Assessment of consensus forecast for DJF2018/2019

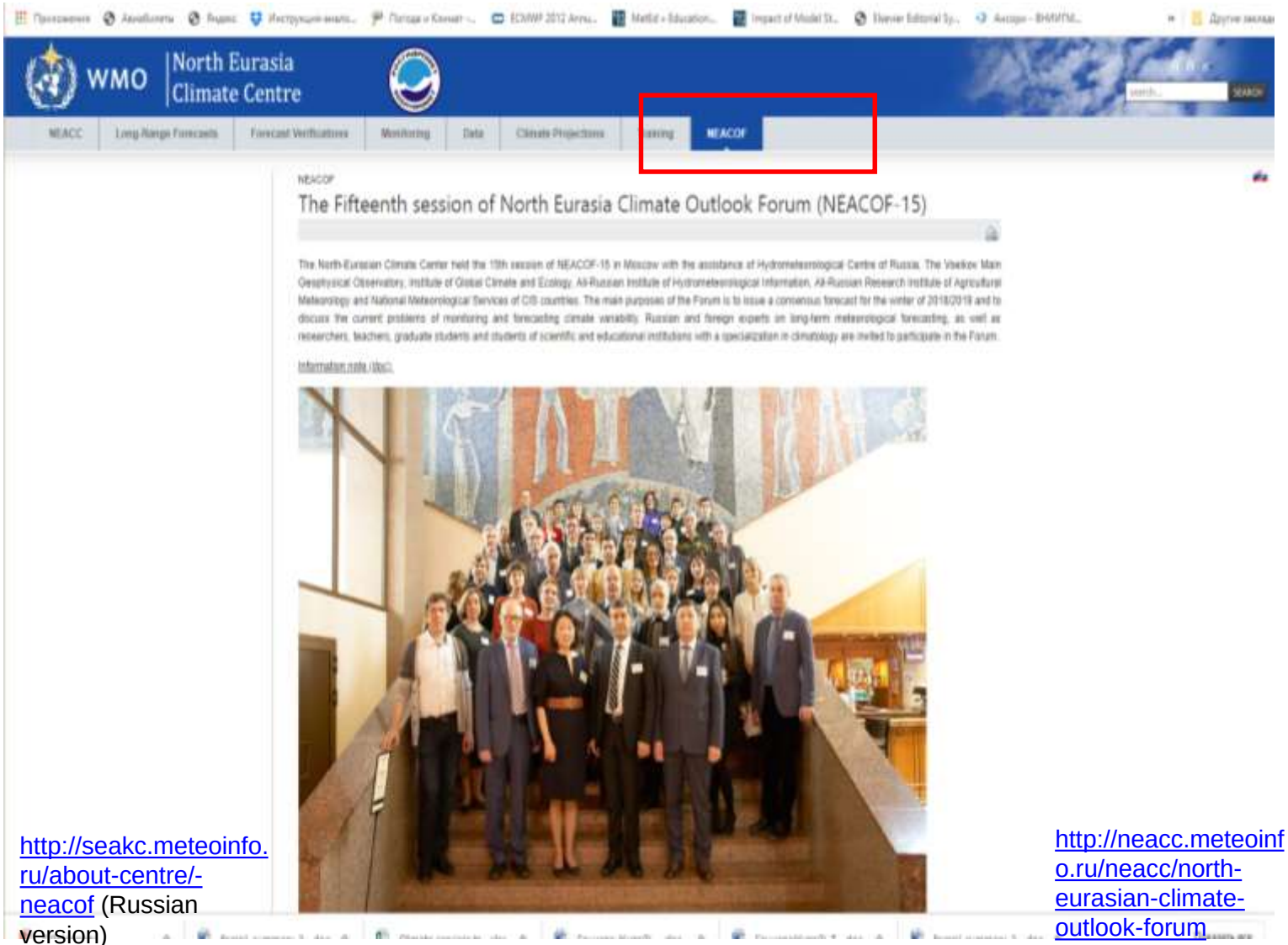
Оценка успешности консенсусного прогноза, составленного для зимы 2018/2019

