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PANTA RHEI

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Information Bulletin for 'Education in Hydrology and Water Management' and 'Training for Water Resources Technology' within the framework of the ERASMUS, COMETT and TEMPUS Programmes of the European Community (EC)

A QUARTERLY BULLETIN

N° 14 - DECEMBER - 1992

GLOSSARY

ACMOBI

ACademic MOBility information system (TECHWARE).

BEST

Building of Extension of Science and Technology network TECHWARE/WEEL in Central and Eastern Europe (COST-CEEC programme).

CALWARE

Computer-Aided-Learning in hydraulics, hydrology and WAter REsources technology, strand Cb project (TECHWARE).

CEC

Commission of the European Community.

COMETT II

COMmunity action for Education and Training for Technology, the European Community programme on cooperation between universities and industry regarding training in the field of technology (TFHR).

COMEX I

Selected experts in the field of diffusion and valorization of RTD results (DGXIII).

COST -CEEC

Cooperation in Science and Technology with Central and Eastern European Countries, programme of DGXII.

CTB

Coordinating TECHWARE Bureau in Brussels (B).

DG

Directorate-General, administrative unit of CEC (there are XXIII DGs).

EC

European Community (member states : B, D, DK, E, F, GR, I, IRL, L, NL, P, UK).

EP

European Parliament (EC).

EFTA

European Free Trade Association (member states : A, CH, FL, IS, N, S, SF).

ERASMUS

EuRopean Action Scheme for the Mobility of University Students (TFHR).

ETC

European Training Courses of TECHWARE.

FORCE

FORmation Continue en Europe - Continuing Vocational Training in Europe (TFHR).

HCM

Human Capital and Mobility, sub-programme of for Science, Research and Development (DGXII).

ICP

Interuniversity Cooperation Programme (ERASMUS).

IP

Intensive Programme (ERASMUS).

IRDAC

Industrial Research and Development Advisory Committee of CEC.

JEP

Joint European Project (TEMPUS).

NGAA

National Grant Awarding Authority providing the grants for student mobility (ERASMUS).

PEP

Personnel Exchange Programme of TECHWARE.

RTB

Regional TECHWARE Bureau.

RTD & D

Research, Technological Development and Demonstration.

SAST

Strategic Analysis for Science and Technology (DG XII).

SME

Small- and Medium sized Enterprise.

SPES

Student and young graduate Placements for training in European industry of the water environment Sector (TECHWARE).

S&T

Science and Technology

STRANDS (COMETT)

A : Action establishing UETPs.

B : Action for transnational exchanges (students, young graduates, personnel).

C : Joint Training Actions.

D : Complementary measures.

TECHWARE

TECHNology for WAter REsources, sectoral UETP (COMETT, Strand A) and International Non-Profit-Making Association, with Coordinating Bureau in Brussels (B).

TECHWARE- Italia and TECHWARE-UK are Regional TECHWARE Bureaus (RTB).

The symbol of TECHWARE is the **icosahedron**, associated with water in PLATO's philosophy.

TEMPUS

TransEuropean Cooperation Scheme for Higher Education, the EC-programme for education and training in CEE-countries (TFHR).

TFHR

Task Force Human Resources, Education, Training and Youth (CEC).

UETP

University Enterprise Training Partnership (COMETT, Strand A).

WEEL

Water Environment European Laboratories, pan-European scientific network of TECHWARE (HCM programme of DGXII).

Hydrology

The logos of the waters, or the science that deals with the waters of the earth, their occurrence, circulation and distribution, their chemical and physical properties, and their interaction with their environment, including their relations to living beings.

Water management

Planned development, distribution and use of water resources, in accordance with predetermined objectives and with respect to both quantity and quality of the water resources.

Water resources technology

The development and application of (new) technologies to increase and improve the supply both in quantity and quality, interpreted in terms of availability of surface and underground waters.

FURTHERMORE . . .

TECHWARE develops longterm joint-training projects and pilot projects, incorporating expert systems, computer-aided learnin and distance learning technology (electronic classroom, satellite communication)

- Advanced computer techniques for the design and renovation of sewer systems.
- TRITON : Training on the technology for environmental protection within water resource management - in cooperation with UETP ACTION LINK, Heraklion, Greece.



E	European
T	TECHWARE
C	Courses

- CAIWARE : Computer Aided learning in Hydraulics, Hydrology and Water Resources Technology - in cooperation with HR Wallingford.
- TECHWARE was also actively involved in the EC- SAST project No. 6 (Strategic Analysis in Science and Technology) RTD for the Supply and Use of Freshwater Resources.

TECHWARE has been included in the select list of experts and consultants to which the European Commission will apply for the provision of services in the field of diffusion and valorization of the results of Community RTD "Research and Technological Development", i.e. COMEX 1 programme of DGXIII.

TECHWARE

also runs a number of other projects :

- SPES - Student and young graduate Placements for training in European industry of the water-environment Sector.
- ATP - Advanced Training Programmes.
- PEP - Personnel Exchange Programme.
- WEEL - Water Environment European Laboratories, a Pan-European Scientific network supported by the HUMAN CAPITAL and MOBILITY programme of CEC-DGXII. : Science, Research and Development.

GENERAL INFORMATION

OBJECTIVES

The European Training Courses (ETCs) of TECHWARE provide up-to-date training at advanced levels for all professionals in the broad field of quality and quantity management of water. Special attention is given towards the needs of small and medium sized enterprises.

TECHWARE's ETCs are unique :

- Sponsored by the European Community programme COMETT II.
- Always with a European dimension with regard to staff, participants and location.
- Guarantee of the best transfer of experience, and research results thanks to the pooling of expertise by TECHWARE.
- Providing excellent opportunities to adapt systematically to the expected changes of the Single Market in 1993.

FOLLOW-UP

TECHWARE is an international non-profit-making association founded in 1990 by 35 leading European Universities and Enterprises in the water-related sectors. TECHWARE at the present time has 175 members across Europe.

TECHWARE was selected by the European Community to develop a strategy for cooperation and partnership. Analysis of training requirements, evaluation and follow-up of courses are central to TECHWARE.

Why not join and share your experience on a truly European level.

If you would like to know more, do not hesitate to contact :

CTB : Coordinating TECHWARE Bureau

c/o CIBEBIWM
Wolstraat 70, rue aux Laines
B-1000 Brussels, Belgium

tel +32-2-5188893 • fax +32-2-5026735

RTB-I : Regional TECHWARE Bureau Italy
c/o AMGA

Via SS. Giacomo e Filippo 7
I-16122 Genova, Italy

tel +39-10-28581 • fax +39-10-2858284

RTB-UK : Regional TECHWARE Bureau U.K.
c/o HR Wallingford Ltd.
Wallingford

UK-OX 10 BBA Oxfordshire, United Kingdom
tel +44-491-3538 • fax +44-491-32233

TECHWARE

TECHNOLOGY FOR WATER RESOURCES
INTERNATIONAL NON PROFITMAKING ASSOCIATION
UETP • UNIVERSITY ENTERPRISE TRAINING PARTNERSHIP
the European Community programme on cooperation between universities and industry regarding training in the field of technology



ADVANCED TECHNOLOGIES

for

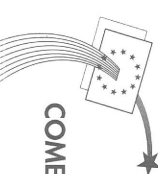
WATER ENVIRONMENT
MANAGEMENT,

WATER TREATMENT
PROCESSES

and

COMPUTER
APPLICATIONS

within the framework of



COMETT II

PRE-REGISTRATION FORM

Surname

First Name

Function/Responsibility

Organisation/Institution

Full address

.....

Country

Tel

Fax

I wish to receive further information on the following course(s) : *list course code, title & location*

.....

.....

Please send me more information about TECHWARE

I would like to apply for TECHWARE membership

My training requirements are : *give short description*

.....

.....

Please also send this information to :

.....

.....

Date

Signed /

Coordinating TECHWARE Bureau

c/o CIBE-BIWM

Wolstraat 70, rue aux Laines

B - 1000 Brussels, Belgium

Please return to the Coordinating TECHWARE Bureau

COURSE CALENDAR

Date	Course No. Code	Course Title	Target Audience	Venue
14-18/12/92	91-SP 2.2	Regional Hydrological Systems Analysis	practising engineers, hydrologists, policy-makers	Delft (NL)
29/03-2/04/93	90-SP 1.2	River Pollution	trainers, engineers, managers, technicians	Bristol (UK)
5-6/04/93	92-SE 1	Euro-Workshops on RTD&D for Freshwater Resources Management	experts, researchers, economic and social actors, decisionmakers	Lisbon (P)
June 1993	92-SP 1.5	Flood Hazards in Mediterranean Countries	engineers, managers	Genoa (I)
9-10/06/93	92-SE 1	Euro-Workshops on RTD&D for Freshwater Resources Management	experts, researchers, economic and social actors, decisionmakers	Brussels (B)
14-15/06/93	92-SE 1	Euro-Workshops on RTD&D for Freshwater Resources Management	experts, researchers, economic and social actors, decisionmakers	Polenza (I)
21-25/06/93	92-SP 2.4	Flood Mitigation	trainers, engineers, managers, technicians	Bristol (UK)
13-17/09/93	92-SP 2.3	Coastal Defence	trainers, engineers, managers, technicians	Bristol (UK)
Autumn 1993	92-SE 1	Euro-Workshops on RTD&D for Freshwater Resources Management	experts, researchers, economic and social actors, decisionmakers	Wallingford (UK)
Autumn 1993	92-SE 1	Euro-Workshops on RTD&D for Freshwater Resources Management	experts, researchers, economic and social actors, decisionmakers	Paris (F)

Special rate for TECHWARE Members

Preparing for the 4th Framework Programme (1994-1998)
TECHWARE launches a series of EURO-WORKSHOPS on RTD & D for

FRESHWATER RESOURCES MANAGEMENT

Within the framework of its projects :

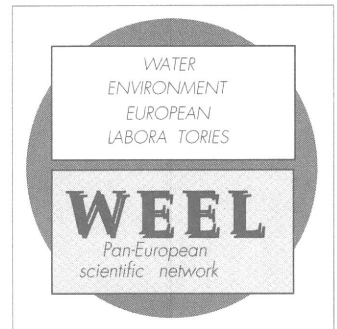
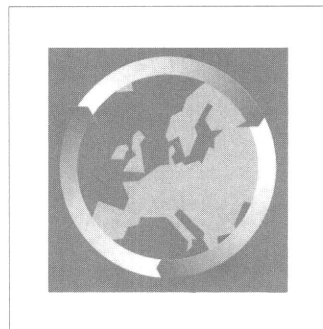
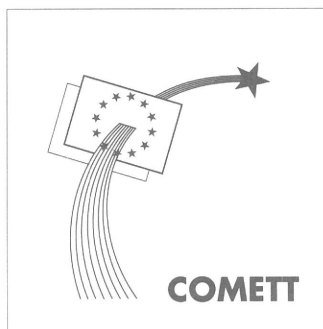
- **WEEL** - **Water Environment European Laboratories**, Pan-European Scientific Network of the **HUMAN CAPITAL and MOBILITY** Programme.
- **ETC** - **European Training Courses of the COMETT** Programme and with the support of **MONITOR-SAST** (*Strategic Analysis in Science & Technology*) unit of the **CEC Directorate General DG-XII for Science, Research and Development**.

Target Audience

The audience expected at these EURO-WORKSHOPS on Research, Technological Development and Demonstration (RTD & D) for freshwater resources management, does not only comprise experts and researchers but also end-users and economic and social actors in all water-related fields. Representatives of small and medium sized enterprises (SMEs), explicitly addressed by the 4th Framework Programme, are welcome, as well as decision-makers at local, regional and national levels. A multidisciplinary audience is always a major goal of TECHWARE.

