

**1. Aim:** Minimization of the biases between the maximum temperature simulated by a global and a regional climate model, based on the ERA5 reanalysis data.

**2. Data:**

Parameter: Maximum Temperature (daily)

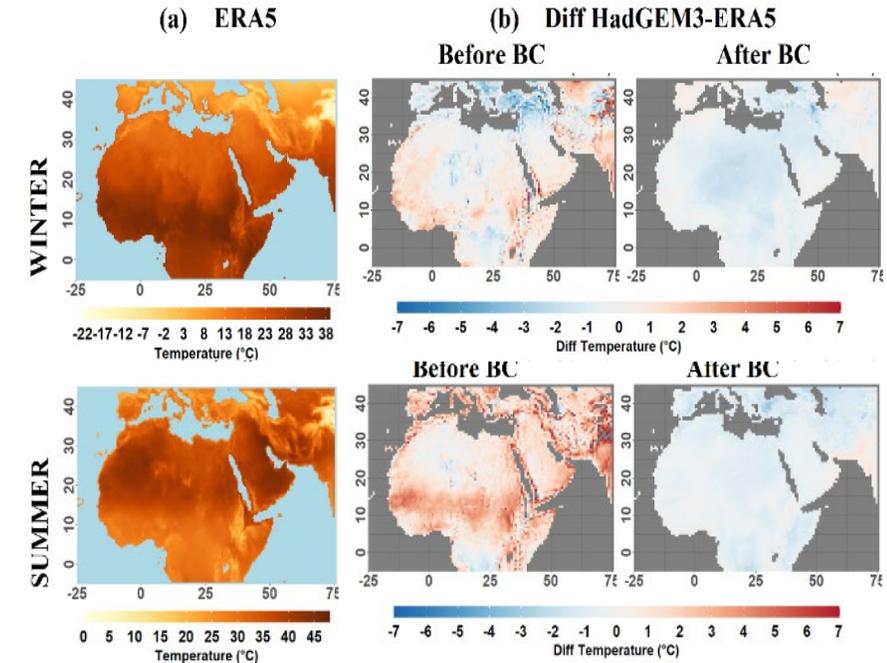
- ERA5 reanalysis data. (  $0.25^\circ \times 0.25^\circ$  )
- Hadley Centre Global Environmental Model version 3 (HadGEM3). (  $0.8^\circ \times 0.5^\circ$  )
- Weather Research and Forecasting model (WRF) (  $0.44^\circ \times 0.44^\circ$  )

Area of Study: MENA-CORDEX domain  
Time Period: 1981-2000 (calibration) & 2006-2014 (evaluation)

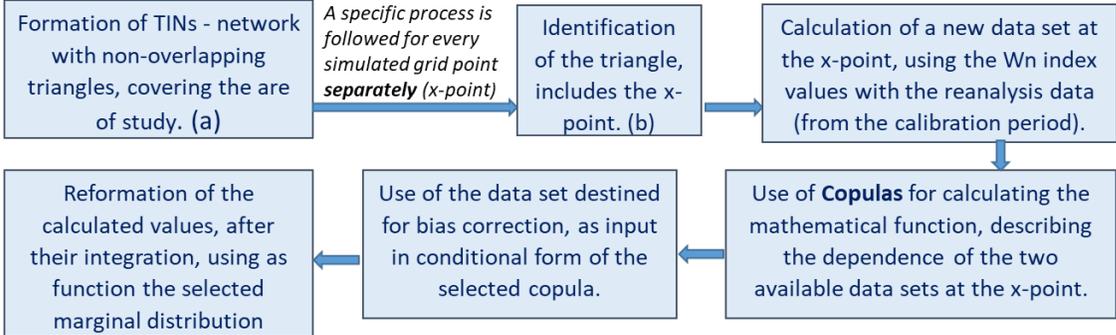
Area of Study



**4. Results:**

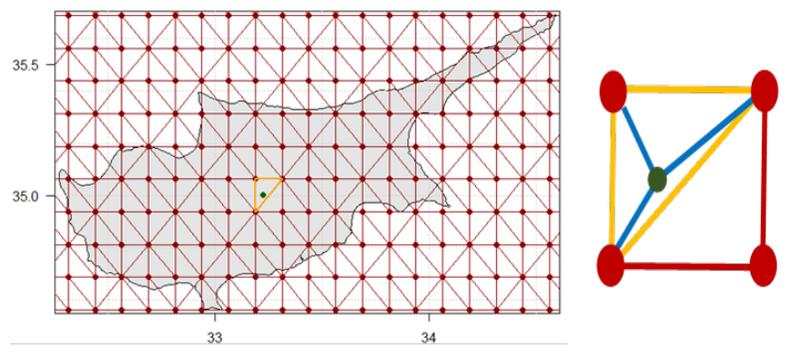


**3. Methodology:** The TIN-Copula method is a combination of **Triangular Irregular Networks (TINs)** and **Copulas**



**5. Conclusions:** TIN-Copula has the ability to increase the accuracy of the simulated data during all seasons and most of the studied area, independent from topographical features, the magnitude of the initial bias and the used model.

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<span style="color: red;">●</span>	Reanalysis Grid Point
<span style="color: red;">—</span>	TIN network
<span style="color: green;">●</span>	x-point (Simulated grid)
<span style="color: yellow;">—</span>	Studied TIN triangle
<span style="color: blue;">—</span>	Distances

