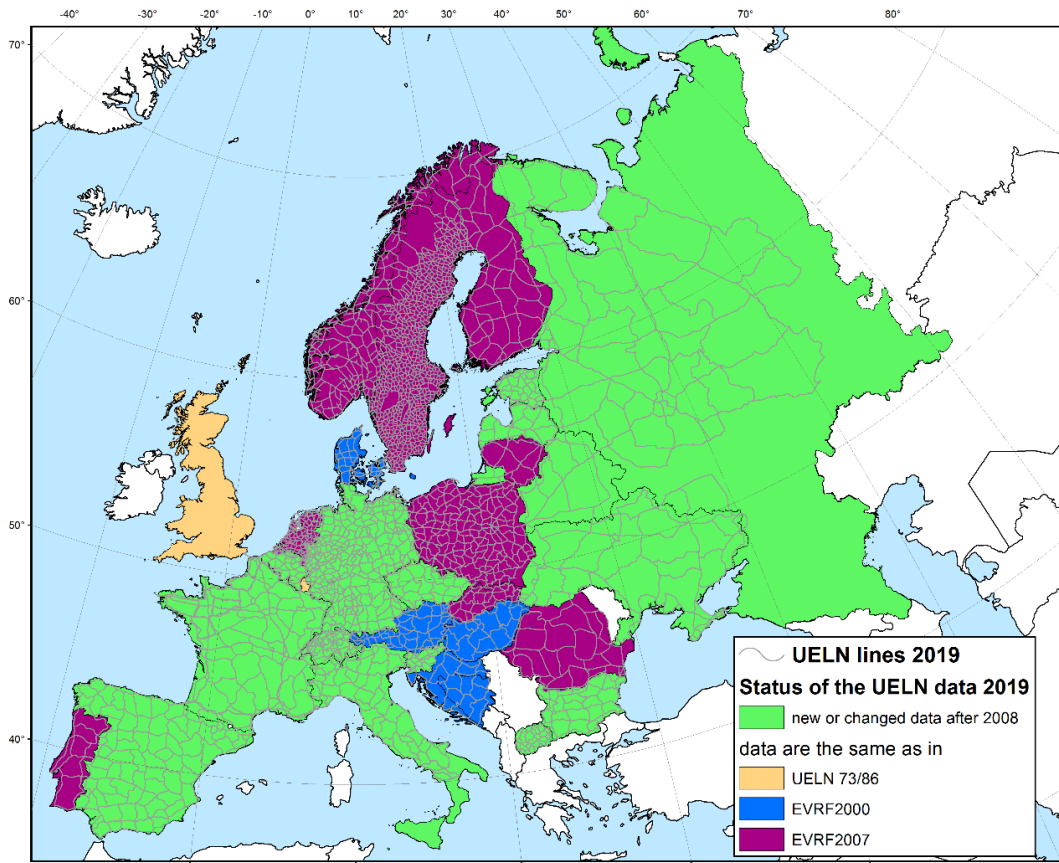


Baltic sea level chart  
datum

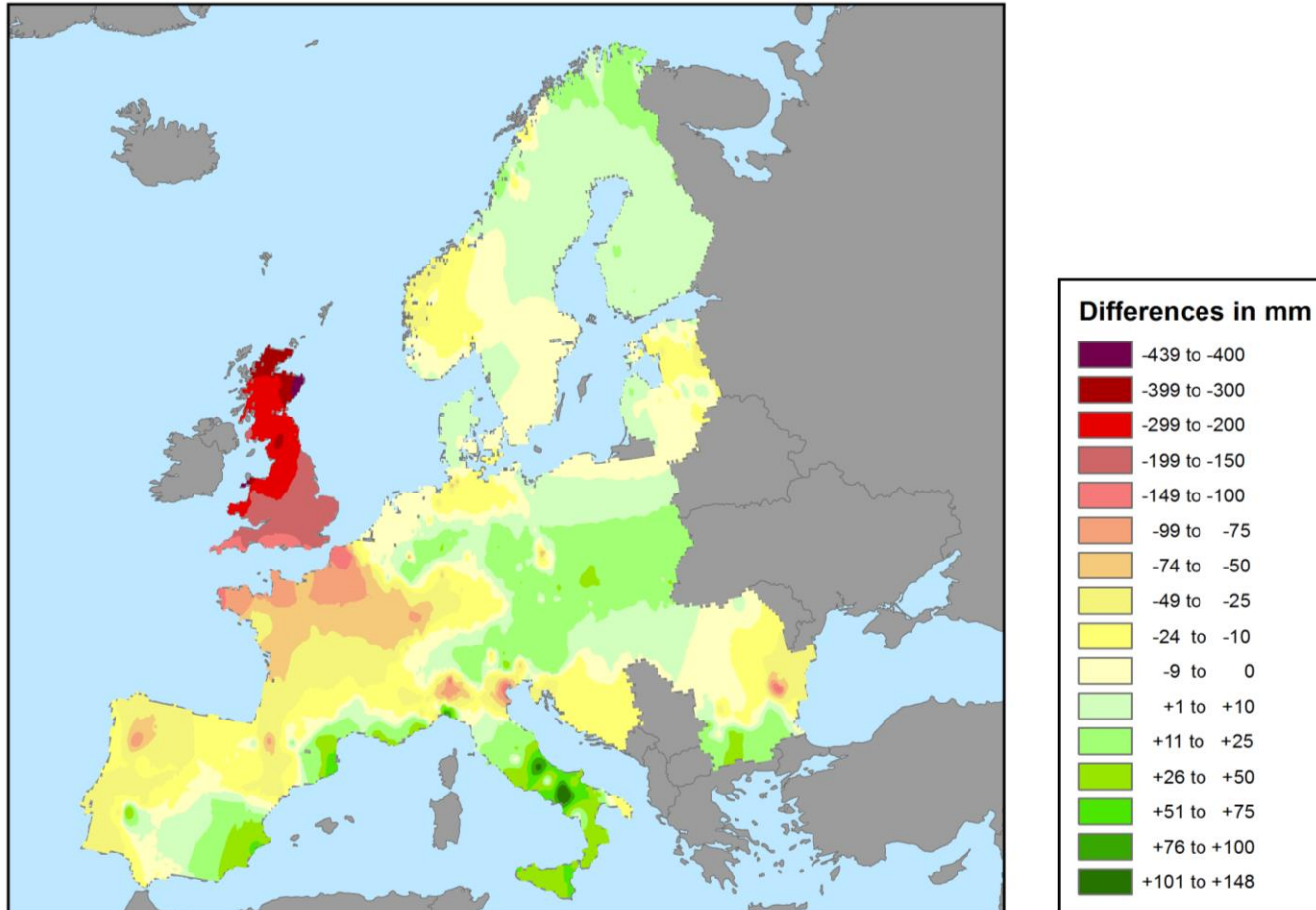
# New realization of EVRS: EVRF2019



New data