Objectives of the Euro-Workshops

Each Workshop will, firstly, explain the basics, the methodologies and the advanced reasoning applied in the SAST Project No. 6 "RTD for the Supply and Use of Freshwater Resources"; secondly, it will discuss the different project reports including the Memorandum on the outcome of the final workshop held in Lisbon, May 1992; thirdly, it will focus on the existing and future Research, Technological Development and Demonstration (RTD & D) programmes such as ENVIRONMENT and HUMAN CAPITAL AND MOBILITY and the projected activities of the 4th Framework Programme; fourthly, the discussions and recommendations of the workshops are also intended to finalize a suitable regional policy of the Regional TECHWARE Bureaux (RTBs): the European Training Courses programme with financial support of COMETT, is in fact designed to achieve an efficient continuing education tool for professionals and water agencies officers in the field of sustainable use of water resources. On the research front TECHWARE got an exciting new project started; WEEL, with EC financial support through the Human Capital and Mobility programme. The network of Water Environment European Laboratories members of TECHWARE, is presently designing a multinational programme of young researchers' mobility in order to improve the quality and efficiency of research institutions in the different regions of Europe.



Planning of the EURO-WORKSHOPS

The first EURO-WORKSHOP to be held in LISBOA (P), April 5-6, 1993 is organized by APRH-Portuguese Water Resources Association.

The meeting will be held in Laboratorio Nacional de Engenharia Civil (LNEC), Avenida do Brasil 101, P-1799 Lisboa. The Workshop will start at 9:30h, April 5, 1993.

The fee includes a copy of all Reports of SAST project 6 and a dinner at Castelo de S. Jorge in Lisbon; 250 ECU for APRH and TECHWARE members and 500 ECU for other participants.

To confirm your participation in the Workshop, please fill in the form on reverse side and mail it to the Workshop organizer:

Dr.-Ing. J.P. Lobo Ferreira, APRH,
 c/o Laboratorio Nacional de Engenharia Civil (LNEC)
 Avenida do Brasil 101, P-Lisboa
 Tel : +351-1-8482131, ext. 2609 or 2428
 Fax : +351-1-8473845
 e-mail : loboferreira@lnec.pt

Other Euro-Workshops are scheduled : see reverse side

Organization and lecturers

The Euro-Workshops will be divided in four sessions according to the project reports, which will be made available to the participants one month before the workshop starts :

- Overview Report which provides a general description of the problem area for the Community and world wide ;
- Five Expert Reports :
 - Demand and use
 - New sources and better use of existing sources
 - Regional dimension of water RTD
 - Monitoring and modelling
 - Treatment, storage and distribution.
- Strategic Dossier which presents a forward looking action oriented synthesis on the outcome of the project and, as an accompaniment to these reports :
- Memorandum on the outcome of the final workshop.

The sessions will be chaired and lectured by experts who have coordinated and contributed to the reports or have participated actively in the final workshop leading to the Memorandum.

See reverse side

Other Euro-Workshops are scheduled :

in **BRUSSELS** (B), June 9-10, 1993, during AQUA-EXPO at the Heizel Exhibition Hall, organized by the Coordinating TECHWARE Bureau.

Please contact :

CTB : Coordinating TECHWARE Bureau
c/o CIBE-BIWM
Wolstraat 70, rue aux Laines
B-1000 Brussels, Belgium
tel : +32-2-5188893 • fax :+32-2-5026735

in **POTENZA** (I), June 14-15, 1993 (tentative) at the Università della Basilicata, organized by the Regional TECHWARE Bureau-Italia.

To announce your participation and for additional informations **please contact** Prof. B. De Bernardinis, c/o D.I.F.A., Via della Tecnica 3, 85100 Potenza, Italy.

Tel : +39-971-474614/474611
Fax : +39-971-56537

in **WALLINGFORD** (UK), Autumn 1993 (tentative) at HR-Wallingford Ltd., organized by the Regional TECHWARE Bureau-UK.

Please contact :

RTB-UK : Regional TECHWARE Bureau
c/o HR Wallingford
Wallingford UK-OX 10 8BA
Oxfordshire, Great Britain
Tel : +44-491-35381 • Fax : +44-491-32233

in **PARIS** (F), Autumn 1993 (tentative)

APPLICATION FORM

EURO-WORKSHOP

on RTD&D for Freshwater Resources Management

<input type="checkbox"/> LISBOA	Name :
<input type="checkbox"/> BRUSSELS	Address :
<input type="checkbox"/> POTENZA
<input type="checkbox"/> WALLINGFORD
<input type="checkbox"/> PARIS
	Tel : Fax :
	Date : Signed :

Fill in and return to address(es) mentioned above and on the reverse side for Lisboa

SPES

STUDENT AND YOUNG GRADUATE PLACEMENTS FOR TRAINING IN EUROPEAN INDUSTRY OF THE SECTOR WATER ENVIRONMENT

WHAT ARE THE BENEFITS OF PLACEMENTS ?

(by courtesy of UK COMETT Liaison Office)

For the employer

- COMETT student placements are cheap and easy to manage, thanks to EC grants and the support network.
- COMETT students can contribute to productivity, a benefit to small and large companies alike.
- COMETT students can introduce new ideas into the workplace, and can tackle projects which otherwise might be difficult to resource.
- COMETT students offer a company opportunities to link with higher education and with Europe.
- COMETT student's language ability can put you in touch with new market opportunities.

For the student

- Placement in industry abroad enhances a student's degree course.
- A placement improves language skills, and offers experience of another culture.
- A placement improves future job prospects.
- A placement brings the satisfaction of contributing to the productivity of a firm.

For higher education

- More mature COMETT students are rewarding to teach.
- Staff arranging placement will make useful contact with European employers.
- Foreign interest will be aroused in an institution's Research and Development and its initial and continuing education courses.

For Europe

- COMETT fosters European awareness
- Student placements will encourage European mobility.
- A well-trained workforce will enable industry to compete better in world markets.

TECHWARE

INTERNATIONAL NON-PROFITMAKING ASSOCIATION

UETP • UNIVERSITY ENTERPRISE TRAINING PARTNERSHIP UNDER COMETT II the European Community programme on cooperation between universities and industry regarding training in the field of technology

WHO CAN OFFER PLACEMENTS ?

All companies, enterprises, including public administration or services, professional or scientific associations, etc. . .

WHO CAN APPLY FOR A COMETT-PLACEMENT GRANT ?

- All registered students or young graduates of an institution for higher education in EC- and EFTA-member states.
- All nationalities if the above condition is fulfilled.

THE ROLE OF TECHWARE



- TECHWARE has the responsibility to award COMETT grants to eligible trainees for placements between 3 and 12 months.
- The selection for awarding the grants and the matching between offers and demands is straightforward and explained in the SPES-Vademecum.
- An agreement between TECHWARE and the grantee is signed as soon as the enterprise has accepted the trainee-candidate.
- The COMETT grant awarded by TECHWARE varies between 260 and 350 ECU per month and is supplementary to any other grant or contribution offered by the enterprise or other organisation.

Fill in the form below and send it to :

TECHWARE c/o CIBE-BIWM Wolstraat 7 B-1000 Brussels
Fax : +32-2-5026735

overview offers/demands for placements : see reverse side

TECHWARE / SPES

Allow for a period of about 6 months between this request and the start of your training

Student and young graduate
Placements for training in
European industry of the
Sector water environment

Name :

Enterprise :

OR University :

Address :

Tel : Fax : Telex :

please send me the SPES Vademecum including application forms and prototype agreement

Date :

please send me full information about the trainee candidate Demand Code No.

Signed :

is interested in Training-Offer Code No.

OFFERS & DEMANDS

SPES/TECHWARE • For more information and address : see reverse side

OFFERS of placement by enterprises (02-12-92)

Code	Country	Duration	Period	Topic proposed	OTHER TOPICS ARE NEGOTIABLE
PT91-02	B	6 m.	a.s.a.p.	Hydraulic model of sediment transport in sewers.	
PT91-03	F	6m. or more	n.s.	Databases.	
PT91-04	NL	3-12 m.	n.s.	Applications in water industry.	
PT91-05	UK	6 m.	n.s.	Flood forecasting.	
PT91-06	UK	6 m.	n.s.	Water resources modelling.	
PT91-07	A	n.s.	n.s.	Water supply planning.	
PT91-08	B	6-12 m.	n.s.	Management, economics, marketing.	
PT91-09	UK	6-12 m.	n.s.	Management, economics, marketing.	
PT91-11	UK	3-12 m.	a.s.a.p.	Irrigation.	
PT91-12	UK	3-12 m.	a.s.a.p.	Hydrodynamics.	
PT91-13	UK	3-12 m.	a.s.a.p.	Flow measurements.	
PT91-14	UK	3-12 m.	a.s.a.p.	Sediment mechanics.	
PT91-15	UK	3-12 m.	a.s.a.p.	Computational methods.	
PT91-16	UK	3-12 m.	a.s.a.p.	Urban drainage.	
PT91-17	UK	3-12 m.	a.s.a.p.	Coastal structures and processes.	
PT91-18	UK	3-12 m.	a.s.a.p.	Ports and harbours.	
PT91-19	UK	3-12 m.	a.s.a.p.	Dredging and spoil deposits.	
PT91-20	UK	3-12 m.	a.s.a.p.	Environmental assessment.	
PT91-21	UK	3-12 m.	a.s.a.p.	Modelling river basins.	
PT91-22	UK	3-12 m.	a.s.a.p.	Estuaries management.	
PT91-23	UK	3-12 m.	a.s.a.p.	Groundwater.	
PT92-01	UK	12 m.	1993	Coastal hydraulics.	
PT92-02	B	6 or 12 m.	n.s.	Integrated river basin management.	
PT92-03	B	6-12 m.	a.s.a.p.	Hydro-informatics.	
PT92-04	NL	6-12 m.	n.s.	Management, economics, marketing.	
PT92-05	D	6-12 m.	n.s.	Management, economics, marketing.	
PT92-06	UK	6-12 m.	n.s.	Fluid mechanics.	
PT92-07	B	6-12 m.	n.s.	Open channel flow.	
PT92-08	E	6-12 m.	n.s.	Hydraulics of water distribution.	
PT92-09	UK	6-12 m.	n.s.	Irrigation water management.	
PT92-10	DK	6-12 m.	n.s.	Urban drainage.	
PT92-11	B	12 m.	02/93	Environmental planning.	
PT92-12	B	12 m.	n.s.	Laboratory activities related to water problems.	
PT92-13	D	n.s.	n.s.	Water management planning.	
PT92-14	F	8 m.	09/93	Design for urban drainage constructions.	
PT92-16	NL	n.s.	n.s.	Chemical engineering water analysis.	
PT92-17	I	n.s.	11/93	Hydraulic engineering, hydrology, meteorology.	
PT92-18	I	6-12 m.	01/04/93	Chemical environmental engineering, biology.	
PT92-19	F	6 m.	a.s.a.p.	Tests for water tightness.	
PT92-20	F	6 m.	a.s.a.p.	Efficiency underground reticulations.	
PT92-21	F	6 m.	a.s.a.p.	Investigations into earth fill.	
PT92-22	I	12 m.	01/02/93	Fluid mechanics.	
PT92-23	UK/I	12 m.	01/02/93	Mathematics, physics, engineering.	
PT92-24	B	12 m.	08/94	Assessment of radioactive water disposal.	
PT92-25	B	12 m.	08/94	Modelling & GIS of pollution control.	

