

# **Preliminary Proposal**

## **for a SRNWP Research Training Network within the 6th FP of the EC**

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*Version of Monday 18, October 2004*

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### **Why ?**

1.

There is a permanent need for specific NWP training, well illustrated by the success of the COSMO or ALATNET training courses. The required training covers a very large range of domains, and is usually not (fully) achieved in Universities or schools associated to NMSs, nor within the (often small) NMSs. UKMO seems to be the exception. Why not joining efforts ?

2.

Past exchanges of PhD students between consortia were quite fruitful, and allowed to start durable cooperations. They allow an enhanced confrontation of points of view (as would mixed training courses), bring new ideas into the community, and help to the harmonization of tools and formats which was considered as essential but didn't progress along the last years (data bases, file formats, intercomparison, interfaces and/or data structures, ...).

3.

All European consortia have similar research objectives for the coming years, mainly going towards very high resolution. The required skill and manpower are available, but spread among numerous teams.

4.

There are well established networks within consortia, and to a less extent at the SRNWP scales. However, individual teams are willing to keep independent as concerns operational choices. A highly centralized structure like ECMWF is not convenient for fine-scale limited-area modelling and short-range forecast.

5.

All this fits quite well the (revised) guidelines of Marie Curie actions within the 6th framework program.

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### **When ?**

The next deadline is December 2004, 2nd (call issued on September 2004, 11th). The delay to prepare the first description of the proposal is rather short, and the conditions for eligibility more selective than for the previous calls : interdisciplinary and intersectorial proposals are required.

Another call, more widely open, should be published on May 2005, 18th, with a deadline on September 2005, 8th.

There was a vote along the 2004 annual SRNWP meeting, on October 6th. It was decided (4 vs 1, and many abstentions) to try answering the first call anyway, and retry with the second one in case of failure.

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## How to contribute ?

1.

If you are willing to participate and not yet registered as volunteer, or if you are registered but no longer willing,

**please send a mail before Tuesday, October 2004, 26th,**

to [dominique.giard@meteo.fr](mailto:dominique.giard@meteo.fr) and [jean.quiby@meteoswiss.ch](mailto:jean.quiby@meteoswiss.ch)

2.

Do carefully read the information booklets on Marie Curie Research Training Networks :

- available at the EC web sites : <http://www.cordis.lu/fp6/mobility.html> and

[http://europa.eu.int/comm/research/fp6/mariecurie-actions/indexhtm\\_en.html](http://europa.eu.int/comm/research/fp6/mariecurie-actions/indexhtm_en.html)

- sent with the present mail (for the most important documents)

3.

Please help refining the present drafts, as concerns :

- training program

- research program

- justification of interdisciplinary and intersectorial aspects

- individual contribution to training (hosting PhD students, organizing or helping for open training courses)

4.

Proposals for acronyms are welcome !

The following were already submitted :

HNWTNET (High resolution Numerical Weather modelling Training NETwork)

EUROPNET or ERTNET or ERONET (European Research and Training Network.)

IDOMENEO (Initiative for a Decentralised Organised/Operated Meteorological Network Over Europe)

STORMNET (Scientific Training for Operations and Research in a Meteorological NETwork)

MARLENE (Multidisciplinary Atmospheric Research and Learning European NETwork)

5.

Patricia Pottier will create a web page to allow following the completion of the file, once a name found.

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## Description of the initial proposal : network

Decentralization and democracy are mandatory. Responsibilities and work are shared between all partners, the main choices (e.g. eligibility of PhD students) are submitted to a vote.

This proposal is assumed to rely on the SRNWP framework, and aims at a closer cooperation

between consortia.

10-20 partners is the target. All members of the SRNWP network are eligible, as well as the Baltic states. The 15 already volunteering NWP teams are the following:

Austria, Belgium, Croatia, Czech Republic, Finland, France, Germany, Hungary, Italy, Netherlands, Norway, Romania, Slovakia, Switzerland, United Kingdom

Portugal expressed interest, but can only send students.

All consortia are represented, 4 teams "joined" since the beginning of October, which leads to a better balance between consortia.

Jean Quiby (SRNWP coordinator) proposed Météo-France as main coordinator, none disagreed. The French team already managed a similar but smaller RTN, ALATNET, hence has got experience on the associated tasks.

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## **Description of the initial proposal : training**

### Training BY research : PhD grants

basis of the project

a lot of care for students

dimensioning factor for fundings (65% for grants, networking, etc ...)

on average : 2 students per partners, 2 years grants

students from third countries allowed, up to 30%

supervision of PhD students not mandatory for each partner

strict conditions about diploma and research experience

40% of women as EC target (we are not so far in NWP !)

### Training FOR research : open training courses

a general need for NWP teams

2 seminars a year ? or only one long "summer" school ?

multidisciplinary and multi-model (teachers from all consortia)

proposed topics :

NWP classics : numerical techniques, dynamics and coupling, physics, data assimilation (modelling and observations)

predictability (emerging topic)

data management, code organization and optimization, ...

down- or upstream applications (hydrology, pollution, ...)

### Local training

management of local applications

foreign languages

...

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## **Description of the initial proposal : research program**

Focussing on NWP at very fine scales, including

- dynamics, physics, coupling ... at 1-3 km resolution
  - data assimilation :
    - 3d-var at 1-3 km resolution,
    - 4d-var at lower resolutions
    - more observations
  - predictability at scales around 10 km
- and with background interactions (coupling, feedback, ...) with other research domains (hydrology, pollution, ...)
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## **Constraints for the next call : inter-disciplinary & inter-sectorial & time**

### Quotation

This call is specifically dedicated to the provision of training/transfer of knowledge in interdisciplinary and intersectorial research projects and not simply projects bringing together various sub-disciplines.

