



**WORLD BANK GROUP**

**AFRICA CENTER OF EXCELLENCE FOR CLIMATE SMART AGRICULTURE AND  
BIODIVERSITY CONSERVATION (ACE Climate SABC)  
HARAMAYA UNIVERSITY**



***FACTS AND FIGURES (2017-2021)***

## Vision

ACE Climate SABC strives to be one of the leading Africa Centers of Excellence with international reputation by 2025.

## Mission

The mission of ACE climate SABC is to produce competent graduates in climate smart agriculture, biodiversity and ecosystem management and related fields; undertake rigorous, problem-solving and cutting-edge research; disseminate knowledge and technologies; and provide demand-driven and transformative community services.

## Motto

Venturing to a resilient future

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## Background

Haramaya University (HU) is one of the prestigious higher learning institutions in Ethiopia. It pioneered the field of agricultural sciences and the provisioning of the tripartite functions of education, research, and community outreach in the country. Early establishment of the university has a notable historical perspective. An agreement was signed between the Governments of Ethiopia and the United States of America (USA) on 16 May 1952, commissioning Oklahoma State University to initiate and operate an agricultural college in the country that was based on the US Land Grant University model to dispense the functions of agricultural education, research, and community outreach nationally. With these lofty goals and mission, the **Alemaya College of Agriculture and the Mechanical Arts** was established in 1954 near the town of Haramaya at the small village called Baate. The institution operated as a College of Agriculture under the Addis Ababa University up until 1986. Graduate study programs were launched in several fields of agriculture in the 1979/80 academic year with 29 students.

In 1987, the college was promoted to the level of university by the Ethiopian government and given the name Alemaya University of Agriculture. In 1996, the Alemaya University of Agriculture was renamed Alemaya University with the opening of new faculties hosting new disciplines beyond agriculture, including health, education, business and economics and social sciences at its Haramaya and Harar campuses. In 2006, the name Alemaya University was changed to Haramaya University, with the name 'Haramaya' denoting the original local vernacular name of the nearby town where the institution was founded. Currently, the University is categorized under one of the Research Universities in Ethiopia that strives to get international accreditation(s) in its fields of research capitalizing especially on Agriculture and environmental studies.

## ACE Climate SABC

Africa Center of Excellence for Climate Smart Agriculture and Biodiversity Conservation (ACE Climate SABC) at Haramaya University in Ethiopia is one of the pre-eminent projects with a loan grant from the World Bank that started operating in 2017. It provides opportunities for African students to enroll in transdisciplinary post-graduate studies conducted by a truly global faculty. The Center is a breakthrough for the growth and program advancement to address challenges caused by climate change and biodiversity loss in Eastern and Southern Africa region. To achieve its vision and missions, the Center provides competitive scholarship for young scholars from different African countries.

## Training and Research at the Center

The Center runs two MSc and one PhD programs. These are:

1. MSc in Climate Smart Agriculture;
2. MSc in Biodiversity and Ecosystem Management;
3. PhD in Climate Smart Agriculture and Biodiversity Management.

PhD is given in the field of Climate Smart Agriculture and Biodiversity management with sub specializations in:

- Crop Production and Management
- Soil and Water Management
- Livestock Production and Management
- Policy, Institution and Innovation
- Biodiversity Management

Trainings are provided through carefully designed curricula with both coursework and interdisciplinary research supervision provided by Haramaya University faculty members as well as scholars other national, regional and international institutions.

Research activities at the Center aimed to generate climate smart agriculture and biodiversity conservation related knowledge, technologies and innovation under five thematic areas, namely, (1) Climate Smart Crop Production and Management, (2) Livestock Production and Management, (3) Climate Smart Soil and Water Management, (4) Biodiversity Conservation and Utilization under the changing climate, and (5) Policies, Institutions , and Innovations for Climate SABC.

