

COST ES1206 WG2.NWP

Summary of models

COST WG2.NWP Members

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- Jaroslaw Bosy (WUELS)
- Jaroslaw Resler (ICS)
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- Siebren de Haan (KNMI)
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- Jean-Francois Mahfouf (Meteo-France)
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- Jelena Bojorova (Met Norway)

Highest Res. Regional NWP models

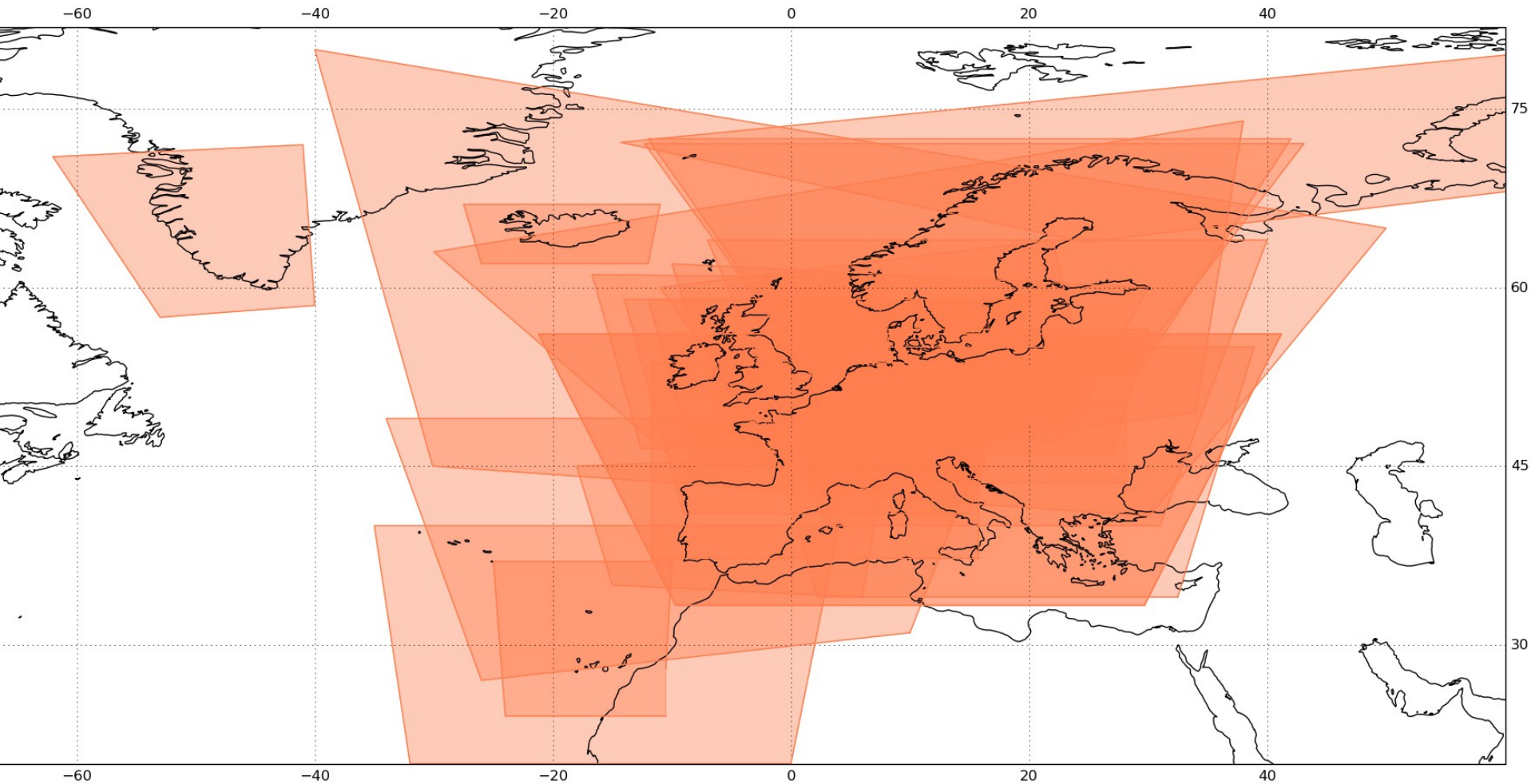
Institute	Model Name	Horizontal resolution	Can assimilate
Met Office	UM-UKV	1.5km	ZTD
Meteo-France	AROME	2.5km	ZTD
OMSZ	AROME	2.5km	ZTD
ZAMG	AROME	2.5km	ZTD
KNMI	HARMONIE	2.5km	ZTD
Estonia	HARMONIE	2.5km	
DMI	HARMONIE	2.5km	ZTD
AEMET	HARMONIE	2.5km	ZTD
SMHI	HARMONIE	2.5km	ZTD
IMO	HARMONIE	2.5km	ZTD
MET NORWAY	HARMONIE	2.5km	ZTD
ICS	WRF	3km	ZTD
WUELS	WRF	4km	
RMIT	ACCESS	1.5km	ZTD
DWD	COSMO??	???	???

