

3rd Annual Conference of Five Universities Consortium



Conference Program

CONFERENCE THEMES



“From Dialogue to Impact: Integrating Science, Technology, Policy and Climate Resilience for Sustainable Future.”

**Location: Nelson Mandela African Institution of Science and Technology
(NM-AIST), NM-AIST Conference Hall, Arusha-Tanzania**

Date: 23rd- 25th September 2026

For more information, please contact:

Dr. Mussa Ally Dida-NM-AIST

Chairperson, Organizing Committee, Mob: +255 689 061 428, Email: mussa.ally@nm-aist.ac.tz

CONFERENCE DAY 01 | 23rd September 2026

Time	Activity	Responsible	Facilitator & Venue
07:00 – 09:00	Arrival and Registration & Morning Tea	ALL	Dr. Maranya Mayengo (Conference Ha
09:00 – 09:10	Arrival of the Guest of Honour – Minister of Education, Science and Technology	VC-NM-AIST	
09:10 – 09:20	National Anthem & Opening Protocol	All	
09:20 – 09:30	Introductory Remarks & 5UCC Achievements	Chairperson, Organizing Committee (Dr. Mussa Ally Dida)	
09:30 – 09:45	Welcome Remarks	Vice Chancellor NM-AIST	
09:45 – 10:10	Remarks by Vice Chancellors ● 09:45-09:50-AKU ● 09:50-09:55-SUA ● 09:55-10:00-UDSM ● 10:00-10:05-SFU	VCs/ Presidents of AKU, SUA, UDSM & SFU	
10:10-10:20	Remarks from a Representative of Conference Sponsors	African Biosystems	
10:20 – 10:30	Remarks from High Commission Canada	Amb. Emily Burns	
10:30 – 10:50	Opening Remarks by Guest of Honour – Minister of Education, Science and Technology	Prof. Adolph Mkenda	
10:50 – 11:00	Group Photo	Organizing Committee	
11:00 – 11:15	Launch of Innovation & Knowledge Exchange Corner	Prof. Adolph Mkenda	
11:15 – 11:30	HEALTH BREAK	ALL	Prof. Emmanuel Sulle (AKU)
11:30 – 12:00	Plenary Session: Financing the climate transition and sustainability, emerging funding models and strategies	Mr. Salum Awadh	
12:00 - 13:00	Panel Discussion: Accelerating Research for Sustainable Development: A Roadmap to 2050	Dr. Amos Nungu, DG COSTECH Prof Said S. Aboud, DG NIMR, Dr. Elbate Mjinga, DG TAWIRI, Dr. Thomas Bwana, DG TARI	5UCC Secretariate
13:00 – 15:00	(Private Meeting) Five University Consortium Executives: High-level discussions to define the roadmap for joint projects, academic exchanges, and future collaborations	Executive committee	
SCIENTIFIC SESSION (Sub-Theme I): Health Systems			
13:00-13:30	Keynote 1: Building Resilient Health Systems for the Double Burden of Disease in Africa	Prof. Paschal Ruggajo	Prof. Ernest Mbega (NM-AIST)
13:30-14:30	LUNCH BREAK	ALL	
14:30 – 15:30	Parallel Sessions Theme I: Health Systems	Authors	Session Chairs
Venue (Room A201)	Prevalence of Anaemia and Its Associated Factors Among Adults with Diabetes Mellitus attending Mbeya Zonal Referral Hospital, Paper No. 22	Helena Hyera	Prof. Anil Hira (SFU)
	University Students' Attitudes towards Mental Health Challenges: Implications for Resilience, Well-Being, and Sustainable Development in Tanzania, Paper No. 24	Annastazia Mwakipesile, Lwimiko Sanga and Mwajabu Possi	
	Strategies for Promoting Positive Mental Health Attitudes and Psychological Well-Being Among University Students in Tanzania: The Emerging Role of Digital Innovation, Paper No. 29	Annastazia Mwakipesile and Lwimiko Sanga	
	Improving Healthcare Quality through Patient Feedback: Evidence from Southern Tanzania, Paper No. 27	Hortensia Nondoli	
Venue (B201)	Modelling Malaria Mosquito Control Strategies: A Mathematical Approach to Environmental	Mary Gladys Mdachi, Neema Kassim and Athanasia Matemu	Prof. Kisangir Michael (NM-

