

**Optimisation of Modelling Methods for
Traffic Pollution in Streets
(TRAPOS)**

Minutes from the Mid-Term Review Meeting

January 17-19, 2000

National Environmental Research Institute
Frederiksborgvej 399, Roskilde, Denmark

AGENDA

Day 0 – Monday, January 17, 2000

9.30-17.30 Preparations for the mid-term meeting discussions

- progress in appointment of the young researchers with special regards to the situation of TNO
- redistribution of the funds
- prolongation of the Network

Day 1 - Tuesday, January 18, 2000

9.30-9.45 **Introduction:** A short introduction by the Commission representatives, who will chair the meeting.

9.45-10.45 **Co-ordinator's Report:** A presentation by the Co-ordinator of the network and of the mid-term review report.

10.45-11.00 **Coffee break**

11.00-12.30 **Tour de Table:** Presentations by each scientist-in-charge of the role and contribution of his research team (up to 5 minutes each)

- NERI, DK, *R. Berkowicz*
- University of Surrey, GB, *E. Savory*
- University of Karlsruhe, DE, *P. Kastner-Klein*
- ETHZ, CH, *M Rotach*
- ECN, FR, *P. Mestayer*
- IBAL, DE, *A. Lohmeyer*
- LHTEE, GR, *N. Moussiopoulos (replaced by P. Sahm)*
- CERC, GB, *R. Britter*
- TNO, NL, *C.J.H. van den Bosch*
- University of Hamburg (MIHU), DE, *M. Schatzmann*

12.30-14.0 **Lunch**

14.00-16.00 **Young Researchers' Reports:** Presentations by each of young researchers currently employed by the Network of himself, his work and his experiences (up to 10 minutes each).

- NERI, DK, *M. Ketzel*
- University of Surrey, GB, *A. Kovar-Panskus*
- University of Karlsruhe, DE, *E. Guilloteau*
- ETHZ, CH, *P. Kastner-Klein*
- ECN, FR, *P. Louka*
- IBAL, DE, *G. Clai*
- LHTEE, GR, *P. Sahm*
- CERC, GB, *S. Di Sabatino*
- University of Hamburg (MIHU), DE, *C. Chauvet*

16.00-17.30 **Open Discussion:** The discussion will concentrate on identifying the strengths and weaknesses of the network, particularly in relation to the organisation of the joint research and to its training programme. Possible revisions to the contract will also be identified and discussed.

Day 2 - Wednesday, January 19, 2000

9.30-12.30 **Continuation of open discussion with the expert reviewer.**

List of Participants

Commission representatives - Graham Wilkie

Expert reviewer - Sylvain Joffre

National Environmental Research Institute (NERI), DK

Ruwim Berkowicz, project co-ordinator
Matthias Ketzel, young scientist

University of Surrey (U.Surrey), GB

Eric Savory, scientist-in-charge
Anke Kovar-Panskus, young scientist

University of Karlsruhe (U.Karlsruhe), DE

Emmanuel Guilloteau, young scientist

Swiss Federal Institute of Technology (ETHZ), CH

Mathias Rotach, scientist-in-charge
Petra Kastner-Klein, young scientist

Ecole Centrale de Nantes (ECN), FR

Patrice G. Mestayer, scientist-in-charge
Petroula Louka, young scientist

Ingenieurbüro Dr.-Ing. Achim Lohmeyer (IBAL), DE

Achim Lohmeyer, scientist-in-charge
Giulia Clai, young scientist

Aristotle University Thessaloniki (LHTEE), GR

Peter Sahn, young scientist

Cambridge Environmental Research Consultants Ltd (CERC), GB

Rex Britter, leading scientist
Silvana Di Sabatino, young scientist

Netherlands Organisation for Applied Scientific Research (TNO), NL

C.J.H. van den Bosch, scientist-in-charge

University of Hamburg (MIHU), DE

Michael Schatzmann, scientist-in-charge
Christian Chauvet, young scientist

Last minute cancellations:

Nicolas Moussiopoulos from LHTEE and Jean-François Sini from ECN

Monday, January 17, 2000

All teams, except TNO, have by now employed young visiting researchers. Kees van den Bosch has informed that TNO is very close to finalise a contract with Silvia Trini Castelli from Italy. She will probably start at TNO by March this year. Kees has made a short presentation of the project on which Silvia will be engaged. The project concerns evaluation of the traffic pollution on and near alternative highway constructions. This is a new subject within the TRAPOS but fits well into the objectives dealing with the sensitivity of the flow and turbulence characteristics to the architecture of the street and its surroundings.