Regional/**Global** NWP models

Institute	Model Name	Horizontal resolution	Can assimilate
Met Office	UM GLOBAL	17km	ZTD
Meteo-France	ARPEGE	10-60km	ZTD
OMSZ	ALADIN	8km	ZTD
KNMI	HIRLAM	11km	ZTD
Estonia	HIRLAM	11km	
DMI	HIRLAM	3km	ZTD
AEMET	HIRLAM	5km, 16km	ZTD
ICS	WRF	9km	ZTD
WUELS	WRF	12km, 36km	
RMIT	ACCESS	47km	ZTD

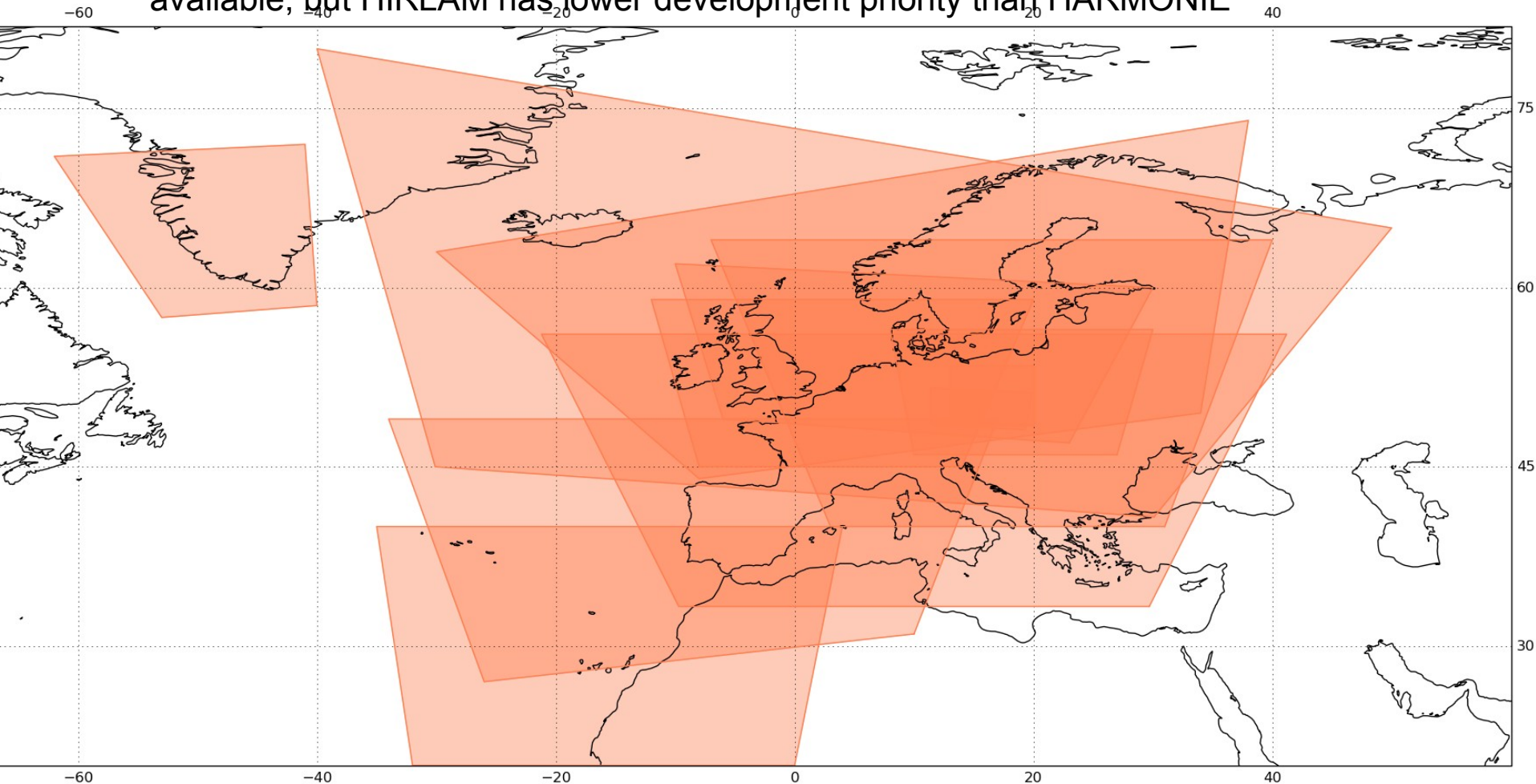
COST WG2.NWP Model Domains

- Some of these are estimated from images, so are approximate