Short term courses that enhance knowledge and skill are delivered in collaboration with partners in areas related to climate smart agriculture and biodiversity. So far, short term trainings have been delivered in areas of digital and information literacy and research tools, scientific writing and research method, eco friendly land-scaping and waste management, greenhouse gas emission measurement and mitigation strategies, food security, integrated decision support system, and predicting and projecting climate change and variability. the Center also supports short-term trainings and experience sharing of faculty, project staff and students provided elsewhere.

## **Facilities**

The Center mobilizes academic and research resources. It has accommodation where students comfortably reside during their stay on campus. The Center has state-of-the-art teaching and video conferencing rooms. It also uses other facilities of the University including digital library, laboratories, sport facilities, day care center and health services.



## Where our Students Come from?

ACE Climate SABC students mainly come from Eastern and Southern African countries such as Ethiopia, Kenya, Malawi, Rwanda, Tanzania, Uganda, Zambia and Zimbabwe.

## Duration of Study

The duration of study for PhD and MSc programs are four years (one year of course work and three years for research) and two years (one year for course work and one year for research), respectively.

## Admission Requirements for PhD Program in Climate Smart Agriculture and Biodiversity Management

Eligible candidates mainly from African countries are invited to apply for studying in the above-mentioned PhD and MSc programs starting from this date of announcement up to 30 April 2017. The medium of instruction for all three programs will be English. Deliberate effort and consideration will be made towards correcting the apparent gender imbalance that exists in professional development at higher educational institutions in the region, and particularly in the agricultural sciences. The Center has set different admission conditions for male and female candidates.

1. For male applicants, a cumulative grade point average (CGPA) of 3.25 or equivalent at the master's level and 3.00 or equivalent at the Bachelor's level. For female applicants, a cumulative grade point average (GPA) of

- 3.00 or equivalent at the master's level and 2.75 or equivalent at the Bachelor's level are the minimum requirement to join the PhD program.
2. Applicants must have an MSc degree from a recognized University or College in fields related to agriculture (plant sciences, animal sciences, agricultural economics, rural development and agricultural extension) and natural resource management (natural resource economics, agro-forestry and forest management, rangeland management, biodiversity conservation and management, soil and water conservation, land resource management and administration, climatology/agro-meteorology, disaster/natural risk management and other related disciplines).
  3. Applicants must submit a research concept note relevant to the sought PhD degree. The concept note should not exceed 2000 words. The concept note should clearly define the research problem, elucidate research done so far to address the problem, identify gaps, justify the research work to be done, formulate clear objectives, methods, and indicate expected outcomes, how the outcome will tackle problems related to climate change in priority area, with annotated references.
  4. Applicants should also submit a copy of the abstract of their Master's thesis as well as copies of their scientific publications.
  5. Maximum age at the time of application is 35 years.
  6. Applicants must pass an interview for admission into the programs (interviews will be conducted via Skype for students from countries other than Ethiopia and in person or via Skype for those in Ethiopia at convenience).

## Admission Requirements for Master's Programs

- Applicants for MSc in Climate Smart Agriculture must hold a BSc or its equivalent from a recognized university or college in agricultural and environmental sciences and related fields; applicants from non-agricultural backgrounds may be required to take remedial/bridging courses to compensate for deficiencies as recommended by appropriate academic units.
- Applicants for MSc in Biodiversity and Ecosystem Management (BCEM) must hold a BSc degree from a recognized university or college in biological and environmental sciences, agricultural sciences, wildlife management and ecotourism, natural resources management, forestry, geography, and related fields.
- Male applicants must have a minimum Bachelor's Cumulative Grade Point Average (CGPA) of 3.00 or its equivalent. Female applicants must have a minimum Bachelor's Cumulative Grade Point Average (CGPA) of 2.75 or its equivalent.
- Maximum age at the time of application is 30 years.
- Applicants must pass an interview for admission into the programs of their choice (interviews will be conducted via Skype for students from countries other than Ethiopia and in person for those in Ethiopia).

