

Space-Time Variation of Hydro- Meteorological Processes

Proposed new COST Action

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What's in a name?

Spatio-Temporal Analysis and Modelling for Meteorological Processes
STAMMP

Hydrometeorological and Atmospheric Research: Variability in Space
and Time
HARViST

Hydrometeorological and Atmospheric Modelling: Space and Time
variability for Environment and Radio
HAMSTER

Variation of Atmospheric and Meteorological Processes: Implications for
Radio and Environment
VAMPIRE

Resources, Analysis and Implications for N-dimensional Meteorological
and Atmospheric Processes
RAINMAP

Objectives

The main objective of the proposed Action is the production of a network where all researchers interested in the spatial and temporal variability of meteorological processes can find support and information, thereby avoiding duplication of effort and leading to better generalised and unified models for different case studies and applications.

The action will also support and encourage young scientists and researchers, providing an environment to learn from leaders in the field and develop their own skills and talents through seminars, symposiums and short term scientific missions.

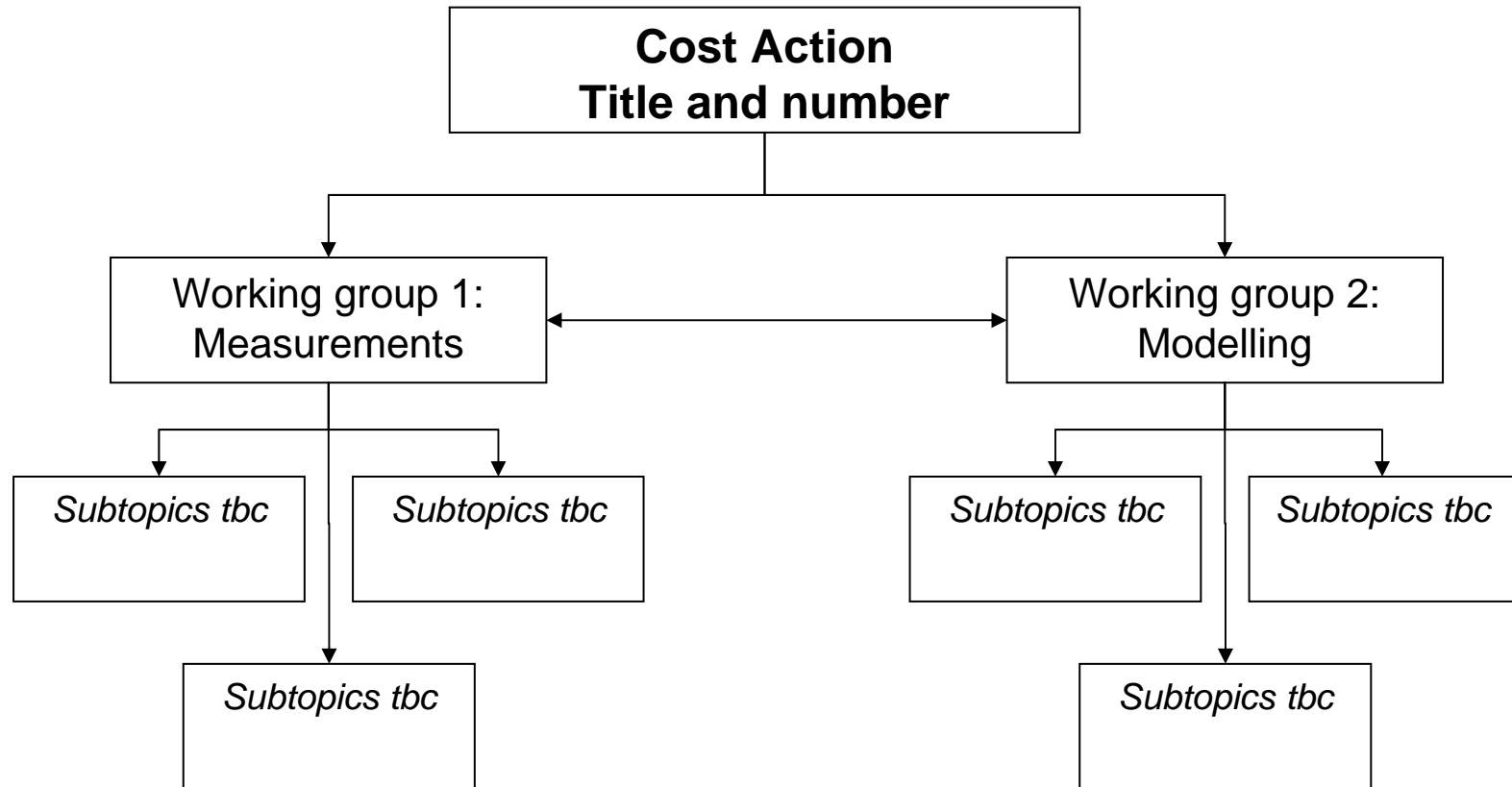
Why propose this action?

- Meteorologists, hydrologists, radio scientists and climatologists have all done a lot of work in the past which looks at how meteorological parameters (e.g. rain, clouds etc) vary in space and time.
- All this work has focussed on different applications and so has concentrated on modelling at different scales, with different strengths and weaknesses.
- There's been a lot of duplication of effort.
- It would be good to get together, compare notes and work towards some form of unified model which would be appropriate for many applications.
- Or at the very least, share hints and tips on what works and what doesn't!

Proposed Deliverables

- Production of a master list of the meteorological datasets available in Europe, with contact and dataset details.
- Production of a handbook of instruments and manufacturers, detailing their strengths, weaknesses and suitability for different measurement scenarios.
- Definition of model requirements (a “wishlist”) for applications such as radio system design, input into climate models or flood defence planning.
- Production of a modelling handbook to aid future researchers to choose the most appropriate method for their modelling needs. This handbook will also be of significant value to international organisations such as the ITU
- More?

Structure of the Action



Potential Subtopics

WG1 subtopics:

- Meteorological instruments (radar, lidar, rain gauges etc)
- Opportunistic meteorological measurements
- Development of new instruments
- Coordination and data integration from multiple instruments

WG2 subtopics:

- Modeling techniques and tools (e.g. synthetic storms, fractals etc)
- Applications for the models
- Data requirements for modeling
- Movement to unified models
- Validation and testing of models

Interested parties

Country	Organisations
Czech Republic	Institute of Atmospheric Physics, TESTCOM
France	ONERA, CERREVE and Météo-France
Germany	Chemnitz University of Technology
Greece	National Technical University of Athens
Italy	Univ. "La Sapienza" of Rome, Politecnico di Milano
Ireland	University College Dublin
The Netherlands	Wageningen University, KNMI
Norway	Telenor
Spain	University of Vigo, UPC
Switzerland	EPFL
United Kingdom	STFC, Imperial College London, University of Exeter, University of Bath, University of Hull, UCL, Met Office, University of Oxford, QinetiQ

What next?

Preliminary proposal has to be submitted to the COST office by 30th September.

Still need some input from meteorologists and hydrologists!

Preliminary proposal is peer-reviewed and is marked according to criteria available on the COST website.

If the first proposal gets through we'll be invited to submit a full proposal.