

NIDECO Portrait and Annual Report 2006

Report

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NIDECO Network for International Development and Cooperation

2006

NIDECO Portrait and Annual Report

ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

About NIDECO

Vision, mission and objectives

It is NIDECO's vision that the ETH Zurich makes its research and teaching capacities available as global public goods with a view to help solving problems in developing countries and countries in transition.

NIDECO's mission is to promote research and education at the ETH Zurich in the field of international development and cooperation, as well as to share its know-how with relevant institutions in developing countries and countries in transition through collaboration in the technical, natural, human and social sciences.

To achieve the above, NIDECO pursues the following goals:

- *Promote and strengthen disciplinary and interdisciplinary collaboration in research and teaching in the field of international development and cooperation among units of the ETH Zurich and other units in the wider ETH domain, as well as with other universities and research institutions;*
- *Improve the presentation of the ETH's performance and capacities (research and teaching) in the field of international development and cooperation to research funding agencies, the political arena, the public and the academia;*
- *Promote field work of ETH doctoral students and other students in developing countries and countries in transition in the framework of their education and research;*
- *Promote doctoral candidates from developing countries and countries in transition at the ETH Zurich.*

Impressum

Editor Barbara Becker, Executive Manager, NIDECO

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To translate its vision and mission into action, NIDECO has adopted five strategic areas of activities. The structure of this report reflects this division of strategic tasks.

NIDECO Portrait and Annual Report 2006

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NIDECO members

as of 31.12.2006

Name, First name	Department	Name, First name	Department
Buchmann, Nina	AGRL	Baumgartner, Rudolf	CESS
Dorn, Silvia	AGRL	Bernauer, Thomas	CESS
Escher, Felix	AGRL	Hesselbein, Gabi	CESS
Frossard, Emmanuel	AGRL	Kappel, Rolf	CESS
Goe, Michael	AGRL	Schubert, Renate	CESS
Hurrell, Richard F.	AGRL	Tobler, Hans Werner	CESS
Kreuzer, Michael	AGRL	Wenger, Andreas	CESS
McDonald, Bruce	AGRL		
Sautter, Christof	AGRL	Gutknecht, Jürg	INFK
Stamp, Peter	AGRL	Kossmann, Donald	INFK
Wenk, Caspar	AGRL	Koumoutsakos, Petros	INFK
Zhang, Peng	AGRL	Nievergelt, Jürg	INFK
Rieder, Peter	AGRL (Prof. em.)	Widmayer, Peter	INFK
Hugentobler, Margrit	ARCH	Ämmer, Dölf	ITET
Keller, Bruno	ARCH	Fichtner, Wolfgang	ITET
Kramel, Herbert	ARCH (Prof. em.)		
		Spreng, Daniel Theodor	MTEC (em., Feb 2006)
Baltsavias, Emmanuel	BAUG	Deb, Kaushik	MTEC (cand.)
Carosio, Alessandro	BAUG		
Faber, Michael	BAUG	Dissertori, Günther	PHYS
Grün, Armin	BAUG	Troyer, Matthias	PHYS
Herrmann, Hans Jürgen	BAUG		
Keiner, Marco	BAUG	Edwards, Peter J.	UWIS
Kinzelbach, Wolfgang	BAUG	Engel, Stefanie	UWIS
Kytzia, Susanne	BAUG	Fischlin, Andreas	UWIS
Niemz, Peter	BAUG	Fleischmann, Karl	UWIS
Li, Pang	BAUG (cand.)	Flühler, Hannes	UWIS
Schmid, Willy A.	BAUG	Ghazoul, Jaboury	UWIS
		Holdenrieder, Ottmar	UWIS
Gruissem, Wilhelm	BIOL	Köllner, Thomas	UWIS
Witholt, Bernard	BIOL (em., March 2006)	Papritz, Andreas	UWIS
Owiti, Judith A.	BIOL (cand.)	Reichert, Peter	UWIS
Stupak, Martin	BIOL (cand.)	Schär, Christoph	UWIS
Vanderschuren, Herve	BIOL (cand.)	Scholz, Roland W.	UWIS
		Schulin, Rainer	UWIS
Chen, Peter	CHAB	Sæland, Klaus	UWIS
Pretsch, Ernö	CHAB	Sorg, Jean-Pierre	UWIS
Sandoghdar, Vahid	CHAB	Wehrli, Bernhard	UWIS
Sæberger, Peter H.	CHAB	Zeyer, Josef	UWIS
Wokaun, Alexander	CHAB	Dirac, Clémence	UWIS (cand.)
Zenobi, Renato	CHAB	Schmithüsen, Franz	UWIS (Prof. em.)
Balderer, Werner	ERDW	Gessler, Monika	ETH Mgmt.
Fidelibus, Corrado	ERDW	Landolt, Maryvonne	ETH Mgmt.
Giardini, Domenico	ERDW		
Havenith, Hans-Balder	ERDW	Johnson, Annette	EAWAG
Kos, Andrew	ERDW	Koné, Doulaye	EAWAG
Löw, Simon	ERDW	Schertenleib, Roland	EAWAG
McKenzie, Judith	ERDW	Yang, Hong	EAWAG
Seward, Diane	ERDW	Zürbrügg, Chris	EAWAG
Winkler, Wilfried	ERDW	Barreto, Leonardo	PSI
		Mesot, Jbël	PSI

This is the last NIDECO Annual Report. Usually, such an occasion is a sad event. It is not in this case, on the contrary: As of July 2007, NIDECO will merge with the Swiss Centre for International Agriculture ZIL into a new Competence Centre of the ETH Zurich, becoming its flagship for cooperation with the developing world. In its mission statement, the ETH Zurich has pledged to contribute to the great challenges of eradicating poverty, hunger and disease, as well as maintaining the basis for the survival of human civilisation. One means of fulfilling this claim is to share its science with the developing world.

