

Deliverable 9.6: Meeting minutes of the last ACTRIS PPP meeting

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| Comments | |

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1. ACTRIS PPP Final Meeting

1.1 Purpose

The purpose of this meeting was to get the ACTRIS PPP community together, including beneficiaries, linked third parties, associated partners and SIAB members. The first main objective of the meeting was to inform and involve the participants in discussion about the implementation of ACTRIS as a research infrastructure and the work required for it. The second main objective was to summarise the outcomes of the PPP Project, to discuss the status and the timeline of remaining deliverables and to identify the next steps for the IMP phase.

1.2 Agenda

The agenda of the meeting is presented below.

| Time | Mon Nov 4th | Tue Nov 5 | | Wed Nov 6th | Thu Nov 7th | | Fri Nov 8th |
|-------------|--|--|--|---|---|---|--|
| 09:00-10:30 | <div></div> | CF plans for operation support and services (Aerosol In Situ/Remote Sensing) <i>Participants: CFs, NFs, NCPs</i> | | ACTRIS HR Strategy & ACTRIS Financial Framework <i>Participants: CFs, NFs, NCPs</i> | Joint CF leaders and EB meeting <i>Participants: CF leaders and EB</i> | | Data Centre technical workshop <i>Participants: DC system developers</i> |
| 10:30-10:50 | | Tea break | | Tea break | Tea break | | Tea break |
| 10:50-12:20 | | CF plans for operation support and services (Cloud In Situ/Remote Sensing) <i>Participants: CFs, NFs, NCPs</i> | SIAB Meeting | NF Labelling Process & CFs and connections to exploratory platforms <i>Participants: CFs, NFs, NCPs</i> | Joint CF leaders and EB meeting <i>Participants: CF leaders and EB</i> | | Data Centre technical workshop <i>Participants: DC system developers</i> |
| 12:20-13:30 | | Lunch | | Lunch | Lunch | | Lunch |
| 13:30-15:00 | | CF plans for operation support and services (Trace Gases In Situ/Remote Sensing) <i>Participants: CFs, NFs, NCPs</i> | SIAB Meeting | SIAB Reporting 13:30-14:00 & Strategy and funding of physical access in ACTRIS <i>Participants: all</i> | Joint CF leaders and EB meeting <i>Participants: CF leaders and EB</i> | Data Centre technical workshop <i>Participants: DC system developers</i> | <div><div>- Brainstorm (0PB)</div><div>- Mare (1B02b)</div><div>- Terra (1A15c)</div><div>- Aqua (1A13c)</div></div> |
| | | Welcome and Introduction 14:00-14:30 ACTRIS ERIC Perimeter and IMP Introduction 14:30-15:30 <i>Participants: all</i> | | | | | |
| 15:00-15:30 | | Tea break | | Tea break | Tea break | | |
| 15:30-18:00 | Tea break 15:30-16:00 | Validation Task Group <i>Participants: VTG, CFs</i> | ACTRIS Data Management Plan & Quantifying the socioeconomic effects to society & ACTRIS future positioning in the Landscape & Conclusions <i>Participants: all</i> | Data Centre technical workshop <i>Participants: DC system developers</i> | | | |
| | CF plans for operation support and services (HO, DC and general discussion) 16:00-18:00 <i>Participants: CFs, NFs, NCPs</i> | Country reports <i>Participants: all</i> | | | | | |
| | | Social dinner | | | | | |

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| | - Brainstorm (0PB) |
| | - Mare (1B02b) |
| | - Terra (1A15c) |
| | - Aqua (1A13c) |

1.3 List of Participants

| First name | Last name | Affiliation | Country |
|------------|------------|--|----------|
| Elke | Ludewig | ZAMG Sonnblick Observatory | Austria |
| Martine | De Maziere | BIRA-IASB | Belgium |
| Christo | Angelov | INRNE, BAS, Bulgaria | Bulgaria |
| Tanja | Dreischuh | Institute of Electronics - Bulgarian Academy of Sciences | Bulgaria |
| Leonard | Barrie | McGill University | Canada |

