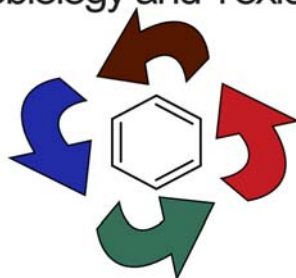


Research School of

Environmental Chemistry, Microbiology and Toxicology

# RECETO

Environmental Chemistry,  
Microbiology and Toxicology



Ph.D. Programme

Final Report 2002 - 2007

FIST references:

**643-01-0101**

**645-03-0160**

**645-04-0031**

## Forord

I denne beretning findes en kortfattet beskrivelse af RECETOs virke i 2003-2007. Størstedelen af rapporten er affattet på engelsk.

Forskerskolen "Research School of Environmental Chemistry and Ecotoxicology (RECETO)" blev grundlagt 2002 efter finansielt tilskud fra det daværende FUR for perioden 2002 – 2006. Perioden blev efterfølgende forlænget frem til sommeren 2007 grundet færdiggørelse af allerede finansierede Ph.D. studerende.

Denne beretning vil samle op på de første fem år af RECETOs virke og danne grundlaget for videre arbejde med den nye bevilling, der løber for perioden 2007 – 2012.

RECETO har i perioden været igennem en række stadier fra etablering af organisationen, konsolidering, vækst, udvikling af nye aktiviteter og evaluering. Forskeruddannelsen i Danmark er i samme periode blevet evalueret, der er kommet en nye universitetslov og –struktur og forskeruddannelsens organisation ved de danske universiteter er blevet revideret. Der har således været mange ændringer at tage højde for ligesom bevillingsstrukturen har været skiftende. Forskerskolerne har i denne periode med mange omvæltninger været med til at give en gennemgående linje i vejledning og faglig netværk. Forskerskolernes rolle er vigtig – og vigtigere end nogen sinde. Næmlig at modvirke faglig isolering af den ph.d. studerende, at styrke samarbejdet mellem vejledere og ph.d. studerende ved forskellige institutioner, at udvikle vejledningen og at forbedre udbudet af kurser, workshops og muligheder for tværgående ph.d. projekter. I den sammenhæng har den vanskeligste manøvre været overgangen fra forskerskoler til forskeruddannelsesprogrammer, herunder at fungere under den nye ph.d. skole ordning der de facto skaber større administrative og faglige skel mellem universiteterne end hidtidig. Forskeruddannelsesprogrammernes succes i fremtiden bliver i høj grad om vi kan arbejde på tværs ad den nye ph.d. skole struktur.



Hans Chr. Bruun Hansen

Leder af Forskeruddannelsesprogrammet RECETO

## Table of content

<b>FORORD .....</b>	<b>2</b>
<b>TABLE OF CONTENT .....</b>	<b>3</b>
<b>1 STATISTIK.....</b>	<b>4</b>
1.1 TILDELTE PH.D.-GRADER .....	4
1.2 IGANGVÆRENDE PH.D.-FORLØB VED AFSLUTNING .....	5
1.3 OPSLAG.....	5
1.4 VEJLEDERE .....	6
1.5 POSTDOCS, TAP OG UDENLANDSKE GÆSTEFORSKERE MED TILSKUD FRA FIST.....	6
1.6 KURSUSVIRKSOMHED MM. MED TILSKUD FRA FIST.....	6
1.7 PUBLICERING .....	7
1.8 EVT. BEMÆRKNINGER: .....	7
<b>2 UDDYBENDE RAPPORTERING .....</b>	<b>8</b>
2.1 AIMS .....	8
2.2 BACKGROUND, PARTNERS, ORGANISATION AND MANAGEMENT .....	8
2.3 STATISTICS OF ENROLLMENT AND DISSERTATION FOR RECETO 2003 - 2011.....	10
2.4 QUALITY ASSURANCE.....	11
2.5 RECETO ACTIVITIES.....	13
2.6 STRATEGIC RELEVANCE, COOPERATION WITH INDUSTRY AND BENEFITS TO SOCIETY.....	14
2.7 NATIONAL AND INTERNATIONAL COLLABORATION .....	15
2.8 FINANCES .....	16
<b>3 INTERNATIONALISATION STIPENDS .....</b>	<b>18</b>
<b>APPENDIX A - RECETO PH.D.S 2002 - 2007 .....</b>	<b>19</b>
2007 .....	19
2006 .....	19
2005 .....	20
<b>APPENDIX B: PH.D. COURSES ANNOUNCED ON THE RECETO HOMEPAGE.....</b>	<b>21</b>
<b>APPENDIX C: MAIN ACTIVITIES IN RECETO 2002 – 2007 .....</b>	<b>26</b>

**FORSKERSKOLER MED TILSKUD FRA FORSKNINGS- OG INNOVATIONSTYRELSEN (FIST)**

**Slutrapport for RECETO**

<b>Sagsnr.</b>	<b>643-01-0101, 645-03-0160, 645-04-0031</b>
Forskerskolens navn	Research School of Environmental Chemistry, Microbiology and Toxicology (RECETO)
Forskerskolens leder	Professor Hans Christian Bruun Hansen
Værtsuniversitet	Københavns Universitet, Det Biovidenskabelige Fakultet for Fødevarer, Veterinærmedicin og Naturressourcer
Deltagende universiteter	Danmarks Tekniske Universitet, Københavns Universitet - Naturvidenskabelige Fakultet, Københavns Universitet - Farmaceutiske Fakultet, Arhus Universitet – Det jordbrugsvidenskabelige Fakultet Arhus Universitet – Danmarks Miljøundersøgelser Lunds Universitet
Bevillingsperiode	2002 - 2007

## 1 Statistik

### 1.1 Tildelte ph.d.-grader

Der ønskes en opgørelse af antal ph.d.-grader opnået af studerende knyttet til forskerskolen fordelt på finansieringskilder og indskrivende universitet samt antal kvindelige studerende og studerende med udenlandsk adgangsgivende eksamen.

	Samtlige tildelte ph.d.-grader	Heraf med tilskud fra FIST				Heraf under Erhvervs-PhD-ordningen
		Samfinansierede i alt	Med tilskud fra sektor-forskning	Med tilskud fra erhvervsliv	Internat. stipendier*	
Antal i alt	23	5	2	0	1	
Heraf:						
Ved værtsuniversitet	4	2	1	0	0	0
Ved deltagende universiteter	15	3	1	0	1	0
Med udenlandsk adg. eksamen	4	1				
Kvinder	7	2				
Gennemsnitsalder	31,4	31,4				

\* Omfatter internationaliseringsstipendier både til indskrivning ved forskerskolen og ved udenlandsk universitet.

## 1.2 Igangværende ph.d.-forløb ved afslutning

Der ønskes en opgørelse af antal ph.d.-studerende knyttet til forskerskolen ved bevillingsperiodens afslutning fordelt på finansieringskilder og indskrivende universitet samt antal kvindelige studerende og studerende med udenlandsk adgangsgivende eksamen.

	Samtlige tilknyttede ph.d-studerende	Heraf med tilskud fra FIST				Heraf under Erhvervs-PhD-ordningen
		Samfinansierede i alt	Med tilskud fra sektorforskning	Med tilskud fra erhvervsliv	Internat. stipendier*	
Antal i alt	48	10	2	1	1	0
Heraf:						
Ved værtsuniversitet	22	9	3	0	0	0
Ved deltagende universiteter	16	1	0	1	0	0
Med udenlandsk adg. eksamen	-	1				
Kvinder	32	5				

\* Omfatter internationaliseringsstipendier både til indskrivning ved forskerskolen og til indskrivning ved udenlandsk universitet.

