PP VERSUS2
Phase5

Activities 2012/2013
Critical Issues

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PHASE 5 2012/2013

The objectives were many and ambitiuos

the most important are completed

The success is due to your collaboration

MANY THANKS!!!!

Task list - Overview

Task 0	Help Desk, bug-fixing, VERSUS update
Task 1	Consolidation and fine tuning of the system
Task 2	Test Area and Test Procedure Creation
Task 3	Implementation of Probabilistic Scores
Task 4	Implementation of the WMO BUFR standard for observations
TASK 4.d	1/3 hours precip. cumulation and wind gusts

Task 0: Help Desk, bug-fixing, VERSUS update

Task 0.a Help Desk

through the forum web site www.meteoam.it/forum

Bug Fixing collection is always active by reports in the forum.

Task 0.b Document Update FTEs underestimated. 0,1 is defined

User Manual has been updated to VERSUS 2.7 version, VERSUS 3.0 in progress (HNMS collaboration)

Technical Manual update in progress

- Php Area (available in http://80.17.44.25/versus/html) with DOXYGEN
- Database structure (available in http://80.17.44.25/versus/report/index.html) with MySql Workbench

Installation Document update is complete (it refers to the new installation package VERSUS 3.0)

Task 0: Help Desk, bug-fixing, VERSUS update

Task 0.c - 3 releases were distributed:

- VERSUS 2.7 October 2012 - developments of the PP phase 4
- VERSUS 3.0 January 2013 - EPS verifications and Software update
- VERSUS 3.1 June 2013 - developments described in the Task 1.c,Task 1.d,Task 4.a and task 4.c

The VERSUS 3.1 test phase (HNMS collaboration) **is closed.**

Total New Installation Package updated to version 3.0 Test Phase in progress (IMGW collaboration)

Task 0.d-COSI TEST Postponed next Year for lack of resources

Task 1: Consolidation and fine tuning of the system

Task 1.a Software update (R, R packages, PHP, MySQL) and code update

VERSUS 3.0

Task 1.c Generic improvements on VERSUS functionalities in order to improve friendliness and operational use of the system:

- Cronjobs automatization for machine in the Verification activities VUS 2013

- Automatic storage of figures with reasonable names
- Replication function of similar verification activities
- Inclusion of Performance diagrams in VERSUS plots

} VERSUS 3.1

Task 1.d: On the test machine was installed the version of Doxygen 1.8.3.1 the code was adjusted

Ex . in the test machine http://80.17.44.25/versus/html/

Task 1: Consolidation and fine tuning of the system

- ✓ Automatic storage of figures with standard names
- ✓ Replication function of similar verification
- ✓ Inclusion of Performance diagrams in VERSUS plots

