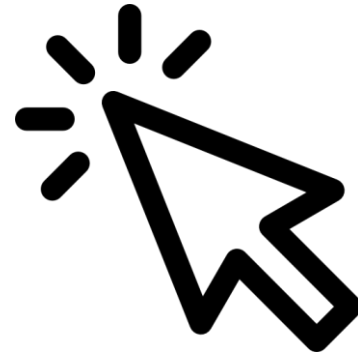


Introduction to CLIK

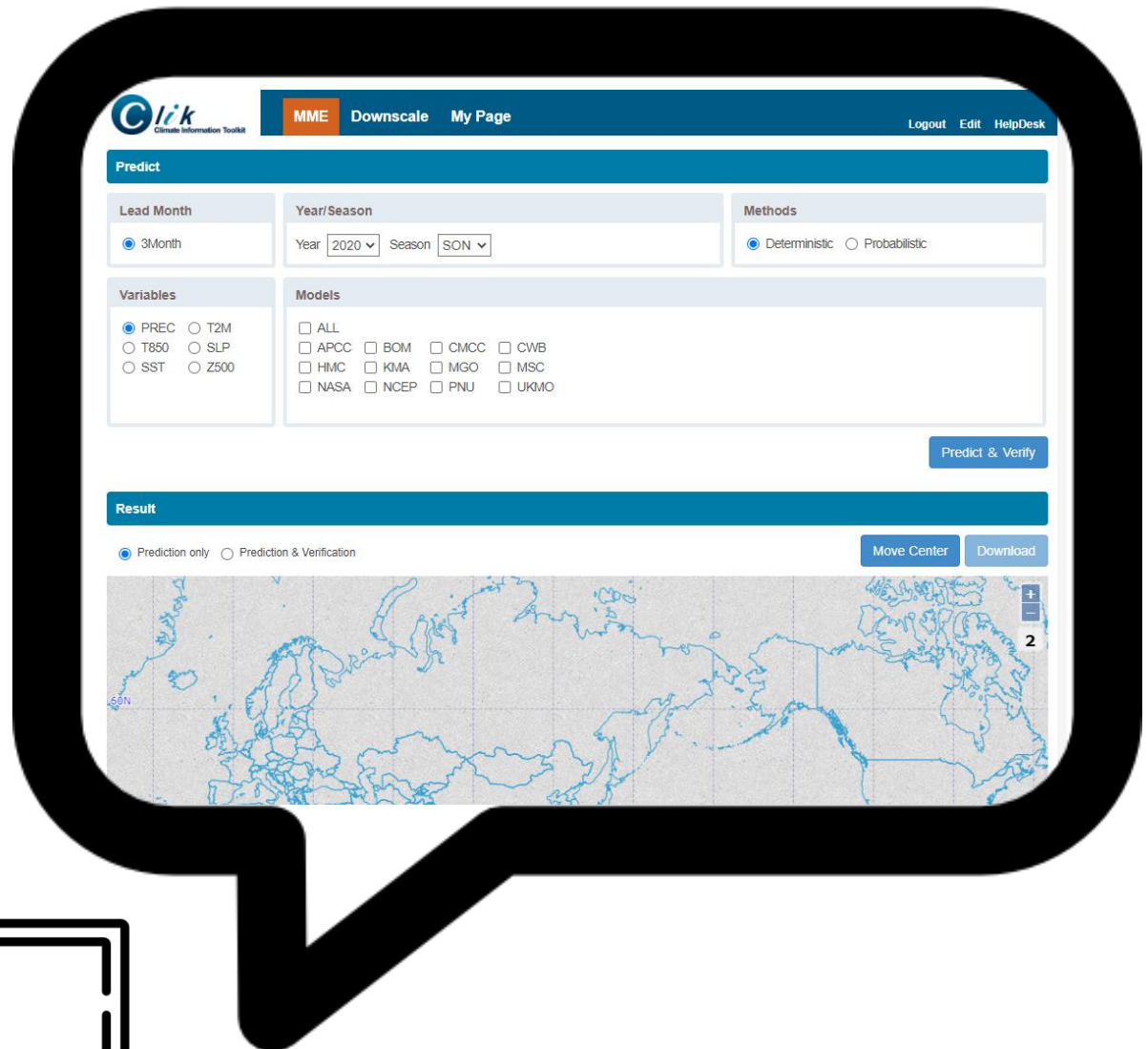
CLIK

CLimate Information toolKit

clik.apcc21.org



CLIK is an online climate prediction tool!



