

PANTA RHEI

Enclosure !

**COMBINED SEWER
OVERFLOWS (CSO)
Information Sheet**

Information Bulletin for 'Education in Hydrology and Water Management' and 'Training for Water Resources Technology' within the framework of the HUMAN RESOURCES and MOBILITY Programmes of the European Union (EU)

A QUARTERLY BULLETIN

N° 20 - JUNE - 1994

CALWARE

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

CC

Coordinating Committee of TECHWARE.

CEC

Commission of the European Community.

CEEC

Central and Eastern European Countries.

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

Executive Committee of TECHWARE.

ECTS

European Community Course Credit Transfer System (ERASMUS)

EP

European Parliament (EU).

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.

EU

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

EWA Ring

JEP (TEMPUS) in the field of Environment, Water and Agricultural soils.

FORCE

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

HCM

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

ICP

Interuniversity Cooperation Programme (ERASMUS).

IP

Intensive Programme (ERASMUS).

JEP

Joint European Project (TEMPUS).

LEONARDO

Vocational training programme 1995-1999 of CEC.

MATECH

European Center for MATHEMATICS and TECHNOLOGY of urban water pollution, network of HCM programme (of DG XII).

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).

SG

Specialist Group for preparing a future TECHWARE activity.

SME

Small- and Medium sized Enterprise.

SOCRATES

Educational programme 1995-1999 of CEC.

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, TECHWARE-UK&IRL and TECHWARE-Vlaanderen 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).

TF

Task Force for a given activity of TECHWARE.

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.

le magazine

for Education, Training and Youth in Europe

The new publication of the European Commission - Spring 1994 - Issue 1

The new magazine reflects the new approach to be implemented after 1 January 1995 : it replaces the various newsletters of the first generation of programmes (ERASMUS, COMETT, LINGUA, TEMPUS, EUROTECNET, FORCE, IRIS, PETRA, ARION ...) and aims to provide a coherent and succinct view of the three integrated programmes : SOCRATES for education, LEONARDO for training and YOUTH FOR EUROPE III.



WHAT ARE THE BENEFITS OF STUDENTS PLACEMENTS ?

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 placements 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.

DEMANDS from STUDENTS : See reverse side

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 200 and 300 ECU per month and is supplementary to any other grant or contribution offered by the enterprise or other organisation.

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Coordinating
TECHWARE
Bureau
c/o CIBE - BIWM
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B-1000 Brussels
Belgium

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Via SS. Giacomo
e Fillipo
I-16122 Genoa
Italy

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+39-10-8343284

RTB-UK&IRL
Regional
TECHWARE
Bureau U.K.
and Ireland
c/o HR WALLINGFORD LTD.
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Oxfordshire
United Kingdom

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c/o WEL vzw.
Marktplein 16
B-2110 Wijnegem
Belgium

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+32-3-3537253
FAX
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Code

Home Country

Proposed
Host CountryDuration
(months)

Topic proposed

DEMANDS FROM
STUDENTS

15 - 05 - 94

OTHER TOPICS ARE NEGOTIABLE

DT94-216	B	anywhere	12	River & Basin MG/Water analysis/Modelling River basins.
DT94-228	E	F/I/P/UK	3	Geological areas.
DT94-284	E	UK/IRL	10	Economics.
DT94-230	B	IRL/UK/F	6	Hydrogeology: Groundwater exploration.
DT93-202	UK	D/B/DK	3	Civil Engineering.
DT93-206	UK	D/F/B	3	Civil Engineering.
DT94-292	S	UK/F	6	Hydraulic, research centre.
DT94-218	I	D=IRL=UK/B=E=DK	3/6	Nuclear activity.
DT92-140	B	UK/NL/D	3	Environ, Engineering, Water Resources.
DT94-308	IRL	D/UK/DK	3	Water pollution/Monitoring water quality.
DT93-180	UK	B	not specified	Agricultural & Food & Environment.
DT94-227	E	F/I/P/UK	3	Geology areas.
DT93-196	I	F/NL/S	6	Waste water treatment.
DT94-225	E	B/NL/F/I/CH	5	Geological areas.
DT94-295	F	IS/DK/UK	6	Water engineering & environm. science.
DT94-214	UK	E/NL/F	12	Hydraulics-civil engineering.
DT93-207	D	B/F/UK=IRL	3/4	Computer Science & Economics.
DT94-297	UK	F/B/NL	3	Hydraulic design, Civil engineering.
DT94-215	UK	E/F/NL	12	Hydraulic-Civil Engineering.
DT94-219	UK	E	3-12	Hydrological Technology-Environmental.
DT94-293	GR	B/F/LX	6	Photovoltaic systems, solar energy ...
DT94-302	I	E	12	Water treatment/Monitories water quality.
DT93-205	UK	F/N	3	Civil Engineering.
DT94-301	S	B	6	Media communications & Public relation.
DT93-183	B	UK/N/DK	9	Water Environment.
DT94-221	I	NL/UK/E	4	Wastewater treatment-Civil engineering.
DT94-280	B	I/F/DK	6	Environmental planning, Bio-samples & water.
DT94-224	B	IRL/UK/NL	12	Mass communication technologies.
DT94-306	N	F/B/L/CH	3	Assistant/Management trainee.
DT93-176	E	F/UK/L	6-9	MK, EM, Management.
DT94-213	B	NL/F	6	Water resources - A.11 (Estuaries Mn).
DT93-198	UK	F/E/SF	3	Civil Engineering.
DT94-287	F	B=CH,IRL=L	3	Waste treatment.
DT94-283	D	anywhere	6	Communication and medical electronics.
DT94-226	UK	I	3	Civil Engineering/Hydraulics engineering.
DT93-203	UK	D/B/F	3	Civil engineering.
DT94-305	N	E-UK-B-IRL	3	Office for cultural affairs/Export marketing.
DT94-229	UK	F/CH/E	12	Environmental Management Technology.
DT94-291	B	DK=SF=N=S/UK=IRL	6	Civil Water Engin./Sanitary Engin./Environm.
DT94-199	A	B	3-9	Marketing, Finance.
DT94-281	UK	F/B/S	8	International Business.
DT94-290	D	UK/DK/NL	12	Energy of sea-waves.
DT93-172	I	UK/NL/DK/IRL/N	6	Leakage treatm. & supplying water treatm.
DT94-303	F	UK/CH/D	4	Water treatment/Environmental protection.
DT94-220	UK	F/D/E	9-12	MK or management.
DT93-201	UK	F/D	3	Civil Engineering.
DT93-199	UK	F/IRL/CH	3	Civil Engineering.
DT94-304	UK	D/B/I	12	Engineering computer application CAD/CAM.
DT94-288	E	B/UK/DK	6	Waste water treatment, water pollution, environm.
DT94-300	A	B	4-5	International Business & Economic Studies.
DT94-212	UK	F(3)/E(8)	3-8	MK, MN & economics.
DT94-294	UK	F	4-6	Water engineering.
DT93-200	UK	F/E/P	3	Civil Engineering.

Fill in the form below and return to : • RTB -I if your first choice is Italy • RTB-UK&IRL if your first choice is UK or IRL
• RTB-VL if your first choice is Belgium • CTB in any other case

TECHWARE • SPES
Please type or use block letters

Name :
 Enterprise :
 OR University :
 Address :
 Tel : Fax :
 Please send me the SPES Vademecum including application forms and prototype agreement
 full information about the STUDENT Code No. ...
 Date : Signed :M.

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

ATTENTION : Only registered students or young graduates of an institution of higher education within the EC and EFTA countries can apply for a COMETT-placement grant.

SOURCES is a monthly UNESCO magazine (ISSN 1014-6989). The November 1993 issue describes "THE DELORS COMMISSION : WHAT EDUCATION FOR THE XXIst CENTURY ?"

This Commission is composed of 16 members and chaired by Jacques DELORS. It will in 1995 present its suggestions and recommendations which, according to its mandate, can "serve as an agenda for renewal and action for policy makers and officials at the highest level". Education might make all the difference. It could help us overcome the great dangers we face ... the demographic boom, the destruction of the natural environment, the "unemployability" of a growing fraction of the working population.

Mastering scientific and technological progress and acquiring the wisdom needed to make more even-handed use of our power over nature by applying progress to the interests of humankind : this challenge can only be met through education. This is also the view of the "Ad-Hoc Forum of Reflection" of 21 intellectuals, the "Council of Sages" : solutions to most of the problems facing humanity ... are to be found principally in education".

The Council proposes "Learning without Frontiers", ... not so much a matter of distance learning as of a type of education abolishing distances.

Are we really heading towards "Learning Organizations" of the XXIst century? It might be that one realises more and more that the post-education performance of an individual is not guaranteed without a post-investment in continuing education and training.

The Editor

Readers Profile

Based on the responses of the mailing-update of last year, the readers of PANTA RHEI have the following profile :

TYPE OF ACTIVITIES

53%	Univ. or Educat. Institution
27%	Research Institute
5%	EC-Administr. or related Institution
12%	National, Regional or local gov. Administr.
3%	United Nations Agency or International Agency
5%	Non-gov. Organization
7%	Water or Wastewater Authority
0%	Power Authority
11%	Consultant
1%	Contractor
1%	Equipment supplier or manufacturer
5%	Other

JOB

4%	Student or trainee
36%	Teacher or tutor
44%	Researcher or technology specialist
39%	Manager/Director
6%	Designer/Programme officer
1%	Operator/Field officer
0%	Supplier or commercial agent
11%	Other

FIELD OF ACTIVITY

51%	Water resources (general)
11%	Hydraulics
23%	Hydrology
5%	Hydrodynamics, fluid mechanics
16%	Surface water
18%	Groundwater
10%	Water supply
17%	Waste water
13%	Drainage, irrigation, land reclamation
8%	River engineering, flood protection
2%	Hydropower, hydraulic machinery
7%	Informatics
6%	Remote sensing, teletransmission
20%	Pollution control
33%	Environmental assessment
10%	Legislation and administration
15%	Other

CONTENTS

Please post Enclosures :

- SPES
- ETC
- CSO Specialist Group

Editorial	3
ERASMUS	4
TEMPUS	6
COMETT-TECHWARE	8
TECHWARE-ETC	13
HCM - WEEL & MATECH	16
WORLD NEWS	18
Calendar	19
Miscellanea	22
Editors	23

This section was published for the first time in issue No. 10, 1991 of PANTA RHEI. It contains excerpts from literature (prose or poems) where water is the source or muse of the author/poet. Why calling it FRACTALS ?

"Fractal mathematics offers a natural way to describe irregular patterns if they contain fine structure that is encountered repeatedly over a range of spatial and temporal scales" (P. Meakin, in Bras, R. EOS, Vol. 7 No. 2).

Is literature not the elegant description of the irregular pattern of human life, containing elements encountered repeatedly all over the world and time after time ?

An excellent book of "fractals" (a "livre de chevet") is **"Le nozze di Cadmo e Armonia"** by Roberto Calasso, director of the famous Adelphi Edizioni, Milano.