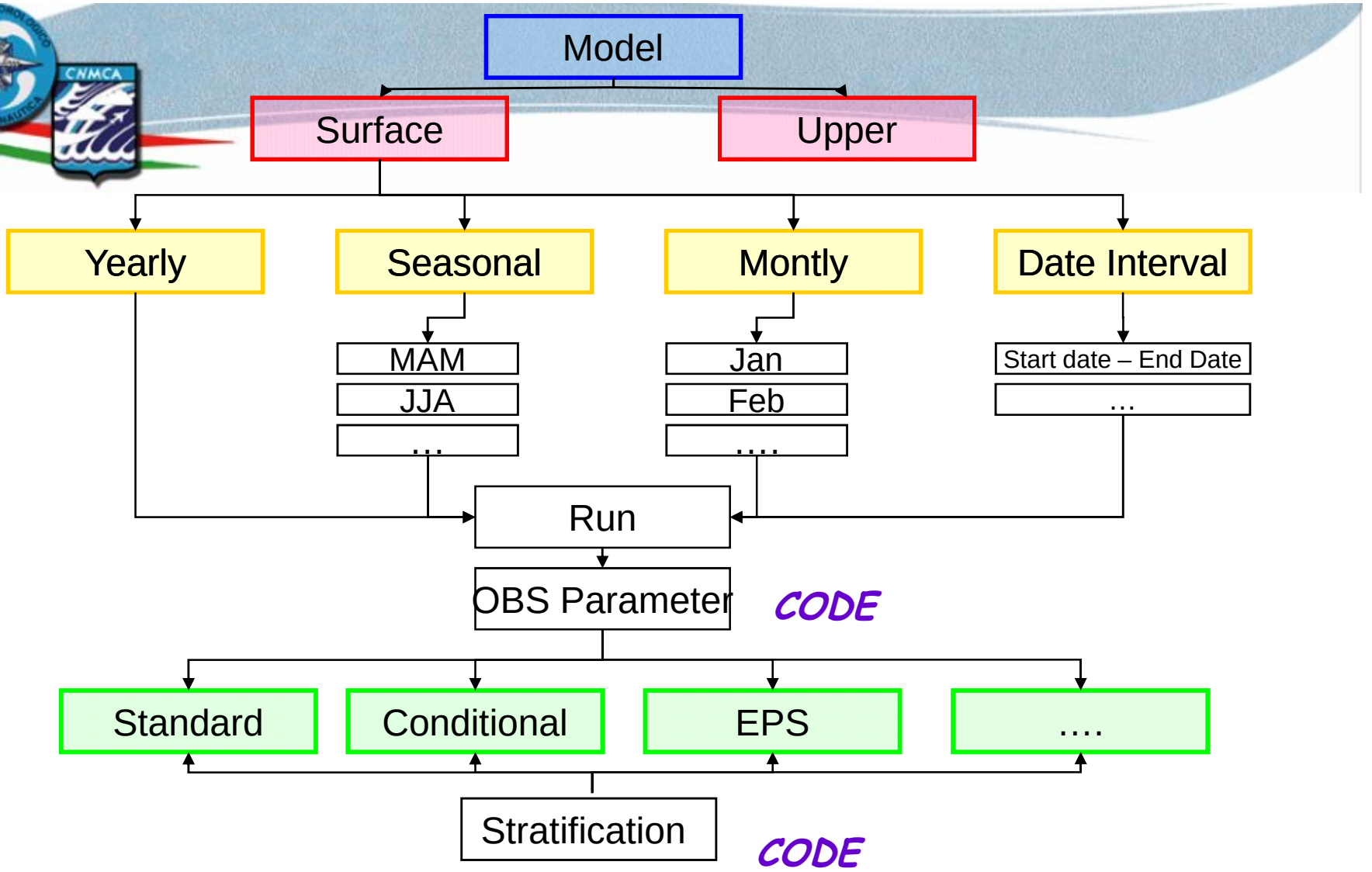
VERSUS 3.1 – Plots Identification

The goal of this task is to create a standard/tree structure in which the VERSUS plots get saved

This structure will allow an easier identification of the graphs

Crucial points: 1) coexistence old and new logic
2) verification against the analysis
(obs code isn't available)

It is not dynamic and it follows this SCHEMA



FILE NAME _ Verification_ID

File Name Schema

Dicotomic

D_ (ID VERIFICATION)_STEP_G/T/S_ScoreName.jpg

G = Geographical map
S = Plot for Step
T = Plot for Trhesholds

Step is only for the SCATTER PLOT/Geographical Distribuction

D_ (ID VERIFICATION)_P_Startth_Endth.jpg

P= Performance Diagrams

Continuous

C_(ID VERIFICATION)_STEP_G.jpg
Step is optional only for the SCATTER PLOT/ Geographical Distribution
G only for Geographical Distribution