This is not completely altruistic, nor is it a one-way knowledge transfer. There is so much to gain that we cannot afford not to look to the South. As scientists and engineers we are always keen on finding interesting and meaningful scientific challenges. The South is full of them. In most global problems, the South, rather than the North, is determining the future course of the world. The South has gifted people who can join us at the ETH engaging in these great tasks. Finally, the experience in developing countries is a great educational element for our own students.

My most gratifying experience with NIDECO was that the ETH Zurich has very many people who feel empathy with the world's poor and want to contribute to tackling the great challenges. They are not only scientists from disciplines specialising in subjects of the South, such as tropical agriculture, but also from the ETH "mainstream", such as electrical engineering, information technology or chemistry. All share the belief that science and engineering have a role to play in eradicating poverty.

Of course the ETH Zurich is not a disaster relief agency, nor is it a consulting firm. We have to contribute in the fields of our core competences: in basic and applied science and in education. To ensure the effectiveness of our work, we have to actively shape the interface between science and the implementation of its results. This is even more important in our work with the developing world than at home.

NIDECO can look back on four successful years, during which the means invested were more than tripled by mobilising funds for doctoral salaries or for scientific projects. Strengthened by uniting forces with ZIL and others, a broad support for activities is available. We invite the ETH community to take on the new Competence Centre as a point of access for engaging in and for the developing world.

Editorial

Wolfgang Kinzelbach, President of
the NIDECO Steering Committee





Strengthening scientific capacities in developing countries

Smitha Krishnan (Pre-doc grantee) enumerating coffee flowers (p. 6)

Since its inception in 2003, NIDECO has approved eleven Pre-doc grants, eight Visiting Scientists and five Teaching Stay applications. In terms of geographic coverage, they concerned countries in all regions of the developing world and countries in transition:

Overview of NIDECO grants 2003 – 2006

	Pre-doc grants	Visiting Scientists, ind. Workshop participants	Teaching Stays
Africa	Botswana, Ethiopia	Cameroon, Egypt (2), Ethiopia, Kenya	
Asia	Bhutan, India (2), Indonesia, Iran, Philippines, Thailand (2)	India (2), Iran (3)	China (2), Philippines (2), Sri Lanka
Americas	Brazil	Brazil, Mexico	
Eastern Europe		Moldova, Ukraine	

The applications originated from nine Departments, thus reflecting a wide interest in the NIDECO activities among the ETH Zurich.

	Pre-doc grants	Visiting Scientists	Teaching Stays
Departments	AGRL (2), BAUG (2), CHEM, ERDW, INFK, MAVT, UWIS (2)	AGRL, CHEM, ERDW (3), INFK, PHYS, UWIS	AGRL, ARCH, BAUG, INFK (2)

The NIDECO funding instruments mentioned above have proven valuable and efficient tools to the researchers concerned, both from the partner countries and from the ETH community. In particular, all of the eleven Pre-doc candidates successfully concluded their preparatory year and subsequently began with their doctoral dissertation; only one candidate eventually abandoned his thesis. Two candidates will complete their studies during 2007, and at least one more in 2008. The stays of Visiting Scientists at the ETH Zurich and the Teaching Stays of ETH staff in developing countries were all concluded successfully, thus contributing to a transfer of knowledge, the main goal of the NIDECO funding instruments.

Moreover, preliminary calculations have shown that the close to CHF 450'000 of all NIDECO funding (Pre-docs, Visiting Scientists, Teaching Stays, Seed Money) was matched by at least CHF 210'000 in financing from the applicants themselves, topped by several in-kind contributions. This investment had a multiplying effect in that it generated some CHF 1.9 million of funds, a large part of which is due to the doctoral candidates, whose studies were financed by the ETH supervisors following the Pre-doc year.

Pre-doc grant scheme



Apis cerana
pollinating
robusta coffee

During 2006, four candidates were accepted for a Pre-doc grant.



The one-year grant for Smitha Krishnan started in November 2006. She graduated with a First Class MSc in Ecology from Pondicherry University, India, and obtained her BSc degree (Chemistry, Botany and Environmental Sciences) from Bangalore University, India. Her research interests are in plant-animal interactions, specifically pollination. She is currently working on Pollinator services provided by the sacred groves of the Western Ghats to the coffee plantations under the guidance of Jaboury Ghazoul (UWIS) at the ETH Zurich.



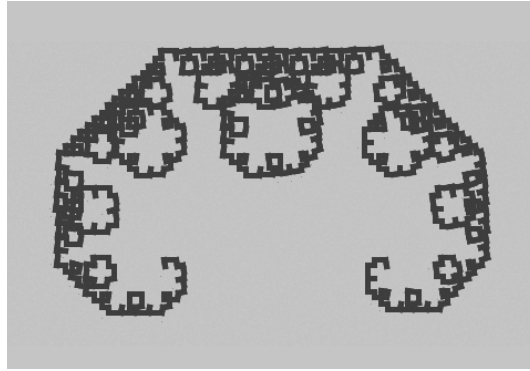
Swaporn Pinkaew obtained a grant of one year, beginning in February 2007. She received her Bachelor Degree (Agro-Industry) from Prince of Songkhla University, and her Master Degree (Nutrition) of Mahidol University, Thailand, in Food Science and Nutrition for Development. She then was a lecturer in the Faculty of Science and Technology (Food Science and Nutrition Department) at Prince of Songkhla University (Pattani campus). Swaporn Pinkaew has work experience in the food industry specialising in dairy and frozen seafood products. Her current research project, supervised by Richard Hurrell (AGRL), will investigate Food based strategies to prevent iron and zinc deficiency in children and pregnant women in Thailand by fortification of selected food with iron and zinc.