In the French translation by Editions Gallimard, 1991, the story of Olympia (Peloponesos, Greece) and its river Alpheos, a wonderful fractal, goes as follows (pp. 179-182) :

"Ce lieu est le don d'un homme qui devient un fleuve, Alphée (...). ... Pausanias rend au moins trois fois hommage à l'Alphée : «le plus grand des fleuves par le volume de ses eaux, et celui qui est le plus agréable à la vue»; fleuve «fabuleux pour l'amour», à cause de son origine; enfin, pour Zeus, «le plus délicieux de tous les fleuves» (...). Alphée était (un chasseur), qui, un jour, «se transforma en fleuve par amour» (pour Aréthuse, une nymphe d'Artémis, qui se transforma en une source). Ce fut l'unique amant qui, lorsque son aimée devint eau, accepta lui aussi de se faire eau, sans se laisser endiguer par les contours d'une identité. Il atteignit ainsi une union telle qu'aucun homme et aucune femme n'avaient connue, l'union de deux eaux douces qui bientôt se jettent ensemble dans la mer. L'oracle de Delphes se porta garant de la vérité de l'histoire de l'Alphée, dont il voulut témoigner avec quelques-uns de ses plus beaux vers : «De quelque part, dans le champ embrumé de la mer, / là où se trouve Ortygie, près de Trinacrie, / la bouche écumeuse d'Alphée se mêle / à la source jaillissante d'Aréthuse». Alphée et Aréthuse : eau avec eau, source qui jaillit de la terre, courant qui remonte des profondeurs marines, rencontre de deux lymphes qui ont voyagé longtemps, approche érotique extrême, pérennité heureuse, absence de remparts sur le monde, paroles gargouillantes".



ERASMUS

NEWS from ERASMUS

ICP : Interniversity Cooperation Programme "Hydrology and Water Management"
Coordinator : Prof. A. Van der Beken • Address : see Editor

ERASMUS Bureau

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NEWS from ICP-93-B-1138 Hydrology and Water Management

THE PAST

This ICP, established in 1989 with 9 partners in 7 EC-Member States, has grown to one of the largest networks with 42 partners from 14 EE and EFTA-countries in the 1994-95 proposal.

Mobility of students and teachers, high priority for ERASMUS, has gone up at similar rate but one may be slightly disappointed about the low number of students choosing the European "added value" of mobility (see Table).

The 1992-1993 report included a.o. a self-assessment form to be filled in by all partners of the ICP. A typical reply is given below.

Example of Self-Assessment Participant Reply

1. Our level of participation is slightly lower than anticipated. Incoming students are increasing in numbers, but there is a difficulty in getting our students to accept ERASMUS exchanges. The problem are in part the short time we have with our students (they are on a one year Masters Degree programme) and in part the students want to stay in the UK to follow up employment opportunities for when they graduate.
2. The ICP has proved very valuable in establishing and re-confirming contacts with colleagues in Europe. We have submitted joint research proposals with ICP members for a number of EC-financed initiatives, and some of them have been successful.
3. a) The ICP is a consortium of a large number of institutions with similar research interests, and provides an invaluable forum for developing research partnerships.
b) We value very highly the ability to offer our students the opportunity to study in another European country, and to develop practical language experience.
c) The ICP provides an opportunity to develop our curriculum in our specialist technical subject, and to jointly develop teaching tools.

Overview of activities ERASMUS ICP "Hydrology and Water Management"

ACADEMIC YEAR	PARTNERS	COUNTRIES	STUDENT MOBILITY		TEACHER MOBILITY	
			NUMBER	MONTHS	NUMBER	MONTHS
1989-90	9	7	4	16	3	5
1990-91	21	8	12	59	5	8
1991-92	27	10	22	138	9	10
1992-93	34	12	40	150	15	15
1993-94	37	12	>100 (1)	***	41 (1)	50 (1)
1994-95 (2)	42	14	>100	***	59	59

(1) not yet known (2) requested

ERASMUS ICP "Hydrology and Water Management" • New Edition

Name :

Address :

requests a copy of the INFORMATION BROCHURE (second edition) and the POSTER

Date : Signature :

Return to the Editor of PANTA RHEI

THE PRESENT

The ICP-coordinator collects the requests for mobility grants from all partners, but he is not handling the actual student-grants and, hence, does not know until the final report, how many students actually participated. With the teaching staff mobility we face the problem of a too optimistic planning of the partners: all requested mobilities were seldom taken up.

Moreover, staff tends to limit also the number of days spent abroad. This reflects two conditions: the ever more increasing workload of the university staff all over Europe and the low per diem rates applied by ERASMUS: the maximum is 400 ECU for a 7 day period.

Few partners have a budget allowing them to pay an additional allowance to the visiting staff.

THE FUTURE

The present ICP-format continues its operation in 1994-95 but with a budget less than 50% of the 1993-94 budget. The reason is that the ERASMUS-Bureau has put emphasis on student mobility grants AND suggests that well-established ICP's, such as this one, could easily find additional national funding ... dreaming is allowed!

More important than the funding is the implementation of the new programme SOCRATES, the successor of ERASMUS (see Panta Rhei No. 18/19, March 1994). The present information about SOCRATES can be summarized as follows:

1. SOCRATES includes not only actions for universities and higher education institutions (i.e. those addressed by ERASMUS), but also secondary education systems. Hence, one may expect a serious competition for funding.
2. ACTION 1 of Chapter 1 of SOCRATES includes all what is student and staff mobility. The new approach of implementation of Action 1 is TOP-DOWN instead of BOTTOM-UP as was the case with the ICPs in ERASMUS. While these ICPs were the initiatives taken by some partners who choose a coordinator, the commission is looking now for full institutional involvement with contracts for the whole university. Moreover, the Commission will not delegate the management of the programme to an independent Bureau as was the case with ERASMUS, but will take up the bureaucracy by itself. The accessibility may not be the same.
3. The above may be not very appealing, but Action 2 of SOCRATES will establish large European University Networks for

specific themes or disciplines. Some 200 networks will be created with a budget of 6 MECU per year. This may be the future for the present ICP.

The activities for which the thematic networks will be able to apply for Community support are as follows:

- evaluation of curricula for specific disciplines;
- design of joint programmes and specialised courses;
- scientific analysis and reflection on a specific area of studies;
- information services for network members.

Hence, the student and staff mobility will NOT be the responsibility of these networks but will be part of Action 1.

4. The link SOCRATES/LEONARDO is still very unclear as is the whole implementation and concrete mechanisms for application and selection of proposals.

5. It is quite obvious that a realistical implementation of SOCRATES cannot be made starting January 1995. One expects a one-year renewal of the ERASMUS-type activities for 1995-96 but under the new name SOCRATES. What's in a name!

LIST OF DESIGNATED NGAAs

* National Grant Awarding Agencies

EC-NGAAs

Belgium (FR)

Agence Francophone ERASMUS
Rue d'Egmont 5, B-1050
Bruxelles
tel 32-2-5049211
fax 32-2-5026463

Belgium (NL)

Vlaamse Erasmusagentschap
Ministerie van de Vlaamse
Gemeenschap
Departement Onderwijs
R.A.C. Arcadengebouw - 3de
Verdieping
B-1010 Brussel
tel 32-2-2105419
fax 32-2-2105372

Denmark

NGAA-Erasmus
Rektorkollegiets Sekretariat
c/o Undervisningsministeriet
Frederiksholm Kanal 26
DK-1220 København K
tel 45-33-925403
fax 45-33-925075

France

CNOUS-ERASMUS
Rue Jean Calvin 6-8
F-75231 Paris Cedex 05
tel 33-1-40799100
fax 33-1-43374348

Germany

Deutscher Akademischer
Austauschdienst
Arbeitsstelle ERASMUS
KKennedyallee 50 - Postfach 20
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D-53175 Bonn
tel 49-228-882277
fax 49-228-882444

Greece

I.K.Y. (State Scholarships
Foundation)
NGAA Greece
ERASMUS and LINGUA Service
Lysicrates Street 14
GR-10558 Athens
tel 30-1-3236690
fax 30-1-3221863

Ireland

NGAA (Ireland)
Higher Education Authority
Fitzwilliam Square 21
IRL-Dublin 2
tel 353-1-6612748
fax 353-1-6610492

Italy

NGAA Italia
Ministero della Università e della
Ricerca Scientifica e
Tecnologica
Dipartimento Relazioni
Internazionali - Ufficio I
Lungotevere Thaon di Revel 76
I-00196 Roma

tel 39-6-326891
fax 39-6-3221584

Luxembourg

Ministère de l'Education
Nationale
Centre de Psychologie et
d'Orientation scolaires
Rue Aldringen 29, L-2926
Luxembourg
tel 352-4785100
fax 352-4785110

The Netherlands

NUFFIC
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Portugal

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Ministerio da Educaçao
Avenida de Oulubro 35-37
P-1000 Lisboa
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Spain

Agencia Española para Becas
ERASMUS
Secretaría General
Consejo de Universidades
Ciudad Universitaria s/n
E-28071 Madrid
tel 34-15496678
fax 34-1-5434550

United Kingdom

UK ERASMUS Student Grants
Council - The University
Research and Development
Building
tel 44-227-762712
fax 44-227-762711

EFTA-NGAAs

Austria

Österreichischer Akademischer
Austauschdienst
Büro für Europäische
Bildungskooperation
Reichratsstraße 17/5 St.
A-1010 Wien
tel 43-1-4022838
fax 43-1-402382090

Finland

Kansainvälisen henkilövaihdon
keskus
Finnisch Centre for International
Mobility
P.O. Box 343
SF-00531 Helsinki
tel 358-0-77477033
fax 358-0-77477064

Iceland

University of Iceland
International Office
IS-101 Reykjavik
tel 354-1-694304

fax 354-1-21331

Liechtenstein

Schulamt des Fürstentums
Liechtenstein
(Department of Education)
Herrengasse 2
FL-9490 Vaduz
tel 41-75-2366758
fax 41-75-2366771

Norway

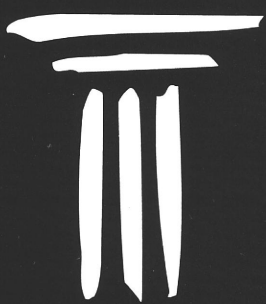
ERASMUS-Norway
Office of International Education
and Research
The Norwegian Council of
Universities
Harald Hårfagresgt. 17
N-5007 Bergen
tel 45-55-233358
fax 47-55-231590

Sweden

Verket för högskoleservice
Box 7851
S-103 99 Stockholm
tel 46-8-4535000
fax 46-8-4535050

Switzerland

Büro ERASMUS Schweiz (BES)
Schweizerische Zentralstelle für
Hochschulwesen
Seidenweg 68
CH-3012 Bern
tel 41-31-3027472
fax 41-43-3026811



Tempus

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 45015

EU TEMPUS Office

Avenue des Arts 19H
B-1040 Brussels

tel +32-2-5040711/12
fax +32-2-5040700

update

TEMPUS forms part of the overall EC programme of

Community aid for the economic and social restructuring taking place in Central and Eastern Europe also known as the PHARE programme, and, as from 1994, and the Community programme for economic reform and recovery in the former Soviet Republics, known as the TACIS programme. The second phase of the programme (TEMPUS II) was approved on 29 April 1993 to run four years from 1994 to 1998.

