ACC = RD

A Consortium for COnvection-scale modelling Research and Development

PM's talk (& CSS)

Claude Fischer, PM, with input by Patricia Pottier, CSS ACCORD All Staff Workshop, 27-31 March 2023, Tallinn, Estonia

Governance level

- PAC on 11 October: how to account for DEODE-funded manpower in ACCORD
- STAC on 3-4 November: scientific and technical reporting on RWP2022, proposal of RWP2023, impact of DestinE on ACCORD RWP, etc.
- Assembly on 7-8 December approved the 2022 reporting, the RWP2023, approved the LAM spectral transform codes to be open source, approved the physics interoperability roadmap, approved the procedure for DA and Physics AL recruitment, approved the budgets, etc.
- next meetings:
 - STAC on 25 May
 - Assembly on 26 June
- minutes from all meetings are available publicly on the ACCORD website at http://www.accord-nwp.org/



Membership



ATVIJAS VIDES, GEOLOGIJAS **JN METEOROLOGIJAS CENTRS**

EOROLOGI, KLIMATOLOGI, DAN GEOFISIKA

- Latvia
 - discussions are ongoing to draft a cooperation agreement, in view of LEGMC to 0 become an observer in ACCORD.



Indonesia

- introductory discussions have taken place in the premisses of MFI (Meteo-France 0 International) with a delegation of BMKG. The Indonesian NMS has expressed interest in joining ACCORD and getting an access to the common codes for a local installation. The expectation now is that BMKG and MFI will continue to explore with the ACCORD PM the ways for an increased collaboration towards a membership status.
- New **Zealand**



an exchange of information took place last autumn with a scientific expert 0 mandated by the NZ NMS.



MG and ST positions

- MG new Area Leaders:
 - for (upper-air) Data Assimilation: Benedikt Strajnar (ARSO)
 - for (upper-air) Physics: Metodija Shapkaljevski (SMHI)

- Consortium Scientific Secretary:
 - Patricia will leave on 1 August (on retirement)
 - the position has been opened by MF (1 FTE position)
- Suggestion to reinforce the Support Team with a new position, to handle documentation and provide level of support to communication
 - to be discussed at the upcoming STAC





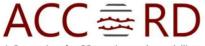


RWP 2023 implementation; DAP2023; preparation of RWP2024

- the costed Detailed Action Plan for 2023 (DAP2023) has been prepared by MG from the autumn 2022 on, until publication of the signed version on 21 February
- additional ACCORD-funded actions will be discussed by MG in June
- ALs and CSC-Ls continue organizing the work in their Areas and in link with the CSC teams (the detailed organization of the coordination is left to each MG member)
- MG members "use" their WP co-leads, who are an essential support to the MG in organizing the overall activity in many Areas
- MG also regularly checks the manpower registered by the LTMs in the Common Manpower Register (CMR)
- We would like to generalize the use of a rolling reporting document per Area, in order to monitor the progress made by the teams and key scientists (under Googledocs)
- we will start preparing the RWP2024 soon after the ASW, which will involve the WP co-leads and the teams

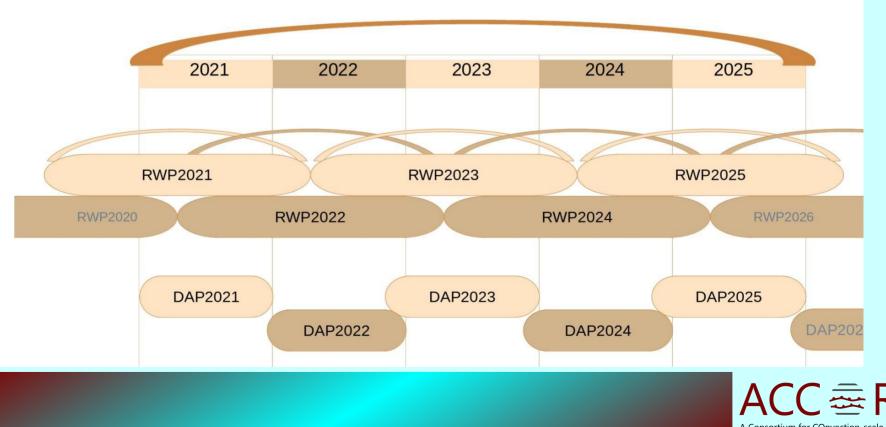


2021-2025: ACCORD MoU-1



A Consortium for COnvection-scale modelling Research and Development

Rolling Work Plans & Detailed Actions Plans during MoU-1



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Specific topics: "white paper"

