

COST ES1404

A European network for a
harmonised monitoring of snow
for the benefit of climate
change scenarios, hydrology
and numerical weather
prediction

2014-2018

<http://harmosnow.eu/>

To enhance the capability of the *research community* and *operational services* to provide and exploit *quality-assured* and comparable regional and *global observation-based data* on the variability of the state and extent of snow.

Action Objectives & Benefits

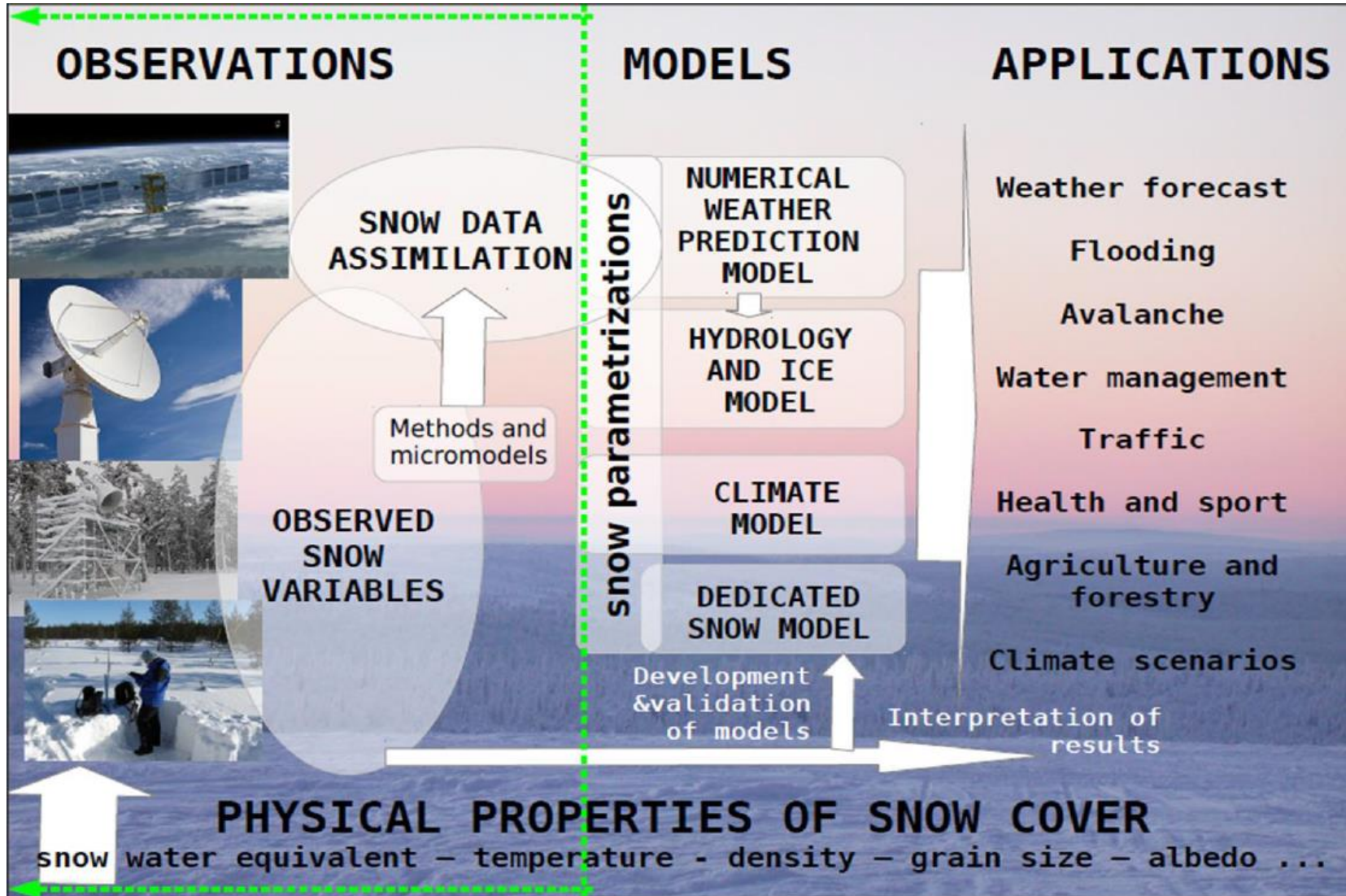
- 1) Establish a European-wide science network on snow measurements
- 2) Assess and harmonise practices, standards and retrieval algorithms applied to ground, air- and space-borne snow measurements
- 3) Develop a rationale and long term strategy for snow measurements, their dissemination and archiving.
- 4) Advance snow data assimilation in European NWP and hydrological models
- 5) Establish a validation strategy for climate, NWP and hydrological models against snow observations
- 6) Training of a new generation of scientists on snow science and measuring techniques