Action I (JEPs)

The TEMPUS (PHARE) Scheme now supports a total of 504 Joint European Projects (JEPs) designed to promote the quality and support the development and restructuring of higher education and to encourage university-industry cooperation in 11 Central and Eastern European Countries: Albania, Bulgaria, The Czech and Slovak Republics, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia and Romania. More than 9,000 teachers and 6,000 students from institutions in the Community and Eastern Europe participate in these projects.

news from EWA-RING

Tempus Joint European Project JEP no. 2150

**Interuniversity Coordinating Forum
for East-West Cooperation in the
Area of Environment, Water and
Agricultural Soils (EWA-Ring)
announces :**

SHORT COURSE : MODELLING OF SEDIMENT YIELD, TRANSPORT AND DEPOSITION IN RESERVOIRS

hosted by the Warsaw Agriculture
University, Poland
13-18 June 1994

Presentation of the lectures will be in the following areas

1. Erosion and Sediment Yield
 - erosion processes and sediment sources
 - sediment transport and delivery
 - factors affecting the intensity of soil erosion
 - sediment yield and water quality from agricultural watershed
 - estimating watershed response to rainfall using computer programmes

2. River Fluxes (hydrologic point of view)
3. River and Reservoir Sedimentation

Contact persons in Warsaw :

Dr. K. Banasik & Dr. S. Ignar
Chair of Hydraulic Structures
Warsaw Agricultural University
Nowoursynowska 166
PL-02-766 Warsaw, Poland
Tel : +48-22-43-9061/1766
Fax : +48-22-439250

SHORT COURSE ON "OPTIMIZATION OF WATER RESOURCES"

Hosted by the Technical University of
Cracow, Poland
11-17 July 1994

The topics are :

1. Water Management Systems - decision Problems and Optimization Criteria
2. Mathematical Modelling of :
 - flow transformation processes
 - pollution transformation processes
 - hydrological processes
3. Optimization
 - risk and uncertainty
 - programmes of water supply and water protection systems development in large basins
 - optimal control of water retention
 - multicriteria decision modelling
4. Ecological Aspects in Water Management
5. Information Systems in Water Management

Contact persons in Cracow :

Prof. E. Nachlik & Dr. T. Maczuga
Technical University of Cracow
Warszawska 24
PL-31-155-Cracow, Poland
Tel/Fax : +48-12-33-1083

SHORT INTENSIVE COURSE ON HYDROELECTRIC POWER PLANTS

within the framework of the BEST
programme of EU
Hosted by the University of Coimbra,
Portugal
18-28 July 1994

Presentation of the seminar lectures will be in the following areas :

1. Site allocation
2. Water power planning
3. Planning water resources
4. Geological analysis
5. Gravity dams
6. Arch dams
7. Dams project and construction
8. Hydraulic design
9. Slope stability
10. Accidents and wave propagation
11. Non-destructive testing
12. Economical analysis
13. Reservoir operation
14. Ecological impact of reservoirs

Contact persons in Coimbra :

For TEMPUS participants : Prof. J.P. de Lima
Dpt. of Civil Engineering
University of Coimbra
P-3049 Coimbra Codex
Tel : +351-39-20042 • Fax : +351-39-22833
For BEST participants : Prof Sá Marques

new tempus proposals submitted

The following new TEMPUS II proposals have been recently submitted to the TEMPUS Office in Brussels :

- **Joint Curriculum Development for Soil and Water Resources Protection (SWARP)**

The objective of this Structural Joint European Project (SJEP) is to change and upgrade the teaching programmes at Polish universities in the area of environmental protection by development of PhD study and postgraduate courses, by introducing new curricula, by creation of a GIS centre and by the transfer of educational know-how.

The following organization are involved in the project :

Warsaw Agricultural University	PL-coordinator
Wageningen Agricultural University	NL-coordinator
University of Warsaw	PL
Warsaw University of Technology	PL
Agricultural University of Cracow	PL
Technical University of Cracow	PL
Agricultural University Wroclaw	PL
Agricultural Academy Poznan	PL
Technical University of Poznan	PL
Polish Academy of Sciences	PL
PETROBALTIC Oil (enterprise)	PL
Free University Brussels	B
University Ghent	B
University of Hannover	D
Technical University of Braunschweig	D
University of Rostock	D
University of Coimbra	P
Technical University of Valencia	E
GEOPS Consulting Company	NL
Agrar- und Hydrotechnik GmbH	D
Universität für Bodenkultur Vienna (BOKU)	A

- **International Cooperation for Educational Restructuring (ICER)**

The major aim is to assist Hungarian universities and institutions of higher learning to incorporate environmental/ecological concepts in the restructuring of civil engineering and agricultural engineering curricula.

The following organizations are involved in the project :

Technical University of Budapest	H-coordinator
Pollack Mihály College, Baja	H
Széchenyi István College, Győr	H
Agricultural University of Debrecen	H
Kossuth Lajos University, Debrecen	H
Eötvös Loránd University, Budapest	H
Agricultural College of Szarvas	H

Irrigation Research Institute of Szarvas	H
VITUKI (Water Resources Research Institute)	H
Lower Danube-Valley Water Authority, Baja	H
University of Horticulture and Food Industry	H
Wageningen Agricultural University	NL
Delft University of Technology	NL
RIZA (State Inst. on Integrated Water Res. man.)	NL
University of Bologna	I
University of Parma	I
Universität für Bodenkultur Vienna (BOKU)	A

- **Interuniversity coordinating forum for (East-West) Cooperation in the area of Water and Health.**

The objective is to set up an international network for the exchange of knowledge and for cooperation in the fields of water and public health, fluids and human health care.

The following organizations are involved in the project :

University of Ghent	B-coordinator
Wageningen Agricultural University	NL-contractor
Free University Brussels	B
Technical University of Cracow	PL
Warsaw University of Technology	PL
Warsaw Agricultural University	PL
Technical University of Budapest	H

- **Environmental Hydrology and Groundwater Protection.**

The objective of this SJEP is hydrology in context of protection and rehabilitation of the environment. The main emphasis is put to education and training in soil and groundwater protection.

The following organizations are involved in the project :

University of Agriculture, Prague	CZ-coordinator
Wageningen Agricultural University	NL-contractor
Czech Technical University, Prague	CZ
Charles University, Prague	CZ
Technical University of Braunschweig	D
Free University Brussels	B
Universität für Bodenkultur Vienna (BOKU)	A

- **Einrichtung eines Interdisziplinären Weiterbildungsstudienganges in Ungarn.**

The objective of this SJEP is transfer of a postgraduate programme to Hungary.

The following organizations are involved in the project :

Technical University of Budapest	H-coordinator
University of Hannover	D-contractor
Wageningen Agricultural University	NL

- **Joint curricula development for use of modern methods and techniques in management of water resources.**

The aim of this SJEP is creation of new curricula in the domain of using optimization methods and new computer techniques in water resources management at various levels of university education : for undergraduate and postgraduate students, for participants of updating and retraining short cycle courses from universities, regional water authorities and local government institutions.

The following organizations are involved in the project :

Technical University of Cracow	PL-coordinator
Warsaw Agricultural University	PL
Warsaw University of Technology	PL
Institute of Water Management and Meteorology	PL
Wageningen Agricultural University	NL-contractor
Technical University of Valencia	E
Universität für Bodenkultur Vienna (BOKU)	A

- **Soil and Water Pollution Control (SOWACON)**

The objective of this SJEP is cooperation in university education in environmental engineering, especially soil and water protection; improvement and replenishment of existing courses as well as institution of new branches of study (distance learning, further education, regular study) at the Czech and Slovak universities.

The following organizations are involved in the project :

Technical University Braunschweig	D-coordinator and contractor
Wageningen Agricultural University	NL
Prague Agricultural University	CZ
Prague Technical University	CZ
Bratislava Technical University	SQ
Nitra Agricultural University	SQ

environmental sound river basin development

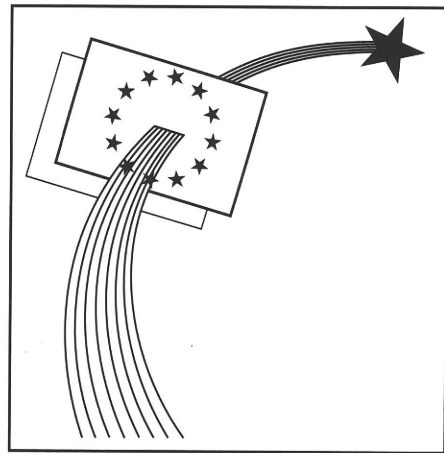
tempus joint european project
jep no. 0266

**Centre for Comparative Studies on River Basin Administrations, RBA-Centre, Stevinweg 1, NL-2628 CN Delft
tel +31-15-784066
fax +31-15-787105**

RBA has published its Newsletter No. 4, April 1994. Reports and a list of publications are available at the above address.

Prof. Mr. J. Wessel, Director of RBA is one of the leaders of the research teams of the **EUROWATER** project : **Institutional Mechanisms for Water Management in the Context of European Environmental Policies.**

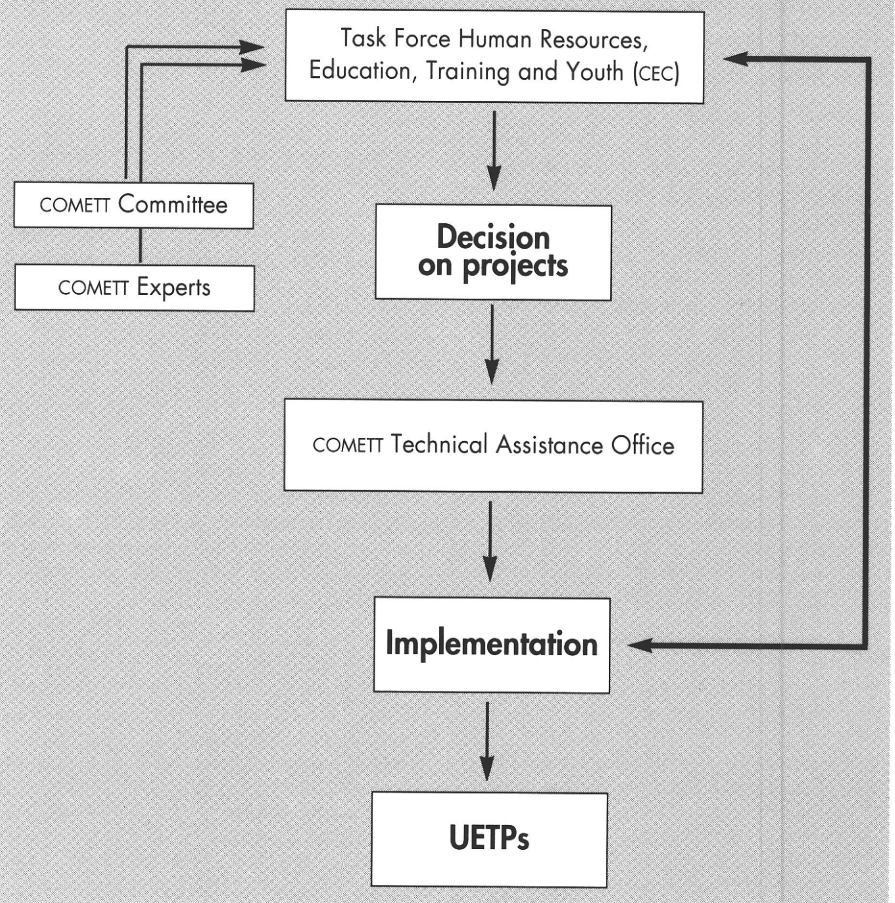
The project is funded by EC-DGXII under its Environment Research Programme.



