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DIRECTOR’S SUMMARY FOR 2019

Dear Friends of UNU-LRT,

It is with pleasure that I present to you the 2019 Annual Report of UNU-LRT, which at the same time is the last report the Land Restoration Training Programme will publish under the umbrella of the United Nations University (UNU). After many years of fruitful collaboration with UNU, the Land Restoration Training Programme is parting ways with UNU by the end of the year 2019.

The year 2019 has been a fruitful and busy year for UNU-LRT. The largest group of fellows so far commenced their training in Iceland on 18 March and graduated on 18 September, a total of 21 fellows. This makes the total number of graduated fellows from the Land Restoration Training Programme 139, with an almost equal percentage of men and women trained (52% men and 48% women).

The international guest lecturer this year at the six-month training was Dr Jerome Sebadduka Lugumira from one of the long-time partner organisations in Uganda, NEMA (National Environment Management Authority). Dr Lugumira, who is a Soil Scientist at NEMA, gave lectures on issues related to soil. Additionally, he gave a talk on soil conservation and research in Uganda at an open seminar at the Agricultural University of Iceland (AUI).

The first UNU-LRT master’s scholarship recipient graduated with an MSc degree from the Agricultural University of Iceland in September. UNU-LRT granted two new scholarships to former UNU-LRT fellows to pursue master’s and PhD degrees at Icelandic universities. Both former fellows started their studies in Iceland in the autumn.

There were numerous other highlights of the year. UNU-LRT held two short training courses in partner countries, Mongolia and Uganda, where a total of 50 participants successfully completed the courses. The ENABLE project was completed after three years of fruitful collaboration on developing high quality educational material targeted at business students and professionals to create awareness about the functioning of ecosystems and the benefits of sustainable landscape management. The ENABLE outputs this year were the launching of the
MOOC (massive open online course) Business Model Innovation for Sustainable Landscape Restoration, publishing five teaching cases, launching an electronic learning and communication platform, and presenting some of the ENABLE outputs at a side event at the Estoril Conferences. UNU-LRT participated, along with 15 former fellows and additionally two representatives from partner organisations, in the SER (Society for Ecological Restoration) World conference in Cape Town, South Africa, in September. UNU-LRT sponsored the former fellows to allow them to participate in the conference, but their oral presentations or posters had all been accepted by the scientific committee of the conference. Furthermore, UNU-LRT hosted a symposium at the conference entitled: Land restoration for improved livelihood in Africa: Challenges and opportunities. Two former fellows presented their work in the Symposium, as well as a representative from Makerere University in Kampala, the Chief of Section at MAB Networking, Biosphere Reserves and Capacity Building at UNESCO, and the UNU-LRT Director.

I hope that you will enjoy reading about the diverse activities of UNU-LRT in 2019. As of 1 January 2020, UNU-LRT, along with the four other UNU Programmes in Iceland (on geothermal energy, fisheries and gender equality) will be a part of the new UNESCO category 2 centre GRÖ International Centre for Capacity Development, Sustainable Use of Natural Resources and Societal Change.

Hafdis Hanna Aegisdottir
UNU-LRT Director
ABOUT UNU-LRT

The United Nations University Land Restoration Training Programme (UNU-LRT) was established in early 2010. The mission of UNU-LRT is to train specialists from developing countries to combat land degradation and restore degraded land, and to assist strengthening institutional capacity and gender equality in the field of land restoration and sustainable land management.

The Programme started as a three-year pilot project in 2007, aiming at becoming a UNU training programme by the end of the pilot phase. After a successful mid-term evaluation by an international evaluator, the Programme was accepted as a UNU training programme. The Programme is implemented jointly by the Agricultural University of Iceland (AUI) and the Soil Conservation Service of Iceland (SCSI). UNU-LRT is also supported by a wide range of other Icelandic institutions, UNU programmes and international institutions.