in the Baltic Sea area since 2008:

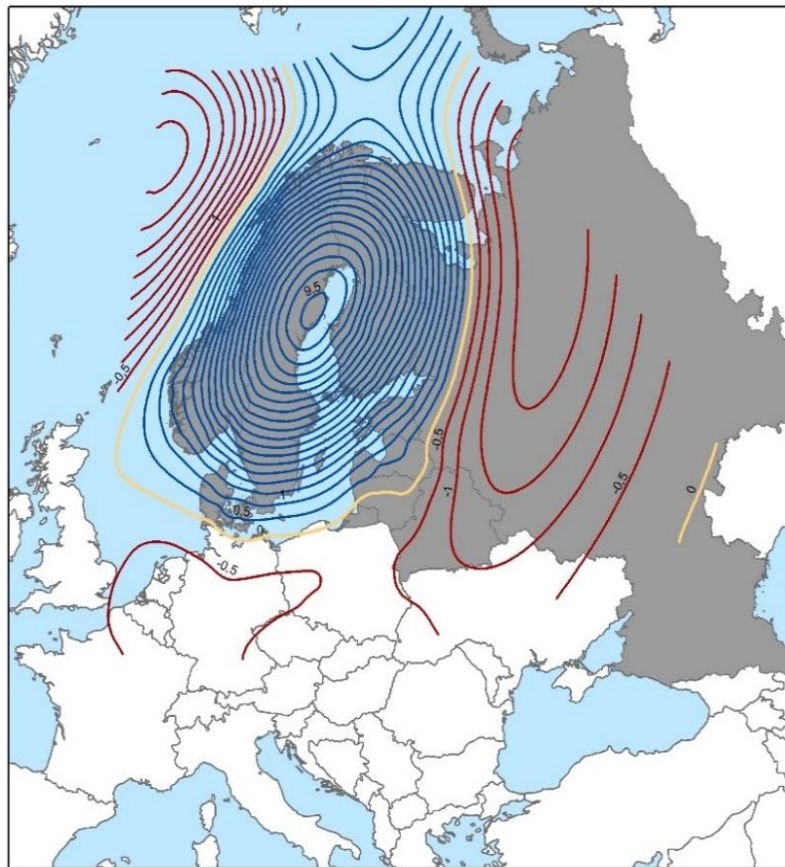
- Russia (2012, new in UELN)
- Estonia (2016)
- Latvia (2011/2012)
- Germany (2015)

