

## CURRICULUM VITAE

### PERSONAL DATA

**NAME:** Ouma Gilbert Ong'isa  
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### PROFILE SUMMARY

Self-motivated qualified meteorologist relishing new and dynamic challenges. Currently a Senior Lecturer in the Institute for Climate Change and Adaptation & Department of Meteorology, University of Nairobi with close to twenty one years of experience in the University. Specific area of specialization is Remote Sensing and Satellite Meteorology. Has a broad experience in Participatory Action Research methodology and Climate Change Adaptation through involvement in several application-related projects working directly with vulnerable communities. He is highly motivated, has experience of training in other African countries and has well-developed communication skills.

He has supervised four PhD and thirteen Masters students to completion. He is currently supervising four PhD and several Masters students at various stages of progression. He is an external examiner at Makerere and Maseno Universities. He is involved in five collaborative research projects involving several local and international universities. He has over fifteen peer-reviewed journal papers and has attended over twenty scientific conferences, workshops and seminars. His current research interest is in early warning systems and climate change adaptation with a focus on how earth observation data can improve the process.

### RESEARCH INTERESTS

Use of earth observation data in improving early warning systems for climate change adaptation; Exploring the role of disaster risk management in the sustainability of food and nutrition security for the achievement of Sustainable Development Goal number 2.

### EDUCATIONAL BACKGROUND

1993 – 2000, University of Nairobi, Doctor of Philosophy (PhD) in Meteorology, Use of satellite data in the monitoring and prediction of rainfall over Kenya

1986 – 1989, University of Nairobi, Master of Science (MSc) in Meteorology, Estimation of Areal Rainfall from Satellite Data over Parts of Tanzania

1983 – 1986, University of Nairobi, Bachelor of Science (BSc) Meteorology

1980 – 1982/3, University of Nairobi, Diploma in Education (Maths and Physics)

1978 – 1979, Cardinal Otunga High School, Kenya Advanced Certificate of Education

1974 – 1977, Nabondo Boys' High School, Kenya Certificate of Secondary Education

### **WORK EXPERIENCE**

May 2011 – Current: Senior Lecturer, University of Nairobi - Lecturing and supervising tutorials for undergraduate and post graduate students; carrying out research in the Department of Meteorology; and supervising dissertations and theses

October 2001 to May 2011: Lecturer, University of Nairobi - Lecturing and supervising tutorials for undergraduate and post graduate students; carrying out research in the Department of Meteorology; and supervising dissertations and theses

September 1993 to October 2001: Assistant Lecturer, University of Nairobi – Lecturing and supervising tutorials for undergraduate and post graduate students, and carrying out research in the Department of Meteorology

September 1989 to September 1993: Tutorial Fellow, University of Nairobi - Lecturing and supervising tutorials for undergraduate students, and carrying out research in the Department of Meteorology

July 1983 to September 1989: Teachers' Service Commission (Pursued B.Sc. and M.Sc. courses while on Study Leave)

### **GRANTS**

GCRF - Building REsearch Capacity for sustainable water and food security In drylands of sub-saharan Africa (BRECCIA), Co-PI, Collaboration between University of Nairobi and Southampton University of UK with twenty seven other universities and organizations (£240,000)

REACH Improving water security for the poor with observatories in Lodwar and Kitui – DFID

Building resilience and adaptation to climate extremes and disasters (BRACED). One year grant (£57,000) –DFID

Planning for Resilience in East Africa through Policy, Adaptation, Research, and Economic Development (PREPARED). USAID Kenya & East Africa

Ground Truthing of Space-Based Observations for Enhanced Air Pollution Monitoring in Kenya: Towards Institutional Capacity Building for National Development - Kenya National Council of Science and Technology

Calibration and Validation of Satellite-Derived Data and Products for Improved Environmental Monitoring for Sustainable Development over Kenya - Kenya National Council of Science and Technology

Using Rainfall to Predict Droughts and Floods in Kenya - Kenya National Council of Science and Technology