Valentina Khan, Vladimir Tischenko

16th session of North Eurasia Climate Outlook Forum

3rd June 2019, Moscow

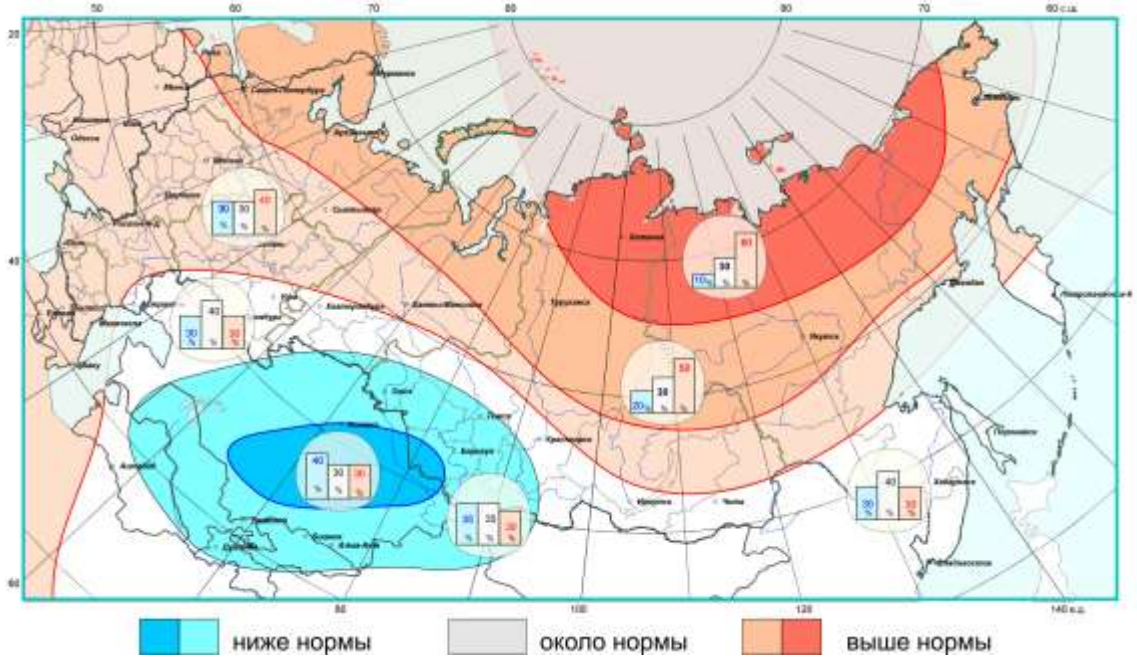
15th session of North Eurasia Climate Outlook Forum (NEACOF)



http://seakc.meteoinfo.ru/about-centre/-neacof (Russian version)

http://neacc.meteoinfo.ru/neacc/north-eurasian-climate-outlook-forum (English version)

Consensus forecast for T2m DJF2018/2019



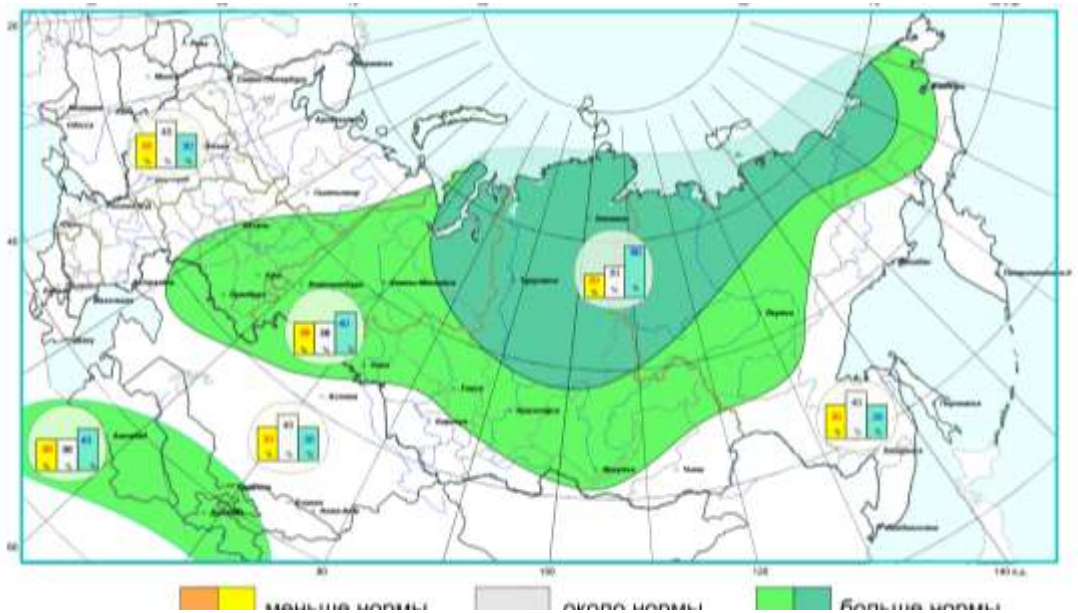
Observed field for T2m DJF2018/2019

Good agreement for positive anomalies: European territory, north of Ural, Siberia. Agreement for negative anomalies: north and eastern part of Kazakhstan, south-west of Siberia, south of Tajikistan and east of Kirgizstan.