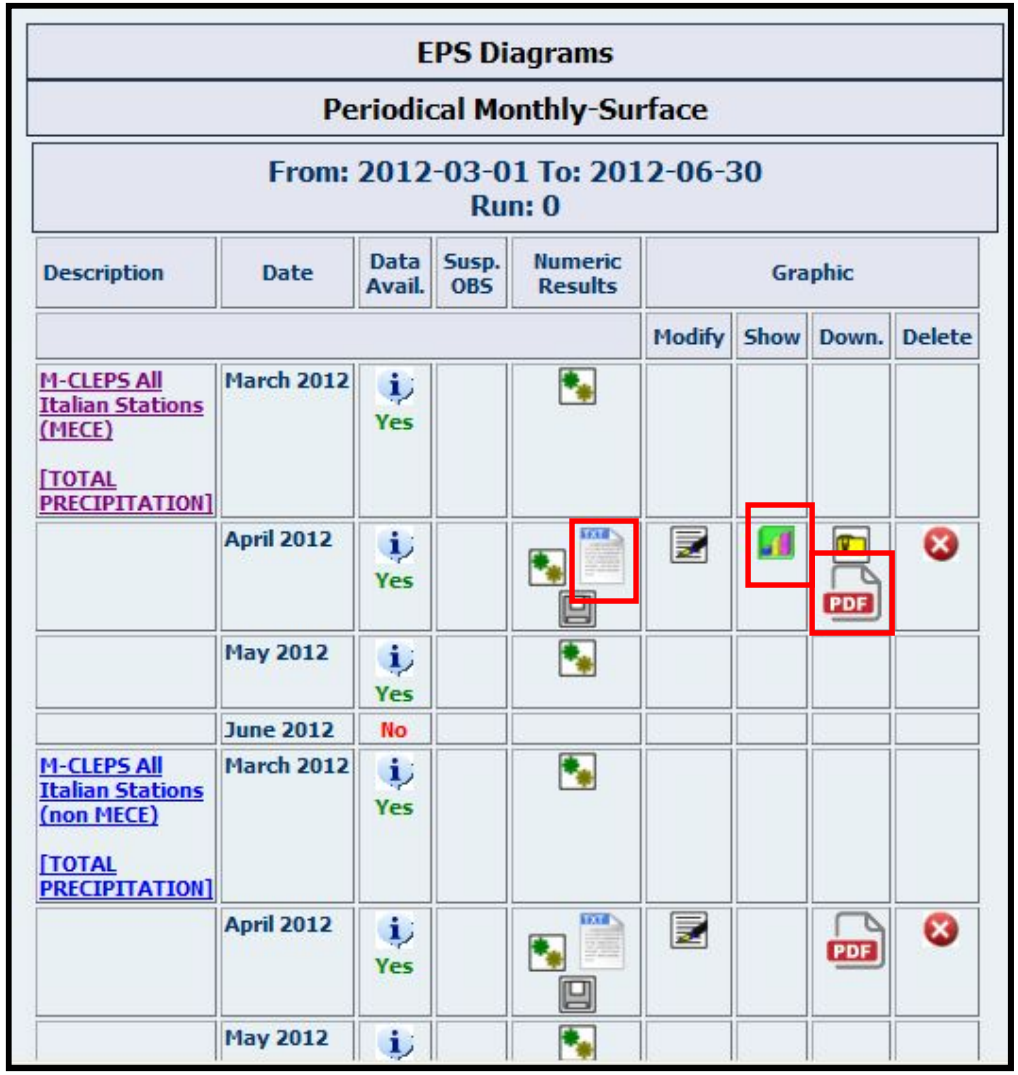
Upper

U_(ID VERIFICATION)_STEP.png for the single plots
U_(ID VERIFICATION)_unic.png for the unic plot

File Name Schema - EPS

Each EPS Verification produces different kind of files:

- ✓ Scores Plots - png files
- ✓ Diagrams - pdf files
- ✓ Prob of Prec - txt files



EPS Diagrams

Periodical Monthly-Surface

From: 2012-03-01 To: 2012-06-30
Run: 0

Description	Date	Data Avail.	Susp. OBS	Numeric Results	Graphic			
					Modify	Show	Down.	Delete
M-CLEPS All Italian Stations (MECE) [TOTAL PRECIPITATION]	March 2012	Yes						
	April 2012	Yes						
	May 2012	Yes						
	June 2012	No						
M-CLEPS All Italian Stations (non MECE) [TOTAL PRECIPITATION]	March 2012	Yes						
	April 2012	Yes						
	May 2012							

File Name Schema - EPS

For the scores plots (png files) we use the same logic for the other ones.