DEMANDS for placements by students (02-12-92)

Code	Home Country	Proposed Host Country	Duration	Period	Topic proposed	OTHER TOPICS ARE NEGOTIABLE
DT91-03	B	DK/IRL/UK/N/S	6 or 12 m.	n.s.	Water treatment, environmental sanitation.	
DT91-12	D	n.s.	3-12 m.	n.s.	Groundwater.	
DT91-13	B	S	3 m.	09/92	Radar applications.	
DT91-15	B	UK/D/F/L/NL/A	3 m.	10-12/92	Chemical environmental engineering.	
DT91-35	UK	E	6m.	09/92-02/93	Coastal zone management.	
DT91-44	D	UK	3 m.	n.s.	Civil engineering hydraulics.	
DT92-11	I	B/L/NL/D/a.o.	12 m.	02/93-01/94	Chemical engineering.	
DT92-27	B	UK/IRL/DK	6 m.	03/93-08/93	Groundwater management.	
DT92-36	B	UK/DK/NL	6 m.	03/93-08/93	Groundwater hydrology.	
DT92-42	E	UK/I/N/F/A	12 m.	n.s.	Environmental and water resources engineering.	
DT92-48	B	D	6 m.	03/93	Water and waste water treatment.	
DT92-50	UK	I/F/GR	6-10 m.	09/92	Civil water engineering.	
DT92-52	B	UK/IRL/NL	03/93-08/93	6 m.	Modelling river basins.	
DT92-53	B	UK/IRL/NL	6 m.	03/93	Surface water measurements.	
DT92-55	B	UK	6 m.	10/92	Civil engineering (marin).	
DT92-57	F	UK/IRL	5 m.	04/93-09/93	Water treatment.	
DT92-58	B	F/IRL/E	6 m.	02/93-07/93	Waste water and water treatment.	
DT92-59	E	P/I/F	6 m.	01/93-07/93	Biology.	
DT92-60	UK	CH/D/A	4 m.	05/93-08/93	Hydraulics.	
DT92-61	UK	F/B/CH	4 m.	05/93-08/93	Hydraulic engineering.	

ABBREVIATIONS n.s. : not specified • a.s.a.p. : as soon as possible • m. : month(s)

EDITORIAL

From this issue onwards, PANTA RHEI will count more pages - on recycled paper - because the information is likely to increase. The section RESEARCH TRAINING especially will become important. PANTA RHEI will be the vehicle for general information about the activities of the **Pan-European Scientific Network called WEEL-Water Environment European Laboratories**, a subset of the TECHWARE network.

This approach has been explicitly proposed to HUMAN CAPITAL and MOBILITY (HCM) which accepted to support WEEL. The next issue of PANTA RHEI will therefore show the HCM-logo as well as the present logos of ERASMUS, TEMPUS and COMETT. Will there be another nice logo for COST-CEEC ?

Don't forget to read the hot news about the proposals for Council Decisions for the **FOURTH FRAMEWORK PROGRAMME (1994-1998) for Community activities in the field of Research and Technological Development**.

The ERASMUS ICP "**Hydrology and Water Management**" starts its fourth year of activities and submitted new proposals for the academic year 1993-94. With its 38 departments or laboratories cooperating for student and staff mobility as well as for joint curriculum development, this ICP is one of the largest and successful networks of ERASMUS.

The TEMPUS JEP "**EWA-Ring**" (what a beautiful name !) is heading towards a bright future with increasing activities, by enthusiastic partners. Again it is very fortunate that PANTA RHEI can be the common information bulletin for both the ERASMUS ICP and the TEMPUS JEP in the water field.

The COMETT-**UETP TECHWARE** has reached the point where it should become self-supporting because the contract for the network structure (Strand A) ends next 31 August 1993. A new structure and management for TECHWARE has been adopted (see this issue) which aims at a decentralization by enhancing the Regional TECHWARE Bureaux and a stronger integration and commitment of the members through the Task Forces. One could say that TECHWARE applies the principles of

the Treaty of the European Union (MAASTRICHT) : coherence and subsidiarity.

PANTA RHEI would also like to continue its section WORLD NEWS because Europe is not a close entity. Especially in the field of water : the circulation of water is a knowledge basis without frontiers. The Second Activity defined by the Fourth Framework Programme gives the priority to HUMAN CAPITAL development. PANTA RHEI would like to support as much as possible this priority.

Finally, the readers of PANTA RHEI are kindly requested to pay attention to the UPDATE of our MAILING LIST.

For reasons explained in the Editorial of issue No. 13, if we want to continue a distribution of PANTA RHEI free of charge, we should strive towards an optimal targeted mailing list. The response cover sheet filled in by the readers should help us. Those who are happy with PANTA RHEI may wish to tick the request for support by advertising.

The Editor

FRACTALS

Vénus (...) fend les airs légers sur son char attelé de colombes et descend sur le rivage de Laurente, où, caché sous les roseaux, le fleuve du Numicium conduit ses eaux en serpentant à la mer voisine. Elle lui ordonne de laver tout ce qui chez Enée est soumis à la mort et d'emporter cette dépouille vers le large dans son cours silencieux ; le fleuve au front armé de cornes exécute les ordres de Vénus ; il délivre Enée, sous les eaux dont il l'arrose, de tout ce qu'il y avait en lui de mortel ; il ne lui laisse que la meilleure partie de lui-même.

Ref : Les Métamorphoses d'Ovide.
Livre XIV, 12

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- News from COMETT/TECHWARE 8
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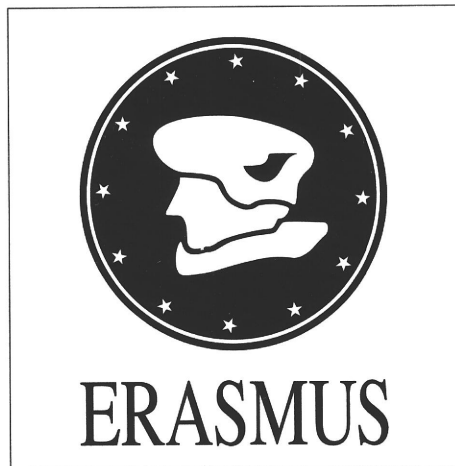
Enclosures :

PLEASE POST LEAFLETS !

- Poster SPES
- Leaflet SPES
- Leaflet ETC
- Leaflet EURO-WORKSHOPS

NEWS from ERASMUS

ICP : Interuniversity Cooperation Programme "Hydrology and Water Management"
 Coordinator : Prof. A. Van der Beken (see address Editor)



Interuniversity Cooperation Programme "Hydrology and Water Management" ICP-91 and 92-B-1138/06

The Plenary Meeting of all partners of 31 August - 1 September 1992 at Firenze (I) has prepared :

- The Statement of activities and expenditure for the academic year 1991/92.
- The 1993/94 Update Form.

The Plenary Meeting has accepted two new partners : DK/AALBORG Universit tscenter, Dept. Civil Engineering, and F-Ecole Nationale Sup rieure des

Mines de Paris, Centre d'Informatique G ologique.

This brings this ICP to a total partnership of 38 laboratories or departments in 35 universities of 12 countries (A-B-CH-DK-D-F-E-I-IRL-NL-P and UK).

During the Academic Year 1991-92, 19 students moved during a total of 111 months, i.e. an average of 5,8 months per mobility. Seven countries participated.

Teaching Staff mobility was limited to 9 staff-members and 9 universities in 5 countries, active in this action.

Constraints in achieving higher mobility rates is the limiting funding. Staff mobility is furthermore hampered by the generally heavy workload at the home-university. Few university teachers can afford to teach abroad because, besides their teaching and research duties at their own university, they are often heavily burdened by administrative responsibilities.

Of all the problems encountered, the majority of the ICP-partners ranked the non-acceptance of the proposals for Intensive Programmes (ICPs) as most serious problem. IPs indeed are very effective and attractive. They trigger the interest among students as well as staff and may increase future mobility and more active participation.

Second most serious problem ranked by

RECEIVING COUNTRIES

SENDING COUNTRIES

students months	B	E	F	I	IRL	NL	UK	totals
B		1 6		2 24			1 3	4 33
D							1 3	1 3
E						2 9	3 9	5 18
F				1 4				1 4
I	5 25				3 27			8 52
UK			3 28					3 28
totals	5 25	1 6	3 28	3 28	3 27	2 9	5 15	22 138

ICP-91-B-1138/06 • Hydrology and Water Management • Overview of student mobility 1991/92

the partners is the accommodation problem of the students. The third most serious problem is often the reluctance of Faculty to accept recognition of the partner's programme : another reason to prepare each mobility programme as careful as possible.

Next Plenary Meeting of ICP-92-B-1138 will be held in Lausanne (CH) on 27-28 August 1993. Prof. A. Musy of EFPL (Ecole Fédérale Polytechnique de Lausanne) will be our host.

ON YOUR DESK

ERASMUS ANNUAL REPORT 1991

CEC, SEC(92)792 Final
Brussels, 30 June 1992

33pp. and 7 Tables (Statistics)

Structures of the Education and Initial Training Systems in the member states of the European Community 1990

L-2985 Luxembourg :
Office for Official Publications of the European Communities, 1991.
ISBN 92-826-2962-7

A Guide to Higher Education Systems and Qualifications in the European Community

Commission of the European Communities
Edited by :
Anita Wijnaendts van Resandt, 1991
Office for Official Publications of the European Communities
L-2985 Luxembourg.
ISBN 92-826-2676-8
Kogan Page, 120 Pentonville Road,
London N1 9JN
ISBN 0-74940-387-X

ERASMUS Bureau

70, rue Montoyer straat 70
B-1040 Brussels

tel +32-2-2330111
fax +32-2-2330150
telex 63528

Editor's note :

Total funds committed by the ERASMUS-programme for the academic period 1991/92 were 73, 772, 409 ECU.

This is less than 4 ECU per university student in the European Community !

A comparison between some other Community funding activities would be very interesting . . .

INFO

ERASMUS ICP

"Hydrology and Water Management"

Name :

Address :

.....

.....

requests a copy of the INFORMATION BROCHURE and the POSTER

Date : Signature :

Return to the Editor of PANTA RHEI

INTERNATIONAL HYDROLOGICAL PROGRAMME

Recommendations to water-related database designers aiming at bibliographic database design and creation based on the Micro CDS/ISIS and the CFF.

Edited by : M. Sicevic

The "Jaroslav Cerni" Institute for the Development of Water Resources, Belgrade, Yugoslavia.
Unesco, Paris 1992 • IHP-IV Project M-2-1

Contact :

UNESCO - IHP, Place de Fontenay, F-7500 Paris

EAIE European Association for International Education

An invitation to join the professionals in international education.

Secretariat :

European Association for Educational Association
c/o University of Amsterdam
Spui 21, 1012 WX Amsterdam, Netherlands

Science Education Newsletter

All enquiries to :
Editor, Science Education Newsletter
The British Council
Medlock Street, Manchester M15 4PR
© The British Council 1992

NEWS from TEMPUS

JEP : Joint European Project
"Interuniversity Coordinating Forum for East-West Cooperation in the field of Environment, Water and Agricultural Soils" (EWA-Ring)

Coordinator : Prof. J. Bogardi
Wageningen Agricultural University • Department of Water Resources • Nieuwe Kanaal 11, NL-6709 PA Wageningen
tel. : +31-83-7084829 • fax : +31-83-7084885 • telex : 450115

NEWS FROM EWA-RING

The coordinator announces the acceptance for a continuation of TEMPUS JEP no. 2150-92/2 for academic year 1992/93. The participating organizations for the year 1992/93 are :

Wageningen Agricultural University	NL
Free University Brussels	B
University Gent	B
University Hannover	D
Technical University of Braunschweig	D
University of Coimbra	P
Agricultural University Wroclaw	PL
Technical University of Cracow	PL
Warsaw Technical University	PL
Agricultural University Warsaw	PL
Polish Academy of Sciences	PL
Gödöllő University of Agricultural Sciences	H
Technical University of Budapest	H
Technical College 'Pollack Mihaly'	H
Agricultural University of Nitra	CS
Czech Technical University Prague	CS
University of Agriculture Prague	CS
University of Warsaw	PL
Agricultural Academy Poznan	PL
Technical University of Poznan	PL
Agricultural University of Cracow	PL
Agricultural University Debrecen	H
Universität für Bodenkultur, Wien	A
Swedish University of Agricultural Science	S

SHORT REPORT ON ACTIVITIES 1991/92

21-22 October 1991

Annual General Assembly in Wageningen; participating : all EWA-Ring partners and potential new partners for year 1992/93

November 1991/ August 1992

Procurement of the hardware equipment for the partners from the eligible countries.