Disagreement: south of Kazakhstan, Uzbekistan, north of Tajikistan, west of Kirgizstan.

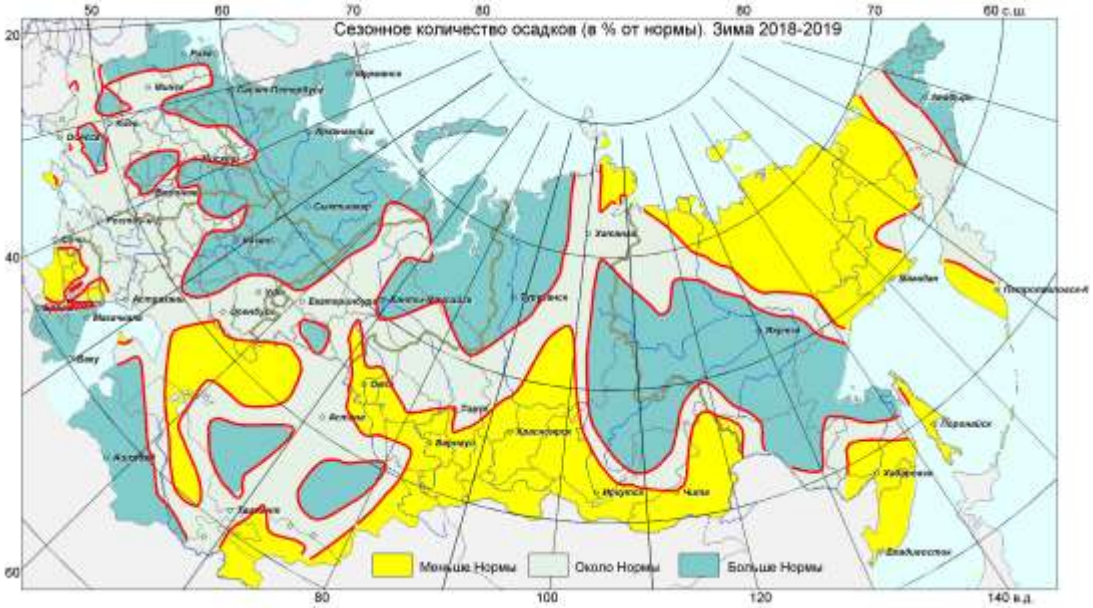
Консенсусный прогноз (КП) реалистично воспроизвел преобладание положительных аномалий над ЕТР СНГ, севером Урала, севером и востоком Сибири, большей частью Дальнего Востока. Около и ниже нормы, как и прогнозировалось было на севере и востоке Казахстана и юго-западе Сибири.
В южных районах Казахстана, в Узбекистане и прилегающих к нему районах Туркменистана, на севере Таджикистана и западе Киргизии наблюдалась положительная аномалия средней температуры, в то время как прогнозировалась температура ниже нормы.