How COMETT works

COMETT is the European Community programme on cooperation between universities and industry regarding training in the field of technology. The programme is managed by the Commission of the European Communities (Task Force Human Resources, Education, Training and Youth).

The Technical Assistance Office (TAO) assists the Task Force in the implementation of the COMETT programme (see figure below). The COMETT TAO currently has some 35 staff members, providing assistance to COMETT promoters on project management, monitoring all contracts, handling finance and providing information about projects and the programme.



NEWS from COMETT

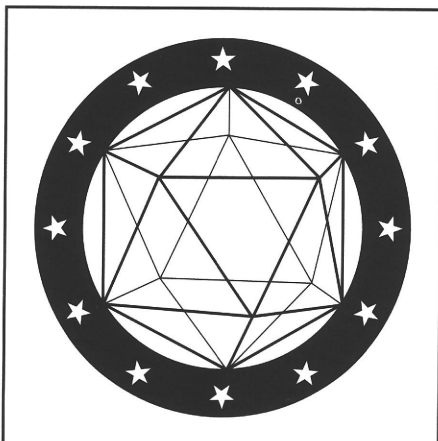
**COMETT - TAO
Technical Assistance Office**
14, rue Montoyerstraat 14
B-1040 Brussels
tel +32-2-5138959
fax +32-2-5139346

UETP : University Enterprise
Training Partnership
TECHWARE
TECHnology for WAter REsources
Coordinator :
A. Van der Beken
c/o CIBE-BIWM
Wolstraat 70 rue aux Laines
B-1000 Brussels
Tel +32-2-5188893
Fax +32-2-5026735

EURO INFO CENTRES (EICs) and CORRESPONDANCE CENTRES have been established all over Europe to provide information on the European Union to small and medium business.

EURO INFO CENTRES NETWORK

They can give you information on the legislation, grants and instruments provided by the Union for business. Some EIC have specialized in R&D. If you want to know more, contact :
EIC Network, rue Montoyerstraat 70/601
B-1040 Brussels • Fax +32-2-2300520



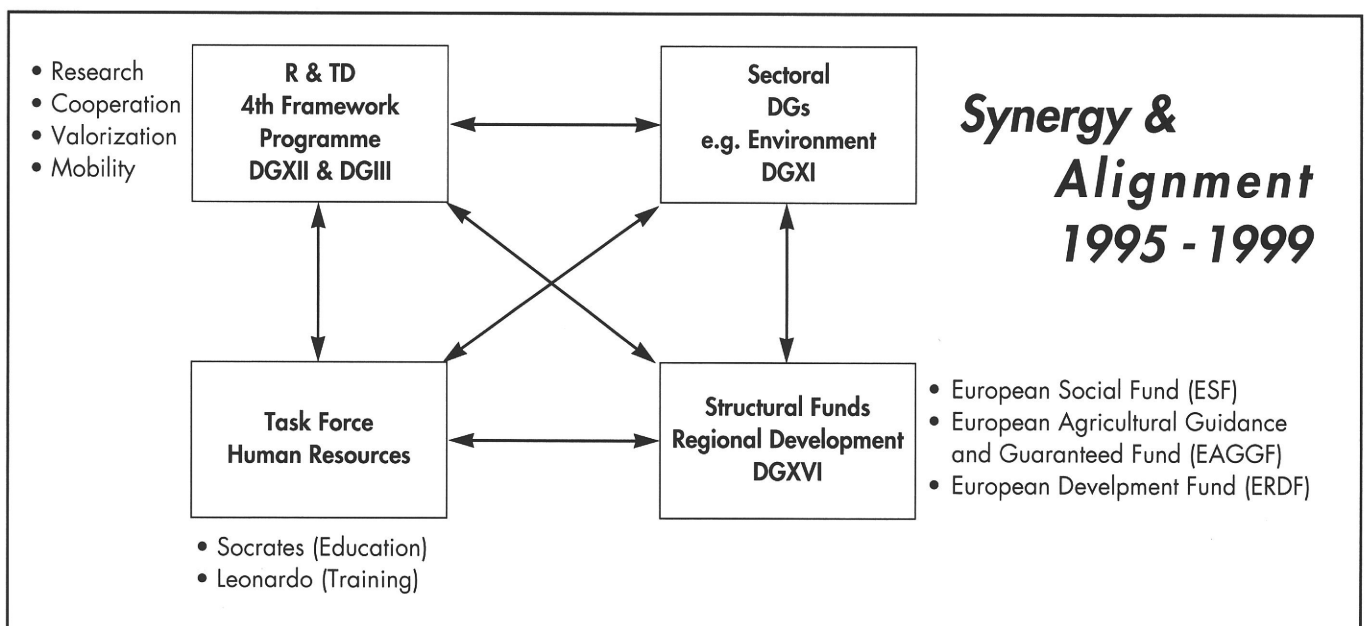
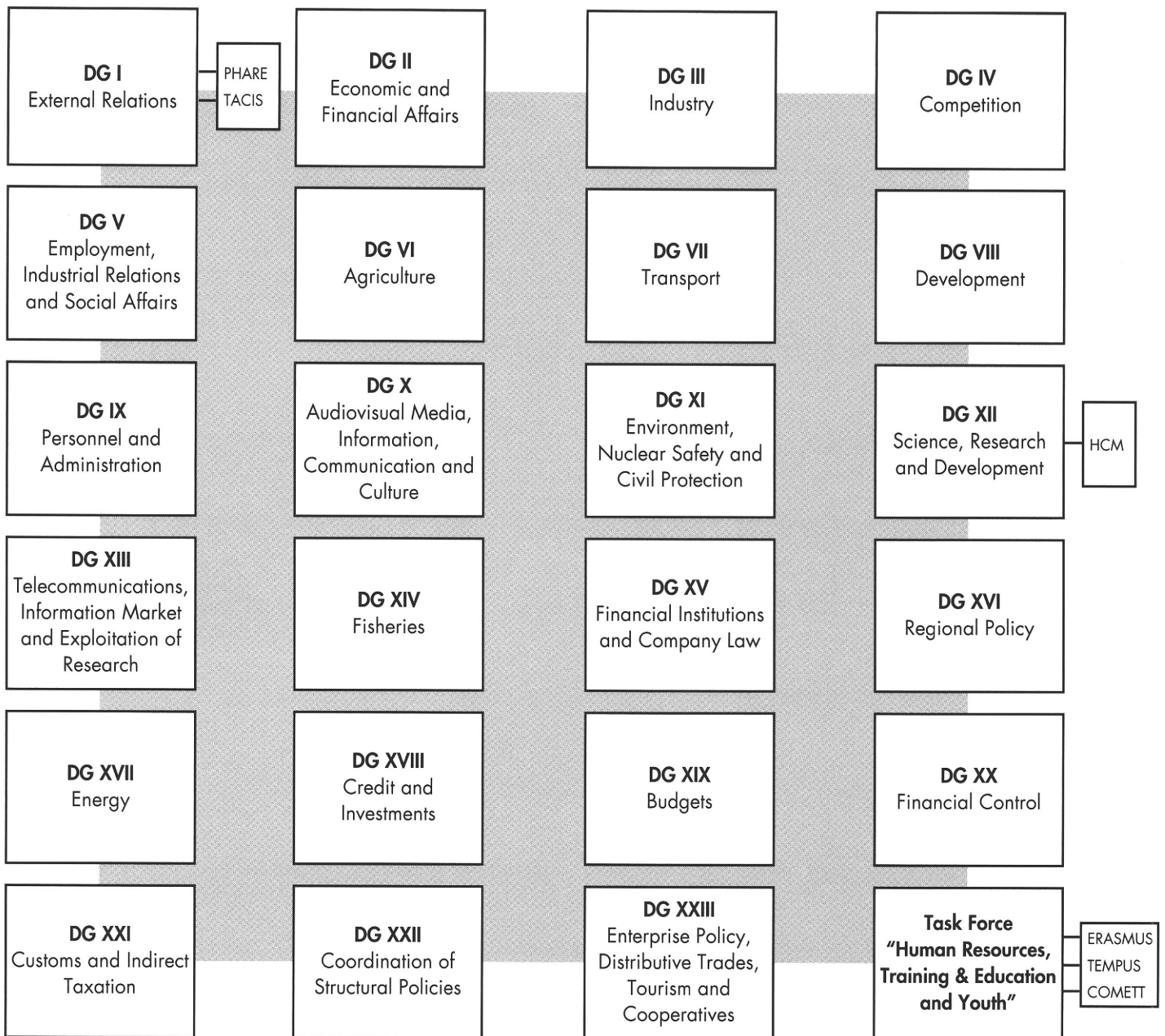
Names after Maastricht

With the coming into force of the 'Maastricht' Treaty on European Union, the names of various European institutions have changed :

- The 'European Economic Community (EEC) has become simply the 'European Community'. The names of the two other Communities - the European Coal and Steel Community (ECSC) and the European Atomic Energy Community (or Euratom) - remain unchanged.
- The name 'Commission of the European Communities', instituted under the 'fusion' Treaty which merged the executives of all three Communities in 1967, is also unchanged. However the shortened form - 'European Commission' - can be used in all but legal contexts.
- The Council has also decided to change its full name to 'Council of the European Union'.
The **European Union** established by the Treaty is founded on the three original European Communities (EEC, ECSC and Euratom), supplemented by further policies and forms of cooperation. These are, notably, a common foreign and security policy, and close cooperation on justice and home affairs. In the Treaty on European Union, Research and Technological Development (RTD) are covered in the form of amendments to the EEC treaty.

Ref. : Innovation & Technology Transfer, Vol. 15/2, April 94.