## **CONSULTANCIES**

2017 Jan - Mar 2018: Developing a framework for Climate Change Information Network through a platform of strategic partnerships with key regional and national institutions for the sharing of climate data, tools, knowledge, and best practices that are available to end-users to allow for more informed decisions for the East African Community region. Funded by USAID/Kenya and East Africa (PREPARED) Project

2015 September to 2016 July: Formulation of IGAD Regional Climate Change Strategy (IRCCS). Funded by the EU, Djibouti Office

2015 (January – June): Evaluation of the project ‘Reducing Vulnerability to Climate Change by Establishing Early warning and disaster preparedness systems and support for integrated watershed management in flood prone areas (Rwanda and Gambia LDCF)’. Funded by UNEP

2014 – 2015: Developed and pilot a framework to integrate the disaster risk and climate information for a comprehensive risk information system for United Nations International Strategy for Disaster Reduction (UNISDR); Piloted the framework using existing databases in the Horn of Africa; and Supported the Resilience Analysis Unit (RAU) of IGAD to assimilate the combined DRR-CC information to inform resilience analysis, monitoring and programming. Funded by the UNISDR Nairobi Office

2014 – ongoing: BRACED Generating and applying research and evaluation knowledge about what does and does not work to build resilience, and use this to affect behaviour, shape policy and tailor practice across scales. Funded by DFID

2013 – 2016: Developed gridded rainfall and temperature (satellite estimates and station observations) for the period 1981 to current for each of the East African Community member states and the EAC region, trained data managers from the EAC member states on the gridding techniques, developed climatological baselines for the EAC region based on the developed dataset, analysed the trends in the data and identified climate hotspots. Funded by the USAID PREPARED Project

2011 – 2012: Designing, proposing, securing funding, developing strategic plan, presenting to the University Senate, designing courses and setting up the Institute for Climate Change and Adaptation; rolling-out the Institute and conducting postgraduate training. Funded by Open Society Foundation

2011 (July): Developed training materials and trained the participants on working with communities, uncertainties in the weather forecasts and participatory monitoring and evaluation. Funded by WMO

3 – 5 November 2010: Facilitator at UNESCO/IOC workshop series for adaptation to climate-change in Africa - targeting the Adaptation Fund: designated authorities draft project outlines for implementing national adaptation to climate studies, Nairobi, Kenya

22 November – 1 December 2010: Trainer at the training workshop on climate change and vulnerability and adaptation assessment in support of Eritrean Second National Communication

May to December 2010: Training on the use of PRAIS and support to the National Focal Points for the fourth reporting and review cycle of the UNCCD

November 2006 to March 2007: Development and dissemination of drought information to rural communities in GHA region. Funded by UNISDR/SIDA

July to September 2006: Coordinating a survey on Coastal and Marine Hazards culminating in the production of an awareness-creation booklet. Funded by UN/ISDR (Africa)

A Review Study on the Current and Longer-Term Trend of the Food Security and Livelihood trends in the Greater Horn of Africa (GHA) with a Special Focus on Pastoralists and Agro-Pastoralists - World Food Programme (WFP)

Pilot Project for Dissemination of Drought Information to Rural Communities in Djibouti, Eritrea, Ethiopia, Kenya and Somalia, August 2007

Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation in Eastern and Southern Africa; Collaboration with Wandiga Shem (Dept. of Chemistry, UON), Opondo Maggie (Dept. of Geography, UON), Olago Dan (Dept. of Geology, UON) and Oduor James (OOP/ALRMP, Food Security/Drought Management). Sponsored by GEF/UNDP – almost concluded

Strengthening Community-Based Adaptation to Climate-Sensitive Malaria in Kakamega and Kericho Districts, Western Kenya Highlands. Collaboration with Githeko Andrew (Climate and Human Health Research Unit, KEMRI), Opondo Maggie (Dept. of

Geography, UON), Olago Dan (Dept. of Geology, UON), and Timothy Downs (Dept. of International Development, Community and Environment, Clark University, USA). Sponsored by ACCCA. Concluded

Integrating Indigenous Knowledge in Climate Risk Management to Support Community Based Adaptation. Sponsored by IDRC and DFID.