For the diagrams file (pdf format):

E_ID Verification_STEP_startth_endth.pdf

All the POP files are stored in a new folder named:

ID verification_txt

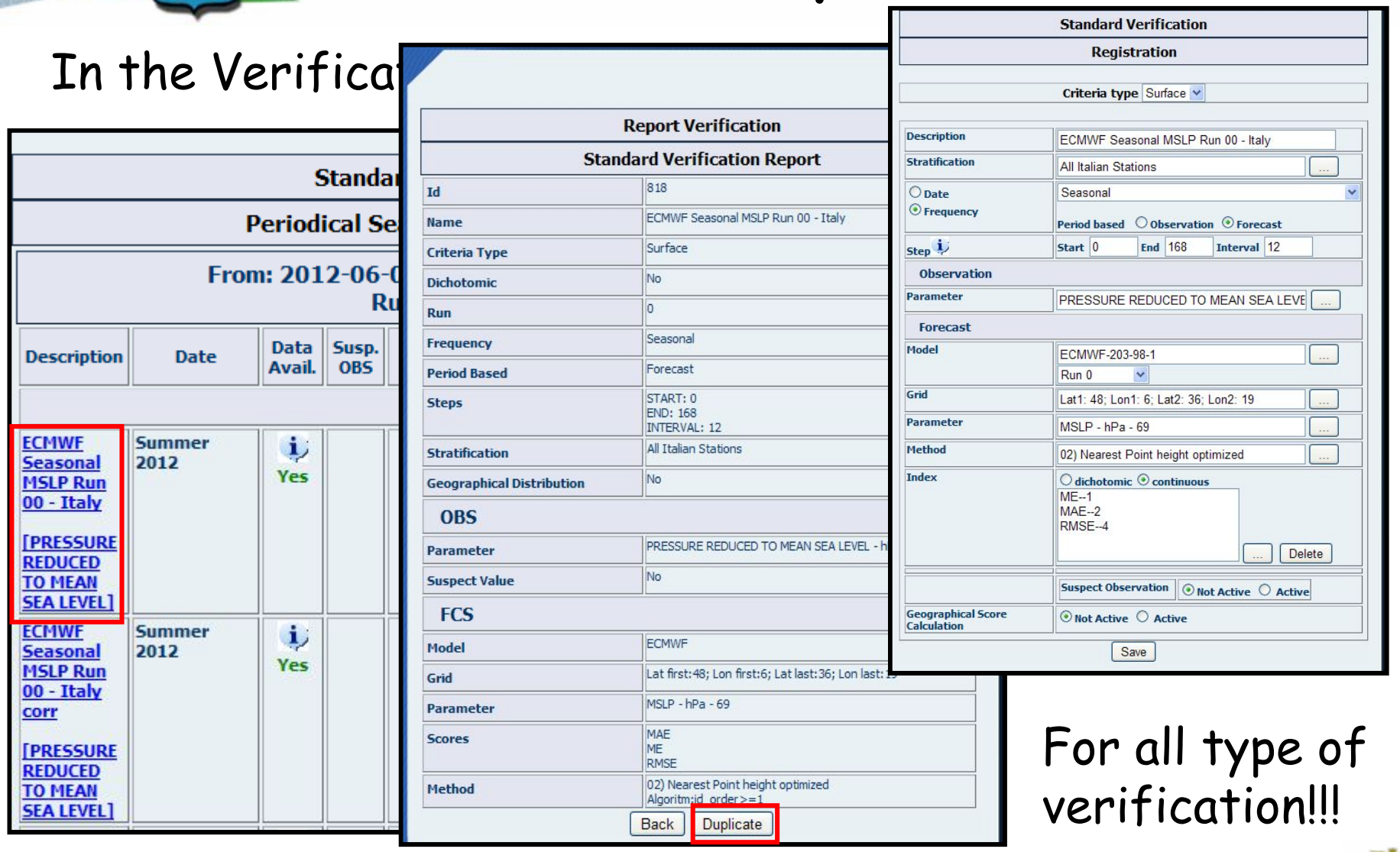
The name of the txt files are the same of the existing ones

Task 1: Consolidation and fine tuning of the system

- ✓ Automatic storage of figures with standard names
- ✓ Replication function of similar verification
- ✓ Inclusion of Performance diagrams in VERSUS plots

Task 1: Consolidation and fine tuning of the system

In the Verifica



For all type of verification!!!