UNU-LRT is governed by a Board of members that are representatives of AUI, SCSI, the Icelandic Forest Service, United Nations University, and an expert nominated by the Ministry for Foreign Affairs. Moreover, a Studies Committee academically governs the Programme, chaired by the UNU-LRT Director. The Studies Committee consists of members from leading research institutes and universities working in the field of land restoration and sustainable land management.

The main activity of UNU-LRT is an annual intensive six-month postgraduate training programme on land restoration and sustainable land management. The first half of the training is dedicated to course work which includes lectures, practical training, field visits, exercises, and group work where the focus is on the active participation of each fellow. In the latter half of the training the focus is on individual research projects which are tailored to the academic and practical background and needs of the individual fellows and their institutions. Since LRT was launched in 2007, 139 fellows have graduated from the training, 67 women and 72 men. The fellows have come from the following 13 countries: Egypt, Ethiopia, Ghana, Lesotho, Malawi, Namibia, Niger, Tunisia and Uganda in Africa, and Mongolia, Kyrgyzstan, Tajikistan, and Uzbekistan in Central Asia.
Short training courses in partner countries are an important part of UNU-LRT capacity development activities. This year, a 9-day course was held for the third time in Uganda and a 7-day course was held for the second time in Mongolia. Participants in each course numbered 25. In total, 124 specialists have participated in UNU-LRT short courses since their initiation in 2017.

Furthermore, UNU-LRT offers scholarships to former fellows who have completed the six-month training programme to pursue graduate studies at Icelandic universities in land restoration and related subjects. The first master’s scholarship recipient graduated with an MSc degree from the Agricultural University of Iceland in September. The first PhD scholarship recipient commenced studies at AUI in September and a new master’s student commenced studies in Environment and Natural Resources at the University of Iceland in August.

UNU-LRT has a webpage (www.unulrt.is) where information about the programme, the latest news and the individual projects of former fellows are accessible. Furthermore, UNU-LRT has a Facebook page (www.facebook.com/unulrt) and a twitter account (@UNULRT).

PROGRESS REPORT

SIX-MONTH TRAINING PROGRAMME 2019

The six-month training programme in 2019 started on 18 March with the largest group of fellows so far, or 21 fellows (11 women and 10 men). The fellows were from Ethiopia (two fellows), Ghana (3), Lesotho (3), Malawi (3), Niger (1), Uganda (3), Kyrgyzstan (1), Mongolia (2), Tajikistan (2), and Uzbekistan (1). The group graduated on 18 September and received their certificates from Mr Jon Erlingur Jonasson from the Ministry for Foreign Affairs and the UNU-LRT Director. The Minister for the Environment and Natural Resources, Mr Gudmundur Ingi Gudbrandsson, addressed the graduating fellows and guest. Other speeches were delivered by UNU-LRT Director Dr Hafdis Hanna Aegisdottir, Dr Arni Bragason, Chair of the UNU-LRT Board and Director of the Soil Conservation Service of Iceland, and Dr Ragnheidur I. Thorarinssdottir, the Rector of the Agricultural
University of Iceland. Two of the graduating fellows, Ms Annett Mlenga from Malawi and Mr Haqrizobek Nurhammadov from Tajikistan, also spoke on behalf of the graduating fellows.

The curriculum of the six-month training programme is divided into eight modules. The first six modules are organized according to the UNU-LRT project cycle framework where the first three modules provide the programme’s backbone, the basic knowledge and understanding needed to use the project cycle, which is then the focus of modules four to six. By applying the project cycle as a process management framework in the six-month training curriculum, the theoretical and practical aspects of land issues and project management are effectively linked. Modules one to six include lectures, practical training, exercises, diverse field visits and individual and group work. Module seven is on special topics that vary from one year to another and includes each year’s international guest lecturer(s). The last module (module eight) focuses on the development of individual research projects, an integral part of the training programme, where fellows work closely with their supervisors in Iceland on a research topic of their choice. The individual research projects are aimed at increasing knowledge and developing relevant skillsets on a topic relevant to the work of the fellows in their home countries.