- We have very good coverage across Europe in general
- All apart from WRF can already assimilate ZTD



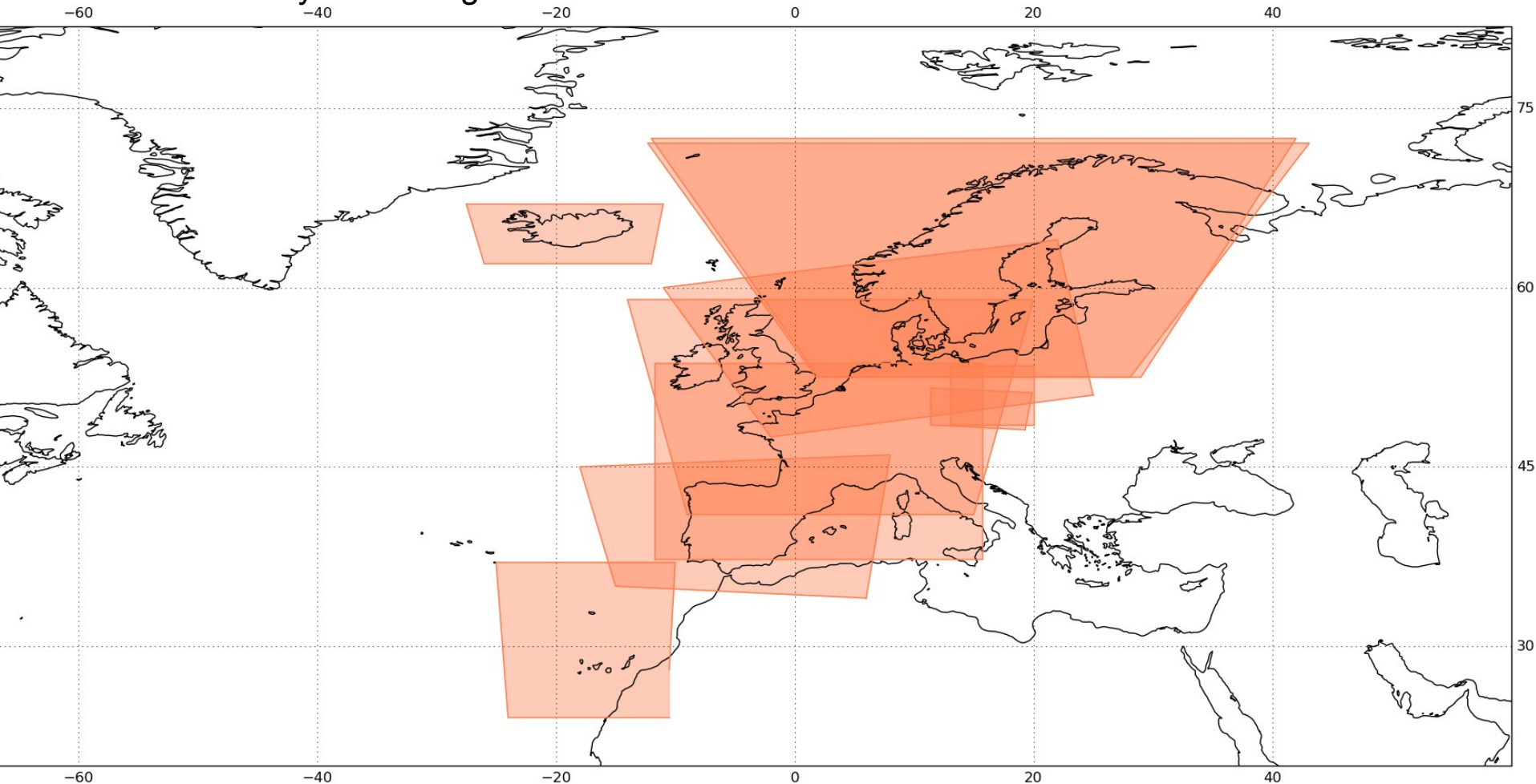
STD assimilation

- HIRLAM and WRF have STD assimilation capabilities, but there is no experience within the members of WG2.NWP of doing this
- So theoretically, STD assimilation could be tested in these domains, if resources were available, but HIRLAM has lower development priority than HARMONIE