Task 1: Consolidation and fine tuning of the system

- ✓ Automatic storage of figures with standard names
- ✓ Replication function of similar verification
- ✓ Inclusion of Performance diagrams in VERSUS plots

VERSUS 3.1 – Performance Diagrams

ARPA SIMC provided us the R script to integrate in VERSUS CODE

To implement this task the following activities are been developed:

- Update the GUI for dichotomic parameters
- Adapt the Data Base
- R Code Integration
- PHP Code Integration

The plots configuration is not dynamic (size, color, pointer)

VERSUS 3.1 - Performance Diagrams

The Performance Diagrams are self performed in any Dichotomic Standard Verification

Standard Report

Periodical Seasonal-Surface

From: 2012-04-01 To: 2012-08-31
Run: 0

Description	Date	Data Avail.	Susp. OBS	Numeric Results
ECMWF Seasonal Prec 12H Run 00- Italy South [PRECIPITATION]	Spring 2012	No		
	Summer 2012	Yes		
ECMWF Seasonal Prec 24H Run 00 - Italy South [PRECIPITATION]	Spring 2012	No		
	Summer 2012	Yes		

<< 1 >>

Results: 2

Back

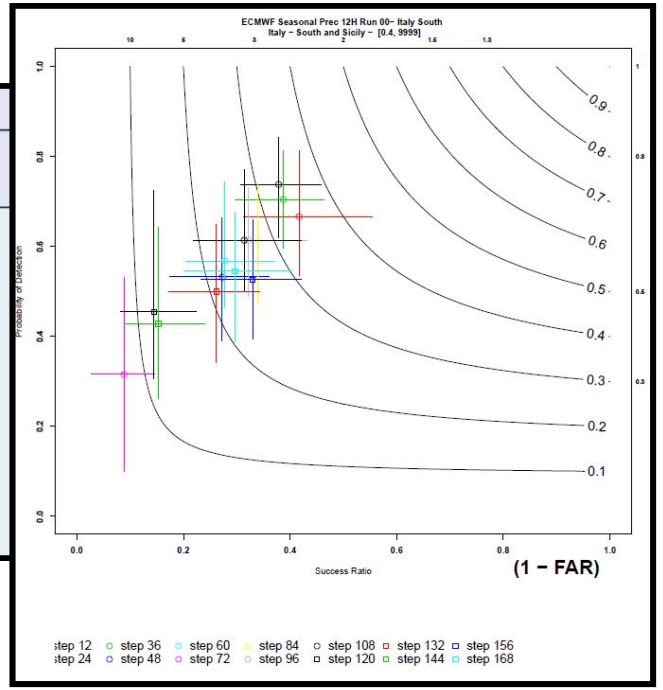
Graphic Viewer

Criteria:
From :2012-06-01 To: 2012-08-31

Click here to download the PDF
PD_845_0.pdf
Click on image to enlarge

Click here to download the PDF
PD_845_0.2.pdf
Click on image to enlarge

Click here to download the PDF
PD_845_0.4.pdf
Click on image to enlarge



Task 2 Test Area and Test Procedure

Task 2.a The machine is available through internet from November 2012 updated at VERSUS 3.1.

http://80.17.44.25/versus

Task 2.b Complete in November 2012

Task 2.c The Document is available in the forum Documentation Area in this topic:

http://www.meteoam.it/forum/viewtopic.php?f=8&t=106

Task 3 Implementation of Probabilistic Scores

Requirements defined with the collaboration of the WG7 coordinator!!
The main development is available in VERSUS 3.0
In version 3.1, there are few improvements defined during the **VUS 2013**

The task 3.c (WEB page Creation for CROSS model) was not considered crucial for the project so it was deleted with the WG assent.

Task 4 -WMO BUFR standard

Great collaboration with MCH colleagues for this task who provided us the data and collaborated in the final test phase.