- since the end of 2021, the MG has been addressing several aspects at the interface between our ACCORD R&D and users (R2O and O2R interfacing)
- this brainstorming materialized in a white paper where MG explained its analysis and made proposals regarding:
 - testing and validation (quality assurance)
 - user feedback
 - documentation
- MG will work on the implementation of these proposals, and regularly review the progress (what works, what doesn't)
- current steps:
 - testing: github and its communication means (codes), generalized use of the davaï tool, progressively extend the scope of davaï for unit-to-integration testing (however not acceptance testing)
 - user feedback: how could ACCORD organize user feedback and the answer from R&D side ? => follow Carl's talk in the MQA session on Tuesday morning
 - documentation: discussion including ECMWF and MF (eg organize a joint inventory), issue of a dedicated part-time position in the Support Team ?



At scientific management level: transversal and technical aspects

- Codes & working practices
 - the use of github is widely encouraged for collaborative work on codes
 - ACCORD source code forge has become a reality
 - the DAVAÏ tool is becoming available both on MF and ECMWF computers (scripted) training will be progressively organized
 - intention to form the "davaï-developer" team (4-5 persons, 10% FTE)
 - please pay attention to the "Code & System" session on Wed morning !
- Code adaptation (aka SPTR)
 - significant progress made at MF, on global/LAM common parts and on the ARPEGE physics codes
 - regular exchanges with ECMWF, in joint SPTR/DEODE-WP2 meetings
 - start of refactoring of the ALARO physics codes
 - start of refactoring of the AROME & HARMONIE-AROME codes: PHYEX code library (Méso-NH) at MF
 - development and evaluation of source-to-source tools (fxtran, loki)
 - we now see the first hints for new coding guidelines: how to write FORTRAN codes compliant with the code adaptation paradigms
 - please pay attention to the "Code & System" session on Wed morning !
- Mixed precision was addressed at the last IFS-ARPEGE coordination meeting: priority is on direct model forecast codes, important to now validate mixed precision runs at the same time as double precision in new developments, sometimes hard bugs may appear requiring debug skills (!)



Working Group on very high resolution modelling

- WG-VHR material accessible at <u>https://opensource.umr-cnrm.fr/projects/accord/wiki/Very_High_Resolution_Modeling_</u> (VHR-MOD)
- VHR working days
 - 14-16 February at SMHI (organizers: Patrick, Thomas, Xiaohua, Claude)
 - about 70 participants in-situ or online
 - afternoons were dedicated to practical work on VHR configurations, for in-situ participants
- side meeting at this ASW: Tuesday 16h30 18h30 local time
 - co-chaired by Claude and Xiaohua
 - show and discuss any new results, upon proposals by the participants
 - special hints about results on 200m grid-mesh grids ?
 - address continuation of the VHR WG in ACCORD



Working Group on Machine Learning for NWP

- WG material accessible at <u>https://opensource.umr-cnrm.fr/projects/accord/wiki/Machine_Learning_(ML)</u>
- the *portfolio* material is in preparation for the upcoming STAC
 - ideas about studying ML tools within our NWP codes: suggestions, discussion about possible caveats
 - scope widened a bit towards hints on infrastructure and strategic aspects
- some examples of activity taking place in ACCORD, or soon to start
 - preparation of input data for physiography (Met Eireann)
 - for radiation (in link with ECRAD, DMI)
 - quality control of some observations
 - first studies on downscaling by ML, in relation to EPS (MF)



