# DEPARTMENT OF METEOROLOGY ANNUAL REPORT 2014



Dr. Fiona Percy, Regional Coordinator, African Adaptation Learning Program at CARE International- Kenya Signs a visitors book during her visit at the Department



Department of meteorology students during a visit at the coastline

#### 1. Introduction

Weather and climate are widely recognized as crucial in the development of any nation since they impact on all sectors of economy. Moreover, many of the natural disasters in the world are related to weather and climate. Knowledge of weather and climate is necessary if it has to be appropriately factored into the national development strategic plan. It is because of the importance of the science of meteorology that the Department of Meteorology of the University of Nairobi was established in 1963 at the request of the East African Community (EAC), the World Meteorological Organization (WMO) and the United Nations Development Program (UNDP) to train professional meteorologists for the English-Speaking countries of the African continent. Ever since its inception, the Department of Meteorology has continued to play a major role in training highly skilled meteorological personnel, most of whom are currently manning National Meteorological and Hydrological Services (NMHSs) of most countries in Africa. In response to the evolving needs the Department has developed several other programs in applied fields that are listed below. The mission of the Department is to maintain a leading role in the pursuit and development of knowledge of Meteorology through quality and relevant teaching, research, consultancy and community service.

### 2. Programs offered in Meteorology

The following academic programmes are offered at the department of meteorology:

- B.Sc. in Meteorology;
- B.Sc. (Atmospheric Science Option);
- Postgraduate Diploma (PGD) in Meteorology;
- PGD in Aviation Meteorology;
- PGD in Operational Hydrology;
- M.Sc. in Meteorology;
- M.Sc. in Agrometeorology;
- M.Sc. Aviation Meteorology;
- M.Sc. in Climate Change;
- PhD in Meteorology;
- PhD in Climate Change (in-progress)

#### 3. Enrolled students in undergraduate and postgraduate programmes

The following table gives the level of study and gender composition of the students enrolled in the courses listed above.

## (a) Undergraduate Programmes

No	Category/ Programme	Year of study	Female	Male	Total
1	BSc in Meteorology	1	8	39	47
2	BSc in Meteorology	2	9	35	44
3	BSc in Meteorology	3	4	22	26
4	BSc in Meteorology	4	11	33	44
		TOTAL	32	129	161

No	Category/ Programme	Group	Year of study	Female	Male	Total
1	BSc in Meteorology (ODL)	1 L	1	2	7	9
2	BSc in Meteorology (ODL)	2K	2	2	5	7
3	BSc in Meteorology (ODL)	4J	3	4	2	6
4	BSc in Meteorology (ODL)	5H	4			
5	BSc (Atmospheric Science)	N/A	1	2	9	11
			TOTAL	8	19	27

### (b) Postgraduate Programmes

No	Category/ Programme	Year of study	Female	Male	Total
1	PGD in Meteorology	2	3	14	17
2	PGD in Meteorology	1	3	8	11
3	PGD in Operational Hydrology	2	0	2	2
4	PGD in Aviation Meteorology	2	1	1	1
5	MSc in Meteorology	1	2	4	6
6	MSc in Meteorology	2	1	1	2
7	MSc in Aviation Meteorology	2	0	1	1
7	MSc in Climate Change	1	4	8	12
8	MSc in Climate Change	2	5	7	
9	MSc in Climate Change (ODL)	1	1	1	4
10	PhD in Meteorology	1			
11	PhD in Meteorology	2	1	2	3
12	PhD in Meteorology	3	0	4	4
		TOTAL			

**4. International Student Component**The following table gives the distribution of foreign student population by country

No	Country	Number of Students				
110		Undergraduate	Postgraduate	Total		
1	Botswana	3	0	3		
2	Ethiopia	0	1	1		
3	Liberia	0	1	1		
4	Malawi	0	9	9		

5	Namibia	8	1	9
6	République du Congo	1	0	1
7	Rwanda	7	2	9
8	South Africa	1	0	1
9	South Sudan	0	1	1
10	Tanzania	3	17	20
11	Uganda	0	3	3
12	Zambia	1	0	1
	Total	24	35	59

The details of the foreign students are as given in the table below.