January 1992/ August 1992

Student mobilities in both directions ; East - West 25 mobilities : 14 thesis preparation, 6 PhD students, 5 practical placements.

West - East 9 mobilities : 2 thesis preparation, 2 PhD students, 5 practical placements.

January 1992/ August 1992

Staff visits in both directions; West - East 7 mobilities : teaching assignments in the eligible countries; East - West 16 mobilities : short updating retraining visits.

1-5 June 1992

Short intensive course on 'Decision Making

for Environmentally Oriented Water Management' attended by 86 participants from CS, Poland, Hungary, Belgium, Portugal, The Netherlands, Germany and Austria : 74 students and young scientists, 12 lecturers. 22 students passed an examination.

3 June 1992

National coordinators meeting at the Agricultural University Prague, participating national coordinators and representatives from other partner universities present during the short intensive course.

August 1992

Procurement of the library books and additional equipment to benefit eligible members.

17-21 October 1992

Annual General Assembly in Brussels; participating : all EWA-Ring partners accepted for academic year 1992/93.

FORTHCOMING EWA-RING ACTIVITIES

April 1993 (6 days)

Short intensive course on 'Agroecological aspects of water management and land reclamation' assumed number of participants : 20, venue Gödöllő, Hungary.

Seminar lectures in the following areas :

- the ecological factors of the agricultural land use; the climate-water-soil-plant systems,
- the agroecological potential; the possibility and limits of its enhancement,
- the strategy of the accommodation of the agricultural land use to the ecology and the environment, the sustainable agricultural land use,
- the effects of the agricultural land use on the water resources,
- the effects of the water management systems and structures on the ecological factors of the agricultural land use.

21-26 June 1993

Training seminar on 'Water resources conservation and pollution spread control within rural areas' - assumed number of participants : 40 students, venue Poznan, Poland. Seminar lectures in the following areas :

- energy and water balance of rural areas
- transport of matter in agroecosystems,
- biogeochemical barriers for non-point pollution spread control in agricultural; landscape,
- waste water management in rural areas,
- ecological guidelines for water man-

agement to improve efficiency of water use,
- conflicts between environmental, social and economical criteria.

TEMPUS JEP
no. 4988-92/1
European Cooperation for
Environmental Education
- ECEE -

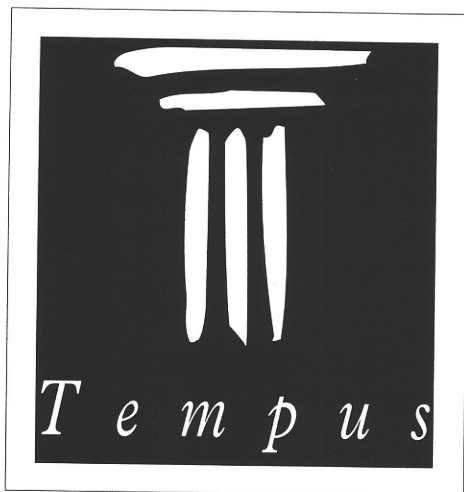
Prof. J.J.Bogardi (Wageningen Agricultural University, NL) and **Dr. D.Huska** (Agricultural University of Nitra, CS) announce the acceptance of the TEMPUS JEP no. 4988 - 92/1 during the academic year 1992/93. The title of the JEP is European Cooperation for Environment Education (ECEE) and the participating organizations are :

<i>Agricultural University of Nitra</i>	CS
<i>Wageningen Agricultural University</i>	NL
<i>Universität Rostock</i>	D
<i>Agricultural University of Cracow</i>	PL
<i>Agricultural University Debrecen</i>	H
<i>University of Agricultural Science, Szarvas</i>	H
<i>Research Centre of Irrigation, Szarvas</i>	H
<i>Technical University of Poznan</i>	PL
<i>University of Agriculture Prague</i>	CS
<i>West Virginia University, Morgantown, West Virginia</i>	USA

Objectives : The target of the project is to improve university education in environmental protection with the final aim to improve the practical application of the acquired experienced and know-how. The projects includes updating of text-books, laboratory instructions, teaching programmes and stock of libraries.

Contact :

Prof. J.J.Bogardi - contractor of the JEP
Department of Water Resources
Nieuwe kanaal 11
6709 PA Wageningen
The Netherlands
tel : +31-8370-2778/4397
fax : +31-8370-84885
or : ir. E. Wietsma
tel : +31 8370 84829
or : Dr. D. Huska - coordinator of the JEP
Department of Land Improvement
Hospodarska 10
949 76 Nitra, Czechoslovakia
tel : +42-87-412941
fax : +42-87-411593



TEMPUS II (1994-1998)
is underway !

"A proposal for a Council Decision adopting the second phase of the Trans-European Cooperation Scheme for Higher Education" has been presented by the Commission of the European Communities (COM(92)407 final) on October 1, 1992 ISBN 92-77-47708-3

The major element in this proposal is the participation of the Republics of the former Soviet Union in TEMPUS II.

TEMPUS OFFICE

The **guide for applicants (Vademecum)** is specifically intended for those wishing to make an application for support under the TEMPUS Scheme for activities referring to the academic year 1993/1994 and commencing on or after 1 September 1993.

The deadline for the submission of applications is : 31 January 1993 for Joint European Projects.

The date of the application will be as per postmark.

EC TEMPUS Office

Montoyerstraat 14, B-1040 Brussels

tel +32-2-50407
fax +32-2-5040700

STUDENT OPPORTUNITIES

World Meteorological Organization
International prize Norbert Gerbier - MUMM1994 (50000FF)
Research studies on meteorology and related earth sciences

Deadline : 31 January 1993 through National Representative
Contact : Secretary-General WMO 41, Giuseppe - Motta
case postale no. 2300
CH-1211 Genève 2
Fax : +41-22-7342326

PRIX INTERNATIONAL JULES CORNET

CONNAISSANCE ET ASSAINISSEMENT DE L'ENVIRONNEMENT

L'Association des Ingénieurs sortis de la Faculté Polytechnique de Mons (A.I.Ms) attribuera en 1993 le Prix International Jules Cornet d'un montant de 300.000,- BEF, destiné à récompenser l'auteur d'un travail original (non publié) dactylographié, jugé le meilleur à la suite d'un concours écrit **en français ou en anglais**, dans le domaine de la Connaissance ou de l'Assainissement de l'Environnement, à l'exclusion des ouvrages de vulgarisation ou de simple documentation. Sont seuls admis, les travaux rédigés pendant la période triennale qui précède la date limite du dépôt des mémoires.

Les mémoires sont envoyés, en cinq exemplaires, au Président de l'A.I.Ms 9 rue de Houdain, B - 7000 MONS par des scientifiques belges ou étrangers avant le 31 janvier 1993.

INFO

EURO INFO CENTRES GO EAST

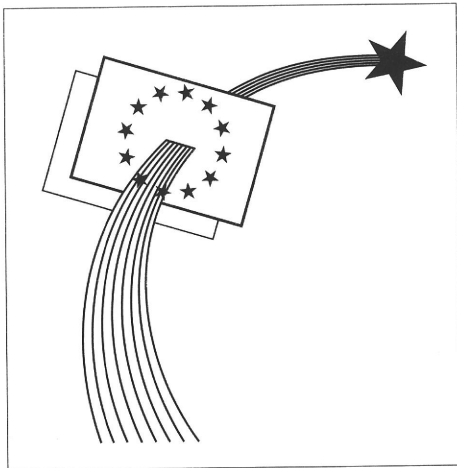
Pocket guide to the Euro Info Centres also available :
Annual Report 1990

Contact : Ms. Diane Eylen
CEC, DG XXIII • AREN 3/25
Wetstraat 200, B-1049 Brussels

NEWS from COMETT

UETP : University Enterprise Training Partnership
TECHWARE - TECHNOLOGY for WATER RESOURCES

Coordinator : A. Van der Beken c/o CIBE-BIWM • 70, rue aux Laines / Wolstraat 70, B-1000 Brussels



GRANTS AVAILABLE !

SPES

STUDENT AND YOUNG GRADUATE PLACEMENTS FOR TRAINING IN EUROPEAN INDUSTRY OF THE SECTOR WATER ENVIRONMENT

TECHWARE has continuously grants available for training placements between 3 and 12 months (see enclosure).

The grants vary between 260 and 350 ECU/month. At the present time, the OFFERS by enterprises for placements ending 15 July 1993 exceed the DEMANDS by students. Students are invited to apply for a grant, also for periods beyond 1993.

COMETT CALL FOR PROPOSALS 1993

Members of TECHWARE are invited to contact the Coordinating TECHWARE Bureau or the Regional TECHWARE Bureaux. Proposals are expected for :

- **Training Placements for Students and Young Graduates** for periods between 3 and 12 months (Strand Ba - TECHWARE's SPES programme, see leaflet enclosed).
- **Transnational Personnel Exchange** for periods between 2 and 12 months (Strand Bc - TECHWARE's PEP programme). This programme has not yet been explored very well : since 1991 only two proposals have been submitted, with success ! It is, however, a most interesting opportunity for industry and universities to engage in cooperative activities. The support of COMETT is between 1,000 and 1,500 ECU per month. Members are encouraged to prepare well documented proposals.
- **European Training Courses (ETC)** (Strand Ca) - see leaflet enclosed - all proposals from members will be screened by the Task Forces established by the Board of Management of TECHWARE, with the purpose to build up a sound strategy for preparation, organization and marketing of the courses.

**DEADLINE FOR PROPOSALS :
31 December 1993 !**

All new contracts will start 1 July 1993 and last 25 months (strand B) or 18 months (strand Ca)

ACTIVITY REPORT 1991-1992

Period May 1991 - May 1992

Is now available. Request your copy. it counts 36 pp. and includes the Constitution of TECHWARE.

TECHWARE has got the complete database of COMETT projects available. This database contains all the projects from 1990 to 1992 .

The following information can be sourced from it :

- the summary and coordinator's coordinates of a given project;
- the projects in a given sector;
- the projects in which a given enterprise or university is involved;
- the projects within a given coordinating country;
- the projects within a given strand;
- the projects within a given participating country.

The database has been compressed on two floppy disks. To install the software a minimum of 8,5 Megabytes on hard disks is needed running under MS-DOS .

TECHWARE members can contact CTB or one of the RTB's if they are interested.

MEMBERS DIRECTORY

TECHWARE prepares a comprehensive **Members Directory** including the sectors of expertise and the involvement in EC- and other international programmes of the member-body as well as the expertise of the individual expert.

This **Members Directory** will be a major document especially important for the COMEX 1 Programme of CEC-DGXIII on services in the field of diffusion and valorization of the results of Community RTD. TECHWARE was selected for COMEX 1. The Directory is likely to be also of major importance to activities and contacts with other CEC-DG's and international agencies.