Destination Earth DE_330

- The goal is to develop an on-demand extreme-event digital twin, interfaced with the global digital twin (ECMWF), the data lakes (EUMETSAT) and the core service platform (ESA)
- The system will use modern HPC facilities from the EuroHPC Joint Undertaking
- An ACCORD-based offer has been chosen by ECMWF in September 2021
- 28 partners, out of which 21 are ACCORD NMSs
- Total budget 12M€
- Météo-France is the Prime Contractor with ECMWF (Elisabeth Gérard, MF); the scientific and technical leadership is shared with other ACCORD Members
 - Roger Radriamampianina (Met.no), Kristian Pagh Nielsen (DMI)
 - WP leaders from the various institutes
- A prototype demonstrating the proof-of-concept of the on-demand digital twin will be delivered by June 2024 (end of phase 1)



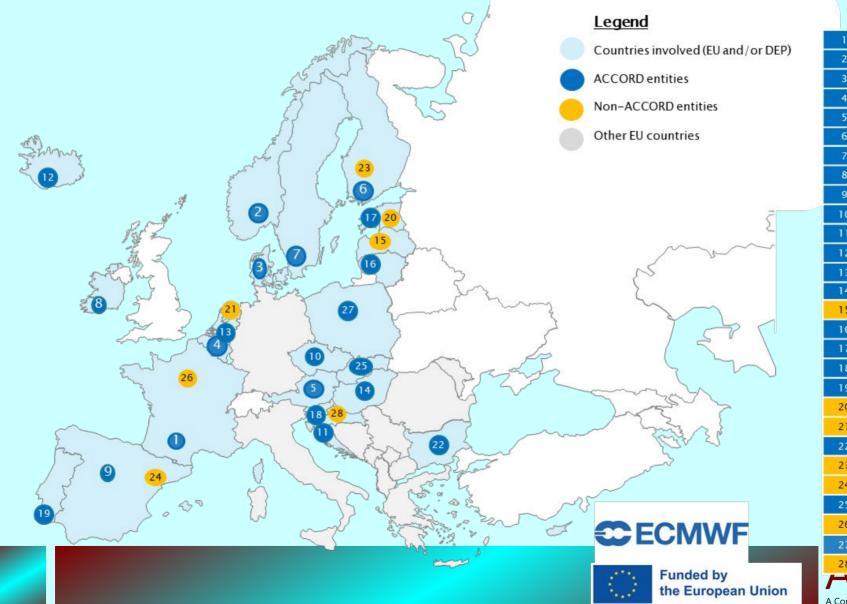
The European Union Destination Earth implem



DestinE

Entities involved in DE_330

21 out of 26 ACCORD entities involved in DE_330 Missing: Algeria, Morocco, Romania, Tunisia, Turkey



1	Météo-France	FR
2	Met Norway	NO
3	DMI	DK
4	KMI-IRM	BE
5	ZAMG	AT
6	FMI	FI
7	SMHI	SE
8	Met Éireann	IE
9	AEMET	ES
10	СНМІ	CZ
11	DHMZ	HR
12	IMO	IS
13	KNMI	NL
14	OMSZ	HU
15	LEGMC	LV
16	LHMS	LT
17	ESTEA	EE
18	ARSO	SI
19	IPMA	PT
20	TalTech	EE
21	RIVM	NL
22	NIMH	BG
23	CSC	FI
24	BSC	ES
25	SHMU	SK
26	INRAE	FR
27	IMGW	PL
28	IRB	HR
A		
A Consor	tium for COnvection-sc	ale mode

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Overview of content of this ASW

- sessions: the (usual) thematic ones plus an applications session
- posters introduction today 15h15, followed by in-situ viewing
- side meetings:
 - Tuesday 16h30 18h30: VHR modelling (in plenary room or in Capella room ... on choice depending on in-situ practical aspects)
 - no side meeting on Wednesday ... sightseeing time !
 - Thursday 16h30 18h30: in parallel surface and 3D physics
 - BJ links to the side meetings:
 - plenary room: <u>https://bluejeans.com/682176176/8069</u>
 - Capella room: <u>https://bluejeans.com/103009650/4638</u>
- LTM meeting today, Monday 27 March 16h30 local on invitation for LTMs or their representatives (Capella room & hybrid)



The PM gives the floor to the CSS ...