# Differences EVRF2019 – EVRF2007



Differences in the Baltic Sea area between -2cm and +1cm

# Epoch of the measurements



Epoch of the measurements:  
2000 (as in EVRF2007)  
model NKG2016LU\_lev was used

contour lines  
at intervals of 0,5 mm/y

- negative
- 0
- positive
- reduced to epoch 2000

# Supply of the data

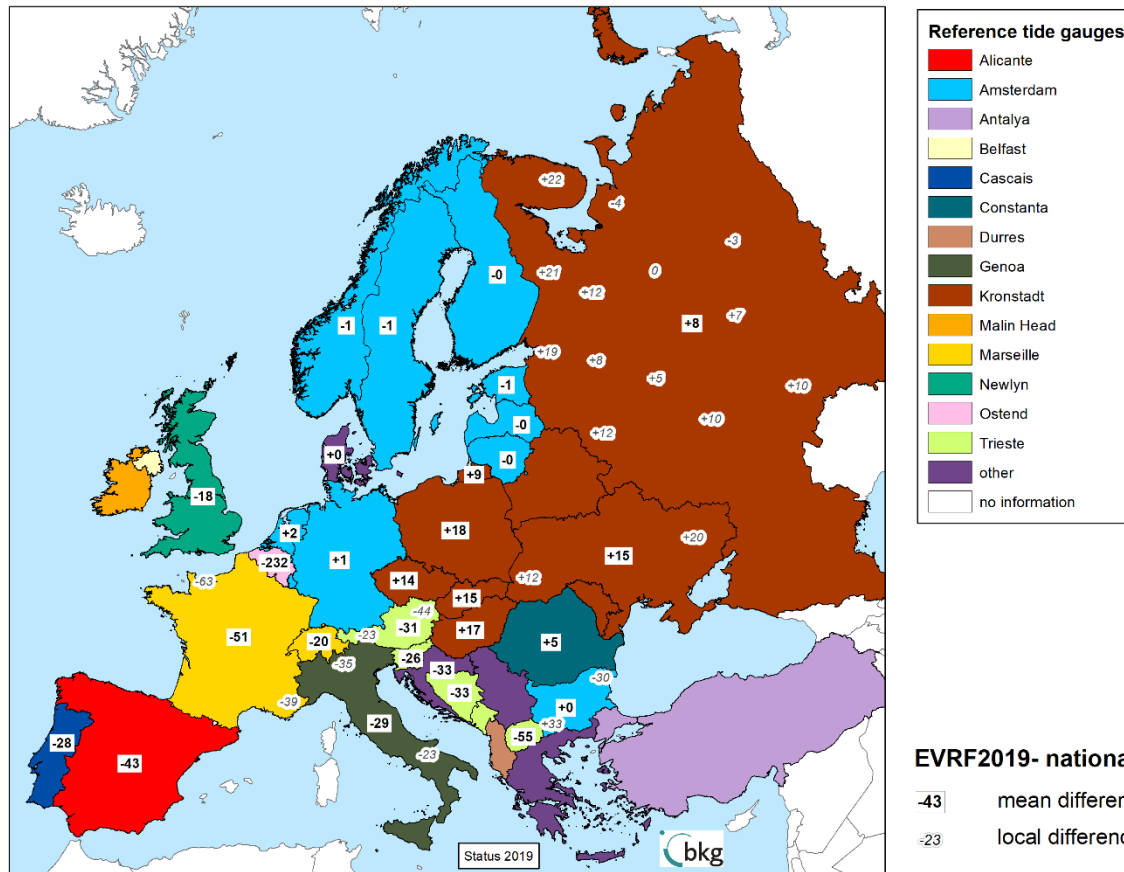
Heights will be (are) published in <https://evrs.bkg.bund.de>  
(except the data of RU, BY, UA, HR)

