

Activities at IM and expressions of interest at EURRA

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Discussion of a potential European Regional Reanalysis (EURRA) Project

ECMWF, Reading, UK, 21-22 November 2005

ECMWF, November 2005

Overview

- **IM activities**
- **IM interest in EURRA**
- **IM participation in EURRA**
- **A possible work package**

ECMWF, November 2005

Activities: Climate



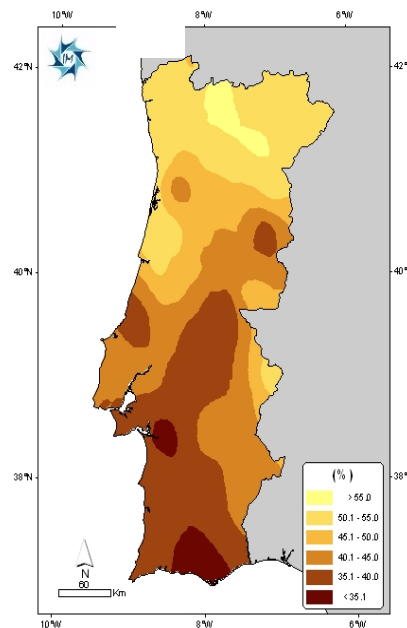
- Monitor climate and climate variability in Portugal
- Build climate normals
 - 1971-2000 is being built now
- Drought monitoring
- Agrometeorology
- Inspect climate scenarios (with U. Lisbon)

ECMWF, November 2005

2005 drought: The worst in the last 60 years

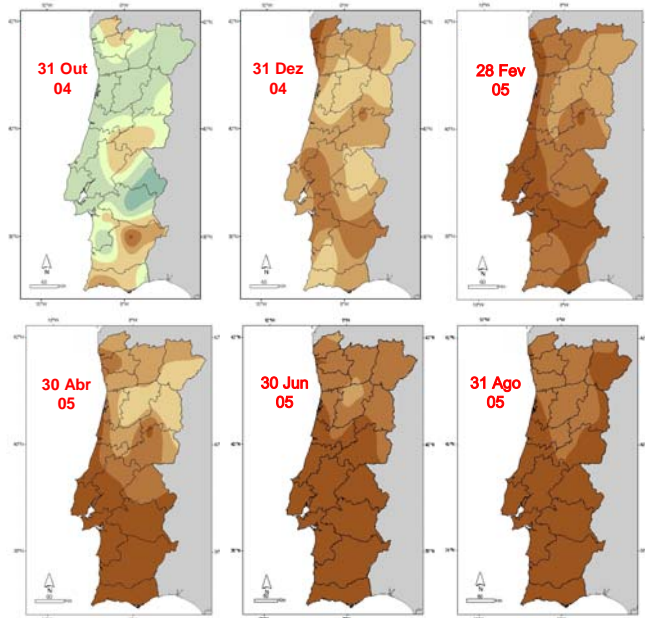


Precipitation 200410-200509 (% normal)



5

PDSI: Extreme or severe drought



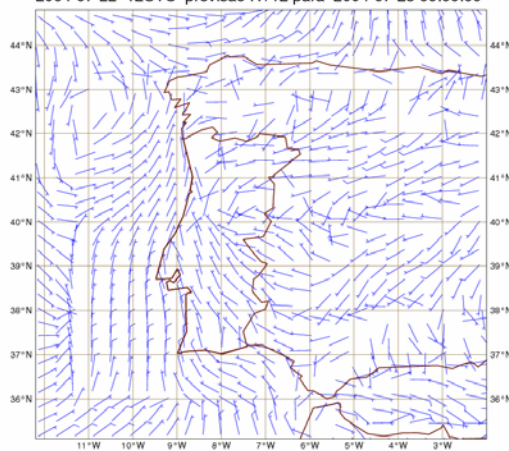
vember 2005

Activities: NWP (I)



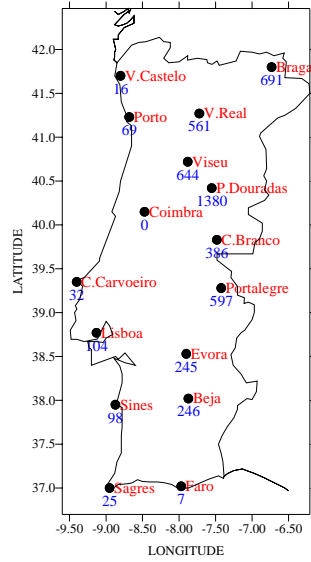
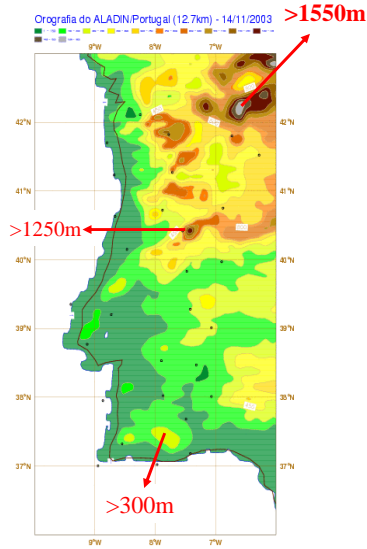
- Run ALADIN, at 10 km, twice a day
- No data assimilation