| | | | |
|---------------|------------------|--------------------------------------|----------------|
| Jean | Sciare | The Cyprus Institute | Cyprus |
| Milan | Vana | CHMI | Czech Republic |
| Jakub | Ondracek | ICPF AS CR | Czech Republic |
| Vladimir | Zdimal | ICPF AS CR | Czech Republic |
| Petra | Pribylova | Masaryk University, RECETOX | Czech Republic |
| Petra | Ruzickova | Masaryk University, RECETOX | Czech Republic |
| Steffen | Noe | Estonian University of Life Sciences | Estonia |
| Joonas | Vanhanen | Airmodus Ltd | Finland |
| Terhi | Kontkanen | FMI | Finland |
| Anniina | Korpinen | FMI | Finland |
| Ewan | O'Connor | FMI | Finland |
| Mikhail | Paramonov | FMI | Finland |
| Edith | Rodriguez | FMI | Finland |
| Anna | Salonen | FMI | Finland |
| Giulia | Saponaro | FMI | Finland |
| Sanna | Sorvari Sundet | FMI | Finland |
| Simo | Tukiainen | FMI | Finland |
| Päivi | Haapanala | University of Helsinki | Finland |
| Tuija | Jokinen | University of Helsinki | Finland |
| Eija | Jurola | University of Helsinki | Finland |
| Pirjo | Kontkanen | University of Helsinki | Finland |
| Tuukka | Petäjä | University of Helsinki | Finland |
| Caroline | Blanke | AERIS CNRS | France |
| Cathy | Boonne | AERIS CNRS | France |
| Guillaume | Brissebrat | AERIS CNRS | France |
| Nicole | Papineau | AERIS CNRS | France |
| Jean-Francois | Doussin | CNRS | France |
| Ariane | Dubost | CNRS | France |
| Sabine | Philippin | CNRS | France |
| Jean-Pierre | Cammas | CNRS OSU-REUNION | France |
| Stéphane | Sauvage | IMT Lille Douai | France |
| Olivier | Favez | INERIS | France |
| Martial | Haeffelin | IPSL/CNRS | France |
| Benedicte | Picquet-Varrault | LISA, CNRS | France |
| Valerie | Gros | LSCE/CNRS | France |
| Paolo | Laj | CNRS/UHEL | France/Finland |
| Robert | Holla | Deutscher Wetterdienst | Germany |
| Ralf | Tillmann | Forschungszentrum Jülich | Germany |
| Robert | Wegener | Forschungszentrum Jülich | Germany |
| Romy | Foesig | KIT | Germany |
| Ottmar | Möhler | KIT | Germany |

| | | | |
|-------------|------------------|---|-----------------|
| Rainer | Steinbrecher | KIT/IMK-IFU | Germany |
| Markus | Hermann | Leibniz Institute for Tropospheric Research | Germany |
| Volker | Freudenthaler | LMU-MIM | Germany |
| Beatrix | Vierkorn-Rudolph | retired | Germany |
| Anke | Mutzel | TROPOS | Germany |
| Dennis | Niedermeier | TROPOS | Germany |
| Ulla | Wandinger | TROPOS | Germany |
| Aikaterini | Bougiatioti | National Observatory of Athens | Greece |
| Sevastianos | Moirasgentis | National Observatory of Athens | Greece |
| Darius | Ceburnis | NUI Galway | Ireland |
| John | Wenger | University College Cork | Ireland |
| Aldo | Amodeo | CNR | Italy |
| Carmela | Cornacchia | CNR | Italy |
| Claudio | Dema | CNR | Italy |
| Giuseppe | Gargano | CNR | Italy |
| Rosa Maria | Petracca Altieri | CNR | Italy |
| Angela | Marinoni | CNR-ISAC | Italy |
| Herman | Russchenberg | Delft University of Technology | The Netherlands |
| Arnoud | Apituley | KNMI | The Netherlands |
| Markus | Fiebig | NILU | Norway |
| Cathrine | Lund Myhre | NILU | Norway |
| Richard | Rud | NILU | Norway |
| Aleksander | Pietruczuk | Institute of Geophysics PAS | Poland |
| Iwona | Stachlewska | University of Warsaw | Poland |
| Daniele | Bortoli | University of Evora | Portugal |
| Livio | Belegante | INOE | Romania |
| Doina | Nicolae | INOE | Romania |
| Natalia | Prats Porta | AEMET | Spain |
| Francesco | Benincasa | Barcelona Supercomputing Center | Spain |
| Amalia | Munoz | Fundacion CEAM | Spain |
| Andres | Alastuey | IDAIA - CSIC | Spain |
| Emilio | Cuevas | Izana Atmospheric Research Center (AEMET) | Spain |
| Lucas | Alados Arboledas | Universidad de Granada | Spain |
| Adolfo | Comeron | UNIVERSITAT POLITÈCNICA DE CATALUNYA | Spain |
| Carlos | Toledano | University of Valladolid | Spain |
| Erik | Swietlicki | Lund University | Sweden |
| Urs | Baltensperger | Paul Scherrer Institute | Switzerland |
| Christine | Braban | UKRI | United Kingdom |
| Chris | Walden | UKRI Chilbolton Observatory | United Kingdom |
| Detlef | Müller | University of Hertfordshire | United Kingdom |

