In cooperation with

FOREST21 - 21st Century Climate-Smart Forestry Education for Livelihood and Sustainability in South Africa

Quality Plan

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Project and document information

Table 1: Project and Document Information

Item	Value
Project Number	123
Project Acronym	FOREST21
Project Title	FOREST21 - 21st Century Climate-Smart Forestry Education for Livelihood and Sustainability in South Africa
Start Date of Project	Date
End Date of Project	Date
Call	Call for Proposals 2020 - EAC/A02/2019
Program	KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education
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Delverable Ref No.	1289727
Due Date	Date
Actual Submission Date	Date
Final Revision No.	1.0
Dissemiation Level	GUxxx
Lead Coordinator	XXXX xxxxx
Contact Details	Adress: Phone: Mail
Finanical Coordinator	YYYY yyyyyy
Contact Details	Adress: Phone: Mail:
Abstract	This is an abstract that must describe and summarize the project and this document.
Keyword	Forest21, Forest Eduaciton, Forest Training, Problem-Based Learning

Version History

Table 2: Version History

Version	Status
0.1	Initial version

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1 Introduction

1.1 Foreword

1.2 Project Description

In South Africa, the forestry sector is increasingly seen as a critical sector for (i) livelihood development, given the simultaneous youth population bulge and high unemployment rates, as well as for (ii) the addressing of global sustainability challenges, given the potential of forestry to advance South Africa's National Climate Change Adaptation Plan (2018). Given this dual importance, Higher Education Institutions (HEIs) should naturally take a lead in preparing graduates to create sustainability-aligned economic opportunities. Yet, forestry HEIs in South Africa have constrained capacity to prepare graduates for post-school careers. These shortcomings exist for sector-specific knowledge on sustainable forestry practices, as well as for the entrepreneurial skills needed to leverage forestry opportunities. Given the importance of addressing these shortcomings, this project will involve collaboration between Finnish, Norwegian, and South African HEIs to develop the forestry-related curricula of South African HEIs, so that graduates are holistically equipped to sustainably leverage forestry for livelihood development.

The project will address:

- Increasing levels of unemployment in South Africa.

  According to Statistics SA, around 10 million South Africans who are actively looking for employment cannot find jobs, leading to an unemployment rate of 27.6% (http://www.statssa.gov.za/?m=2019)..) Youth are the most vulnerable in the South African labour market, with even university graduates in this age group having an unemployment rate of 31.0%. Forestry-related entrepreneurship can provide a partial solution to this problem, as young people have enormous potential for innovation and risk-taking, which can produce start-ups employing many people. To fully realize these opportunities embedded in forestry, HEIs should use their curricula to produce inquisitive graduates who can think in new ways, and who have the courage to meet and adapt to the challenges facing them an entrepreneurial mindset that is simultaneously mindful of sustainability.

- Foresters mitigating climate change.

  Forests are critical for global ecosystems and carbon balances, especially because of their potential to sequester carbon in forests. In its 2009 Forest Sector Charter, South Africa officially recognized its massive potential to sequester carbon through new afforestation of about 100 000 hectares (Forest Strategy 2009-2030). Yet, this potential has not been exploited, sustainability has not entered the mainstream of South African Forestry, and forestry graduates have not internalized the importance, benefits, and necessity of integrating sustainability into forestry. To address this shortcoming, climate-smart forestry will seek new ways of producing, using, and repurposing traditional forestry products like wood products, pulp, paperboard, and paper. This will include teaching forestry students the principles of the circular economy, of sustainable forestry management, and the potential of new innovative wood-based bioproducts. The overarching goal will be to not just lower the environmental impact of current forestry practices, but to leverage forestry management to increase the sequestration of carbon.

- Foresters of 21st century, education shortcomings, and new teaching methods

There is substantial discrepancy between what the forestry industry in South Africa sees as the key skills for future foresters, and what is being taught in HEIs offering forestry. Several research papers highlight this, as Mgaga and Scholes (2019): "Does tertiary education in South Africa equip professional foresters for the future?"

