

Cover letter

Name: Yeneayehu Fenetahun Mihertu

Phone: +86-17797819571; *WeChat ID= yene7979*

Address: University of Chinese Academy of Science (UCAS)

818 south Beijing road, Urumqi, 830011, Xinjiang, China

Email: yeneayehu07@gmail.com/ yeneayehu07@mailsucas.ac.cn

Linkedin: <https://www.linkedin.com/in/yeneayehu-mihertu>

Researchgate: <https://www.researchgate.net/profile/Yeneayehu-Mihertu>

Google Scholar: <https://scholar.google.com/citations?user=DWVJKgsAAAAJ>

To whom it may concern

I am writing to express my interest in a postdoctoral position at your university. I am a Ph.D. candidate at the University of Chinese Academy of Science (UCAS) in Xinjiang Institute of Ecology and Geography and submitted my dissertation and will be defended and graduate in May 2023. My all graduate work, published in SCI journals focus on evaluating the carrying capacity dynamics of rangeland using both field and remote sensing data at optimizing grazing site. My future research goals are to apply and upgrade my skills working with Ecological ecosystem modeling, associated threatening factors, and eco-environmental vulnerability and developed new strategies used for sustainable management of ecological resources and biodiversity in general. I believe my strong background in the ecological research area (dry land ecology, biodiversity, and climate) both field and experimental data organization and integration of both field and remote sensing data make me an ideal candidate to conduct more Ecological, environmental, biodiversity and natural resource projects in your university.

In my dissertation, I mainly focus on rangeland and its associated threatening factors. However, assessing threatening factors doesn't make our study complete in the area of ecology, rather also need to combine mitigation strategy basically focus on the restoration of keystone species to conserve biodiversity resources from both wetland and the dry land ecosystems. Therefore, to refine and complete our understanding of our ecosystem I plan to focus on different mitigation strategies using local indigenous eco-friendly plant species. The skills I learned both from Ethiopia and China during my BSc, MSc, and Ph.D. studies together with my different Professors and supervisor (prof. Wang Yongdong and Xu Xinwen) both field and experimental studies have prepared me well to conduct, and organize ideal project concepts and this make me exactly fit with

your position and confidently preform your idea as well. I am well prepared to do my part teaching as well as researching, having taught a range of ecology and related courses. All in all I have well experienced in teaching, awareness creation, laboratory, and fieldwork.

I am enclosing my very short curriculum vitae, short sample concept note research, only some of the published papers, working statements as well as the history of my education. I also attached a letter of reference from my work colleague, MSc, and Ph.D. supervisors. Please don't hesitate to contact me if I could provide additional information or materials that will aid you in the evaluation of my application.

I would greatly appreciate the opportunity to talk with you more about my fit at your university. Thank you for your time and consideration.

Sincerely,



Yeneayehu Fenetahun Mihertu (PhD candidate)

University of Chinese Academy of Science (UCAS), Xinjiang Institute of Ecology and Geography (XIEG)

Curriculum Vitae

Personal information



Full name	Yeneayehu Fenetahun Mihertu
Sex	Male
Date, place of birth	14 July, 1989, W/Gojjam, Ethiopia
Mobile	+86-17797819571
E-mail(s)	Yeneayehu07@gmail.com / yeneayehu07@mails.ucas.ac.cn
LinkedIn	https://www.linkedin.com/in/yeneayehu-mihertu
Research gate	https://www.researchgate.net/profile/Yeneayehu-Mihertu
Google Scholar	https://scholar.google.com/citations?user=DWVJKgsAAAAJ
ORCID ID	https://orcid.org/0000-0003-1127-5504
Nationality	Ethiopian
Marital status	Married
Research Interest	Rangeland management and Ecology; Environmental ecology; Biodiversity; Natural resources.