ALADIN Pressao e vento a 10m
2004-07-22 12UTC previsao H+12 para 2004-07-23 00:00:00



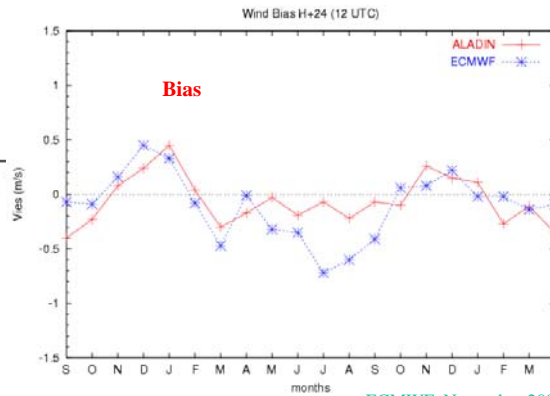
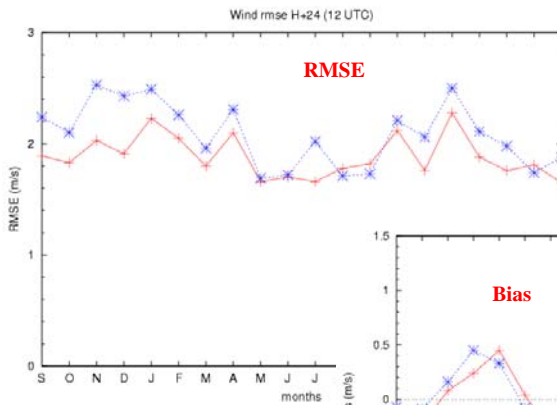
ECMWF, November 2005

ALADIN Orography and portuguese stations



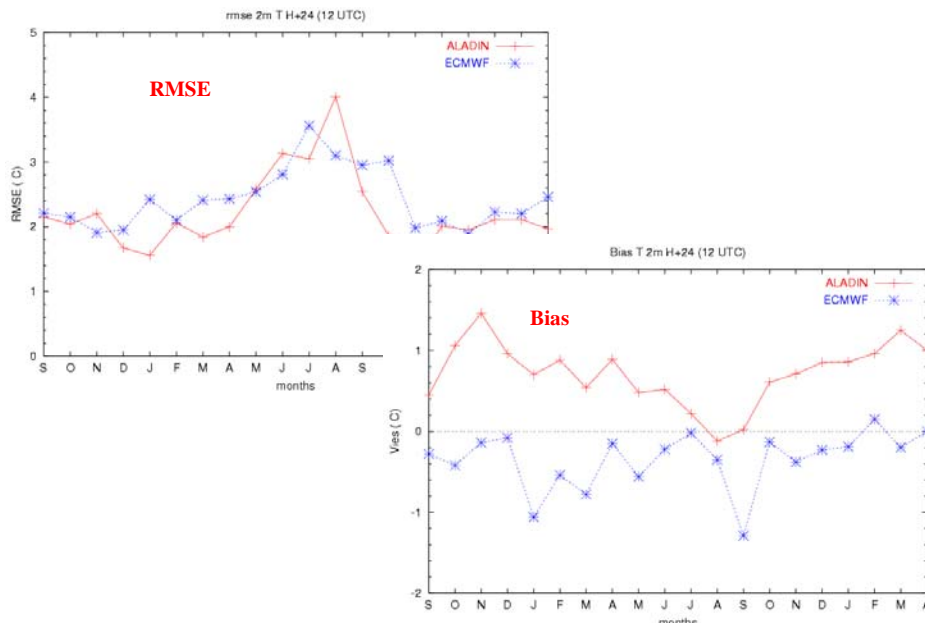
ECMWF, November 2005

Wind speed (ALADIN versus ECMWF)