VERSUS 3.1

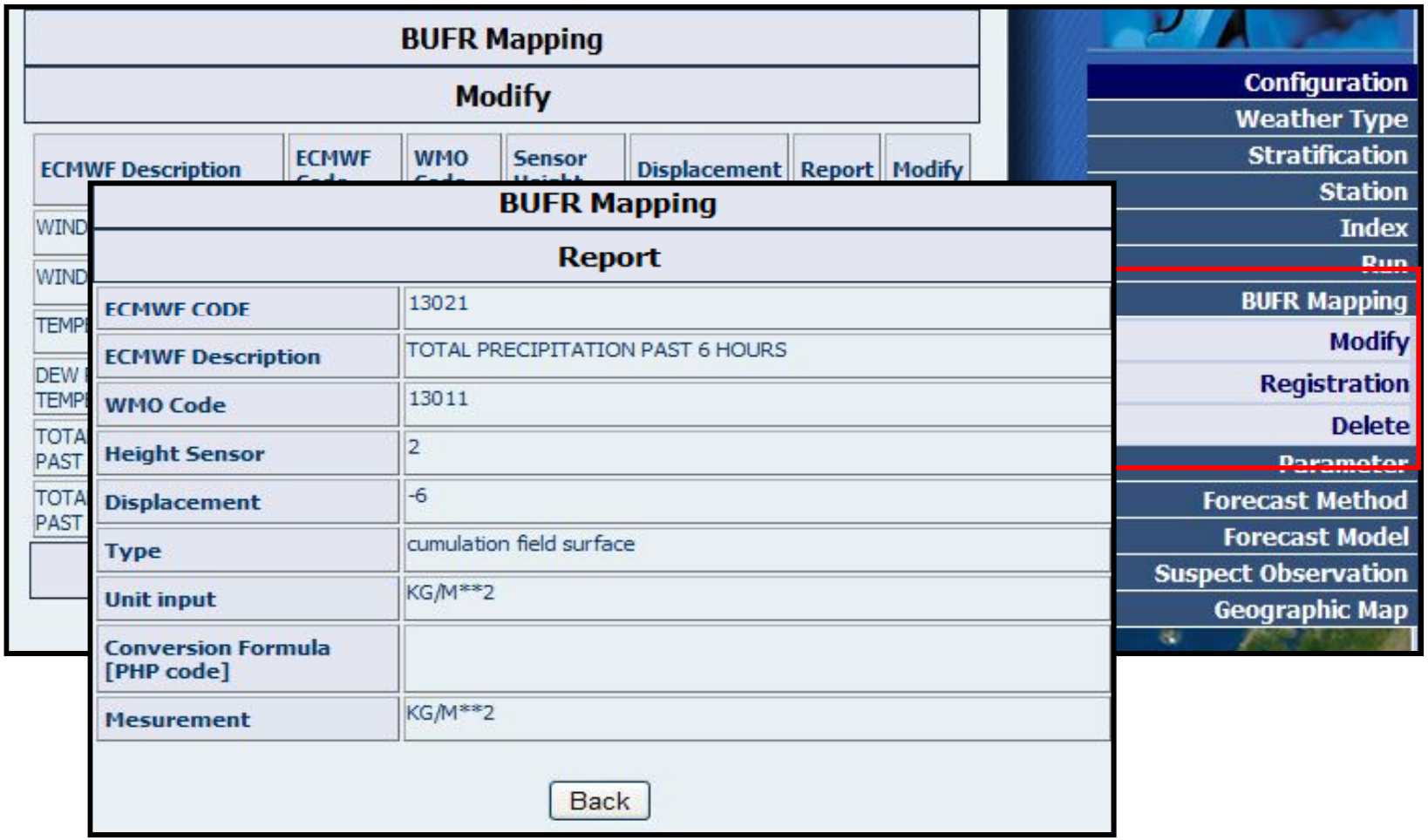
The basic choice is to keep the ECMWF rules even if BUFR data are coded according the WMO rules

For this activity we have:

- Create a Mapping TABLE
- Adapt the Data Base
- Write New Code for loading data to read/decode information from Mapping TABLE (FE Management)
- Creation of NEW GUI to manage the Mapping TABLE

Task 4 -WMO BUFR standard

BUFR Mapping Table - Configuration Area



TASK 4.c (old): Implementation of Exp version

The task 4.c (old) was **SUBSTITUTED:** this activity is already possible in VERSUS, indirectly.
Documentation on how to upload experimental versions of COSMO models in VERSUS is available in the forum area
(Topic http://www.meteoam.it/forum/viewtopic.php?f=8&t=101)
including examples of scripts.

