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# Restoration Education

## Concept Note



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## Introduction

Although Restoration Education is a new concept, the art of restoration has been taught in professional colleges and universities across the world under many disciplines. Ecosystem Restoration can be linked to soil, water, forests, and landscapes. It not only focuses on forests, but aims to restore all ecological functionalities of an ecosystem, be it a forest, a savanna, a wetland, a coastal zone, or any otherwise ecologically defined unit of space. Landscape restoration aims to restore not only ecological functions, but extends to repair social, cultural, economic functions and political relations within a larger area that harbours multiple ecosystems. In this concept note we refer to the widest approach to restoration which is landscape restoration.

Formal education and training focused on the principal components and interdisciplinary concepts of landscape restoration as a standalone subject is not common, and when taught, is often embedded within targeted existing programmes such as forestry curricula. And indeed, most types of ecosystem or landscape restoration contain some kind of tree planting or vegetation based restoration activities. But restoration goes far beyond the act of planting trees, and foresters can no longer claim to be the only ones

who can restore. With a growing number of ecosystem and landscape restoration programmes there is a growing demand for professionals who master the subject of restoration in a broad and skilful manner. Yet scarce are the colleges and universities that offer landscape restoration curricula, while even scarcer are the opportunities for students to practise field-based application and develop the competencies that they need to implement landscape restoration on the ground.

This is the rationale behind the concept of Restoration Education. This concept note aims to sketch the contours of Restoration Education, what it is, and, if carefully designed, what it could be. It aims to raise questions as to which institutes could provide Restoration Education, and where is its disciplinary 'home'? Who are the students to get enrolled? What would be their entry level? What are the assessment modalities for Restoration Education? Moreover, this concept note aims to carve out the basic principles of Restoration Education, and what would be the potential modalities through which it could be taught and assessed. With this, the concept note serves as a basis for discussion with education partners for project development within the near future.

## The Context and the Need for a New Approach

The UN Decade on Ecosystem Restoration was launched in 2021, and is expected to increase investment in restoration projects and programmes across the globe. This means that an increasing number of young professionals trained as foresters, natural resources managers, agricultural specialists, ecologists, spatial planners or other related domains will find their way to a job that is directly or indirectly related to restoration. But how many of these young professionals are equipped with the latest restoration insights and tools? How many of them have acquired the knowledge and the skills to combine novel restoration techniques with broad stakeholder engagement? How many of them have learned how to solve spatial conflicts related to restoration, and facilitate participatory restoration design? Some of them may have learned some of this, but only few will have the interdisciplinary education to do so correctly.

It is for this reason that, prior to the launch of the UN Decade on Ecosystem Restoration, the [Food and Agriculture Organization \(FAO\)](#), [International Union of Forest Research Organizations \(IUFRO\)](#), and the [Global Landscapes Forum \(GLF\)](#), co-organised a workshop on the development of capacities for ecosystem and landscape restoration, which led to a [Call to Collective Action](#) stating that there is a growing market for skilful restoration professionals. Starting to integrate restoration into current curricula would therefore be well timed. It would help to mainstream restoration across disciplines, and form the basis of an interdisciplinary approach to ecosystem restoration. Educating a new generation of restoration professionals with a broad range of technical and social skills will raise the restoration capacities of individuals, organisations, networks and wider governance systems, and leverage the UN Decade on Ecosystem Restoration to achieve its ambitious aims.

In response to the Call to Action and the subsequent [“Global Capacity Needs Assessment”](#) carried out by the UN Decade's Task Force on Best Practice, a group of educational frontrunners including [IUFRO](#), [GLF](#), [Youth In Landscapes \(YIL\)](#), and the universities and institutions of [Ghana \(Tamale\)](#), [Nigeria \(Ibadan\)](#), [Malawi \(CASA, LUANAR\)](#), [Rwanda \(IPRC Kitabi\)](#), and [The Netherlands \(Wageningen\)](#) decided to start the process of Restoration Education. The first step of which included the exchange of restoration related courses and curricula that they already have, and a decision to develop additional courses together. With this, they will provide a springboard to the development of Restoration Education as an enhanced professional and education domain.

