Servicio Meteorológico Nacional
Argentina

Week-2 Outlook products

In evaluation for the risk management sector

Lucía Castro y Alejandro Godoy

DSS: Direction of Sectoral Services

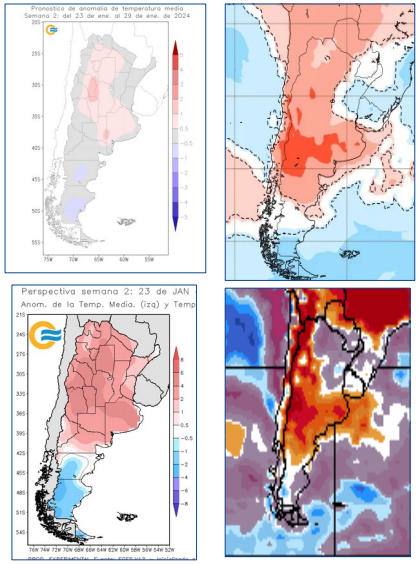
Week-2 Outlook products

In evaluation for the risk management sector

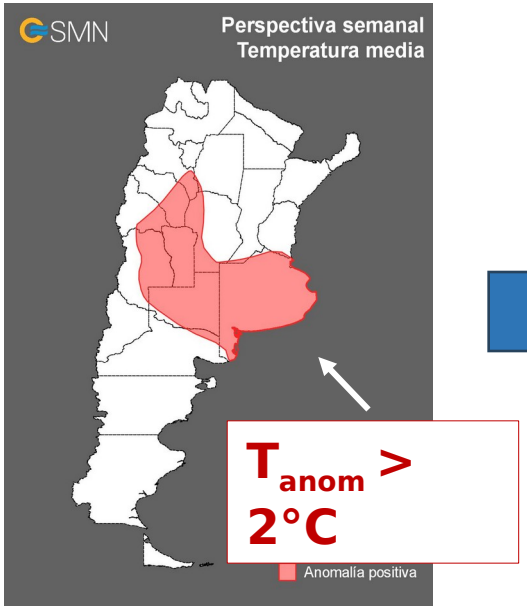
- *Forecast methodology and case study*
- *What products are used*
- *How we implement ECMWF in our workflow*

Workflow – 2 Weeks forecasts

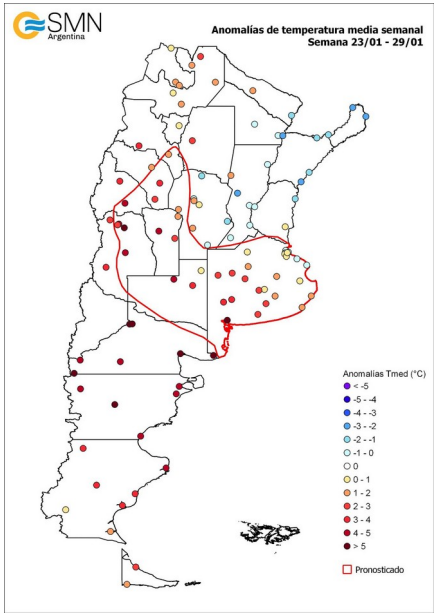
1° Analyse all graph products



2° Select a forecast area



3° Dichotomous verification



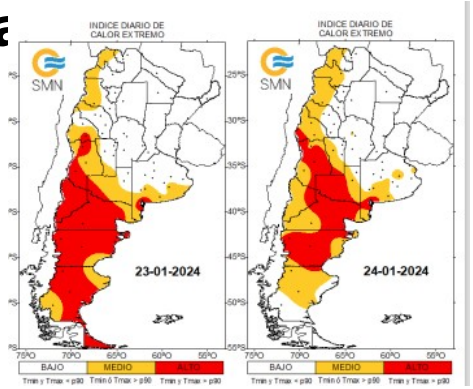
Only Week 2!

