ Understand real-life applications of LCCA based on an analysis of case studies
▶ Identify policy challenges for mainstreaming life-cycle thinking by decision-makers

Rethinking Infrastructure Design for Multi-Use Water Services

Upon completion of the course, participants will be able to:

➢ Identify available measures and options to apply the multi-use water services paradigm
➢ Understand main concepts and techniques related to multi-use water services
➢ Understand methods of planning that advance multi-use water services based on an analysis of case studies
➢ Identify policy challenges related to the application of the multi-use water services paradigm


Financing Public Services and Environmental Sustainability

Upon completion of the course, participants will be able to:

➢ Understand the inter-relationship between different levels of government for management of environmental resources, notably water and waste
➢ Describe and assess international experiences in the field of decentralisation and identify best practices
➢ Evaluate the prospects of Output-Based Aid (OBA) initiatives for the planning and management of local governments’ revenues and expenditures
➢ Evaluate the role of planning instruments, such as benchmarking and outcome indicators in enhancing accountability of decision-making processes for management of environmental resources

The United Nations University Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES) was established in Dresden, Germany in 2012 with the support of the Federal Ministry of Education and Research (BMBF) and the Ministry for Higher Education, Research and the Arts (SMWK) of the Free State of Saxony, Germany. As part of the United Nations University ( UNU), the Institute helps build a bridge between the academic world and the United Nations. UNU encompasses 13 research and training institutes and programmes located in 12 countries around the world. UNU as a whole aims to develop sustainable solutions for pressing global problems of human survival and development.

UNU-FLORES develops strategies to resolve pressing challenges in the area of sustainable use and integrated management of environmental resources such as soil, water and waste. Focusing on the needs of the UN and its member states, particularly developing countries and emerging economies, the Institute engages in research, capacity development, advanced teaching and training as well as dissemination of knowledge. In all activities, UNU-FLORES advances a nexus approach to the sustainable management of environmental resources.

Find more information under: flores.unu.edu

ADVANCING A NEXUS APPROACH TO THE SUSTAINABLE MANAGEMENT OF ENVIRONMENTAL RESOURCES

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