Education/qualification with dates

1. Philosophy of Doctor in Ecology (Ph.D.)	From the University of Chinese Academy of Sciences with host institution of Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, China (September 2019 - June 2023).
Dissertation Topic:	Analysis of Eco-environmental vulnerability and Assessment of Carrying Capacity Dynamics in Borana rangeland, Southern, Ethiopia
2. Master of Sciences in Ecology	From the University of Chinese Academy of Sciences with host institution of Xinjiang Institute of Ecology and

Geography, Chinese Academy of Sciences, China
(September 2017 - June 2019).

Thesis Topic: **Dynamic carrying capacity analysis as tool for Scientific Management approach in range improvement. With case of Yabello, Southern Ethiopia.**

3. Bachelor of Science Degree (BSc) in Biology From Bahir Dar university, Ethiopia (September 2009-June 2012).

Title of bachelor degree thesis **Testing the repellence potential of common tree leaves against house flies.**

Work experience and Dates

1. Ethiopian Biodiversity Institute (EBI) As an **Assistant researcher** from December 2016- September 2017. www.ebi.gov.et

Main duties performed

- Assessed the environmental impact and sustainability of biodiversity and projects.
- Carried out field Dynamics and surveys to collect ecological data (invasive species and indigenous crop data)
- Sustainable Land Management

Give Training and Awareness creation for the local communities

2. Haramaya University As **Sinner laboratory assistant** from September 2012-Dec 2016. www.haramaya.edu.et

Main duties performed

- Teaching general biology courses for BSc students.
- Teaching both BSc and MSc students about general laboratory handily
- Teaching Microbiology and Biotechnology laboratory nodule for BSc students.
- Doing both BSc, MSc, and Ph.D. experimental projects.

3. Current Activities

✓ Assigned by my supervisor to assist both BSc and MSc students with their paper and laboratory work

✓ Provide for Undergraduate students' Global change Ecology course.

Write a grant proposal that focuses on Soil and Water Conservation; Watershed management; Degraded highlands Restoration/Rehabilitation.

Skills

Decision making; Microsoft Excel; Data collection; Data cleaning; Statistics; Problem solving; Communication; SWOT analysis; Creativity; Data management; Critical thinking

Publication (s) during the period of study

Fenetahun, Y., You, Y., Xin wen, Xu. and Yonggong, W., 2022. Borana rangeland of southern Ethiopia: Estimating biomass production and carrying capacity using field and remote sensing data. *Plant Diversity* 44 (2022) 598-606.

Fenetahun, Y., You, Y., Fentahun, T., Xinwen, X. and Yong-dong, W., 2021. Effects of grazing intensity on forage nutritive value of dominant grass species in Borana rangelands of Southern Ethiopia. *PeerJ* 9:e12204.

Fenetahun, Y., You, Y., Xu, X., Nzabarinda, V. and Wang, Y., 2021. Impact of grazing intensity on soil properties in Teltele rangeland, Ethiopia. *Front. Environ. Sci.* 9.

Fenetahun, Y., You, Y., Xu, X., Nzabarinda, V. and Wang, Y., 2021. The Impact of Political Instability on Sustainable Rangeland Management: A Study of Borana Rangeland, Southern Ethiopia. *Agriculture*, 11, 352.

Fenetahun, Y., Yuan, Y., Xinwen, X. and Yongdong, W., 2021. Effects of Grazing Enclosures on Species Diversity, Phenology, Biomass, and Carrying Capacity in Borana Rangeland, Southern Ethiopia. *Front. Ecol. Evol*, 8:623627.

Fenetahun, Y., XU, X.W. and WANG, Y.D., 2020. Analysis of eco-environmental vulnerability: Implication for bush encroachment and livestock population dynamics of

the Teltele rangeland, Southern, Ethiopia. *APPLIED ECOLOGY AND ENVIRONMENTAL RESEARCH*, 18(5):7255-7278.

Fenetahun, Y., XU, X.W. and WANG, Y.D., 2020. Forage composition, biomass and carrying capacity dynamics in Yabello rangeland, Southern Ethiopia using different grazing sites. *APPLIED ECOLOGY AND ENVIRONMENTAL RESEARCH*, 18(5):7233-7253.