For this call, interdisciplinary is understood to be:

A project which approaches an issue from a range of disciplinary perspectives with an integrated contribution of the various disciplines or fields of study traditionally distinct in order to provide a holistic or systemic outcome. Alternatively such a project would be expected to incorporate knowledge around complex, heterogeneous domains, rather than in specific disciplines and subjects as usually organised in academic settings.

An effective interdisciplinary approach is expected to require new modes of thinking by researchers and cuts across the more traditional discipline-based academic structures.

The project should not be a bringing together of several sub-disciplines, instead it should form a cohesive partnership having an active and equitable involvement of researchers from the different disciplines. It should combine expertise from several knowledge domains and overcome communication problems among researchers from different disciplines in a synergistic manner. Typical, but not exclusive, examples of interdisciplinary developments are expected to involve areas such as the biotechnologies, nanotechnologies, biomedical, bioinformatics and communication sciences, complex environmental systems, humanities and social sciences.

For this call, intersectorial is understood to be:

Open to academic and other stakeholders: private or public research institutions, governmental and non governmental organizations and any other commercial and non-commercial sectors in particular industrial partners, including SMEs, for which it is expected that there will be full and active commitment to the appointment or at least host secondments of researchers and to fully participate in training/ToK activities.

### Answers ?

Inter-disciplinary :

OK for the training program

maybe OK for the research program, underlining that NWP is by essence inter-disciplinary and looking at the FP6 list of research domains

Inter-sectorial :

NWP teams only will enter the network, but links to universities and hydrological services ?

Balance between spreading and efficiency !

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## Main informations received from the volunteering NWP teams

Partner	PhD students hosted / sent	Organizing training courses	Preferred research topics (main)	Other informations
Austria	2 / ?	yes		students from China
Belgium	2 / ?	sending teachers	physics-dynamics interface	
Croatia	0 / 1+	yes		
Czech republic	2 / 1+	yes		minimum overlap of PhDs
Finland				
France	2 / ?	yes		
Germany				internal & LM training courses
Hungary	2 / 1 or 2	yes	data assimilation predictability	3 PhDs max. hosted
Italy				LM training courses
Netherlands	1 or 2 / ?	yes	initialization & application at 1km	+ internal PhD ?
Norway				
Romania	1 / ?	yes		cooperation with University
Slovakia	2 / 1+	yes	NH dynamics EPS->hydrology	cooperation with University
Switzerland	2 / ?	sending teachers		cooperation with University
UK				internal training

## **Guidelines for RTN in FP6 : a summary from EC documents**

These [Networks] provide the means for research teams of recognised international stature to link up, in the context of a well-defined collaborative research project, in order to formulate and implement a structured training programme for researchers in a particular field of research. Networks will provide a cohesive, but flexible framework for the training and professional development of researchers, especially in the early stages of their research career. Networks also aim to achieve a critical mass of qualified researchers, especially in areas that are highly-specialised and/or fragmented; and to contribute to overcoming institutional and disciplinary boundaries, notably through the promotion of multidisciplinary research. They will also provide a straightforward and effective means to involve the less-favoured regions of the EU and Associated Candidate Countries in internationally recognised European research co-operation.

Projects supported in this action will have to exploit the network structure to the best extent possible, typically combining local specialist training with network-wide, interdisciplinary/intersectorial training and research activities. The joint collaborative research training projects will aim at increasing the number of researchers in areas where there is an identified training need, addressing one or more of the following:

- Integrating different disciplines - bringing together and integrating different disciplines, especially towards the derivation of novel concepts, approaches and frameworks;
- Industry-academia cooperation - establishing or furthering co-operation in research and research training between academia and industry and/or other relevant economic actors;
- Overcoming fragmentation - overcoming fragmentation in areas where there is a lack of pan-European collaboration and integration or where the scientific community is too small and or dispersed to achieve a critical mass in research and research training, potentially hindering a significant advancement in knowledge.

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## **Deadlines for the next calls : a summary from EC documents**

*Call Information for Marie Curie Research Training Networks for 2004*

1. Specific Programme: Structuring the European Research Area
2. Activity: Human Resources and Mobility activities
3. Call title: Call for proposals for Marie Curie Research Training Networks, Interdisciplinarity and Intersectorial .
4. Call identifier:
5. Date of publication: 11 September 2004
6. Closure date(s): 2 December 2004 at 17.00 (Brussels local time).
7. Total indicative budget: → 45 000 000
14. Indicative evaluation and contractual timetable:
  - Provisional evaluation results: Results from the first stage are estimated to be available in February/March 2005 and results on the second stage are estimated to be available within some 4 months after the 28 April 2005 closure date for full proposals.
  - Contract signature: it is estimated that the first contracts related to this call will come into force after the summer of 2005.

*Call Information for Marie Curie Research Training Networks for 2005*

1. Specific Programme: Structuring the European Research Area
2. Activity: Human Resources and Mobility activities
3. Call title: Call for proposals for Marie Curie Research Training Networks
4. Call identifier:
5. Date of publication: 18 May 2005
6. Closure date(s): 08 September 2005 at 17.00 (Brussels local time).
7. Total indicative budget: – 220 000 000
14. Indicative evaluation and contractual timetable:
  - Provisional evaluation results: Results from the first stage are estimated to be available in December 2005 and results on the second stage are estimated to be available within some 4 months after the February 2006 closure date for full proposals.
  - Contract signature: it is estimated that the first contracts related to this call will come into force in the first half of 2006.

Calls were redefined and delayed along Summer 2004.