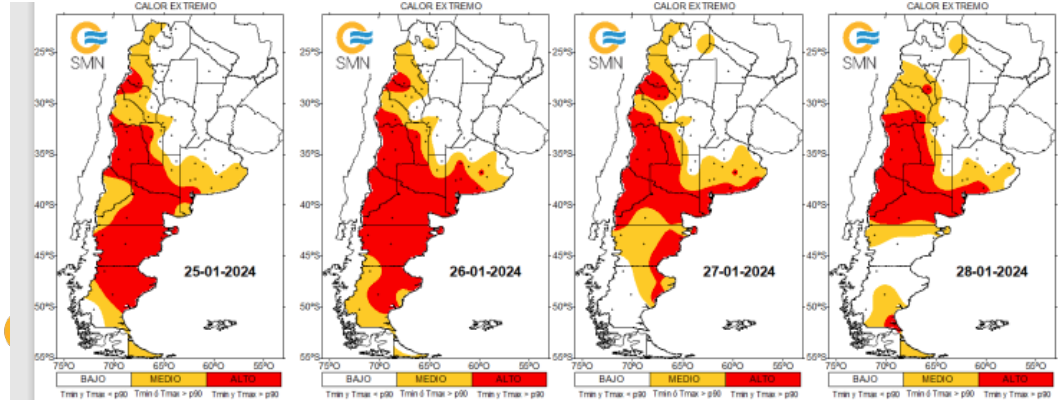
SMN Argentina

Ministerio de Defensa Argentina

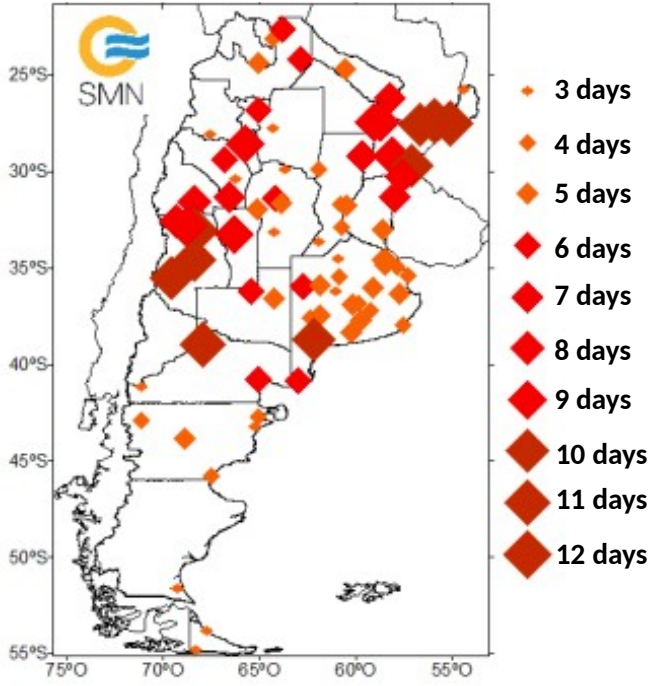
Case study – Heat Wave

Period:
21 January to 12 February of 2024 ***(23 da***





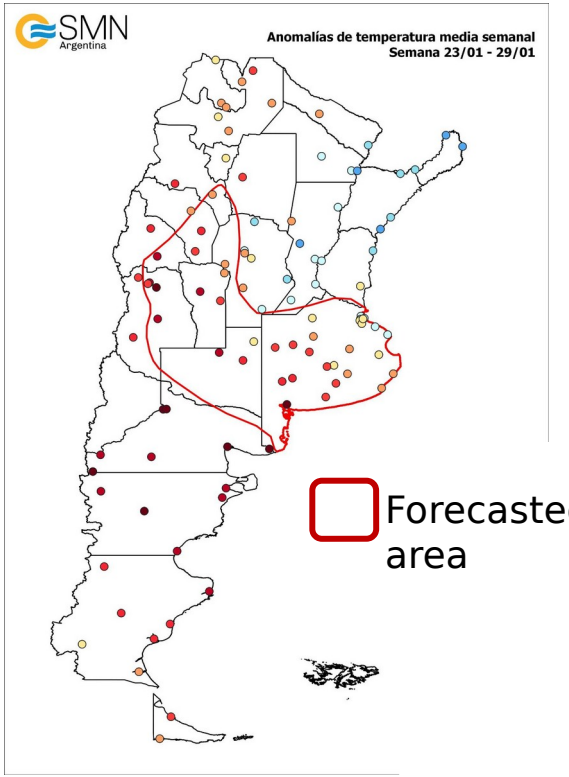
Stations with heatwaves



*This event affected **80***

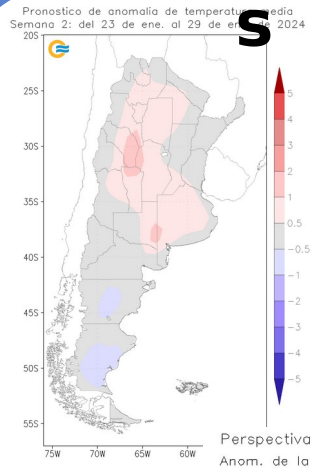
Fcst week: 23/01 al 29/01