WG1: Physical characterization of snow properties

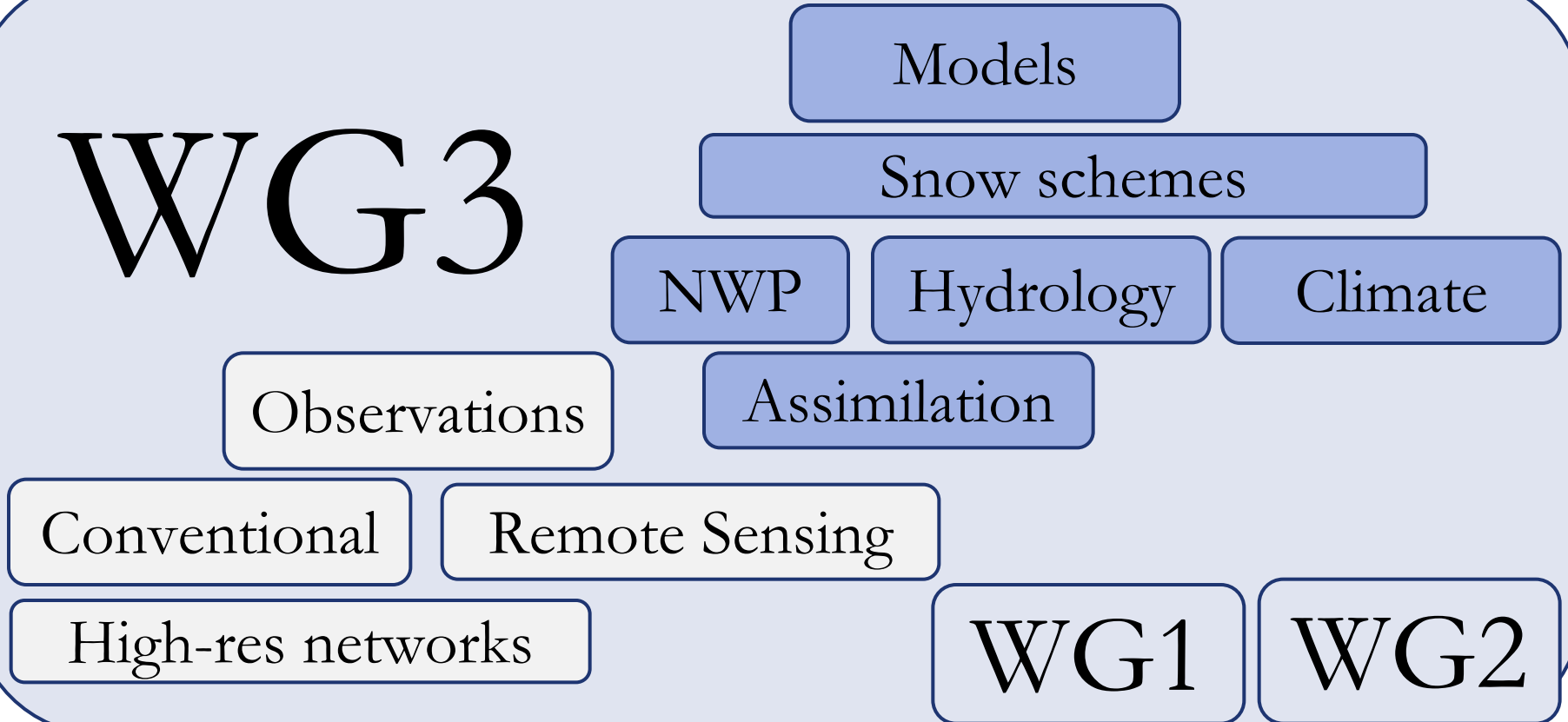
WG2: Instrument and method evaluation

WG3: Snow data assimilation and validation methods for NWP and hydrological models

Structure – Working groups



WG3



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Task 3.1: Overview of the various snow observations used in NWP, hydrology and climate studies for different purposes including validation and data assimilation

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WG3 Questionnaires

Questionnaire 1

The aim of this questionnaire is to identify and enhance the usage of snow data in numerical models. These models are used for assimilation, forcing, monitoring, validation, or verification with application in numerical weather prediction, hydrological services, in special models (e.g. road model) and reanalysis runs.

If all information is available, it takes about 15 min to go through all questions. After submission of the form you have also the opportunity to modify or add some answers.

[>>Link to the questionnaire](#)

Notice board

2nd Field Campaign will be held in Reykjavik, Iceland between 28 February - 2 March 2017.

The COST ES1404 workshop on snow data assimilation and working group meeting of WG3 during 8-9 March 2017, will be hosted by Deutscher Wetterdienst (DWD) in Offenbach, Germany.

Presentations from "Workshop: Snow Monitoring and Modeling Initiatives in Spain Based On Ground and Satellite Data" are available.

The 4th Winter Field Course for Snow Measurement by The NASA Snow Working Group-Remote Sensing will be held in Kananaskis, Canadian Rockies on January 5-9, 2017.



Task 3.2: Finding a new method for combining satellite observations with conventional in-situ snow measurements and modelling results.

Task 3.3: Looking for strategies towards a more extended usage of conventional snow observations to include observations from high-resolution national networks into NWP, hydrological and climate models.

- 4th WG3 meeting during the workshop on Remote Sensing Products of Cryosphere using Sentinels, in Vienna, April 19, 2016
- 5th WG3 meeting during the COST ES1404 MC meeting in Granada, November, 3, 2016
- 6th WG3 meeting during the COST ES1404 workshop on snow data assimilation, Offenbach, March, 8/9, 2016

Task 3.3: Looking for strategies towards a more extended usage of conventional snow observations to include observations from high-resolution national networks into NWP, hydrological and climate models.

- Connection to DWD, WMO, GCW Snow watch, EUMETNET, SRNWP

Task 3.4: Acquiring more information about observational errors relevant for DA by establishing links between the modelling and measurement communities via WG1 and WG2.

COST ES1404 freely available deliverables:

- A web-based overview/data portal of snow observations, measurements and instruments with links to existing real-time snow databases
- A synthesis and strategic recommendations report.
- A review and practical guide on snow measurements considering different user needs
- A catalogue of snow measurement instrumentation and best practices
- A review on snow data assimilation in European NWP and hydrological models
- Multidisciplinary articles in scientific journals (including above review results)