

COST ACTION ES1404

MIDTERM-EVALUATION REMARKS

Objective 1: Establish a European-wide science network on snow measurements and their optimum use and applications, by direct inclusion and interactions across disciplines and expertise.

Suggestions:

- Provide information on the nomination of ESR and Gender monitors and their reports
- Introduce personal pages or add information about participants' expertise to demonstrate the network diversity and inter-disciplinarity
- Provide links to related actions, projects and networks
- Add “Deliverables” or “Reports” in the main menu of the webpage in order to make clear what are the outcomes of the action workshops and overall results. All reports, summaries, white papers and scientific publications resulting from the action should be listed here in relation to various WGs and Action objectives.

Objective 2 :Assess and harmonise practices, standards and retrieval algorithms applied to ground, air-borne and space-borne snow measurements and foster for their acceptance by key snow network operators at the international level.

Suggestions:

- Provide links between Action activities with other projects and international groups should be clearly stated and the added value of the Action clarified
- It would be very useful for a reader if the updated report from the 1st field campaign provides further discussion with respect to the state-of-the-art snow measurements and its errors

Objective 3 :Develop a rationale and long-term strategy for snow measurements, their dissemination and archiving

Suggestions:

Objective 4 : Advance the application of snow data assimilation in European NWP and hydrological models and show its benefit for weather and hydrological forecasting as well as other applications.

Suggestions:

- Provide a white paper or report with the results from the questionnaire
- Provide a summary document (including hyperlinks) discussing the role of the Action for the advancement of snow data assimilation in European NWP and hydrological models in relation to the current state of NWP and hydrological modelling and the existing EUMETNET activities.

Objective 5 :Establish a validation strategy for NWP, hydrological and climate models against snow observations and advance its implementation within the European modelling communities

Suggestions:

- Describe the role of the Action in listed achievements

Objective 6 :Training of a new generation of scientists on snow science and measuring techniques with a broader and more holistic perspective linked with the various applications.

Suggestions:

- Provide numbers regarding the participation of ESRs in the Action, its workshops and STSMs
- Aim at more balanced gender participation and increased participation of the inclusiveness countries, especially the ESR from these countries in the WG training and STSMs.

CONCLUSION

The Action has held a number of WG meetings, often successfully combined with the MC meetings. **Although reports related to the WG meetings do not appear publicly available, some meetings were held as a part of the workshops and workshops' agendas and presentations are published on the webpage.** A number of workshops is greater than envisaged and several workshops are co-organized as a part of longer-term running meetings. This is another evidence of the strong links between the Action participants and international organisations measuring, disseminating and using the snow data. **So far there are few deliverables and the results of the two questionnaire are yet to be fully analysed and published.** The objectives can be considered partially achieved and related deliverables and summary reports are to be provided in the second part of the Action.

Deliverables

- Track the progress of various deliverables by making a list of action bullets, persons in charge and deadlines to realise the tasks
- Aim to reduce the spread by making the participation of 192 Action members, most of which are engaged in several WGs, more efficient.
- Clarify how a large number of co-organized workshops contributed towards the Action objectives and the production of deliverables.
- Present a plan how the deliverables stated in the MoU are going to be delivered in the time left. Identify critical points for the realisation and relation to the deliverables of other projects and organisations in which members have been engaged
- Discuss whether a core group for various deliverables (or groups of deliverables) would be helpful. The core group should discuss regularly (for example by skype).

Review of Impact(s)

Impact 1: Action to improve snow depth reports availability on the Global Telecommunication System (GTS) for Numerical Weather Prediction applications, between Bulgaria (NIMH) and ECMWF. Demonstrated and report available to support operational implementation (de Rosnay P., Mallas, I. Gospodinov: Additional snow depth reports from Bulgaria: data assimilation and recommendations, ECMWF Research Memorandum RD16-178, 2016)

Impact 2: Action to improve the treatment of snow in forests for NWP application

Impact 3: Action to improve the snow reporting practice in Switzerland

Impact 4: Coordination with the WMO Snow Watch team to improve snow reporting on the GTS and reporting practices. Concrete action to contribute to the CBS recommendations. Article by de Rosnay et al. ECMWF newsletter n143, Spring 2015.

The Action listed four impacts, all related to the improvement of NWP in relation to the availability of new snow data in data assimilation for NWP, the treatment of snow in forecasts and snow reporting practices and data exchange. Two items are related to the work carried out at ECMWF (items 1 and 4) and the Action contribution is unclear. The relation to the Action's activities should be clarified also for other two items. Since most of deliverables is missing, it can be expected that impacts will be listed and discussed more clearly in the final report.

Dissemination and exploitation

Seven items listed in dissemination and exploitation of Action results consist of seminars and workshop summaries and presentations. These are not easy to locate on the Action webpage and it is suggested that all relevant reports are published under a separate menu. Overall these is valuable information for the experts working on the snow data.

Suggestion: Presuming that COST inclusiveness policy is motivated by research gaps between the COST member states, it would be valuable to briefly discuss whether there is a gap in snow research between developed and inclusiveness countries and the role of the Action to bridge the gap. Is there any difference between twelve inclusiveness countries and other countries participating in the Action at the beginning of the Action and how the Action has been helping to bridge the gap?

Review of Action Success(es)

The Action listed 2 items of success. The first one is about bringing Bulgarian snow data available on GTS. This was also mentioned earlier in relation to the use of this data at ECMWF. It would be helpful if the role of the Action in the collaboration between Bulgarian data provider and ECMWF is clarified. The other item, “high visibility of Europe on scientific research of snow”, suggests significant impact of the Action in spite of its current lack of deliverables. It would be helpful if both items are discussed in more detail.