Point UELN	Country	Point No. 1	Point No. 2	No. in a neighb. Country	neighb. Country	ETRS89		EVRF2019 (zero tide)				EVRF2019 converted to mean tide	
						Lat	Lon	geop. Value	Normal height	sH	v	geop. Value	Normal height
						°	°	kgal·m	m	mm	mm/y	kgal·m	m
1500659	SE	1376402	40.41.42			60.698082	17.155178	10.4147	10.6059	13.80	7.200	10.4536	10.6452
1500660	SE	1756803	45.46.47			62.525624	15.644571	169.0062	172.0893	14.26	8.372	169.0529	172.1365
1500661	SE	1973303	65.65.68			63.267695	17.182878	80.8820	82.3518	14.65	9.171	80.9318	82.4021
1500662	SE	1984705	62.63.69			63.299555	18.589245	11.1516	11.3541	14.88	9.498	11.2015	11.4045
1500665	SE	1447802	51.52.53			61.179940	14.726400	206.7843	210.5796	13.78	7.376	206.8253	210.6210

Heights are given in zero-tide (according the definition of EVRS) and additional in mean-tide system

Vertical velocity is provided → user is able to convert the height to another epoch

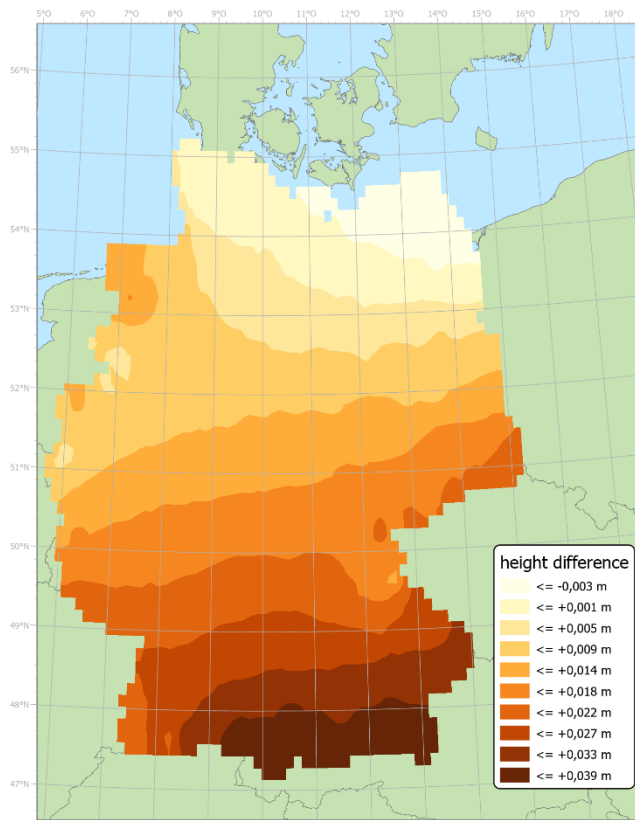
# Mean transformation parameters between national heights and EVRF2019



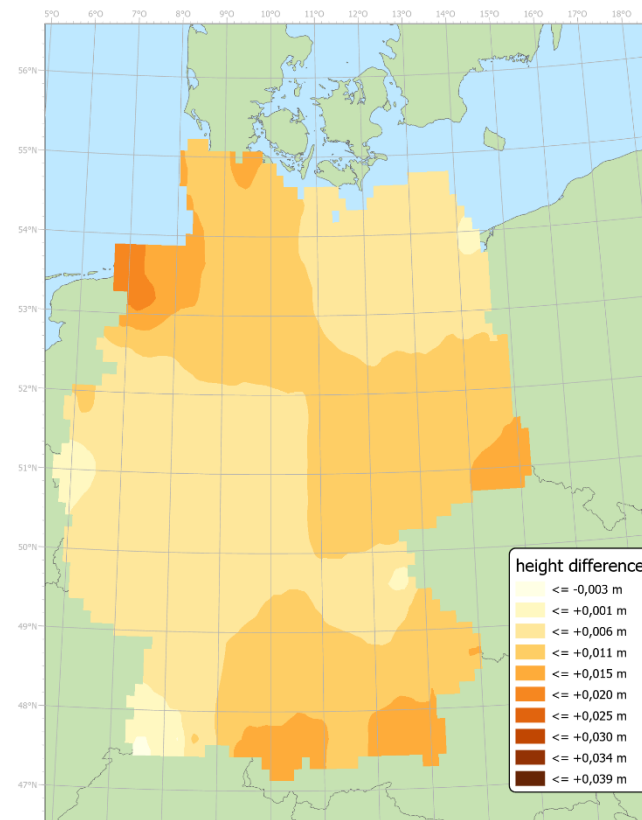
Estonia, Latvia and Lithuania redefined their vertical CRS based on EVRF2007