to remind the teams the content of the ACCORD website





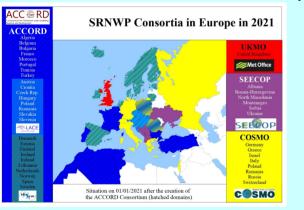
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http://www.accord-nwp.org/

ABOUT ACCORD V	
MEMBERS	About ACCORD
MoU	
COLLABORATIONS	Veðurstofa Íslands
BIRTH	
Members (NMS, we	eb)

- MoU (inc. agreement, licenses)
- Collaboration

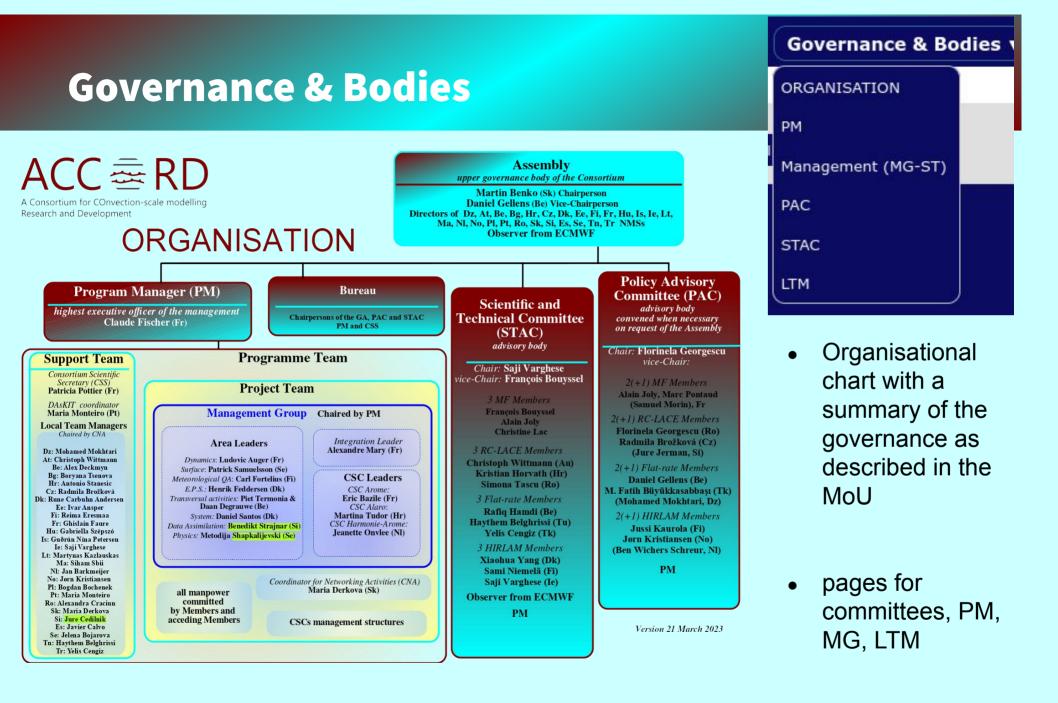
 SRNWP consortia in Europe



- Birth
 - press release, inc. video animation
 - ACCORD introductory text for NWP reviews



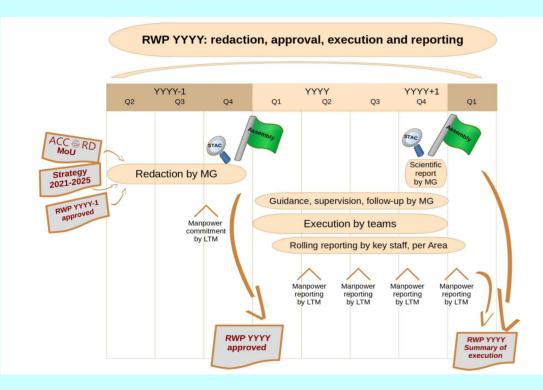
ACC and RD A Consortium for COnvection-scale modelling Research and Development





Plans and Reports

- strategy 2021-2025
- organisation of the R&D activities



PLANS & REPORTS V			
Scientific Visits reports			
R&D activities			
Rolling Work Plan			
Strategy			

- Rolling Work Plans
 - process
 - RWPs since 2018 as adopted by the Assembly
 - scientific reportings
 - committed and reported manpower figures
- scientific visits' reports