Knowledge Sharing for Climate Change Adaptation in Africa in partnership with IDS (UK), ENDA (Dakar, Senegal) and FARA (Accra, Ghana). Sponsored by IDRC and DFID

Transferring the malaria epidemic prediction model to end-users in East Africa. Sponsored by CCAA.

Strengthening Community-Based Adaptation to Climate-Sensitive Malaria in Kakamega and Kericho Districts, Western Kenya Highlands. Collaboration with Opondo Maggie (Dept. of Geography, UON), Githeko Andrew (Climate and Human Health Research Unit, KEMRI), and Olago Dan (Dept. of Geology, UON). Concluded.

1 August to 30 September 2004: Coordinating the elaboration of Country Profiles in support of the preparation of the third series of national reports on the implementation of the United Nations Convention on Combating Desertification (UNCCD) for twenty two countries in Eastern and Southern Africa region. Funded by UNCCD

July 2003 to November 2003: Conducted training on "Analysis, Interpretation and dissemination of Satellite-derived Data in Support of Food Security and Environmental Monitoring within the IGAD Sub-Region. This included training on the basics of GIS." Funded by GTZ for IGAD Secretariat

October 2001 to December 2002: IGAD Remote Sensing Project (Remote Sensing Officer) - On leave of Absence from the University of Nairobi

#### **UNIVERSITY COLLABORATION INITIATIVES**

Improving the Adaptive Capacity to Climate Variability and Change in Sub-Saharan Africa (IMPALA), Collaboration between University of Nairobi, ALERRA (Netherlands), UNESCO-IHE (Netherlands), Free University of Brussels, Max Plank Institute for Meteorology, Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), IRD (France), NBI NELSAP Office (Rwanda), National University of Rwanda, Dar-es-Salaam University, Makerere University, South African Weather Service, International Crop Research Institute for the Semi Arid Tropics (ICRISAT), Institut d'Economie Rurale (MALI), and European Joint Research Center

Water Futures for Sustainable Development: Strategic Planning for Population, Land Use and Climate Change Adaptation in Kenya, Collaboration between University of Nairobi, University of Connecticut (USA), IGAD Climate Prediction and Applications Centre (ICPAC), Regional Center for Mapping of Resources for Development (RCMRD), and Kenya Water Institute (KEWI)

Improved Drought Early Warning and FORecasting to strengthen preparedness and adaptation to droughts in Africa (DEWFORA), a collaboration between nineteen international partners

### **AWARDS**

WMO fellowship: PhD sandwich at North Carolina State University

DAAD Scholarship: Doctor of Philosophy (PhD) in Meteorology at the University of Nairobi, 1993 – 2000

DAAD Scholarship: Master of Science (MSc) in Meteorology at the University of Nairobi, 1987 – 1989

### **MEMBERSHIP TO PROFESSIONAL ASSOCIATIONS**

Kenya Meteorological society – life member

African Meteorological Society

### **DEPARTMENTAL RESPONSIBILITIES**

Institute for climate change and adaptation examinations officer: 2011 – Ongoing

Institute for climate change and adaptation examinations officer: 2011 – Ongoing

Member College Environmental Committee: 2015 – Ongoing

Department of Meteorology examinations officer: 2006 – 2012

College timetabling committee member: 2003 – 2006

### **APPOINTMENT AS EXTERNAL EXAMINATION OFFICER**

Maseno University, 2017 and ongoing

Makerere University, 2018 and ongoing

### **POSTGRADUATE STUDENT SUPERVISION**

#### **MS.c:**

- 1 Stanley David Chabvunguma: Assessment of maize crop water requirements under present and future climate in agro-climatic zones of the central and southern regions of Malawi. Graduation September 2009
- 2 Ezekiel Muigai Njoroge: Validation of Satellite Derived Rainfall Estimates in Kenya. Graduation September 2010