Aurea M. Perez has been a NIDECO Pre-doc grantee in a “Sandwich Programme” with the University of the Philippines (Los Baños) from September 2006 to

March 2007, benefiting from a study leave as an Assistant Professor in Computer Science at the University of the Philippines (Baguio). Supervised by Jürg Nievergelt and Peter Widmayer (INFK), her dissertation is on the **Computer science talent scout: A self-assessment test.**

This project is motivated by findings that one of the reasons for decreasing enrolment in Computer Science (CS), as well as the low success rate of freshman CS students, is the apparent lack of understanding of students of what CS is really all about. The collaboration between A. Perez and her ETH supervisors resulted from the NIDECO-funded Teaching Stay of Jürg Nievergelt and Peter Widmayer in the Philippines in 2005.



RecursivePix
Module



Ana Flavia Velloso Eter, NIDECO grantee from May to October 2006, is a graduate in Geology from the University of Sao Paulo, Brazil. She has worked with ultramafic complexes in the state of Goias, constraining isotopic ages by different isotopic elements: Sm/Nd, Rb/Sr and Re/Os. She has been a field assistant during her studies and also was granted with three scholarships from

the Brazilian National Council for Scientific and Technological Development (CNPq). Her doctoral research focuses on the **Role of microbes in the formation of Cap Dolostones in the Bambui Group, Brazil.** At the ETH Zurich, she has been supervised by Judith McKenzie and Crisogono Vasconcelos of the Institute of Geology (ERDW).

Teaching stays



Introduction to urban landscapes on site in Nanjing (Teaching Stay P. Li and J. Parish)

After a successful first run in 2005 by Jürg Nievergelt and Peter Widmayer, staff from the Department of Computer Science (INFK) organised a second **Phil-Swiss IT School** in the Philippines from September 11 – 15, 2006. Taking place in two locations in greater Manila (University of the Philippines [Diliman campus] and De La Salle University), the school was co-organised by a joint Philippine/Swiss group: Susan Pancho-Festin and Cedric Festin (UP Diliman), Caslon Chua and Arnie Azcarraga (De La Salle), as well as David Basin and Michael Näf from the ETH Zurich. While the first Phil-Swiss IT School had consisted of various ETH Zurich colleagues presenting various aspects of their research, the 2006 school focused entirely on Information Security. Moreover, there was a strong emphasis on laboratory work.

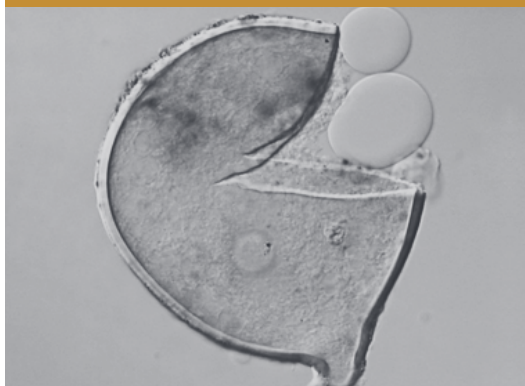
Each day consisted of three hours of morning lectures and the afternoons were filled with laboratory work. The objective was to provide students of computer science an impression of the kinds of problems studied in Information Security both from a research and practical perspective. The lectures at De La Salle were to a full auditorium with over 100 participants.

From October 16–27, 2006, a two-week workshop on **Designing Urban Landscapes in Transformation** was held at the Department of Architecture of South-Eastern University (Arch-SEU) in Nanjing, China. NIDECO supported the participation of two teaching staff, Pang Li (Institute for Spatial and Landscape Planning, BAUG) and Jacqueline Parish (Institute for Landscape Architecture, ARCH) from the ETH Zurich, who conducted the course together with Kai Gong from Arch-SEU. 25 students in architecture and planning participated in this workshop. 18 of them were first-year Master students, and seven were between the 7th and 9th semester. Three experts were invited for final comments at the end of the second week, namely Tong Zhang (Arch-SEU), Mathias Heinz and Rainer Pirker, a Swiss and an Austrian architect respectively. The course programme of testing an operational approach to landscape architectural design was highly appreciated by both the teaching staff and the participating students. The workshop took place in the context of the long and positive exchange tradition between the Arch-SEU and the ETH Zurich, bringing together the latest research work of landscape planning and teaching of landscape architecture design.



Dr Martin Jemo, NIDECO Visiting Scientist from February to August 2006, began his research career in 1998 with the International Institute of Tropical Agriculture (IITA) in Cameroon. From 2001, he was a research fellow with the IITA. His research project aimed at identifying accessions of sub-Saharan grain legumes able to exploit various P sources and to increase the soil P availability to subsequent cereal crops. His current research interests are the restoration of soil fertility following productive cropping periods with maize, soybean, cowpea, banana, yams, or cassava on deforested soil. Traditionally, yield decline used to be offset by soil fallowing for 20–30 years, but recently this period was markedly shortened as the pressure on land throughout sub-Saharan Africa increased. To investigate solutions to this problem, Martin Jemo spent half a year in the group of Emmanuel Frossard (AGRL).

