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Integrated Doctoral Program for Environmental Policy, Management and Technology – INTENSE

586471-EPP- 1-2017- 1-EE- EPPKA2-CBHE- JP

start-up seminar in mongolia

ulaanbaatar, mongolia, 30 April-01 May, 2018

Meeting agenda

Day 1

# Meeting Information

## Date: [30 April, 2018, Monday]

***Time:*** [1000 – 1600]

## Location: [Room number 221, Building 3, University street-1, National University of Mongolia]

## Attendees: [Nachin Baatarbileg, Prof. PhD., Dean, School of Engineering and Applied Sciences, NUM]

##  [Oyunsanaa Byambasuren, PhD., Head, Department of Environment and Forest, SEAS, NUM]

##  [Anton Shkaruba, PhD., Estonian University of Life Sciences]

 [Raimonds Ernsteins, Prof., PhD., University of Latvia]

##  [Professors of Department of Environment and Forest Engineering, School of

##  Engineering and Applied Sciences, NUM]

 [Bayarkhuu B, PhD., Head of Geography and Geology Department, KHU]

 [Tegshjargal N, PhD., Head of Department of Biology, KHU]

##  [Graduate students of KHU]

##  [Graduate students of Department of Environment and Forest Engineering, School of Engineering and Applied Sciences, NUM]

***Agenda items:*** presentation of research training programs of NUM and KHU, presentation of the INTENSE project and its implementation plans, and PhD program development experience at the Latvia University (Riga, Latvia), as well as panel discussion of the project implementation at NUM and KHU, presentations by NUM and KHU PhD students

# Discussion points

* Dr. **Oyunsanaa Byambasuren** has presented the Graduate program at the School of Engineering and Applied Sciences, National University of Mongolia as a comprehensive program covering a broad range of issues related to environmental sciences, management and technology. He pointed out why new developments are necessary, and how the project will help to enhance the quality and relevance of doctoral provision at NUM; in addition, he outlined the motivation of NUM for participating in the project, and emphasized that the project came just in right time, both in terms of timing of the higher education reform in Mongolia, and in terms of institutional developments in NUM and KHU. An important issue to be explored by INTENSE is development of multidisciplinary studies, as currently environmental research and training are rather narrowly focused and explored within particular disciplinary fields. Another important aspect of INTENSE is the development of e-learning; this is only starting at NUM, and it is highly prioritized at the university level. Forthcoming cooperation with Khovd University was identified as an important opportunity, especially as historically KHU was a part of NUM, and after it became independent, the cooperation was limited in scope and scale.
* Dr. **Anton Shkaruba** made a detail presentation of the INTENSE project, its history, the concept and implementation strategy, the partnership, governance and quality assurance mechanisms, and specific objectives sought for Mongolia, as regards the implementation of Bologna principles and mechanisms and integration to European higher education and research spaces.

Following a question from the audience, Anton Shkaruba held a brief discussion on the nature of the awarded degree; the overall conclusions (as also agreed by the audience) was that dual or joint degrees might not be easy to arrange, and can be discussed as a future development. However, the International INTENSE school has to develop and award a single award supplement describing the INTENSE requirements and QA arrangements.

Dr.habil., Prof. Raimonds Ernsteins made presentation of PhD program development experience at the Latvia University, Faculty of Geography and Earth Sciences (Riga, Latvia). Presentation emphasized how the PhD program on Environmental Science was designed, developed and further implemented in practice, being also in close discussion and elaboration with main stakeholders’/end users in the field and PhD students themselves. The aim of the doctoral study program is to train highly qualified specialists with interdisciplinary environmental science background in specialization in one of research directions (environmental chemistry and ecotoxicology, nature conservation or environmental management/governance) able to do research at internationally accepted level on urgent environmental problems and publish its results internationally.

Joint study and research projects with foreign partners so that the experience, results and knowledge from such projects can be integrated into the doctoral study programme.

For the needs of PhD students there is developed also doctoral school “Natural resources and their sustainable use” with an aim to provide advanced training for young scientists regarding resources available in Latvia, their diversity, accessibility, quality and properties, sustainable use and technological advancement, as well as the ways to explore new types of renewable resources.

Looking of international INTENSE partnerships there are obvious to find common academic interests, and that was supported by Mongolian academics, as well as solutions to environmental problems as driving factor towards sustainable development in all our partner countries.

* **NUM PhD students have presented their thesis research**:
	+ "Forest fire history research in Khentey Mountains", **Byambagerel Suran**, PhD candidate, DEFE, SEAS, NUM
	+ "Research on planting technology of Siberian Spruce (PICEA OBOVATA. LDB.) in greenhouse"; Presenter: **Jagdag Damdinjamts**, PhD candidate, DEFE, SEAS, NUM
	+ "Characteristics and concentration of white dust and the particulate matter (PM10) in Erdenet city, Mongolia"; **Lkhagvajargal Banzragch**, PhD candidate, DEFE, SEAS, NUM
	+ "Use of satellite technologies in forestry research"; Presenter: **Bayanmunkh Norovsuren**, PhD candidate, DEFE, SEAS, NUM

All the presentations have been discussed, and received a detailed feedback from visitors and the resident faculty. Prof. Raimonds Ernsteins and Dr. Anton Shkaruba have noted the highest level of research, its relevance to the international science discussion and national socio-economic and environmental challenges, and suggested that within the consortium NUM will be positioned as a center of excellence in forest ecology, forestry and forest-dependent socio-ecological systems.