Discussion of the current progress of the Network resulted in the conclusion that a prolongation of the Network is necessary. An agreement was reached to recommend to the Commission to prolong the duration of the network by additional ½ year, i.e. until the April 30, 2001. With this prolongation it will be possible for the teams that were behind with appointment of the young researchers (TNO, NERI, IBAL, MIHU) to fulfil their contractual obligations with respect to the contract with the Commission. The prolongation will also help to finalise the scientific achievements of the network.

The Network as whole cannot attain any additional funds. Therefore a redistribution of the already available funds and training months of the young visiting researchers is necessary to insure an efficient operation of the Network also after the original deadline of October 31, 2000. Because the team of TNO will, at best, have only about one year to fulfil their obligations with respect to employment of young scientists, it is not likely that they will be able to deliver the 36 months that were envisaged in the original contract. The common agreement among the Partners was therefore that the number of training months allocated to TNO should be reduced to 24 months and 1/3 of their funds should be redistributed among the other teams.

Ruwim Berkowicz has presented the current situation of the NERI team. Employment period of Matthias Ketzler was prolonged by additional 6 months to 18 months in total. Meanwhile, NERI has finally succeeded to find a suitable candidate for the young scientist position dealing with the traffic related particulates. Olivier Le Bihan from France can start on his job at NERI by April 1, 2000. To employ him for 1 year NERI needs additional funds corresponding to ½ year. This was agreed by the Partners.

Conclusion of the subsequent discussion was that each of the teams should specify their needs for additional funds and training months and this resulted in the distribution shown in the following table.

Participant	Contract deliverable of young researchers to be financed by the contract (man-months)			Young researchers that will be financed by the Network after redistribution of funds and prolongation (man-months)			TOTAL ALLOWABLE COSTS (EURO) Contract	TOTAL ALLOWABLE COSTS (EURO) After redistribution
	Pre-doc (a)	Post-doc (b)	Total (a + b)	Pre-doc (a)	Post-doc (b)	Total (a + b)		
1. NERI	0	24	24	18	12	30	161,000	181,000
2. U.Surrey	0	24	24	14	12	26	121,000	129,600
3. U.Karlsruhe	6	18	24	13	13	26	183,000	186,000
4. ETHZ	0	24	24	0	24	24	0	0
5. ECN	0	24	24	0	22	22	166,000	157,400
6. IBAL	0	18	18	12	12	24	159,000	159,000
7. LHTEE	0	30	30	0	33	33	154,000	164,000
8. CERC	0	24	24	0	27	27	156,000	170,000
9. TNO	0	36	36	0	24	24	210,000	140,000
10. MIHU	12	24	36	12	30	42	190,000	213,000
TOTAL	18	246	264	69	209	278	1,500,000	1,500,000

The request on prolongation of the Network, together with the new distribution of funds and the training months was after the meeting submitted to the Commission.

Tuesday, January 18, 2000

Introduction

Dr Graham Wilkie, Commission representative, gave a presentation of the general aspects of the TMR Network Programme. He has pointed out that the main goal of the Programme is to contribute to improvement of the future career and job opportunities for young European researchers. Therefore, mobility and training are the most important aspects of the TMR Networks. The Commission will be extremely strict with monitoring the progress in employment of young researchers. The number of training months is the most important deliverable and must not be less than specified in the contract.

Co-ordinator's Report

Ruwim Berkowicz gave an overview presentation of the TRAPOS network (*a complete set of the overheads will be available on the TRAPOS homepage*). The scientific objectives and working methods were discussed. The most important events and scientific achievements of the Network were presented. The main conclusions from the first two years of the Network were:

- The Network is now operating effectively and efficiently with extensive collaboration between young researchers placed in Universities, government laboratories and “Small and Medium-size Enterprises”.
- The considerable effort required to set up the network of young researchers has been worthwhile.
- Prolongation of the network by 6 months will ensure that the effort required to set up the network will be fully rewarded.

Tour de Table

All the present scientists-in-charge made a presentation of their teams contributions to TRAPOS. Petra Kastner-Klein made the presentation on behalf of the University of Karlsruhe team, while Peter Sahm replaced Nicolas Moussiopoulos, who was not able to participate in the meeting.

Young Researchers' Reports

The young researchers currently employed by the Network gave short presentations of their experiences and the work within the Network.

Open Discussion

The open discussion started with comments of the Expert Reviewer, Prof. Sylvain Joffre, on the Mid-Term Report and presentations given at the meeting. He has expressed his overall satisfaction with the TRAPOS Network. The Network is well consolidated, the young researchers are well integrated in their respective teams and co-operation between the teams is very good. The scientific level of the work performed within the Network is high. However, he has also raised some points of criticism. The main criticism was related to not sufficiently clear differentiation between the scientific objectives and topics of activity as formulated both in the contract and in the Mid-Term Report. The Mid-Term Report did not give the right impression of how the results achieved by the different teams were utilised by the Network as whole. The report was too much focused on description of the activities and achievements of the single teams. The presentations given at the meeting have, however, shown that the aspect of co-ordination of the scientific activities was good and that the different individual set-ups and findings complete each other.