Visiting scientists



Mycorrhiza fungus
Glomus caledonium



Dr Fereshteh Rouholahnejad from Iran has been a NIDECO Visiting Scientist in the group of Peter Chen from the Laboratory of Organic Chemistry (CHAB) since November 2006. She obtained her PhD from the Isfahan University of Technology. The research she undertakes at the ETH Zurich deals with Measuring the chain branching ratio in Ziegler-Natta polymerisation of ethylene with Fourier transform ion mobility spectrometry. In particular, she investigates the application of ion mobility spectrometry as a solution to the size-selected determination of chain branching in metallocene-catalysed Ziegler-Natta polymerization of ethylene. A homemade high-resolution electro-spray Fourier-transform ion mobility spectrometer with atmospheric pressure ion drift tube adaptable into a Finnigan MAT TSQ-700 triple-quadrupole mass spectrometer is used for the experiments. The ultimate product will be a predictive model for the rational optimisation of catalyst structure and process conditions for the production of high-value polymers.



Dr Mostafa Sadek, an Associate Professor of Isotope Hydrology at the National Center for Nuclear Safety and Radiation Control (Egyptian Atomic Energy Authority), had originally been awarded the Grant of NIDECO Visiting Scientist in 2005, but could only come to Zurich in December 2006 to stay for five months. During his stay in the group of Simon Löw and Werner Balderer (ERDW), he investigated **The use of environmental isotopes and hydro-chemistry to evaluate recharge sources and salinisation of the groundwater west of Alexandria City, Egypt.** The study area is a target for many development and investment activities (industry, agriculture, tourism, and urbanisation). Securing water resources of appropriate quality and quantity is of prime importance for these activities. The objective of the study is to characterise the groundwater resources and evaluate their potential and quality and to assess their suitability for different uses.

The UN World Conference on Disaster Reduction in 2005 identified education and training as a priority area for building national and community level resilience to disaster. Capacity development in risk reduction is an interdisciplinary endeavour and requires the cooperation and collaboration of individuals and institutions from, inter alia, education and research. On August 31, 2006, an invited workshop took place as part of the **International Disaster Reduction Conference (IDRC)** in Davos. The workshop was jointly convened by Andrew Kos from the Geological Institute (ERDW) at the ETH Zurich, the Capacity for Disaster Reduction Initiative (CADRI) of the United Nations Development Program (UNDP) and the UN International Strategy for Disaster Reduction (UN-ISDR). The workshop dealt with the application of educational technologies in facilitating learning in the disaster and natural risk management domain. Two NIDECO sponsored participants took part, Ramathilagam Kuberan from the NGO Seeds in India and Narayana M.S.I. Arambepola from the Asian Disaster Preparedness Centre (ADPC) in Thailand. The workshop participants agreed to create a publication oriented towards capacity development in risk reduction.

From 11–14 September 2006, following the European Conference on Earthquake Engineering and Seismology (ECEE) in Geneva, a training course for young scientists and engineers was organised by Domenico Giardini and Donat Fäh from the Swiss Seismological Service (ERDW) at the ETH Zurich. The course covered a selection of topics regarding “Seismic Hazard and Risk Assessment”. Participation in the course was supported by the International Association of Seismology and Physics of the Earth’s Interior (IASPEI) and NIDECO. NIDECO financed the participation of six researchers from developing countries (Egypt, Ethiopia,



India, Iran, Mexico, and Moldova). The course was free of charge for the students. Participation in the ECEE was mandatory for the admission to the training course. Out of more than 80 applicants, 40 candidates were selected in total. The main objectives of the course were: 1) to introduce young scientists to the field of modern seismic hazard assessment and to basic concepts of earthquake resistant structural engineering; 2) to allow candidates to discuss their research with experts from the field of seismology and structural engineering; and 3) to provide a platform for discussions, information exchange and future common research activities.



Strengthening the ETH engagement for issues of international development

Street in Dar es Salaam, Tanzania. The graffiti reads “They have equal rights”.
Cover photo of the publication on Africa in transition (p. 16)

Two principal NIDECO activities marked the year 2006 in strengthening the engagement of the ETH Zurich in issues of international development. This included the annual interdisciplinary colloquium in May and June 2006, and the involvement as co-organiser of the lecture series “Africa in Transition” during the winter term 2005/06, the papers of which NIDECO subsequently assembled in a book publication. Both events are described in more detail on the following pages.

Making the case for North-South collaboration

This aside, NIDECO contributed to several events organised by other institutions and presented its mission, mandate and activities. On September 9, 2006, NIDECO was present with a stand at the seventh forum Cinfo in Biel/Bienne, the most important biannual fair in Switzerland on international development and cooperation. Some 90 institutions used the opportunity to present themselves to the interested public. The forum attracted more than 1000 visitors. The NIDECO stand was next to the stands of both ZIL and NADEL. In this way the ETH Zurich presented its corporate portfolio related to development and cooperation.

Finally, Wolfgang Kinzelbach made presentations at two important meetings in his capacity as the President of the NIDECO Steering Committee. Addressing an audience of the ETH Zurich, on June 19 he spoke about “North-South Research” in the Colloquium organized by the School Domain of Earth, Environment and Natural Sciences (S-ENETH). He made a strong case for the continued commitment of the ETH Zurich towards the developing world. He argued that it was its duty to share its knowledge in science and engineering to assist the development and the eradication of poverty in this part of the world. He pointed out that this kind of interaction contained a great educational element for the students at the ETH Zurich, and that gifted people from there could become future students or scientists at the ETH Zurich.

At the national level, Wolfgang Kinzelbach shared similar thoughts with the audience at the Annual Conference of the Commission for Research Partnerships with Developing Countries (KFPE) on September 14. The subject of the conference was “Research with developing countries and countries in transition: Which policies does Switzerland need?”

Colloquium “Selected Aspects of Sustainable Development”

11 May and 22 June 2006

Voices of participants

“Very interesting. Especially the diversity of the different topics was interesting.”

“I benefited from communicating my research work. Also, the presentation helped me to improve my presenting skills, as well as to discuss my work with many other scientists.”

“Interdisciplinarity was challenging with regard to the content, the methodology and the way of presentation.”