S/No	FULL NAMES	REG. NUMBER	GEND ER	COUNTR Y OF ORIGIN	PROGRAMME REGISTERED	PERIOD OF STUDY
1	Sabiiti Geoffrey	I80/80585/2010	Male	Uganda	PhD (Meteorology)	2009-2013
2	Gahigi Aimable	I56/62101/2011	Male	Rwanda	MSc (Agrometeorology)	2010-2012
3	Ashipala Sarafia Ndapandula	I56/71911/2011	Female	Namibia	MSc (Agrometeorology)	2011-2013
4	Mulbah Jr. David Mawolo	I54/76311/2012	Male	Liberia	MSc (Climate Change)	2012-2014
5	Ame Hassan Khatib	I45/80695/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
6	Athuman Ahmed	I45/84333/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
7	Binda Juma Hamisi	I45/84338/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
8	Emmanuel Johnson L.	I45/84341/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
9	Jecha Suleiman Haji	I45/84344/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
10	Kapakala Isaya	I45/80695/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
11	Kasenga Leonard Michael	I45/84347/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
12	Kavishe golden M.	I45/84340/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
13	Levira Pamela william	I45/84350/2012	Female	Tanzania	PGD (Meteorology)	2012-2013
14	Miraji miraji khamis	I45/84342/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
15	Mking'imule Veronica	I571/84348/2012	Female	Tanzania	PGD (Meteorology)	2012-2013
16	Mohamed H. Mohamed	I45/84346/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
17	Musiba Musiba M.	I45/84334/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
18	Mwakilembe Amani Burton	I45/84343/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
19	Nkuba Abel M.	I45/84335/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
20	Tuju Peter Enos	I45/84345/2012	Male	Tanzania	PGD (Meteorology)	2012-2013
21	Tunsume Gideon M.	I45/84339/2012	Female	Tanzania	PGD (Meteorology)	2012-2013
22	Kaligirwa Jeanne	I10/30762/2011	Female	Rwanda	BSc (Meteorology)	2010-2013
23	Nyiranteziryayo Esperance	I10/30922/2011	Female	Rwanda	BSc (Meteorology)	2010-2013
24	Ngabonziza Athanase	I10/30763/2011	Male	Rwanda	BSc (Meteorology)	2010-2013
25	Mbati Mathieu Mugunga	I10/30921/2011	Male	Rwanda	BSc (Meteorology)	2010-2013
26	Odillo Usile Kgobetsi	I10/44542/2012	Male	Namibia	BSc (Meteorology)	2011-2014
27	Sebastiano D.J. Laurinda	I10/44561/2012	Female	Namibia	BSc (Meteorology)	2011-2014
28	Masaka Hendrick	I10/44562/2012	Male	Namibia	BSc (Meteorology)	2011-2014
29	Somses Sieglinde	I10/44543/2012	Female	Namibia	BSc (Meteorology)	2011-2014
30	Haindongo Israel Ndaendako	I10/42366/2011	Male	Namibia	BSc (Meteorology)	2011-2014
31	Anande Doreen Mwara	I10/41650/2011	Female	Tanzania	BSc (Meteorology)	2011-2014
32	Nsonga Joseph	I10/41025/2011	Male	République	BSc (Meteorology)	2011-2014