- 3 Msemo Hellen Elimo: Association between Climate Variability and Malaria Risk in Tanzania. Graduation September 2010
- 4 Mbithi Daniel Muange: Transport and dispersion patterns of aerosols over the East African Region. Graduation December 2010
- 5 Simon Musyimi Wambua: The use of remote sensing products to monitor meteorological drought in East Africa. Graduation December 2010
- 6 Marine Kasuvu Ambani: Monitoring vegetation phenological stages using remote sensing data for pasture management in selected ASALs of Kenya. Graduation August 2011
- 7 Gahigi Aimable: Impacts of climate variability and change on agriculture in Rwanda. Graduation August 2013
- 8 Ireri Nyaga Mwathi Waithavu: Communication of climate change information to smallholder farmers – a case study of Mbeere North, Embu County. Graduation December 2013
- 9 Onyango Michael Otieno: A neural network implementation for near real time tropospheric water vapour profiling over Nairobi using ground-based GPS receiver. Graduation August 2015
- 10 Ouma Jully Odhiambo: Assessing the potential effects of climate variability and change on livestock in the arid lands of Kenya. Graduation August 2015
- 11 Nsengiyumva Gloriose: A participatory decision support tool for smallholder farmers' climate variability and change response in Bugesera District, Rwanda. Graduation August 2016
- 12 Lillian Kwamboka Motaroki: Assessment of conservation agriculture as an adaptation option to climate change in Taita Hills, Kenya. University of Nairobi, Graduation December 2016
- 13 Obonyo Michael Ochieng': Assessing the impacts of climate variability on the academic performance of pupils in Siaya County, Kenya. Graduation 2018

**Ph.D.:**

1. Jared O. H. Ndeda: Solar Radiative Variability Forcing of Climate Change on Seasonal to Decadal Scales in Kenya, East Africa, Jomo Kenyatta University of Agriculture and Technology, Graduation – 2008

2. Bobadoye, Ayodotun Oluwafemi: Vulnerability assessment of masaaï pastoralist under changing climatic condition and their adaptation strategies in Kajiado County, Kenya. Graduation 2016
3. Linda Ajuang' Ogallo: The role of charcoal production in climate change adaptation in Somalia's lower Jubba region. Graduation 2018
4. Gideon Muchiri Muriithi: Impacts of seasonal climate variability and weather forecasts on livestock production and marketing in Baringo county, Kenya. Graduation 2018
5. Emily Nyaboke Bosire: Modelling impacts of climate change on sorghum production in the semi-arid environment of Machakos County. Graduation 2019

### **WORKSHOPS AND CONFERENCES**

Write-shop to review and edit The Nganyi Community book titled Rain Makers of Western Kenya: Nganyi Indigenous knowledge and Modern Climate Science, 17 – 22 October 2010, LeSavannah Hotel, Kisumu, Kenya – Team member and Facilitator

Policy Level Workshop on Mitigating Climate Change in Africa through Social Forestry, 28th September to 6th October 2010, Kenya Forestry Research Institute (KEFRI) Headquarters

Enhancing the Participation of African Women Scientists in Climate Change Assessment Information Dissemination and Policy Advocacy Training Workshop 30 August – 1 July 2010, Kisumu Hotel, Kisumu, Kenya

UNCCD PRAIS Training Workshop for National Focal Points (NFP) in IGAD Region, 5 – 9 July 2010, Nairobi, Kenya – Trainer

UNCCD Performance Review and Assessment of Implementation System (PRAIS) project Training of Trainers Workshop: 31 May-4 June 2010, FAO, Rome, Italy - Participant

Developing Phase II AfricaAdapt project, 12 – 16 April 2010, Brighton, United Kingdom

Climate Change Adaptation in Africa Learning Forum 08-12 March, 2010, Windsor Golf and Country Club, Nairobi, Kenya

UNDP's Regional community of practice workshop Disaster risk management – Africa 11 – 13 November, 2009, Dakar, Senegal

Parliamentary Sensitization Workshop on Climate Change, 8 – 9 October 2009, Continental Hotel, Mombasa, Kenya

Ninth Kenya Meteorological Society International Workshop on Meteorological Research Applications and Services 21 -23 September 2009, Kisumu Hotel