The start of the UN Decade on Ecosystem Restoration

forms an opportunity to address restoration as a new domain, for graduates to find a place in the job market and expand their roles. The ability of graduates to combine their technical knowledge of forestry, regenerative agriculture, coastal zone management etc. with the art to design and facilitate a participatory process will make them high in demand. As such, a new approach in restoration education should stem from the technical methods and tools for restoration; and the social skills which are needed to design an inclusive restoration process that meets a local demand.

Restoration education thus allows graduates to merge disciplinary (or 'substantive') knowledge with process-oriented skills, and get ready for a career in restoration.

## Six Principles for Restoration Education

Instead of building curricula from the onset, it is more realistic to start integrating and embedding landscape restoration-based topics into already existing courses. Such an integration can be done through electives, colloquia, special tracks, internships and capstones, to name a few. Thinking from a student perspective it will allow them to stay in their own disciplinary domain while choosing from a set of additional learning products that fits their needs. If designed in collaboration with current and future employers (governments, private companies, communities and civic organisations) these products will be practically oriented and deliver the professionals that the employers need. In order to help educators to design such products, six educational principles will help to get started: interdisciplinary learning, transformative learning, competence-based learning, practice-based learning, lifelong learning, and blended learning design.

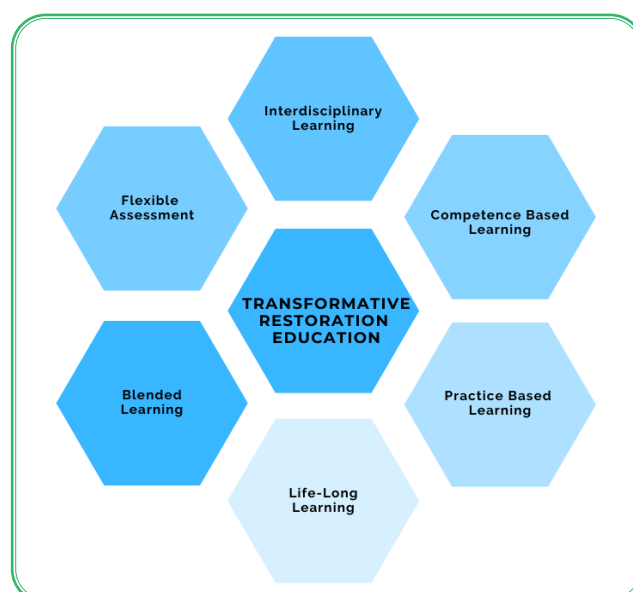


Figure 1: the six principles of Restoration Education



## The Restoration Education Collaborative Process - African Education Institutes Taking the Lead

The Pan-African education institutes mentioned earlier have already started experimenting with innovative practices on restoration education at the TVET, BSc and MSc levels. As such, these institutes have decided to join hands and co-author this concept note, signalling the start of a steadily growing [Restoration Education Network](#). They recognise the shortage of professional and academic learning opportunities on ecosystem restoration, and intend to fill this gap, with some of them already running short courses for professionals who wish to further their career. All five are active in international networks such as the [GLF](#), and are eager to actively take part in the UN Decade on Ecosystem Restoration, in their own field of expertise.

Without giving up on their disciplinary curricula on forestry, natural resources management, ecology, agriculture and more, they have expressed interest in developing novel education products such as short courses, summer schools and other forms of modules that could form the basis for Restoration Education according to the six principles of Restoration Education (as seen in Figure 1). Building on the values of collaboration, they expressed an interest to develop an inter-institutional programme on Restoration Education, in collaboration with the [GLF](#), [IUFRO](#), and other partners to the UN Decade. In order to get started, they have designed a collaborative process that is visualised in Figure 2.

