

June 27, 2022

Press Release

### **JMI organizes Webinar on Statistical Downscaling of Climate Data**

The Department of Environmental Science, Jamia Millia Islamia (JMI) organized a webinar on “Statistical Downscaling of Climate Data” on Wednesday, 22 nd June 2022. Dr. Mohamed Mwabumba, Senior Meteorologist, Tanzania Meteorological Authority at the Nelson Mandela African Institution of Sciences and Technology (NM-AIST), Arusha, Tanzania was the key speaker in the webinar. The event was inspired by the Jal Shakti Abhiyan, a water conservation campaign, launched by Hon’ble Prime Minister of India.

Prof. Sirajuddin Ahmed, In-charge Department of Environmental Science, JMI, delivered the welcome address, extended greetings to the invited speaker, faculty, scholars, and students. He then introduced the esteemed speaker, Dr. Mwabumba, who was welcomed by a round of applause.

The Webinar was enthusiastically attended by more than 100 scholars, students, faculty members of JMI and other universities. Participants got to know about the latest, state of the art technology and tools on statistical downscaling of climate data. Dr. Mohamed discussed in detail about the key challenges when it comes to downscaling climate data during his sixty-minute talk. The talk was followed by an engaging, in- depth Q&A session, coordinated by Dr. Neha Sami, Department of Environmental Sciences, JMI.

The event was brought to an end with a Vote of Thanks delivered by Dr. Neha Sami.

Public Relations Office  
Jamia Millia Islamia

meet.google.com/sty-tebz-jzv

Mohamed Mwabumba is presenting

## GCMs

Primary source of information on climate change projections

- Incoming and outgoing radiation
- Wind, Temperature, humidity etc..
- Clouds formation, Precipitation falls
- How ice sheets grow or shrink, etc.
- Feedback processes

Dr. David Wood 1988, 2002  
Climate Research Unit

4:40 PM | sty-tebz-jzv

Dr. Neha Sami (GF, D/o E...)  
Musahib Musa  
Shahid Ikbal  
Satyajit Saini  
MD NAWAZUZZOHA  
Moh Mwabumba  
42 others  
You

Mohamed Mwabumba is presenting

## Downscaling

Process of generating higher resolution data or climate change information from relatively coarse resolution GCMs relevant for adaptation and policy