Training Workshop Climate Variability and Predictions Indian Ocean Basin: Africa and Asia, Hanoi, Vietnam, 22– 29 June 2009

Climate Change Adaptation Projects in Africa, 10 December 2008, European Union (EU) Side Event, 14th Conference of Parties to the UN Climate Change Convention (COP 14), Poznan, Poland

Enhancing African Food Security in the Face of Climate Change: Are the existing risk management mechanisms adequate? 14 December 6, 2008, CCCA Side Event, 14th Conference of Parties to the UN Climate Change Convention (COP 14), Poznan, Poland

Workshop on "Adaptation to Climate Change: Strengthening Capacities in Africa", 26 - 27 November 2008, German Development Institute (DIE), Bonn, Germany

Proposal development workshop for Knowledge Sharing for Climate Change Adaptation in Africa Project, 1 - 4 July 2008, Accra, Ghana, sponsored by IDRC

Scoping workshop on long term capacity building on climate change in Africa, 12 - 15 June, 2008, Farm Inn Lodge, South Africa

AMESD - IGAD Regional Consultative Meeting, 26 - 30 May 2008, Hilton Hotel, Nairobi, Kenya

Advancing Capacity to Support Climate Change Adaptation in Africa (ACCCA) Technical Assistance Workshop, Cape Town, South Africa 23-25 October, 2007

2007 ATPS Annual Conference and Workshop on "Science, Technology and Climate Change Adaptation in Africa", 19-23 November 2007, Birchwood Executive Hotel and Conference Centre, Johannesburg, South Africa

ACCCA Technical Assistance Workshop, Cape Town, South Africa 23-25 October, 2007

Meeting of Experts on Strengthening Coordination for Drought Risk Reduction in Kenya. Supported by Government of Kenya and ISDR, 24 April 2007

Participant at Coastal Training of Disaster Mitigation Trainers' Course. Conducted by Office of Disaster Preparedness in Africa (ODP A) of the University of Witwatersrand and Supported by FORD Foundation, 26 - 30 March 2007

2nd African Drought Risk Forum, Sponsored by UNDP and ISDR, 16 - 18 October 2007, Safari Park hotel, Nairobi

Capacity Building Training Workshop for Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda for the production of SOND seasonal climate forecasts, 21 - 28 August 2006, Nairobi, Kenya (Coordinator)

ICPAC/ISDR Regional Workshop on Dissemination of Drought Information to Rural Communities in GHA Region, 20 - 21 October 2006, Nairobi, Kenya

Factoring climate products for improved agriculture production and food security for East Africa, Pre-COF 18 Agriculture capacity building workshop for East Africa, 21 - 28 August 2006, Nairobi, Kenya (Coordinator)

Reducing Communities' Vulnerability to Disasters, Mid-term Workshop, Lawyers' Environmental Action Team, Institute for Law & Governance and The FORD Foundation, 14 - 16 June 2006, Dar-Es-Salaam, Tanzania

Meeting of the WMO RA I Working Group on Climate Matters, 22 - 24 February 2006  
Dakar, Senegal

Meeting of the Sixth Session of the IOCIUNESCO's Regional Committee for the Western Indian Ocean (IOCWIO-VI), 2 - 4 November 2005, Maputo, Mozambique Capacity Building Training Workshop for Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda for the production of MAM seasonal climate forecasts, 13 - 28 February 2006, Nairobi, Kenya, Nairobi, Kenya (Coordinator)

Capacity Building Training Workshop for Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda for the production of SOND seasonal climate forecasts, 14 to 30 August 2005, Nairobi, Kenya (Coordinator)

Joint workshop of the GEOLAND Observatory on Land cover and Forest change (OLF) and of the VGT4Africa Specific Support Action, two activities implemented in the framework of the European GMES initiative, Global Vegetation Monitoring unit of the Joint Research Centre, Ispra (Northern Italy), 30 May-03 June 2005

Capacity Building Training Workshop for Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda for the production of MAM seasonal climate forecasts, 6 to 28 February 2005, Nairobi, Kenya, Nairobi, Kenya (Coordinator)

