



The 5th Pan African Society of Agricultural Engineers International Conference 2023

By: Yvonne Madahana



From Right: Eng. Prof. Lawrence Gumbe, Chairperson KeSEBAE, Hon. Harriette Chiggai, the President's Advisor on Women's Rights, Chief Guest and Eng. Erastus Mwongera, Chairman EBK, Follow the Conference Proceedings During the Opening Ceremony of the 5th PASAE International Conference 2023.

The 5th Pan African Society of Agricultural Engineers International Conference 2023 was held in Kenya from **Wednesday 6 to Friday 8 December 2023**. Organized jointly by the **Kenya Society of Environmental, Biological and Agricultural Engineers (KeSEBAE)** and the **Pan African Society of Agricultural Engineers (PASAE)**, the conference focused on the theme of **Engineering Agenda 2063: The Africa We Want**. With over five hundred attendees from various sectors including industry, academia, governments, businesses, and students in the fields of environment, agriculture, water, food, energy, and related sectors, the conference provided a platform for knowledge sharing and collaboration. The Chief Guest, Hon. Harriette Chiggai, the Presidential's Advisor on Women's Rights, represented the Prime Cabinet Secretary H. E Hon. Musalia Mudavadi, EGH, at our opening ceremony on Wednesday 6 December 2023.

DEAR READER

Welcome to KeSEBAE Newsletter.

A fortnightly Newsletter touching on topical issues affecting our environment.

KeSEBAE NEWS is a Newsletter of the Kenya Society of Environmental, Biological and Agricultural Engineers (KeSEBAE)

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PASAE President, Prof. Michael Faborode

In his speech, he commended the inclusion of the Africa Union (AU) Agenda in this Agricultural Engineering Conference, emphasizing the importance of professionals in Africa's development. The theme, "Engineering Agenda 2063: The Africa We Want," aligns perfectly with this goal. The Chief Guest urged the audience to focus on the priority areas of Agenda 2063, which include fostering a skills revolution through Science, Technology, and Innovation, adopting modern agricultural methods to enhance productivity, promoting Blue Economy projects for accelerated economic growth, ensuring environmentally sustainable and climate resilient economies and communities, developing world-class infrastructure across Africa, and taking full responsibility for financing Africa's development. It is imperative for the audience to focus their efforts on these priority areas to drive progress and achieve the goals set forth in Agenda 2063.



Chief Guest, Hon. Harriette Chiggai, the President's Advisor on Women's Rights

The Chairperson of KeSEBAE, Eng. Prof. Lawrence Gumbe, highlighted the significance of the 5th PASAE Conference as a testament to the dedication of KeSEBAE and PASAE towards the aspirations and objectives of the African continent. He emphasized the crucial role that engineers play in the modern world and in the realization of Agenda 2063's goals.



Chairperson of KeSEBAE, Eng. Prof. Lawrence Gumbe

The President of PASAE, Prof. Michael Faborode, was glad to be holding the 5th PASAE International Conference in Nairobi again, KeSEBAE held the 1st PASAE Conference in 2018. The 5th PASAE Conference looked into aligning with the objectives of the PASAE Report on Agricultural Engineering in Africa. ¹



President of PASAE, Prof. Michael Faborode

The 5th PASAE International Conference 2023 was also graced by the following guests:

- i. Eng. Erastus Mwangera, Chairman Engineers Board of Kenya
- ii. Eng. Grace Kagundu, 1st Vice President of Institution of Engineers of Kenya
- iii. Eng. Richard Kanui, Representative, Principal Secretary, State Department of Crop Development
- iv. Dr. Pascal Sanginga, Representative AFDB
- v. Levis Kavagi, Representative UNEP
- vi. Brian Ouma, Chief Operating Officer, Representative, Vice Chancellor, the University of Nairobi
- vii. Eng. Dr. Fidelis Kilonzo, Representative, Vice Chancellor, Kenyatta University
- viii. Domitila Waititu, Kenya Electricity Generating Company PLC, KenGen