University of Latvia have been suggesting to clarify most close fields of research and studies bilaterally and for the whole INTENSE consortium - major directions of research at the University of Latvia are: a) climate change studies; b) research on environmental contamination; c) studies related to biogeochemistry (on flows of substances at first in aquatic environment); d) environmental functions and perception of landscapes; e) composition of surface waters; f) studies on natural resources; g) studies on natural organic matter – humic substances); g) air pollution; h) sustainability and environmental governance research; i) bioeconomy. Further lists for whole partnership can be developed.

* **Dr. Bayarkhuu B** made a presentation of graduate studies at the Geography and geology department of Khovd University, and Dr. **Tegshjargal N.** presented graduate studies at the Biology department. While Khovd University does provide at these departments research training in environmental sciences, it is not licensed to award doctoral degrees, and all doctoral defenses (in geography, biology, engineering or agricultural sciences) are done in Ulaanbaatar. In this respect, the cooperation with NUM under INTENSE is strategically important for KHU, as well as further internationalization, and access to research and educational resources of the broader network. E-learning is also an important development starting in Khovd, and INTENSE is coming right on time. Khovd University plays a very important role in the Mongolian system of higher education, as it is the furthest from Ulaanbaatar in terms of distance, and it serves a large area that has very specific biophysical conditions. These factors are important drivers behind the KHU’s motivation to develop its doctoral studies under INTENSE, and for NUM to cooperate with KHU.
* **KHU PhD students have presented their thesis research**:
	+ The chemical research of *Rhodiola grandifolia,* **Erkhembileg E**, MA student, KHU
	+ "Hedoric analysis of land prices focusing on urban amenities; case study of Ulaanbaatar city, Mongolia", **Khishigjargal B**, PhD Candidate, KHU

The presentations have been discussed and received a detailed feedback from visitors and the resident faculty. Prof. Raimonds Ernsteins and Dr. Anton Shkaruba have noted good level of research; the most evident issues observed and discussed during the feedback session had to do with ethical questions (e.g. medical experiments involving human-beings) and the scientific (i.e. not only strictly applied) relevance of set project objectives.

Program schedule - Day 2

# Meeting Information

## Date: [01 May, 2018, Tuesday]

## Location: [Room number 217, ​ building 3,

##  University street-1, National

##  University of Mongolia]

## Time: [1000 – 1300]

## Attendees: [Oyunsanaa Byambasuren, PhD., Head, Department of Environment and Forest, SEAS, ​NUM]

##  [Anton Shkaruba, PhD., Estonian University of Life Sciences]

 [Raimonds Ernsteins, Prof., PhD., University of Latvia]

***Agenda items:*** discussion of project implementation details involving the project management teams at NUM and KHU, Dr. Anton Shkaruba and Prof. Raimonds Ernsteins; meeting with the head of the NUM Graduate School; a tour to research facilities of SEAS NUM.

# Discussion points

The following issues have been discussed:

* Templates of INTENSE establishment agreements: options for agreements at national and international levels will be checked; in particular, we will check, what is acceptable and what is not acceptable in such agreements, in particular, in terms of the organisational format; as an option, we will explore differentiated levels of integration of doctoral programs by countries and partners; another point to check is what synergies can be achieved and promoted by the School.
* INTENSE code of operational practices (COP): in principle, any best practices coming from the European higher education and research spaces shall be acceptable and implementable, as long as Mongolia, in particular NUM, took many principles and arrangements developed under the Bologna process.
* INTENSE research framework (RF): this will be done after completing a detailed database of what research expertise exists in the partnership, especially in terms of high profile internationally acclaimed research; such a database will also work as a match making facility for researchers within the INTENSE consortium; Horizon2020 program can be taken as a template for the conceptual document as regards research within the consortium.
* INTENSE business plan and transition plan: it will describe - the range of dissemination, exploitation activities ensuring the sustainability of operations of INTENSE national schools and the INTENSE International; specific details on how the project deliverables (especially e-services and the organisation) will be managed after the end of the project; a partner’s transition plan provides specific details of how we ensure smooth and efficient transition of existing postgraduate programs in the field of environment to the INTENSE organisation; transition the Plans shall account for organisational and capacity barriers existing at INTENSE partners, and make sure that all the existing capacity and the advantageous features of the programs are kept and enhanced.
* E-learning and curriculum development: the courses will be developed by KHU and NUM researchers within the areas of their expertise and, where possible, in cooperation with EU colleagues; MN partners shall be involved top each MOOC as well to make present there the Mongolian context; INTENSE e-learning is hosted by OSENU (UA), and we shall find a way for sharing some of learning contents between the e-learning systems of MN partners and the INTENSE system.
* Summer schools: each MN partner will identify at least 4 participants for summer schools offered by INTENSE in 2018 as soon as possible; if qualified and competitive, they will be enrolled.
* Research facilities of SEAS NUM leave very good impression; the level of research is very high, and confirms the proposals of promoting NUM as the INTENSE centre of excellence in forestry, forest ecology and forest-dependent socio-ecological systems; the issues related to air pollution can be proposed for a centre of excellence as well.

*Minute-taker – Anton Shkaruba*