Events

- Assembly, PAC, STAC, LTM: agenda, minutes, presentations if any, date of next meetings, ...
- ASW: registration form, information from the hosts, agenda, guidelines, list of participants, pdf of the presentations and posters, recordings of the sessions, chat discussions, photos ...
- WW/WD => list of the WW/WD with link to the wiki pages that contain the relevant material

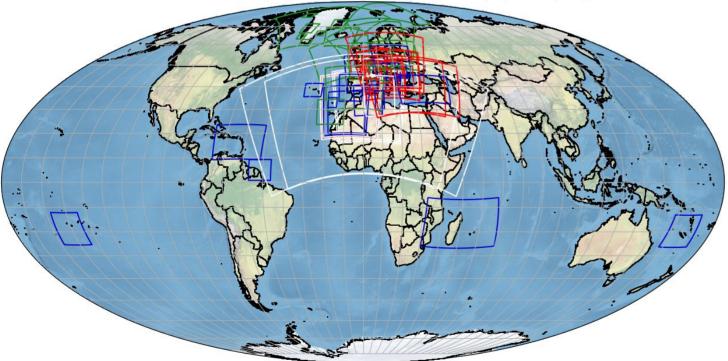
EVENTS V Assembly MG meetings PAC meeting STAC meeting LTM meeting All Staff Workshop Working Weeks /Working Days



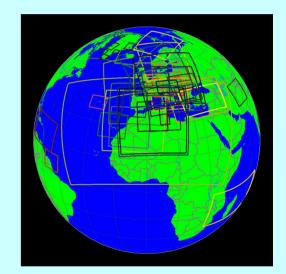
Configurations

- the CSCs (articles)
- Description of the main operational configurations
- Maps by CSC, Partners, Components, ...

ACCORD CSCs : AROME (blue) HARMONIE-AROME (green), ALARO (red) ALADIN (white)









Newsletters

Newsletters v

EDITIONS

TEMPLATES & RECOMMENDATIONS







CONTACT US Claude Fischer, ACCORD Programme Manager @ mw@accord-nwp.org Patricia Pottier, Consortium Scientific Secretariat @ css@accord-nwp.org (http://www.accord-nwp.org/



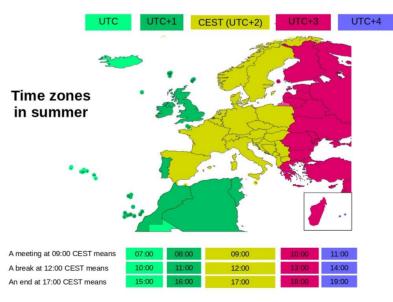
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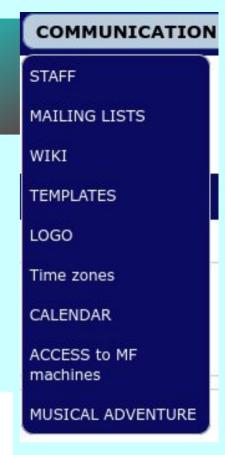


Communication: catch-all section !

- ACCORD logo: meaning, files to download (jpg, png, svg)
- templates for presentations
- Mailing lists: the 22 lists @accord-nwp.org, how to (un)subscribe
- Wiki: how to get an account, where to find it
- Access to MF machines