1.2.1 Project Coordinator

1.2.2 Participating Organizations

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2.3.2 Deliverables

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2.3.3.1 Notice of Planned Publications

2.3.3.2 Dissemination/Marketing and Publications

2.3.3.3 Notification of Funding

2.3.4 Management and Internal Communication Tools

2.4 Quality Assurance

2.4.1 Interim Managemnet Reports

2.4.1.1 Finished, Ongoing and Planned Activities

2.4.1.2 Estimates of Efforts Per Quarter

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2.4.2.1 Numbering of Documents

2.4.2.2 References in Documents

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2.4.3.1 Completeness

2.4.3.2 Accuracy

2.4.3.3 Relevance

2.4.3.4 Language

2.5 Quality Control

2.5.1 Internal Review Process

2.5.2 Monitoring Activities

2.5.3 Risk Management

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2.5.6 Files, Archives and Collaborative Tools

2.6 Quality Roles and Responsibilities

2.6.1 Author/Authoring Unit Level

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2.6.3 Executive Board

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Mgaga, Palesa, and Mary C Scholes. 2019. "Does Tertiary Education in South Africa Equip Professional Foresters for the Future?" *Southern Forests: A Journal of Forest Science* 81 (4): 377–85. https://doi.org/10.2989/20702620.2019.1615230.

Session Info

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## - Session info ---------------------------------------------------------------
##  setting  value
##  version  R version 4.0.5 (2021-03-31)
##  os       Windows 10 x64
##  system   x86_64, mingw32
##  ui       RTerm
##  language (EN)
##  collate  Norwegian Bokmål_Norway.1252
##  ctype    Norwegian Bokmål_Norway.1252
##  tz       Europe/Berlin
##  date     2021-06-01
##
## - Packages -------------------------------------------------------------------
##  package     * version    date       lib source
##  assertthat  * 0.2.1      2019-03-21 [1] CRAN (R 4.0.5)
##  backports   * 1.2.1      2020-12-09 [1] CRAN (R 4.0.3)
##  base64enc   * 0.1-3      2015-07-28 [1] CRAN (R 4.0.3)
##  broom       * 0.7.6.9001 2021-05-27 [1] Github (tidymodels/broom@4a4b5aa)
##  cli         * 2.5.0      2021-04-26 [1] CRAN (R 4.0.5)
##  colorspace  * 2.0-1      2021-05-04 [1] CRAN (R 4.0.5)
##  crayon      * 1.4.1      2021-02-08 [1] CRAN (R 4.0.5)
##  data.table  * 1.14.0     2021-02-21 [1] CRAN (R 4.0.5)
##  DBI         * 1.1.1      2021-01-15 [1] CRAN (R 4.0.5)
##  digest      * 0.6.27     2020-10-24 [1] CRAN (R 4.0.5)
##  dplyr       * 1.0.6      2021-05-05 [1] CRAN (R 4.0.5)
##  ellipsis    * 0.3.2      2021-04-29 [1] CRAN (R 4.0.5)
##  evaluate    * 0.14       2019-05-28 [1] CRAN (R 4.0.5)
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##  officer     * 0.3.18     2021-04-02 [1] CRAN (R 4.0.5)
##  pacman      * 0.5.1      2019-03-11 [1] CRAN (R 4.0.5)
##  pillar      * 1.6.1      2021-05-16 [1] CRAN (R 4.0.5)
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##  purrr       * 0.3.4      2020-04-17 [1] CRAN (R 4.0.5)
##  R6          * 2.5.0      2020-10-28 [1] CRAN (R 4.0.5)
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##  rlang       * 0.4.11     2021-04-30 [1] CRAN (R 4.0.5)
##  rmarkdown   * 2.8        2021-05-07 [1] CRAN (R 4.0.5)
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##  scales      * 1.1.1      2020-05-11 [1] CRAN (R 4.0.5)
##  sessioninfo * 1.1.1      2018-11-05 [1] CRAN (R 4.0.5)
##  stringi     * 1.5.3      2020-09-09 [1] CRAN (R 4.0.3)
##  stringr     * 1.4.0      2019-02-10 [1] CRAN (R 4.0.5)
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##  systemfonts * 1.0.1      2021-02-09 [1] CRAN (R 4.0.5)
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##  tidyr       * 1.1.3      2021-03-03 [1] CRAN (R 4.0.5)
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##  vctrs       * 0.3.8      2021-04-29 [1] CRAN (R 4.0.5)
##  viridisLite * 0.4.0      2021-04-13 [1] CRAN (R 4.0.5)
##  webshot     * 0.5.2      2019-11-22 [1] CRAN (R 4.0.5)
##  withr       * 2.4.2      2021-04-18 [1] CRAN (R 4.0.5)
##  xfun        * 0.23       2021-05-15 [1] CRAN (R 4.0.5)
##  xml2        * 1.3.2      2020-04-23 [1] CRAN (R 4.0.5)
##  yaml        * 2.2.1      2020-02-01 [1] CRAN (R 4.0.4)
##  zip         * 2.1.1      2020-08-27 [1] CRAN (R 4.0.5)
##
## [1] C:/Program Files/R/R-4.0.5/library
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