# Transformation grid from DE (mean tide) to EVRF2019

Height transformation DE (DHHN2016)  
to EVRF2019 (zero tide)

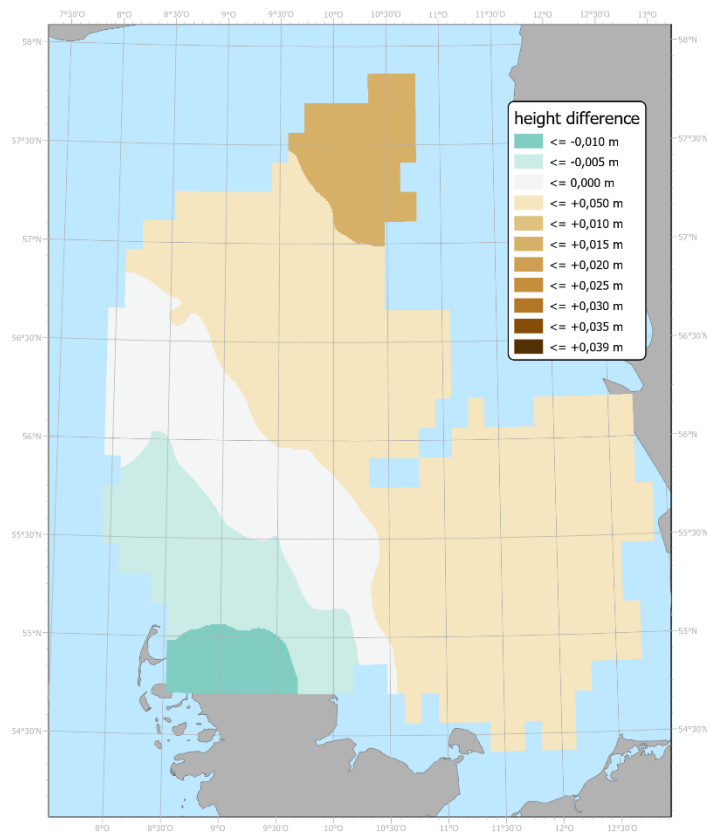


Height transformation DE (DHHN2016)  
to EVRF2019 (mean tide)

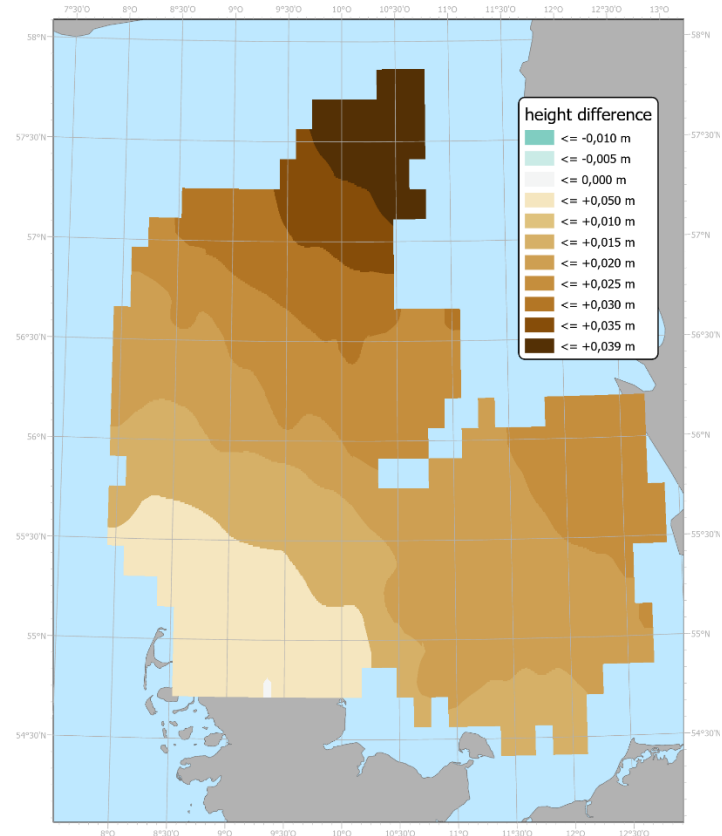


# Transformation grid from DK (tide free) to EVRF2019

Height transformation DK (DVR90)  
to EVRF2019 (zero tide)