Fenetahun, Y., Yong-dong, W., You, Y. and Xu X.W., 2020. Dynamics of forage and land cover changes in Teltele district of Borana rangelands, southern Ethiopia: using geospatial and field survey data. *BMC Ecol*, 20, 55.

Fenetahun, Y., Wang Y.D. and Xu-X., 2020. Assessment of impact of ecological elevation on grass species' diversity in Yabello Rangeland, Southern Ethiopia. *IJBC*, 12(2):118-127.

Fenetahun, Y., XU, X.W, YOU, Y. and wang, Y.D., 2020. Effects of Vegetation Cover, Grazing and Season on Herbage Species Composition and Biomass: In Case of Yabello Rangeland, Southern Ethiopia. *Journal of Resources and Ecology*, 11(2): 159–170.

Fenetahun, Y., XU, X.W., Wang, Y.D., 2019. An Evaluation of the Effect of termites on Rangeland Degradation: The Case of Yabello, Southern Ethiopia. *Journal of Resources and Ecology*, 10(5): 525–529.

Fenetahun, Y., Wang Y.D. and Xu-X. (2019). Determinants of pastoral communities for adoption of forage production technology in Yabello rangeland, Southern Ethiopia. *Journal of Ecology and The Natural Environment*, 11(8):108-114.

Fenetahun Y, Xu-Xinwen, Yong-dong W (2019). Rehabilitating Benefits and its Sustainability of a Degraded Semi-arid Rangeland in Yabello Southern Ethiopia. *J Biodivers Manage Forestry* 8:1. Pp.1-5.

Fenetahun Yeneayehu, Xu-Xinwen, Wang Yong-dong (2019). “Impact of Water Availability and Conservation Trends on Livestock and Community Mobilization: In Case of Yabello, Southern, Ethiopia”. *Annals of Ecology and Environmental Science* 3(2), pp.29-36

Yeneayehu Fenetahun, Xu-Xinwen, Wang Yong-Dong. Assessing Rangeland-Soil Degradation Induced by Over Grazing. In case of Yabello Rangeland Southern Ethiopia. *Haya Saudi J Life Sci.* 2019 4(2), <http://DOI:10.21276/haya.2019.4.2.4>.

Fenetahun Yeneayehu. “Over View of Socio-Economic Data on Eastern Ethiopia Region (Harar Biodiversity Center Working Zone)”. *Acta Scientific Agriculture* 3.4 (2019): 196-206.

Fenetahun Yeneayehu, Xu-Xinwen, Wang Yong-dong (2018). Assessment of Rangeland Management Approaches in Yabello: Implication for Improved Rangeland and Pastoralist Livelihoods. Review Paper. *International Journal of Advanced Research in Botany (IJARB)*, 4(3), pp.16-25. <http://dx.doi.org/10.20431/2455-4316.0403002>.

Fenetahun Yeneayehu, Wang Yongdong, Xu Xinwen and Girma Eshetu. Ecological assessment of type, abundance and infestation status of invasive alien species (IAS) in eastern part of Ethiopia; suggestion of inventory and monitoring protocols–IAS. *MOJ Biology and Medicine* 2018:3(5).

Fentahun T and **Fenetahun Y**. Case Management Protocol and Tips to Manage Mental Health and Wellbeing during Corona Virus Disease-19 (COVID-19) Case Study. *Cytol Histol Int J* 2020, 4(1):

Fenetahun Y and Fentahun T. Socio-economic profile of the arid and semi-arid agropastoral region of Borana rangeland Southern, Ethiopia. *MOJ Eco Environ Sci.* 2020;5(3):113–122. <http://DOI:10.15406/mojes.2020.05.00183>.