Eng. Erastus Mwangera, Chairman EBK



Eng. Grace Kagundu, 1st Vice President of IEK

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[https://www.pasae.org.za/0_pdf/publications/Jeff/Final%20Agricultural%20Engineering%20in%20Africa%20PASAE%20Report%20\(Hi-Res\).pdf](https://www.pasae.org.za/0_pdf/publications/Jeff/Final%20Agricultural%20Engineering%20in%20Africa%20PASAE%20Report%20(Hi-Res).pdf)



Brian Ouma, Chief Operating Officer, University of Nairobi



Eng. Richard Kanui, Engineering Secretary, Ministry of Livestock Development



A picture of Chief Guest and Other Invited Guests, PASAE and KeSEBAE officials During the Opening Ceremony of the Conference

The Conference featured over forty one (41) papers, with most presenters taking a keen interest in Industrialized Agriculture and Sustainable Environment, Climate Change and Blue Economy subthemes. Other subthemes covered Seamless Connections, Energy for Africa, Housing, Free Trade in Services, Security and Engineering Education and Practice.



Emmanuel Mugwaneza Presenting the Performance Evaluation of Experimental Solar Evaporative Cooling Systems



Tilahun Workneh Presenting on the Potential Evaporative Coolers for Shelf-Life Extension of Fresh Fruits and Vegetables in Sub-Saharan Hot and Semi-Arid Regions Supply Chain



Samuel Nyaanga Presenting the Design, Installation and Evaluation of Solar Irrigation Projects in the Kenyan Lake Victoria Basin



Adebayo Segun Emmanuel Presenting on the Effect of Machine Parameters on Physical and Sensory Properties (Desirability) of Coated Peanut Snacks

We are grateful to our sponsors and collaborators CAMCO Equipment (K) Ltd, Tea Machinery and Engineering Company Ltd, TEMEC, Institution of Engineers of Kenya, IEK, Engineers Board of Kenya, EBK, Kenjap Motors Ltd, Agricultural Technology Development Center, ATDC, from the Ministry of Agriculture and Livestock Development, LOG Associates Ltd and the University of Nairobi who showcased their great products and services to the attendees in the Conference.



Engineers Board of Kenya Showcasing their Products and Services to the Guests



Institution of Engineers of Kenya Showcasing Copies of African Journal of Engineering Research and Innovation (AJERI) to the Guests



Agricultural Technology Development Center (ATDC) Exhibiting their Products to the Guests

Tea Machinery Engineering Company Limited (TEMEC) Demonstrating their Products to Students



KeSEBAE Displaying Copies of the Journal of Engineering in Agriculture and the Environment, JEAEE to the Guests

PASAE Demonstrating their Products and Services to the Guests



Hon. Harriette Chiggai Operating the Lovol Tractor from CAMCO Equipment (K) Ltd

THE OLKARIA GEOTHERMAL POWER PLANT VISIT

On Friday 8 December 2023, fifty-one (51) delegates of the KeSEBAE/PASAE delegates visited Olkaria Geothermal Power Plant in Naivasha. The KenGen-Olkaria Geothermal team was led by Ann Gathagu after welcoming remarks by Anna Mwangi.

Olkaria Geothermal Project is situated within Hell's Gate National Park 120km from Nairobi. The geothermal system at Olkaria consists of a two-phase reservoir that is hosted within 0.9-1.65 million-year old fractured trachyte and rhyolite rocks at depths of between 600m and 3000m. At the Olkaria East, Olkaria Domes field and Olkaria North East Geothermal fields, wells with a nominal diameter of 8 inches are drilled into the reservoir and the upper 700m-1200m cased off to avoid cold fluid inflow into the bore. The wells produce 75% water and 25% steam. Separation of steam is done using cyclone separators from where dry steam is piped to the powerhouse and separated water injected back into the reservoir.

The facility is an engineering masterpiece in renewable energy and KeSEBAE/PASAE would recommend it as a model in the development of global renewable energy system.