How to use forecast information generated by CLIK



කාලගුණ විද්‍යා දෙපාර්තමේන්තුව
வளிமண்டலவியல் திணைக்களம்
DEPARTMENT OF METEOROLOGY
இலங்கை இலங்கை SRI LANKA

Consensus Seasonal Weather Outlook July, August and September(JAS) Seasonal Rainfall and Temperature for Sri Lanka

This forecast was prepared using

- The prevailing global climate conditions.
- Forecasts from different climate models from around the world.
- Statistical downscaling of GCM output using CPT

Issued by Centre for Climate Change Studies (CCCS)

And
Research Division

(b.4) Probabilistic Forecast for JAS season 2019 using Climate Information Toolkit

A climate information toolkit which has developed by APCC is used for following forecast. For the tool kit APCC has used Collection of Dynamic ensemble seasonal prediction data from National Meteorological and Hydrological Services and research institutes. This includes 14 operations and the models developed by institutes from 10 countries.

Areal rainfall data used as input data to "CLIK" toolkit and Downscaled to districts. SST selected as predictor for all the models. (APCC, MSC, NASA, NCEP, PNU, POAMA).

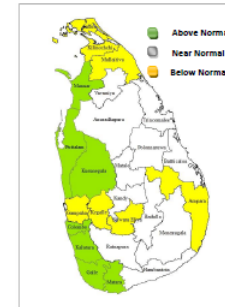


Fig 13: CLIK Multi model Ensemble Probabilistic Forecast for JAS season 2019

According to the CLIK tool there is a higher chance of receiving above normal rainfall in Mannar, Puttalam, Kurunegala, Colombo, Kalutara, Galle and Matara districts (Fig.13). And there is a higher chance of receiving below normal rainfall in Jaffna, Kilinochchi, Mullativu, Ampara, Gampaha, Kegalle and Nuwaraeliya districts. There is no signal in other districts and it indicates equal chances of receiving below normal, near normal and above normal rainfall for these districts.

▲ Sri Lanka's seasonal climate outlook for July – September 2019

Why CLIK?



Collection, Production and Distribution of
Climate Prediction Information as well as
Diagnosis of Climate Variability & Change



Technology and Their Application
Development for Climate Prediction as well
as Diagnosis of Climate Variation & Change

APCC's mission is...



Capacity Building and Improvement for
Climate Prediction



Domestic & International Cooperation

History of CLIK

Development

2008

- The CLimate Information ToolKit(CLIK) version 1.0 was developed.
 - Deterministic Multi-Model Ensemble (DMME) prediction

2009-2010

- CLIK version 2.0
 - Probabilistic Multi-Model Ensemble (PMME)
 - Statistical Downscaling