Development of the Faculty of Science, University of Nairobi Strategic Plan, 11 - 14 May, 2005, Mombasa, Kenya

Development of the Department of Meteorology, University of Nairobi Strategic Plan, 31 August - 4 September, 2004, Matuu, Kenya

Capacity Building Training Workshop for Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda for the production of SOND seasonal climate forecasts, 8 - 21 August 2004, Nairobi, Kenya (Coordinator)

Capacity Building Training Workshop for Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda for the production of MAM seasonal climate forecasts, 8 - 24 February 2004, Nairobi, Kenya (Coordinator)

Rainfall Estimation Validation and Applications Training Workshop, 10 - 21 February, 2003, Nairobi, Kenya, Coordinator and Chairman Local Organizing Committee

United Nations Regional Workshop on the Use of Space Technology for Disaster Management in Africa, Addis Ababa, 1 - 5 July 2002

METEOSAT Workshop for postgraduate students in hydrology, 28 May - 1 June, 2001, Nairobi, Kenya.

Capacity Building Training Workshop for Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda for the production of JJAS seasonal climate forecasts, 14 - 26 May 2001, Nairobi, Kenya. Coordinator

Pre-Forum Capacity Building Training Workshop for Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania and Uganda for the production of MAM, 2001 seasonal climate forecasts, February 2001, Nairobi, Kenya (Resource Person)

Rainfall Estimation Training Workshop, 19 - 24 February, 2001, Nairobi, Kenya, Coordinator and Chairman Local Organizing Committee

CLIVAR Panel Meeting 29 - 31 January, 2001, Nairobi, Kenya, Member of Local Organizing Committee

EUMETSAT/OMM MEC-IVE Course (METEOSAT data users' course). 6-10 November, 2000, Nairobi, Kenya

Training course Statistics in Agricultural Climatology (Resource person), June-July, 2000, Kenya Meteorological Department, Nairobi, Kenya

Workshop on sustainable environmental management for poverty alleviation in the Lake Victoria Basin, 27-29 March 2000, Maseno University College, Kisumu

Visiting student, North Carolina State University, USA, Sandwich Ph.D. program extraction and analyses of satellite data (WMO fellowship), 28th September, 1998 - 30 May, 1999

The First International Conference of African Meteorological Society, 8 - 12 February, 1993, Nairobi, Kenya

The Second Technical Conference on Weather Forecasting in Eastern and Southern Africa, 3 - 7 Sept., 1990, Nairobi, Kenya

A follow up course in Image Processing, 29 Aug. - 7 Sept., 1990, Institute of computer Science, University of Nairobi, Kenya

Introductory Course in Image Processing with Practical Applications, 23 March to 23 June, 1990, Aston University, United Kingdom

F.A.O. Workshop on Calibration of Satellite Data for rainfall Estimations in the Tropics, 12 - 22 February, 1990, Nairobi, Kenya

The First National Research Workshop on Meteorological Applications and Services, 25-29 September, 1989, Nairobi, Kenya