This year’s international guest lecturer was Dr Jerome Sebadduka Lugumira, a soil scientist at the National Environment Management Authority (NEMA) in Uganda. Dr Lugumira has been involved with the development and execution of the short courses on sustainable land management, land restoration and the linkages to climate change, that have been given in Uganda for three consecutive years. Apart from giving lectures to the fellows on soil and the geomorphology as related to land condition, Dr Lugumira gave a talk in an open seminar at AUI on soil conservation and research in Uganda.
A 9-day training course entitled Sustainable land management, land restoration and linkages to climate change was held for the third time in Uganda. This year, the course was given in October in Soroti District, in eastern Uganda. The course was organized in cooperation with the Ugandan partner institutions of UNU-LRT, NEMA and Makerere University, as before. Twenty-five environmental-, agricultural-, and forest officers from districts in eastern and northern Uganda participated in the course. This makes the total number of participants in Uganda 75, 25% women and 75% men. The curriculum development team included specialists from Uganda, Dr Jerome Sebadduka Lugumira, from NEMA, and three lecturers from Makerere University: Dr Daniel Waiswa, Dr Gerald Eilu and Dr Patrick Byakagaba. The Icelandic team consisted of Dr Johann Thorsson and Dr Bryndis Marteinsdóttir from SCSI, as well as the UNU-LRT Office Manager Halldora Traustadottir. Three former UNU-LRT fellows assisted with the organization and teaching in the course, Ms Joan Angom Atalla (UNU-LRT fellow in 2015), Ms Gertrude Akello (fellow in 2019) and Mr Moses Opio (fellow in 2008), as well as Ms Briget Nakyanzi from NEMA.

During the course, the participants took part in interactive lectures, group assignments and exercises as well as two short field trips to visit wetland sites. The final day of the course was devoted to a comprehensive evaluation of the content and practicalities, both an anonymous evaluation as well as an oral one.

Mongolia
A 7-day training course entitled “Communicating knowledge for sustainable rangeland management under climate change – Improving analytic and reporting skills” was held for the second time in Mongolia, from 19 to 25 May 2019. The course was jointly developed by UNU-LRT and three of its partner institutions in Mongolia: The Mongolian University of Life Sciences (MULS), the National Federation of Pasture User Groups of Herders (NFPUG), and the Information and Research Institute of Meteorology, Hydrology and Environment (IRIMHE). The course participants were land managers and environmental-, rangeland- and agrometeorological specialists from selected districts in Mongolia, where resilience-based rangeland and herding management is being piloted, as well as professionals from universities and governmental agencies; in total twenty-five
participants. The course curriculum development team included six specialists from Mongolia: Dr Bulgamaa Densambuu (from NFPUG, and a former LRT fellow), Dr Bayigal-Amar Tulaikhuu, Dr Burenjargal Otgonsuren, Dr Oyuntuya Sharavjamts and Dr Khishigjargal Mookhor (MULS), and Dr Bat-Oyun Tserenpurev (IRIMHE); and four from UNU-LRT: Dr Isabel Barrio (AUI), Dr Kristin Svavarsdottir and Dr Bryndis Marteinsdottir (SCSI), and UNU-LRT Deputy Director Berglind Orradottir. Additionally, three former UNU-LRT fellows contributed to field demonstrations and assisted with running the course: Ms Bayarmaa Battogtokh (UNU-LRT fellow in 2018), Mr Budbaatar Ulambayar (fellow in 2015) and Ms Sumjidmaa Sainnemekh (fellow in 2014). The course was given in Mongolian.