Consensus forecast for Precipitation DJF2018/2019



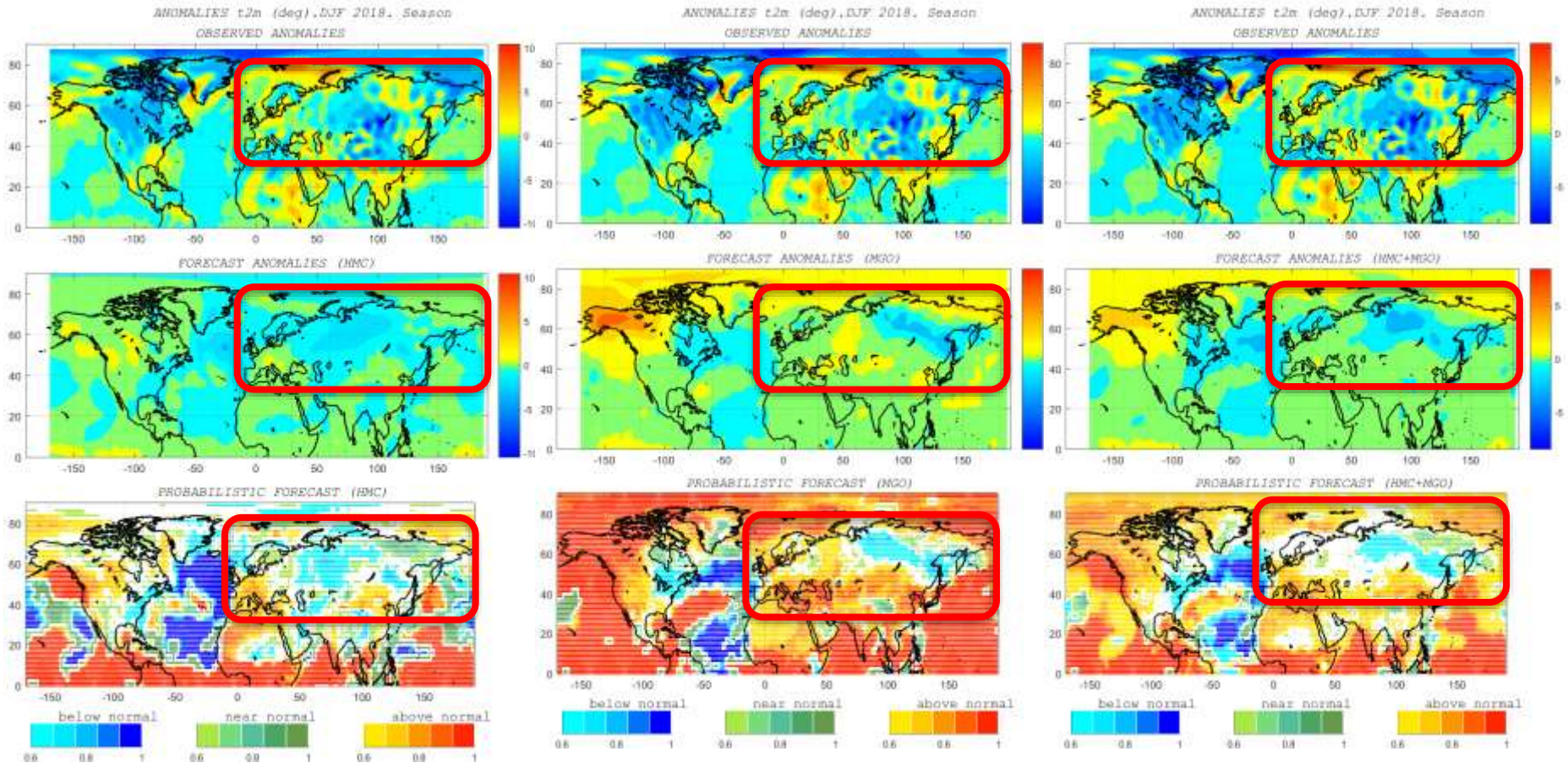
Good agreement for above normal precipitation: north of Ural, Krasnoyarsk region, central and south of Yakutiya, Turkmenistan.

Observed field for precipitation DJF2018/2019



Удачно спрогнозирован избыток осадков на севере Урала, Красноярского края, в центре и на юге Якутии и в Туркменистане.