	Interventions, Paper 62		AIST)
	Enhancing Risk Communication for Climate-Sensitive Neglected Tropical Diseases in Northern Tanzania: Integrating Agropastoral Community Knowledge and Health System Strategies, Paper No. 7	Chris Buse (Online)	
	AI-Powered Cough Sound Classification for Early Detection of Respiratory Diseases in Tanzania: Preliminary Findings from the Kikohozi Classifier Project, Paper No. 48	Kahabi Isangula	
	Microbial and Parasitic Communities Associated with Egyptian Fruit Bats (<i>Rousettus aegyptiacus</i>) in Kagera Region, Tanzania Paper No. 38	Emmanuel Kifaro, Mikidadi Issanudia Mtalika, Susan Diana Kerfua, Emma Peter Njau and Philemon Wambura.	
Venue (Conference Hall)	Molecular Characterization of the Mycobacterium tuberculosis Complex in Humans and Cattle, Paper No. 49	Jacqueline Ulomi, Peter M. Mbelele, Jonas Ngowo, Helena Dela, David Mtweve, Bruno Lokonon, Bassirou Bonfoh, Esther G Kimaro and Beatus Lyimo	Dr. Happiness Moshi (AKU)
	Modelling the impact of adopting new-generation insecticide-treated nets on malaria transmission and insecticide resistance, Paper No. 57	Hamenyimana Gervas	
	Social-ecological predictors of HIV testing among adult men: Analysis of the 2022 Tanzania demographic and health survey data paper No. 32	Christopher Hariri Mbotwa, Elihuruma Eliufoo Stephano and Linus Paul Rweyemamu	
	Skin Carotenoid Scores Reflect Immune Status Among Children Living with HIV in Tanzania, Paper No. 33	Wilbert Mbuya, Thobias Boniphace, Michael Mwangala, Peter Agrea, Nazareth Mbilinyi, Nancy Moran, Andrew DiNardo and Mkunde Chachage	
15:30 –15:45	HEALTH BREAK	ALL	
SCIENTIFIC SESSION (Sub-Theme II): Environmental Integrity and Climate Resilience			
15:45-16:15	Keynote 2: Environmental Integrity & Climate Resilience	Director General TMA Dr. Ladislaus Benedict Chang'a	Prof. Mwemezi Rwiza (NM-AIST)
16:15-16:45	Panel Discussion: Policy Dialogue Session: Science–Policy Interface for Climate Resilience	Dr. Ladislaus B. Chang'a , Director TMA, Dr Freddy Kanizio Manyika, Prof. Linus Munishi, Prof. Emmanuel Sulle	
16:45-18:00	Parallel Sessions Theme II: Environmental Integrity & Climate Resilience	Authors	Session Chairs
Venue (Room A201)	The Limits of Resilience: Climate Adaptation Fatigue among Smallholder Farmers, Women, and Youth in Tanzania, Paper No. 11	Innocensia John	Gamariel Mboya (AKU)
	Benchmarking Climate Resilience and Net-Zero Initiatives across AKDN Academic Institutions, Paper No 14	Gamariel Mboya, Nicholas Wachira and Emmanuel Sulle	
	Bridging Science, Technology and Policy for Climate Resilience and a Sustainable Future in Rural Tanzania, Paper No. 58	Simon Ngalomba	
	Microclimate and Building Energy Consumption: Case of Urban and Rural Buildings, Paper No. 85	Fitsum Tariku and Afshin Gharib Mombeni	
Venue (B201)	Impacts of Climate-Smart Maize Production on Smallholder Household Nutrition Security in Arumeru District, Tanzania, Paper No. 53	Manaye Asefa Ferede	Dr. Bernard Ngowi (UDSM)
	Blended Finance as a Catalyst for Climate-Resilient Agricultural Transformation in Tanzania, Paper No. 1	Lazaro Athanas Mwonge, Fulgence J. Mishili and Kissa Mwaisoba	
	From Adoption to Inclusion: How Climate-Smart Irrigation Reshapes Women's and Youth Livelihoods in Semi-Arid Tanzania, Paper No. 36	Gerald Sumari	
Venue (Conference Hall)	Beneficial microbes reduce disease development on agricultural crops, Paper No. 19	Zamir Punja	Dr. Christopher Mbotwa (UDSM)
	Isolation, Molecular Identification and Comparative Evaluation of Probiotic Potential among Indigenous Lactobacillus Species from Traditional Tanzanian Fermented Milk, Paper No. 61	Zulfa Shariff Alawi, Beatus Modesty Lyimo and Neema Kassim	