2. Meeting minutes session by session

2.1 Monday

2.1.1 Welcome, Introduction, ACTRIS ERIC Perimeter and IMP Introduction

The presentation was given by Sanna Sorvari Sundet

ACTRIS PPP Progress

- Some of the documents in the operational and organization framework of PPP that are in progress will be submitted as deliverables by the end of the year, and further developed during ACTRIS IMP. Agreement templates have not been done yet.

Infraia 03-2020 project invitation call about access to Atmospheric RIs

- Addresses how the access to the scientific community to ACTRIS facilities can be sustained on a long-term perspective. Paolo Laj and Sabine Philippin are leading the call, and the call approach is about ACTRIS and its country. The project is called ATMO-ACCESS, and it is for 9 million euros. The call opens at the end of November and the deadline is March 2020.

ACTRIS Implementation and ACTRIS IMP Project

- Project got funded
- Discussion about the objectives of overall implementation of ACTRIS and of ACTRIS IMP
 - Not all ACTRIS implementation objectives can be achieved within this project.
 - Implementation of CFs and NFs is the most important in addition to this project.
- Understanding ACTRIS the same way in all countries/by all actors is crucial in the implementation phase.
- 3 ACTRIS communities: in situ, remote sensing and simulation chamber
 - ACTRIS scientific conferences are needed in the future (planned for 2021 and 2024).
- Leadership and change in the work teams is discussed.

ACTRIS ERIC Perimeter

- Eija Juurola, Pirjo Kontkanen and Sanna Sorvari Sundet wrote a document on ACTRIS ERIC perimeter this fall, and a questionnaire related to the different options was sent to IAC delegates and NCPs. Country statements will be presented in IAC meeting next week. It describes different possibilities of ACTRIS perimeters and analyses the pros and cons of each approach. It is not a community decision, but on an RPO/country level. The document was discussed, and it was noted that close communication between the NCP and RPO and IAC delegates is needed.

Feedback on the Strategic Leadership Training Course for ACTRIS CFs, (Milan, Italy, September 2019)

- There is a need for more applied trainings, e.g. how to make a business plan. Discussion about the business landscape awareness. More training courses will be organised in the future.

Commission feedback on the ACTRIS ERIC documents

- Comments were very positive. The ERIC proposal was reviewed. ERIC RI has certain criteria that need to be met. Scope of ACTRIS is touched upon. Timeline and clarification regarding the EC comments to be discussed at the IAC. Progress in the ACTRIS communication.

2.1.2 CF plans for operation support and services (Head Office, Data Centre and general discussion)

Head Office

The presentation was given by Eija Juurola and Rosa Petracca.

- Necessity to promote innovation liaison. This means cooperation with industry and public sector.
- Single entry point approach.
- Annual clock of RI is needed and will be made in HO during next year in cooperation with the community.
- Ways of interaction with users were discussed.
- HO Finland needs to be operational when the ERIC starts, SAMU will take more time. Beta version of Access Management Platform will be ready by 2022. Access management plan first version already exists as a deliverable of ACTRIS PPP and will be further developed in ACTRIS IMP.
- Exercise/Piloting on how to do labelling should be done already during the next year.

Data Centre

The presentation was given by Cathrine Lund Myhre.

- The Data Management Plan (DMP) is discussed. It will be a living document. Some notes about FAIR criteria.
- Discussion about the validation of the Data Centre, real time data monitoring and the need for effective coordination.

General Discussion, led by Eija Juurola

- CF implementation plans are useful documents for management and monitoring of the implementation process (obstacles and deviation), as well as for the dissemination to CF, NF and IAC. Current status: drafts to be discussed in IAC09 and commented by the VTG.
- IAC is called to approve the overall implementation plans and to give a green light to go ahead with this plan.

- Refinement of the details of these implementation plans are planned as deliverables in ACTRIS IMP.

2.2 Tuesday

2.2.1 CF plans for operation support and services (Aerosol In Situ and Remote Sensing)

Aerosol In Situ (ECAC)

The presentation was given by Markus Hermann.

- Positive feedback from SHB, will serve as the basis for estimating the needs of NFs.
- Full capacity is expected to be achieved around 2024.
- The labelling process follows the generation of NFs guidelines and standard operating procedures.
- ECAC website provides an overview of their offers and guidance to the users.