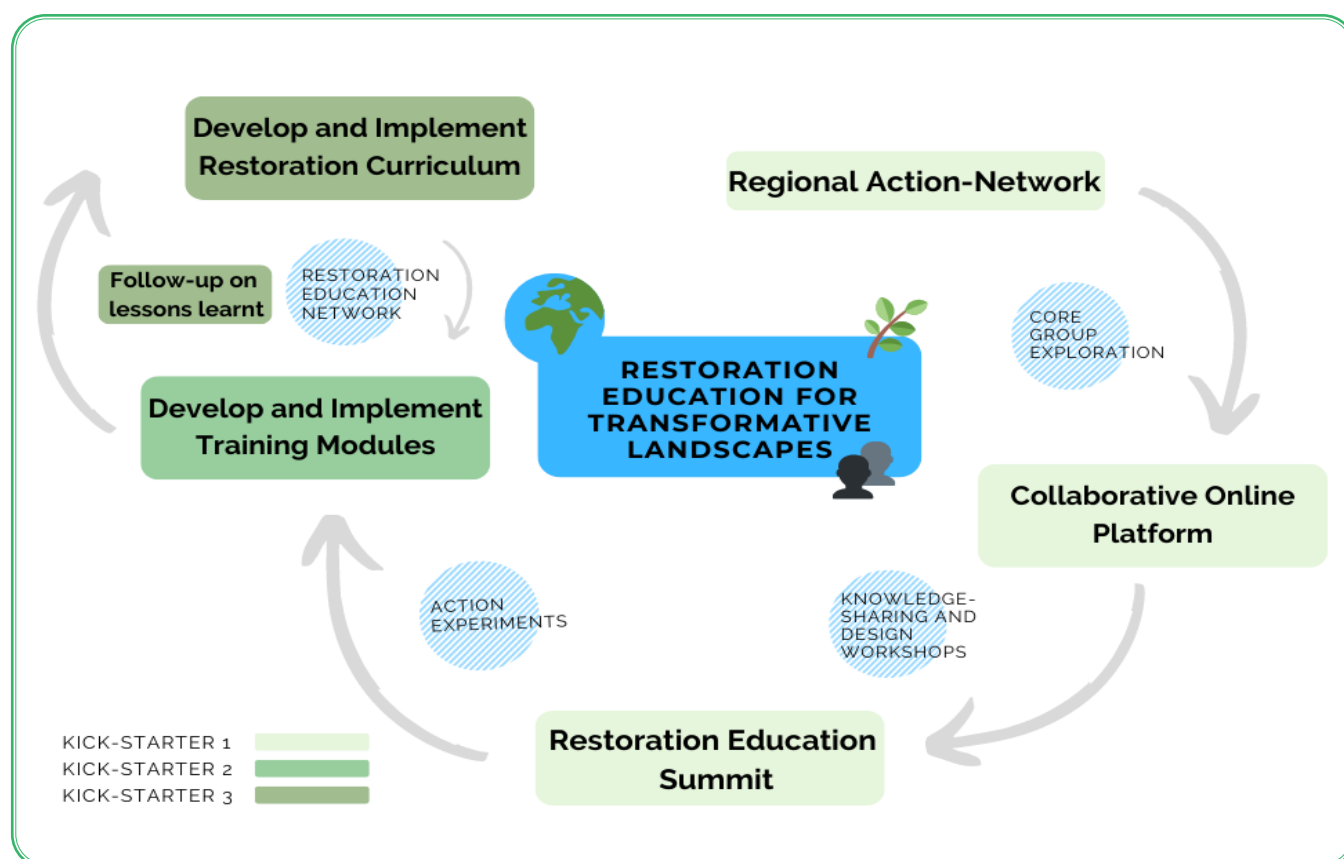


Figure 2: The Restoration Education Collaborative Process, as designed by the core group.