Lead = 2 weeks

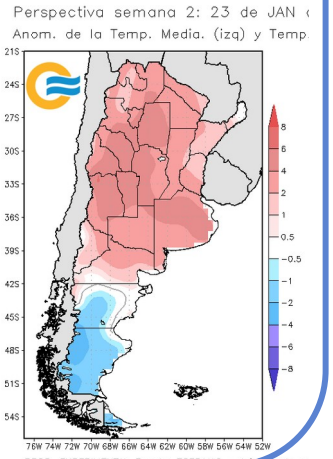
Forecast area and observations



Forecasted area

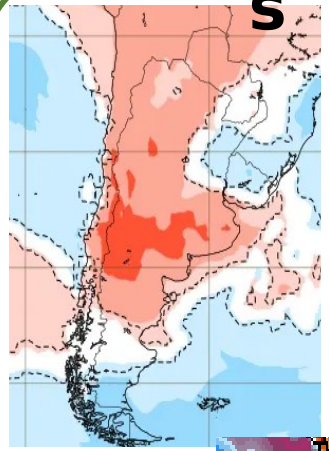
Internal products

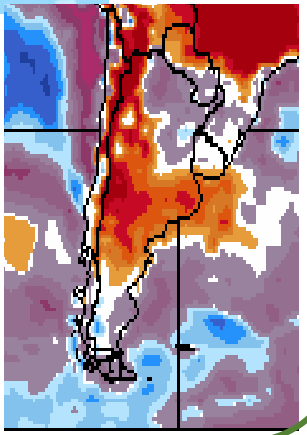




mad efro m GFS!

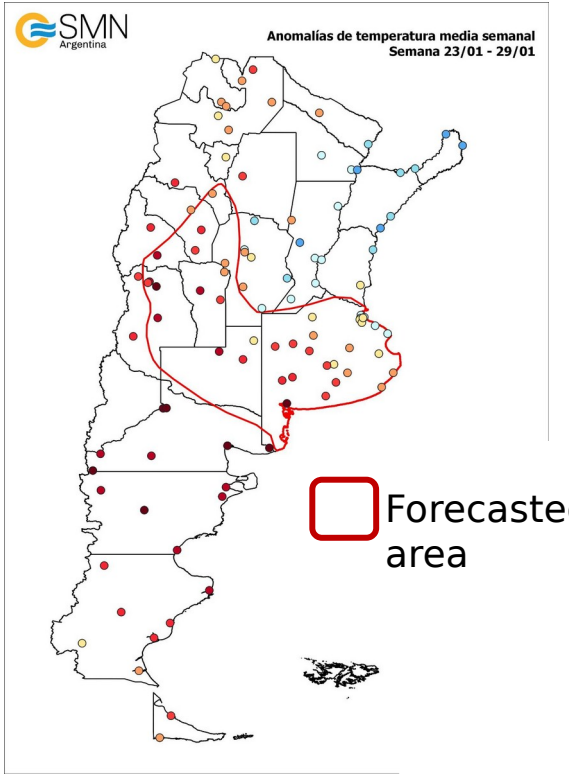
External products





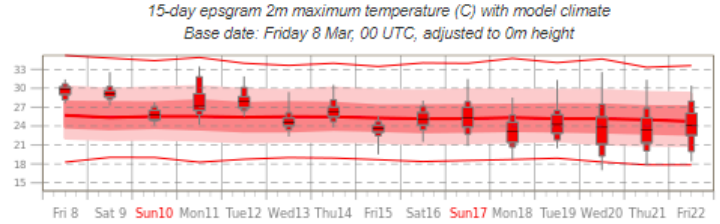
Fcst week: 23/01 al 29/01
Lead = 2 weeks