Fenetahun Yeneayehu, Xinwen Xu, Yongdong Wang. Assessment of Range Land Degradation, Major Causes, Impacts, and Alternative Rehabilitation Techniques in Yabello Rangelands Southern Ethiopia. *Review paper. Preprint* <http://doi:10.20944/preprints> 201807. 0198. v1.

Fentahun T, **Fenetahun Y**. Synthesis of silver nanoparticles using bacterial and fungal reduction methods and analytical evaluation of their physical and antimicrobial characteristics. *Int J Biosen Bioelectron.* 2019; 5(3):69–76. <http://doi:10.15406/ijbsbe.2019.05.00156>.

Fenetahun Y. and Girma E. Assessment of students' knowledge and perceptions about biodiversity and conservation method in Harari regional State, eastern Ethiopia. *International Journal of Botany Studies* 2018;3(1): 57-66.

Fenetahun Y. and Girma E. Community based eradication strategy and response tactics of the IAS *Prosopis juliflora* early infested nursery site in babile worked, Erer bada Kebele Eastern Hararghe, Ethiopia: Case Study. *International Journal of Botany Studies* 2018; 3(1):70-73.

International and National Conference and Workshops Awards and Certification on participation and presentation

The 8th Annual National Conference on the theme “*Agriculture and Environmental Management for Sustainable Development*” from May 22-23/2021 Organized by the College of Agriculture and Environmental Science of Bahir Dar University.

The 9th Annual Science Conference (ASC2021) on the theme “*Collaborative Scientific Researches for Solving Current Challenges*” Was organized by Science Collage of Bahir Dar University from May 20-21/2021.

The 6th National research conference on “*Indigenous knowledge and Science for Green Environment*” Organized by the College of Natural and Computational Science of Dire Dawa, University Ethiopia (April 16-17) 2021.

The 6th Annual Conference and Workshop of *THE ETHIOPIAN FISHERIES AND AQUATIC SCIENCES ASSOCIATION (EFASA)*; 2017.at Wollo University, Ethiopia.

The 8th Annual Conference and Workshop of *THE ETHIOPIAN FISHERIES AND AQUATIC SCIENCES ASSOCIATION (EFASA)*; 2019. at the University of Gondar, Ethiopia.

The 27th Annual Conference of the Biological Society of Ethiopia (Co-hosted by Ethiopian Biodiversity Institute) Sponsored by Ministry of Environment, Forest and Climate Change

” *Mainstreaming Biodiversity in Ethiopian Production Sectors: A Viable Strategy for Conserving Ethiopia's Mega diversity* “April 7-8, 2017, Addis Ababa, Ethiopia.

The 28th annual Conference of Biological Society of Ethiopia from 20-21 April 2018 in Addis Ababa. “*The production of eco-friendly products necessitates forging public-private partnership in joining forces to fully realize the goals set forth in climate resilient growth strategy of Ethiopia*”.

The 3rd World Congress on “*NATURAL PRODUCTS CHEMISTRY AND RESEARCH & 12th WORLD PHARMA CONGRESS*” October 16-18, 2017 Budapest, Hungary.

Yeneayehu Fenetahun Mihertu and Girma Eshetu Teshome. Impact of invasion: a case study on the ecological and socio-economic impact of lantana camara (L.) In gursum woreda, eastern hararghe, Ethiopia. Proceeding paper on the IXth Annual Conference and Workshop of THE ETHIOPIAN FISHERIES AND AQUATIC SCIENCES ASSOCIATION (EFASA); 2017. at Wollo University, Ethiopia.

Submitted articles or in preparation

Fenetahun, Y., Yuan, Y., Xinwen, X. and Yongdong, W. Effects of land-use intensity on vegetation species across elevation in Borana rangeland, Southern Ethiopia (in preparation).

Fenetahun, Y., Yuan, Y., Xinwen, X. and Yongdong, W. Estimate the environmental and economic costs associated with encroachment of woody invasive species in the Borana rangeland, Southern Ethiopia: using participatory approach (*Accepted*).