EUROPEAN COMMISSION • DIRECTORATES GENERAL



TECHWARE meetings

of the
BOARD OF MANAGEMENT
and the
GENERAL ASSEMBLY

Madrid, 10-11 June 1994

Programme of Activities

at CEDEX-CEH,
Centro de Estudios
y Experimentación
de Obras Publicas
Centro de Estudios Hidrograficos
Paseo Bajo Virgen del Puerto 3
E-28005 Madrid, Spain
tel +34-1-3357900 • fax +34-1-3357922

Friday, 10th June 1994

- 13h00 Opening Session of the General Assembly 1994
- Welcome Address by Mr. F. Martinez Martinez, Director-General of CEDEX
 - Opening Address by Mr J. Dirickx, President of TECHWARE
 - Evaluation, Assessment, Perception of TECHWARE by Mr W. Van den Berghe
- 14h00 Lunch offered by CEDEX
16h00 Technical visit CEH of CEDEX
18h00 Departure from CEH to Canal de Isabel II
18h30 Technical visit at Canal de Isabel II
20h00 Cocktail offered by Canal de Isabel II

Saturday, 11th June 1994

- 09h00 Board of Management meeting
10h30 General Assembly meeting
- Activity Report 1993
 - Financial Affairs
 - Election of the President of TECHWARE
 - Election of the Board of Management
- 11h30 Board of Management meeting
- Election of the Executive Committee
 - Cooption of members of the Board
- 12h00 First Demonstration of CALWARE Title Meetings of Specialist Groups and Task Forces

**A major TECHWARE project (1992-1995)
funded by COMETT II**

**First Demonstration
at TECHWARE's General Assembly • CEDEX-CEH
Madrid, 10-11 June 1994**

Demonstration of the title FLUID MECHANICS and outline of the four other titles of the project :

- Open channel flow
- Hydraulics of water distribution
- Irrigation water management
- Urban drainage

Some Details

TITLES are equivalent to a 20 hrs course and are composed of 5 to 6 CELLS (chapters).

Each cell consists of a series of MOLECULES (subchapters) which are studied with the help of a standard TRAINING OVERLAY.

A MOLECULE needs a memory of 30 to 40 Mbytes.

A full TITLE totals 600 Mbytes and fills up a CD-ROM disk.

The TRAINING OVERLAY characterizes the

CAL-approach.

It includes :

- a tutorial
- worked examples
- a summary
- a test

The system allows for an automatic tutoring. There are many other features, such as a glossary of terms and symbols, a list of equations, a hypertext with additional information of all kind. All this can be viewed by the learner at any moment in a WINDOW environment.

The CALWARE group has released a first issue of its "**Guidelines and Development Cycle for Title Design**" which is without doubt a primer in the CAL-world.

RTD on TELEMATICS applications

The first CALWARE demonstration is also the right moment for discussing "RTD on TELEMATICS applications", a major sub-Programme of the **4th Framework Programme (1994-1998)** of the European Commission. it includes among others :

- Telematics for **Knowledge**
 - Research
 - Education and training
- Telematics for the **Environment**

TECHWARE prepares project proposals through a Specialist Group of highly interested and committed members.

Contact :

- for CALWARE : Dr. J. Davis
tel +44-272-303280 • fax +44-272-251154
- for RTD on TELEMATICS : Dr. R. Price
tel +44-491-835381 • fax +44-491-826703

Partners of the CALWARE project are :

- Laboratory of Hydrology, Vrije Universiteit Brussel, Brussels, Belgium
- Hydrodata IC, Kessel-Lo, Belgium
- Dept. Civil Engineering, Katholieke Universiteit Leuven, Heverlee, Belgium
- LHCN University of Liège, Belgium
- Department of Environmental Eng., Technical University of Denmark, Lyngby, Denmark
- Dept. Of Engineering Hydraulics, Universidad Politecnica, Valencia, Spain
- Egevesa, Valencia, Spain
- Aristotle University of Thessaloniki, Dpt. of Hydraulics, Thessaloniki, Greece
- AMGA, Genova, Italy
- Fluid Mechanics Dept., University of Calabria, Renda (CS), Italy
- Labtegnos, Commenda Di Renda (CS), Italy
- Limerick Business & Technology Consultants Ltd., Limerick, Ireland
- Dpt. of Engineering, University of Limerick, Limerick, Ireland
- Dpt. of Civil Engineering, University of Bristol, Bristol, UK
- Travers Morgan Four Ltd., East Grinstead, West Sussex, UK
- IRTCUW-UK Ltd., Redditch Worcestershire, UK
- Dpt. of Civil Engineering, University of Glasgow, Glasgow, UK
- Silsoe College, Silsoe, UK
- HR Wallingford - Software Ltd., Oxfordshire, UK

techware projects

Advanced computer technology for the design and renovation of sewer systems FINAL REPORT

This project aimed at training in the correct use of computer simulation models (RIO/HYSTEM/EXTRAN and BEMUS) and data handling tools, used in the field of sewer system design and renovation.

During the last project year, most of the time was spent in finishing the different tools, such as :

- extension of the database to further models;
- extension of the knowledge-base to further models;
- geographical information system for urban hydrology

The knowledge base was put on to KAPPA and some additional features were included. The whole tool and its instructions were evaluated by the different partners and the instructions have been updated. The scope of the instructions was also extended and now provides a better match for the specific needs.

The data base is finished and it is now able to handle the specific data of different models by converting the basic information. The link between the knowledge base (KAPPA) and the database (ORACLE) is provided by ASCII-files. A direct link seems to be better but there was no time left for developing. The video GIS was finished and tested during a training course. Later, the first stage of a training tool was developed which can be used directly in urban drainage. The tool is based on AutoCAD and in the first phase instead of the direct link with ORACLE uses ASCII-files. It includes routines of sewer system digitalization, subcatchment delineation and a digital elevation model. The exercises mainly focusing on hypothetical catchments and are included in the BEMUS programme. Additional exercises for GIS, databases systems and expert systems have not been developed. The available written material is mainly a handbook about the topic "Advanced computer techniques for

the design and renovation of sewer systems". It is currently available in English and Spanish and a German version is under development. In addition to this handbook a set of transparencies is available. The urban drainage term bank is finished and contains a considerable number of additional terms.

During the operational year 1992/93 more than 100 participants took part in the different courses. This project was coordinated by
Mr. L. FUCHS

Institut für Technisch Wissenschaftliche Hydrologie, Engelbosteler Damm 22
D-3000 Hannover, Germany.
tel +49-511-9719321
fax +49-511-9719377

Cooperation with the World Bank

TECHWARE is involved with AQUANET (the Netherlands) in a project funded by the World Bank.

The task is to prepare an evaluation report for the Government of Senegal about the structural modification of the water sector in Dakar.

TECHWARE

Specialist Group (SG) Combined Sewer Overflow CSO - Information Group

This successful SG, formally established by the Executive Committee of TECHWARE in December 1993, has organized already two workshops :

- Delft (NL), 24-25 March 1994 on 'Combined Sewer Overflows : a European perspective'
- Calais (F), 27-28 April 1994 on 'Meeting the Challenge of the European Waste Water Directive'

The next one is scheduled at Houthalen-Helchteren, Belgium (100km east of Brussels) on 21-22 September 1994 :

'Environmental motivation for abatement of the impact of combined sewer overflows on receiving waters'

Each of these workshops is organized in cooperation with the local/regional or national organisations responsible for CSO.

For further information :
Secretariat SG-CSO c/o Smisson Foundation, Foundation Chambers, Shearwater House
Clevedon Hall Estate, UK BS21/7RD, Clevedon, Avon.
tel +44-275-341440
fax +44-275-341413

see enclosure

FORTHCOMING TECHWARE ACTIVITIES

EUROPEAN TRAINING COURSES

see enclosure

REMINDER :

All TECHWARE - memberbodies can send their personnel to the short courses at discount registration fee.

SP93-09.04

Computer Technologies for the Analysis and Prediction of Flood Risk.

Milano - Italy
6 - 8 June, 1994

This course will focus on two major aspects of flood risk analysis, namely simulation of flood events by means of mathematical models of the rainfall runoff transformation and flood risk design prediction for a given probability level of occurrence in a distributed way over the basin. The course will introduce the participants (up to 30), to the theoretical bases of the underlying hydrological models, and the formulation and set-up of a hydrological risk oriented GIS, including the automatic network detection, and the soil type and land use information management.
Contact : RTB-I

SP93-09.06

Surface Water Pollution.

Pavia - Italy
21 - 24 June, 1994

This course will focus on the analysis and simulation of transport and transformation of contaminants in rivers, lakes and estuaries. Participants will also learn the basic usage of the WASP4 (Water Quality Analysis Simulation Program) model. Both theoretical and practical aspects of the model will be considered, and a half of the courses will be devoted to practical workshops using personal computers. The course is intended for max. 30 participants coming from technical bodies, water agencies and municipalities.
Contact : RTB-I

SP93-09.01

Sewers Infrastructures in Mediterranean Countries : Filling the gap. Course no. 2 : Rehabilitation and modelling.

Genova - Italy
27 - 29 June 1994

This course will bring together specialists from Northern and Southern EC Countries in order to assess and evaluate the technologies for sewer rehabilitation in ancient urban centers. One of the major issue will be the performance comparison between software package for modelling sewer systems under different storm and pollution conditions. The course is intended for max. 30 participants coming from technical bodies, water agencies and municipalities.
Contact : RTB-I

SP93-10.09

River Pollution

Bristol - United Kingdom
27 June - 01 July 1994

This course will focus on the assessment and control of river pollution.

Course content :

- Political and economic issues of river pollution and legal aspects of pollution control
 - EC and international water quality standards
 - Biological assessment of river and reservoir quality
 - Bacteriological and virological water quality
 - Impacts of water quality on health
 - Monitoring of river quality, statistics of sampling, sources of pollution, chemical analysis
 - Methods of pollution control
 - Groundwater pollution and training
- Contact : RTB-UK&IRL

SP93-10.01

Computer Aided Engineering - Fluid process/network analysis to water industries.

Limerick - Ireland
September, 1994

The course will address the advance of application of CAE in fluid process/network analysis in water industries. The analysis will be of single phase fluid flow under steady state conditions and will make use of commercially available CAE software. A primary technique in this course is the use of live industrial case studies derived from the cooperating enterprises. The output will be a full text and case study application manual with appropriate CAE documentation. The course will be suitable for engineers who are playing a key industrial role in engineering project system design, evaluation, economic analysis and commissioning. The training will be biased towards the demonstration of advanced engineering application concepts.
Contact : RTB-UK&IRL

SP93-10.08

Coastal Defence

Bristol • United Kingdom
05 - 09 September, 1994

This course will address the following topics :

- The natural Coastal environment and sea-level rise
 - Wave generation and computer models for predictions of extreme tides and waves
 - Fundamentals of coastal sediment transport
 - Barrages
 - Design and maintenance of coastal defence structures such as sea defence embankments, sea walls, groynes and revetments
 - Beach replenishment and dredging
 - Offshore breakwaters
 - Environmental and geological considerations
 - Legal and economic aspects
 - The course will also include laboratory demonstrations on littoral drift and groynes, and site visits.
- Contact : RTB-UK&IRL

SP93-10.07

Environmental motivation for abatement of the impact of combined sewer overflows on receiving waters.

Houthalen- Belgium
21 - 22 September, 1994

The course is planned to highlight the potential use of chemicals to reduce pollution escape from Combined Sewer Overflows. Day 1 will start with an overview of the chemical treatment of sewage with an examination of present day developments and future research; this will then be followed with a series of case studies. Day 2 will be taken up by Workshop sessions during which teams of participants will be given problems with different sets of criteria and will be required to develop solutions which will be discussed by a panel of experts.

Contact : RTB-VL

SP93-09.02

Sewers Infrastructures in Mediterranean Countries : Filling the gap. Course no. 3 : The quality of the service.