Aerosol Remote Sensing (CARS)

The presentation was given by Doina Nicolae

- Existing infrastructure was discussed (AERONET & EARLINET stations, calibration facilities).
- Details of costs and HR can be found in the validation document. Options and final decision need to be discussed within ACTRIS Community (e.g., final Access pricing).
- Discussion about NFs, their costs and the labelling process

2.2.2 CF plans for operation support and services (Cloud In Situ and Remote Sensing)

Cloud In Situ

The presentation was given by Ottmar Möhler.

- Instrument costs and costs related to the work needed for the instruments are discussed.
- Potential for new/planned instrumentation (e.g., UAVs) is known and monitored.
- The user's usage and risks of campaign-based activities have been evaluated.

Cloud Remote Sensing

The presentation was given by Martial Haeffelin.

- Operational and planned stations are mentioned, and instrumentation requirements are addressed.
- Collaboration between ACTRIS and manufacturers needs to be discussed as it is important.
- Discussion about HR aspects and connection with DC for quality control (QC) took place.

2.2.3 CF plans for operation support and services (Trace Gases In Situ and Remote Sensing, Closing Remarks)

Trace Gases In Situ

The presentation was given by Rainer Steinbrecher.

- Units of this TC, as well as the costs and complexity of instrumentation, are discussed.
- Discussion about calibration support and primary standards for a subset of reactive gases and VOCs.

Trace Gases Remote Sensing

The presentation was given by Martine De Maziere.

- The organisation of units of this TC and the estimated needs are discussed.
- Complexity of instrumentation and Implementation Plan is addressed.
- Discussion need to be held about the dissemination of the material (e.g. documents, news, recommendations) provided by CF/TC.
- Validation of CFs is done, but cross evaluation (comparison between CFs) has not been done yet.
- Some qualitative cost-benefit analysis/feedback should be considered.

Closing Remarks

- Cross validation timeline is addressed.
- Discussions about exploratory platforms, mobile platforms, contributing stations need to be held.
- Contingency and management plans are required, as is the mailing list for NFs for the organization of the trainings, workshops etc.

2.2.4 Validation task group (VTG)

The presentation was given by Päivi Haapanala.

Discussion points:

- A question is raised about potential conflicts or contradictions between VTG and IAC. IAC comments will be sent to VTG so VTG can take them into account.
- Evaluation report document is not confidential and can be shared among CFs.

2.2.5 Country reports

Reports from a total of 22 countries were presented by National Contact Persons or their representatives during this session.

Discussion points:

- No major changes regarding the status of countries

- Discussion about the appropriate number of NFs, taking into account geographical distribution, strategic location, relevant scientific questions, measured and missing components, and redundancy.
- Maps can help with the issue raised in the previous paragraph.

2.3 Wednesday

2.3.1 ACTRIS HR Strategy

The presentation was given by Eija Juurola.

- HR Strategy and Staff Policy are to be approved by the IAC.
- ACTRIS staff policy states important values and principles to be followed for people working for ACTRIS.
- HR strategy will be a living document; it will be updated several times.
- Today's discussion about the new role and skills in ACTRIS is a continuation of what was started in the ACTRIS PPP Meeting in Rome in May 2019
- The goal is the specific key roles tailored for ACTRIS.
- The essential roles, duties and qualifications of the key personnel are discussed in detail. This includes CF leaders, Heads of Units, NF PIs and NCPs. management structure and support are touched upon as well.

2.3.2 ACTRIS Financial Framework

The presentation was given by Carmela Cornacchia.

Cost Book

- An informal review has been done by CSIL (an association working within ESFRI).
- We need to estimate the cost for implementation phase before 2020. The total cost for implementation also includes the cost for starting and ramping up the operations.
- The current uncertainties of cost definition shall be clarified before the next Cost book issue.
- Contingency plan is needed.

Funding model/Financial plan

- Service for users is discussed, and it is mentioned that CFs can provide service for free for the users, but it might be different for different CFs depending on the capacity of the CF.
- The importance to consider "minimum/optimal requirements" when thinking about the unit costs per NF type is highlighted.
- The major uncertainty is in the number and complexity of NF components.
- There is a need for max and min numbers for the TC to function.

- There is also a need for the minimum funding scheme for NF to operate. “Acceptable funding capacity”.

2.3.3 CFs and connections to exploratory platforms

The presentation was given by Jean-Francois Doussin.