## Scholarship Modalities and Sponsorship

Under the World Bank Project, scholarship opportunities were available on a competitive basis for eligible male and female students from Eastern and Southern Africa Region (Kenya, Malawi, Tanzania, Rwanda, Burundi, Mozambique, Uganda, and Zambia) as well as for Ethiopian female students. Successful male Ethiopian candidates were granted financial support to cover research expenses. Since there was limited funding for scholarship opportunities, only candidates can fully or partially cover costs of their studies were given preferences for admission. Applicants eligible for scholarships used to receive grants which included monthly stipends, tuition fees, medical

services, book allowances, research funds, and accommodation. Since funds allotted for scholarship under the World Bank project was fully granted to students admitted from the first to fourth Cohorts, the Center is aggressively working for other source of funding to sustain the scholarship program.

## Tuition Fees and Research Grants

Self-sponsored PhD students joining the Center are required to pay a tuition fee of 5000 USD per annum. Self-sponsored MSc students are required to pay a tuition fee of 3500 USD per annum. PhD students sponsored by the Center are entitled to a research grant maximum of 8000 USD whereas MSc students can utilize maximum of 3000 USD for their theses research.

## Documents Required for Application

The following documents should be enclosed in the application for admission:

1. A cover letter indicating for which program of study the application is being made and description of the motivation to join the program.
2. A curriculum vitae (CV).
3. Authenticated Master's and Bachelor's degrees and transcripts for PhD applicants, and Bachelor's degrees and transcripts for Master's applicants.
4. Recommendation letters from at least two knowledgeable academic referees about the applicant.
5. A support letter from an employer (if any).
6. A copies of valid identification card or passport.
7. Sponsorship letter from an organization (if any). Applicants from countries where English is not the medium of instruction must also prove that they are proficient users of the English language with written evidence from a relevant body or institution in their respective countries.

## The Center Management

The Center management and staff include Center Leader, Deputy Center Leader, Project Manager, Research and Training head, Finance Officer, Communication Officer, Procurement and property management officer and office manager. For more information on the organizational structure, please visit the centers website through this link: <http://www.climatesabc.haramaya.edu.et/>

## Partners

Since its establishment, ACE Climate SABC has formed collaborative partnership with several institutions, including the World Bank, Inter-University council for Eastern Africa (IUCEA); African Conservation Tillage Network (ACT), Nairobi, Kenya; Regional Universities Forum for Agricultural Sciences (RUFORUM); Bukavu University, DRC; Regional Scholarship and Innovation Fund-Partnership for Skills in APPLIED Sciences, Engineering and Technology, (RSIF-PASET); The International Center of Insect Physiology and Ecology (icipe); Natural Resource Institute of the University of Greenwich, UK; Purdue University, USA; Center Excellence for Sustainable Agriculture and Agribusiness Management at Egerton University, Kenya; WISE-Future Center of Nelson Mandela Institution of Science and Technology (NM-AIST) Arusha, Tanzania; Aqua Soul (Mineral Water Factory) in Dire Dawa, Ethiopia; and Harar Brewery, the Subsidiary of Heineken NPV in Ethiopia, Ethiopian Biodiversity Institute, NINT AgroFarm PLC, Ethiopia.

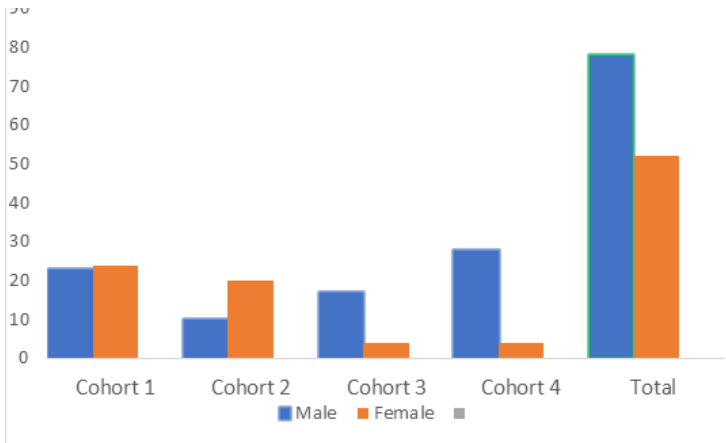
## Student Statistics

Table 1: Enrollement by program, gender and national-regional composition (2017-2021)