## 1.3 Opslag

Der ønskes en opgørelse af antal stipendier med tilskud fra FIST, som er slået op i bevillingsperioden, antal modtagne ansøgninger fordelt på universitet, antal kvindelige ansøgere og ansøgere med udenlandsk adgangsgivende eksamen.

	Opslag	Ansøgere i alt
Antal i alt	18	107
Heraf:		
Ved værtsuniversitet	12	85
Ved deltagende universiteter	6	24
Med udenlandsk adgangsgivende eksamen		54
Kvinder		36

#### 1.4 Vejledere

Der ønskes en opgørelse af antal vejledere (jf. ph.d.-bekendtgørelsens § 9) for ph.d.-studerende knyttet til forskerskolen, fordelt på ansættelsessted.

	Værtsuniversitet	Deltagende universiteter	Sektorforskning	Virksomheder	I alt
Antal vejledere	22	16	5		43
Heraf fra udlandet					

#### 1.5 Postdocs, TAP og udenlandske gæsteforskere med tilskud fra FIST

Der ønskes en opgørelse af antal postdocs og TAP knyttet til forskerskolen og lønnet med tilskud fra FIST, samt antal udenlandske gæsteforskere støttet af FIST.

	Værtsinstitution	Deltagende universiteter	Sektorforskning	Virksomheder	I alt
Postdocs	4				4
TAP					
Udenlandske gæsteforskere	1	1			2

#### 1.6 Kursusvirksomhed mm. med tilskud fra FIST

Der ønskes en opgørelse af antal ph.d.-kurser mv. og vejlederkurser afholdt med tilskud fra FIST, antal deltagere og heraf ph.d.-studerende indskrevet i udlandet.

	Ph.d.-kurser, workshops mv.		Kurser for vejledere	
	Enheder	Deltagere	Enheder	Deltagere
Antal	8	355	2	38
Heraf fra udlandet		51		1

## 1.7 Publicering

Der ønskes en opgørelse af antal publikationer med ph.d.-studerende knyttet til forskerskolen som forfatter eller medforfatter.

	Antagne tidsskrifter med peer review	Antologier	Monografier	Konference-papers	Andet
Danske					
Udenlandske	66			45	2

*Disse tal er meget usikre idet vi ikke har modtaget data fra alle studerende. RECETO sekretariatet har ikke haft ressourcer til at søge på publikationer for samtlige ph.d. studerende ved forskerskolen. Det vides dog at alle ph.d. studerende normalt har 3 eller flere videnskabelige publikationer som del af deres ph.d. afhandling. Da der ialt er tildelt 23 ph.d. grader vil det sige at der mindst skulle være publiceret omkring 70 artikler. Hertil kommer at ligeså mange ph.d. studerende er igang med et studium og er påbegyndt publicering, så et skøn over publikationer vil være tæt på 100. RECETO sekretariatet har ikke haft tilfælde med indberening af ph.d. studerende fra Danmark som har udvist mangelfuld publicering.*

## 1.8. Beskæftigelse efter ph.d.

Der ønskes en opgørelse af de ved forskerskolen ph.d.-uddannedes ansættelsessted på rapporteringstidspunktet, jf. tabel 1.1.

*Vi har som forskerskole ikke fulgt de studerendes beskæftigelse efter aflevering af afhandling, da dette arbejde er tidskrævende og vi har fundet det vigtigere at bruge kræfterne på at støtte studerende der er igang med en ph.d. uddannelse i RECET. På forskningsniveau har ph.d. studerende efter afsluttet eksamen etableret samarbejde med forskere tilknyttet RECETO.*

## 1.8 Evt. bemærkninger:

*RECETO indskrev i starten af sin virkeperiode studerende fra udenlandske institutioner. Disse studerende deltog i kurser og sommerskoler ved RECETO og de studerende var interesseret i den faglige profil som RECETO havde. Det viste sig imidlertid ganske vanskeligt at holde kontakten med disse studerende og også deres vejledere var i mange tilfælde ikke identificerede. Vi har derfor i anden del af perioden været tilbageholdne med at indskrive ph.d. studerende fra institutioner, der ikke er direkte tilknyttet til RECETO.*

## 2 Uddybende rapportering

### 2.1 Aims

The main aims behind establishment of RECETO as stated in the application 2002 were:

- to strengthen the education of researchers within environmental science based on strong roots in the natural sciences
- to stimulate interdisciplinary cooperation and projects directed towards sustainable use of natural resources
- to strengthen common concepts and research progress in environmental science between the partner universities and with particular focus on terrestrial systems and interactions between soil, water and biota
- to better respond to the need for top level researchers in companies and in the public sector

RECETO has been responding to these aims throughout the period; many new interdisciplinary projects have been funded and very importantly many of the partners in RECETO have got to learn each other and have extended their cooperation.

RECETO applied for funding for establishing a secretariat, for development of a homepage and establishing an organizational structure of the school, for development of courses including summercourses, and for organization of annual symposia. In addition RECETO applied for Ph.D. stipends. The budget and expenses are given at end of the report and below is given a summary of the activities and progress made during the period.

### 2.2 Background, partners, organisation and management

The research school of Environmental Chemistry, Microbiology and Toxicology (RECETO) was initiated by a “FUR” grant in 2002 and started operation January 2003. This grant has been followed by a 2<sup>nd</sup> grant starting in 2007 for quality improvement. The grants have been used to develop and run courses and summer schools, annual symposia (now together with GESS, COGCI and FIVA research schools), to operate a secretariat and board, to develop and manage a homepage, to organize meetings, to co-finance scholarships, and to develop international cooperation. RECETO comprises 7 different universities/faculties: DTU, University of Copenhagen (3 faculties), Aarhus University (2 faculties) and Lunds University, plus two research institutions: GEUS and DHI Water and Environment. The institutions represent important research institutions in environmental science and most of the partners have the Øresund Region as an important geographical target. The

Faculty of Life Sciences, University of Copenhagen (KU-LIFE) is currently the host of the research school. A total of 16 research groups at the partner institutions contribute with a total of about 60 supervisors to take part in the network. At KU-LIFE RECETO is being managed together with the research school MIBS constituting, two research schools with together make up the cluster of research schools (CRS) called Chemistry & Environment.