- The main goal of exploratory platforms is to provide access.
- Basic vs. highly advanced instrumentation.
- A service that chambers could bring to TCs is the calibration for CFs.
- Discussion about the need for a body/committees and support to set this up.
- Discussion about a facility becoming an NF.

2.3.4 NF Labelling Process

The presentation was given by Ulla Wandinger.

- A detailed discussion about the NF template took place.
- A comment about the offline measurements is raised.
- In general, the DC should be part of the process of the requirements focusing on instruments.
- The additional instruments that the NFs have will be evaluated and listed, and a drop-down menu for instruments is needed.
- TCs will produce guidelines by 2020. The labelling cannot be done before.
- We need to practice first.

2.3.5 SIAB reporting

The presentation was given by the SIAB members, Leonard Barrie and Beatrix Vierkorn-Rudolph.

- We have received excellent comments from SIAB.
- Discussion about ERIC Perimeter document and HR took place.
- The SIAB report will be presented in IAC next week.

2.3.6 Strategy and funding of physical access in ACTRIS

The presentation was given by Sabine Philippin.

- Resources at SAMU are limited, but what is important is the ease of access.
- Not providing access to observational platforms is a possibility, since some observations cannot be interrupted. However, there is only a limited risk for this.
- It would be good to know the chamber operational schedule and the options for funding.
- Offering access to different kinds of users is an advantage as it increases visibility. The cost for access will be low, and, in addition, it will increase the visibility. Users will get to know ACTRIS.

- it is necessary to be careful with the costs of all types of platforms, and a selection of platforms is needed.

2.3.7 ACTRIS Data Management Plan

The presentation was given by Cathrine Lund Myhre.

- DMP is one of the main ACTRIS documents. ACTRIS Community is encouraged to read it, especially those parts that are relevant for their roles in ACTRIS.
- It describes everything about ACTRIS data, and, therefore, it is a useful document for all groups of stakeholders.
- The DMP will be a living document.
- Graphic User Interface (GUI) has not evolved but it will be improved altogether with ACTRIS website.
- The integration of the access will be greatly improved in the future.

2.3.8 Quantifying the socioeconomic effects to society

The presentation was given by Sevastianos Mirasgedis.

- ACTRIS did not exist in 2010, so we couldn't have contributed to the aviation crisis caused by the Eyjafjallajökull eruption. The measurement that were available were not used by the authorities because there were no thresholds officially set.
- A question is raised whether ACTRIS is a monitoring or a research network because a volcanic eruption is a monitoring case. ACTRIS is an RI, but its duty is to make the data available and foster its use.
- WP8 has three deliverables in PPP, but the analysis will continue in IMP. Some approaches will be updated in IMP (impact on economy, research community) and the top-down approach will be tested.

2.3.9 ACTRIS future positioning in the Landscape

The presentation was given by Paolo Laj.

Discussion on the conclusion of D7.1

- Pilot projects and MoU are discussed.
- More discussion about relevant existing examples.

Discussion on the conclusion of D7.2

- The catalogue of services is hard to define, and it reflects the complexity of ACTRIS.
- D7.2 offers discussion points, but it does not yet result in solutions.
- We are missing regions outside of Europe.
- Question on internal organisation of the communication is raised.

2.3.10 Conclusions

The presentation was given by Sanna Sorvari Sundet.

- The discussions for the completion of the final PPP deliverables were fruitful.
- Main strategies have been presented and discussed.
- There will be a glossy report (editorial book) explaining everything about ACTRIS; it will be available after the IAC has finalized and approved the deliverable.
- Second periodic report: Jan/Feb 2020.
- The work required from the PPP is done!
- #towardsoperationalACTRIS



ACTRIS PPP meeting, Rome, Italy, 6-10.5.2019

Meeting notes

Notes kept by ACTRIS PPP office, condensed by Niku Kivekäs

Distributed 28.6.2019

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| 5.1 | 9:00-9:20 Greetings from the president of CNR..... | 6 |
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| 5.4 | 11:00-12:30 ACTRIS ERIC governance, perimeter and contracts (Francesco Paoletti)..... | 7 |
| 5.5 | 13:30 Communicating ACTRIS (Giulia Saponaro) | 7 |
| 5.6 | 14:00 Staff policy and human resources strategy (Eija Juurola, Pirjo Kontkanen) | 8 |
| 5.7 | 15:00-15:30 Wrap-up (Sanna Sorvari Sundet)..... | 8 |

1 Monday 6.5.

The meeting on Monday and Tuesday is mainly for CF internal work, and therefore not included in the general published notes. From Monday and Tuesday only the notes of the common sessions are included here.