## Kick-starting Restoration Education

In order to kickstart the collaborative programme, the five institutes decided to take off with a number of 'low input' activities which lay the foundation for further action. An inventory of existing courses and modules related to conserving and managing natural resources was made, to serve as a starting point. Based on this, a number of interventions were proposed. These interventions can be grouped into three types, each having different implications in terms of organisation, administration, and finance.

These three interventions, or 'kick-starters' are:

1. Mainstreaming landscape thinking for restoration education,
2. Developing and implementing "think landscape" training modules,
3. Developing and implementing a "think landscape" curriculum.

## Kick-Start 1

Mainstreaming landscape thinking for restoration in natural resources management education through the development of a Pan-African action-network of educational institutes. The network of restoration teachers, educators and trainers will help to foster peer-to-peer knowledge-exchange, collaborative learning and accelerate curriculum development for restoration activities. The following activities will be deployed to activate and maintain the network:

- ◆ Establish a diverse core group of institutional front-runners;
- ◆ Carry out experiments to start gathering ideas and content;
- ◆ Organise a knowledge-sharing and activation workshop to exchange ideas and existing content and material, and establish a common understanding of landscape thinking for restoration in natural resources management education;
- ◆ Develop an online platform to facilitate knowledge sharing and exchange, build a sense of community and share/build resources and content;
- ◆ Carry out a Restoration Education Summit to collectively unpack how to mainstream landscape thinking for restoration in natural resources

management through train-the-trainer modules and self-learning materials

- ◆ Carry out action experiments to start developing and testing self-learning material for network members;
- ◆ Grow and maintain a restoration education network to help members to incorporate lessons learnt in their curricula.

## Kick-Start 2

Developing and implementing multi-disciplinary "think landscape" training modules for restoration (within existing curricula) for bridging the gap between theory and implementation.

## Kick-Start 3

Developing a "think landscape" course/curriculum for restoration as a blended learning trajectory, to be implemented within and across the institutes represented.