Genova - Italy
24 - 26 October 1994

This course will deal with the tariff justification upon evidence of the quality of the service. Experiences from different countries will be compared. The course is intended for max. 30 participants coming from technical bodies, water agencies and municipalities.
Contact : RTB-I

SP93-10.02

Knowledge Based Expert Systems for Water Industries.

Limerick - Ireland
November, 1994

Conventional Knowledge Based Expert Systems (KBES) will be applied to the field of engineering design in fluid flow water industry applications. Thus extending the tools available to the engineer for design as

well as analysis. The course will introduce KBES techniques to experienced fluid flow engineers and show applications in the selection of pipeline components, risk assessment and fault analysis under transient flow. The course will be suitable for engineers who play a key industrial role in engineering project system design, evaluation, economic analysis and commissioning. The training will be biased towards the demonstration of advanced engineering application concepts.
Contact : RTB-UK&IRL

SP93-09.05

Groundwater pollution modelling.

Cosenza - Italy
 21 - 24 November, 1994
 This course will focus on the analysis of parameters uncertainty in groundwater flow and pollution. The problem of parameters estimation will be addressed in both its deterministic and probabilistic approach for saturated and unsaturated flow conditions. A few case-studies will be presented together with the discussion about the significance of field-data and laboratory measurements. Contaminant transport parameters, in the saturated and unsaturated zone, will be also discussed. The course is intended for max. 30 participants coming from technical bodies, water agencies and municipalities.
Contact : RTB-I

SP99-02

Improving efficiency and reliability in water distribution systems.

Valencia - Spain
 21 - 25 November 1994
 This course is presenting the following topics :

- Fundamentals
- Leakage detection in networks
- Network management rehabilitation
- Reducing energy costs
- Reliability, risk analysis and rehabilitation
- Quality modelling

Organizers : UPV, Valencia (E), Lecturers from LNEC (P), institute Superior Tecnico (P), Montfort University (UK), Heriot-Watt University (UK), Egevesa (E), Aguas de Barcelona (E) and Water Eng. Cons. (GR).
Contact : International University Menéndez Pelayo, Student Office
 Palau de Pineda
 Piazza del Carmen 4
 E-46003 Valencia
 tel : +346-386-98-02
 fax : +346-386-98-23

SP94-09.07

Network Simulation.

Pavia - Italy
 13 - 17 December, 1994
 This course will present an up-to-date training in the design of open channel networks. The simulation of flow in irrigation and Drainage networks and Sewer Systems is considered, in steady conditions or during transients. Catchment characterization and rainfall-runoff simulation are also considered for Drainage networks and Sewer Systems. Participants will learn how to use the MUSS model through practical applications to some case studies.
Contact : RTB-I

SP93-10.03

Sewerage Treatment for Sales/Marketing Personnel in Companies Supplying to the Water Industry.

Stoke-on-Trent - United Kingdom
 1994
 The aim of the course is to develop the ability of the participant to understand the overall sewage treatment process, the operation of treatment elements in relation to each other and to appreciate some of the practical consequences associated with the operation of such plant. This will enable them to better deal with decision-makers within the water industry and to provide greater assurance to prospective purchasers that both the individual and their company clearly understand a major aspect of the water company's core business. The course is designed for sales and marketing personnel who work for companies who supply equipment and services to Water Companies.
Contact : RTB-UK&IRL

SP93-10.05

Nutrient Removal during Sewage Treatment - Reasons, methods and consequences.

Stoke-on-Trent - United Kingdom
 1994
 The course is designed for personnel in the water industry, and allied businesses, who need to gain an overview of nutrient removal philosophy and technology. Day 1 will set out to explain the need, the potential solutions and the technology. Day 2 will draw on the benefit of visiting speakers from UK and Europe who are involved in developing nutrient removal strategy or implementing nutrient removal technology, and seek to highlight some of the practical aspects of this challenging problem.
Contact : RTB-UK&IRL

SP93-10.06

Pre-Treatment of Industrial Effluents - Concepts and applications.

Stoke-on-Trent - United Kingdom
 1994
 The course is designed for personnel in the water industry, allied businesses and participants on certain environmental technology graduate and masters courses, who need to gain an overview of methods available for the pre-treatment of industrial effluents. Day 1 will set out to explain the need, some of the potential solutions and the technology available. Day 2 will draw on the benefit of visiting speakers from UK and Europe who are involved in designing or operating industrial effluent pre-treatment plants, who seek to share with the course participants some of the practical problems associated with the production, use and modification of equipment that they have experienced.
Contact : RTB-UK&IRL

other
 forthcoming
TECHWARE
 short courses
 in 1994-95

CTB coordinates :

- Evaluation and Assessment of present and future Continuing Education and Training (CET) for Water Resources Engineering.
Brussels (B), 20-22 April 1995

RTB - UK & IRL coordinates :

- Water Supply Engineering
Bristol (UK), 19-23 September 1994

RTB - VL coordinates :

- Integrated Water Management Vlissingen (NL) - Antwerpen (B) - Hull (UK), *to be announced*
- Recht op Water
Gent (B), 19-20 October 1994
- VLARIO (Flemish Sewers) Courses
Antwerpen - Brugge - Gent - Hasselt - Leuven (B), to be announced

see next page for addresses

TECHWARE : BENEFITS AND RIGHTS OF MEMBERSHIP

1. the appointment of one representative to attend the General Assembly, who has the right to vote and to propose items for the agenda of the General Assembly,
2. to propose projects within the objectives of TECHWARE for further discussion and to claim support from TECHWARE for their realisation, through Specialist Groups and Task Forces,
3. to propose the establishment of a Regional TECHWARE Bureau in mutual agreement with other members of the region,
4. to benefit from a members' discount on registration fees for all TECHWARE events; all employees of a member-body are entitled to receive the discount. In the case of members which are Professional or Scientific Associations, UETPs or Trade Associations, this benefit is limited to four nominated representatives,
5. to propose the creation of Specialist Groups for a subject which comes within the terms of reference of TECHWARE,
6. to participate in Specialist Groups and Task Forces under the conditions fixed by the Executive Committee,
7. to receive the Members' list,
8. to have an entry in the relevant section of the Members' Directory,
9. to receive all general communications issued by TECHWARE,
10. to receive other TECHWARE publications at reduced rates.

TECHWARE SUPPORTING MEMBERSHIP

Members who assign to the association a supporting contribution of 1.000 ecu as an interest-free loan are recorded in the minutes as supporting members and are entitled to a position on the Board of Management.

TECHWARE Membership Dues * 1994

Decision of the General Assembly of Tailfer (B)
7 June 1993

- Individual Consultant285 ECU
- University, Laboratory or
Department of University,
School or non-profit Research Institute310 ECU
- Enterprise, Authority
COMETT size code S1, S2, S3
(less than 200 employees)425 ECU
- Professional or Scientific Association,
UETP's, Federation of Enterprises565 ECU
- Enterprise, Authority
COMETT size code S4, S5, S6, S7
(more than 200 employees)710 ECU
- Life Membership7500 ECU

* Not including 2.5% allowance for banking costs

FOR ALL FURTHER INFORMATION, please contact :

CTB - Coordinating TECHWARE Bureau

c/o CIBE-BIWM
Wolstraat 7, rue aux Laines
B - 1000 Brussels, Belgium
tel +32-2-5188893 • fax +32-2-5026735

Bank Accountnumber :
ASLK-CGER BANK 005-4323374-76
P.O. 1436 - Brussels 1, B - 1000 Brussels
telex 26860 • fax +32-2-139117
For easy and quick money transfer, use code :
61189SWIFT CGAK BE BB

RTB-I

Regional TECHWARE Bureau Italia

c/o AMGA,
via SS. Giacomo e Filippo 7
I - 16122 Genova, Italy
tel +39-10-83431 • fax +39-10-8343284

RTB-UK&IRL

Regional TECHWARE Bureau UK and Ireland

c/o HR Wallingford
Wallingford, UK
OX 10 8BA Oxfordshire, Great Britain
tel +44-491-835381 • fax +44-491-826703

RTB-VL

Regional TECHWARE Bureau Vlaanderen

c/o WEL vzw
Marktplein 16
B-2110 Wijnegem, Belgium
tel +32-3-3537253 • fax +32-3-3538991

Handbook of Higher Education Diplomas in Europe

A Survey of Study Programmes and of Diplomas, Degrees and other Certificates granted by Higher

Education Institutions in the Europe Region.

by *Hanna Jablonska-Skinder and Ulrich Teichler*
 Publisher : K.G. SAUR Verlag,
 München 1992, ISBN 3-598-11073-1

This survey has been undertaken by CEPES, the UNESCO European Centre for Higher Education. It is not based on official country reports but on a study commissioned to two experts. However, the draft of the manuscript was distributed to the national information centers for their comments and corrections.

Part I of the book includes considerations on the "Informational value of higher education diplomas provided in the document representing the diplomas, degrees and other certificates, and, what, in the opinion of the authors would be further necessary in order to have a better understanding of the knowledge, level of training and the skills sanctioned by the respective diplomas, so as to facilitate their national and international recognition"

Part II of the book contains the presentations of the national systems of higher education in 30 countries of Europe. The institutional structure, the organization and duration of various programmes of studies, the diplomas and degrees they lead to and the requirements for their award are presented in a manner which is specifically designed to facilitate comparison.

A companion to the above is the NARIC Brochure

NARIC is the Network of National Academic Recognition Information Centers in EC- and EFTA-countries. Available from ERASMUS Bureau.

EUROMECUM European Higher Education and Research Institutions

Yet another publication of 5,800 pages in 6 volumes,

loose-leaf edition with quarterly supplements of ca. 450 pages is available for DM 295,-.

Roabe Fachverlag für Wissenschaftsinformation, P.O.
 Box 301155, D-53191 Bonn
 Tel +49-228-97020-25
 Fax +49-228-97020-10

MED-CAMPUS Briefing available

The EC Med-Campus programme for Inter-university Cooperation, which has now

completed its pilot year, 1992/93, has been established to create new links and reinforce existing ties between universities and other higher education institutions in the European Community and the Mediterranean non-Community countries (MNC).

It is an initiative of the Commission within the framework of its New Mediterranean Policy (NMP). The essence of the programme is to promote EC/MNC exchanges between institutions which will improve institutional, social and economic development within the MNC by increasing the quality of human resources in the appropriate scientific, technical and professional sectors. A recently produced comprehensive information package on MED-CAMPUS includes information sheets providing further details on the Programme and its administrative structure, together with conditions of participation, and a catalogue of projects.

Further information : Commission of the European Communities, DGH-1/2 (Science 14 - Room 39), 200, rue de la Loi, B-1049 Bruxelles, Belgium.
 Tel : +32-2-295.62.43 • Fax : +32-2-299.02.03

Educational Structures and Decision-Making Bodies

As a result of an ERASMUS Action 4 publications grant, HEURAS, the Secretariat of European Associations in Higher Education, has published a directory entitled Higher Education in Europe : Educational Structures and Decision-Making Bodies. The directory contains written descriptions and graphic presentations of engineering education and teacher education, as well as the general higher education systems in each EC Member State and EFTA country. It comes complete with a series of overhead slides of the graphic presentations.