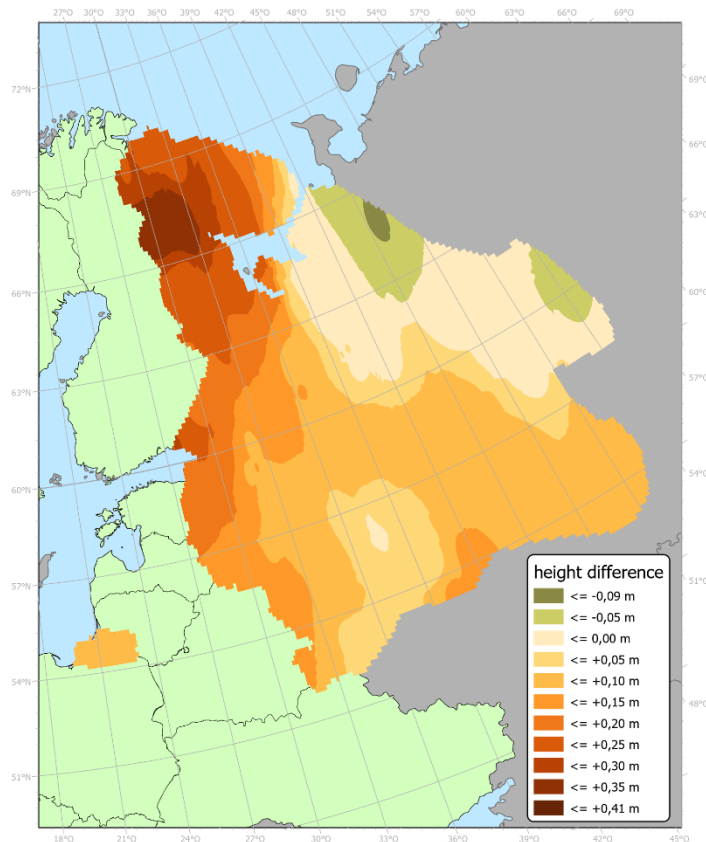


Height transformation DK (DVR90)  
to EVRF2019 (mean tide)

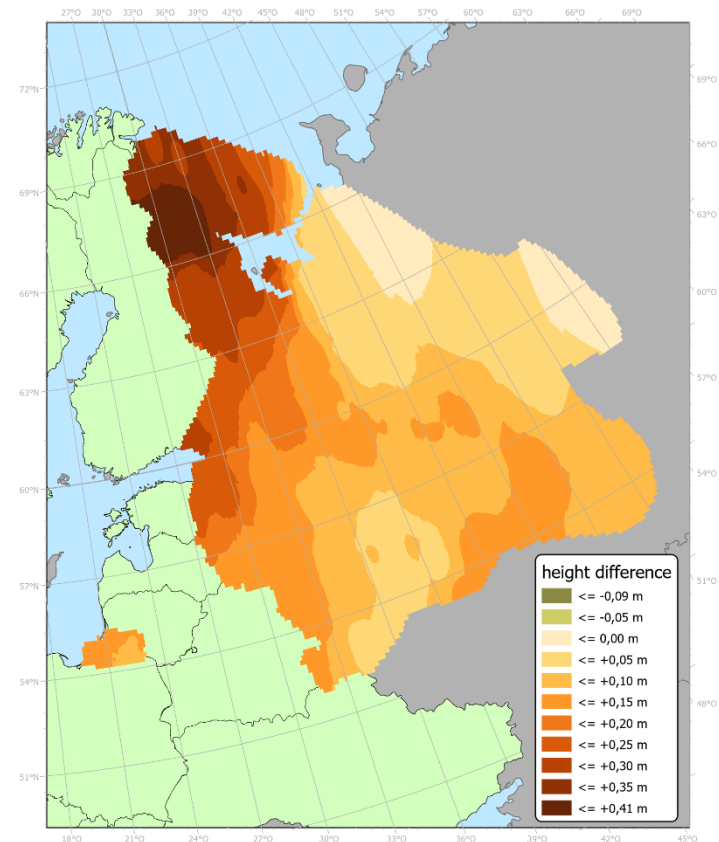


# Transformation grid from RU (mean tide) to EVRF2019

Height transformation RU (Baltic 1977)  
to EVRF2019 (zero tide)