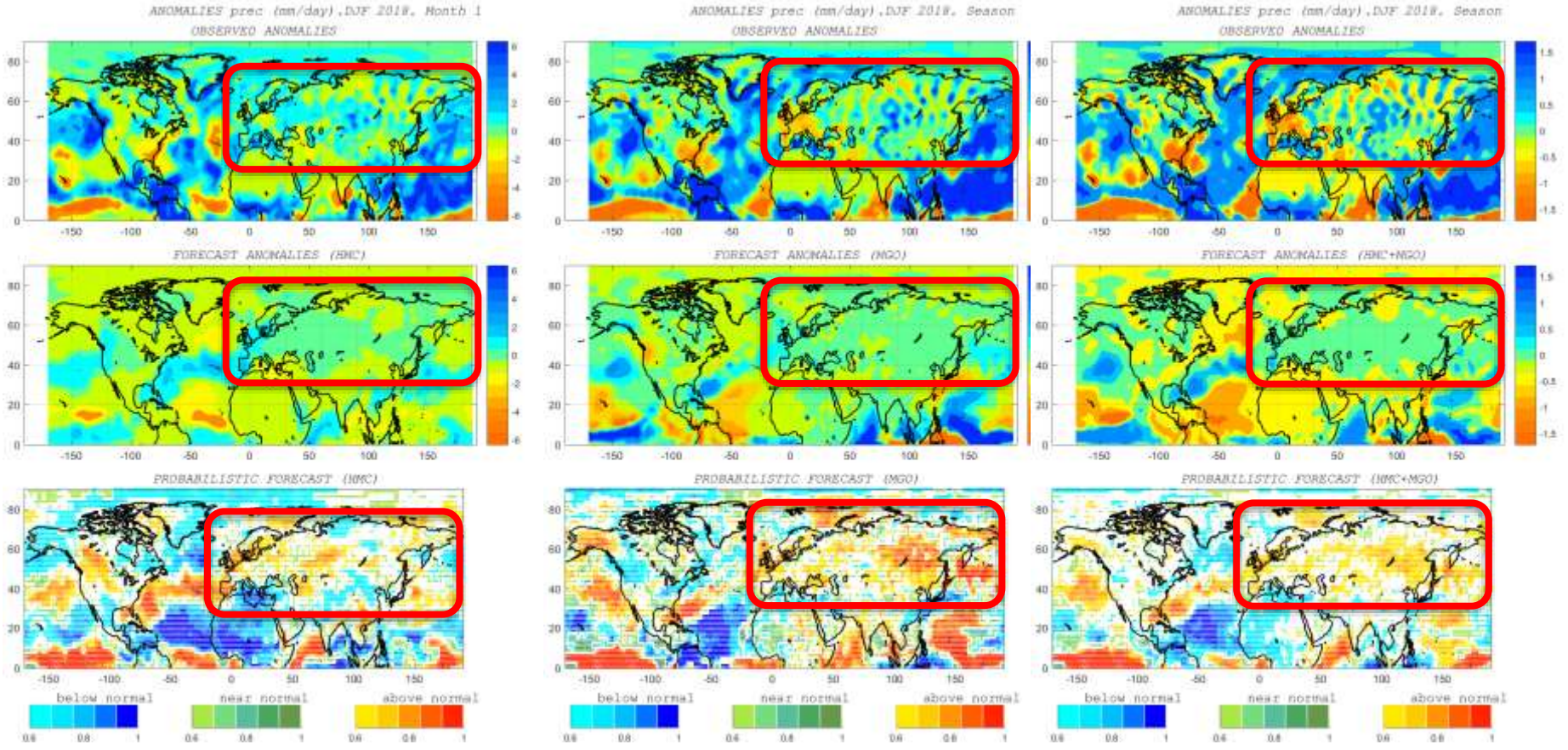
Sl-AV, MGO, Sl-AV+MGO forecasts of T2m for DJF2018/2019



Parameter: T2m
Region: North Eurasia (35N - 75N; 20E - 180E)
Date: 2018-12-01

Model	Verifications						Maps
	ROC_A	ROC_N	ROC_B	RO	ACC	RMSE	
December 2018							
PLAV	0.46	0.54	0.49	-0.04	-0.09	3.36	Open
MGO	0.61	0.47	0.56	0.03	-0.12	3.56	Open
PLAV+MGO	0.54	0.49	0.53	-0.04	-0.14	3.36	Open
January 2019							
PLAV	0.61	0.57	0.5	0.11	0.16	2.21	Open
MGO	0.46	0.53	0.44	0	-0.16	2.64	Open
PLAV+MGO	0.53	0.56	0.47	0.07	-0.07	2.35	Open
February 2019							
PLAV	0.55	0.5	0.54	-0.03	0.04	2.86	Open
MGO	0.57	0.5	0.51	0.09	-0	2.95	Open
PLAV+MGO	0.58	0.49	0.54	0.09	0.02	2.83	Open
Season							
PLAV	0.55	0.54	0.43	-0.08	0.03	2.16	Open
MGO	0.61	0.56	0.53	0.1	-0.12	2.43	Open
PLAV+MGO	0.59	0.57	0.48	0.17	-0.08	2.22	Open

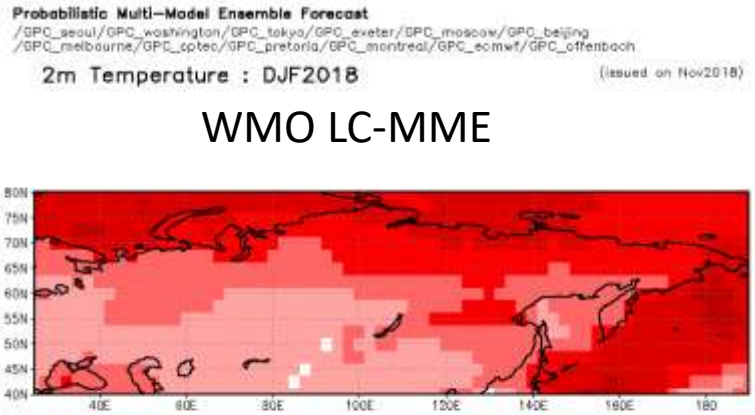
Sl-AV, MGO, Sl-AV+MGO forecasts of precipitation for DJF2018/2019