2011-2013

- Clustering Computation
Enhancing Internal Algorithm

2014

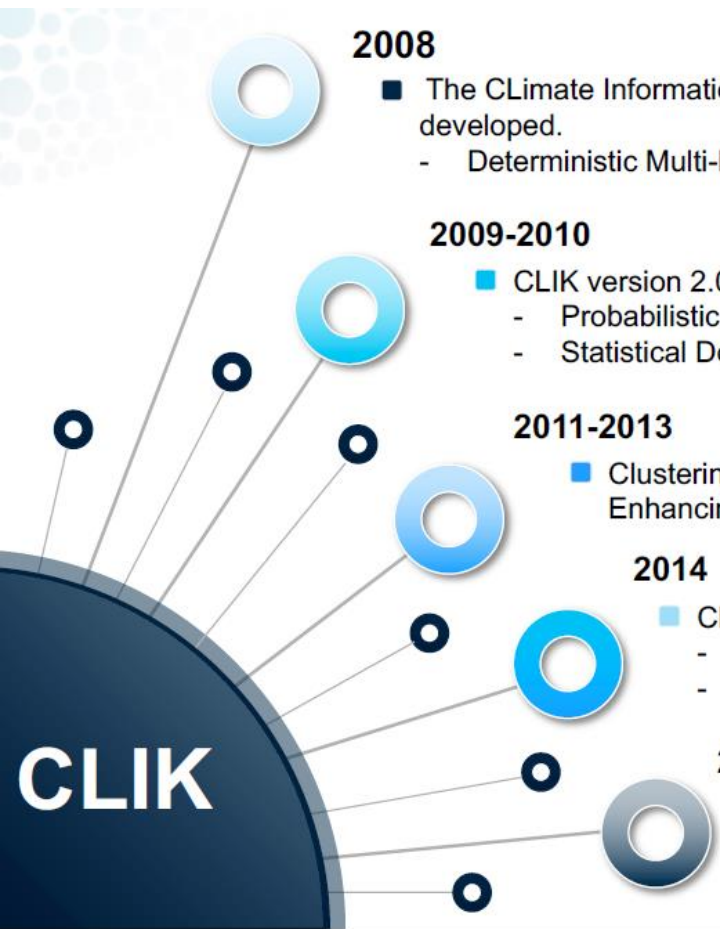
- CLIK v3.0 with New Web Framework (New CLIK)
 - Enhancement of User Interface & Performance
 - Database optimization, Lightweight Map, etc.

2015-2018

- Improvement of User Interface & Functions
 - New PMME Verification Metric (HSS)
 - Downscaling Dataset Management
 - Downscaling Correlation Map