Grants/Awards

1. National Research and Development Network to Conserve Threatened Yehab (*Cordeauxia Edulis*) Species, [2015-2018] **(PI), (\$500,000)**. *Fund source in collaboration with Jijiga University, Ethiopia, and Ethiopian Biodiversity Institute.*
2. Dynamic carrying capacity analysis as a tool for Scientific Management approach in range improvement. In the case of Borena, Southern Ethiopia, [2018-2022] **(\$120,000)**. *Fund source University of Chinese Academy of Science, Xinjiang Institute of Geography and Ecology, Urumqi*

International scholarship/fellowship award, certificates, Training

- ✓ The CAS-TWAS President’s Fellowship Programme for Ph.D. study [2019-2023].

- ✓ The **University of Chinese Academy of Sciences (UCAS)** Fellowship Programme for MSc study [2017-2019]
- ✓ **Excellent International Graduate** student award of UCAS [2021]
- ✓ Science Diplomacy Workshop Themes: **Healthcare, Climate Change, Energy Solutions & Disaster Management** held online during 17-21 October 2022 in association with TWAS and the National Institute of Advanced Studies (NIAS).
- ✓ Certificate of professional competency of Environmental consultant given in August. 2021.
- ✓ The Talent Firm Training on human capital skill development and certification.
- ✓ Training on validation and application of remote sensing products in Ecology and Environment for BRICS Countries from 24-26 May 2022 organized by Russia, China, and India.
- ✓ International training workshop on Earth observation for sustainable development in developing countries, online from 26-28 July 2022.
- ✓ Fundamental concepts of metrology, calibration, and evaluation of uncertainty in measurements from 17-20 June 2015 from Haramaya University, Ethiopia.
- ✓ Provide training on “Basic science laboratory for Junior, Secondary, and Preparatory school teachers organized by Haramaya University from 1-5 February 2016.

Membership in Scientific Societies

- Ethiopian Fisheries and Aquatic Sciences Association (EFASA).
- Biological Society of Ethiopia (BSE).
- African Forest Forum (AFF).
- Royal Society of Biology (RSB) e.t.c.

References

1. Wang Yong-dong (Professor of Desert and Oasis Ecology)
Address: Xinjiang Institution of Ecology and Geography, Chinese Academy of Science, Urumqi 830011, China.
Email: wang@ms.xjb.ac.cn / nunuwangy@gmail.com
Mobile: +8613999150554

2. Xu Xinwen (Professor of Desert and Oasis Ecology)

Address: Xinjiang Institution of Ecology and Geography, Chinese Academy of Science,
Urumqi 830011, China.

Email: xinwen@ms.xjb.ac.cn/ Xuxinwen2023@gmail.com

Mobile: +8618999150354

3. Girma Eshetu Teshome (PhD, in Agronomist)

Address: - Ethiopian biodiversity institute (EBI),

Position: - Director

Email: -amen0910g@gmail.com

Mobile: - +251-910163950

The above information is true to the best of my knowledge

Signature



Date

May/2023

Award Certificate



A. Msc and PhD Transcript

中国科学院大学
University of Chinese Academy of Sciences

Academic Transcript

Name: YENEAYEHU FENETAHUN MIHERTU
Student ID: 2017B010251002(M) Student Type: Student of a Successive Master's and Doctoral Program
2019X8010251002(D)
School/Institute: Xijiang Institute of Ecology and Geography
Major: Ecology(M)
Ecology(D)