“A good chance to get knowledge of research in different disciplines, which is enlightening the viewpoint and inspiring development research.”

“I really appreciated the seminar.”

“I found the selection and composition of the presentations most felicitous.”

“I like this kind of events in which you can touch on very different issues and get a short but comprehensive overview on such a variety of topics.”

The NIDECO Colloquium for doctoral students with a research topic related to international development and cooperation was again held as a block course on two days, a format found appropriate by the participants of previous colloquia. Participants also appreciated the interdisciplinarity of the colloquium and the time-frame for papers (20 minutes presentation, 40 minutes discussion). As a result, the programme was fully booked and comprised 13 presentations.

The researchers giving presentations came from several Departments of the ETH Zurich (AGRL, ARCH, BIOL, GESS, and UWIS) and from the EAWAG. The variety of subjects treated was further augmented by papers from several doctoral candidates involved in the NCCR North-South (Kengne, Koanda, Schaffner, Schmid, Strasser) and two candidates from the University of Zurich. Among the speakers was also a NIDECO Visiting Scientist, Dr Martin Jemo from Cameroon, who spent the period from February to August 2006 in the group of Emmanuel Frossard (AGRL).

In spite of the heterogeneity and diversity of contributions, a most lively exchange of ideas and discussion resulted. A contributing factor to this was the input provided by the supervisors of the twelve doctoral candidates, of which eight participated.

Programme

Session "Food and Agriculture"

- Frank Eyhorn (Supervisor R. Baumgartner, GESS): The impact of organic cotton cultivation on the livelihood of Indian smallholders
- Martin Jemo (Supervisor E. Frossard, AGRL): Agronomic management options to increase P use in low-P soils of southern Cameroon
- Judith Owiti (Supervisors W. Gruissem and P. Zhang, BIOL): Biotechnology approaches to modulate post-harvest physiological deterioration of cassava storage roots
- Martin Stupak (Supervisors W. Gruissem and P. Zhang, BIOL): Improving the protein content in staple crops via biofortification
- Balz Strasser (Supervisors U. Müller-Böcker and U. Geiser, University of Zurich): Diversified livelihood strategies and the role of the local institutional setting: A case study of natural rubber holders in Kerala, South India

Session "Sanitation"

- Ives Kengne (Supervisors M. Strauss and D. Kone, EAWAG): Assessing design criteria of sludge humication beds vegetated with *Cyperus papyrus* and *Echinochloa pyramidalis* for the treatment of faecal sludge in tropical regions: Case study of Yaoundé, Cameroon
- Halidou Koanda (Supervisors J. Tarradellas, EPF Lausanne, M. Strauss, D. Koné and H.-J. Mosler, EAWAG): Towards a sustainable urban sanitation in sub-Saharan Africa: Innovative planning approach for faecal sludge management

Session "Socio-Economics"

- Li Pang (Supervisors W.A. Schmid, BAUG, and G. Mörsch, ARCH): Virtual environment based visual character assessment of historical cultural landscape in sequence: Case study of Shaxi Rehabilitation Project, Yunnan Province, China
- Juan Pedro Schmid (Supervisor R. Kappel, GESS): Economic growth and poverty reduction in India: Effectiveness and efficiency of economic and social policies by the central and state governments
- Jean-Daniel Strub (Supervisor J. Fischer, University of Zurich): Human security: A paradigm for both sustainable development and sustainable peace building? Some queries from an ethical perspective

Session "Water Management"

- Junguo Liu (Supervisor A.J.B. Zehnder, ETH Board, formerly EAWAG): Modelling winter wheat yield, and crop water productivity with a GIS-based EPIC model for China
- Samuel Luzi (Supervisor A.J.B. Zehnder, ETH Board, formerly EAWAG): Domestic determinants of international conflict and cooperation in the Nile Basin: Case studies from Egypt and Ethiopia
- Monika Schaffner (Supervisors R. Schertenleib, EAWAG; H. Hurni and R. Weingartner, University of Berne): Assessing river water quality problems and mitigation potentials by using Material Flow Analysis Model: A case study in central Thailand

Lecture series “Africa in Transition”



Palm broom manufacturing in Côte d'Ivoire as a means of income generation during the civil war crisis

During the winter semester 2005/06, NIDECO acted as a co-convenor of the interdisciplinary lecture series “Africa in Transition”. The topics covered aspects of history, politics, economic development, social security, as well as language, art and religion. Eight presentations were made by members both from the ETH and the University of Zurich, documenting the variety of scientific examination of Africa at these two academic institutions. All presentations were extremely well received by the audience, with an average of 150–300 participants per lecture. The lecture series also found good media coverage, with the Africa specialist of the *Neue Zürcher Zeitung*, Anton Christen, reporting on two lectures.

Following the lecture series, all but four of the speakers wrote up their papers for inclusion in the book publication. The resulting monograph, edited by Thomas Bearth, Barbara Becker, Rolf Kappel, Gesine Krüger and Roger Pfister, was published in March 2007 by the vdf Verlag of the ETH Zurich as volume 40 in the series *Zürcher Hochschulforum*.

The entirety of chapters aims at offering a balance between the Afro-pessimist and the Afro-optimist views, both seeing and presenting Africa as a continent with no hope on the one hand, and one of being the source of plentiful cultural and artistic wealth, as well as a reservoir for menaced human virtues, on the other. The volume therefore brings together contributions on aspects of African reality from different viewpoints. It throws a glance at a continent that impresses by its cultural and ecological variety. This richness with its related history of original societal development is seen as Africa’s potential to overcome unquestionably existing developmental deficits. The volume thus sets a clear countersignal against the determinism, if not fatalism, that often determines the discussion on Africa.