Workshop



How CLIK works

CLIK
Climate Information Toolkit

MME **Downscale** My Page Logout Edit HelpDesk

Predict

Lead Month: ☒ 3Month

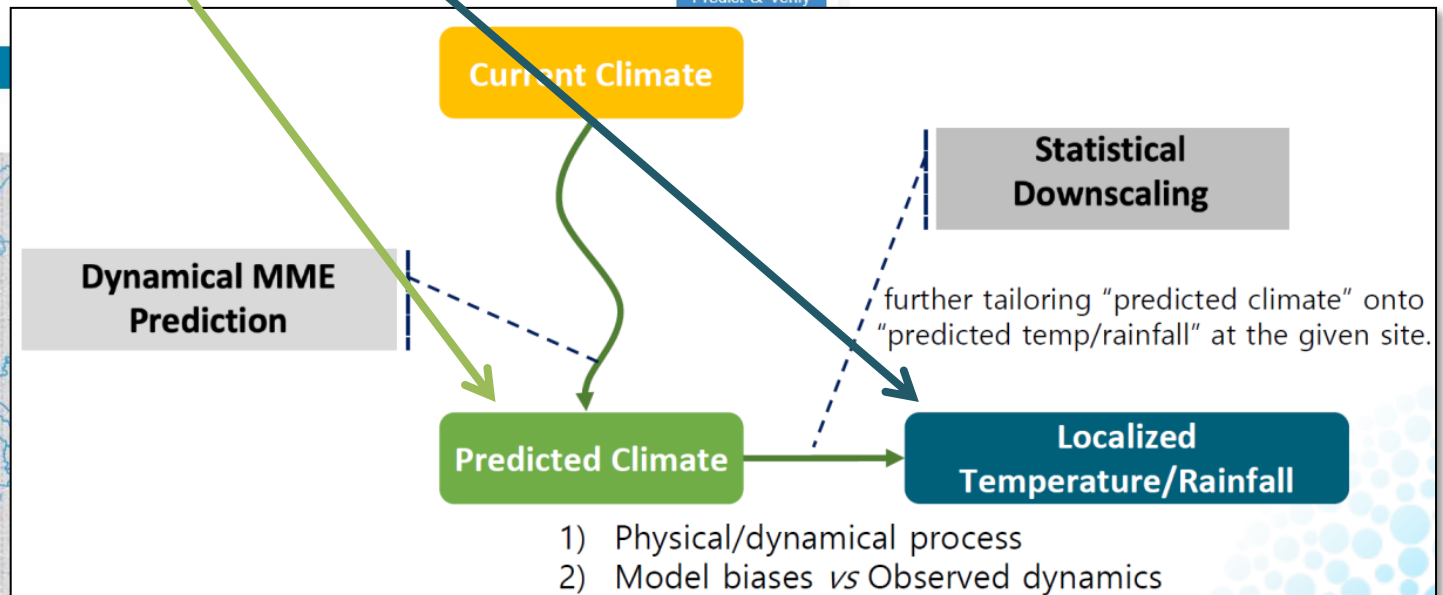
Year/Season: Year Season

Methods: ☒ Deterministic ☐ Probabilistic

Variables: ☒ PREC ☐ T2M ☐ T850 ☐ SLP ☐ SST ☐ Z500

Models: ☐ ALL ☐ APCC ☐ BOM ☐ CMCC ☐ CWB ☐ HMC ☐ KMA ☐ MGO ☐ MSC ☐ NASA ☐ NCEP ☐ PNU ☐ UKMO

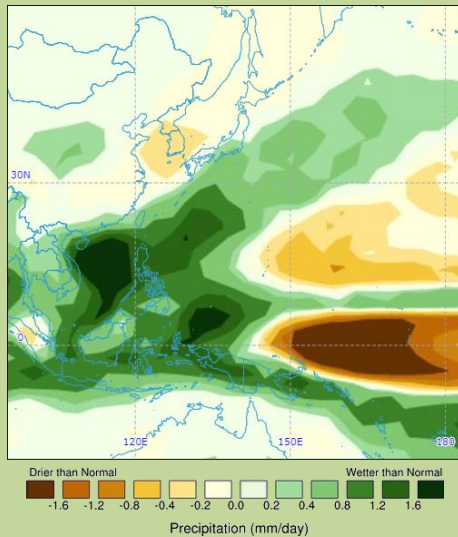
Predict & Verify



Components of CLIK

MME

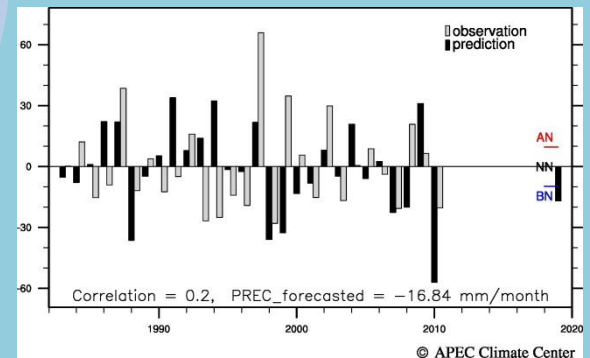
Individual models and
MME forecast
manipulated by users



CLIK

Downscale

Statistical downscaled
forecast using individual
models & MME forecast



Components of CLIK

MME

Individual models and
MME forecast
manipulated by users

Precipitation (2020SON)