Be sure that you are listed in the **Directory**: apply for membership in 1993.

TECHWARE will use its **Members Directory as a confidential document.**

NEW STRUCTURE AND MANAGEMENT FOR TECHWARE

TECHWARE 7th Meeting of the Board of Management (BM) Copenhagen, 20-21 November 1992

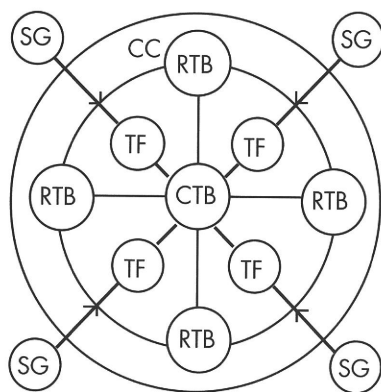
The BM took an important decision : it adopted the "Blueprint for a new structure and management of TECHWARE" prepared by the Coordinating Committee (CC) as established at the meeting of Lisboa on 13 June 1992. The EXECUTIVE SUMMARY of the blueprint includes a financial summary of all TECHWARE contracts from start (July 1990) till October 1992 : a total support of 1,6 MECU was achieved of which only 10% was support for the network itself ! In reality, since most of the contracts are on a 50% share-basis, the global cost of all projects under contract amounts to about 3,2 MECU.

The new structure and management is based on the bridge-function of TECHWARE at the meso-

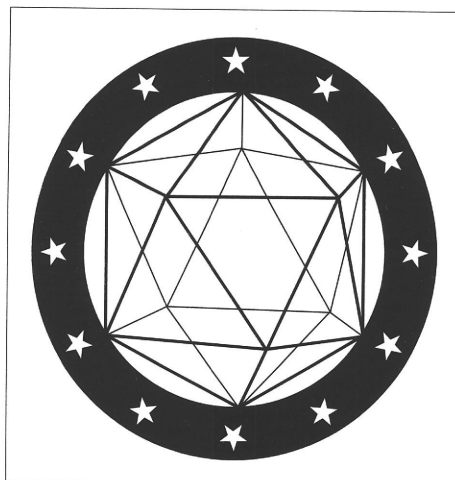
- objectives and activities among its members;
- the **Coordinating TECHWARE Bureau (CTB)** representing the supraregional and European international dimension and regulating the complex management of activities.

This management has a matrix-form with **Task Forces (TFs)** for each activity with full managerial power. Team-members of the TFs are drawn from the RTBs and other member-bodies not adhering to an existing RTB.

Specialist Groups (SGs) may help to prepare a workprogramme for a project.



Position of Task Forces (TF) and of Specialist Groups (SG) with respect to the Coordinating Committee (CC), consisting of the CTB and RTBs.



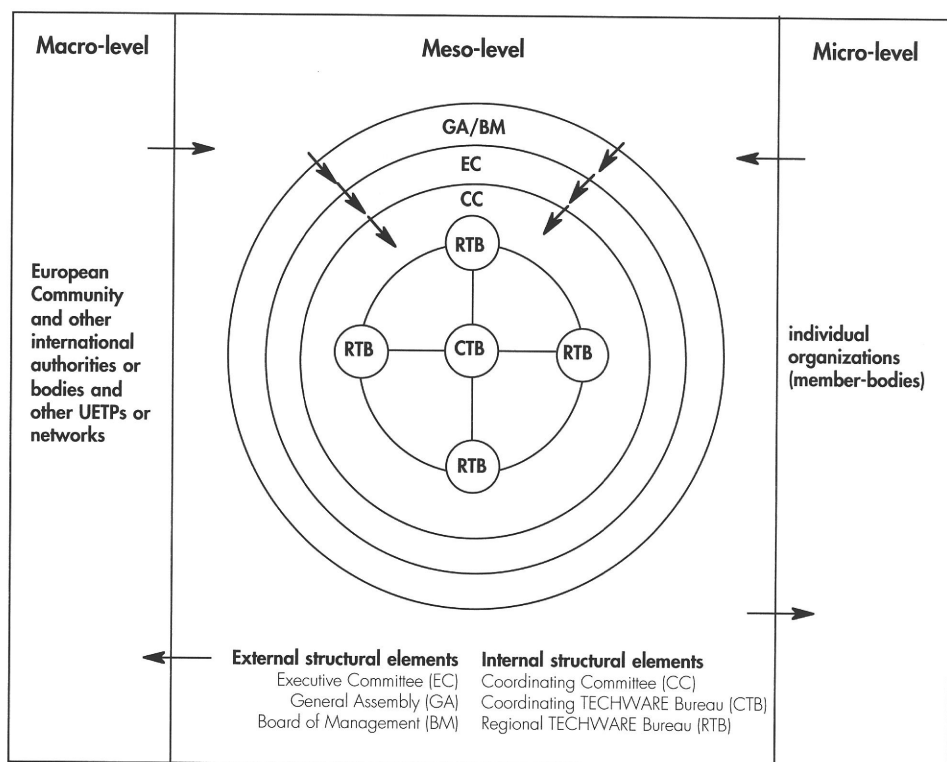
Acknowledgement

The 7th meeting of the BM was a happy experience thanks to the exemplary hospitality and organizational skill of TECHWARE's Vice-president Prof. P. Jacobsen and Ms. Annette Sorensen of the Technical university of Denmark at Lyngby. The participation of Mr. Jens Tuesen, COMETT Committee member, was a support very much appreciated as was also the technical visit to the Lynetten sewage treatment plant, one of the biggest in Scandinavia. The visit was organized by Krüger Consult, a TECHWARE-member.

NEW MEMBERS OF THE BM

The Board of Management of 21 November 1992 co-opted the following new members :

- J. Cunge (F)
Director of Laboratoire d'Hydraulique de France.
- J. Nemeč (CH)
Coordinator of TECHWARE project BEST.
- J. Rodda (CH)
Director of Hydrology and Water Resources, World Meteorological Organization (WMO).



level between the micro-level of the individual members and the macro-level of the EC and other international bodies.

The structural elements described in the Constitution (i.e. the General Assembly, the Board of Management and the Executive Committee) safeguard the cohesion among the members, but it is the **Coordinating Committee (CC)** which forms the collaborative network of nodes :

- **Regional TECHWARE Bureaux (RTBs)** representing the regional dimension of the network and defining the equilibrium between

The overall new structure of TECHWARE

Next Meetings

The new structure of TECHWARE allows to limit the meetings of the BM and the GA to a combined meeting only once a year. This GA/BM will be held in Brussels on 11 June 1993 at the occasion of AQUA-EXPO (7 to 11 June 1993). The meeting will follow the TECHWARE EURO-WORKSHOP on RTD & D for Freshwater Resources Management (see enclosure).

ON YOUR DESK

INTERNATIONAL SCIENCE & TECHNOLOGY CO-OPERATION NEWSLETTER

Organisation for Economic Co-operation and Development. Directorate for Science, Technology and Industry

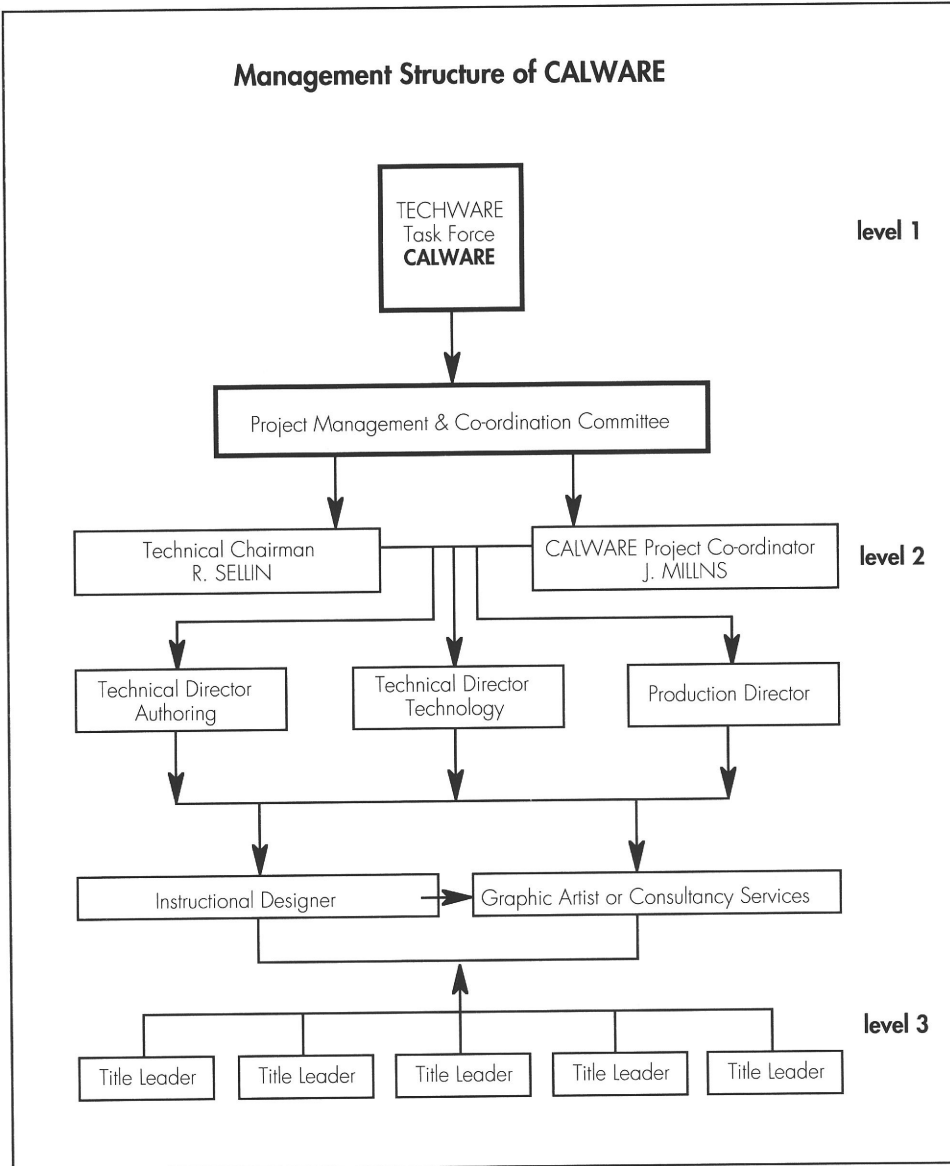
Mr. Mamory Shinohara
Information Clearing House
STP/STI/OECD
2, rue André-pascal
75775 Paris CEDEX 16, France
Fax +33-1-45249767

CALWARE

Computer-Aided-Learning in hydraulics,
hydrology and WATER REsources technology

a major COMETT - strand Cb project of TECHWARE
(1992 - 1995)

Management Structure of CALWARE



The CALWARE meeting at HR-Wallingford on 3-4 November 1992 decided on a series of budgetarial and managerial aspects of the project. The Management Structure is as shown above. Some twenty active partners from 8 European countries are working together for developing high quality multimedia tools for continuing education.

Titles to be developed during the contract period are :

- FLUID MECHANICS
- OPEN CHANNEL FLOW
- HYDRAULICS OF WATER DISTRIBUTION
- IRRIGATION WATER MANAGEMENT
- URBAN DRAINAGE

The products will be especially geared towards end-users in enterprises.

For all further information,
please contact Mr. J. Millns at Regional TECHWARE Bureau-UK.