The papers extend from discussions on social, economic, political and ecological developments to discourses on art, language, religion and magic. In so doing, the historic roots and processes are discussed, the presence is analysed and pointers are made into the future. Even though the image produced thereby inevitably remains incomplete, it should be sufficiently differentiated to do fair justice to the forward-looking trends in Africa. After all, despite obvious phenomena of stagnation and persistent problems, the continent experiences a broad and partly far-reaching societal transformation. To understand this development is the aim of this book.

Programme

Helmut Bley, Hanover / Peter Schaber, Zurich:
 Afrika im welt- und zeitgeschichtlichen Raum der Gegenwart:
 Ist ein Perspektivenwechsel notwendig?

Gesine Krüger, Zurich / Matthias O. Ezeoba, Zurich:
 Vergangenheitsbewältigung?
 Zum Umgang mit Sklaverei, Kolonialismus und Apartheid

Said M. Khamis, Bayreuth / Werner Graebner, Bayreuth:
 Global and local dimensions of African literature and music:
 The example of East African Taraab poetry

Miklos Szalay, Zurich / Ursula Helg, Zurich:
 Afrikanische Kunst: Ihre Ästhetik und Rezeption

Heike Behrend, Cologne / David Sgner, Zurich:
 Magie und ihre Mediatisierung in westafrikanischen Videos

Till Förster, Basel / Ticky Monekosso, Geneva:
 Staat und Staatlichkeit in Afrika: Vom Zerfall zum funktionierenden Chaos?

Claudia Roth, Zurich / Rose Marie Beck, Frankfurt:
 Afrika im Wandel: Soziale Sicherheit und Gender

Hans Hurni, Berne / Emmanuel Frossard, Zurich:
 Nachhaltige Entwicklung in Afrika: Globale Agenda und lokales Wissen

Rolf Kappel, Zurich / Barbara Becker, Zurich:
 Ist Afrika zu arm, die Armut selbst zu überwinden?

Rebekka Ehret, Basel / Julian Thomas Hottinger, Berne:
 Konfliktursachen, Aufarbeitung und Versöhnung in Afrikas Krisenzonen

Marcel Tanner, Basel / Guéladio Gssé, Côte d'Ivoire:
 Afrikas Entwicklung und die Herausforderungen im Gesundheitswesen:
 Medizinische, soziale und kulturelle Dimensionen

Wolfgang Kinzelbach, ETH Zurich / Bernhard Wehrli, Lucerne:
 Wasserwirtschaft und Feuchtgebiete in Afrika: Beispiel Okavango Delta, Botswana

Thomas Bearth, Zurich / Fan Diomande, Kassel:
 Afrikas Sprachenvielfalt: Hindernis oder Ressource?

Heinrich Balz, Berlin / Guy Thomas, Basel:
 Traditionelles Weltverständnis und Moderne im Spannungsfeld der Religionen:
 Afrikanische Begegnungen



Strengthening the scientific capacities at ETH Zurich on international development

Tributary to the Haihe River, China (p. 26)

Strengthening the ETH Zurich's scientific capacities for international development and cooperation is one of the five pillars of NIDECO's strategy. To achieve this objective, NIDECO fosters research collaboration by providing seed money for the development of joint research proposals, and by promoting joint initiatives

between research groups of the ETH Zurich and institutions in developing countries. In 2006, NIDECO was involved in two such endeavours, namely the initiative on "Sustainable management of natural hazards in South and South East Asia" and the implementation of the partnership between the United Nations Environment Programme (UNEP) and the ETH Zurich. NIDECO learnt some lessons through this experience.

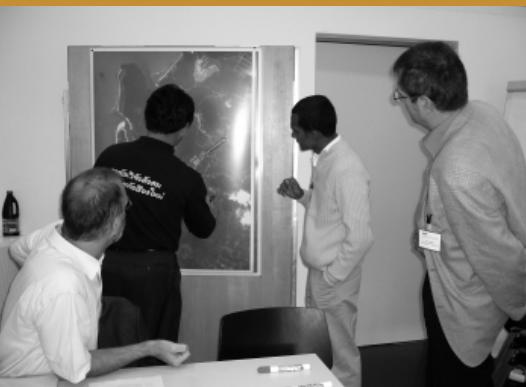
Lessons learnt in interdisciplinary collaboration

The engagement of the ETH Zurich in risk management in Asia was initiated as a response to the tsunami catastrophe in December 2004. Existing partnerships with the Asian Institute of Technology (AIT) in Thailand and the University of Peradeniya (UoP) in Sri Lanka were strengthened and a new partnership with the Asian Disaster Preparedness Centre (ADPC) was established. However, the initiative started unilaterally from the ETH Zurich and despite considerable efforts to respond to research needs of the Asian partners, the initiative has remained biased by the ETH Zurich research offer.

The initiative is both science-driven and rooted in the common interest of researchers, policy makers and practitioners to develop improved tools and models for the management of natural hazards. No aid money could be tapped for the development of joint projects and the lack of financial support to research proposals has been a major challenge for the initiative. The initiative did not succeed in mobilising support from development funding mechanisms, as their focus is on humanitarian aid and technical assistance. On the other hand, research for development takes place in complex settings of multiple stakeholders, making it less attractive to classical research funding mechanisms.

In order to actively support ongoing joint initiatives, NIDECO must be in a position to provide at least seed money for joint project development. This lesson was taken up in the planning of the second joint research initiative managed by NIDECO: a budget was earmarked for the implementation of the partnership between UNEP and the ETH Zurich. In addition, the new North-South Centre will allow strengthening capacities with regard to fundraising for research for development projects at both national and international level.