				du Congo		
33	Gakomati Justin	I10/44407/2012	Male	Rwanda	BSc (Meteorology)	2011-2014
34	Musayidizi Jean De Dieu	I10/44409/2012	Male	Rwanda	BSc (Meteorology)	2011-2014
35	Niyonkuru Shadrack	I10/44408/2012	Male	Rwanda	BSc (Meteorology)	2011-2014
36	Kitero Beatrice Staford	I10/58731/2012	Female	Tanzania	BSc (Meteorology)	2012-2015
37	Maswe Oratile Kelebemang	I10/30949/2013	Female	Botswana	BSc (Meteorology)	2012-2015
38	Moreri Linky	I10/30950/2013	Female	Botswana	BSc (Meteorology)	2012-2015
39	Setoto Joyce Mmapotong	I10/309512013	Female	Botswana	BSc (Meteorology)	2012-2015
40	Masigani Godbless John	I10/58733/2012	Male	Tanzania	BSc (Meteorology)	2012-2015
41	Nasilele Collins		Male	Zambia	BSc (Meteorology)	2012-2015
42	Waiswa Milton	154/69928/2013	Male	Uganda	MSc (Climate Change)	2013-2015
43	Omay Paulino Omoj	154/69929/2013			MSc (Climate Change)	2013-2015
44	Mtingwi Patrick Edward	145/69975/2013	Male	Malawi	PGD (Meteorology)	2013-2014
45	Kanyenda Tolani	145/69977/2013	Male	Malawi	PGD (Meteorology)	2013-2014
46	Mughogho Kapewa Paulos	145/69978/2013	Male	Malawi	PGD (Meteorology)	2013-2014
47	Kazembe Anne	145/69979/2013	Female	Malawi	PGD (Meteorology)	2013-2014
48	Kisyombe Winthy Lusubiro	145/69980/2013	Female	Malawi	PGD (Meteorology)	2013-2014
49	Milanzi Hussein chikasowa	145/69981/2013	Male	Malawi	PGD (Meteorology)	2013-2014
50	Pagona James Pilirani	145/69982/2013	Male	Malawi	PGD (Meteorology)	2013-2014
51	Mkandawire Malazi	145/69983/2013	Male	Malawi	PGD (Meteorology)	2013-2014
52	Mthiko Keenness	145/69984/2013	Female	Malawi	PGD (Meteorology)	2013-2014
53	Sebaziga Ndakize Joseph	145/69931/2013	Male	Rwanda	PGD (Meteorology)	2013-2014
54	Henock Hailu Misganaw	145/69930/2013	Male	Ethiopia	PGD (Meteorology)	2013-2014
55	Bogere Robert	149/67157/2013	Male	Uganda	PGD (Operational Hydrology)	2013-2014
56	Matiapato Valencia Lesedi		Female	South Africa	BSc (Meteorology)	2013-2016
57	Simalumba Michael		Male	Namibia	BSc (Meteorology)	2013-2016
58	Philander Martin M.		Male	Namibia	BSc (Meteorology)	2013-2016
59	Nasikaku Richard Zaa		Male	Namibia	BSc (Meteorology)	2013-2016
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### 5.0 Research Activities Undertaken

The research activities in the Department include;

• Climate variability and predictability using statistical, General Circulation Models (GCMs) and Regional Climate Models (RCMs)

- Development of indices for monitoring and prediction of climate variability in Eastern Africa region
- Link between atmospheric aerosols, stratospheric dynamic, ozone and climate variability
- Effect of urbanization on micro-environment; air pollution transport and dispersion, air quality modelling
- Climate change
- Drought and low flows in the Nile/Flow Regime for International Experimental Network Data (FRIEND) research program
- Mixed tree/crop interfaces in semi-arid environments
- Applications of renewable energy in Kenya.
- Applications of remote sensing in meteorology with particular emphasis on disaster management, hydrology, agriculture and environmental monitoring in support of sustainable food security

Specific research activities are as reported in the table below.

Researchers Name(s)	Title of Research	Departments involved	Sponsor
Prof. NJ Muthama Dr. J.M. Ininda Mr. W.B. Masieyi Mr. D.N. Kariithi	Atmospheric Resources Modeling Centre	<ul> <li>Department of Meteorology, UON</li> <li>Kenya Meteorological Department</li> </ul>	KMD & UON
Dr. AO Opere	Nile basin Project- Adapting to climate change induced water stress in the Nile River Basin; WP1: Comprehensive Assessments	•Department of Meteorology, UON	UNEP (Small Scale Funding)
Prof. NJ Muthama Dr. JN Mutemi Mr. BK Mutai Ms Stella Aura	Sensitization of the communities in Kibwezi on the use of weather and climate information for the enhancement of food security	<ul> <li>Department of Meteorology, UON</li> <li>Kenya Meteorological Department</li> </ul>	African Institute for Capacity Development (AICAD)
Dr. GO Ouma Mr. CB Lukorito	Enhancing the Kenyan capacity on climate risk reduction and climate change adaptation for sustainable agricultural productivity and food security	Department of Meteorology, UON	Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)

### 6. International Links and Collaborations

The department of Meteorology boosts of a number of links and collaborations all of which enhance the teaching, research, consultancy and corporate social aspects of its existence. Such links and collaborations include the following.