TERM	COURSES	HOURS	CREDITS	EXAM
2017—2018 AUTUMN TERM	Molecular Biology and Genetics	60	4.0	91
	Developmental Biology	60	4.0	92
	Climate Change, Environmental and Natural Resources Management	60	4.0	92
	Elementary Chinese-Reading and Writing	120	2.0	68
	Elementary Chinese-Listening and Speaking	120	2.0	68
	Introduction to Chinese Culture	48	2.0	89
	Scientific Writing	48	2.0	73
	Plant Physiology and Botany	60	4.0	91
	Conservation Biology	21	2.0	96
	Physical Geography	60	4.0	95
2017—2018 SPRING TERM	Global Change Ecology	60	4.0	91
	Climate Change	60	4.0	91
	Research Ethics	21	2.0	Pass
2017—2018 SUMMER TERM	English Paper Writing	30	2.0	80
	China Practices	48	2.0	90
2019—2020 AUTUMN TERM	Elementary Chinese-Reading and Writing	120	2.0	90
	Elementary Chinese-Listening and Speaking	120	2.0	90
ALL CELLS BELOW THIS ROW MUST BE LEFT EMPTY				
TOTAL CREDIT				49.0

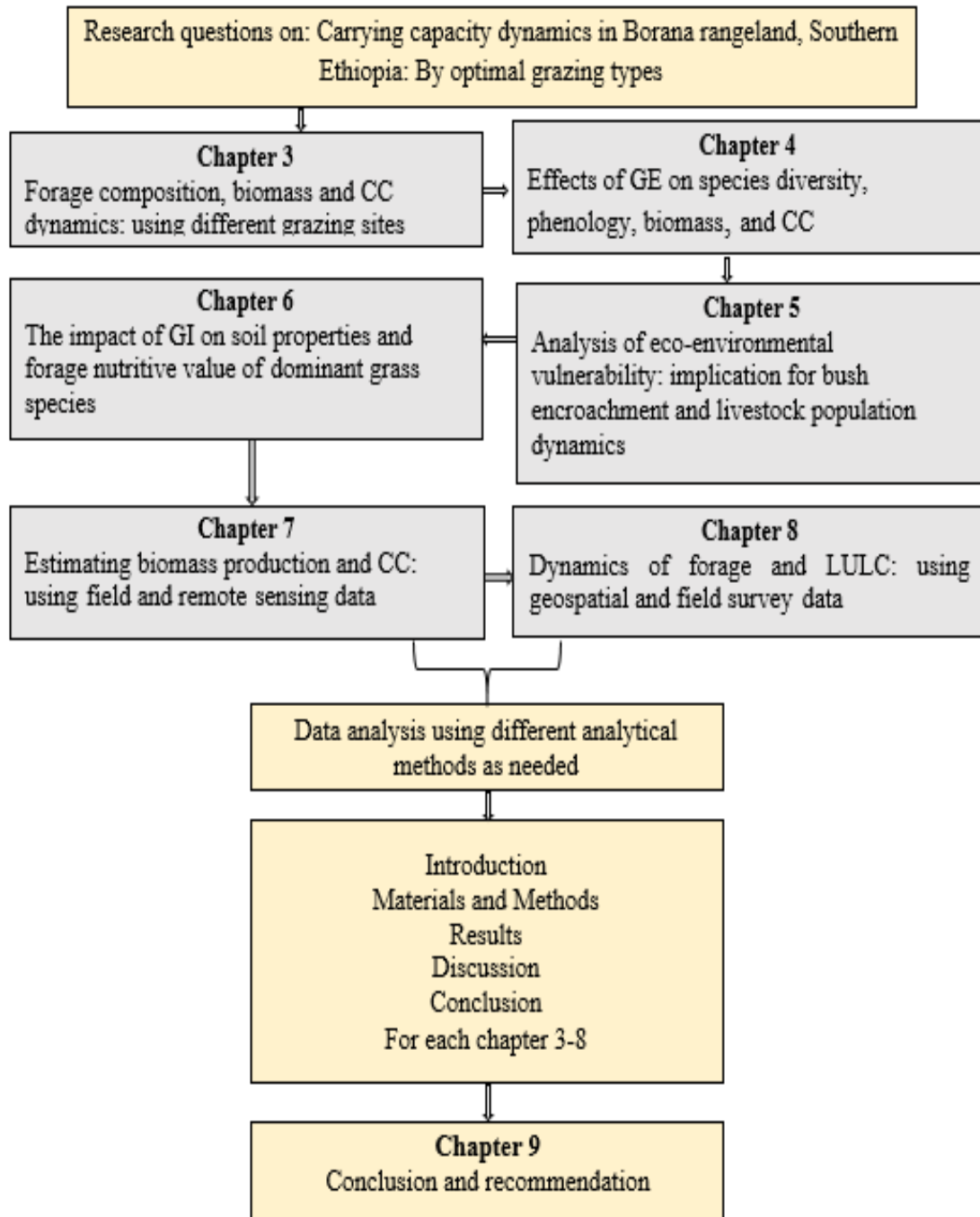
Notes: *W= Score of Make-up Exams, **R= Score of Retaker Courses, P= Pass/Passaged,
I=Blank Not Applicable to Postgraduate Courses.