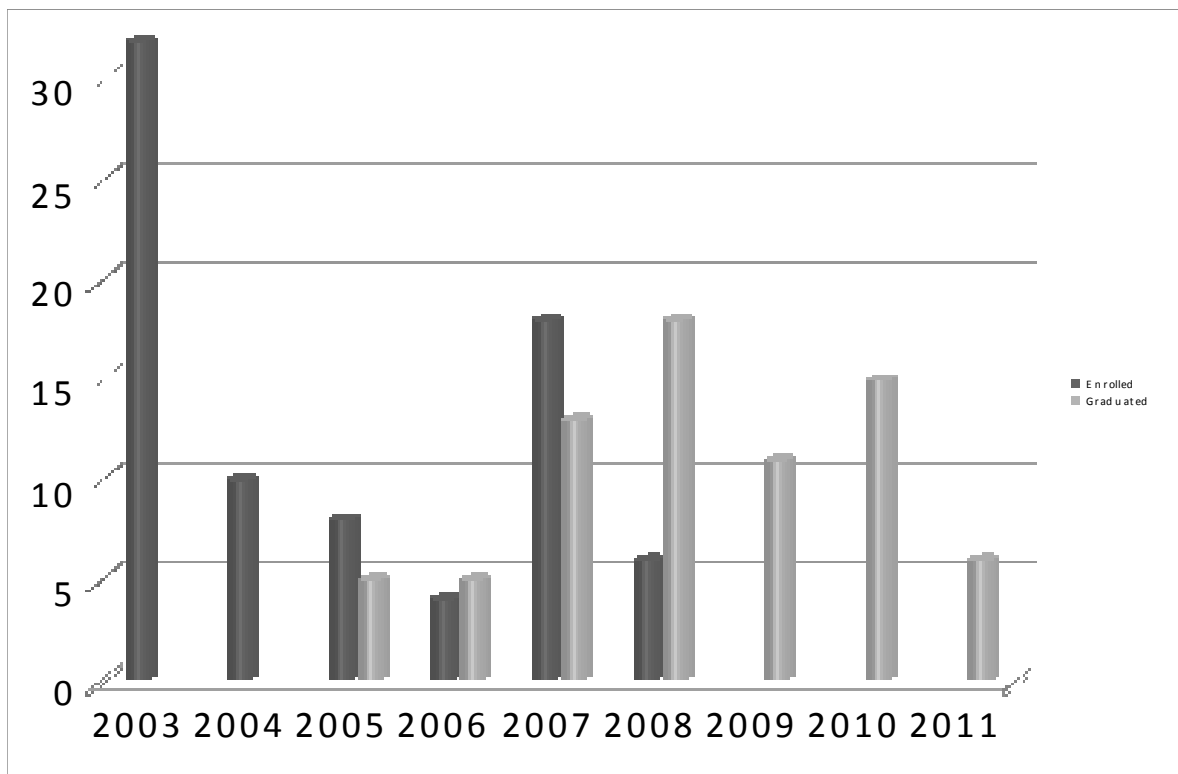
In RECETO annual work programmes, budgets, national and international collaboration, research school activities and evaluations are handled by the board which comprises 6 representatives from the partner institutions, one Ph.D. student and the head of research school. Daily management is carried out by the head of research school and the CRS secretary which comprise one part time academic secretary as well as several part time technical officers (accounting, IT, newsletters, and recruitment/advertising).

A homepage is used for easy communication with Ph.D. students and supervisors and for administration ([www.receto.dk](http://www.receto.dk)); newsletters are sent out every 2<sup>nd</sup> month. Today RECETO has about 50 affiliated students. An internal and external evaluation of RECETO was completed in 2006; the evaluation has been the basis for continuing the improvement of RECETO and for revision of its scientific programme and for the management.

With the new organization of Ph.D. education into Ph.D. Schools, RECETO formally belongs to or acts in relation to different Ph.D. Schools at the different partner institutions and faculties, viz. AU, DTU and KU. Agreements between RECETO and the different Ph.D. schools are being developed to ensure that RECETO can continue as a cross-disciplinary and cross-institutional network being represented in all of the partner Ph.D. Schools. In terms of day-to-day administration RECETO has the tightest links to the “Graduate School of Life Sciences” at KU-LIFE, which is the Ph.D school under which all Ph.D. students at LIFE is enrolled. The head of this Ph.D. school has the overall responsibility for the organization of the Ph.D. education at KU-LIFE. A Ph.D. committee advises the head of the graduate school regarding enrollment, Ph.D. plans, assessment committee, evaluation, complains, etc. The graduate school offers generic courses such as introductory courses for new Ph.D. students and didactic courses and supervisor courses. The graduate school ensures supervision quality, makes evaluations and monitors and assures quality of the activities within the research schools.

### 2.3 Statistics of enrollment and dissertation for RECETO 2003 - 2011

Figure 1 shows the progress of enrollment and theses defended by Ph.D. students associated with RECETO during 2003 – 2011. Today 47 Ph.D. students have been enrolled and during the last couple of years 16 have defended their thesis after an average of 3.9 years of Ph.D. study; the length of the study period includes leaves, e.g. maternity leaves. 21 Ph.D. students were enrolled in 2006-7. We have seen a very low drop-out frequency for Ph.D. students affiliated to RECETO via the partner institutions, probably only 1 or 2 students have stopped their studies.



**Figure 1.** The progress of enrollment and thesis defended by Ph.D. students associated with RECETO during 2003 – 2011.

## 2.4 Quality assurance

All activities contributed by RECETO are evaluated using a written evaluation scheme. A full internal and external evaluation of RECETO was performed in 2006 and formed the basis for revision of RECETO management and activities. The full evaluation and recommendations are available via the RECETO homepage. A summary of the evaluation 2006 was:

- The core areas of RECETO should be reconsidered – and also the name of the research school is to be discussed. More emphasis on environmental biology/microbiology and ecotoxicology/risk assessment is preferable.
- The RECETO symposia should be further developed. It is suggested to turn the symposia into two-day events with the first day comprising presentations and lectures open to all workers within all core areas of RECETO, and with the second day allocated to Ph.D. student activities (presentation techniques, evaluation, supervision, discussions, networking, etc).
- The international dimension should be strongly improved by offering better opportunities to attend courses and other activities in foreign research schools and to use such extended network for research stays in other academic environments. One of the highest priorities will be to apply the Marie Curie actions, in particular “early stage training sites”.
- The plan for development and implementation of courses including summer courses need to be made for a time horizon of 2 – 3 years so that students can incorporate the courses in their time schedules.
- Development of short tool-oriented courses, e.g. academic writing, research communication, innovation and patenting, and project planning and organization. These courses should be developed in cooperation with other research schools.
- The more technical matters of administration such as advertisement, evaluation of applicants, cooperation agreements, etc. should be removed from the research school administrations in order to get more time for the professional and academic activities.
- Introduction of new tools for support of Ph.D. student activities, e.g. small grants for attending courses abroad, travel grants and for organization of workshops, seminars and short courses.
- More direct involvement of Ph.D. students in RECETO activities, e.g. RECETO symposia, seminars and social events.
- A yearly half-day meeting for supervisors, where evaluation and development of Ph.D. courses – and the general development of RECETO are discussed
- Strengthening of collaboration with other Danish research schools within environmental science and ecotoxicology.

- More extensive information about RECETO via news letters, journals, flyers and posters. Further, the partner institutions should make better use of RECETO as a co-organizer of meetings, seminars and workshops.
- Focus on cooperation with industries and companies. Cooperation projects, services offered by RECETO, innovation, use of opportunities for financing of university-company cooperation, etc.
- Continued work on research school organization, in particular to make a stronger and bigger national school within environmental chemistry and ecotoxicology, and a school which includes all partners in Denmark.

In response to these recommendations RECETO has revised its name (equal emphasis on microbiology and toxicology) and restructured formulation of the core research areas, and the RECETO symposia now are distributed over 2 days including both plenary sessions, student presentations and workshops related to supervision, internationalization, planning etc. It has been decided that supervisor improvement should be included as part of the annual symposia. RECETO continues to cooperate with the Finnish research school EnSTe and the Dutch research school SENSE. However, there is still a big need to further develop the international dimension. The same is true for industrial collaboration. RECETO is now planning summercourses several years ahead. The responsibility for development of generic tool-oriented courses now rests with the different Ph.D. schools and RECETO is only supporting specific generic courses within its own field of specialisation. RECETO has developed travel grants to support students travelling to participate in erts-earnig activities such as courses and workshops. RECETO is in process of strengthening collaboration with other Danish research schools like GESS and STAIR. It would also be relevant to improve cooperation with the research school of Biotechnology, Chemistry and Environment hosted by the Aalborg University. RECETO has revised its homepage and a news-letter is now being sent out every 2<sup>nd</sup> month. It has been discussed to develop a “big” national research school in environmental science, but due to many administrative, legal, and financial restrictions laid down in the current Danish regulations of university management and research education it has been decided not to follow up on such effort. In stead RECETO will go for as intensive collaboration with related Danish and international research schools as possible.