Cohort	PhD	MSc	Male	Female	Regional	National	Total
Cohort 1	21	26	23	24	12	35	<b>47</b>
Cohort 2	11	19	10	20	12	18	<b>30</b>
Cohort 3	6	15	17	4	5	16	<b>21</b>
Cohort 4	6	26	28	4	6	26	<b>32</b>
<b>Total</b>	<b>44</b>	<b>86</b>	<b>78</b>	<b>52</b>	<b>35</b>	<b>95</b>	<b>130</b>

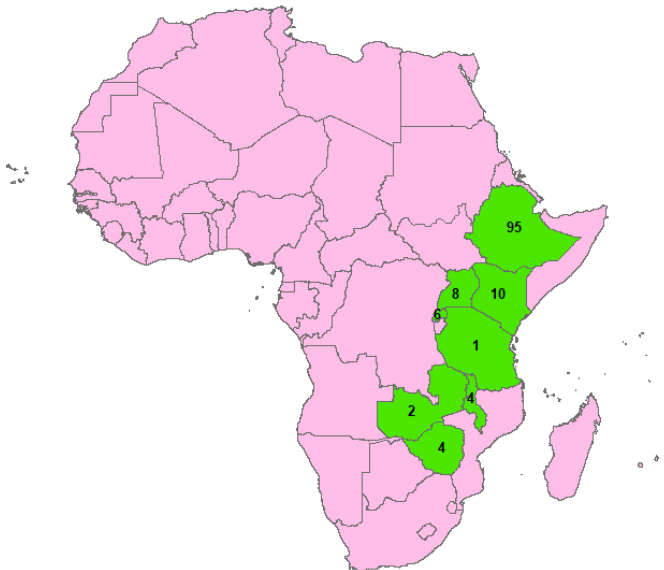
A total of 130 (78 male and 52 female) students have been admitted to the Center from 2017 to 2021 in four cohorts (Table 1). Of the total students, 44 and 86 are PhD and MSc students respectively. In terms of regionality, 26% are regional students coming from seven African countries.

A total of 52 (40%) female students are enrolled from 2017 to 2021 (Figure 1). Across cohorts, 46% of the female students are admitted in the first Cohort followed by 38% in the second and 8% in the third and the fourth. Regarding gender composition, female students constitute 51%, 66%, 19% and 12% for cohort 1, 2, 3 and 4, respectively.