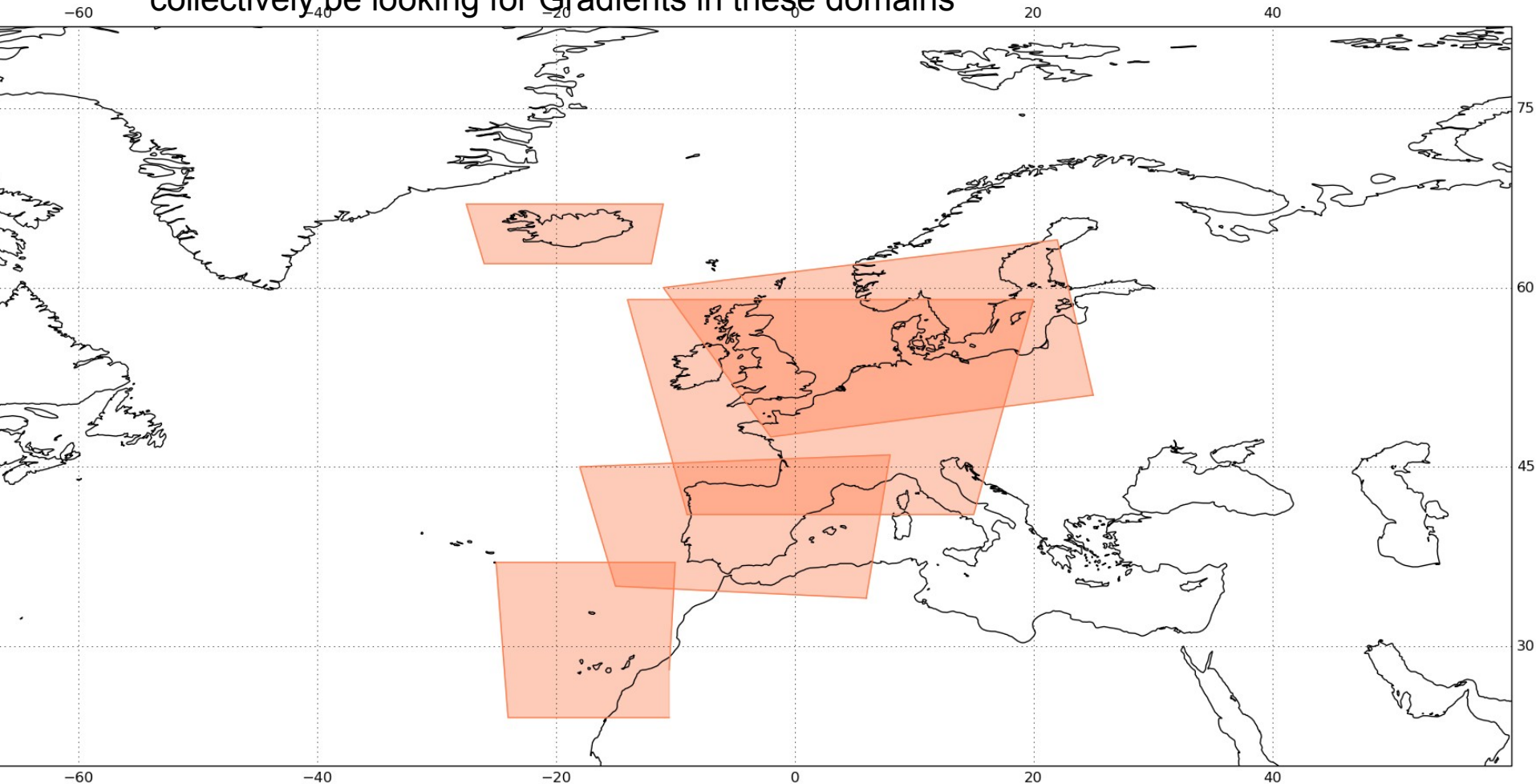
STD development

- 9 centres have expressed an interest in developing an STD assimilation capability within the timeframe of this project
- Assuming we will use the current highest resolution model domains, we would collectively be looking for STDs in these domains