The course started with two days of interactive lectures, followed by a field trip where participants explored grazing and climate change impacts in different habitats. In the latter part of the course the focus was on the basic project framework, where the rangeland health monitoring system in Mongolia was used as a case study to explain the different elements of the framework. In this part, the participants were assigned to working groups, where they explored the different components of the basic project framework. Comprehensive evaluation of the course was done on the final day.
ENABLE PROJECT
For the last three years, UNU-LRT has been working with its ENABLE partners to develop a holistic and applicable high-quality education platform for business-driven landscape restoration. This year the consortium partners focused on: 1) launching a second massive open online course (MOOC), 2) finalizing five teaching cases, 3) building and launching an electronic learning and communication platform, 4) presenting the outputs of the project at a side event at the Estoril Conferences, and 5) submitting a final report to the Erasmus+ Project Results Platform as the project ended in August.

The European Network for the Advancement of Business and Landscape Education (ENABLE) is a partnership of organisations, funded by the Erasmus+ programme of the European Union. ENABLE has a webpage where information about the project can be found: https://www.rsm.nl/enable/home/

MOOCs
UNU-LRT with its ENABLE partners launched a second MOOC on 14 February. The MOOC is entitled Business Innovation for Sustainable Landscape Restoration. This eight-week long course builds upon ENABLE’s first MOOC, A Business Approach to Sustainable Landscape Restoration. The course is designed in three phases that move the participants from ideas towards the successful implementation of a new business model for sustainable landscape restoration with 4 returns: return of natural capital, return of social capital, return of inspiration and return of financial capital. Each step of the process is illustrated with three real-life cases of landscape restoration to show how the theory works in practice. These cases are: a large-scale woodland restoration case in Iceland, a case about diversification of land use and cropping systems in Spain, and a case about the challenges of recovering from forest fires in Portugal. By the end of 2019, the MOOC had attracted more than 1080 learners from all over the world. The course is open to all and free of charge on Coursera: https://www.coursera.org/learn/bmi-sustainable-landscape-restoration

The seven-week MOOC A Business Approach to Sustainable Landscape Restoration, launched 1 May 2017, had attracted more than 3500 learners from all over the world, by the end of 2019. About 50% of the learners are 25-34
years old; men and women in about equal numbers. The course is still open to all on Coursera: https://www.coursera.org/learn/landscape-restoration-sustainable-development

Teaching cases
UNU-LRT, with its partners in the ENABLE consortium, finalized five teaching cases aimed for business students at the Master’s level, as well as students in environmental sciences and natural resource management. UNU-LRT was responsible for the development of the Hekluskogar teaching case that deals with a large-scale restoration in Iceland.

The other five teaching cases developed by ENABLE are:

1. The Alvelal project in Spain - an example of a successful restoration initiative of collaboratively developing integrated sustainable business cases for rainfed almonds.

2. The Arento Group in Spain - Towards a Sustainable Future. This case examines how an agricultural business tries to make the transition towards higher levels of sustainability.

3. From Bare to Birch - Large-Scale Ecosystem Restoration in Iceland. The case examines how to transition from barren desertified land to a resilient and healthy woodland that can provide ecosystem services to the people in the area and beyond.

4. Reborn from Ashes - The Alvares Project. The North and Centre of Portugal encompass many productive forest areas that are particularly prone to fires. In the middle of this burnt region, the parish of Alvares stands as a representative case of the entire territory: consecutive decades of rural exodus dramatically changed the economic structure in which its population used to subsist.

5. Sustainable Finance for Landscape Restoration in Spain focuses on mobilising finances for the farmers who take part in the co-operative (Alvelal) and for the trading company (Almendrehesa).

All teaching cases are available free of charge on the website of the RSM Case Development Centre: https://repub.eur.nl/col/9816
Knowledge exchange platform
In May, ENABLE launched an online knowledge exchange platform, https://4returns.earth/. This platform is an online space for a growing community of people involved in large-scale landscape restoration based on the holistic 4 returns approach. The aim of the platform is to help build and energize a landscape restoration community that can accelerate landscape restoration based on sustainable business models.