All half-year assessment reports are collected and scrutinized by the RECETO secretariat which takes action if problems arise. In addition the performance of the affiliated Ph.D. students are followed viz. publications, thesis, and other study activities. In the future the quality assurance will be further adjusted and harmonized according to the needs of the different Ph.D. schools to which RECETO refers.

## 2.5 RECETO activities

RECETO has developed and supported the following Ph.D. educational activities:

- National/international network between Ph.D. students and supervisors
- Information exchange through meetings, courses and via the RECETO homepage
- Intensive courses, e.g. sampling, instrumental analysis, and toxicology
- Summer schools
- RECETO symposia with focus on research in progress, communication skills and student-supervisor relationships
- Workshops and meetings
- Visiting scientists
- Traveling grants for participation in courses
- Setting quality standards (admission, progress reports, evaluation panels, course evaluation)

RECETO has played a very important role for the establishment of networks. Through this network Ph.D. students get easy and quick access to knowledge and support, national and international contacts, and the risk of feeling “isolated” has been markedly reduced. Networking speeds up project work and advances the quality of the science performed. Supervisors and institutions also use RECETO for networking and Ph.D. students act as “vectors” between research environments. Unfortunately, with the organization of Ph.D. Schools (as a consequence of the new university act) there is a new risk of Ph.D. students getting isolated and RECETO has an even more important role to bridge the science as the different institutions and to hinder isolation caused by administrative “walls”. Information exchange takes place via the RECETO homepage, newsletters and e-mails. RECETO has compiled relevant courses at the 5 participating universities and has established its own programme of intensive courses. Summer schools have become the most important course activity run by RECETO attracting many students and being taught by national and international guest professors. The RECETO symposia now co-organized together with the research schools COGCI and GESS is the annual event bringing together students and supervisors; the symposia also comprise workshops on supervision, internationalisation, planning, communications etc. Besides these activities *ad hoc* work shops and meetings are organized by the partners. Several visiting scientists participating as supervisors and course teachers have been hosted by RECETO.

All courses in the RECETO homepage are listed in Appendix B. Major activities supported by RECETO are given in Appendix C.

## 2.6 Strategic relevance, cooperation with industry and benefits to society

The strategic relevance of the research, the research training and the collaboration/network being accomplished through RECETO has three components:

- *Basis for development of environmental and cleantech technology.* Most Ph.D. projects aims at understanding processes at the molecular and mechanistic level in order to develop environmental technologies, such as water cleaning, waste decomposition/separation, soil remediation, and environmental friendly chemicals and dosage. Development of sustainable technologies with low environmental impact is a strong trademark of Danish products.
- *Modelling, prediction, risk analysis and tools for management.* Industries, public administrative bodies and consultants at local to national levels are in strong need of models and tools to predict the effects of different management strategies, e.g. in relation to risk assessment of chemicals (REACH), transport of chemicals in relation to the Water Framework Directive, aquifer management, control of point pollutions, land use management and evaluation of new technologies.
- *Monitoring, analysis, QSAR, and awareness.* Millions of industrial and natural chemicals circulate in the environment and affects human and animal health, and ecosystem stability. Analytical schemes and biological effects are known for only a few thousand of these chemicals. There is a huge need to increase the capacity to analyze and predict environmental effects and thus to reduce the costs by “not knowing” as expressed in the precautionary principle used in Danish environmental regulation.

RECETO collaborates with industries, environmental engineers and consultants and the public environmental sector through running Ph.D. projects with industrial cofunding. A high quality of environmental research is critical to society. There is much public concern in relation to the environment, e.g. clean drinking water, healthy and stable ecosystems (forests, arable land), agricultural practices, eutrofication, endocrine disruptors, climate change and loss of biodiversity. A high standard of Ph.D. education is a prerequisite for providing environmental professionals for industry, consultants, public administration and for universities and other public research organizations. Foremost is however, that RECETO through high quality programmes and research projects generated by its students and supervisors contributes to the development of new approaches and that not only incremental research is seen but that new steps forward are generated. Hence, there is need for both in-depth molecular oriented basic research programmes and programmes where the basic research is brought into an applied context.

## **2.7 National and international collaboration**

RECETO has initiated collaboration with three other research schools funded by the Danish Research Councils: GESS, COGCI and FIVA. The collaboration comprises information exchange, opening of courses for Ph.D. students from the collaborating research schools and organization of common courses and workshops. The cooperation between the national schools brings together more than 70 % of the Danish research institutions in environmental science which are then in position to coordinate and improve Ph.D. education. Concurrently, RECETO has initiated international collaboration with the Dutch research school for Socio-Economic and Natural Sciences of the Environment (SENSE; > 200 Ph.D. students), the Finnish research school of Environmental Science and Technology (ENSTE; ~50 Ph.D. students) and the Swedish-Norwegian network in environmental science lead by Stockholm University (~50 Ph.D. students). Collaboration comprises information exchange (news letters, access to homepages, course announcements, and summer schools) and development of proposals (EU, Nordforsk). RECETO provide travelling grants for students attending courses abroad. All partners in RECETO and at the collaborating national and international universities and institutions take part in a large number of international research projects, networks, societies and committees, EU-projects, UN and world bank projects, etc. An international MS programme in environmental science is conducted by DTU and KU. The strong international collaboration and profile is a trademark of environmental science - issues on environment and health are global and cross-border.

## 2.8 Finances

The accountings comprise three grants:

643-01-0101: Research School of Environmental Chemistry and Ecotoxicology (RECETO);  
3,700,000 kr.

645-03-0160: Thermodynamics of transient and steady-state sub-oxic redox processes relevant to  
groundwater contamination; 1,397,520 kr.

645-04-0031: Biological methods for diagnosing the status and predicting evaluation of polluted  
environments; 450,000 kr.

The budgets and expenses comprising all three grants are given below. It appears that all funding has been used – and almost as originally planned. The secretariat has spent 165.000 kr. more than expected while less money has been spent on summer schools and travelling as originally planned. Seen over a period of 5 years, these unbalances appear not very significant. The administrative work has been much more heavy than originally expected and many resources have been spent for job postings, evaluations, development of cooperation contracts, legal issues, etc. Hence, the partner university has had to add a substantial co-funding in order to allow for the secretariat to fulfill its tasks. Also the time spent of the head of the research school has been fully paid by the host institution.

Most of the stipends have been reallocated to the partner institutions and hence the KU-LIFE host institution has transferred the grants incl. OH to the hosts.

A detailed cost statement has been made and can be forwarded on request.