Forcing: Emission Scenarios  
Initial Conditions

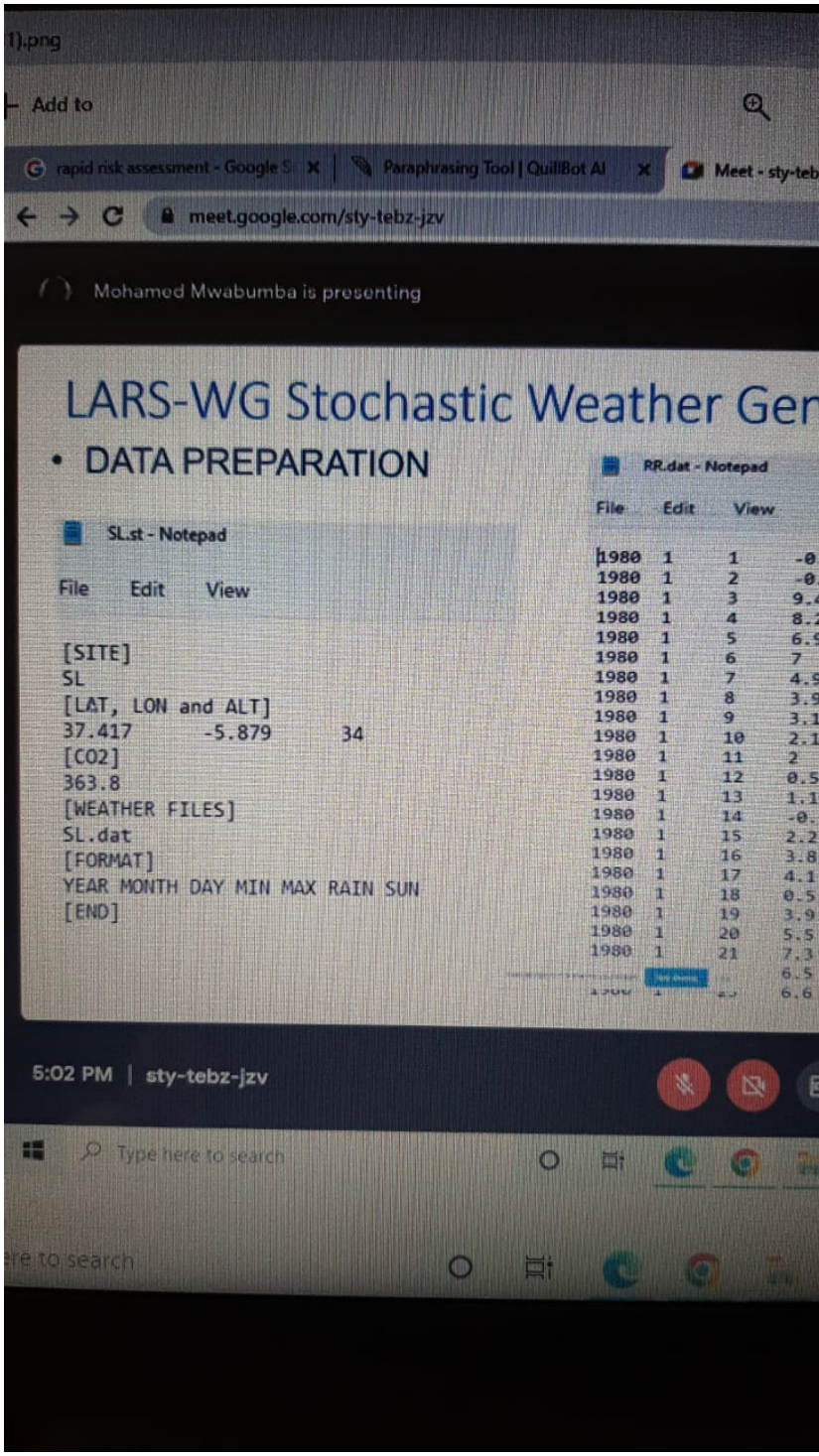
Downscaling model chain

Global Climate Models (GCMs)  
(HadCM3, ECHAM5, ~100km)

Regional Climate Models (RCMs)  
(CLM, 25km)

WASIM, PREVAH, ~1km

Prof. Siraj Uddin Ahmed (D/o Civil Engineering)

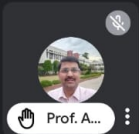


### Two main stream methodologies

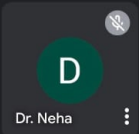
- **Dynamic downscaling / Regional Climate Models (RCMs)**
  - (e.g. RegCM, high resolution PRECIS)
- **Statistical /Empirical downscaling**
  - Weather typing (SOMD – University of Cape Town)
  - Linear (and nonlinear) regression (SDSM –Wilby,2001)
  - Weather generators (e.g. LARS-WG)



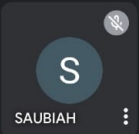
Mohamed



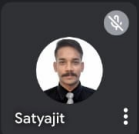
Prof. A...



Dr. Neha



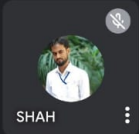
SAUBIAH



Satyajit



Dr. Jahangeer



SHAH



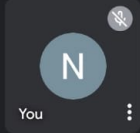
Manuprasad



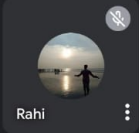
Prof. Siraj U...



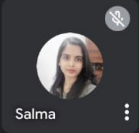
Yumnam



You



Rahi



Salma



husna



Faiz

35 others





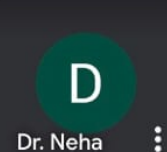
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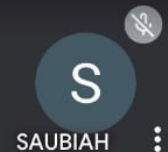
Mohamed



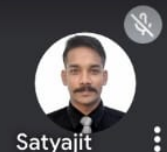
Prof. Atiq...



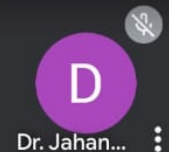
Dr. Neha



SAUBIAH



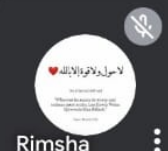
Satyajit



Dr. Jahan...



Mohd



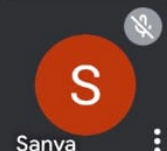
Rimsha



Mohame...



Shanawaz



Sanya



Israil



Mohd Wa...



SHAH



Gulnaz



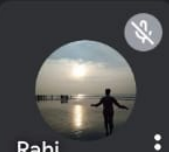
Harshit



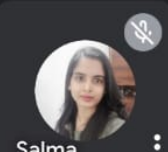
swapan



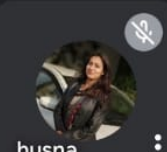
Yumnam



Rahi



Salma



husna



Faizan



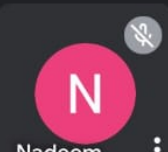
Er.Shahn...



Abdul



Musahib




Nadeem



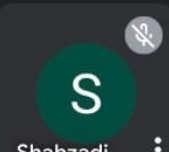
Malik



Mehreen



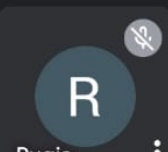
Saweza



Shahzadi



Shazia



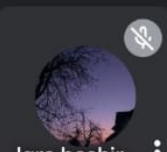
Ruqia



Shumaila



MD



Iqra bashir



shamza



Shahid



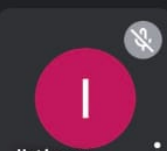
Shafiya



adnan



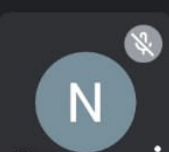
Faizan



Ibtisam



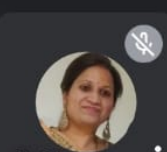
Firoz



You



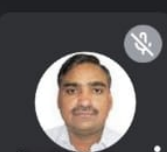
Fumeena



Rekha



warish



Prof. Moh...



Mirz 1 other