## The Collaborative Process Timeline

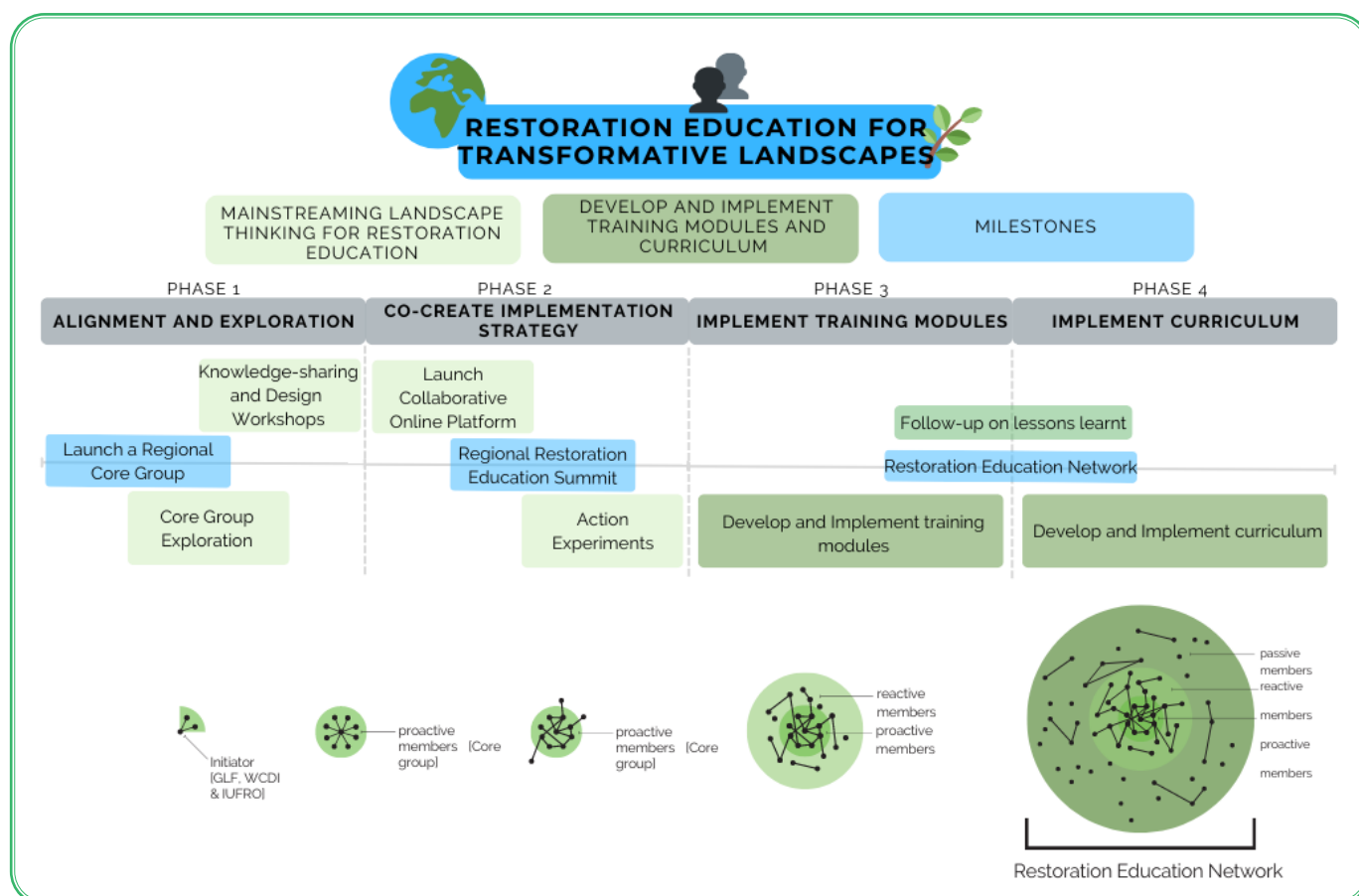


Figure 3: A Timeline of the Restoration Education Collaborative Process





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### Restoration Education Network

The **Restoration Education Network** now comprises of the following:

- University of Ibadan (Nigeria),
- University of Energy and Natural Resources (Ghana),
- University of Development Studies (Ghana),
- University of Dschang (Cameroon),
- Lilongwe University of Agriculture and Natural Resources (LUANAR, Malawi),
- Centre for Applied Systems Analysis (CASA, Malawi),
- Youth In Landscapes Initiative (YIL),
- University of Nairobi (Kenya),
- Integrated Polytechnic Regional College Kitabi (IPRC Kitabi, Rwanda),
- Light On A Hill Organization (LOAH, Nairobi),
- Moi University (Kenya).



### Global Landscapes Forum

The Global Landscapes Forum (GLF) is the world's largest knowledge-led platform on integrated land use, dedicated to achieving the Sustainable Development Goals and Paris Climate Agreement. The Forum takes a holistic approach to create sustainable landscapes that are productive, prosperous, equitable and resilient and considers five cohesive themes of food and livelihoods, landscape restoration, rights, finance and measuring progress. It is led by the Center for International Forestry Research (CIFOR), in collaboration with its co-founders UNEP and the World Bank and Charter Members.

**Charter members:** CIAT, CIFOR-ICRAF, CIRAD, Climate Focus, Conservation International, Crop Trust, Ecoagriculture Partners, The European Forest Institute, Evergreen Agriculture, FAO, FSC, GEF, GIZ, ICIMOD, IFOAM - Organics International, The International Livestock Research Institute, INBAR, IPMG, IUFRO, Rainforest Alliance, Rare, Rights and Resources Initiative, SAN, TMG-Think Tank for Sustainability, UNEP, Wageningen Centre for Development Innovation part of Wageningen Research, World Farmer Organization, World Agroforestry, World Bank Group, World Resources Institute, WWF International, Youth in Landscapes Initiative (YIL)

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