INFO

INDUSTRIAL AND MATERIALS TECHNOLOGIES BRITE-EURAM II

Commission of the European Communities,
Directorate-General XII for Science, research and
Development
Closing date of the second Call for Proposals
February 26th, 1993

WORKPROGRAMME

Technical Content of Workprogramme of special interest to the readers of PANTA RHEI are :

Area 1 : Materials - raw materials ;
Raw materials and recycling and
Area 4 : Targeted research actions ;
Environmentally friendly technologies
The Guide for Applicants describes :

- Industrial research and focused fundamental research

- Concerted Actions

- Specific training actions

(2% of total budget for research)

- Linked to Brite-EuRam projects

- to train technologists for European industry :

- industrial research fellowships

- specialized courses and conferences

- in-project training to improve exploitation of results, make use of codes and standards, and set up industrial property rights etc.

EC funding

- Research fellowships : fixed amount per month

- Specific grants and courses : to be negotiated with the Commission

Duration : 3-36 months

Call : open Call

Applications can be submitted at any time, throughout the period 1991-1996 after the official launching of the programme.

Research fellowships and subsidies : application forms can be obtained from and should be submitted to : Commission of the European Communities Directorate-General for Science, Research and Development - DG XII-H1

75 rue Montoyer, B-1040 Brussels

Specific grants and support for courses and conferences : applications should be sent to :

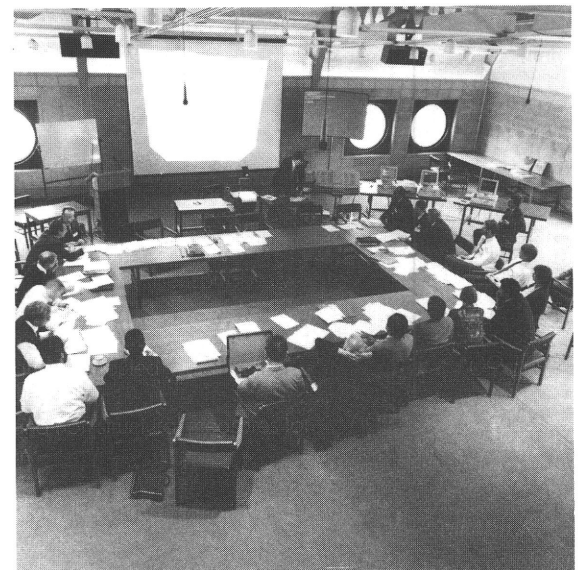
Commission of the European Communities

Directorate-General for Science, Research and Development. Directorate for Technological Research. Brite-

EuRam Specific Training Action - DG XII/C.

75 rue Montoyer, B - 1040 Brussels

Applications sent by telefax cannot be accepted



CALWARE Meeting of 3-4 November 1992

FORTHCOMING TECHWARE ACTIVITIES

EUROPEAN TRAINING COURSES

91-SP 2.2

REGIONAL HYDROLOGICAL SYSTEMS ANALYSIS

*Delft - the Netherlands
14-18 December, 1992*

To provide insight into regional hydrological systems analysis in solving a broad spectrum of water related problems. to provide insight into the close relations between topography, landuse, groundwater recharge, vegetation patterns, groundwater flow path and surface networks. To provide training of modelling regional groundwater flow systems, hydrochemical data processing and the application of GIS during workshops and demonstrations.

92-SP 1.2

WATER AND ENVIRONMENTAL MANAGEMENT River Pollution

*Bristol - United Kingdom
29 March-02 april, 1993*

An introduction to the political economic and legal aspects of pollution control. Assessment of water quality and the impact of pollution. Methods of pollution control, introduction to the use of computer models of river water quality.

92-SP 2.4

WATER AND ENVIRONMENTAL MANAGEMENT Flood Mitigation

*Bristol - United Kingdom
21-25 June, 1993*

Interdisciplinary approach to flood mitigation with an introduction to legal political, engineering, chemical and geographical aspects of flooding. Cause and results of floods are examined as well as methods of flood alleviation.

TECHWARE EUROPEAN TRAINING COURSES - Edition June 1992

A summary of all courses is now available and can be ordered free of charge from the Secretariat. Please fill in and return :

I request the summary of all course descriptions, free of charge.

Name :

.....

Address :

.....

.....

Return to the Editor of PANTA RHEI

92-SP

FLOOD HAZARDS IN THE MEDITERRANEAN COUNTRIES : MONITORING FORECASTING AND MANAGEMENT

*Genova - Italy
June 1993*

Tentative Programme

First Day

Introduction and Course presentation
Prof. F. Siccardi - Prof. L. Ubertini
Meteorological forecasting in the Mediterranean ambient

Dr. Maria Del Carmen Llasat - Dr. S. Palmieri
GIS Application in natural hazard assessment and mitigation

Prof. G.A. Schultz

Second Day

Remote sensing of natural hazard and precipitation by satellites

Dr. E. Barrett

Passive and active microwave sounding of cloud systems (Polar Satellite and Radar)

Dr. J.W.F. Goddard

Third Day

Coherence assessment of multisensor observations

Prof. A. Mugnani - Dr. Levizzani

Risk perception and distributed warnings

Dr. L. Lanza

Civil protection and non-structural measures for hazard mitigation

Dr. M. Conti

AQUATER ISMES-ALENIA Presentation Master plan : Hydrological Risk

Prof. G. Roth

92-SP 2.3

WATER AND ENVIRONMENTAL MANAGEMENT Coastal Defence

*Bristol - United Kingdom
13-17 September, 1993*

This course examines the sea and coastal structures. Computer modelling for the prediction of waves are studied as well as the design of coastal defence structures, such as sea walls. Environmental, geological, legal and economic aspects are also examined.

92-SE 1

Preparing for the 4th Framework Programme

EURO-WORKSHOPS on RTD & D for Freshwater Resources Management

see enclosure in this issue

*Lisbon - Portugal
05-06 April, 1993*

•
*Brussels - Belgium
09-10-June, 1993*

•
*Potenza - Italy
14-15 June, 1993*

•
*Wallingford - United Kingdom
Autumn 1993*

NEWS FROM MEMBERS

NEREIS has a godfather : TECHWARE

Nereis, a new transnational company in the field of urban water management, water supply and sewer technology, was recently founded by two of the most active TECHWARE members : SASTER (Ilva) - RTB-I and HR Wallingford -RTB-UK.

Nereis is established on the premises of the oldest cast iron pipe manufacturer of Italy, TUBIGHISA, in Cogoleto, a nice resort village west of Genoa, on the Tyrrhenian sea-side. The aim of **Nereis** is to support by suitable software and hardware technologies the modernization of the water sector in Italy as well as in the Mediterranean countries.

Central governments have been heavily subsidizing the water sector for decades in order to speed up the process of infrastructural development. Presently water agencies are changing from the state supported condition into private companies, delivering services and quality within the commercial constraints of reliability and budget : the change requires huge efforts on management procedures and technological innovations. **Nereis** is a case in point of the possible outcomes of the transnational co-operation triggered by EC COMETT programme. To the new borne and the parent enterprises the best wishes of the TECHWARE family.

COMETT Programme and TECHWARE trigger Research and Technological Development

Perhaps the best recent illustration of the possible outcomes of TECHWARE, a sectoral University and Enterprise Training Partnership and the well known International Non Profit Making Association, is the close co-operation in which a number of TECHWARE members are working together on an EC funded **SPRINT** training and technology transfer project to promote the use of standard procedures in urban storm water management all among Europe. Groups from UK, Italy, France, and Ireland are looking at how the so-called Wallingford Procedure and UK Industry standards for modelling drainage networks, can be modified to take account of local hydrology in other European countries. In UK the **SPRINT** Project is led by HR Wallingford Ltd. through IHS, the recently

formed subsidiary specialising in urban drainage flow measurement and modelling and Wallingford Software, the subsidiary of HR for software development.

In Italy the **SPRINT** Project is led by SASTER (Ilva group) and operates through ACEA - the water agency of the city of Roma, a smaller water agency north of Milano and two Universities, Politecnico di Milano and La Sapienza di Roma. TECHWARE behaved as culture medium for such an initiative : the UK Regional TECHWARE Bureau was launched at Wallingford where it shares office and administration facilities with HR Wallingford's Training and Technology Transfer, while SASTER, in Italy, is among the original founding members of TECHWARE.

TECHWARE WELCOMES

Joanna Maycock, young graduate from the University of Liverpool (UK), School of Combined Honours S.E.S. , trainee at the CTB in Brussels during 12 months..

Joanna Maycock wrote an interesting thesis of 33 pp. entitled :

THE DEVELOPMENT OF A EUROPEAN COMMUNITY YOUTH POLICY AND THE OBSTACLES TO ITS EFFECTIVE IMPLEMENTATION

Contents :

- The Origins of E.C. Youth Policies 1957-1976
- Youth Policy in the European Community 1976-1985
- The Recent Development of E.C. Youth Policies 1986-1992

And appendices present :

- Appendix 1. The E.C. : Institutions and Legislation
- Appendix 2. Acronyms
- Bibliography

Members of TECHWARE interested to receive a copy of this important document can contact Joanna at the CTB.

Other readers are welcome but will be charged a nominal price for reproduction and mailing.

The Development of a European Community Youth Policy

The development of the EC's policy for young people reflects the development and expansion of the EC's Social Policy as a whole, and similarly reflects the limitations on the implementation of social policies by the EC. Policies towards youth have also reflected a growing aspect of EC activity. Under-25's represent a large and ever-growing proportion of the population of the EC, currently around 40%, and a disproportionately large percentage of the poor, unemployed and low-paid. The EC aims to overcome these problems through a whole range of policies, including measures aimed at creating new job opportunities, providing educational and vocational training facilities, and promoting exchanges of young people.

In the early years of the EC little progress was

made in the field of youth policy, despite the prevailing interest and belief in the cause of vocational training. Education was kept entirely off the EC's agenda, mostly because of the strong connections between education and national sovereignty that were felt throughout the immediate post-war era, and to the present day. It is clear, however that this gap in the EC's youth policy could only be maintained whilst the traditional dichotomy between education and training was maintained.

The oil crisis and ensuing recession in the early 1970's served to force the issue of vocational training onto the political agenda. The early 1970's were notable more for a change of attitude and emphasis than for any concrete policy initiatives. Perhaps the best example of this change in emphasis is the reform of the European Social Fund (ESF) in 1971 involving the incorporation of increasing numbers of young people. In the early 1980s, the roots of a more coherent and positive policy towards youth was emerging in which education and training became part of an EC strategy for economic success against a background of deepening recession and technological change. By far the biggest advances in the development of an EC youth policy have taken place over the last few years, new programmes with significant budgets, such as the COMETT programme, have been developed, while seasoned programmes, such as the ESF have been strengthened. There have been a number of reasons for this, perhaps the most important of which have been technological and demographic change. The expansion of the EC to include Spain and Portugal has also served to highlight disparities between educational and training standards between different regions of the EC. A further factor was the preparation for the signing of the Single European Act (SEA) which gave renewed impetus to economic integration, giving an improved legal base from which to launch social policy initiatives. The SEA led to the creation of a number of new projects in the field of youth policy, with significantly increased budgets. In addition to these factors there has been a shift in attitude which have seen education and training as vital elements of economic and social policy; the connection between human resource development and economic growth has been made.

A vital part of the advances in youth policy over the last few years has been the merging of educational and training initiatives under the 'Task Force For Human Resources' (created in 1989) which has enabled the creation of a much more coherent policy approach. Since 1985 a wealth of new policies aimed at improving education and training within the EC have emerged, such as LINGUA (EC scheme, launched in 1988 to combat the lack of language skills within the Community), COMETT (Community Action Programme in Education and Training for Technology, launched in 1987), ERASMUS (European Community Action Scheme for the Mobility of University Students) and TEMPUS (Trans-European Cooperation Scheme for Higher Education).