Sustainable management of natural hazards in South and South East Asia



Identification of hazard exposed areas in a case study in Southern Thailand

In 2005, in response to the devastating tsunami of December 2004, the ETH Zurich launched a research and teaching initiative called “Sustainable management of natural hazards in the Region of South Asia and Southeast Asia”. In August 2005 a Memorandum of Understanding was signed between the Asian Institute of Technology (AIT), the Asian Disaster Preparedness Centre (ADPC) and the ETH Zurich to establish a long-term collaboration in the field of sustainable risk management. Based on a long-lasting collaboration with the ETH Zurich, the University of Peradeniya (UoP) in Sri Lanka was also included in the research and teaching initiative. The intention of the initiative was to launch joint research projects on demonstration sites in both Thailand and Sri Lanka, as well as to generate generic decision support tools for risk management in the Region of South Asia and South East Asia.

Sri Lanka

The proposal “Integrating agronomic and socioeconomic aspects of reversing soil degradation by tropical legumes trees using GIS analysis” was accepted for funding as ZIL project in March 2006. It is focused on mitigating degradation as a slow natural hazard. The project officially started in October 2006 and is located in the central hills of Sri Lanka (Meegahakivula area, Badulla District, Uva Province). In this area, the legume tree *Glyricidia sepium* was introduced into the agricultural system in order to mitigate soil erosion and land degradation. Moreover, *Glyricidia* wood chips are used for electricity production in a local dendrothermal power plant and are a source to generate additional income for rural smallholders. The ZIL project will evaluate the impact of *Glyricidia* cultivation on the socio-economic conditions of rural households, on soil erosion and soil fertility, as well as on land use and the agricultural system as a whole. In 2006, a GIS platform for the storage, administration, analysis and visualisation of all spatially related project data was developed, including a digital terrain model. Agronomic and socio economic field survey data will later be integrated into the GIS platform. Finally, the GIS platform will form a decision making tool on how legume trees can be used to stabi-

lise incomes, as well as remediate soil degradation and erosion in tropical hilly regions. Within the framework of the initiative on sustainable management of natural hazards, the project will serve as a demonstration site for mitigation of slow hazards such as erosion and soil degradation.

Thailand

The project “Coastal forest resources affected by the Asian tsunami – from disaster alleviation to sustainable resource management” was accepted for ZIL seed money funding in 2005 and started in January 2006. The project aimed at the provision of technical and management assistance for natural hazard risk reduction in disaster-prone communities. Emphasis has been given on the development of tools, materials and models to support the identification and implementation of sustainable risk reduction means. Within the project, four interdisciplinary research proposals on the following thematic areas were developed:

- Micro-insurance: Development and testing of a micro-insurance model to extend financial services to low-income groups in developing countries;
- Community based risk management (CBRM): Adaptation of the existing Swiss CBRM tool RiskPlan to the Asian context and improvement of current risk and natural resources management strategies;
- Youth-focused natural risk reduction programme: Reduction of the vulnerability of risk-exposed youth through the strengthening of their individual and social coping strategies;
- Vegetation and landscape mapping for sustainable integrated forest resource management and restoration in coastal Southwestern Aceh Province, Indonesia, submitted as a proposal to the Research Fellow Partnership Programme (RFPP) on 31 March 2007.

A network of potential partner institutions in Thailand and donor agencies was established and funding requests for the research proposals will be submitted.



Excursion to an alpine valley that was affected by a flash flood with debris flow



Lively discussions between Thai and Swiss risk management experts

Risk Plan workshop

In October 2006, a workshop on community based risk management (CBRM) was held at the ETH Zurich, which was attended by six participants from Thailand from the Department of Disaster Prevention and Mitigation (DDPM), the National Disaster Warning Center (NDWC) and AIT. The ETH Zurich was represented by the Institute of Structural Engineering, the Institute of Geodesy and Photogrammetry, the Institute for Environmental Decisions, the Institute of Geology and NIDECO. Officials from the Swiss Agency for Development and Cooperation (SDC) and the Swiss Federal Office for the

Environment (FOEN), as well as representatives from two private companies (Ernst Basler and Partner AG; GR-Soft) also took part in the workshop. The intention of the workshop was to present, test and apply the software-based CBRM tool "RiskPlan" in a case study of a coastal site in Thailand, where tsunami and flash floods are the prevailing natural hazards. The software tool RiskPlan was developed in Switzerland by Ernst Basler and Partner AG and GR Soft GmbH with support of the Swiss Federal Office for Civil Protection and FOEN. It is a pragmatic tool for participative risk assessment and evaluation and the planning of cost-effective risk mitigation measures. RiskPlan stores and processes existing data and uses local knowledge for assessing the impacts and implications of natural hazards in a given system. The participants from Thailand evaluated the tool and saw a great potential in using an adapted version in their country. After the workshop, RiskPlan was translated into Thai and a proposal for an in-depth case study and follow-up workshop in Bangkok was submitted to SDC. However, the proposal was rejected, mainly because Thailand is not an SDC target country and an ICT-based CBRM approach does not fit into the priorities of SDC. At present, alternative ways to capitalise on the positive outcomes of the CBRM workshop in Zurich are explored.