	Lion Connectivity in the multi-use Ngorongoro Conservation Area. Paper No. 77	Ingela Jansson, George G. Lohay, Laura D Bertola, Bernard Kissui, Ernest Mjingo, Craig Packer, Camilla Sandström, Robert Spitzer and Göran Spong	
Venue (D201)	Skill Development Workshop: Setting Up A Research Centre.	Prof. Anil Hira	
17:00-18:00	Poster Presentations & Innovation Exhibitions	ALL	Dr. Janeth Marwa& Dr Lawrence Mdegela
18:00 – 20:00	Networking Cocktail	ALL	
20:00	End of Day one	ALL	

CONFERENCE DAY 02 | 24th September 2026

Time	Activity	Responsible	
08:00 – 08:30	Registration & Morning Tea	ALL	Dr. Maranya Mayengo (Conference Hall)
SCIENTIFIC SESSION (Sub-Theme III & IV): Technology, Innovation, Governance, Policies & Institutions			
08:30 – 09:00	Keynote 3: Technology & Innovation	Prof. Tushar Shinde (IITMZ)	Prof. Zamir Punja (SFU)
09:00- 09:30	Keynote 4: Governance, Policies & Institutions	Prof. Raffaella Cagliano	
09:30-10:00	Panel Discussion: How universities are shaping innovations commercialization cultures	Prof. Valorie Crooks, Prof. Thomas Kivevele, Dr George Lohay, Prof. Tushar Shinde, Prof. Raffaella Cagliano	
10:00 – 11:00	Parallel Sessions Theme III: Technology, Innovation, Governance, Policies & Institutions	Authors	Session Chairs
Venue (Room A201)	AI Vulnerability Corridors: A Dual Exposure Framework for Climate-Related Operational AI Risk Assessment in Transportation Infrastructure, Paper No. 10	Doreen Sebastian Sarwatt, Frank Kulwa, Adamu Gaston Philipo and Edda Tandi Lwoga	Prof. Parin Dossa (SFU)
	Integrating AI and Data Analytics into Tanzania's Development Policy: Opportunities, Barriers, and Strategic Pathways to Sustainable Development, Paper No. 42	Aravinthan Devarasu	
	The Challenges and Opportunities for Remote Energy, Paper No. 20	Andy Hira	
	A Scalable Cloud-Based Flash Sale Platform for Agricultural Surplus Management Using Redis Pessimistic Locking and AWS Auto Scaling, Paper No. 37	Dr Alcardo Alex Barakabitze and Camilius Sanga	
Venue (B201)	Future of Farming: Leveraging IoT and Blockchain for Revolutionizing Hydroponic Crop Monitoring, Paper No. 40	Karthikeyan Subramaniam, Hariharasudhan S, Thangaraj Ethilu and Rajkumar S	Dr. GerminPeter Lyakurwa (NM-AIST)
	Machine Learning and Remote Sensing for Plasmodium falciparum Parasite Prevalence Prediction in Karagwe District, Tanzania, Paper No. 60	Joanitha Kaijage, Lawrence Mdegela, Devotha Nyambo and Elizabeth Mkoba	
	Can AI Guidelines Keep Pace With Artificial Intelligence? Assessing Policy Adaptability In Tanzanian Higher Education, Paper No. 74	Philbert Nyinondi	
	The Role of Research Groups and Centres of Excellence in Advancing Research and Innovation of a Low-Resourced University: A Review, Paper No. 9	Mussa Ally	