Parameter: Precipitation
Region: North Eurasia (35N - 75N; 20E - 180E)
Date: 2018-12-01

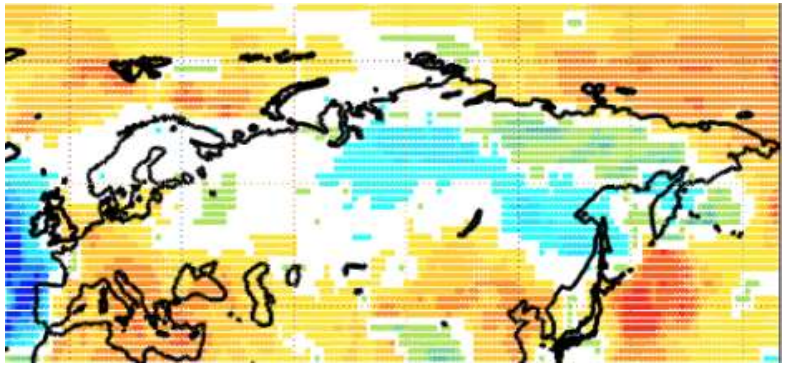
Model	Verifications						Maps
	ROC_A	ROC_N	ROC_B	RO	ACC	RMSE	
December 2018							
PLAV	0.55	0.52	0.56	0.16	0.21	1.77	Open
MGO	0.58	0.56	0.53	0.2	0.27	1.77	Open
PLAV+MGO	0.6	0.56	0.58	0.31	0.38	1.77	Open
January 2019							
PLAV	0.55	0.54	0.48	0.06	0.27	1.34	Open
MGO	0.46	0.49	0.46	0.05	0.16	1.34	Open
PLAV+MGO	0.49	0.51	0.46	0.1	0.28	1.34	Open
February 2019							
PLAV	0.47	0.5	0.45	-0.06	0.05	1.23	Open
MGO	0.55	0.48	0.56	0.17	0.39	1.23	Open
PLAV+MGO	0.53	0.5	0.51	0.05	0.35	1.23	Open
Season							
PLAV	0.51	0.51	0.51	0.07	0.27	1.29	Open
MGO	0.58	0.55	0.52	0.21	0.33	1.29	Open
PLAV+MGO	0.57	0.56	0.53	0.24	0.45	1.29	Open

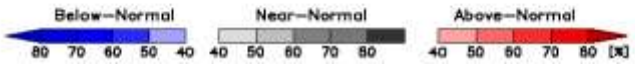
T2m forecasts for DJF2018/2019 from different sources