Pictures of KeSEBAE/PASAE delegates in Olkaria Geothermal Power Plant in Naivasha



KeSEBAE/PASAE delegates in their Protective Equipment as they Explore Olkaria Geothermal Power Plant in Naivasha





Photo Gallery of Guests During the 5th PASAE International Conference 2023





CALL FOR PAPERS

To the Next Editions of the JEAE

JEAE

Journal of Engineering in Agriculture and the Environment

The Journal of Engineering in Agriculture and the Environment (JEAE) is a Publication of the Kenya Society of Environmental, Biological and Agricultural Engineers (KeSEBAE) through which researchers in the fields of Environment, Agriculture and related fields share research information and findings with their peers from around the globe.

The JEAE Editorial Board wishes to invite interested researchers with complete work in any relevant topic, to submit their papers for publication in the next editions of the Journal.

Manuscripts may be submitted online or via email to:

Chairperson, JEAE Editorial Board via Email: jeae@kesebae.or.ke or Online via: <https://kesebae.or.ke/journal/index.php/kesebae/about/submissions>

Criteria for Article Selection

Priority in the selection of articles for publication is that the articles:

- a. Are written in the English language
- b. Are relevant to the application of engineering and technology in agriculture, the environment and biological systems
- c. Have not been previously published elsewhere, or, if previously published are supported by a copyright permission
- d. Deals with theoretical, practical and adoptable innovations applicable to engineering and technology in agriculture, the environment and biological systems
- e. Have a 150 to 250 words abstract, preceding the main body of the article
- f. The abstract should be followed by the list of 4 to 8 "Key Words"
- g. Manuscript should be single-spaced, under 4,000 words (approximately equivalent to 5-6 pages of A4-size paper)
- h. Should be submitted in both MS word (2010 or later versions) and pdf formats (i.e., authors submit the abstract and key words in MS Word and pdf after which author uploads the entire manuscript in MS word and pdf)
- i. Are supported by authentic sources, references or bibliography

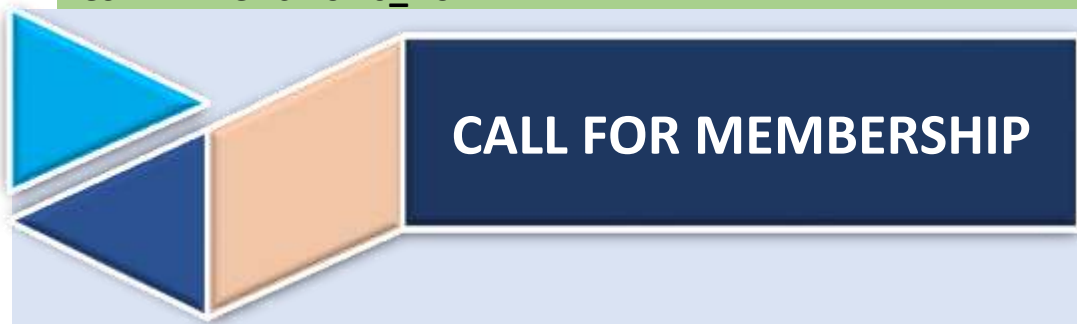
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CALL FOR ARTICLES TO KeSEBAE NEWS

KeSEBAE NEWS Editorial wishes to call for topical articles for publication in future editions of KeSEBAE NEWS.

Please transmit the same via Email: info@kesebae.or.ke

NOTE: A payment will be made to the author of each selected article



Be a KeSEBAE Member:

The annual subscription fees, admission fees and reinstatement fees for members of all grades (except Honorary and Life Members who shall pay no dues or fees) are indicated below: The annual dues are as follows:

Membership Category	Annual Subscription (KES)	Admission Fees (KES)	Reinstatement Fees (KES)
<i>Fellow</i>	5,000	1,000	2,000
<i>Member</i>	2,000	1,000	2,000
<i>Ass.Member</i>	1,000	1,000	2,000
<i>Aff.Member</i>	500	1,000	2,000
<i>Student</i>	300	100	-

Membership Renewal

Members of all grades are requested to renew their 2024 membership as follows.

Membership Category	Annual Subscription Fee (KES)
<i>Fellow</i>	5,000
<i>Member</i>	2,000
<i>Ass. Member</i>	1,000
<i>Aff. Member</i>	500
<i>Student Member</i>	300

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