Venue (Conference Hall)	Artificial Intelligence-Enabled Research Support Services in Academic Libraries: A Systematic Literature Review, Paper No. 75	Sefu Hamis Abeid and Philbert Nyinondi	Dr. Theresia Nkya (UDSM)
	Afrocentric and Black Diaspora Sustainable Entrepreneurship Education: Disrupting the Eurocentric Paradigm and Recentering African and Afro-Diasporic Knowledge, Intellectual Property, Markets and Know-How, Paper No. 66	Prof. June Francis, Prof. Kristina Henriksson	
	Energy Audit of University Campuses: Evidence from Sokoine University of Agriculture, Tanzania, Paper No. 21	Enock Chambile, Susan Mbacho and George Kibirige	
Venue (D201)	Skills Development Workshop: Media Training Session	Prof. Valorie Crooks	Dr. Angela Mkindi (NM-AIST)
11:00 – 11:30	Health Break	ALL	
SCIENTIFIC SESSION (Sub-Theme V & VI): Sustainable Agriculture and Food Systems & Inclusivity and Community Resilience			
11:30 – 12:00	Keynote Speaker 5: Sustainable Agriculture & Food Systems	Dr. Abdul Kudra.	Prof. Kashaigili (SUA)
12:00 – 12:45	Keynote Speaker 6: Inclusivity & Community Resilience (Title: Building Inclusive and Resilient Communities: From Evidence and Dialogue to Meaningful Health and Social Impact)	Prof. Valorie Crooks	
12:45 – 13:45	Parallel Sessions Theme IV: Sustainable Agriculture & Food Systems; Inclusivity & Community Resilience	Authors	Session Chairs
Venue (Room A201)	The role of vegetable production in enhancing household income and improving food accessibility through monetary value of consumed produce: evidence from Ilala municipality Dar es salaam, Paper No. 17	Magdalena Mwimbe	Prof Ernest Mbega
	Integrating Sustainable Agricultural Intensification and Diversification to Feed the Projected Double Population in Tanzania's Southern Highlands by 2050, Paper No. 52	Wilson Charles Wilson	
	Bridging the Quality Gap in Tanzania's Edible-Oil Sector: Evidence from Small-Scale Processors and Mini-Refineries, Paper No. 64	Maria Ngulu, Athanasia Matem, and Frederick Kahimba	
	Identification and Functional Characterization of Single-Domain Antibodies Targeting Ralstonia solanacearum Using Nanobody Phage Display library Paper No. 51	Emmanuel Mwampale	
Venue (B201)	Feed sources, seasonality, and coping strategies in semi-arid smallholder crop–livestock systems of Central Tanzania, Paper No. 72	Bonheur Kusinza, Wilson Wilson, Anthony Whitbread and Jacob Emanuel Joseph	Dr. Angela Mkindi (NM-AIST)
	Enhancing Yield and Productivity in Lowland Rice Systems in Northern Tanzania through Enhanced Agronomic Practices, Paper No. 73	Baraka Selemani, Wilson Wilson and Akida Meya	
	Beyond Formal Extension: How Informal Knowledge Networks Influence Soil Conservation Adoption in the Uluguru Mountains, Morogoro Tanzania, Paper No. 18	Respikius Martin	
	Post-harvest handling and microbiological safety of cultivated Eucheuma denticulatum and Kappaphycus alvarezii in selected wards of Zanzibar, Tanzania paper 71	Khairat Hassan, Neema Othman and Athanasia Matem	
Venue (Conference Hall)	Designing and Development of Tanzania National Costume Prototype, Paper 5	Mary Marcel	Dr. Emmanuel Kifaro (SUA)
	Walking into Nature: Nurturing Environmental Subjectivities through Hiking in Kenya, Paper 41	Elizabeth Cooper	
	Inclusivity & Community Resilience, Paper 44	Parin Dossa	