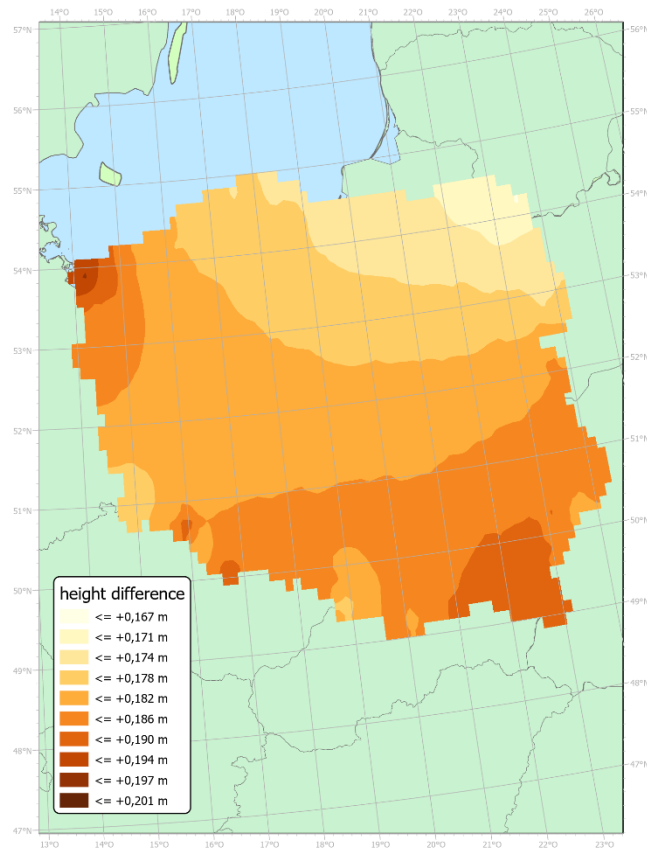


Height transformation RU (Baltic 1977)  
to EVRF2019 (mean tide)

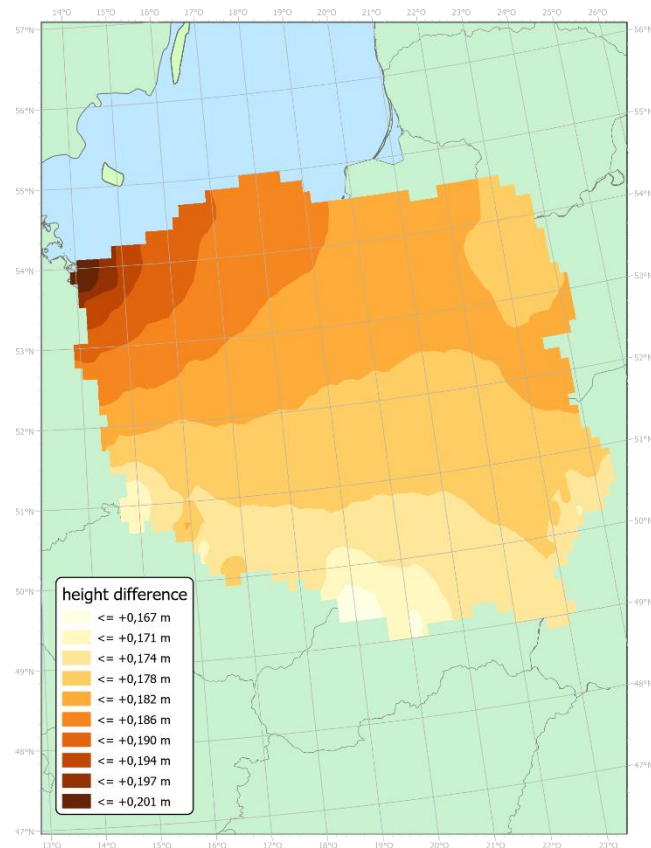


# Transformation grid from PL (tide free) to EVRF2019

Height transformation PL (Kronstadt 2006)  
to EVRF2019 (zero tide)



Height transformation PL (Kronstadt 2006)  
to EVRF2019 (mean tide)



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