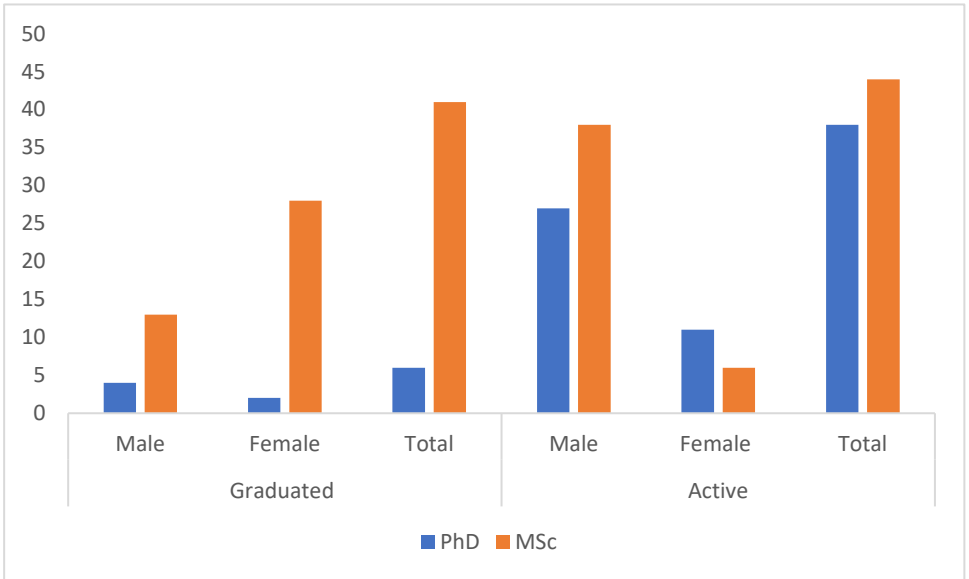
**Figure 1: Enrollment by gender composition across cohorts (2017-2021)**

Out of the total enrollement, 27% (n=35) are regional students coming from seven African countries (Figure 2).



**Figure 2: Enrollement by country**

Forty eight (6 PhD and 42 MSc) students have completed their studies from 2017 to 2021. Out of the total, 64%(n=31) are females. Among the PhD graduates, 33% are females. Similarly, about 69% of MSc graduates are females. Currently 37 PhD and 44 MSc students are on study (Figure 3).

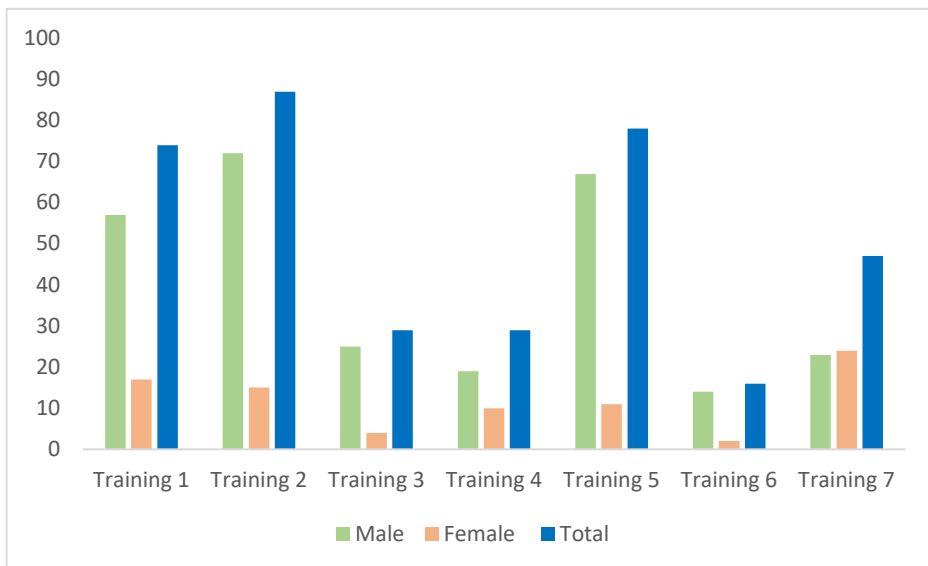


**Figure 3: Number of graduated and active students 2017-2021**



## Short Course Trainees

The Center organized skill enhancer short term trainings on different topics. A total of 360 trainees from different organizations and countries benefited from the trainings(Figure 4). Of the total participants, 23% (n=83) are females.