Venue (D201)	Skill Development Workshop: Decolonizing the Academy and Research, Decolonizing Data and moving towards Data sovereignty, Afrocentric and Afro-diasporic Research methods and theorizing or similar topics.	Prof. June Francis	Prof. Kisangiri Michael (NM-AIST)
13:45 – 14:30	LUNCH BREAK	ALL	
14:30-15:15	Poster Presentations & Innovation Exhibitions	Dr. Janeth Marwa & Dr Lawrence Mdegela	
SPECIAL HIGH-LEVEL SESSION:			
15:15 – 15:45	Arrival of Guest of Honour- Deputy Minister of State in the Vice President's Office for Union and Environment in Tanzania	H.E. Reuben Nhamilo Kwagila	
15:45-16:00	Conference Summary & Key Resolutions		
16:00-16:15	VC to welcome guest of honor		
16:15-17:00	Awards & Recognition to winners, sponsors, and committee		
17:00-17:30	Closing Speech by Guest of Honour – Deputy Minister of State in the Vice President's Office for Union and Environment in Tanzania	H.E. Reuben Nhamilo Kwagila	
17:30-17:45	Remarks from Consortium Representatives & Vote of Thanks		
17:45-18:00	Group Photo		
18:00 – 21:00	Gala Dinner, Cultural Night & Awards Ceremony		

POSTER PRESENTATIONS

SN	Paper Title, Paper #	Authors	Venue
1.	Formal and Informal Institutions in Groundwater Governance: Empirical Evidence from Central Semi-arid Tanzania, Paper 45	Lina Samani, Kim Kayunze, Devotha Mosha, Rajabu Kangile and Japhet Kashaigili	Poster Exhibition Area
2.	Gender Dynamics in Groundwater Governance: Experience from Semi-Arid Tanzania, Paper 46	Lina Samani, Devotha Baltazary Mosha, Kim Kayunze, Rajabu Joseph Rajabu Kangile, Japhet Joel Kashaigili and Ruth Emmanuel Pallagyo	
3.	Effects of Socioeconomic Factors on Groundwater Access in the Semi-arid Areas of the Dodoma Region, Paper 47	Mwajuma Ramadhani	
4.	Spatiotemporal Analysis of Urban Expansion and Its Impacts on Land Use/Land Cover and Ecosystem Service Values, Paper 50	Aschalew Alelign Kassa, Francis Moyo, Issakwisa Ngondya, Mwema Felix Mwema and Getachew Bayable	
5.	Sustainable Management of the African Great Lake Coastal Areas: Motivations and Perspectives of Community Citizen Scientists, Paper 55	Happiness Moshi, Daniel Shilla, Joan Brehim, Ismael Kimirei, Catherine O' Reilly and Steven Loiselle	
6.	Ground Truth-Oriented Fake News Detection Using Sentiment-Aware Hybrid Ensemble Learning and Bi-Directional LSTM Networks, Paper 35	Dr Alcardo Alex Barakabitze	
7.	Fabrication of Cellulose Chitosan Porous Membranes from Cotton Textile Waste for Advanced Wound Care, Paper 2	Joshua William and Kereth Gudila	
8.	Impact of health literacy interventions on dietary behaviours and nutritional status among adults in Tanzania, Paper 12	Victoria Kariathi, Hadijah Mbwana and Safiness Msollo	
9.	Prevalence and Predictors of Multidrug Resistant Tuberculosis Among Patients with Pulmonary Tuberculosis at Songwe Regional Referral Hospital, Paper 26	Kissoro Pembe	
10.	Not Afraid of Digital Technology, But Afraid of Losing Money? Understanding the Digital Financial Trust Gap among Tanzanian Youth, Paper 76	Orpa Kijanda and Philbert Nyinondi	
11.	Examining the Level of Adoption of Climate Smart Agricultural Practices through Agricultural Innovation Systems among Women Smallholder Farmers in Tanzania, Paper 15	Jacquiline Ndosi	
12.	Wood Properties of 5-Year-Old Eucalyptus Genetic Materials, Paper 3	Fortunatus Makonda, Brand Wessels and Mbonea Mweta	