Forecast area and observations

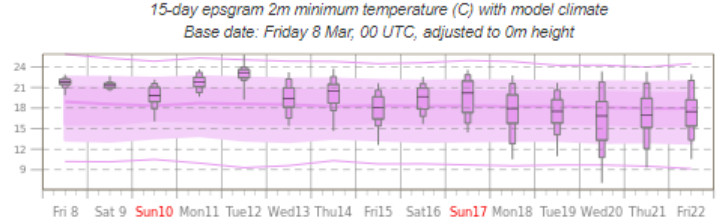


Forecasted area

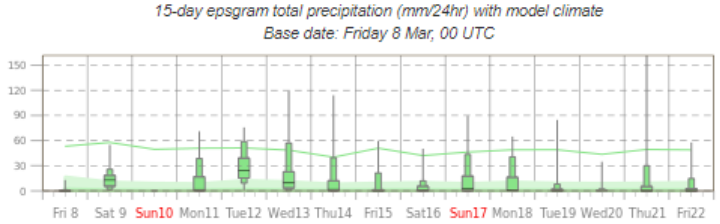
External



Tmax



Tmin

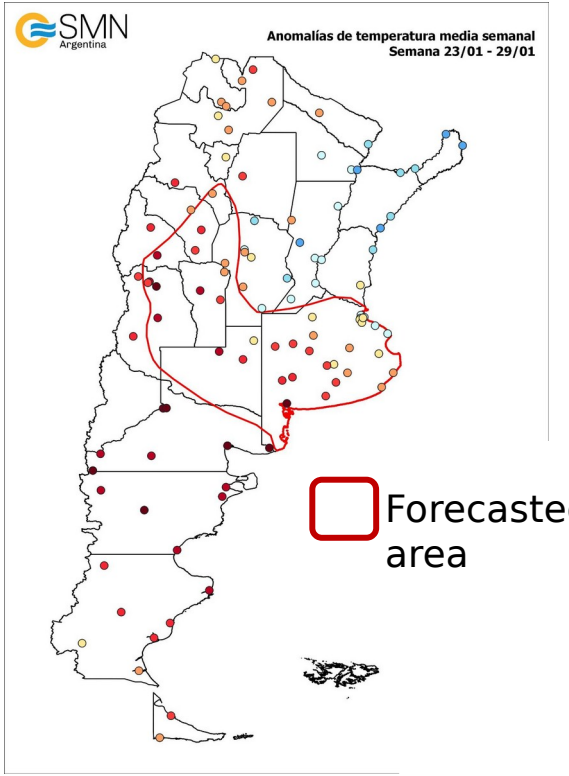


Total PP

Fcst week: 23/01 al 29/01
Lead = 2 weeks

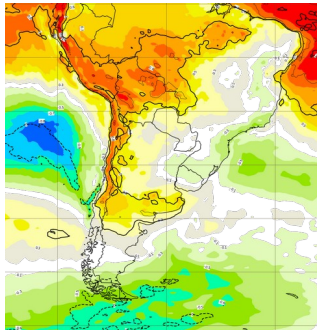
EFI and geopotential anomalies

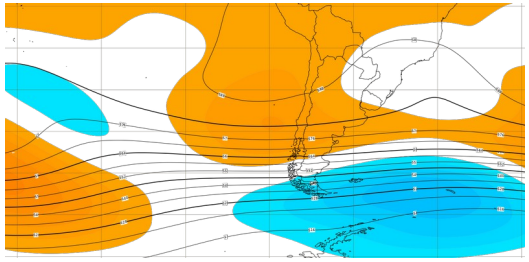
Forecast area and observations



Extended range forecast