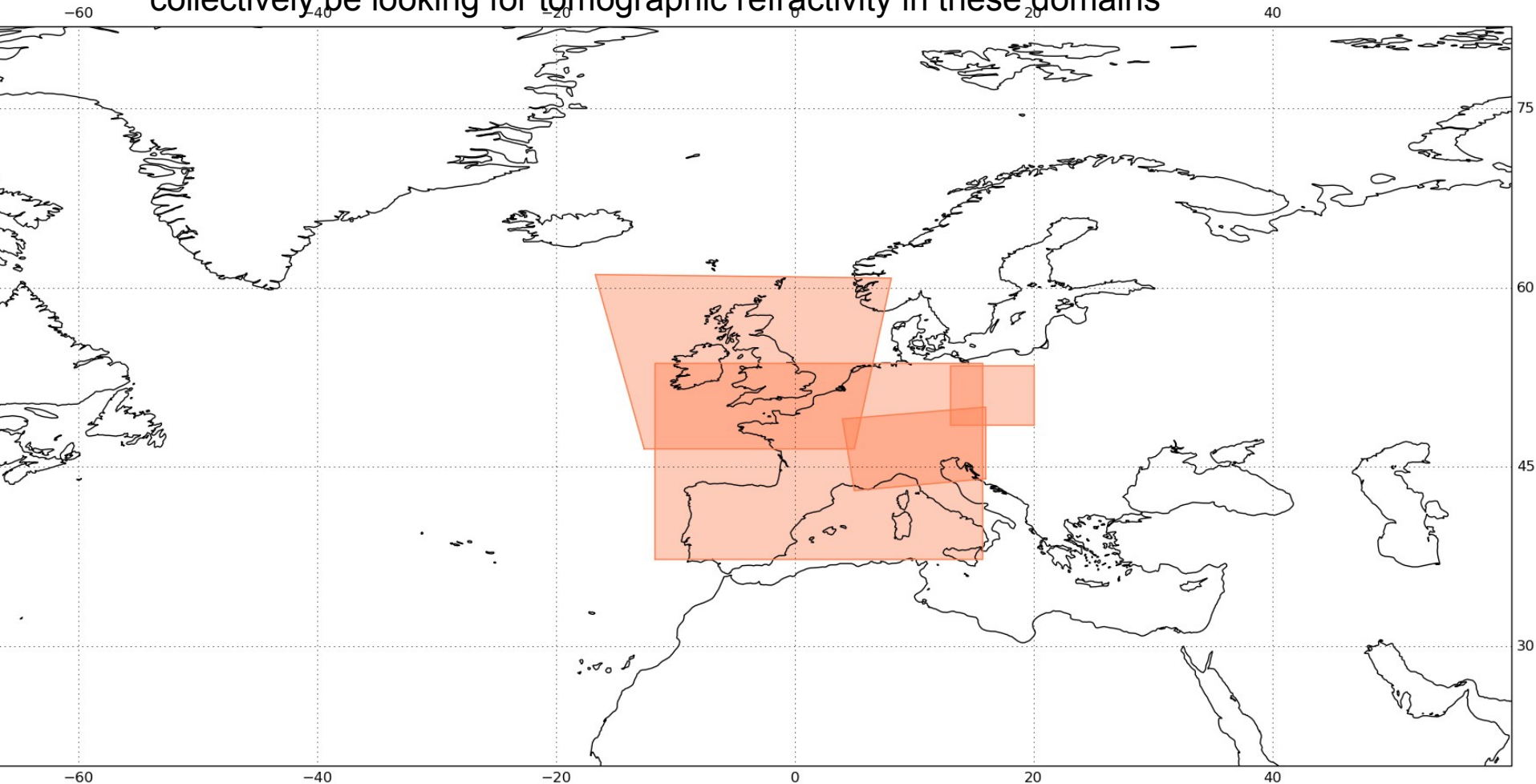
Gradient development

- 4 centres have expressed an interest in developing a Gradient assimilation capability within the timeframe of this project
- Assuming we will use the current highest resolution model domains, we would collectively be looking for Gradients in these domains