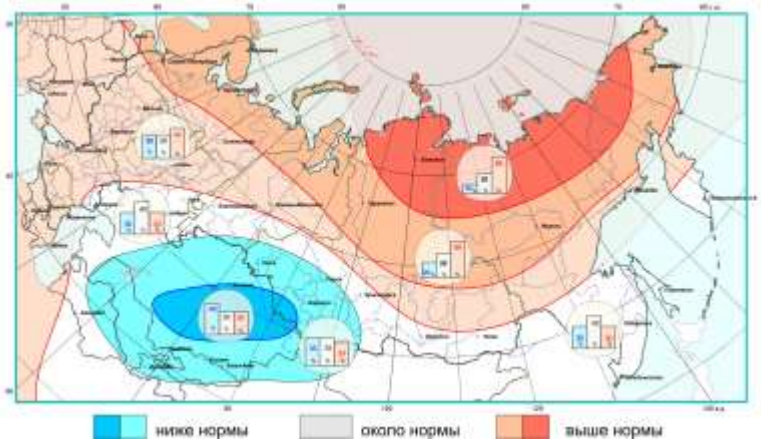
WMO LC-MME

PLAV+MGO





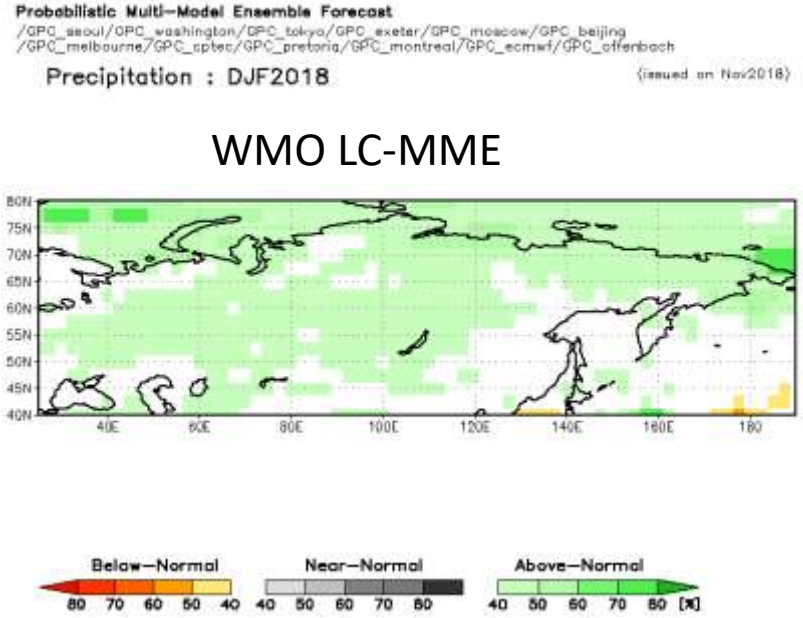
Consensus forecast



Observed T2m

Precipitation forecasts for DJF2018/2019 from different sources

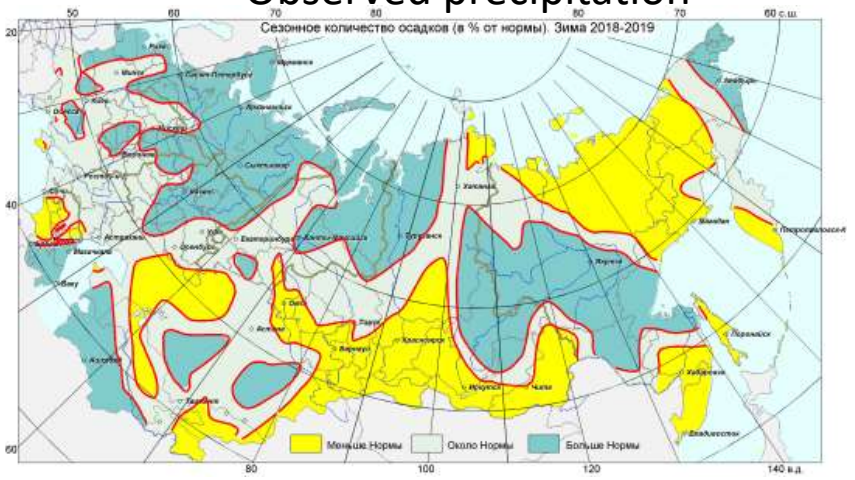
WMO LC-MME



PLAV+MGO

Consensus forecast

Observed precipitation



Quantitative assessment of consensus forecast

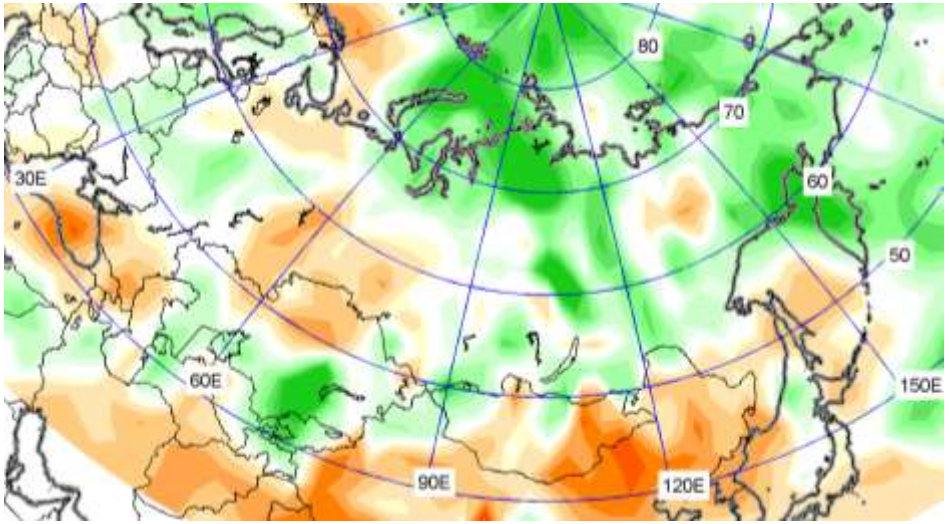
The general skill score of consensus forecast throughout the territory for air temperature was 76%, for precipitation - 59%.
Estimates (%) * for individual territories are shown in the table.

Успешность КП по всей территории для температуры воздуха составила 76%, для осадков – 59%.

Оценки (%)* для отдельных территорий приведены в таблице.