Week 2

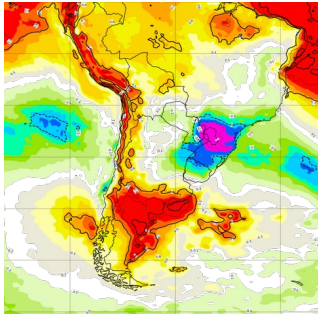


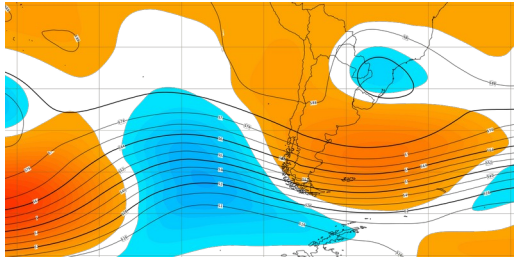


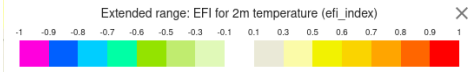
2 m temperature

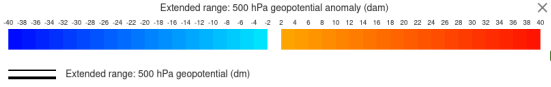
500 hPa height

Week 1







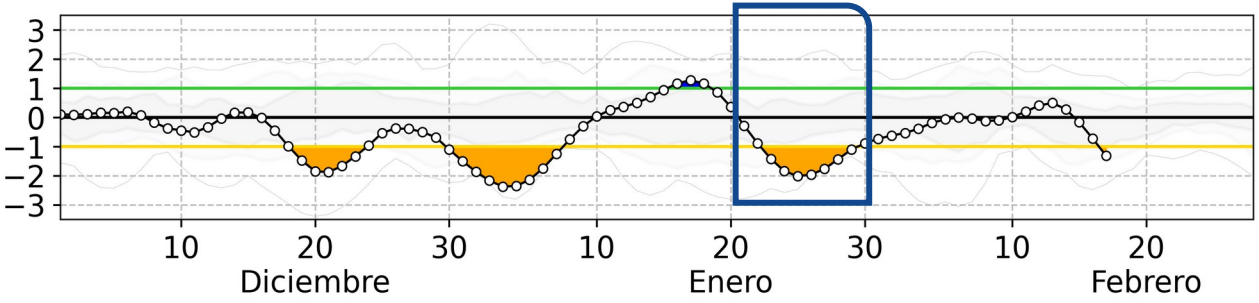


VERIFICATION - *23/01 to 29/01*

S2S forcing's analysis during the heat wave

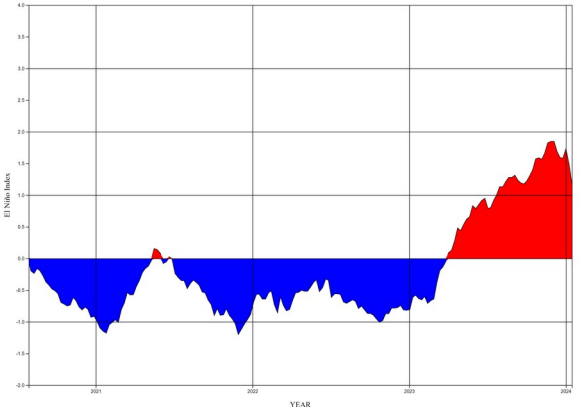
SIS

(intraseasonal)