The African Technology Policy Studies Network (ATPS) is a multi-disciplinary network of researchers, practitioners and policy makers that promotes science, technology and innovation (STI) policy research, dialogue and practice, for African Development. With a regional secretariat in Nairobi, it operates through national chapters in 30 countries with an expansion plan in place to cover the entire Africa. (<a href="http://www.atpsnet.org/">http://www.atpsnet.org/</a>).

Deltares is an independent, institute for applied research in the field of water, subsurface and infrastructure. Ms Marta Faneca Sanchez, a researcher affiliated to Deltares, made a 3-week visit to the department of Meteorology between May and June, 2013 (http://www.deltares.nl/en/).

The East African Community (EAC), is the regional intergovernmental organisation of the Republics of Burundi, Kenya, Rwanda, the United Republic of Tanzania, and the Republic of Uganda, with its headquarters in Arusha, Tanzania

Food Security and Nutrition Analysis Unit (FSAU-Somalia) provides a broad range of information users with timely and relevant information and analysis for better decision-making relating to short-term food insecurity and malnutrition, as well as informing development planning to address underlying causes of food and livelihood insecurity, and malnutrition (http://www.fsnau.org/).

Friend of River Nile is a project aimed at creating a better understanding and quantification of the river Nile system to enhance the management of the Nile water resources (http://www.friendnile.org/demo/)

The department collaborates with Kenya Meteorological Society (KMS) in facilitating communication of important findings, which contribute towards the advancement of meteorological knowledge to Kenyans and the global community at large through organizing local and international meteorological workshops, conferences, symposia; introducing public education; and, sensitizing the public on the important aspects of meteorology such as drought, desertification and climate change.

The department's link with Kenya Water Institute's (KEWI) is vital in research and consultancy services in the water, sanitation, irrigation and related Sectors for sustainable development.

The Lake Victoria Basin Commission, LVBC is a specialized institution of the East African Community (EAC). The department views a link with LVBC as being imperative in the coordination of the sustainable development agenda of the Lake Victoria Basin. The department acknowledges the fact that the Lake Victoria and its basin as an economic growth zone to be exploited in a coordinated manner (http://www.lvbcom.org/). The department also has a link to the Lake Victoria Environmental Management Project Phase II-Kenya (LVEMP II).

The Nile Basin Research Programme, NBRP serves as a framework for research on topics specifically relevant to the Nile Basin. This strategic, multidisciplinary research programme focuses on contested resources; climate dynamics; health; and socio-economic challenges. The research reflects regional priorities. NBRP targets post doctoral and senior researchers of regional institutions (http://www.uib.no/rg/nbrp). This is a possible entry point for collaborative research with the department.

The Somalia Water and Land Information Management, SWALIM is an information management unit of FAO Somalia serving Somali administrations, non-governmental organisations, development agencies and UN organisations. (http://www.faoswalim.org/). This link can be one way for the departmental to help the Somali communities whose lives depend directly on water and land resources.

The collaboration with Universite De Bourgogne (France) has benefited two members of academic staff in the recent past through research attachments. One of the staff was supervised by the deputy-director of CRC, Prof Pierre Camberlin.

Others links include the Climate Research Centre, CRC (http://climatologie.ubourgogne.fr/liens-utiles.html), University Of Cape Town (uct.ac.za), World Meteorological Organization (WMO), Kenya Climate Change Action Plan (KCCAP), Kenya Meteorological Ministry Of Environment Services Department (KMS), & Mineral Resources (environment.go.ke), Unesco Chair- Water Resources Sudan, UNESCO-CWR of Sudan (http://www.ucwr-sd.org/) and IGAD Climate Prediction and Application Centre (ICPAC). ICPAC provides industrial attachment and research facilities to students.

#### 7. Publications for the year

The table below gives the publications by the members of staff in the department in the year 2013.