Predict

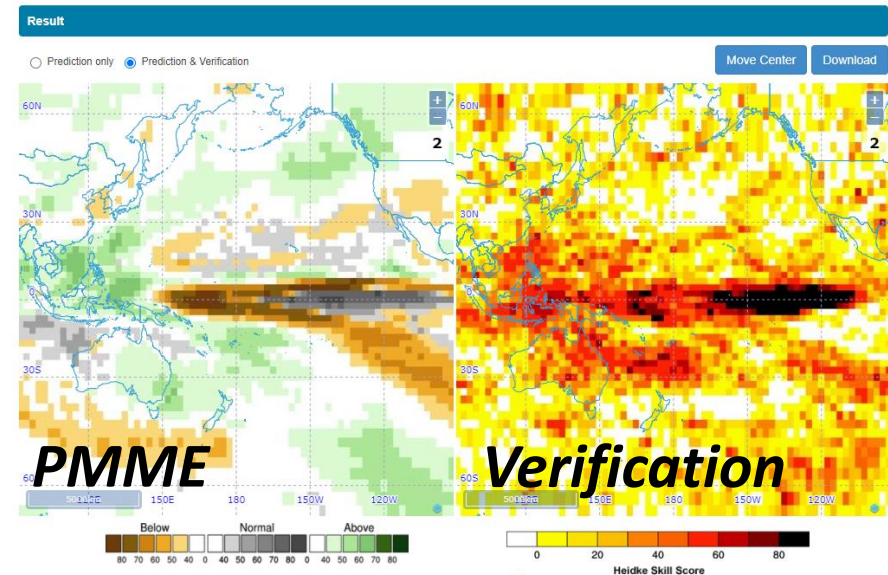
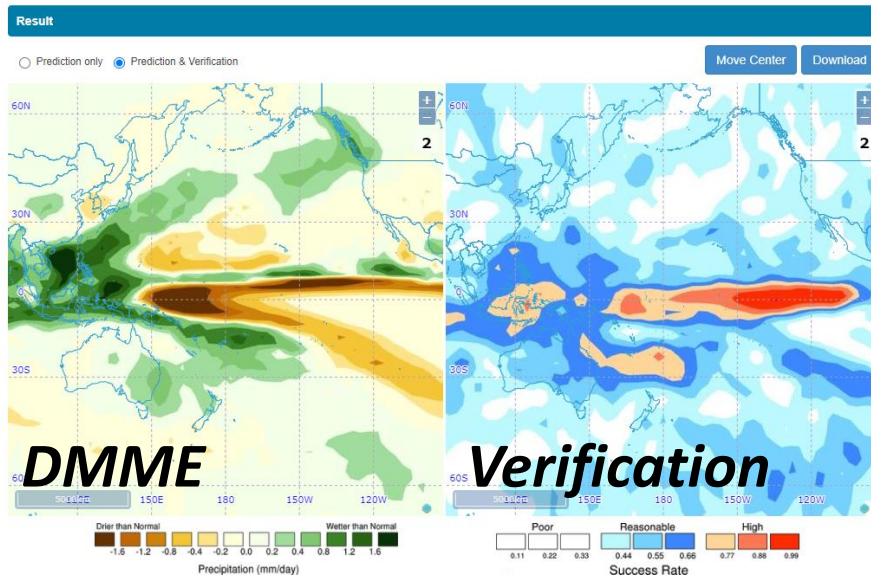
Lead Month
☒ 3Month