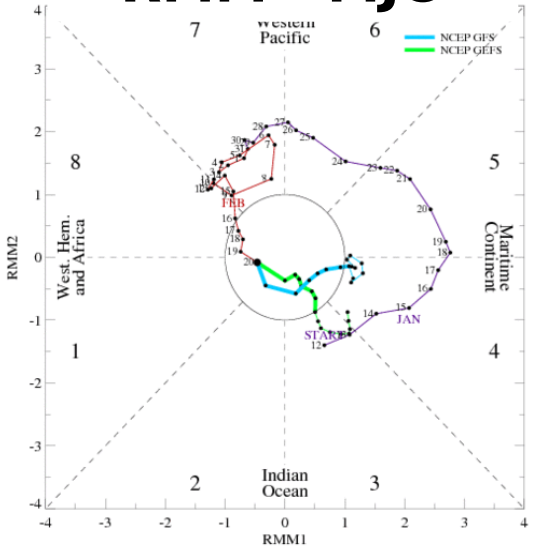


Source: Alvarez, M., C. Vera, G. Kiladis, and B. Liebmann, 2014: Intraseasonal Variability in South America during the Cold Season. Climate Dynamics, 42, 3253-3269. https://link.springer.com/article/10.1007/s00382-013-1872-z

ONI - ENSO



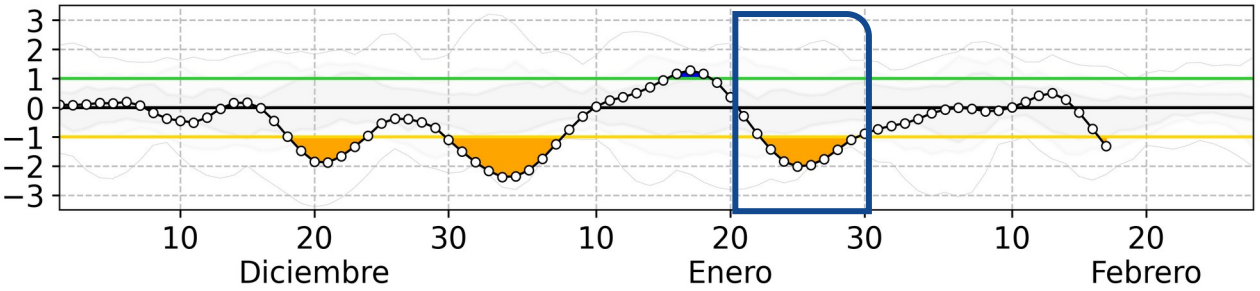
RMM - MJO



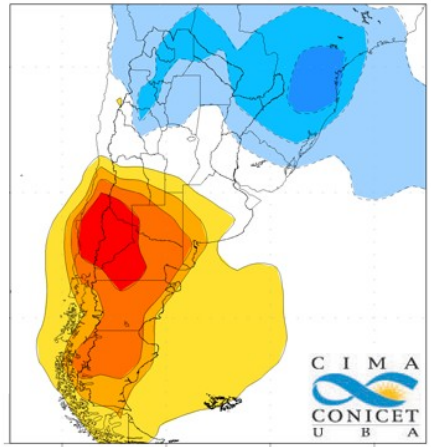
VERIFICATION - *23/01 to 29/01*

SIS

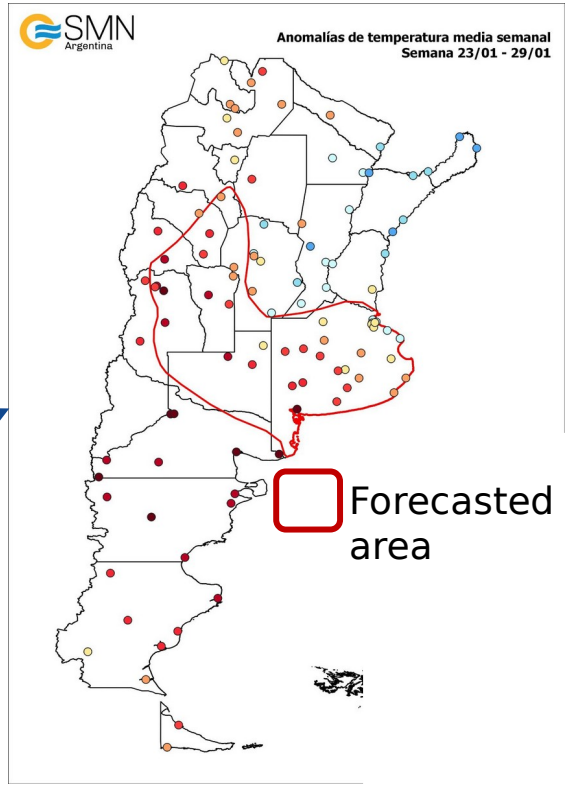
(intraseasonal)