Further information :
 Ms. Marie-Louise Kotterman or Yves Beernaert
 rue de la Concorde 60, B-1050 Brussels.
 Tel : +32-2-514.51.81 • Fax : +32-2-514.11.72

HYDRA 2000 The XXVth IAHR Congress **HYDraulics Research and its**

Application next century will be held in London (UK), 11-15 September 1995.

One of the many topics addressed is : **Training the hydraulic engineer for the 21st century.** Contributions to this topic should be submitted not later than 30 April 1995.

There is also the **J.F. Kennedy Student Paper Competition.** Submissions should be original work, not previously published, authored by students with a university registration at any time during the period 1993 to 1995. Deadline for these student papers is 31 January 1995.

Contact : XXVI IAHR Congress c/o Ms. Sue Frye, Conference Office, Institution of Civil engineers
 1 Great George Street
 London SW1P 3AA UK
 Tel : +44-71-8399801 • Fax : +44-71-2331743

On Chartered Status in U.K.

Everybody knows something about the - rather unique - chartership approach in U.K. Chartered status in U.K. means that you are a competent professional. It is a measure of your standing in your profession. It is almost a "must" for those wishing to work in consultancy in U.K.

Very few, however, know about the details. For hydrologists, for instance, there are three main routes to chartered status :

- through the Institution of Civil Engineers (ICE)
- through the Institution of Water and Environmental Management (IWEM)
- through the Royal Meteorological Society (R. Met. Soc.)

Prof. Susan Walker, president of the British Hydrological Society (BHS), explains it all in the BHS-Newsletter called CIRCULATION No. 41 of February 1994, pp. 6-8.

Reference : British Hydrological Society c/o ICE
 1 Great George Street
 London SW1P 3AA UK

HUMAN CAPITAL & MOBILITY



Pan-European Scientific Network :
WEEL - WATER ENVIRONMENT EUROPEAN LABORATORIES
 (subnetwork of TECHWARE)

Coordinator : Prof. F. Siccardi
 Università di Genova, Istituto di Idraulica
 Via Montalegno 1, I - 16100 Genova, Italy
 tel. +39-10-3532496 • fax +39-10-3532481

MATECH • EUROPEAN CENTER FOR MATHEMATICS AND TECHNOLOGY OF URBAN WATER POLLUTION

Coordinator : Ass. Prof. P. Jacobsen
 Institute of Environmental Science and Engineering
 Technical University of Denmark
 Building 115, DK-2800 Lyngby
 Tel. +45-45-933908 • Fax +45-45-932850



weel
 water environment
 european laboratories
 scientific network

Pan-European Scientific Network for integrating disciplinary components of the Water Sciences and Technologies : RTD for Regional Integrated Water Management
Project Nr. ERBCHRXT930212

In the Conference, HYDROTOP '94, in Marseille, on 14 April, entitled "Europe and Scientific and Technological Cooperation on Water", in cooperation with DGXI and DGXII of the European Commission, TECHWARE and several leading authorities on water management, TECHWARE's major project, WEEL, was highlighted by Prof. F. Siccardi, coordinator of the Project. A report was also presented by the Coordinator of TECHWARE, Prof. A. Van der Beken and Mr. A. Delo (HR Wallingford).

The TECHWARE Recommendations on Water Policy and RTD Issues - see Panta Rhei No. 18/19 - were incorporated in the document entitled "Europe and Scientific and Technological Cooperation on Water", published by EC-DGXII (ISBN 92-826-6464-3). The document discusses for the first time all EC-research programmes on water and was presented at the HYDROTOP 94 Conference.

CONTENTS

- Relevant Activities of Directorate XII-A "Strategy and Accompanying Measures"
 Research and technological development for the supply and use of freshwater resources - A strategic policy study carried out for the EC.
 by B. Schmitz, EC
- Relevant activities of Directorate XII-D "Environment" and the Joint Research Centre - ISPRA
 R&D Environment Programme : Overview

of Activities in the field of Water
 by D. Peter and P. Balabinis, EC

- Relevant Activities of Directorate XII-C "Industrial and Materials Technologies"
 - The European research actions on Industrial Technologies for a better water management and a better water quality by H. Pero, EC
 - Measurements and testing programme : Interlaboratory studies for the quality control of water analysis by Ph. Quevauviller, EC
- Relevant Activities of Directorate XII-G "Human Capital and Mobility" and Related Initiatives
 - Human Capital and Mobility (HCM) and the WEEL Network
 by F. Fay, EC
 - **WEEL - Water Environment European Laboratories**
 by J.A. Cunge, Ch. George, F. Siccardi and A. Van der Beken, TECHWARE
- Relevant Activities of Directorate XII-B "Cooperation with third Countries and International Organizations" and Related Initiatives"
 - Relations with Developing Countries
 by M. Catizzone, EC
 - The EUREKA Initiative
 by M. Warras, EC
 - COST Cooperation
 by M. Warras, EC
 - Co-operation in S&T with Central and Eastern European Countries
 by M. Warras, EC
 Annex A : priority scientific areas for co-operation
 Annex B : TACIS activities
 Annex C : PHARE activities
 - The activities of the international association for promotion of co-operation with scientists from the independent states of the former Soviet Union
 by G. Wagenaar, INTAS
- Relevant Activities of Directorate XIII-D "Dissemination and Exploitation of R&D Results, Technology Transfer and Innovation"
 The European Community SPRINT Programme : Supporting Innovation in the Water Industry
 by G. Heasen and A. Doronzo, EC
- Annex
The Euro-Workshops of TECHWARE
 In the preface to "Europe and Scientific and Technological Cooperation on Water", a review of programmes and activities supported by the EC-DGXII, **Prof. A. Ruberti**, the member of the Commission responsible for research, education, training and youth, writes :

"Water is a fundamental constituent of life and essential to a wide range of economic activities. (...) there is an urgent need to devise strategies for the sustainable management of water resources. (...) Attention should be given to long-term preservation of water sources, improved supply systems, as well as to the more rational use of water by all economic actors (...)."

MATECH

EUROPEAN CENTER FOR MATHEMATICS AND TECHNOLOGY OF URBAN WATER POLLUTION

General

The first MATECH network meeting will take place June 4 1994, in Cernice in the Czech Republic. The meeting will form part of the 7th European Junior Scientist Workshop on: Integrated Urban Storm runoff, the Workshop is being organised by the Czech Technical University and is supported by MATECH.

The MATECH network meeting which will take place there, represents the first annual meeting for all partners and interested individuals. The purpose of the meeting will be to discuss progress on the various projects, bring everyone up to date on the latest developments, discuss policies regarding growth as well as strategies for new proposals and ways of receiving financing.

An important role will be played by the newly established Secretariat. The primary function of this Secretariat is to communicate with the various partners, keep them up to date on all the latest developments and changes; as well as to coordinate all their efforts on the various projects and proposals. The annual meeting will give the members of the secretariat the opportunity to meet all the partners in person (and vice versa) and update all relevant information regarding partnerships and interested individuals and organisations.

New partners

The EU Commission has initiated a new programme whereby organisations and/or scientists of Central and Eastern Europe (PECO) and the New independent States of the former Soviet Union can receive financing to participate in projects of the Community research programmes. The MATECH network was open to receiving these new potential partners and was therefore announced in the general bulletin sent out by the EU to eligible countries.

Numerous requests for more information have come in to the Secretariat, as well as some proposals. All requests are being answered and an application procedure has been set up. It is hoped that new partnerships can be established under the existing network subprojects so increasing our collaborative efforts and the potential of the subprojects in question.

Projects

Under the network contract which became effective January 1 1994, all four subprojects have now chosen the most appropriate candidates from the applications to conduct the work. As a reminder here are the titles of the network subprojects, with details on the objectives for each one:

1. Optimisation of Runoff, treatment and Receiving Waters

Overall aim: to investigate, from the application of new modelling tools, the circumstances in which the separate elements of the urban Drainage system (sewer, treatment plant, receiving water) interact with adverse impact, what scope can be found to reduce such impact and thereby optimise system performance.

Specific objectives:

- To utilise novel mathematical/computational techniques in the development of new tools for simulation modelling of all elements of Urban Drainage System on a fully integrated basis.
- To apply these tools to case study sites and explore scope for the achievement of optimum benefit from the combined performance of all system components in planning, design and operational phases.

2. Neural Networks in Urban Hydrology

The Neural network is a new mathematical tool, which has already been successfully used in different disciplines. The use of neural networks in urban hydrology will be investigated for several hydrologic and transportation phenomena. Simulation of the following phenomena will be considered:

- Forecast of rain data
- Simulation of runoff hydrographs
- Forecast of runoff hydrographs
- Determination of control strategies for real-time control.
- Simulation of urban runoff pollutographs.

3. Stochastic Properties in Description of Pollutant Runoff.

For the assessment of the effect of urban runoff upon receiving waters, the statistical properties of the discharged loads are required. Depending on the receiving water impacts of interest, the average annual load of the extreme loads should be estimated. Because of the stochastic nature of the underlying processes the variability in the loads is great. From a manager's point of view, it is essential to have information on the probability distribution of loads.

In the framework of this project a number of existing databases will be analyzed, in order to distinguish between deterministic and stochastic components. Using statistical methods relationships between the event mean concentration and potential explaining variables will be explored and the remaining variability will be quantified. The data sets will be selected in such a way, that the results may reflect site specific properties of the catchment and sewer system and can be related to these.

4. Control of Nutrient Removal processes in Wastewater

Objective: to elucidate three interacting elements in the wastewater treatment process which need to be better controlled.

- The settler function
Objective: to create better control over the settler function in order to minimize the concentration of suspended solids in the effluent.
- Carbon source addition
Addition of external carbon to the anaerobic and/or anoxic tanks are sometimes done to ensure sufficient C/P or C/N-ratios. Objective: to examine how best carbon addition can be performed.
- Intermediate process compounds
In the wastewater treatment process, the formation of intermediate process compounds is sometimes a problem. Some of these may cause bulking (hydroxylamine and nitrogen oxides) while others are strong poisons in the concentration of harmful intermediates.

If you wish additional information on MATECH or would like to receive a general information brochure, please contact the Secretariat:

**Institute of Environmental Science
and Engineering
Technical University Denmark
Building 115, DK-2800 Lyngby
tel +45-455-933908 • fax +45-455-932850**

research conference

**ALLUVIAL BASINS
Past and Present Environments**
Lunteren, The Netherlands,
10-15 September 1994

Information & Application:

Dr. Josip Hendekovic,
European Science Foundation
1, quai Lezay-Marnésia, F-67050
Strasbourg Cedex, France
tel +33-88767135
fax +33-88366987

fellowships opportunities

A fellowship may be awarded to postgraduate students, Ph. D. students, scientists at post-doctoral level and experienced scientists who are nationals from EC and EFTA-countries. These fellowships are awarded to individuals to allow them to spend from one to three years at one of the Joint Research Centres (JRCs) of the CEC. Details may be obtained by writing to the relevant IRC-institute.