REVISIT/REAR: DAILY OFFICE - 2020/12/21



Summary of the Ph.D. dissertation

Analysis Eco-environmental vulnerability and Assessment of Carrying Capacity dynamics in Borana rangeland, Southern, Ethiopia
Chapter 1 and 2 introduction and Materials and Methods



Summary of the project proposal

Project Title	Investigate Desertification, Drivers, and Mitigation strategy in Borana, Rangeland, Southern, Ethiopia. Restoration of Keystone spices
Project Duration	36 Months
Estimated Budget	The total area targeted is around 5426 km ² and the total cost of Rehabilitation of this area is estimated around US \$150,000. However, of the total budget, 25% (US \$37,500) will come as beneficiaries' contribution and 75% (US \$112,500) will be incurred by the Implementing agencies.
Stakeholders	As main project leader is the Research team of leads this project. And it will have other supporting partners: <ul style="list-style-type: none"> ➤ The researcher ➤ The propagation biology, physiology, and restoration of native trees and shrubs; ➤ Landscape/watershed restoration ➤ Land husbandry ➤ Plant husbandry ➤ Animal husbandry ➤ Watershed management ➤ Community and/or public relations management ➤ Workers (including guards, daily laborers, etc)
Targeted Areas	The project will target the Borana rangeland of Southern, Ethiopia, which is the primary pastoral area of the country and highly impacted area because of frequent climate change.
Beneficiaries	Direct beneficiaries from the project include the researcher himself, local communities (through direct job creation, livelihood restoration, education, etc.), various Governmental and Non-governmental organizations concerned with landscape restoration, as well as regional and international organizations engaged in similar or related activities. In the long run, Borana has social, economic, and environmental challenges through generating new scientific knowledge and models and also applying these new concepts and models in the field, amidst the poor rural communities that surround the degraded land. In general, Ethiopia (as well as eastern African regions) will benefit from the best experience of the project by learning lessons from restored, diversified and vibrant landscapes in order to manage land desertification.
Project Description	A major difficulty of assessing land degradation is inherently related to the very concept, as 'the loss of the land's capacity to produce goods and services'. Land degradation assessment methods have evolved from classic field survey methods for soil and vegetation mapping and land suitability evaluations to the more recent ecological approaches (Paulos, 2001). Ethiopia is one of the most well-endowed countries in Sub-Saharan Africa in terms of natural resources (Gete et al. 2006). However, natural resource degradation in Ethiopia has been going on for centuries (Hurni et al. 2010). The major causes of land desertification in Ethiopia are rapid population increase, severe soil loss,