Sylvain Joffre has also pointed out that at the present stage of the Network the focus should be on consolidation of the achieved results. The results should be reported in joint publications and made available to the scientific and user community. The last phase of the network calls for a clear allocation of tasks to designated groups or individuals.

The Commission Representative, Dr. Graham Wilkie has again underlined the importance of the training aspect within the TMR Networks. The young researchers should be given all the possible opportunities to improve their job career. The designated funds should also be used to allow the young researchers to participate in international conferences, even if this is connected with significant expenses. The meeting participants agreed with this statement but with this reservation that the expenses must be in balance with the available funds. Priority should be given to the employment expenses. Graham Wilkie has expressed his support to the proposed prolongation of the Network. He has mentioned that practically all the previous TMR Networks have obtained an extension of their duration. Furthermore, he has suggested to the Participants to reconsider whether the proposed prolongation by 6 months is sufficient. A prolongation can only be given once, and the Commission will not approve a secondary prolongation.

Finally, a discussion arised on how to insure that all the TRAPOS teams will be operational also after prolongation of the Network. A specially difficult situation is for the Swiss team, which cannot make use of the redistribution of the funds from the Commission but needs additional national funds. In view of the central position of this team in the final stage of the Network (see section on formation of the new Working Groups) this subject needs soon clarification. The Commission Representative has promised to contact the respective Swiss authorities in order to find out a working solution.

Several of the young researchers present at the meeting have mentioned the difficulties that are connected with combining the “mobility” with their private life. It would have been desired if some TMR funds were designated to ease the mobility also with respect to “non-scientific activities”.

Wednesday, January 19, 2000

Continuation of open discussion with the expert reviewer

The expert reviewer, Sylvain Joffre, has expressed his satisfaction with the information on the network that he has obtained during the previous day discussion and suggested instead focusing on the discussion of how to improve the work within the Network.

In view of his comments and the discussion on Tuesday, the Participants have decided to establish several working groups, which will have well formulated working tasks and for each of the groups to designate one of the young researchers as the chair-person.

The responsibilities of each of the working group should be:

- Formulation of the importance of the subject for traffic pollution modelling
- Presentation of the TRAPOS contribution to the advancement of the subject (publications!)
- Transformation of the results into recommendations for practical models

Definition of the established working groups, the chairpersons and the members are shown in the Table below. Only the members among the young visiting researchers are shown in the Table. The senior scientists will contribute to the Working Groups as associated members.

The Chairpersons will be responsible for co-ordination of the Working Groups and for reporting of the results from now and to the new end of the network (April 30, 2001). Their contribution will be a part of the Final Report of the Network.

In order to consolidate the formation and the working programme of the working groups it was decided that the groups will meet at the next TRAPOS meeting.

The next TRAPOS meeting was scheduled for the 28-30 May, 2000 in Nantes, France, with the team of Ecole Centrale de Nantes (ECN) as the host organiser. The main subject of this meeting will be

presentation and discussion of the results achieved by the Network until now and concretisation of the plans for the final stage of the Network.

It was also decided that one day of this meeting will be reserved for a discussion among the young visiting researchers only.

TOPIC	Chairperson	Members
Traffic induced turbulence	Petra Kastner-Klein	Silvana Di Sabatino Matthias Ketznel Petroula Louka Anke Kovar-Panskus
Thermal effects	Petroula Louka	Silvana Di Sabatino Anke Kovar-Panskus Peter Sahn
Street Architecture	Emmanuel Guilloteau	Silvia Trini Castelli Christian Chauvet Anke Kovar-Panskus Petroula Louka Petra Kastner-Klein Peter Sahn
Fast Chemical reactions	Peter Sahn	Petroula Louka
CFD inter-comparison	Matthias Ketznel	Petroula Louka Peter Sahn Emmanuel Guilloteau Christian Chauvet
“Podbielski” inter-comparison	Giulia Clai	Christian Chauvet Silvana Di Sabatino Matthias Ketznel Peter Sahn
Tunnel exits	Silvia Trini Castelli	Giulia Clai Silvana Di Sabatino
99.8-percentile	Giulia Clai	Matthias Ketznel Peter Sahn
Wind-tunnel data	Christian Chauvet	Emmanuel Guilloteau Anke Kovar-Panskus Petra Kastner-Klein
Particulates	Olivier Le Bihan	Giulia Clai