For PANTA RHEI readers, these IRCs are a.o.:

- Institute for Reference Materials and Measurements
Mr. A. Deruyter
Steenweg op Retie
B-2440 Geel
tel +32-14-571272 • fax +32-14-584273
- Institute for Remote Sensing Applications
Mr. P. Churchill
I-21020 Ispra (VA)
tel +39-332-785031 • fax +39-332-789536
- Environment Institute
Mr. G. Rossi
I-21020 Ispra (VA)
tel +39-332-789981 • fax +39-332-785631

international science foundation travel grant program

The International Science Foundation announces a program which will award travel grants to enable a limited number of scientists from the former Soviet Union and Baltic States to travel abroad to attend international scientific conferences. Travel Grants will include roundtrip airfare from the former Soviet Union to the conference site and subsistence expenses on a per diem basis. Travel arrangements will be made by the Foundation. Applications will be accepted at the Foundation's Washington D.C. office from conference organizers.

Applications will not be accepted from scientists wishing to travel. Scientists may not travel more than once on this program. All trips must originate and end within the FSU or the Baltic States.

Applications submitted on the ISF standard application form will be accepted at the Foundations Washington D.C. office from conference organizers.

Applications and inquiries should be forwarded to:
The International Science Foundation
Travel Grant Program
1054 32nd Street, NW Suite 110
Washington, DC 20007
tel +1-202-3422760
fax +1-202-3422765

the new GEF

Replenished and restructured global environment facility established as first major financial achievement since UNCED

In an international milestone, representatives from more than 80 countries reached an agreement on March 16 1994 in Geneva to restructure and replenish the Global Environment Facility (GEF).

The new GEF has been replenished with over \$2 billion.

The GEF will have an Assembly, a Council, and a Secretariat and will be supported administratively by the World Bank. Implementation of the GEF will be the responsibility of the United Nations Development Programme, the United Nations Environment Programme, and the World Bank.

Among the GEF Pilot Phase projects, 5 were on international waters.

For more information on the restructured Global Facility Environment, write to the environment Department's global Environment Facility Administration, Room S-3027, the World Bank 1818 H St. NW Washington, D.C. 20433

university mobility in asia and pacific

A recently circulated brochure outlines the background and aims of UMAP, the acronym for university Mobility in Asia and the Pacific. The general objective of this new programme is to achieve a better understanding, within the countries and territories of the region, of their cultural, economic and social systems, by increasing the mobility of their students and staff in higher education institutions, extending and enhancing cooperation in higher education and improving its quality.

More specifically, the programme aims to increase significantly active bilateral agreements among institutions (or consortia of institutions), to foster internationalisation of curricula and teaching through student and staff exchange and to foster bilateral institution and business enterprise relationships.

Further information : Mr. John Scutt, UMAP Coordinator
C/AVCC, GPO Box 1142
Canberra Act 26011 Australia
tel +61-6-2858200
fax +61-6-2858211

on your desk

Water Resource Management Policy Paper

The newly released Water Resource Management Policy Paper provides water management guidelines for all concerned with water.

Please contact :

The World Bank Bookstore
Room J-1060
1818 H St. NW
Washington, D.C. 20433

Lessons learned in water, sanitation & health

Thirteen years of Experience in Developing Countries

Revised Edition, 158 pages

WASH Project
1611 North Kent Street, Room 1001
Arlington, VA 22209, U.S.A.

World Resources 1994-95

A Report by
The World Resources Institute
New York - Oxford, Oxford University Press
1994, ISBN 0-19-521045-X

Including

Global Environmental Conditions and Trends.

Natural Resource Indicators for 152 countries.

WORLD RESOURCES DATA BASE DISKETTE
Indispensable data on global conditions and trends in an easy-to-use software pack

This time-saving research and reference tool contains all of the vital economic, population, natural resource and environmental statistics found in the print edition of World Resources 1994-95, plus 20-year time-series for many variables, and more.

You won't find this extensive collection of authoritative, up-to-date global data anywhere else.

The World Resources 1994-95 Data Base Diskette lets you search, manipulate, and print thousands of key variables and export the data into your favorite spreadsheet, wordprocessing, and desktop publishing programs. Use the Diskette to conduct your own analysis using the latest data available. Create charts, graphs, and tables to reinforce your presentations, enhance your reports, and support your research and teaching objectives. Each diskette pack includes a comprehensive user's manual 3.5" and 5.25" high-density, IBM-compatible disks.

CALENDAR 1994-95

RN

See reference number for corresponding addresses - page 21

- 8** APRIL - SEPTEMBER
Delft (NL)
Short Courses '94.
Water Resources Management in the Hydroinformatics Era, Port Management, Anaerobic Waste Water Treatment, Low-cost Water Supply and Sanitation, Water Quality Management for Decision-makers, Environmental Management, Advances in Environmental Ecotechnology, Coastal Zone Management, Polder Development, Appropriate Modernization and Management of Irrigation Systems.
- 45** 20-22 JUNE
12-14 SEPTEMBER
La Hulpe (B)
Creating a Learning Organisation.
- 27** 20-24 JUNE
Maastricht (NL)
Course. Introduction to the Administration of international Education.
- 39** 21-24 JUNE
Pavia (I)
TECHWARE ETCourse
Surface Water Pollution.
- 29** 23 JUNE
Wallingford (UK)
Seminar
Asset Data Management.
- 11** 23-25 JUNE
New York City, NY (USA)
Water network Modeling Seminar.
- 38** 26 JUNE - 07 JULY
Flagstaff, Arizona (USA)
Course. Introduction to Higher Education in the US.
- 4** 26 JUNE - 07 JULY
Agadir, Marocco
med-campus Seminar.
Desertification et Amenagement.
- 39** 27-29 JUNE
Genova (I)
TECHWARE ETCourse
Sewers Infrastructures in Mediterranean Countries: Filling the Gap.
Rehabilitation and Modelling.
- 30** 27 JUNE - 01 JULY
Bristol (UK)
TECHWARE ETCourse
Short Course. River Pollution.
- 15** 27 JUNE - 29 JULY
Cambridge,
Massachusetts (USA)
Training Workshop.
Environmental Economics & Policy Analysis.
- 27** 28 JUNE - 01 JULY
Maastricht (NL)
Course. Decision Making in International Education.
- 52** 28 JUNE
Cambridge (UK)
Workshop.
Copyright in flexible and Distance learning Projects.
- 3** 29 JUNE - 01 JULY
Cagliari (I)
Course.
Trattamento delle acque reflue : aspetti tecnologici e normativi.
- 16** 30 JUNE - 2 JULY
Paris (F)
International Conference on Education Business Partnership. Innovation through Partnership. The International Challenge.
- 45** 04-07 JULY
10-13 OCTOBER
La Hulpe (B)
Shaping Learning organisations - Starting the journey.
- 32** 04 JULY - 16 SEP
Leuven (B)
International Course on Microcomputer Applications in Water Resources Engineering and Management.
- 51** 06-07 JULY
Brussels (B)
Workshop.
Technology Management Projects.
- 29** 11-15 JULY
Wallingford (UK)
Conference
Nearshore and Estuarine Cohesive Sediment Transport.
- 25** 11-17 JULY
Cracow (PL)
TEMPUS JEP
Short Course.
Optimization of Water Resources.
- 18** 11 JULY - 31 AUGUST
Virginia&Colorado (USA)
International Course.
Techniques of Hydrologic Investigations for International Participants.
- 3** 13-15 JULY
Cagliari (I)
Course.
Sprechi, perdite e metodi di contenimento.
- 52** 15 JULY
Brussels (B)
Workshop.
Copyright in flexible and Distance learning Projects.
- 34** 17 JULY - 07 SEP
Aberdeen (UK)
Intensive Training Course on Environmental Assessment and Management.
- 19** 18 JULY
Roorkee, India
International Post-Graduate Diploma and Master's Course in Hydrology.
- 31** 18-28 JULY
Coimbra (P)
TEMPUS JEP
Short Intensive Course.
Hydroelectric Power Plants.
- 40** 19-21 JULY
Hong-Kong
Conference.
Assessing Quality in Higher Education.
- 53** 23 JULY
Singapore
Short course.
Solid Liquid Filtration Technology.
- 3** 27-29 JULY
Cagliari (I)
Course.
Modelli di simulazione di flusso a trasporto delle acque sotterranee.
- 54** 14-17 AUGUST
Santa Cruz, CA (USA)
Conference.
Higher Education Technology.
- 20** 15 AUG - 25 NOV
Wageningen (NL)
International Post-Graduate Course on Land Drainage.
- 10** 25 AUG - 22 DEC
Computer Conference Course. **TECHWARE.**
Integrated Urban Runoff.
- 21** 29 AUG - 02 SEPT
Prague (PL)
International Workshop.
Post-graduate Hydrology Education.
- 23/28** SEPTEMBER '94
Interuniversity Programme in Water Resources Engineering (IUPVWARE)
- 30** 05-09 SEPTEMBER
Bristol (UK)
TECHWARE ETCourse.
Short Course. Coastal Defence System.
- 43** 07-08 SEPTEMBER
Oxford (UK)
Symposium.
Improving Student Learning.
- 51** 08-09 SEPTEMBER
Uxbridge (UK)
Workshop.
Technology for Education in Software Technology '94.
- 55** 12-16 SEPTEMBER
Kastroma-Moscow, Russia
Remote Sensing and GIS in urban Waters. UDT-94 Education and Training Tools.
- 22** 12-16 SEPTEMBER
Kastroma-Moscow, Russia
Integrated Rehabilitation of environmentally devastated areas in river basins in Eastern Europe.
- 29** 13-16 SEP
Wallingford (UK)
Conference
Integrated River Basin Development.
- 14** 14-23 SEPTEMBER
Utrecht (NL)
Ten-day Summercourse.
Environmental implications of society's use of water.
- 3** 14-16 SEP
Cagliari (I)
Course.
Strumenti di misura e controllo.

Note : In view of PANTA RHEI's objectives, this calendar includes only educational and training or related activities in the field of water and HUMAN RESOURCES and MOBILITY. These announcements are made free of charge. Advertising of other activities such as Conferences, are welcome.

See rates on page 23
Please contact the Editor.

- 9** 15-16 SEPTEMBER
Graz (A)
Conference.
University-Enterprise
Information Systems.
- 35** 15-17 SEPTEMBER
Marseille (F)
COMETT Course.
Cardiovascular Fluid
Dynamics. Principles and
Clinical Application.
- 4** 18-29 SEPTEMBER
Murcia (E)
MED-CAMPUS Seminar.
Desertification et
Aménagement.
- 1** 19 SEPTEMBER
Wien (A)
Hochschullehrgang (4
Semester).
Geoinformationswesen.
- 24** 19-23 SEPTEMBER
Delft (NL)
International Conference
on Hydroinformatics.
- 30** 19-23 SEPTEMBER
Bristol (UK)
TECHWARE ETCourse.
Short Course. Water
Supply Engineering.
- 8** 20 SEP - 14 OCT
Delft (NL)
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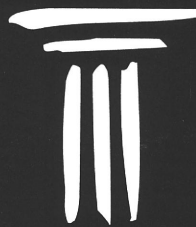
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