	<p>deforestation, low vegetative cover, and unbalanced crop and livestock production (Girma 2001). Topography, soil type,s, and agroecological parameters are also additional factors playing significant roles in the degradation processes influenced by man (Paulos 2001). To combat land desertification, the Ethiopian government launched a massive soil conservation program in the middle of 197 (Hawando 1997). However, success to date has been limited (Paulos 2001). Thus, the purpose of this project will be to assess the causes and impacts of land desertification, adaptive techniques, and possible mitigation strategy in the semi-arid area of Borana rangeland, southern Ethiopia.</p>
<p>Project Objectives</p>	<p>General objective The key objective of this project is to derive a methodology for the assessment of land desertification risk in areas using simple indicators and possible mitigation methods.</p> <p>Specific objectives</p> <ul style="list-style-type: none"> ➤ To investigate land degradation and desertification through vegetation indices. ➤ To evaluate the risk of desertification affecting different types of land in the study area. ➤ To identify Aeolian desertification as a major cause of arid land degradation in Borana ➤ To develop methods for selecting, cultivating, and restoring various keystone spices in the degraded area. ➤ To generate models for developing keystone resources, biodiversity, and ecosystem /function within the shortest possible time. ➤ To transfer indigenous tree propagation and field establishment technology to various stakeholder
<p>Project Activities</p>	<p>Some of the immediate and long-term activities performed in this project shall include:-</p> <ul style="list-style-type: none"> ➤ Evaluate the land use changes in the past 2decades by using Landsat data. ➤ Assess the social, economic, and ecological impact of land desertification on the area. ➤ Look at the indicators and roles of different environmental and biophysical factors for land desertification and future mitigation system together with the local community. ➤ Established nursery site for seeding plants to continue restoration activities on indigenous/tropical trees, watershed, keystone natural resources, biodiversity, as well as livelihoods. ➤ Conducting an awareness creation campaign on the value of restoring indigenous trees’ watershed, keystone natural resources, biodiversity, and livelihoods. ➤ Transformation of the degraded and desertification land area to <i>Center for the Restoration of Keystone Natural Resources and Livelihoods.</i> ➤ Producing educational and/or scientific publications, disseminating new knowledge consistent with the project’s objective. <p>In general, the project has planned the following activities to involve external stakeholders:</p>

	<ul style="list-style-type: none"> ➤ Organize stakeholders/collaborators consultation and awareness creation workshop at the onset of the project ➤ Arrange field days for demonstration of the project activities ➤ Invite NGOs and other developmental organizations working on natural resource conservation and environmental issues in order to assess the progress and success of the project ➤ Organizing stakeholders consultation workshops for the dissemination of project outputs to competent authorities and natural resource management stakeholders for future directions and sustainability of the project
Expected Results	<p>The following basic outputs and other short-term results will be expected from this project:</p> <p>Assist and demonstrate a truly transformed practical work that has the capacity for addressing Borana’s critical challenges namely, land desertification and degradation and related issues like environmental, food, energy, and poverty challenges. One essential merit of the project is its transgenerational impact, as Ethiopia shall be preoccupied with its land desertification challenges during the entire twenty-first Century and beyond. Produce quantifiable, concrete, and relevant outputs that are critical for confidence building in the area’s protracted fight for the restoration of:</p> <p>(a) Native trees and shrubs; (b) Watersheds; (c) biodiversity; (d) Keystone natural resources (including water and soils); as well as, (e) Essential life support systems. The establishment of such a Project amidst a fragile landscape threatened with increasing numbers of people, deforestation, land degradation, and climate change is critical not only for Borana but also for Ethiopia and widely for the eastern African region. Examining mechanisms and developing appropriate models for the restoration of land desertification and another biological resource within it. Analysis of the major cause, its effect, and future mitigation strategy for desertification. Important steps will be established as nurse sites used for the conservation of local species and used for increasing ethnobotanical significance, animals, birds, insects, and other macro- and microorganisms. Other benefits include simplified technology transfer on combatting desertification techniques, creation of environmental awareness among the peasants and all other stakeholders, as well as restoration of livelihoods.</p>
General Project methodology	<ul style="list-style-type: none"> ➤ Assessment of land use change ➤ Evaluation of the impact of desertification ➤ Established and supporting quality nursery facilities and staff are necessary for the restoration of desertification areas by local species <ul style="list-style-type: none"> ✓ Nursery-Site Selection, Layout, and Development ✓ Snowing and planting seeds on the prepared nursery site ✓ Key factors used for mitigating of reforestation techniques