ECMWF, November 2005

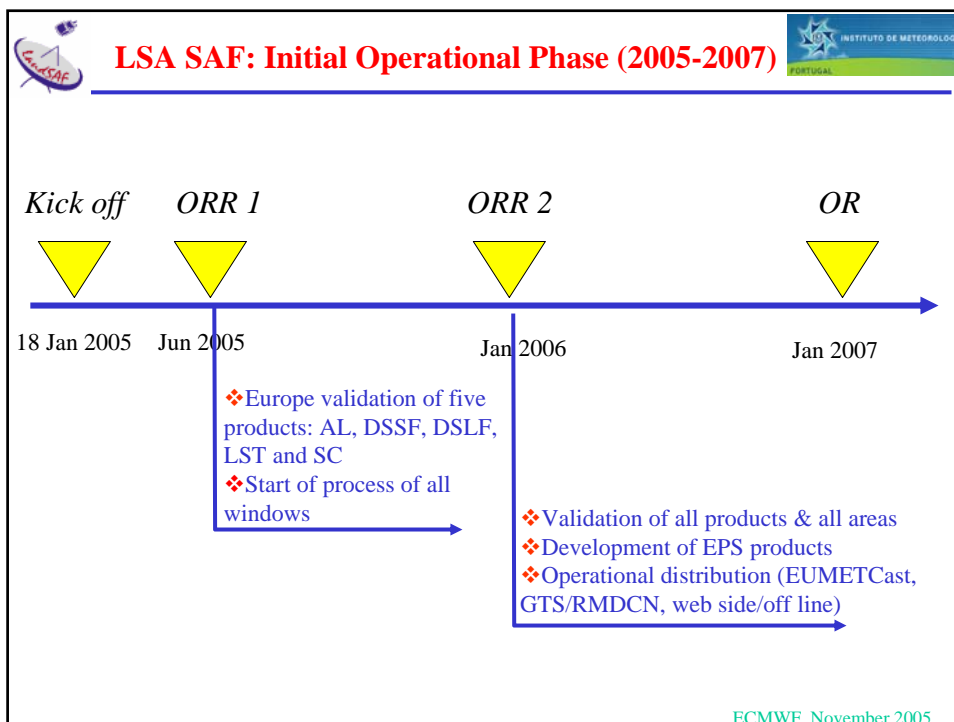
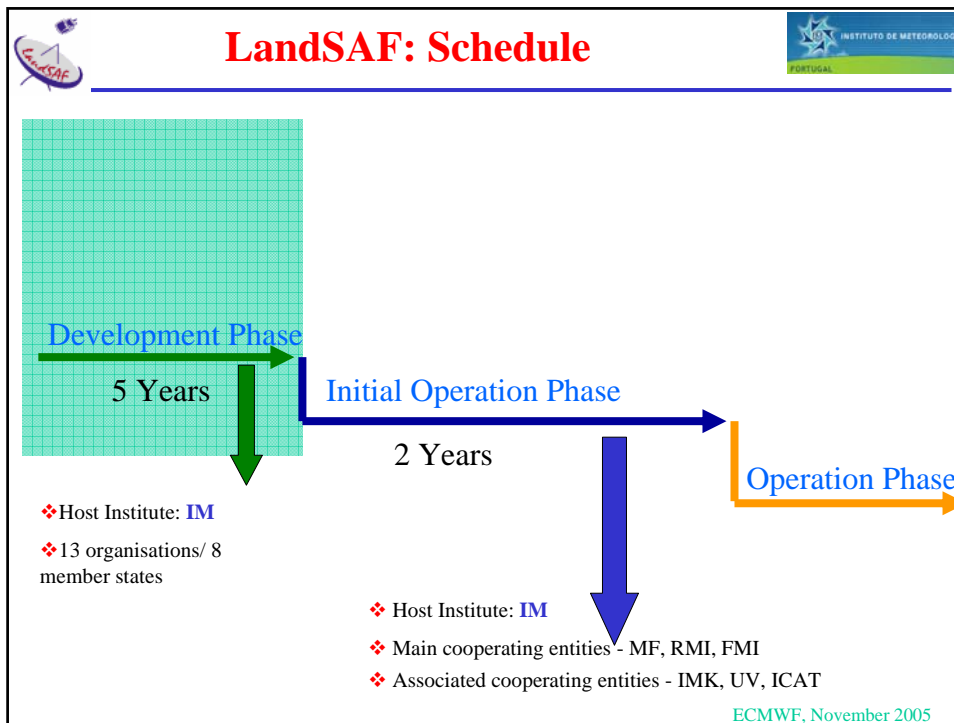
2m Temperature (ALADIN versus ECMWF)



Activities: Ocean group



- 3rd generation wave mode MAR3G
- No assimilation
- Regular verification against buoys offshore Portugal
- Transport model of HC (oil spills)





LSA SAF: Products (I)