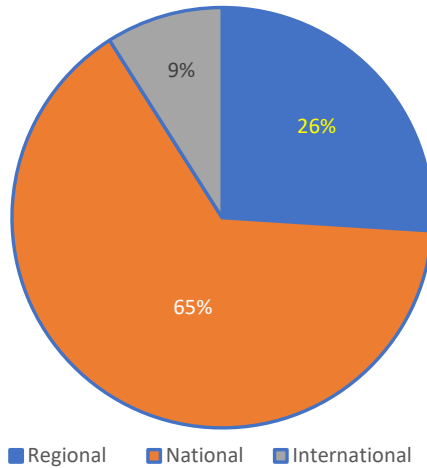


**Note:** Training 1 = Digital and information literacy and research tools; Training 2 = Scientific writing and research method; Training 3 = Eco-friendly landscape and waste management; Training 4 = Greenhouse gas emission measurement and mitigation strategies; Training 5 = Integrated decision support system; Training 6 = Predicting and projecting climate change and variability, and Training 7 = Food security, climate change and modelling.

**Figure 4: Number of trainees that have taken short courses**

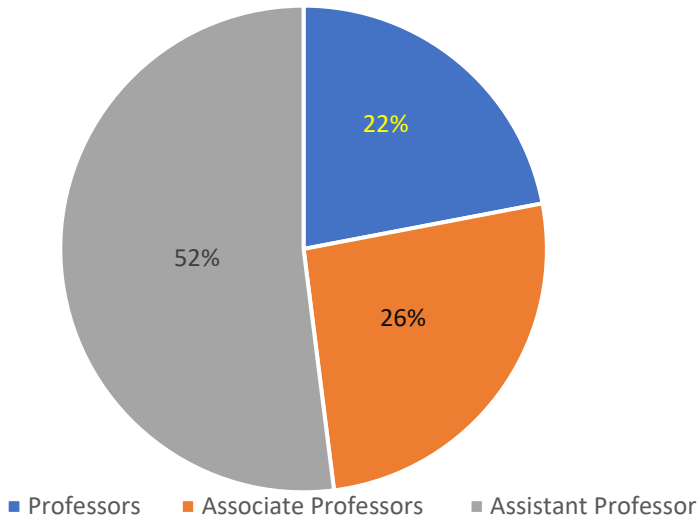
## Visitng Professors

About 146 scholars from different organizations and countries were engaged in the Center’s activities from 2017 to 2021 in teaching courses, supervising students, delivering trainings, seminars and workshops. Of these, 65%, 26% and 9% are national, regional and international scholars, respectively (Figure 5).



**Figure 5: Number of visiting scholars from 2017-2021**

More than 65 faculty members are engaged in different ACE climate SABC activities including teaching, supervising, managing, reviewing proposals, examining theses and/or dissertations, and delivering trainings and seminars. Out of which, 22%, 26% and 52% of faculty members are professors, associate professors and assistant professors, respectively (Figure 6).



*Figure 6: Profiles of faculty members engaged in ACE climate SABC activities by academic ranks from 2017-2021*

### Key Collaborators



## Publications

PhD Students in Africa Center of Excellence for Climate Smart Agriculture and Biodiversity Conservation are expected to publish scientific papers on reputable journals as publication is one of the requirements for their graduation. Thus, some articles published by students and their supervisors on peer reviewed journals are listed in Table 3.

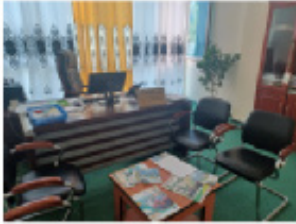
Table 2: List of Some Publications by PhD students

N	Name of the Authors	Topic of Papers Published	Publishing Journals
1	Ashenafi Woldeeslassie, Nigussie Dechassa, Yibekal Alemayehu, Tamado Tana and Bobe Bedadi	Soil and Water Management Practices as a Strategy to Cope with Climate Change Effects in Smallholder Potato Production in the Eastern Highlands of Ethiopia	Sustainability, MDPI
2	Helen Teshome, Kindie Tesfaye, Nigussie Dechassa, Tamado Tana and Matthew Huber	Smallholder Farmers' Perceptions of Climate Change and Adaptation Practices for Maize Production in Eastern Ethiopia	Sustainability, MDPI
3	Titay Zeleke, Fekadu Beyene, Temesgen Deressa, Jemal Yousuf and Temesgen Kebede	Vulnerability of Smallholder Farmers to Climate Change-Induced Shocks in East Hararghe Zone, Ethiopia	Sustainability, MDPI
4	Matiwos Habte, Mitiku Eshetu, Abiyot Legesse, Melesse Maryo and Dereje Andualem.	Land use/cover change analysis and its implication on livestock feed resource availabilities in southeastern rangeland of Ethiopia	Livestock Research for Rural Development