Joanna Maycock

TECHWARE Membership Dues 1993

Decisions of the General Assembly
Lisboa, 12 June 1992

- Individual Consultant 210 ECU
- University, Research Institute (Lab or Dept.),
School/Non-commercial 230 ECU
- Enterprise/Undertaking/Authority
(less than 200 employees)
COMETT Size codes S1-S2-S3 315 ECU
- Professional and Scientific Association,
UETP'S, Federation of Enterprises 420 ECU
- Enterprise/Undertaking Authority
(more than 200 employees)
COMETT Size codes S4-S5-S6-S7 525 ECU

To advertise your vacancies
contact the Editor : Fax +32-2-6413022
NEXT COPY DEADLINE : 1 February 1993

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natural gas distribution

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INFLUENCING THE EUROPEAN COMMUNITY

Guidelines for a Successful Business Strategy
By : Cecilia Andersen

BF 2.558 Hardback
ISBN 0-7494-0447-7 (368 pages)
Published by Kogan Page April 1992

COMETT Conference Proceedings

Amsterdam 13-15 November 1991

'Towards new models of university-industry cooperation: the example of COMETT'

Published on behalf of the Task Force Human Resources,
Education, Training and Youth of the Commission of the
European Communities by the COMETT Information Centre in
The Netherlands.

For more information :

COMETT Information Centre in the Netherlands
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Price (including bank charges and mailing costs) :
First copy Hfl 75, each subsequent copy Hfl 55.

RESEARCH TRAINING



TECHWARE was successful for its application called WEEL within AREA 2 "Networks among research teams and laboratories for S & T co-operation" of HCM-HUMAN CAPITAL and MOBILITY, the specific RTD subprogramme of the third Framework Programme (1990-1994) of CEC-DGXII.

WEEL - Water Environment European Laboratories

is a Pan-European scientific network, subset of TECHWARE, for integrating the disciplinary components of the water sciences and technologies and the regional dimension of water RTD.

WEEL comprises 30 participants from A, B, F, GR, I, P and UK. The accepted project with a budget of 480,000 ECU will be managed by a Task Force of TECHWARE, following the decision of the Board of Management of TECHWARE (this issue).

Task Force - leader is Prof. F. Siccardi (University of Genoa, Italy). For all further information, please contact Regional TECHWARE Bureau Italia.

BEST-Building of Extension of S&T network TECHWARE/WEEL in Central and Eastern Europe

The decision about TECHWARE's application called BEST within the parallel programme of CEC-DGXII for Co-operation in S & T with Central and Eastern European countries (COST-CEEC) is not yet known. It is likely that the success of WEEL within HCM will be an asset for BEST.

EGS XVIII General Assembly

Co-editor of PANTA RHEI, Prof. P.E. O'Connell is Vice-President of the **European Geophysical Society (EGS)** and announces the EGS XVIII General Assembly, Wiesbaden (D), 3-7 May 1993.

EGS offers : YOUNG SCIENTIST TRAVEL AWARDS and EAST EUROPEAN SUPPORT AWARDS. Deadline : 15 December 1992



Of special interest is Hydrological Sciences Session HS6 : **Water in the new Europe : scientific and management issues.**

Convenors : N.W. Arnell (Wallingford) and J. Wessel (Delft)

Contact : EGS Office
Postfach 449, Max-Planck-Str.
WV-3411 Katlenburg-Lindau
Federal Republic of Germany
Tel +49-5556-1440 • Fax +49-5556-4709
SPAN: LINMPI::EGS
EARN: U0085@DGOGWDG5

UNESCO/WMO/ICSU Fourth Joint International Conference on Hydrology UNESCO, Paris, 22-27 March 1993

International Conference on Hydrology Towards the 21st Century : Research and Operational Needs

Objectives

This Conference will offer a forum for the free exchange of views on the present status of hydrological sciences and practices and future needs in research and operational activities.

The Meeting

The Conference will be conducted at two levels :

Plenary Sessions : presentation and discussions on the international programmes : IHP, OHP, IGBP and other hydrology-related ICSU programmes. Discussion on proposals by the different groups.

Group Sessions : these groups will consist of about 10 members, selected on a language basis by the Convenors of the meeting. Each group will nominate a Rapporteur to prepare a very short report on the findings of the discussions.

Main themes of the Conference

Four themes were identified for discussion

1. Hydrological research
2. Operational hydrology
3. Interdisciplinary activities
4. Training and capacity building.

There will be two keynote presentations on each theme, one from a representative from a developed country and the other by a representative from a developing country.

Contact :

UNESCO, Water Sciences Division.
7, Place de Fontenoy, F-75700 Paris
Fax : +33-1-45675869

Towards the
**FOURTH FRAMEWORK
PROGRAMME of
CEC-DGXII
for Science, research and
Development 1994-1998**

National Science Policy authorities have received the proposal for Council Decisions concerning the Fourth Framework Programme of Community activities in the field of Research and Technological Development (1994-1998).

The proposal is based on the communication of the Commission dd. 9 April 1992 entitled: "**Research after Maastricht : an assessment, a strategy**".

The new framework programme stresses the importance to encourage enterprises, including small and medium-sized enterprises (SME), research centres and universities in their RTD activities and, to that end, to support their efforts to cooperate with one another. SMEs especially will be stimulated to make significant contributions to the innovation processes. Particular attention will be paid to their access to information and to enhancement of their ability to exploit the results of Community research. Important principles of the 4th framework programme following the Treaty on European Union are a.o. : objectives related to economic and social coherence and the harmonious development of the Community and subsidiarity.

Examples of proposed actions which can be better organized at Community level includes first, "**big science**" activities, involving international initiatives (e.g. GLOBAL CHANGE) ; secondly, activities involving "**generic technologies**" ; thirdly, activities designed to organize the "**single market**" ; fourthly, "**pre-normative research**" for the preparation of standards, norms and regulation ; fifthly, activities to assist the European scientific community to develop Community-wide integrated systems of **Networks and Mobility programmes**.

Four activities are defined with a thematic content. Each theme will be implemented through specific programmes according to selection criteria based on the above principles.

FIRST ACTIVITY

Implementation of RTD and demonstration programmes, by promoting co-operation with and between undertakings, research centres and universities.

This activity includes :

- Information and communication technologies
- Industrial technologies
- **Environment** with themes
 - 22 GLOBAL CHANGE
 - 23 EUROPEAN SOIL AND WATER RESOURCES INCLUDING DESERTIFICATION
 - 24 ENVIRONMENTAL QUALITY AND HUMAN HEALTH
 - 25 NATURAL HAZARDS
 - 26 INNOVATIVE TECHNOLOGIES AND INFRASTRUCTURE FOR MARINE AND POLAR RESEARCH
- Life sciences and technologies
- Energy

SECOND ACTIVITY

Promotion of cooperation in the field of Community RTD and D with third countries and international organizations.

Theme 2 on COST with CEEC emphasises the mobility of scientists and the development of PAN-EUROPEAN SCIENTIFIC NETWORKS.

Theme 3 on COST with developing countries gives priority to joint research and the development of HUMAN CAPITAL.

THIRD ACTIVITY

Dissemination and optimization of the results of activities in Community RTD & D.

Theme 1

"The Research-Industry interface" a.o. comprises networks of national/regional relay centres which will provide access to the results and supply information.

Theme 2

"The Research-Scientific Community Interface" mentions a.o. advanced means of diffusion on Community R & D (MULTIMEDIA PUBLICATION SYSTEMS).

Theme 3

"The Research-Society Interface" addresses "technology assessment".

Theme 4

"Technology Transfer (SPRINT)" continues the support of NETWORKING of technology transfer organisations and sectoral technology centres in view of their European orientation.

FOURTH ACTIVITY

Stimulation of the training and mobility of researchers in the Community.

with themes :

1. TRAINING AND MOBILITY OF YOUNG RESEARCHERS
2. SCIENTIFIC AND TECHNICAL NETWORKS
3. INDUSTRY-ACADEMIA INTERWORKING
4. INCENTIVES FOR THE EUROPEAN SCIENTIFIC COMMUNITY

Research after Maastricht : an assessment, a strategy

Communication from the Commission to the Council and the European Parliament. (SEC(92)682 final)

Bulletin of the European Communities
Supplement 2/92

L-2985 Luxembourg :

Office for Official Publications of the
European Communities

1992 - 79 pp. - 17.6 x 25.0 cm

ISBN 92-826-4307-7 / Price : ECU 5

After analysing the situation in Europe in the field of research and technological development, examining the possibilities opened up by the Maastricht Treaty and assessing what the Community has achieved so far, this communication indicates how the Community's strategy in this area should be developed in the years ahead by redirecting activities, and by focusing on technological priorities reflecting industry's needs.

Contents

Introduction : 1992 : A pivotal year

I The World competitive context

- A The global dimension
- B The industrial and technological dimension
- C The industrial enterprise dimension

II The role of Community policy

- A Increasing demand
- B Improving supply
- C A policy for the system : standardization

III Beyond 1992 : A Community strategy

- A An assessment : darkness and light
- B An objective : to reorientate our activities
- C A constraint : rapidity and effectiveness
- D A principle : subsidiarity
- E An opportunity : the coordination of national policies
- F An ambition : making a success of Maastricht in research

IV Acoherent framework of proposals

- A The position of research in the 1993-97 financial perspectives
- B Towards the fourth framework programme
- C Linking decisions for 1993-94

Annexes

NOTE : In view of PANTA RHEI's objectives, this calendar includes only educational and training or related activities in the field of water and ERASMUS-ICP, TEMPUS-JEP, COMETT and HCM or COST-CEEC meetings. These announcements are made free of charge.

Advertising of other activities such as Conferences, are welcome. See rates on page 15. Please contact the Editor.

JANUARY 1993

06-08/01
Davis, California (USA) **1**
Courses on HEC water engineering simulation models
Data Storage System (DSS).
Applications for HEC Models.

18-22/01 **2**
Cagliari (I)
HYDROCONTROL Courses
Monitoraggio delle acque sotteranee, modelli di flusso e di trasporto.

20/01 **3**
London (UK)
BICS Conference
EC Legislation & Water Quality.

FEBRUARY 1993

08-12/02 **2**
Cagliari (I)
HYDROCONTROL Courses
Sprechi, perdite e metodi do contenimento.

08-13/02 **4**
Lucerne (CH)
COMETT Advanced Education Course
Evaluation of impacts and priority settings in environmental management.

10-13/02 **5**
Brussels (B)
European Student Fair

10-13/02 **13**
Brussels (B)
Exhibition and Conference
European Association for the Development of Databases in Education and Training.

24-26/02 **6**
Freiburg (D)
Seminar course
Water quality management for inland water.

MARCH 1993

05-08/03 **19**
Brussels (B)
The Budapest Student Fair '93

09-12/03 **7**
Texel (NL)
6th Advanced Course on Ecotoxicology

15-19/03 **8**
Cagliari (I)
HYDROCONTROL Courses
Normativa e tecnologie di trattamento per il reimpiego e lo smaltimento delle acque reflue.

21-24/03 **8**
Cambridge, Massachusetts (USA)
The Tenth International Conference on Technology and Education.

22-26/03 **9**
Trondheim (N)
UETPEEE /Short Modular Course
Environmental Safety Education.
Safety Management.

22-27/03 **10**
Paris (F)
International Conference on Hydrology
Group Session : Training and capacity building.

29/03-02/04 **12**
Bristol (UK)
TECHWARE ETCourse 92-SP1.2
Water and Environmental Management. River Pollution.

29/03 - 02/04 **1**
Davis, California (USA)
Courses on HEC water engineering simulation models
Water Surface Profile Computation : HEC-2 Microcomputer Applications.