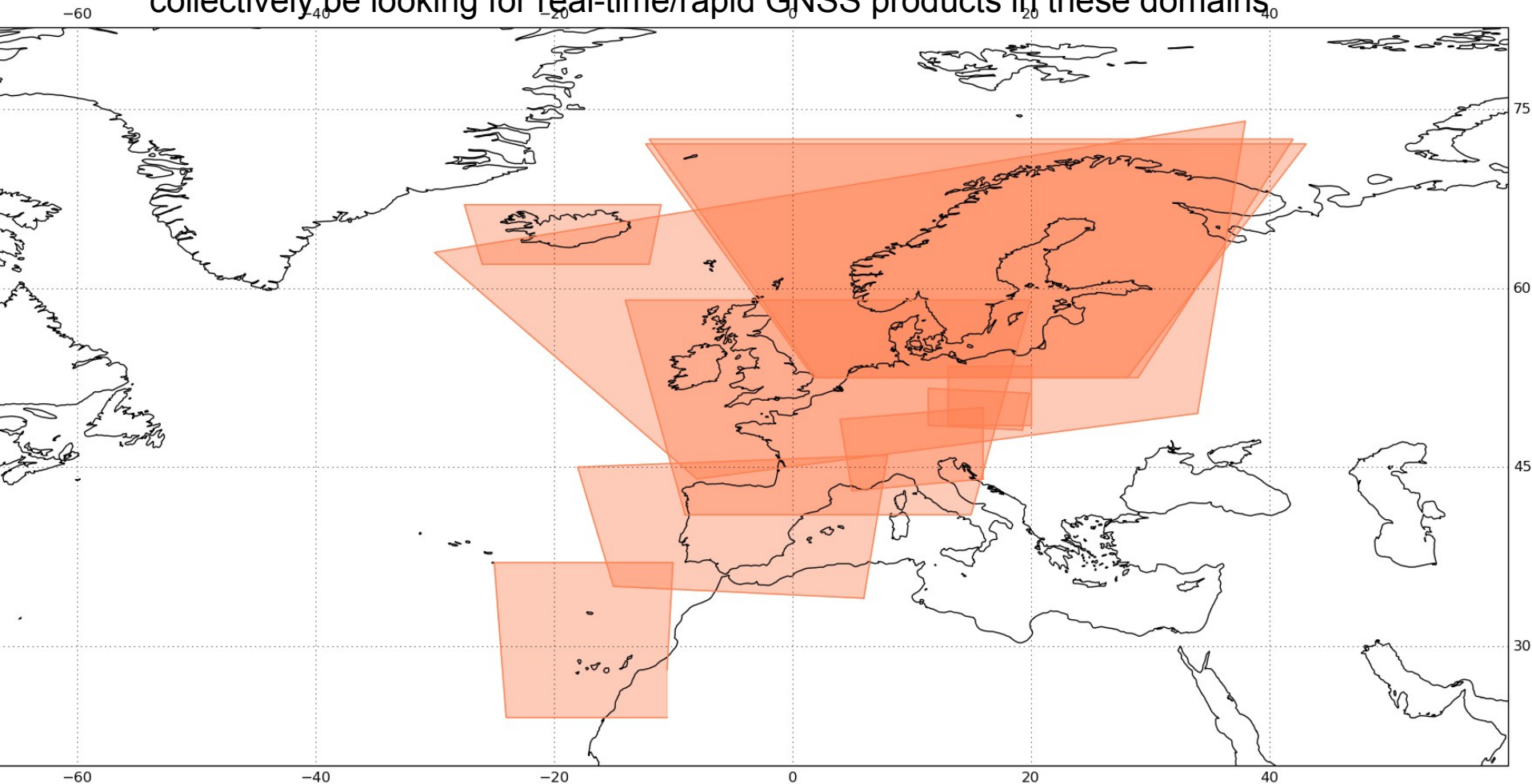
Tomography profile development

- 4 centres have expressed an interest in developing an tomographic refractivity profile assimilation capability within the timeframe of this project
- Assuming we will use the current highest resolution model domains, we would collectively be looking for tomographic refractivity in these domains



NWP Nowcasting development

- 9 centres have expressed an interest in developing an NWP –based nowcasting system within the timeframe of this project
- Assuming we will use the current highest resolution model domains, we would collectively be looking for real-time/rapid GNSS products in these domains



WG2.NWP ideas

- As with all work within this COST project, none of the development work is guaranteed, due to resourcing/funding limitations
- The development of STD operators could be an area of collaborative work, with lots of potential for STSMs
- Suggested topic for workshop in 2015 is Slant Delays: covering the theory and limitation of the observations, observation operators, etc.
- Case study periods discussed with WG1:
 - > 21-28.Dec 2012
 - > 02-09.Jan 2013
 - > 22-30.Jun 2012
 - > 23-30.Jul 2013
 - > 18-25.Sep 2012
 - > 22-29.Oct 2013