1	N <u>o.</u>	AUTHOR	TITLE	JOURNAL	PERIOD	EVIDEN CE	F/ N <u>o.</u>
1	L	Ongoma, V., Muthama, J. N. and Gitau, W.	Evaluation of urbanization influences on the urban winds of Kenyan cities.	Ethiopian Journal of Environmental studies and	2013	Article	

			Management . 6(2):223-231.			
2	Ongoma, V.,  Muthama, J. N. and  Gitau, W.	Evaluation of urbanization influences on urban temperature of Nairobi City, Kenya	Global Meteorology 2(1):1-5.	2013	Article	
3	Okuku, C. C., Muthama, J. N. and Opijah, F. J.	Observed Similarity In Satellite Derived Total Column Ozone Data And Ground Based Dobson And Ozonesonde Over Nairobi Kenya.	JKMS	2013	Book of Abstracts	
4	Kaume, C. M., Mutai, B. K., Muthama, J. N. and J. K. Ng'ang'a	Simulation of Potential Impact of Air Pollution from the Proposed Coal Mining Sites in Mui Basin	JKMS	Accepted Mar,2013	Review comments	
5	Ngaina, J. N. and <b>B. K. Mutai</b> .	Observational evidence of climate change on extreme events over East Africa	Global Meteorology	Oct, 2013	Article	
6	Ouma, G. O., Ogallo, L. A. and M. Onyango	Coping with local disasters using indigenous knowledge: Experiences from Nganyi Community of Western Kenya	Lambert Academic Publishing ISBN 978-3- 659-45101-0	Nov, 2013	Copy of Title page	32
7	Oludhe, C.	The Use Of Renewable Energy Resources In Reducing Green House	JKMS Vol. 7	Nov. 2013	Book of Abstracts	33
8	Ng'ang'a, J. K.	Kenya technology needs for climate change resilience	JKMS Vol. 7	Nov. 2013	Book of Abstracts	34
9	Mutua, F.	Major sources of uncertainty in IWRM science and practice as everything Flows	JKMS Vol. 7	Nov. 2013	Book of Abstracts	35
10	Mutai, B. K., Muthama, J. N. and Ngaina, J. N	Investigation of the weather-dependence of fine particulate matter air pollution over Kenya	JKMS Vol. 7	Nov, 2013	Book of Abstracts	36
11	Mukabana, J.	Applied Weather and Climate Prediction	JKMS Vol. 7	Nov, 2013	Book of Abstracts	37
12	Bosire, E. N., Opijah F. J. and Gitau, W.	Accuracy evaluation of the climate forecast system model in predicting rainfall on seasonal time scales over East Africa	JKMS Vol. 7	Nov, 2013	Book of Abstracts	38
13	Gateri, Opere, A. O. and Gitau, W.	Domestic Rainwater Harvesting in Embu County: A case study	JKMS Vol. 7	Nov. 2013	Book of Abstracts	39
14	Ngaina, J. N., <b>Ininda J. M.</b> and <b>Mutai, B. K.</b>	Assessment of the potential of harvesting atmospheric water resources over Nairobi	JKMS Vol. 7	Nov, 2013	Book of Abstracts	40
15	Ngaina, J. N., Njoroge, <b>Mutua, F.</b> and <b>Opere, A.O.</b>	Improvement of flood forecasting using ensemble Kalman Filter on River Nzoia	JKMS Vol. 7	Nov, 2013	Book of Abstracts	41

## 8. Consultancies

Client Staff Involved	itle (
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Provision of consultancy services on Verification of the Internally Displaced Persons due to 2007 elections	Ministry of State for Special Programmes	Prof. Muthama
Advancing the objectives of the CGIAR Research Program CCAFS	International Crops Research Institute for Semi-Arid Tropics (ICRISAT)	Mr Lukorito

### 9. Number of staff

The establishment of the department comprising of the administrative, technical and academic staff is as given below.

Designation		No. of staff
Professor	-	2
Associate Professor	-	3
Senior Lecturer	-	8
Lecturer	-	3
Assistant Lecturer	-	0
Tutorial Fellow	-	0
Graduate Assistant	-	2
Administrator	-	0
Principal Technologis	t-	1
Senior Technologist	-	2
Technologist	-	3
Trainee Technologist	-	0
Secretary	-	2
Clerk	-	0
Driver	-	0
Messenger	-	0
Total	-	26

### 10. Number of Graduands (2013)

The number of undergraduate and postgraduate students who graduated from the department in the academic year 2012/13 is as follows.