2 Tuesday 7.5.

2.1 Tuesday 13:30-16:45 CF implementation plans

Main points:

- The ERIC step 2 does not have a deadline. The schedule will depend of the development of the CFs and the consideration of the IAC. (However, IAC aims to have all the Step 2 materials available by April 2020.)
- There is a need for the CF leaders to plan the activities and allocate time for the development of the RI in the coming months.
- Different CF have different levels of readiness and they can have different times of being operational.
- The terminology needs to be standardized between the CFs.

2.2 Tuesday 17:30-18:00 CF Validation (Niku Kivekäs)

The validation process was only discussed shortly due to lack of time, and the rest of discussion was moved to Wednesday. The validation notes are in the Wednesday session.

3 Wednesday 8.5.

The actual ACTRIS PPP meeting was from Wednesday to Friday

3.1 9:00-9:30 Welcome and introduction (Sanna Sorvari Sundet)

- ACTRIS PPP final meeting in Helsinki in November 4-9. This is an important meeting to discuss the finalization of the deliverables.
- Clarifications for CF issues:
 - In 8th IAC meeting (June 2019) only the outline of the CF-specific implementation plans and the work done in Spring 2019 will be presented. The first versions of the CF-specific implementation plans will be presented in the 9th IAC meeting (November 2019).
 - CF specific implementation plans (15 pages) are needed for IAC to proceed with establishing the ERIC. The plans will be updated regularly.
 - CF implementation Tool is an optional tool for CFs to plan their work and composition.
 - For the CF Validation the tool is not required. A Template for filling the CF information will be provided by the Validation Task Group.

- There are minor modifications in the meeting schedule. These notes follow the real times of the sessions.

3.2 9:30-10:00 NF labelling (Ulla Wandinger)

- D5.3 already approved. Remaining time in 2019 is for D5.4 on details of the labelling process. The writing team of D5.4 was discussed and WP5 will contact and set up the writing team.
- For preparing the NF labelling templates HO will lead the process.
- Science case of the NF will be included in the NF labelling template.
- The NFs shall be evaluated every 5 years, but HO will monitor the performance continuously. ACTRIS General Assembly (GA) can remove the label also between the evaluations if needed. Processes for disputes will be included in the NF contracts.

3.3 10:00-10:30 ACTRIS Data Management Plan (DMP) (Cathrine Lund Myhre)

- DMP deadline for submission to EC is 1.10.2019.
- DMP is a living document that can be updated in course of ACTRIS.
- It is important for testing FAIRness and digital objects, and also important also for the stakeholders.
- Good progress has been made and now it is time to go more in the details.
- SIAB pointed out that near real time data delivery is one of the highest priorities, and needs to be very visible in the DMP.

3.4 11:00-14:20 Data flows (Cathrine Lund Myhre, Break-out session)

Targets for the splinter work:

- Discussion on the Interlinkages
- Hands-on work

3.4.1 Remote Sensing

Lucia Mona - Data workflow and interlinkages General aspects

Lucia Mona - ARES data workflow

Ewan O'Connor - CLU data workflow

There was no presentation for the CRES data workflow.

Then the audience divided into groups related to the 3 topical centers: ARES CLU and CRES for discussing into details each step of the data workflow.

During the first part of the meeting with the 3 remote sensing components together, the group discussed the possibility to use the www.draw.io tool of workflow for describing all the activities foreseen within ACTRIS. It was agreed to use the same tool with the same color/shape code for all the ACTRIS components. Different workflow for each one of the components can be set up and then having a simplified version linking the different components and activities. In this way the consistency can be checked, and conflicts avoided within the RI. For the complete ACTRIS workflow a simplified scheme with main blocks should be used referring to the detailed specific workflows. For replying to the different needs, some colors have been added to the ones already used in the workflow: specifically, at the time being the yellow has been selected as color for the Head Office, while Purple identifies external source.

Finally, it was recalled from the audience that a detailed discussion about the workflow is crucial, because going through it is a unique opportunity to define well what needs to be done in the next years. In this context, the meeting for Topical Centres was very useful for specific discussion. The discussion will continue via email/remote meetings.

3.4.2 In situ

- Explanation of the Templates (Specifications)
- Starting point = what you already have.
- Meaning of the terms is not clear for all: e.g. Provenance was explained.
- Important to fill in the table e.g. for the task sharing between TC and NFs
- Process to communicate with the data providers? To gather the comments from the community (e-mailing is not maybe the best option)

SIAB: purpose of ACTRIS is to standardize as much as possible: Is there a clear subset of variables that can be standardized to be proposed to the NFs (without any discussion)? > This will be discussed in the break-out groups. Need to see the reason of doing this.