5	Matiwos Habte, Mitiku Eshetu, Abiyot Legesse, Melesse Maryo and Dereje Andualem	The inventory of camel feed resource and the evaluation of its chemical composition in south-east rangelands of Ethiopia	Journal of Veterinary medicine and Science
6	Matiwos Habte, Mitiku Eshetu, Melesse Maryo, Dereje Andualem, Abiyot Legesse & Birhanu Admassu	The influence of weather conditions on body temperature, milk composition and yields of the free-ranging dromedary camels in Southeastern rangelands of Ethiopia	Journal of Cogent Food & Agriculture
7	Michael Abera, Yesihak Yusuf Mammed, Mitiku Eshetu, Fabio Pilla and Zewdu Wondifraw	Physiological, Biochemical, and Growth Parameters of Fogera Cattle Calves to Heat Stress during Different Seasons in Sub-Humid Part of Ethiopia	Animals, MDPI
8	Michael Abera, Mitiku Eshetu, Yesihak Yusuf Mammed, Fabio Pilla and Zewdu Wondifraw	Impact of climatic variability on growth performance of Fogera cattle in Northwestern Ethiopia	Journal of Animal Behaviour and Biometreology
9	Michael Abera, Mitiku Eshetu, Yesihak Yusuf Mammed, Fabio Pilla and Zewdu Wondifraw	Analysis of climate change and land use/cover impacts on Fogera cattle population dynamics at Metekel Ranch, Northwestern Ethiopia	Livestock Research for Rural Development
10	Michael Abera, Yesihak Yusuf Mammed, Mitiku Eshetu, Fabio Pilla and Zewdu Wondifraw	Perception of Fogera Cattle Farmers on Climate Change and Variability in Awi Zone, Ethiopia	Open Journal of Animal Sciences

11	Alefu Chinasho , Bobe Bedadi, Tesfaye Lemma, Tamado Tana, Tilahun Hordofa and Bisrat Elias	Evaluation of Seven Gap-Fill- ing Techniques for Daily Sta- tion-Based Rainfall Datasets in South Ethiopia	Advances in Metereology
12	Alex Zizinga, Jackson-Gilbert Majaliwa Mwanjalolo, Britta Tietjen, Bobe Bedadi, Geof- rey Gabiri and Kizza Charles Luswata	Effect of Mulching and Permanent Planting Basin Dimensions on Maize ( <i>Zea mays</i> L.) Production in a Sub-Humid Climate.	Water, MPDI
13	Abera Assefa Biratu, Bobe Bedadi Solomon Gebreyo- hannis, Gebrehiwot , Tilahun Hordofa , Desale Kidane Asmamaw and Assefa M. Melesse	Implications of land management practices on selected ecosystem services in the agricultural land- scapes of Ethiopia: a review.	International Journal of River Basin Manage- ment, Taylor & Francis
14	Zizinga, Alex, Jackson G.M. Mwanjalolo, Britta Tietjen, Bobe Bedadi, Ramon Amaro de Sales and Dennis Beesiga- mukama	Simulating Maize Productivity under Selected Climate Smart Agriculture Practices Using Aqua Crop Model in a Sub-humid Envi- ronment	Sustainability, MPDI

## Some facilities and resources



## Graduation Photo



*Venturing to a resilient future*

**Staff Photo**



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