Budget	Main grant (643-01-0101)							Additional grants (645-03-0160; 645-04-0031)			
	2002	2003	2004	2005	2006	2007	Subtotal	2004	2005	2006	Total
Secretary	40	120	120	80			360				360
Secretariat	50	40	40	30			160				160
Meetings/travelling	25	30	30	15			100				100
Guest profs (summer schools)	0	96	96	96			288				288
Symposia, conferences, etc	0	100	100	100			300				300
Stipends	750	750	375	0	375		2250	575	587	611	4023
OH for KU-LIFE (20 % of running costs)	173	227	152	65	-375		242	25	25	25	317
Budget distributed onto years	1038	1363	913	386			<b>3700</b>	600	612	636	<b>5548</b>

### Expenses

	2002	2003	2004	2005	2006	2007	Total	Comparison with budget
Secretary	27	160	-28	100	180	33	472	-112
Secretariat	19	77	2	7	41	67	213	-53
Meetings/travelling	0	11	16	8	15	3	53	47
Guest profs (summer schools)	0	0	52	81	54	1	188	100
Symposia, conferences, etc	0	18	110	26		128	282	18
Stipends incl. OH	0	0	695	1186	2142		4023	0
OH IGV	53	107	93	64			317	0
Overhead	99	373	940	1472	2432	232	<b>5548</b>	<b>0</b>

### Income









	2002	2003	2004	2005	2006	Total	Notes
FI (643-01-0101)	1038	1363	913	386		3700	RECETO incl. 5 x 1/3 stipends
FI (645-04-0031)			150	150	150	450	1/3 stipend
FI (645-03-0160)			450	462	485	1397	Internationalization stipend
Total income	1038	1363	1513	998	635	<b>5547</b>	




### 3 Internationalisation stipends

*RECETO has been granted one stipend for Axel Heimann (645-03-0160) and a final report has been send to FI on a separate document dated 2008-04-08.*

*The report was accepted by Kirstine Larsen by mail 4/29/08 9:45 AM.*

## Appendix A - RECETO Ph.D.s 2002 - 2007

Name	Title of dissertation	Affiliation	Link
<b>2007</b>			
Nanna Birgitte Bjarnholt		KU-LIFE	
Thaer Berri	Membrane extraction - an environmentally friendly and efficient alternative for environmental analysis	Lund University	
Fredrik Reichenberg	The accessibility and chemical activity of polycyclic aromatic hydrocarbons in soil	DMU / Lund University	
<a href="#">Helle Marcussen</a>	Contents and risks of potentially toxic elements in wastewater-fed food production systems in Southeast Asia	KU-LIFE	
Kamila Deavers (former Muzikantova)	Potential utilization of green plants to remove 4-CBA (chlorobenzoic acid) from the environment	VSCHT Prag	
<a href="#">Jirij Hønning</a>	Use of <i>in situ</i> chemical oxidation with permanganate in PCE-contaminated clayey till with sand lenses	DTU-E&R	
<a href="#">Axel Colin Heimann</a>	Bioenergetics of transient and steady-state anaerobic redox processes relevant to groundwater contamination	DTU-E&R	
<a href="#">Ellinor Ingrid Lindberg</a>	Detection and quantification of subsurface pesticide degrading microbial populations	DTU-E&R	
<a href="#">Ahmed Suheyl Ucisik</a>	Uptake of chemicals and metabolism kinetics related to toxic effects and consideration of phytoremediation as a remediation option	DTU-E&R	
<a href="#">Kåre Press-Kristensen</a>	Biodegradation of xenobiotic organic compounds in wastewater treatment plants	DTU-E&R	
<b>2006</b>			
Anne-Marie Jacobsen	Analysis of Veterinary Antibiotics and Steroid Hormones in Soil and Manure	KU-FARMA	
Ales Kulhanek	Risk assessment methods of soils contaminated by selected polycyclic aromatic hydrocarbons	DTU-E&R	
<a href="#">Anne Kirketerp Friis</a>	The potential for reductive dechlorination after thermal treatment of TCE-contaminated aquifers	DTU-E&R	
Majid Abbaspoor	Chlorophyll a Fluorescence and Herbicide Efficacy, Metabolism and Selectivity	KU-LIFE	<a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>

2005			
Juliana Cristina Barreiro		Federal University of São Carlos	
<a href="#">Morten Larsen</a>	Plant uptake of cyanide	DTU-E&R	
<a href="#">Dorte Seifert</a>	Experimental and numerical investigations of changes in flow and solute transport processes in porous media affected by bioclogging	DTU-E&R	
<a href="#">Morten Birkved</a>	Fate and exposure modelling in Life Cycle Assessment : Alternative approaches	DTU-E&R	
Maria Sommer Holtze	Degradation of the herbicide dichlobenil and the metabolite 2,6-dichlorobenzamide (BAM) in soil and bacterial cultures	KU-LIFE / GEUS	

## Appendix B: Ph.D. courses announced on the RECETO homepage

Below find a list of Ph.D. courses relevant for RECETO students, and contributed by the partner institutions.

Course Title	Course Schedule and Period	Course responsible	Institution	Level
<a href="#">The Art of Scientific Writing</a>	Spring - 4½ days	<a href="#">Bo Jellesmark Thorsen</a>	KU-LIFE	PhD
<a href="#">Biophysical Chemistry</a>	Irregular course, contact course responsible	<a href="#">H.E. Lundager Madsen</a> / <a href="#">L. Hemmingsen</a>	KU-LIFE	PhD
<a href="#">Analytical Chemistry</a>	<a href="#">Block 4</a>	<a href="#">Jan H. Christensen</a>	KU-LIFE	MSc
<a href="#">Advanced Chemometrics</a>	<a href="#">Block 2</a>	<a href="#">Lars Nørgaard</a> / <a href="#">Rasmus Bro</a> / <a href="#">Frans Van Den Berg</a>	KU-LIFE	MSc
<a href="#">Infection microbiology</a>	<a href="#">Block 4</a>	<a href="#">Line Elnif Thomsen</a>	KU-LIFE	PhD
<a href="#">Pesticide Use, Mode of Action and Ecotoxicology</a>	<a href="#">Block 1</a>	<a href="#">Jens Carl Streibig</a> / <a href="#">Nina Cedergreen</a>	KU-LIFE	MSc / BSc
<a href="#">Microbial growth and Activity in Complex Communities</a>	One full week, summer even years	<a href="#">Jan Sørensen</a>	KU-LIFE	PhD
<a href="#">Applied Microbiology</a>	<a href="#">Block 2</a>	<a href="#">Peter Stougaard</a>	KU-LIFE	MSc
<a href="#">Advanced Mathematics for Biology</a>	Individual study, contact course responsible	<a href="#">Mogens Flensted-Jensen</a>	KU-LIFE	PhD
<a href="#">Advanced statistics</a>	Individual study, contact course responsible	<a href="#">Ib Skovgaard</a>	KU-LIFE	PhD
<a href="#">Applied Statistics</a>	Individual study, contact course responsible	<a href="#">Ib Skovgaard</a>	KU-LIFE	PhD
<a href="#">Biochemistry and Natural Product Chemistry</a>	Semester; irregular course, contact course responsible	<a href="#">Hilmer Sørensen</a> / <a href="#">Susanne Sørensen</a> / <a href="#">Charlotte Bjerregaard</a>	KU-LIFE	PhD
<a href="#">Combinatorial chemistry and chemical biology</a>	Six weeks full time; irregular course, contact course responsible	<a href="#">John Nielsen</a>	KU-LIFE	PhD
<a href="#">Environmental Soil Chemistry</a>	Block 2; irregular course, contact course responsible	<a href="#">Hans Christian Bruun Hansen</a>	KU-LIFE	PhD
<a href="#">Pedology</a>	Semester; irregular course, contact course responsible	<a href="#">Ole K. Borggaard</a>	KU-LIFE	PhD
	One week residential	<a href="#">Inge S. Fomsgaard</a>	AU-agrsci	PhD