## **PUBLICATIONS**

1. Ochungo EA, GO Ouma, JPO Obiero, NA Odero (2019): Drinking Water Quality Provenance Tracking for the Informal Water Market using Blockchain Technology. *Journal of Engineering Research and Application*, ISSN : 2248-9622 Vol. 9, Issue 2 (Series -III) Feb 2019, pp 64-70
2. Bosire, E, Gitau, W, Karanja, F and G O Ouma (2019): Analysis of Climate Variability, Trends and expected implication on crop production in a Semi-Arid Environment of Machakos County, Kenya. *Advances in Agricultural Science*. Volume 7 (2019), Issue 01, 99-115
3. Ochungo EA, GO Ouma, JPO Obiero, NA Odero (2018): Water Supply Security in a Drought Exposed Nairobi: Adopting a Blockchain Provenance Tracking for Informal Alternatives. *International Journal of Innovative Research in Science, Engineering and Technology*, Vol. 7, Issue 10, ISSN(Online): 2319-8753
4. Bosire, E, Karanja, F, Ouma, G O and W Gitau (2018): Assessment of Climate Change Impact on Sorghum Production in Machakos County. *Sustainable Food Production*, Vol. 3, pp 25-45. ISSN: 2624-876X, doi:10.18052/www.scipress.com/SFP.3.25
5. Muriithi, GM, Olago, DO, Ouma, GO and Oriaso, SO (2018): Reliability of Indigenous Traditional Knowledge and Conventional Weather Forecasting in the Face of Climate Change and Variability in Baringo County, Kenya. *Int J Recent Sci Res*. 9(7), pp. 28136-28141. DOI: <http://dx.doi.org/10.24327/ijrsr.2018.0907.2401>
6. Aduma, M.M., Ouma, G., Said, M.Y., Wayumba, G.O., Omondi, P.A. and Njino, L.W. (2018): Potential Impacts of Temperature Projections on Selected Large Herbivores in Savanna Ecosystem of Kenya. *American Journal of Climate Change*, 7, 5-26. <https://doi.org/10.4236/ajcc.2018.71003>
7. Linda Ajuang Ogallo, Kenneth Mwangi, Philip Omondi, Gilbert Ouma and Gordon Wayumba (2018): Land Cover Changes in Lower Jubba Somalia. *American Journal*

- of Climate Change*, 7, 367- 387, <http://www.scirp.org/journal/ajcc>, ISSN Online: 2167-9509, ISSN Print: 2167-9495, DOI: 10.4236/ajcc.2018.73022
8. Linda Ajuang Ogallo, Philip Omondi, Gilbert Ouma, and Gordon Wayumba (2018): Climate Change Projections and the Associated Potential Impacts for Somalia. *American Journal of Climate Change*, 7, 153 - 170
  9. Ouma, J., Olang, L., Ouma, G., Oludhe, C., Ogallo, L. and Artan, G. (2018) Magnitudes of Climate Variability and Changes over the Arid and Semi-Arid Lands of Kenya between 1961 and 2013 Period. *American Journal of Climate Change*, 7, 27-39. doi: 10.4236/ajcc.2018.71004
  10. Muriithi G., Olago D., Ouma G., Oriaso S. (2018). Long-term observed Precipitation Trends in Arid and Semi-arid Lands, Baringo County, Kenya. *Journal of Agricultural Economics and Rural Development*, 4(1): 326-334.
  11. Scott AA, Misiani H, Okoth J, Jordan A, Gohlke J, Ouma G, Arrighi J, Zaitchik B F, Jjemba E, Verjee S, Waugh D W (2017): Temperature and heat in informal settlements in Nairobi. *PLoS ONE* 12(11): e0187300. <https://doi.org/10.1371/journal.pone.0187300>
  12. Ouma G O, Dieye A M, Ogallo L O and L O Olang' (2017): Institutional challenges in upscaling climate change adaptation actions: experiences from rural communities in Senegal and Kenya. *Climate and Development*, 2017, <https://doi.org/10.1080/17565529.2017.1372261>
  13. Michael Otieno Onyango, Collins O. Mito, Paul Baki & Gilbert Ouma (2017): Near real-time tropospheric water vapour profiling using a ground-based GPS receiver. *International Journal of Remote Sensing*, 38, 2017, Pages 6697-6713, <http://dx.doi.org/10.1080/01431161.2017.1363434>
  14. Ouma G.O (2017): Improving water security for the poor: the role of climate science, REACH Conference on improving water security for the poor in drought-prone regions, 6 April 2017
  15. Mwesigwa J. B, Ouma G. O, Ouma J, Mulama I. L, Mwangi S. G and Ogallo L (2017): Tools and Procedures for Seasonal Downscaling of Climate Forecasts for Use by Farmers Over the Greater Horn of Africa: A Case Study for Western Kenya. DOI: 10.1007/978-3-319-49520-0\_24. Edition: illustrated, Publisher: *Springer*, 2017, Editor: Walter Leal Filho, Simane Belay, Jokasha Kalangu, Wuta Menas, Pantaleo Munishi, Kumbirai Musiyiwa, ISBN: 3319495208, 9783319495200