UNU-LRT has, in collaboration with partners from Mongolia, Ghana, Kyrgyzstan and Iceland, created inspiring restoration stories from those countries, which are presented on the platform. The knowledge exchange platform has already connected people from different backgrounds and provided them with tools and success stories.

Side event at Estoril conferences
The ENABLE consortium members organized a side event at the Estoril Conferences in Portugal to display some of the outputs of ENABLE. Three case studies (forest fires in Portugal, Hekluskogar restoration in Iceland, and crop diversification & low input farming in south-eastern Spain) were presented and a roundtable organized with the main focus on the Portuguese case of forest fires.

ENABLE final report
The ENABLE project finished in August. The consortium members submitted a final report to the Erasmus+ Project Results Platform at the end of October. The report presents the activities undertaken and outputs produced within the project, as well as discussing the project management, implementation, impact and lessons learned.
OTHER HIGHLIGHTS OF THE YEAR

SER world conference in Cape Town, South Africa
UNU-LRT was well represented at the Society for Ecological Restoration (SER) World Conference, held in Cape Town, South Africa at the end of September. This was the first time an African country hosted the conference and thus a good opportunity for the UNU-LRT alumni, especially from Africa, to network and present their work. UNU-LRT hosted a symposium at the conference entitled *Land restoration for improved livelihood in Africa: Challenges and opportunities*. A part from the talk from the UNU-LRT Director on capacity building for restoring land, four other speakers presented their work in the symposium, two former UNU-LRT fellows, Mr Mulugeta Sebhatleab Tesfay from Ethiopia (fellow in 2014) and Ms Setrida Mlamba from Malawi (fellow in 2018). Dr Gerald Eilu, a lecturer at one of the main partner institutions of UNU-LRT in Uganda, Makerere University, gave a review on land restoration training in Eastern Africa where he outlined the short courses that UNU-LRT and the Ugandan partners have developed and hosted in Uganda for the past three years. Lastly, Ms Noéline Raondry Rakotoarisoa, Chief of Section at MAB Networking, Biosphere Reserves and Capacity Building at UNESCO, introduced an approach by UNESCO’s Man and the Biosphere Programme to ecological restoration in the Lake Chad Basin area.

In addition to the two former UNU-LRT fellows mentioned above, 13 additional former fellows also attended the conference, nine from Africa and four from Central Asia. They introduced their work back home and/or their research from the UNU-LRT six-month training, either in oral presentations or in posters.

Finally, UNU-LRT represented the ENABLE consortium at the conference with a poster entitled *Massive open online courses on business-driven landscape restoration*. The poster presented the two massive open online courses (MOOCs) on land restoration based on sustainable business models, developed by the ENABLE consortium.
Master’s and PhD scholarships to former UNU-LRT fellows

Three former fellows were studying in Iceland this year. Mr Joel Charles Owona started his master’s studies at AUI in 2017 and in September this year, he graduated with an MSc degree in Environmental Science. In August, Ms Beatrice Dossah from Ghana, a UNU-LRT fellow in 2017, started her master’s studies in Environment and Natural Recourses at the University of Iceland, with a scholarship from UNU-LRT. Furthermore, the first UNU-LRT PhD scholarship recipient, Ms Sumjidmaa Sainnemekh from Mongolia, a UNU-LRT fellow in 2014, started her doctoral studies at AUI in September. Her PhD project is entitled: Validating recovery classes on long term rangeland monitoring data of Mongolia. Her main supervisor, Dr Isabel C Barrio, is an Associate Professor at AUI.

Sheep in the Land of Fire and Ice

UNU-LRT has collaborated in the development of a short massive open online course (MOOC) on sheep grazing, management, and land conservation in Iceland. The course, titled Sheep in the Land of Fire and Ice, examines the sustainability of sheep grazing in Iceland and explores how history, socioeconomic factors and environmental conditions have influenced the management of grazing resources. Grazing management is a common challenge in many regions of the world, and this course uses Iceland as a case study because here traditional sheep grazing has been associated with extensive environmental degradation.