<a href="#">RECETO Summerschool - Bioactive natural compounds in soil: Analysis, fate and effects</a>	course, July 27-31, 2009		RECETO	
<a href="#">Soil Mineral Determination</a>	Irregular course, contact course responsible	<a href="#">Christian Bender Koch</a>	KU-LIFE	PhD
<a href="#">Topics and Methods in Inorganic Chemistry</a>	One week residential course, summer school	<a href="#">Morten J. Bjerrum</a>	KU-LIFE	PhD
<a href="#">Advances in Plant Nutrition</a>	Full year, part time	Niels Erik Nielsen (Module A) / <a href="#">Jan K. Sjørring (Module B)</a>	KU-LIFE	PhD
<a href="#">Isotope methods for studying carbon and nutrient dynamics</a>	Three full weeks, January 12-30, 2009	<a href="#">Anders de Neergaard</a>	KU-LIFE	PhD
<a href="#">Agrohydrology and Bioclimatology</a>	Full year, part time	<a href="#">Søren Hansen</a>	KU-LIFE	PhD
<a href="#">Plant Nutrients in Terrestrial Ecosystems - acquisition and turnover</a>	Four weeks intensive course; irregular course, contact course responsible	<a href="#">Jakob Magid</a>	KU-LIFE	PhD
<a href="#">Uptake and effects of xenobiotics in plants</a>	Two full weeks; irregular course, contact course responsible	<a href="#">Jens Carl Streibig</a>	KU-LIFE	PhD
<a href="#">Advanced Chemometric Methods. Multi-way analysis</a>	Three full weeks, autumn 2009	<a href="#">Rasmus Bro</a>	KU-LIFE	PhD
<a href="#">Patenting</a>	Three weeks (half time), spring 2009	<a href="#">Henrik Vibe Scheller</a>	KU-LIFE	PhD
<a href="#">12233 - Water Pollution</a>	<a href="#">Semester</a> , autumn every year	<a href="#">Stefan Trapp</a>	DTU	MSc / BSc
<a href="#">01716 - Advanced Topics in Applied Functional Analysis</a>	<a href="#">Semester</a> , autumn every year	<a href="#">Michael Pedersen / Ole Christensen</a>	DTU	PhD
<a href="#">42132 - Large Scale Optimization using Decomposition</a>	<a href="#">Semester</a> , spring every year	<a href="#">Thomas K. Stidsen</a>	DTU	PhD
<a href="#">42133 - Optimization using metaheuristics</a>	<a href="#">Semester</a> , spring every year	<a href="#">Thomas K. Stidsen</a>	DTU	PhD
<a href="#">02901 -Advanced Digital Signal Processing</a>	One full week, autumn every year	<a href="#">Jan Larsen / Lars Kai Hansen</a>	DTU	PhD
<a href="#">10501 - Modern Physics</a>	<a href="#">Semester</a> , spring every year	<a href="#">Jørn Bindslev Hansen / Steen Mørup</a>	DTU	PhD
<a href="#">10503 - PhD course in Nanomaterials and Surface Physics</a>	Autumn and spring semester, even years	<a href="#">Ib Chorkendorff</a>	DTU	PhD
<a href="#">10504 - Low Temperature Physics</a>	<a href="#">Semester, autumn or spring</a>	<a href="#">Jesper Mygind</a>	DTU	PhD
<a href="#">26920 - Advanced Organic Synthesis</a>	Semester, spring even years	<a href="#">David Aukland Tanner</a>	DTU	PhD

<a href="#">28908 - Rheology of complex fluids</a>	<a href="#">Semester</a> , autumn every year	<a href="#">Peter Szabo</a>	DTU	PhD
<a href="#">28910 - Numerical Solution of Mathematical Models in Chemical Engineering</a>	<a href="#">Semester</a> , spring every year	<a href="#">Stig Wedel</a>	DTU	PhD
<a href="#">28911 - Multivariabel Process Identification for Model Predictive Process Plant Control</a>	<a href="#">Semester</a> , fall	<a href="#">Sten Bay Jørgensen</a>	DTU	PhD
<a href="#">28914 - Advanced Polymer Chemistry</a>	Summer/fall, even years	<a href="#">Søren Hvilsted</a>	DTU	PhD
<a href="#">41690 - Electron Microscopy and Analysis for Materials Research</a>	<a href="#">Semester</a> , autumn and spring	<a href="#">Andy Horsewell</a>	DTU	PhD
<a href="#">12902 - Life Cycle Assessment Modelling of Solid Waste Systems - Application of the EASEWASTE Model</a>	Irregular course, contact course responsible	<a href="#">Thomas Højlund Christensen</a>	DTU	PhD
<a href="#">12903 - Individual Based Modelling of Microbial Processes and Interactions</a>	One full week; Irregular course, contact course responsible	<a href="#">Bart F. Smets</a>	DTU	PhD
<a href="#">25002 - Lipid Biochemistry and Technology, Applications and Analysis</a>	Eight full days, September even years	<a href="#">Charlotte Jacobsen</a>	DTU	PhD
<a href="#">41390 - Eksperimental Fluid Dynamics and Data Interpretation</a>	Three weeks, June	<a href="#">Knud Erik Meyer</a>	DTU	PhD
<a href="#">27815 - Microbial Natural Product Chemistry</a>	Six full days, spring/summer odd years	<a href="#">Thomas Ostenfeld Larsen</a>	DTU	PhD
<a href="#">27820 - Medical Biofilm Techniques</a>	Ten full days, August every year	<a href="#">Claus Sternberg / Janus Anders Juul Haagesen</a>	DTU	PhD
<a href="#">27819 - Process Analytical Technologies</a>	Six full days, May/June odd years	<a href="#">Anna Eliasson Lantz</a>	DTU	PhD
<a href="#">88401 - Patent Course</a>	<a href="#">Semester</a> , spring every year	<a href="#">Susanne Schultz</a>	DTU	PhD
<a href="#">88553 - Teaching and Learning</a>	Autumn and spring	<a href="#">Birgitte Lund Christiansen</a>	DTU	PhD
<a href="#">12131 - Waste Water Treatment</a>	<a href="#">Semester</a> , autumn every year	<a href="#">Bart F. Smets</a>	DTU	MSc
<a href="#">12140 - Integrated Urban Water Quality Management</a>	<a href="#">Semester</a> , autumn every year	<a href="#">Peter Steen Mikkelsen</a>	DTU	MSc
<a href="#">12332 - Groundwater Geochemistry</a>	<a href="#">Semester</a> , spring every year	<a href="#">Rasmus Jakobsen</a>	DTU	MSc
<a href="#">12341 - Surface Water Hydrology</a>	<a href="#">Semester</a> , spring every year	<a href="#">Dan Rosbjerg</a>	DTU	MSc
<a href="#">Mass Spectrometry Coupled to Separation Techniques in</a>	One full week, January 2009	<a href="#">Steen Honoré Hansen</a>	KU-FARMA	PhD