Break-out group targets presented in detail (aerosol, trace gases, clouds)

3.5 14:20-14:45 Update and discussion on CF validation (Niku Kivekäs)

- The activities of the operational phase are to be validated (outcome if implementation).
- Level of detail: The level of detail should be about the same than in the CF implementation plans. Grouping of the activities in logical categories is acceptable as long as they remain validatable for costs per activity. It is up to CFs how to do the grouping.
- Schedule: Time to fill the templates 7-9/2019, feedback in mid-November, face-to-face consultation in December / January. (Note: The face-to-face consultation was later removed from the process and replaced by written correspondence.)
- Potential evaluators: ACTRIS users, NF + other CF repr., other RI repr., Financial experts (not financial auditors)
- More detailed guidelines were asked and they will be provided in the information collection template.
- Even though ranking of services by importance is not planned to be asked, it is valuable work for the CFs in case the funding decreases. (Note: This was later added in the template)

3.6 14:50 -18:00 Business plan and risk management (Sanna Sorvari Sundet, Edith Rodriguez)

- Business Plan will be the main outcome of ACTRIS PPP. It is important for gathering funding and for ESFRI. It has already been asked by IAC.
- Business Plan as a deliverable to EC is due by end of 2019.
- Stakeholder handbook has been well received from the ACTRIS community and stakeholders
- Hands on exercise about Business Model Canvas was done in small groups during this session. The immediate output of the exercise is included in the meeting presentations.

4 Thursday 9.5.

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4.1 9:00-10:00 Updates in the User Strategy and Access Management planning (Sabine Philippin, Rosa Petracca)

User Strategy (Rosa)

Wide user portfolio is a strength of ACTRIS.

- Data users
- Facility users (will be facilitated through SAMU)
- Institutional users (Copernicus etc.)
- Targeted user categories
- Tailored services need to be developed, important for the exploratory platforms
- Training of new users is very important. Different training for different user groups.

Further developments (Rosa)

- Science and user forum is an important tool to attract new users and to gather feedback.
- The selection is needed but the process should be as fast as possible, making the access attractive also to private sector users.
- There is no strict percentage of time and resources reserved for external users, but the fraction depends on CF (or NF).
- Single entry point to ACTRIS is important for users.

KPIs (Sabine)

- KPIs are for monitoring / evaluating the services.
 - SMART objectives
 - Impact on innovation
 - Impact on research

4.2 10:50-11:30 Access pricing schemes and principles (Sabine Phillippin)

- The real value of service should to be communicated to the users, regardless of how much they pay. This includes also investment costs.
- The fixed costs and variable costs need to be separated. Fixed costs should be paid by the countries.
- The way access costs are covered is not yet discussed enough.

4.3 11:30-12:00 Invited presentation by European Metrology Network (Celine Pascale, EUMETNET)

- It is important to look closely at the different calibration activities between EMN and ACTRIS to avoid duplication of efforts. Special attention is needed in the remote sensing plans.
- ACTRIS will bring the close connection to the community as a plus to EMN.

4.4 12:00-12:30 Future perspectives (Markku Kulmala)

- When thinking about future, ACTRIS should think big and aim high.

4.5 13:30-14:30 ACTRIS strategy for NFs and liaisons (Paolo Laj)

- There needs to be room for evolution also when ACTRIS is “ready”.

- ACTRIS needs a strategy on collaboration / expanding to new areas (both geographically and topically).
- The liaisons and strategy work needs to be communicated better within the community. The same applies also for the work of the liaisons unit in ERIC HO.
- Ministries should be more involved in promoting ACTRIS, considering that science is also a good tool for diplomacy.

4.6 14:30-18:00 SIAB Meeting (SIAB)

Parallel with afternoon plenary sessions

The SIAB meeting minutes are not public, but the presented outcome is included in the meeting presentations.

4.7 14:30-15:10 ACTRIS PPP management and General Assembly

The ACTRIS PPP General Assembly notes are provided separately in the ACTRIS web pages.