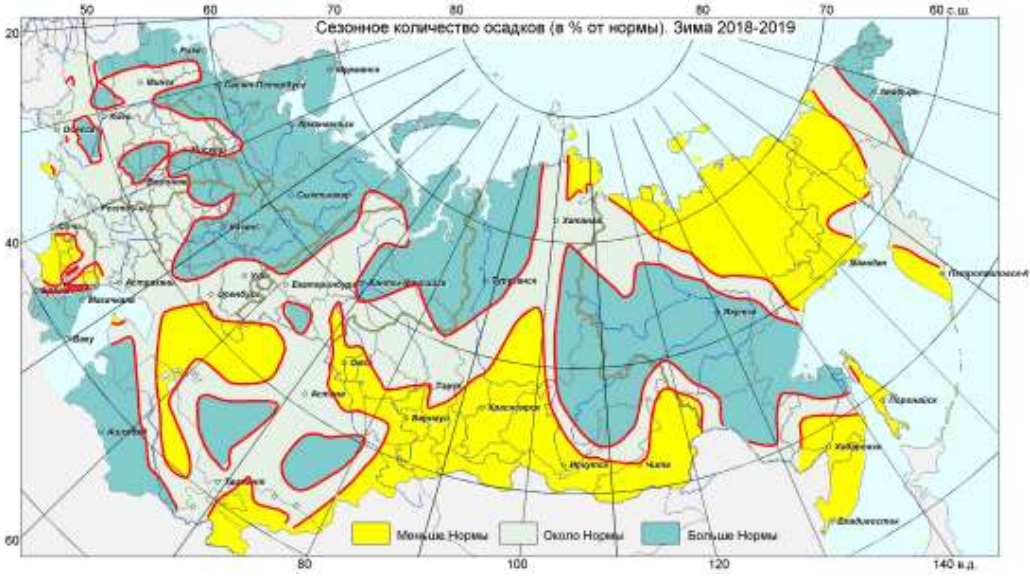
Район	Температура	Осадки
Россия, Беларусь, Молдова, Закавказье	85	58
Казахстан и Средняя Азия	60	58
Азиатская часть России	78	61

NCEP/NCAR reanalysis field for Precipitation DJF2018/2019



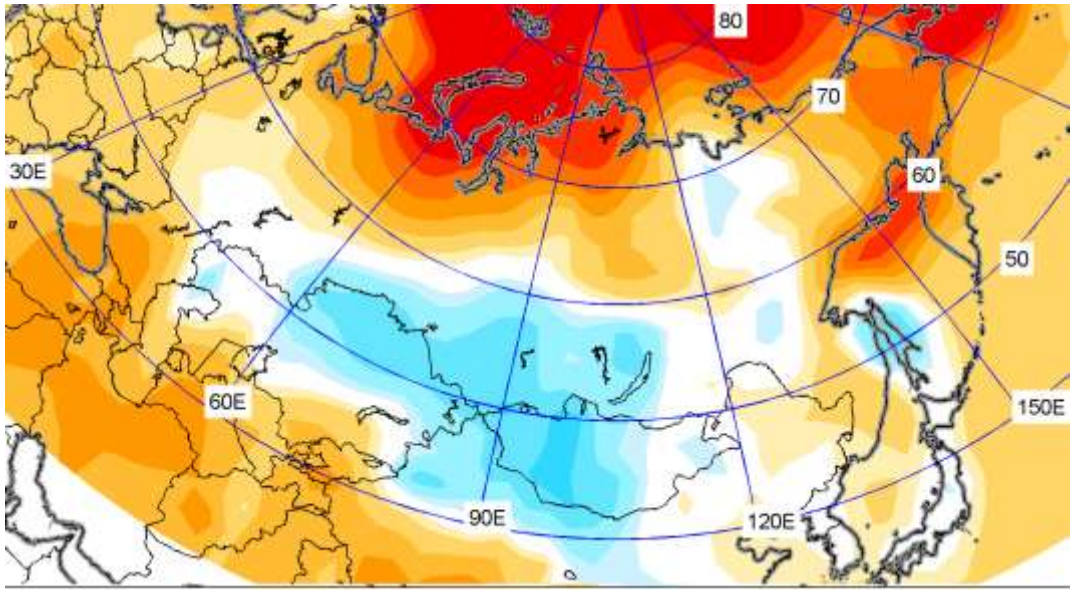
Incompatibility of reanalysis and observational data in some regions

Observed field for precipitation DJF2018/2019



What kind of data to be used for verification?

NCEP/NCAR reanalysis field for T2m DJF2018/2019



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