<a href="#">Bioanalytical Chemistry</a>				
<a href="#">Scientific Writing - a framework for writing a scientific paper</a>	One day, April 2009	A.C. Moffat / <a href="#">Flemming Steen Jørgensen</a>	KU-FARMA	PhD
<a href="#">Chemoinformatics</a>	Four days, September 2008	<a href="#">Flemming Steen Jørgensen</a>	KU-FARMA	PhD
<a href="#">Function of biological airfilters</a>	Autumn 2008	<a href="#">Jeppe Lund Nielsen</a>	Aalborg University	PhD
<a href="#">Management of Research and Development</a>	Three days, May every year	<a href="#">Frank Gertsen</a>	Aalborg University	PhD
<a href="#">Writing and Reviewing Scientific Papers</a>	Two days, autumn and spring	<a href="#">Jacob Stoustrup</a>	Aalborg University	PhD
<a href="#">Professional Communication</a>	Three days, autumn and spring	<a href="#">Anette Kolmos</a>	Aalborg University	PhD
<a href="#">Hazards in the Chemical Research Laboratory</a>	Eight days, autumn and spring (January 2009)	<a href="#">Ulf Ellervik</a>	Lund University	PhD
<a href="#">Advanced analytical chemistry</a>	Block 2 and 4 (twice a year)	<a href="#">Margareta Sandahl</a>	Lund University	MSc
<a href="#">Statistics and Measurement Quality in Chemistry</a>	Every year; irregular course, contact course responsible	<a href="#">Jan Åke Jörnson</a>	Lund University	PhD
<a href="#">Environmental analytical chemistry</a>	Block 3	<a href="#">Jan Åke Jörnson</a>	Lund University	MSc
<a href="#">Written and oral presentation skills for environmental scientists</a>	One Full Week, October 2008	<a href="#">Valery Forbes</a>	GESS	PhD
<a href="#">Ecosystem Processes</a>	Residential course, May 24-30, 2009	<a href="#">Sten Struwe</a>	GOGCI	PhD
<a href="#">Policy Course</a>	Five full days, spring 2009	<a href="#">Sten Struwe</a>	GOGCI	PhD
<a href="#">Business Economics for Academic Entrepreneurs</a>	Three days, December 16-18 2008	<a href="#">FOOD</a>	FOOD	PhD
<a href="#">Soil Degradation, Erosion and Restoration</a>	Ten days residential course, June 2010	<a href="#">Olafur Arnalds</a>	NOVA	PhD
<a href="#">Microbial N Transformations and NO/NO2 Emissions</a>	One week residential course, June 2009	<a href="#">Åsa Helena Frostegård</a>	NOVA	PhD
<a href="#">Biosystem Instrumentation</a>	Eleven days residential course, November 2009	<a href="#">Hans W. Griepentrog</a>	NOVA	PhD
<a href="#">Postgraduate course in applied toxicology</a>	Two weeks full time, autumn 2008	<a href="#">Grete Østergaard</a>	KU-NAT	PhD
<a href="#">Theory of Sampling og statistisk forsøgsplanlægning</a>	Block 2	<a href="#">Bo Svensmark</a>	KU-NAT	MSc
<a href="#">Chromatographic Analysis</a>	Block 2; irregular course, contact	<a href="#">Bo Svensmark</a>	KU-NAT	MSc

	course responsible			
<a href="#">Environmental Inorganic Analysis</a>	Block 2	<a href="#">Bo Svensmark</a>	KU-NAT	MSc
<a href="#">Sensors for Analysis in the Field</a>	Block 2	<a href="#">Frants Roager Lauritsen</a>	KU-NAT	MSc
<a href="#">Introduction to University Pedagogy</a>	Four full days, December 2008, March 2009, June 2009	<a href="#">Frederik V. Christensen</a> / <a href="#">Camilla Rump</a> / <a href="#">Lene M. Madsen</a>	KU-NAT	PhD
<a href="#">Vejledningskursus for ph.d.-vejledere og ph.d.-studerende</a>	One and a half day, January 14 and April 16, 2009	<a href="#">Christine Holm</a>	KU-NAT	PhD
<a href="#">Graduate School of Molecular Biophysics</a>	Semester, spring 2009	<a href="#">Ole G. Mouritsen</a>	SDU	PhD
<a href="#">Advanced Methods in Protein Mass Spectrometry and Proteomics</a>	Two weeks, autumn 2008	<a href="#">Ole Nørgaard Jensen</a>	SDU	PhD
<a href="#">Physical Organic Chemistry</a>	Block 2	<a href="#">Erik Bjerregaard Pedersen</a>	SDU	MSc / PhD
<a href="#">Advanced Theoretical Chemistry</a>	Block 2	<a href="#">Hans Jørgen Aagaard Jensen</a>	SDU	MSc
<a href="#">Bioinorganic Chemistry</a>	Block 1	<a href="#">Christine Joy McKenzie</a>	SDU	MSc
<a href="#">Advanced NMR Spectroscopy</a>	Block 4	<a href="#">Poul C. Stein</a>	SDU	MSc
<a href="#">Statistics Physics</a>	Block 1 and 2		SDU	MSc
<a href="#">Risk Assessment of Chemicals</a>	Block 2	<a href="#">Poul Bjerregaard</a>	SDU	MSc
<a href="#">Project Management in Science</a>	Block 3	<a href="#">Pernille Eskerod</a>	SDU	MSc
<a href="#">Patent Course</a>	Block 1; irregular course, contact course responsible	<a href="#">Jette Bechmann</a>	AU	PhD
<a href="#">Microsensor analysis in the Environmental Sciences</a>	One week residential course, May even years	<a href="#">Michael Kühl</a> / <a href="#">Niels Peter Revsbech</a>	AU	PhD
<a href="#">Ph.d.-kursus i forskningsformidling</a>	Block 1, autumn 2009	<a href="#">Svend Åge Lund Mogensen</a> / <a href="#">Jens Dykjær Holbech</a>	AU	PhD
<a href="#">Evolutionary Theory and its Application</a>	Five days residential course, September odd years	<a href="#">Kai Finster</a> / <a href="#">Volker Loeschcke</a>	AU	PhD
<a href="#">Hands-on LC-MSMS analytical chemistry of phytochemicals</a>	Five days residential course, June 2010	<a href="#">Inge S. Fomsgaard</a>	AU	PhD
<a href="#">Data Analysis Tools in Ecology</a>	Ten full days, February 16-27, 2009	<a href="#">José Paulo Sousa</a>	University of Coimbra	PhD

## Appendix C: Main activities in RECETO 2002 – 2007

Below are listed main activities in the period 2002 – 2007

### Summer schools

2007

#### **Representative sampling of solids. Characterization and analysis**

Head of Course: [Bo Svensmark](#) (KU-NAT, Department of Chemistry)

In collaboration with 3R ([www.3r.er.dtu.dk](http://www.3r.er.dtu.dk))

[Download further information](#)

---

2006

#### **Microbial growth and activity in complex communities**

Head of Course: Professor [Jan Sørensen](#) (KU-LIFE, Department of Ecology)

[Download further information](#)

---

2005

#### **Pharmaceuticals and hormones in the environment**

Head of Course: Associate professor Flemming Ingerslev (former at KU-FARMA)

[Download further information](#)

---

2004

#### **Chemical Pollutants and Biological Systems**

Heads of Course: Associate Professor [Nina Cedergreen](#) (KU-LIFE, Department of Agricultural Sciences) and Associate Professor [Kresten Ole Kusk](#) (DTU, Institute of Environment & Resources)

[Download further information](#)

---

# Symposia, conferences, etc.

2007

**Environmental Strategies and Solutions**  
Symposium of Danish Environmental Science Schools

**www.environmentalsymp.dk**

Environmental Strategies and Solutions  
Symposium for Ph. D. Students, MSc students, supervisors and others interested in environmental science  
Topics: Sustainable Energy, The Happy Years and Communicate Your Science

5-6th November 2007  
Faculty of Life Science  
University of Copenhagen

Organized by: COGCI, GESS, Environmental Chemistry, RECETO

2006

**Environment and Stress**  
Symposium of Danish Environmental Science Schools

**www.environmentalsymp-2006.dk**

Organizing partners:  
COGCI www.cogci.dk  
GESS www.ruc.dk/gess  
Environmental Chemistry www.environmental-chemistry.dk  
RECETO www.receto.dk

November 7-8, 2006  
Royal Veterinary and Agricultural University, KVL

2005



We are pleased to invite all RECETO Ph.D.-students, supervisors and others interested in the field of environmental chemistry and ecotoxicology to attend this one-day symposium. The morning program will present breaking news on carbon cycles, bioactive compounds, emerging pollutants and environmental chemistry at the nanoscale. In the afternoon, a workshop will be held with focus on how to plan and conduct research work including research stays at foreign research institutions. Ph.D. students will present experiences and we will attempt to pin point the most important issues.