S/No.	Certificate	Number Graduands
1	Diplomas	N/A
2	Bachelor of Science in Meteorology	49
3	Postgraduate Diploma in Meteorology	16
4	Postgraduate Diploma in Aviation Meteorology	2
5	MSc in Meteorology	3
6	MSc in Agrometeorology	2
7	PhD	0
	Total	72

### 11. Papers Presented at Conferences and other Academic Fora

The following papers were presented by the indicated members of staff from the department in conferences and other academic forums.

Nº.	Staff Name	Title of the Paper	Conference/Journal	Venue	Date
1	Dr. Oludhe	Methods and Tools for VIA Assessment	Vulnerability Impact Assessment (VIA) Scoping Workshop (PREPARED)	Imperial Hotel, Kisumu	July 10-13
2	Dr. Oludhe	Review of the 2012/2013 Rainfall over the GHA Sub-region	SARCOF 17	Rainbow Hotel, Harare, Zimbabwe	August 28-30
3	Dr. Mutemi	Performance of GHACOF 34 outlook and the GHACOF 35 outlook: SOND 2013	Thirty Fifth Greater Horn of Africa Climate Outlook Forum (GHACOF 35)	Boma Inn, Eldoret	August 21-23
4	Dr. Oludhe	Climate change and sustainable development in the GHA	Thirty Fifth Greater Horn of Africa Climate Outlook Forum (GHACOF 35)	Boma Inn, Eldoret	August 21-23
5	Dr. Ouma	Community Based Climate Services for Disaster Risk Reduction	Thirty Fifth Greater Horn of Africa Climate Outlook Forum (GHACOF 35)	Boma Inn, Eldoret	August 21-23
6	Dr. Opere	Historical and future climate projections over Mount Elgon area	Consultative stakeholders workshop- Resilience Framework for Climate Change (RFCC) Project	Kisumu Hotel, Kisumu	July 11-12
7	Dr. Opere	Climate service for risk assessments & risk reduction of hydro meteorological hazards in GHA	Thirty Fifth Greater Horn of Africa Climate Outlook Forum (GHACOF 35)	Boma Inn, Eldoret	August 21-23
8	Prof. Ng'ang'a	The Use Of Renewable Energy Resources In Reducing Green House	11th KMS Conference on Meteorological Research Applications and Services	Institute for Meteorological Training and Research, Nairobi	Nov 12-16
9	Dr. Oludhe	Kenya technology needs for climate change resilience	11th KMS Conference on Meteorological Research Applications and Services	Institute for Meteorological Training and Research, Nairobi	Nov 12-16
10	Prof. Mutua	Major sources of uncertainty in IWRM science and practice as everything Flows	11th KMS Conference on Meteorological Research Applications and Services	Institute for Meteorological Training and Research, Nairobi	Nov. 12-16
11	Mr. Mutai	Investigation of the weather- dependence of fine particulate matter air pollution over Kenya	11th KMS Conference on Meteorological Research Applications and Services	Institute for Meteorological Training and Research, Nairobi	Nov 12-16
12	Dr. Mukabana	Applied Weather and Climate Prediction	11th KMS Conference on Meteorological Research Applications and Services	Institute for meteorological Training and Research, Nairobi	Nov. 12-16

Nº.	Staff Name	Title of the Paper	Conference/Journal	Venue	Date
13	Ms. Bosire	Accuracy evaluation of the climate forecast system model in predicting rainfall on seasonal time scales over East Africa:	11th KMS Conference on Meteorological Research Applications and Services	Institute for Meteorological Training and Research, Nairobi	Nov. 12-16 2013

### 12. Corporate Social Responsibility

The Nairobi University Meteorological Association undertook charity work activities during the calendar year as part of the university's corporate responsibility. The students visited St. Elizabeth Secondary school on two occasions; one during the Children's Home visit and the other during the school's examination prayer day. The staff members and students also contributed generously to the visit to Kajiado children's home by the University.

### 13. Any other Activities

#### (α) **Promotions**:

Mrs Ann Kamau was promoted to a senior grade and posted to Lower Kabete campus. She was a secretary at the Department of Meteorology.