29/03-03/04 **4**
Nice (F)
COMETT Advanced Education Course
Evaluation of impacts and priority settings in environmental management.

APRIL 1993

April 1993 - 6 days **14**
Gödöllő (H)
Short intensive course EWA-Ring
Agroecological aspects of water management and land reclamation.

05-06/04 **11**
Lisbon (P)
TECHWARE EURO-WORKSHOP 92-SE1
RTD & D for freshwater resources management.

05-09/0 **2**
Cagliari (I)
HYDROCONTROL Courses
Strumenti di misura, di regolazione e di controllo.

19-21/04 **1**
Davis, California (USA)
Courses on HEC water engineering simulation models
Sediment Transport Calculations : HEC-6 Microcomputer Applications.

20-23/04 **7**
La Rochelle (F)
Course
Estuarine ecology and coastal management.

27/04 **16**
Berlin (D)
BWK-Symposium on training engineers in water and waste

MAY 1993

03-07/05 **9**
Trondheim (N)
UETPEEE /Short Modular Course
Environmental Safety Education.
Safety Management.

04-06/05 **17**
London (UK)
Conference
International Training Equipment Conference-Incorporating Simulation in Concurrent Engineering.

10-12/05 **1**
Davis, California (USA)
Courses on HEC water engineering simulation models
Hydraulic Analysis of Dam Failure : DAMBRK Microcomputer Applications.

10-14/05 **2**
Cagliari (I)
HYDROCONTROL Courses
Sistemi di automazione e di teleoperazione.

23-28/05 **18**
Washington, DC (USA)
Several Short Courses
1993 International Conference on Hydro-Science & Engineering.

24-28/05 **2**
Cagliari (I)
HYDROCONTROL Courses
Monitoraggio delle acque sotteranee, modelli di flusso e di trasporto.

24-29/05 **4**
Urbino (I)
COMETT Advanced Education Course
Evaluation of impacts and priority settings in environmental management.

JUNE 1993

Genova (I) **11**
TECHWARE ETCourse 92-SP1.5
Flood hazards in the Mediterranean countries : Monitoring and forecasting management.

07-11/06 **2**
Cagliari (I)
HYDROCONTROL Courses
Telerilevamento, elaborazione di immagini e sistemi informativi territoriali.

07-12/06 **20**
Leuven (B)
International Post-graduate Course
Soil Pollution and Soil Protection.

09-10/06 **21**
Brussels (B)
TECHWARE EURO-WORKSHOP 92-SE1
RTD & D for freshwater resources management.

14-15/06 **11**
Potenza (I)
TECHWARE EURO-WORKSHOP 92-SE1
RTD & D for freshwater resources management.

14-18/06 **1**
Davis, California (USA)
Courses on HEC water engineering simulation models
Flood Plain Hydrology : HEC-1 Microcomputer Applications.

21/06 **1**
Davis, California (USA)
Courses on HEC water engineering simulation models
Floodplain : How is it defined ?

21-25/06 **12**
Bristol (UK)
TECHWARE ETCourse 92-SP2.4
Water and Environmental Management. Flood Mitigation.

21-25/06 **2**
Cagliari (I)
HYDROCONTROL Courses
Sprechi, perdite e metodi do contenimento.

21-26/06 **14**
Poznan (PL)
Training Seminar EWA-Ring
Water resources conservation and pollution spread control within rural areas.

JULY 1993

05-09/07 **2**
Cagliari (I)
HYDROCONTROL Courses
Gestione delle emergenze : manutenzione e scorte.

19-23/07 **2**
Cagliari (I)
HYDROCONTROL Courses
Normativa e tecnologie di trattamento per il reimpiego e lo smaltimento delle acque reflue.

AUGUST 1993

16/8-26/11 **14**
Wageningen (NL)
32nd International Post-Graduate Course on Land Drainage

30/08-03/09 **22**
Dublin (IRL)
8th World Conference on Co-Operative Education.

SEPTEMBER 1993

Autumn 1993 **12**
Wallingford (UK)
TECHWARE EURO-WORKSHOP 92-SE1
RTD & D for freshwater resources management.

September 1993 **23**
Edinburgh, Scotland (UK)
Glasgow, Scotland (UK)
Msc Course for Water Engineers
Water Resources. Management & Engineering.

06-11/09 4
 Portugal
 COMETT Advanced Education Course
**Evaluation of impacts and priority
 settings in environmental manage-
 ment.**

06-11/09 25
 The Hague (NL)
 15th International Congress on
 Irrigation and Drainage
**Research and training programs
 and their influence on institutional
 management performance.**

13-17/09 12
 Bristol (UK)
 TECHWARE ETCourse 92-SP.3
**Water and Environmental Manage-
 ment. Coastal Defence.**

13-17/09 2
 Cagliari (I)
 HYDROCONTROL Courses
**Strumenti di misura, di regolazione
 e di controllo.**

20-24/09 24
 Lodz (PL)
 2nd East-West Congress on
 Engineering Education
**Enhancing Engineering Education
 Research.**

OCTOBER 1993
 06/10 25
 Budapest (H)
 Seminar of the IWSA Foundation for
 the Transfer of Knowledge
**Continuing education needs for
 Integrated Water Resources ,
 World-Wide.**

11-15/10 2
 Cagliari (I)
 HYDROCONTROL Courses
**Sistemi di automazione e di
 teleoperazione.**

NOVEMBER 1993
 Bangkok, Thailand 26
 Pre-conference short course
**Environmentally Sound Water
 Resources utilization.**

15-19/11 2
 Cagliari (I)
 HYDROCONTROL Courses
**Telerilevamento, elaborazione di
 immagini e sistemi informativi
 territoriali.**

DECEMBER 1993
 13-17/12 2
 Cagliari (I)
 HYDROCONTROL Courses
**Gestione delle emergenze :
 manutenzione e scorte.**

1994
 29/08-02/09 27
 Prague (PL)
 International Workshop
Post-graduate hydrology education.

A D D R E S S E S

- | | | | |
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November 8-11, 1993
 Ambassador Hotel, Bangkok, Thailand

INTERNATIONAL CONFERENCE

*Environmentally
 Sound Water Resources Utilization*

Deadline of abstract • 500 words •
 31 December 1992

Themes :

1. Environmental, economic and social assessment of water use activities.
2. Assessment and forecasting of water resources availability and water demands.
3. Offstream water use such as irrigation, urban and rural water supply, industrial water uses, etc.
4. Instream water use such as hydropower generation navigation, salinity intrusion and recreation, etc.
5. Combined offstream and instream water uses.
6. Financing and legal aspects of water resources projects.
7. Organization and institutional implications on environmentally sound with resources utilization.

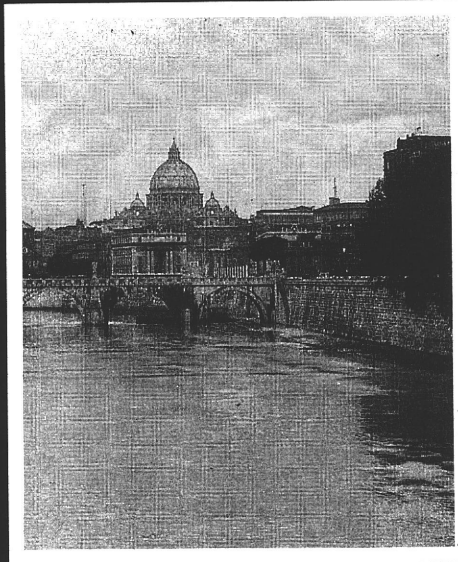
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CALENDAR

International Congress

METROPOLITAN AREAS AND RIVERS

Rome, 5/8 December 1993
Centro Multimediale
Montemartini
Via Ostiense, 104/c ROMA



Organized by **ACEA**
Azienda Comunale
Energia e Ambiente

Under the aegis of:

IWSA
International Water
Supply Association

and

IAWPRC
International Association
Water Pollution
Research and Control

General programme

Session 1

Quality of rivers in metropolitan areas

Part I

A) Present situation

A1) - case studies giving the history and current situation of water quality in river systems.

Part II

B) Quality objectives

B1) - uses of rivers and the associated quality objectives and standards (drinking, amenity and landscape, recreation and bathing, aquatic life, irrigation, etc.)

B2) - biological classification systems

B3) - EQS and fixed emission standards

B4) - emergency situations and minimum flow considerations

Part III

C) Monitoring methods

C1) - general paper on the requirements for monitoring both river quality standards and at intakes to water treatment works

C2) - case studies:
on sampling and analysis
on online monitoring systems

C3) - intake protection systems

C4) - new technology: models, systems and sensors, standards

Session 2

Planning and management problems

Part I

D) Legal and institutional aspects

D1) - intercountry organization eg. Rhine, Danube

D2) - regulation of sewage and industrial discharges

D3) - controls on agricultural practices

D4) - availability of river quality data

D5) - controls over discharges to sewers

D6) - control over manufacture and sale of polluting substances eg. pesticides

D7) - experience of river authorities

Part II

E) Technical aspects

E1) - urban drainage system and need for an integrated approach to control both flow and the pollution impact on the river

E2) - wastewater treatment, particularly the visual and odour problems of building facilities and plant in an urban environment; the question of nutrient removal

E3) - the use of models to achieve the most cost-effective solution

E4) - dealing with accidental spills of chemicals

Part III

F) The river: an element of the city

Case studies:

F1) - as an amenity looking from the bank

F2) - as an amenity looking from the river - landscaping and buildings

F3) - control of depth changes

F4) - appearance and odours

F5) - river walks

F6) - a means of transport for goods and people

F7) - use for recreation: boats, water skiing, windsurfing

F8) - recreational fishing

Organizing Committee

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Official Languages of the Congress

Italian and English with
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Summaries

To be presented in one of the two
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A quarterly information bulletin edited on behalf of the partners in the field of hydrology, water management and water resources technology. It is published with the financial support of the European Community within the framework of the ERASMUS, COMETT and TEMPUS programmes and distributed free of charge. The present distribution is 5,000 copies. Issues are published in September, December, March and June.

OBJECTIVES OF PANTA RHEI

An efficient and continuous way of communication among all ERASMUS, COMETT, TEMPUS, HCM and COST-CEEC partners, both active and prospective, and among students and training participants with interest in water related fields.

Service to the

- ICP-Interuniversity Cooperation Programme "Hydrology and Water Management"
- JEP-Joint European Project : "Interuniversity Coordinating Forum for East-West Cooperation in the field of Environment, Water and Agricultural Soils (EWA-Ring)"
- UETP-University Enterprise Training Partnership : TECHWARE-TECHnology for WATER RESources.
- TECHWARE-WEEL-BEST pan European scientific network "Water Environment European Laboratories"

Dissemination of activities or proposals of partners, in particular,

- transnational exchanges of students, young graduates and staff
- joint development of full curricula or specific training tools
- crash or intensive courses
- analysis of training needs

Information about other water related training activities, including research training.

Promotion of a European dimension in the field of water-related education and training.

"panta rhei"

all things are in constant flux.

It is an axioma of Heraclitus (c. 540 - c. 480 BC), Greek philosopher of Ephesus, quoted by Plato. Heraclitus is also known for illustrating the persistence of unity through change by the analogy of the river : "Upon those who step into the same river different and ever different waters flow down".

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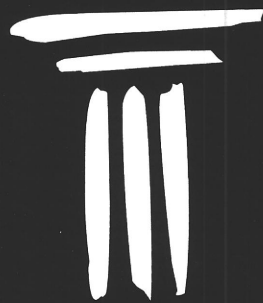
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Informatie Bulletin voor 'Onderwijs in hydrologie en waterbeheer' en 'Opleiding voor technologie van de watervoorraden'

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