PRE - OPERATIONAL PRODUCTS

Land Surface Temperature	IM
Broad – Band Albedo	M-F
Snow Cover	FMI
Downwelling Short Wave Surface Fluxes	M-F
Downwelling Long Wave Surface Fluxes	IM

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LSA SAF: Products



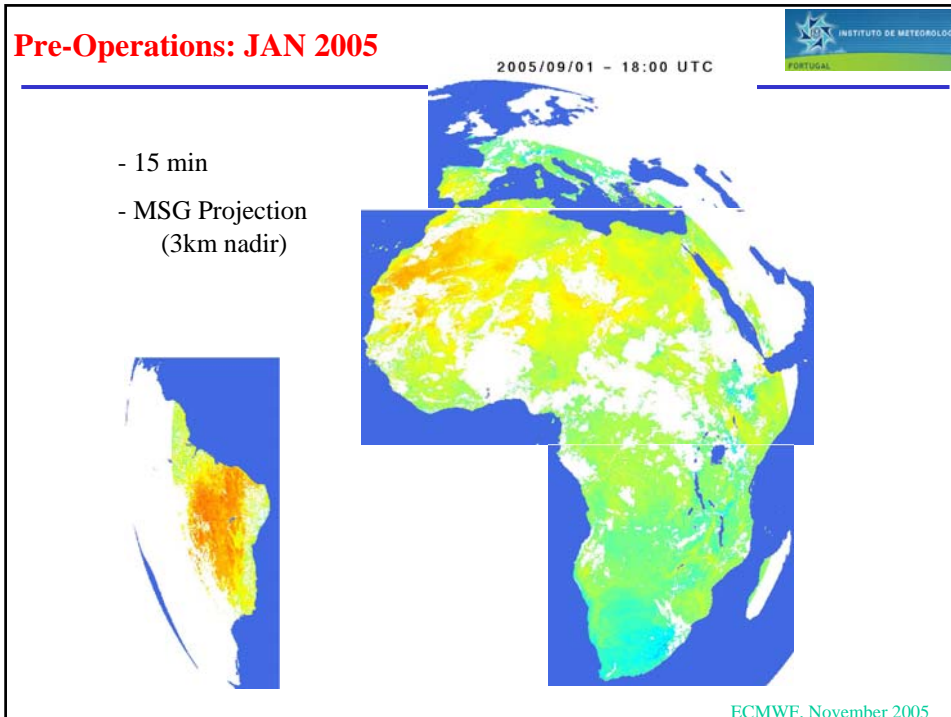
INTERNAL PRODUCTS

Emissivity	ICAT / IM
Snow Albedo	M-F
BRDF	M-F
Thermal Surface Parameters	IMK

DEMONSTRATION PRODUCTS

Vegetation: FVC, LAI, (fAPAR)	UV
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- IM interest in EURRA**
- **Data mining, surface and upper-air: gap filling, recovering and digitizing, where appropriate**
 - **Observation QC, via the feedback files**
 - **A compact, physically consistent, description of climate and climate variability**
 - **Climate downscaling**
- ECMWF, November 2005

IM (mandatory) activities with EURRA



- **To participate in preparatory and regular meetings (Ph 1-4)**
- **Inspect ERA-40 surface and upper-air obs records (Ph 2-4):**
 - **Confront with IM**
 - **Provide extra obs from IM records**
- **Check, over Portugal, ancillary fields (orography, vegetation type and cover, ...) (Ph 1-4)**
 - **Identify deficiencies and propose amendments**
- **Check early production results over Portugal (Ph 1-4)**

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IM other activities with EURRA



- **Precipitation**
 - **Collect precipitation records (~70 + ~600) and perform precipitation analysis (Phase 3-4)**
 - **Partnership with INAG (Water Institute) and University**
- **Participation in a work package (see tomorrow)**

ECMWF, November 2005

Question



- **Contiguous Europe?**
 - Azores Islands
 - Madeira Islands

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Surface WP



- **Focal centre for the land surface**
- **WPX.1 Assemble the necessary data**
 - Snow depth, precip, LAI, satellite skin T (or TIR radiances), mw radiances for soil moisture, snow cover from remote sensing
- **WPX.2 EURRA-LDAS**
 - Run an ensemble of surface models, off-line, forced where possible with observations to shadow any of the phases of EURRA
 - WPX.2 could continue in near-real-time with very minimal effort and most likely at no cost, once the infrastructure is set up.
- **WPX.3 Massage data for EURRA**
 - Experiment with the best way of using the data in WPX.1 and WPX.2 in the core part of EURRA
- **This would need appropriate funding**
- **Potential other partners, apart from IM and INM:**
 - landSAF/EUMETSAT, H-SAF, UKMO, MeteoFrance, DWD/GPCC, SMHI, KNMI

ECMWF, November 2005