### (β) Academic Staff Research Visits

Dr W Gitau, a Lecturer at the Department of Meteorology, made a research visit to centre de Recherches de Climatologie (Centre for Research on Climate), Universite de Bourgogne, Dijon, France. This was a 7-week visit made between 1<sup>st</sup> May, 2013 and 22<sup>nd</sup> June, 2013.

Ms Marta Faneca Sanchez made a 3-week visit to the department of Meteorology between May and June. She is affiliated to Deltares, an independent Research Organization in Netherlands. Deltares undertakes research in collaboration with Department of Meteorology.

Mr Bethwel Mutai visited the Max Planck Institut fur Chemie, Mainz, Germany. Mr Mutai is a graduate Assistant at the department of Meteorology. This two-month visit came between 15<sup>th</sup> July, 2013 and 15<sup>th</sup> September, 2013.

### $(\chi)$ Visitors to the Department:

During the year 2013, the following visited the department as invited speakers, courtesy calls, and walk-in guests' e.t.c

	DATE	NAME OF VISITOR	ADDRESS/AFFILIATION
ſ	25.01.2013	Ruth Maina	UN Habitat
	04.02.2013	Makuto Suwa	World Meteorological Organization [WMO]

17.04.2013	Prof. L A Ogallo	IGAD Climate Prediction and Application Centre [ICPAC]
10.05.2013	Prof R O Genga	School Of Mathematics [SOM], UON
13.05.2013	Prof D Olago	
21.06.2013	Ayub Shaka	Kenya Meteorological Services [KMS]
11.07.2013	Kanthy-Ann L. Caesal	
12.09.2013	Sandra K Baptista	CIESEN, Columbia University, USA
12.09.2013	Wassila Mamadon Thiaw	Climate Prediction Centre [CPC]-African Desk, NOAA
16.09.2013	Hikari Fujit	Akita University- JAPAN
17.09.2013	Japanese Students	JAPAN
10.10.2013	Yinka Adebayo	World Meteorological Organization [WMO] , SWITZERLAND
10.10.2013	Elijah Mukhala	World Meteorological Organization [WMO] Regional Office, Nairobi, KENYA
16.10.2013	David Gikung'u	Kenya Meteorological Society [KMS]
16.10.2013	Bahati Musilu	Kenya Meteorological Society [KMS]
20.11.2013	Dlafer Roguldse	Belgingur, ICELAND
20.11.2013	Logi Rogersson	Belgingur, ICELAND
20.11.2013	Robert Wayumba	IGAD Climate Prediction and Application Centre [ICPAC]
20.11.2013	Fiona Percy	Care International

### (δ) Nairobi University Meteorological Association's Activities (NUMA)

NUMA is an organization that brings together students of meteorology with a mission to further understanding knowledge and research applications in the science of meteorology and other related fields. The following activities were undertaken by NUMA during the calendar year 2013:

**Students Orientation:** Organized general and department orientation of first year meteorology students

**Field trips:** Organized a field trip to Kenya Meteorological Service to orient the students to the centre and register them with Kenya Meteorological Society. It organized a tour to JKIA particularly for 3<sup>rd</sup> year students taking aviation meteorology. Students made a trip to Ngong Hills to appreciate the role of meteorology in wind power production.

**Sports Day:** Took part in the Departmental and Interdepartmental Sport Day. This was a competitive bonding session for meteorology and other students.

Career talks: Two speakers were invited to talk to students and staff; one on the potential meteorological career employers and the other on the perspectives of the users of meteorological products in Kenya.

**Charitable activities:** The students visited St. Elizabeth Secondary school on two occasions; one during the Children's Home visit and the other during the school's examination prayer day.

**World Meteorological Day:** NUMA showcased at the Kenya Meteorological Service head quarters, with student as participating actively in KMS activities and as ushers during the same day.

Two **other crucial activities** are earmarked for the end of the academic year 2013/14. These are the Career Day and End of year Dinner. During the career day NUMA will showcase the department, inform other students on importance of the science of meteorology in an economy, student presentations on various research projects and other general career talks that will benefit all SPS students. The end of year farewell dinner to final year students will also include awards ceremony for outstanding association members in research, academia and service to all.