Year/Season
Year Season

Methods
☒ Deterministic ☐ Probabilistic

Variables
☒ PREC ☐ T2M
☐ T850 ☐ SLP
☐ SST ☐ Z500

Models
☒ ALL
☒ APCC ☒ BOM ☒ CMCC ☒ CWB
☒ HMC ☒ KMA ☐ MGO ☒ MSC
☒ NASA ☒ NCEP ☒ PNU ☒ UKMO

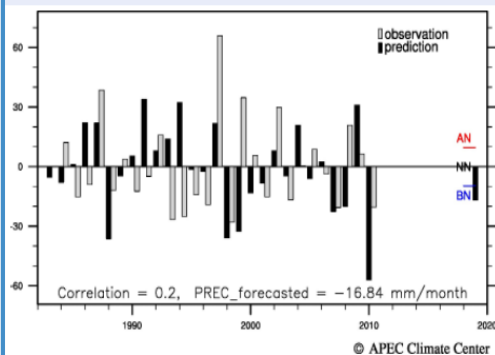


Components of CLIK

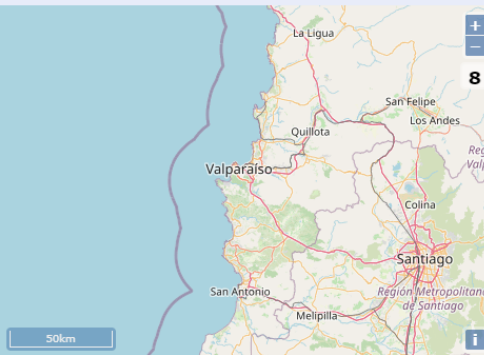
Precipitation @ Valparaíso (2019ASO)

Result

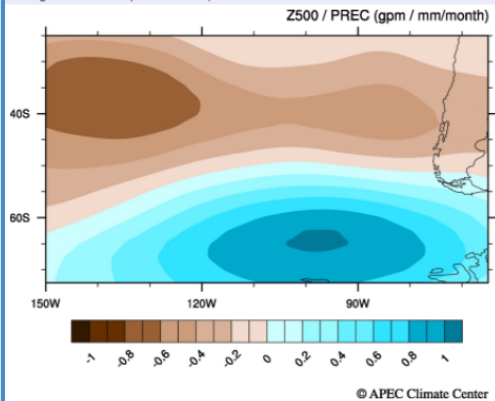
Downscaled forecast on the selected station



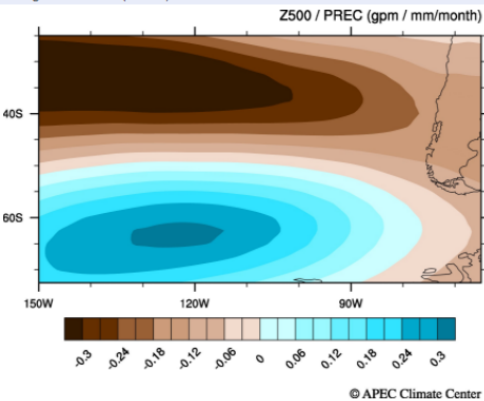
Location



Regression field (observation)

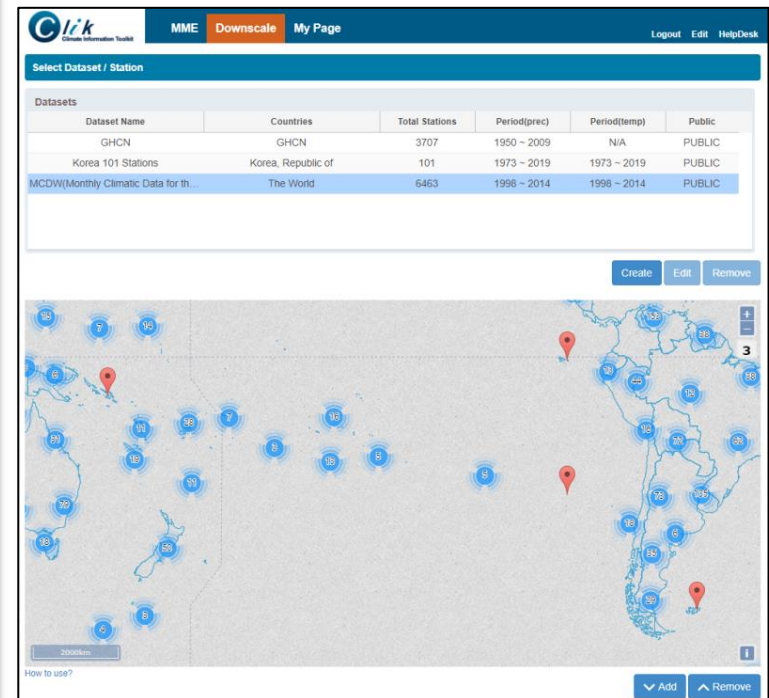


Regression field (model)



Downscale

Statistical downscaled
forecast using individual
models & MME forecast





Thank you!