Negative SIS T2M Response (DJF)

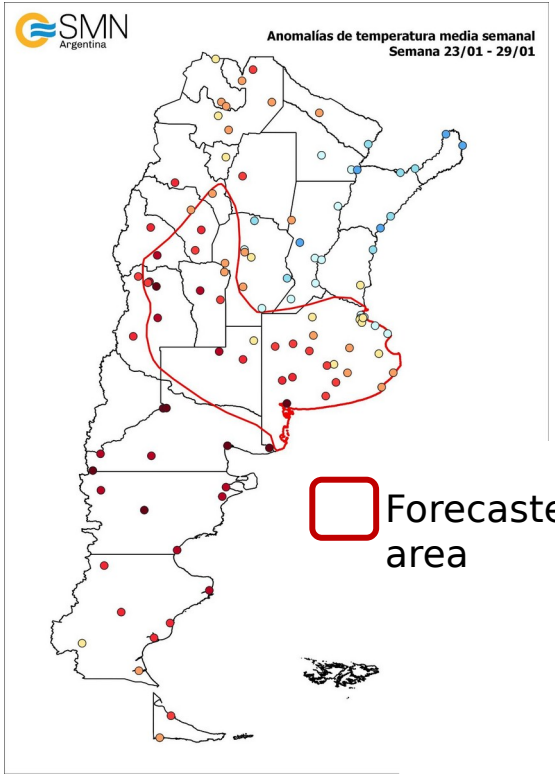


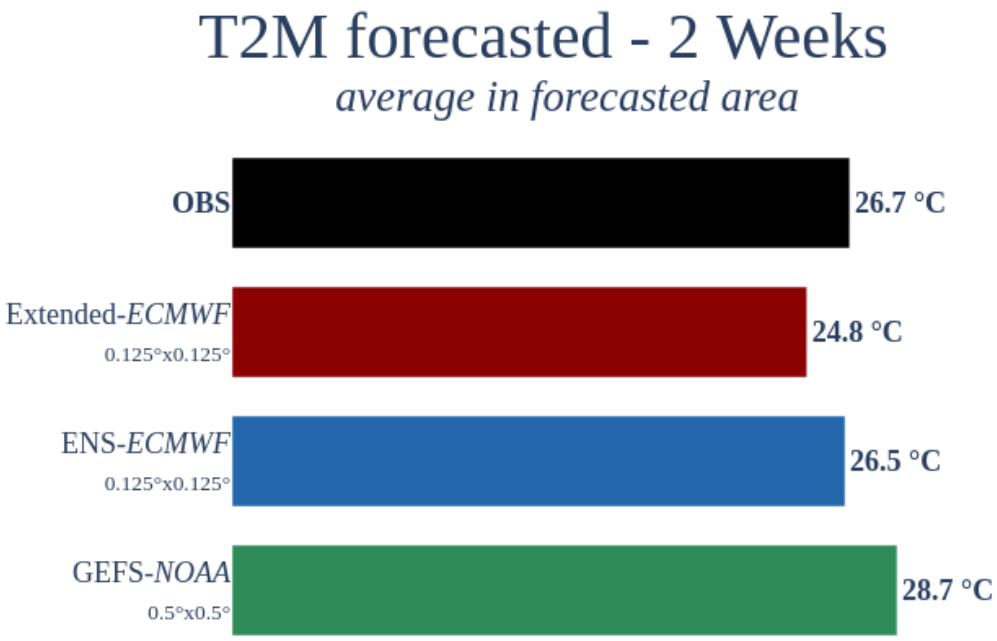
Observed T2M **similar** to expected



VERIFICATION - *23/01 to 29/01*

Forecast area and observations





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Argentina

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