**Place:** Lecture room 1-61, the Royal Veterinary and Agricultural University, Bülowsvej 17, DK-1870 Frederiksberg C, Denmark. Phone: +45 3528 2828. Map: <http://www.kvl.dk/dok/ark/kort/kvlfuse2005010k.pdf>

**Posters:** All RECETO-students are asked to bring posters and present these only 15 min. in English. Presentations will be evaluated and there will be a prize for the best presentation (poster and/or oral). All others are invited to bring a poster on their current work as well. Please inform RECETO if you bring a poster.

**Fee:** The symposium (incl. lunch) is free.

**Registration:** By email to RECETO at RECETO@KVL.DK, no later than 6<sup>th</sup> of October.

**Program updates:** <http://www.receto.dk/Education/Symposia>

**RECETO** Research School of Environmental Chemistry and Ecotoxicology

A postgraduate school of environmental chemistry and toxicology - molecular studies of pollutant fate and effects in aquatic and terrestrial ecosystems.  
Visit our website: <http://www.receto.dk>

Symposium program	
08:30-09:00	Registration and coffee.
09:00-09:15	Keynote: Hans Christian B. Hansen, Aalborg University
09:00-09:30	Carbon cycling in forested ecosystems, Peter Børg, Danish Forest and Landscape Research Institute
09:30-10:00	Emerging pollutants, Jakobian R. Sørensen, GESS
10:00-10:30	Bioactive compounds from Brazilian lightning-sulfonamide plants, Anne Louise Cordeiro, The Royal Veterinary and Agricultural University
10:30-10:45	Break
10:45-11:00	Oral poster presentations, Ph.D.-students
11:00-11:15	Oral poster presentations, MSc-students
11:15-11:30	Environmental chemistry at the nanoscale, Susan Step, University of Copenhagen
12:30-14:00	Lunch and poster session.
14:00-18:30	Being a RECETO student. What makes a RECETO student? How to plan and conduct a successful research stay abroad and how to give research work. Lars Holm, RECETO
15:30-15:45	Break
15:45-16:00	Being a RECETO student. Difficulties from our workshop, Lars Holm, RECETO
16:15-16:30	Evaluation of poster/oral presentations and selection of prize.
16:30-16:45	RECETO, evaluation and the future Hans Christian B. Hansen, RECETO

2004



We are pleased to invite all current and potential RECETO Ph.D.-students, supervisors and other persons interested in the field of environmental chemistry and ecotoxicology to attend this one-day meeting. This annual event is the platform for sharing and commenting of ongoing research and in particular for making new contacts. This year we focus on the working conditions needed for carrying out a successful Ph.D.-study.

**Place:** Skov & Landskab (Næstved), Auditoriet, Næstvedvej 77 A, DK-5400 Fredensborg. Phone: +45 5528 1965. Map: [http://www.kvl.dk/upload/overnagtikon\\_næstved.pdf](http://www.kvl.dk/upload/overnagtikon_næstved.pdf)

**Posters:** RECETO-students will present posters, but all participants are invited to bring posters on their research. Please notify the RECETO about poster submissions, instructions will follow. There will be a prize for the best poster.

**Fee:** The symposium (incl. lunch) is free for RECETO-students, guests and supervisors. Please contact the secretariat if you want to get affiliated with RECETO.

**Registration:** By email to the RECETO-secretariat at RECETO@KVL.DK, no later than 1 October.

**Program:** The final program will be launched at the symposium homepage: <http://www.receto.dk/Education/Symposia>

**RECETO** Research School of Environmental Chemistry and Ecotoxicology

A postgraduate school of environmental chemistry and toxicology - molecular studies of pollutant fate and effects in aquatic and terrestrial ecosystems.  
Visit our website: <http://www.receto.dk>

Symposium program	
08:30-09:00	Registration and coffee.
09:00-09:15	Keynote: Hans Christian B. Hansen, RECETO
09:00-09:30	Workshop: How to plan and conduct a successful research stay abroad and how to give research work. Lars Holm, RECETO
09:30-10:00	Emerging pollutants, Jakobian R. Sørensen, GESS
10:00-10:30	Bioactive compounds from Brazilian lightning-sulfonamide plants, Anne Louise Cordeiro, The Royal Veterinary and Agricultural University
10:30-10:45	Break
10:45-11:00	Oral poster presentations, Ph.D.-students
11:00-11:15	Oral poster presentations, MSc-students
11:15-11:30	Environmental chemistry at the nanoscale, Susan Step, University of Copenhagen
12:30-14:00	Lunch and poster session.
14:00-18:30	Being a RECETO student. What makes a RECETO student? How to plan and conduct a successful research stay abroad and how to give research work. Lars Holm, RECETO
15:30-15:45	Break
15:45-16:00	Being a RECETO student. Difficulties from our workshop, Lars Holm, RECETO
16:15-16:30	Evaluation of poster/oral presentations and selection of prize.
16:30-16:45	RECETO, evaluation and the future Hans Christian B. Hansen, RECETO

2003



We are happy to invite all current and potential RECETO Ph.D.-students, supervisors and other persons interested in the field of environmental chemistry and ecotoxicology to attend this one-day meeting. This annual event is the platform for sharing and commenting of ongoing research, for making new contacts, for upgrading your knowledge on hot topics and a day where we get to know each other within RECETO.

**Place:** Scandic Hotel Glostrup, Bøkkålevvej 550, 2605 Brøndby. Phone: +45 4343 4200.

**Posters:** There will be a free poster session. All participants are welcome to bring posters on their research. Please notify the RECETO-secretariat, which will give you further instructions.

**Fee:** The symposium (incl. lunch) is free for RECETO-students, guests and supervisors. Please contact the secretariat if you want to get affiliated with RECETO.

**Registration:** By email to the RECETO-secretariat (RECETO@KVL.DK), no later than 29 September.

**RECETO** Research School of Environmental Chemistry and Ecotoxicology

A postgraduate school of environmental chemistry and toxicology - molecular studies of pollutant fate and effects in aquatic and terrestrial ecosystems.

Symposium program	
08:00-09:00	Registration and coffee.
09:00-10:15	Keynote: Hans Christian B. Hansen, RECETO
10:15-10:30	Workshop: How to plan and conduct a successful research stay abroad and how to give research work. Lars Holm, RECETO
10:30-11:00	Emerging pollutants, Jakobian R. Sørensen, GESS
11:00-11:30	Bioactive compounds from Brazilian lightning-sulfonamide plants, Anne Louise Cordeiro, The Royal Veterinary and Agricultural University
11:30-11:45	Break
11:45-12:00	Oral poster presentations, Ph.D.-students
12:00-12:15	Oral poster presentations, MSc-students
12:15-12:30	Environmental chemistry at the nanoscale, Susan Step, University of Copenhagen
12:30-14:00	Lunch and poster session.
14:00-18:30	Being a RECETO student. What makes a RECETO student? How to plan and conduct a successful research stay abroad and how to give research work. Lars Holm, RECETO
15:30-15:45	Break
15:45-16:00	Being a RECETO student. Difficulties from our workshop, Lars Holm, RECETO
16:00-16:15	Evaluation of poster/oral presentations and selection of prize.
16:15-16:30	RECETO, evaluation and the future Hans Christian B. Hansen, RECETO

**Administration**

Board meetings are listed at [www.receto.dk](http://www.receto.dk). To date 19 meetings has taken place in RECETO.

**Other activities**

During the period 2002 – 2007 there have been about 50 workshops, meetings, seminars, lectures and international meetings.