**Severe Weather Forecasting Demonstration Project**

**Regional Subproject for the Eastern Africa (SWFDP-Eastern Africa)**

**Regional Training Workshop on Severe Weather Forecasting and Delivery of Warning Services**

(Nairobi, Kenya, 29 January to 8 February 2019)

**(under High Impact Lake System (HIGHWAY) project)**

**Provisional Programme for Week-1**

**(29 January – 2 February 2019)**

# **Aims**

* To develop a consistent interpretation of global and convective scale models output for use in forecasting severe and high impact weather in Eastern Africa.
* To train the trainers who are expected to impart training to their fellow forecasters in their home countries

# **Outputs**

At the end of the week, forecasters will have improved knowledge of model strengths and weaknesses, and will have gained experience in using a variety of models for synoptic scale forecasting of severe and high impact weather.

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| **Resource Persons/Lecturers*** Chris Tubbs – UKMO
* Andrew Hartley –UKMO
* Stephanie Landman – SAWS
* Douglas Parker – GCRF African-SWIFT
* Hamza Kabelwa – TMA/RFSC Dar Es Salaam
* David Koros – KMD/RSMC Nairobi
* Ata Hussain – WMO Secretariat
 | **Daily Health Breaks**A.M. Tea/Coffee: 10:30-11:00 hours Lunch Break: 12:30-13:30 hoursP.M. Tea/Coffee: 15:30-16:00 hours |

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| **Day 1: Tuesday, 29 January 2019** |
| Morning Session |
| 09:00-09:30 | Registration | All |
| 09:30-10:00 | Opening of the Training Workshop & Group photo | KMD, WMO, HIGHWAYAll |
| 10:00-10:15 | Training objective & Aims for the week | Andrew Hartley |
| 10:15-10:30 | Strengthening capacity of NMHSs in improving forecasts and warnings through SWFDP | Ata HUSSAIN |
| 11:00-12:30 | Introduction to models & visualisations* What models are available, and how to access them?
* HIGHWAY plans for 2019
 | Andrew Hartley & country teams |
| Afternoon Session |
| 13.30-13:45 | Weather briefing and discussion | KMD & All |
| 13:45-16:30 | Country presentations on evaluation of models for recent case studies | All trainees |
| 16:30-17:30 | Summary of model strengths & weaknesses observed by each country | Andrew Harley & Chris Tubbs |

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| **Day 2: Wednesday, 30 January 2019** |
| Morning |
| 09:00-10:00 | Global & Regional NWP from the UM | Chris Tubbs |
| 10:00-10:30 | RSMC Nairobi Guidance product - its interpretation and use | David Koros |
| 11:00-11:45 | UM Model Strengths & Weaknesses observed in SE Asia | Andrew Hartley |
| 11:45-12:30 | Introduction to synoptic forecasting | Douglas Parker |
| Afternoon |
| 13.30-13:45 | Weather briefing and discussion | KMD & All |
| 13:45-14:15 | RFSC Dar Es Salaam Guidance product for Lake Victoria basin - its interpretation and use | Hamza Kabelwa |
| 14:15-16:30(including tea break) | Group practical work on case studies(participants will be divided into groups) | All Participants Douglas Parker (to lead)Other lecturers (to assist) |
| 16:30-17:30 | Group presentations | All groups (to present)Douglas Parker (to facilitate) |

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| **Day 3: Thursday, 31 January 2019** |
| Morning |
| 09.00-09:45 | Verification – why, how, and what has been done already for East Africa? | Stephanie Landman |
| 09:45-10:30 | Practical session on forecast verification(participants can be divided into groups) | Stephanie Landman (to lead)David Koros & Hamza Kabelwa (to assist) |
| 11:00-11:30 | Severe weather forecasting – the forecast process including forecast confidence, uncertainty and predictability | David Koros |
| 11:30-12.30 | HIGHWAY observation campaign plans | Andrew Hartley  |
| Afternoon |
| 13.30-13:45 | Weather briefing and discussion | KMD & All |
| 13:45-14:30 | Atmospheric stability and use of stability indices: Global Instability Indices (GII), Combined Instability Index (CII), and Rapidly Developing Thunderstorm (RDT/CRR) products etc. | Andrew Hartley |
| 14:30-15:00 | Interpretation and use ECMWF Extreme Forecast Index (EFI) and Shift of Tails (SOT) indices | Chris Tubbs |
| 15:00-16:30(including tea break) | Group practical work on case studies(participants will be divided into groups) | All Participants Andrew Hartley (to lead)Other lecturers (to assist) |
| 16:30-17:30 | Group presentations | All groups (to present)Andrew Hartley (to facilitate) |

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| **Day 4: Friday, 1 February 2019** |
| Morning |
| 09:00-09:30 | Interpretation and use of EPSgrams/ ENS Meteograms | Hamza Kabelwa |
| 09:30-11:30 | Medium range forecasting including practical session  | Chris Tubbs All participants |
| 11:30-13:00 | Tour to KMD Forecasting Office and participation in video conference (TBC) | KMD (to lead)All participants |
| Afternoon |
| 13:30-14:30 | Presentation on forecast verification results(from previous day’s work assignments) | All groups (to present)Stephanie Landman (to facilitate) |
| 14:30-16:30(including tea break) | Group practical work on case studies(participants will be divided into groups) | All participants Andrew Hartley (to lead)Other lecturers (to assist) |
| 16:30-17:30 | Group presentations | All groups (to present)Andrew Hartley (to facilitate) |

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| **Day 5: Saturday, 2 February 2019** |
| Morning |
| 09:00-09.30 | Brainstorming on impact based forecasting (value adding process) | Ata Hussain |
| 09:30-10:30 | How to prepare case studies for SWFDP  | Hamza Kabelwa |
| 11:00-12:30 | HyVic Pilot Flight campaign – background & thermodynamics of Lake Victoria | Andrew Hartley |
| Afternoon |
| 13.30-13:45 | Look at previous day and current day’s forecast | KMD & All |
| 13:45-14:15 | SWFDP database and status of progress reports by NMHSs in Eastern Africa | Ata Hussain |
| 14:15-15:30 | SWFDP-Eastern Africa: Discussion on implementation and future prospects | Hamza Kabelwa & David Koros (to lead)Ata Hussain (to assist) |
| 16:00-16:30(including tea break) | Complete Questionnaire on assessment of training workshop week-1 | All trainees (to complete)Ata Hussain (to facilitate) |
| 16:30-17:00 | Closing of training workshop week-1 | All |