13.	Wood Properties of 14 Lesser-Known Miombo Timber Species, Paper 4	Fortunatus Makonda and Mbonea Mweta	
14.	From Shelf to Impact: NMU Innovation Hub, Paper 8	Mussa Ally	
15.	Vapour Pressure Deficit & Farmer Perceptions of Maize Production, Paper 13	Emily Helandogo, Juma Selemeni and Anna Msigwa	
16.	Multidrug-Resistant Uropathogens Among Diabetic Patients, Paper 28	Hortensia Nondoli	
17.	Energy Transition in Uganda: Oil, Gas & SDGs, Paper 34	Gershom Mukisa	
18.	Medicinal Plant Diversity & Conservation (Northern Tanzania), Paper 54	Clementine Mukanoheri, Linus K. Munishi, Mwema Felix Mwema and Suzana Augustino	
19.	Traditional Feeding to Precision Rations (Digital Dairy), Paper 56	Yohane Deogratias Sebogo, Wilson Charles Wilson, Gladness George Mwanga and Gabriel Mkilema Shirima	
20.	Harnessing Maasai Traditional Knowledge for Climate-Resilient Schools, Paper 59	Joseph C. Pesambili and Simon Ngalomba	
21.	Bridging the Gaps in School Feeding Program (Monduli), Paper 63	Mary Gladys Mdachi, Neema Kassim and Athanasia Matemu	
22.	Natural Radionuclides in Agricultural Soils (Central Tanzania), Paper 65	Furaha Msale Chuma, Aloyce Amasi, Jerome Mwimanzi, Dennis Mwalongo and Kelvin Mtei	
23.	From Winery Waste to Wealth: Red Grape Pomace Antioxidant, Paper 67	Mariam Mohamedi, Athanasia Matemu and Armachius James	
24.	Sustainable Seaweed-Based Edible Coatings, Paper 68	Khayrat Ali Salim, Athanasia Matemu and Neema Kassim	
25.	Food Safety & Microbial Risks in Small-Scale Anchovy Processing, Paper 69	Maria Omary and Athanasia Matemu	
26.	Ticks & Tick-Borne Diseases in Livestock (N. Tanzania), Paper 70	Lemaly Olekibirith	
27.	Responsible Innovation in Entrepreneurship Management (Bibliometric), Paper 80	Salum Kanyungu and Kulwa Mang'Ana	
28.	From Waste to Market: Rice Husk Valorization (Bibliometric), Paper 82	Emmanuel Mambali, Kulwa Mang'Ana and Janeth Marwa	
29.	Type A/B Personality Traits Among Medical Students (Mbeya), Paper 84	Fortunatus Bundala and Stephano Mkakilwa	
30.	POLICY BRIEF: Scaling Solar-Biogas Hybrid Drying for Tanzania's Horticulture Sector	Dismas Kimaro and Thomas Kivevele	

TRIP TO TARANGIRE NATIONAL PARK

Time	Activity	Responsible	
06:00	Meeting at NM-AIST Amphitheater	NM-AIST -Organizing Committee	
06:15-16:30	Leaving for Tarangire National Park	NM-AIST-Organising Committee	
16:30	Return from Tarangire National Park	NM-AIST- Organising Committee	

IMPORTANT INFORMATION:

Venue and Dates

The 3rd Five University Consortium Scientific Conference takes place at the Nelson Mandela African Institution of Science and Technology, Conference Hall, Arusha Tanzania from 23rd -25th September 2026.

Contact Address

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Name badge

Your name badge is your entrance ticket to all sessions. Please, always remember to wear your badge throughout the conference. Participants without the name badges will be denied access to conference rooms/ sessions. If you lose your badge, a new one will be provided against proof of your original registration.

Conference registration hours

Wednesday: 23rd Sept. 2025: 07:00 – 20:00 hrs Thursday: 24th September: 08:00 – 20:00 hrs: Friday 25th Tarangire National Park Trip From 06:00 am

Time Zone

The time zone in Arusha, Tanzania is GMT +3 Hours.

Weather

The weather in Arusha during this time of the year is usually of mild cold. temperatures typically range from 18°C to 23°C (64°F to 73°F), while nighttime temperatures can drop to around 12°C (53°F).

WiFi/Internet connections

Wi-Fi will be available to all delegates. Participants will be informed of Wi-Fi access points during the conference.

Lunch and Coffee Breaks

Lunch and coffee/tea is included in the registration fee and will be served daily in the conference area.

Accommodation

Every conference participant is supposed to cover for their own accommodation, with hotels and lodges located near NM-AIST in the USA River area, and within Arusha town.

Trip to Tarangire National Park

A trip to Tarangire National Park will be coordinated by the organizing committee of NM-AIST and will take place on the third day of the conference.