Substituted

with

Task 4.d Implementation of period 1 and 3 hours for precipitation cumulation and wind gusts

TASK 4.c 1/3h for precip. cumulation

We are extending the verification creation on 1/3 hours cumulated precipitation using the hourly accumulation.

Concerning the 6/12/24 hours cumulated we've adopted the WMO Standard Synop Regulations:

- 00 UTC 6 hour precip sum
- 06 UTC 12 hour precip sum
- 12 UTC 6 hour precip sum
- 18 UTC 12 hour precip sum

TASK 4.c 1/3h for precip. cumulation

To implement this task the following activities are to be developed:

- Create new DB Views
- Adapt the Data Base
- R Code Integration
- PHP Code Integration
- Modify the GUI to allow the new data download

  (Data Availability -hourly and each three hours precip)

Task 4.c Parameter TRI=2 (ex Wind Gust)

The parameters with Time Range Indicator = 2 are the following:

Par	Tab	Name	Levtyp	Field
15	2	TMAX_2M	105	2m maximum temperature
16	2	TMIN_2M	105	2m minimum temperature
187	201	VMAX_10M	105	maximum 10m wind speed
216	201	VABSMX_10M	105	maximum 10m wind speed without gust
218	201	VGUST_DYN	105	maximum 10m dynamical gust
219	201	VGUST_CON	105	maximum 10m convective gust

VERSUS was able to ingest them but it was necessary a new development to run the Verifications in the right way

Task 4.c Parameter TRI=2 (ex Wind Gust)

Versus **allows** verifications for parameters with TRI=2 when the *step range* period is the same either in the obs (displacement) or fcs (period2-period1) data.

The Observations for this kind of parameters follow National Rules

For this reason the verification consistency depends on the ingested data.

The User take care that fcs and obs data use the same "displacement".

Task list - Overview

In conclusion

Overview VERSUS PP-2012/2013

Tasks	Contributing scientists	FTE year	Deliverables	Start	Date of delivery	STATUS
Task 0				**Sept 2012**	**Sept 2013**	
a	**PL team - Italy**	0,5	**Help Desk, bugs fixing**			**DONE**
b	**PL team - HNMS**	0,02	**Documentation Update**			**IN PART**
c	**PL team - Italy**	0,03	**New patches release**			**DONE**
d	**TBD**	0,2	**Test of New VERSUS release**			**DONE**
Sub Task	**DWD**	0,05	**Subtask COSI Test**			**POSTPONED**
Task 1				**Sept 2012**	**Sept 2013**	
a	**PL team - Italy**	0,15	**Software upload**			**DONE**
b	**TBD**	0,05	**Test**			**DONE**
c	**PL team - Italy**	0,15	**Creation of a scheduled task**			**DONE**
d	**PL team - Italy**	0,15	**Doxigen Inst. and code adjustment**			**DONE**
Task 2						
a	**PL team - Italy**	0,03	**Installation Test Machine**	**Sept 2012**	**Oct 2012**	**DONE**
b	**PL team - Italy**	0,03	**Enviroment**	**Oct 2012**	**Oct2012**	**DONE**
c	**HNMS**	0,02	**Document to describe test procedure**	**Oct 2012**	**Nov 2012**	**DONE**
Task3						
a	**PL team- Italy**	0,2	**Implementation of Probabilistic Scores**	**Ongoing**	**Dec 2012**	**DONE**
b	**PL team- Italy**	0.05	**Creation of WEB pages for GUI**	**Dec2012**	**Feb 2013**	**DONE**
c	**PL team- Italy**	0.05	**WEB page Creation for CROSS model**			**DELETED**
d	**PL team - WG7**	0.06	**Test phase**			**DONE**
Task 4						
a	**PL team - Italy**	0,1	**Implementation of template for BUFR**	**Jan 2013**	**Mar 2012**	**DONE**
b	**PL team - HNMS**	0,02	**Test Phase**	**Apr 2013**	**Jun 2013**	**DONE**
c (old)	**PL team - Italy**	0,1	**Implementation of Exp version (Substituted)**	**Apri2013**	**Jul 2013**	**SUBSTITUTED**
c new	**PL team - Italy**	0,1	**Implementation of precipitation cumulation period (1 and 3 hours)**			**DONE**

Thanks

for your collaboration!