4.8 16:00-16:30 Socio-economic impact of ACTRIS (Sevastianos Moirasgentis)

- Analysis of benefits is important and really needed by the funders. The work done in WP8 is very important and needs to be acknowledged.
- Answers from international organizations should be included in the future surveys.
- The deliverable 8.3 is still expected in time, with some reservations. Potential case studies:
 - Eyjafjallajökull eruption and role of ACTRIS
 - Effect of ACTRIS on number and quality of PhD
 - Other ideas should be sent to Sevastianos

4.9 16:30-18:00 ACTRIS funding model (Carmela)

- IAC is the one to choose the funding model. The scientific community proposes options within the boundary conditions written in the statutes.
- Update is needed for NFs inventory needs to be updated in each country to get the latest figures.
- Country's fees should be independent from each other so that a change in one country does not affect the fees of other countries.
- It has to be considered that a country can give a certain amount of money to ACTRIS (regardless of funding model formula), and ACTRIS needs to adjust to it.
- Scaling the costs to the number of NFs is more feasible when cost per service is known.
- Many IAC delegates consider ACTRIS currently too expensive, and also prefer to have more fixed fees for 5-year period.

5 Friday 10.5.

5.1 9:00-9:20 Greetings from the president of CNR.

5.2 9:20-9:50 Feedback from SIAB (Beatrix Vierkorn-Rudolf)

- ACTRIS-ERIC specific procurement rules should be prepared by using European Spallation Source as an example.
- The internal regulation of GA should ensure that the votes of one country cannot be split.
- The representation at GA should be at ministry level.
- Comments on users and funding:
 - ACTRIS has very many types of users and user demands. This has an effect to user strategy, access and funding.
 - The funding model should aim for countries to pay the bulk costs and a fraction of the variable user access costs, reducing the cost for users. There are some exceptions when the experiments need specific attention, like the chambers.
 - Outreach towards other developed countries is important because it may be a possibility for new resources.
 - Showing the value of participation can make ACTRIS-ERIC more attractive.

5.3 9:50-10:30 ACTRIS ERIC governance, perimeter and contracts (Francesco Paoletti)

- ACTRIS is very complex organization, but all needed governance aspects are in place.
- The role of Chair of GA between governments and scientists clarified. The co-operation of DG and Chair of GA is crucial.

5.4 11:00-12:30 ACTRIS ERIC governance, perimeter and contracts (Francesco Paoletti)

- Financial Committee is an advisory board (and likely a part of) the General Assembly. Financial committee does not make decisions. A clear role and mission of the financial board is important to have real support from it.
- Director General or Board to directors:
 - Management board or Board of Directors is stronger than a DG alone. DG can distribute work to other board members, who should be involved in the decision making. Even if there is a Management Board, the DG represents the RI in the GA.
 - If ERIC includes only HO activities, there is an issue how CF leaders can work with DG on daily basis. There are also some legal issues related to this.
 - The HO should have a separate director to manage the head office activities.
 - It is important to define clearly the roles of the different components of the RI and bodies to be sure that the DG cannot make strong decisions affecting the RI without hearing the different components of ACTRIS. Internal communication is very important to avoid this situation.
 - A feedback mechanism is needed in the governance, especially from the national level
- Training will be organized to CF leaders and unit heads in September for 20-30 persons. The resources for participation (in terms of both time and funding) create some limitations.

5.5 13:30 Communicating ACTRIS (Giulia Saponaro)

- Communication highlights the project results, strengthens the community and improves visibility.

- Timeline for the development of the communication activities exists, but the execution depends partially on the approval of ACTRIS IMP.
- ACTRIS Teaser video has been released, and more videos will be provided later.
- ACTRIS motto to be used in communication: “Exploring the atmosphere”
- ACTRIS in Social media:
 - YouTube channel: ACTRIS
 - Twitter: ACTRISRI
 - LinkedIn: ACTRIS-RI
- Re-structuring of administration of ACTRIS email list will be done when reporting of ACTRIS-2 has ended. GDPR shall be considered when moving information from one list to another. The lists for in-situ and remote-sensing communities will continue.

5.6 14:00 Staff policy and human resources strategy (Eija Juurola, Pirjo Kontkanen)

- The gender aspect (and also age and background aspects) need to be taken into account on several levels: job description, selection process, etc., to ensure both equality and fair and open competition when hiring persons for new positions.
- CFs leaders should generally be scientists because ACTRIS is a research infrastructure. On the other hand CF leaders need to understand management and communication to be able to advise the DG. There is a need for management and communication training for CF leaders and Heads of Units.

5.7 15:00-15:30 Wrap-up (Sanna Sorvari Sundet)

- There is a lot of work to be done, as Input is needed to all the final ACTRIS PPP deliverables.
- Lot of input and information has been given and received in the Rome meeting and it has been valuable.
- The final meeting of ACTRIS PPP will be 4-8 November 2019 in Helsinki.