Sheep in the Land of Fire and Ice was developed by UNU-LRT, the Agricultural University of Iceland, the University of Iceland, and the Soil Conservation Service of Iceland. Dr Isabel C Barrio, Associate Professor at AUI, led the development of the course. A group of experts, including many lecturers and supervisors in the UNU-LRT six-month training programme, teach in the course. The course is designed for students in environmental sciences and for anyone interested in understanding one of the drivers of landscape change in Iceland: sheep grazing. The short course was launched on 11 January 2019 and is open for all and available online free of charge on EdX. https://www.edx.org/course/sheep-in-the-land-of-fire-and-ice.
EVALUATION OF THE UNU-LRT SIX-MONTH TRAINING PROGRAMME

Every year the UNU-LRT six-month training programme is evaluated weekly throughout the three-month period of course work. At the end of the six-month training, the programme is evaluated by the participants by filling out an extensive overall anonymous evaluation on all parts of the programme, followed by group discussions with the fellows. A thorough evaluation of the programme allows adjusting the programme to the needs of the fellows. The evaluation is also important for the continuous improvement of the training curriculum and practical issues of the UNU-LRT six-month training programme.

There was an overall very high satisfaction with the six-month training programme, as assessed by the overall evaluation conducted on the evaluation day. A high number of the fellows stated their satisfaction with the contents and organization of the courses and thought that the concepts and theory presented during the lectures were relevant and covered many important aspects. During the weekly evaluations in the first part of the programme, the fellows highlighted the high quality of lecturers and the usefulness of the topics being presented. Most of the fellows were satisfied with the organisation and outcome of the individual research project work and felt that it had enhanced their professional skills.

UNU-LRT SITE VISITS

UNU-LRT works with partner countries in Africa and Central Asia. Within each of these countries, partner institutions that play a key role in land restoration and sustainable land management are identified. The training of the fellows is considered a contribution to capacity building of their institutions. The institutions
propose candidates for the UNU-LRT six-month training programme, who are then personally interviewed by UNU-LRT employees. To ensure the effectiveness of the training programme, the candidates should fulfil the following requirements: they should have at least one university degree, at least one-year experience working in the field of specialization that they will pursue at UNU-LRT, have a permanent position at the partner institution, have good English skills, and be under the age of 40.

The visits this year were made in connection with the running of the short courses in the partner countries, i.e. in Mongolia and Uganda.

**Mongolia**
The UNU-LRT Deputy Director visited partner institutions during the visit to Mongolia in May in connection with running the short course “Communicating knowledge for sustainable rangeland management under climate change”. The aim of the institutional visits was to strengthen collaboration with the partner institutions and to interview potential candidates for the UNU-LRT six-month training, proposed by these institutions. State institutions, state universities and NGO’s were visited in Ulaanbaatar and Darkhan. In total 34 candidates were interviewed, 20 women and 14 men.

**Uganda**
The UNU-LRT Office Manager visited Uganda in October in connection with the running of the short course in Soroti District in eastern Uganda. At Makerere University, six potential candidates for the six-month training in Iceland were interviewed, three men and three women. While running the short course in Soroti, the UNU-LRT Office Manager interviewed 13 potential candidates for the six-month training, three women and 10 men. Two brief meetings with the contact persons at the respective institutions were also held.

**UNU-LRT PRESENTATIONS**

**Presentations**


Posters


Other
Aegisdottir HH (2019) Training leaders to restore a planet in crisis. TEDx Reykjavik talk held on 13 October 2019. Video can be retrieved on https://www.ted.com/talks/hafdis_hanna_aegisdottir_training_leaders_to_restore_a_planet_in_crisis

UNU-LRT organized a symposium at the SER World Conference on Ecological Restoration - Restoring land, water & community resilience, 28 September 2019, Cape Town, South Africa. The title of the symposium was Land restoration for improved livelihood in Africa: Challenges and opportunities.

Publications