16. Carolyne M. M. Songa, Jared H. O. Ndeda & Gilbert Ouma (2016): Statistical study of solar forcing of total column ozone variation over three cities in Kenya. *Applied Physics Research*; Vol. 8, No. 3; 2016
17. Carolyne M. M. Songa, Jared H. O. Ndeda & Gilbert Ouma (2015): Total column ozone variability and trends over Kenya using combined multiple satellite-based instruments. *Applied Physics Research*; Vol. 7, No. 5; 2015
18. Ouma G. O (2015): Reaching the communities (users) with weather/climate information. Paper presented at the National Climate Information Service Providers Stocktaking Workshop, 23rd June 2015, Hilton Hotel, Nairobi
19. Bobadoye, A.O., Ogara W.O., Ouma, G.O. and Onono, J.O. (2014). Comparative analysis of rainfall trends in different Sub Counties in Kajiado County Kenya. *IJIRS*. Vol.3 Issue12. ISSN 2319-9725.
20. Ouma G.O (2014): Role of Indigenous Knowledge in Early Warning Systems. Paper presented at the Wilton Park Conference on Strengthening technological capacities and information access for improving disaster risk reduction in the Horn of Africa, 22 –23 January 2014, Safari Park Hotel, Nairobi
21. Ouma G. O., Ogallo, L., Maria, O., Achola, P., Wayumba, G., Ochieng', J. P., Mbeva, J., Mwangi, S., Abong'o, B.O. and Nyamenya, P. (2013): Coping with local disasters using indigenous knowledge: Experiences from the Nganyi Community of Western Kenya. LAP LAMBERT Academic Publishing. ISBN 978-3-659-45101-0
22. L. O. Olang, P.M. Kundu, Ouma, G. and Fürst G. J. (2012): Impacts of Land Cover Change Scenarios on Storm Runoff Generation: A Basis for Management of the Nyando Basin, Kenya. *Land Degradation & Development*. 2012; DOI: 10.1002/ldr.2140(DOI: 10.1002/ldr.2140)
23. Ouma G. (2011): Meteorological Service Evaluation, Second Eastern Africa Regional Training On Severe Weather Forecasting And Warning Services: Workshop On Public Weather Services, Arusha, Tanzania, 28 November – 2 December 2011  
Ouma G. and Ogallo L. (2011): Climate Change Science: Opportunities and Challenges. Paper presented at the 3rd Regional Training Course on Mitigating Change in Africa through Social Forestry, 24 – 25 November 2011, Muguga, Kenya

24. Ouma G. (2011): Reaching the communities and grass root users with weather/climate forecasts. Paper presented at WMO Workshop on Public Weather Services, Hong Kong, China, 11-15 July, 2011
25. Ouma G. O. (2010): Climate Change Science: Opportunities and Challenges, Policy Level Workshop on Mitigating Climate Change in Africa through Social Forestry, 28th September to 6th October 2010, Kenya Forestry Research Institute (KEFRI) Headquarters
26. Maria O., G. O. Ouma and L. A. Ogallo (2010): Science of the Elders, *Alternative Journal*, 36:4 2010
27. Ndeda, J.O.H., A.B. Rabi, L.H.M. Ngoo, and G.O. Ouma (2009): Similarities in periods of meteorological variables over Kenya and solar activity periods, *Journal of Science and Technology*, Vol. 29, No. 3, pp 43-51, Kwame Nkrumah University of Science and Technology (KNUST)
28. Ouma G. O (2008): Integrating Indigenous Knowledge in Climate Risk Management in Western Kenya, Paper presented at the European Union (EU) Side Event, 14th Conference of Parties to the UN Climate Change Convention (COP 14), Poznan, Poland
29. Ouma G. O. (2008): Are existing climate risk management mechanisms adequate to sustain food security in Africa? Case of the Greater Horn of Africa, Paper presented at CCCA Side Event, 14th Conference of Parties to the UN Climate Change Convention (COP 14), Poznan, Poland
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