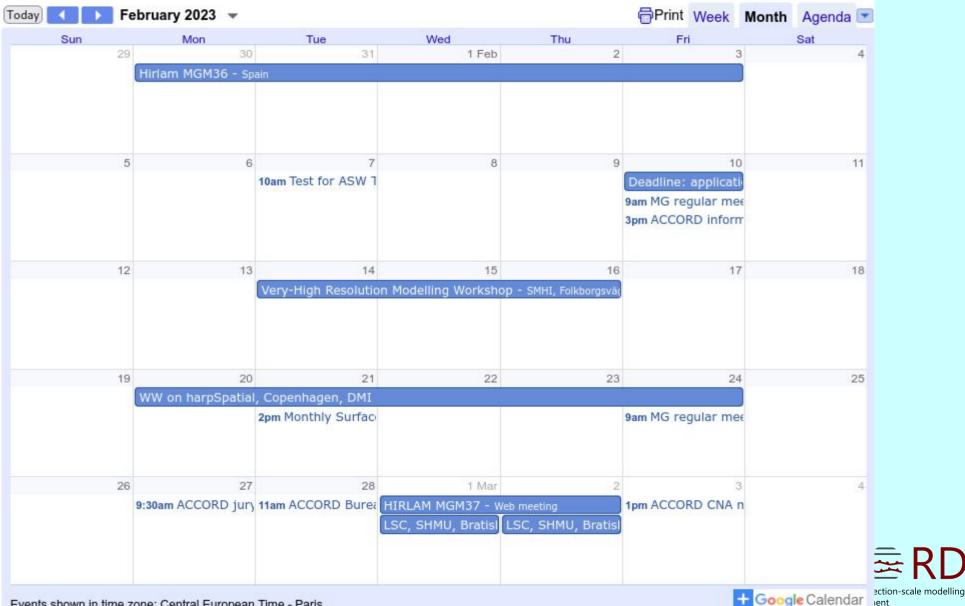
Times zones





Google CSS calendar (ACCORD events, but not only)

ACCORD calendar



lient

Events shown in time zone: Central European Time - Paris



ACC a RD teams

ACCORD staff: contact people (Email, Phone, ...)

Persons by alphabetical order, Teams by Country/NMS/Subgroups, Committees and bodies

SELECT STAFF (SINCE 2018), ORDERED BY NAME OR FIRSTNAME

Select a person (NAME) to view his/her data 🐱

Select a person (Firstname) to view his/her data 🗸

SELECT STAFF ACTIVE IN THE ACCORD ROLLING WORK PLAN

Select a person (NAME) to view his/her data 🗸

~

SELECT THE COUNTRY/NMS, OR ACCORD, OR A SUBGROUP FOR INFORMATION ON ITS STAFF

NMS/Country

Subgroup

SELECT A COMMITTEE/BODY FOR INFORMATION ON ITS MEMBERS: PAC, STAC, LTM, MG&ST

Committee/body

~

Dynamic page created from the CMR (Common Manpower Register)

Search:

- by name
- by firstname !...
- by NMS
- by Subgroup
- by body: PAC, STAC, LTM, MG

For each person: name, position, photo, contact, activity in the RWP, ...

the more the LTMs fill in the fields, the more complete the information displayed ...



Information about ALGERIA: ONM, subgroup: Flat-Rate people

BACK TO ACCORD MAIN PAGE BACK TO THE TEAMS

NAME Firstname	Email	Phone	Photo	Position	Country	Active in ACCORD RWP (click for detail
AIT MEZIANE Mohand Ouali	aitmeziane.m.ouali@gmail.com				ALGERIA	Yes
AMBAR Abdenour	ambar.abdenour@gmail.com				ALGERIA	Yes
BAHLOULI Abdelhak					ALGERIA	Yes
BELKACIMI Zahra	belkacimiselmanezahra@gmail.com		No photo	i i	ALGERIA	Yes
BENAMARA Mohamed Arab			No photo		ALGERIA	No
BENGHABRIT Zakaria	benghabritzak@gmail.com				ALGERIA	Yes
BOUSRI Islam			No photo		ALGERIA	Yes
BOUZGHAIA Mohamed Seraj Eddine			No photo	j	ALGERIA	No
CHEMROUK Ghiles	ghileschemrouk@hotmail.com				ALGERIA	Yes
CHIKHI Sara			No photo		ALGERIA	Yes
CHIKHI Walid			No photo		ALGERIA	Yes
DEHMOUS Idir			No photo		ALGERIA	No
DOUBA Oussama			No photo		ALGERIA	No
KERROUMI Nour El Isslam			No photo		ALGERIA	Yes
MOKHTARI Mohamed			Real Property in the second se	LTM Algeria	ALGERIA	Yes
SARA Rouidja			No photo	1	ALGERIA	AĽL ≊

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Let's leave the last word to the PM ...

- tänan tähelepanu eest
- (thank you for your attention)