Background

In November 2005, the former President of the ETH Zürich, Olaf Kübler, and the former Executive Director of the United Nations Environment Programme, Klaus Töpfer, signed a Memorandum of Understanding (MoU) to formally establish cooperation between the two institutions. The MoU serves as a framework for collaboration in the area of scientific assessment, monitoring and early warning of environmental change and examining the interlinkages between environmental and social systems. In December 2005, the ETH School Board delegated the implementation of the MoU to the head of the School Domain of Earth, Environment and Natural Resources (S-ENETH), René Schwarzenbach. The NIDECO management was given the operative mandate for this task. A joint steering committee for the implementation of the MoU was formed in 2006. On the side of the ETH Zurich, the following persons form the Steering Committee and represent their departments: Wolfgang Kinzelbach (BAUG), Renate Schubert (GESS), Jaboury Ghazoul (UWIS), Emmanuel Frossard (AGRL), supported by Barbara Becker and Manfred Kaufmann from the NIDECO management. From UNEP, Marion Cheadle, Acting Director of the Division of Early Warning and Assessment, and Kilaparti Ramakrishna, Chief Policy Advisor, are represented in the Steering Committee. In August 2006, NIDECO informed all ETH Zurich professors about the MoU and requested information on existing links or planned collaboration projects with UNEP or with programmes of the Global Environmental Facility (GEF). Eleven researchers provided information on existing or planned projects and were subsequently asked to provide short presentations at the first joint UNEP-ETH Zurich Steering Committee Meeting.

Memorandum of Understanding with the United Nations Environment Programme (UNEP)

Joint Steering Committee Meeting

The first joint UNEP-ETH Zurich Steering Committee Meeting was held on November 2–3, 2006 at the ETH Zurich. From UNEP, in addition to the two above-mentioned Steering Committee members, Jaap van Woerden (Global Resource Information Database, GRID-Geneva) participated in the meeting. The objectives of the first meeting were to express the mutual expectations with regard to the collaboration, to define possible entry points and models of cooperation and to develop a follow-up strategy. Both UNEP and ETH Zurich gave presentations about their governance, administration and thematic focus and provided in-depth information of key institutions involved.

The objectives of UNEP with regard to the partnership with the ETH Zurich are:

- Strengthening the scientific base of UNEP and enhancing the scientific credibility, particularly in the field of monitoring, early warning and assessment of environmental change and the inter-linkages between environment and social systems;
- Training and Capacity Development: UNEP has endorsed the Bali Strategic Plan for Technology Support and Capacity Development. Within this framework, the ETH Zurich could support UNEP by technical training for visiting scientists, teaching stays of ETH professors in existing training courses of UNEP and the development of joint training courses;
- UNEP could open up channels to make cutting-edge research more visible and policy relevant by providing the opportunity to contribute to various global environmental assessments.

The objectives of the ETH Zurich with regard to the partnership with UNEP are:

- Making scientific expertise available for the global environmental assessments of UNEP and deliver scientific inputs to the policy level;
- Contributing actively to the Environment Watch System of UNEP and use it to foster the dialogue between science and multiple decision making fora;
- Developing research projects that respond to the needs of UNEP, and for which joint funding opportunities can be found;
- Strengthening the link to GEF projects managed by UNEP and, as a long term perspective, contribute to the development and formulation of new GEF projects.

Based on the analysis of the offers and needs of UNEP and the ETH Zurich, the topics stated below have been identified as possible entry points for partnerships of mutual interest for both institutions.

- Water, air and climate
 - Hydrological and climate modelling
 - Assessment of effects of climate change
 - Air pollution
- Capacity development
 - E-learning
 - Education for sustainable development

- Human – environment inter-linkages
 - Environmental decision making tools
 - Sustainable cities

- Biodiversity and natural resources management
 - Ecosystem services
 - Global change research in mountain regions

- Disaster and risk management
 - Environment and Conflicts
 - Environmental effects of natural hazards

- Technical cooperation
 - Life-cycle assessment
 - Wireless sensor networks
 - Sustainable construction



Celebrating the successful conclusion of the workshop

The first Steering Committee Meeting has prepared the ground for further exchange and the establishment of collaboration in the identified thematic clusters. However, the collaboration between UNEP and the ETH Zurich is not limited to these thematic clusters and new themes can be identified in the future. NIDECO will actively facilitate the interaction between ETH researchers and UNEP officials, by both establishing linkages between the two institutions and by providing travel grants and seed money for the formulation of joint projects. Once these personal linkages are established, the development and formulation of collaborative projects will have to be based primarily on the initiative of the partners involved.

Global Expert Meeting on web-based and e-learning platforms

As a first concrete follow-up after the joint Steering Committee Meeting, Barbara Becker participated in the Global Expert Meeting on web-based and e-learning platforms that took place in Washington DC on December 13–14, 2006. The workshop was attended by some 25 experts and UNEP staff members for a first brainstorming on potential avenues for the envisioned UNEP e-learning platform MENTOR. There are several options how the ETH Zurich could collaborate with UNEP in the development of MENTOR: providing advice in designing the platform, contributing individual modules and testing and reviewing existing modules from a scientific and a user perspective.

Seed money



Field interview,
Haihe River
Basin, China

Besides the two major research initiatives described on the previous pages, NIDECO provides small seed money grants for the development of bilateral research partnerships. In the year 2006, two such individual grants were approved.

The project Non-point source pollution monitoring and control in the Haihe River Basin in China by Peter Reichert und Hong Yang (EAWAG) was funded by NIDECO from July 2005 to June 2006 and pursued three objectives: 1) establish a network involving Swiss and Chinese scientists for the research on non-point source (NPS) pollution in the Haihe River Basin; 2) develop a full project on the monitoring and control of NPS pollution caused by agricultural activities in the study area; and 3) establish a long-term collaboration in research and education with reputable Chinese counterparts. Four concrete tasks were proposed to fulfil these objectives.

Task 1: Examine the information on rural NPS: The literature review suggests that research on NPS pollution caused by agricultural activities is relatively new. The increasing concern is partly due to the fact that agricultural activities have become the major source of water and soil pollution, especially in the developed countries. However, very few studies in English are found for NPS pollution in China.

Task 2: Conduct a field survey and interviews on selected case study sites: Hong Yang had personal discussions and interviews with a number of experts from government and scientific research institutions. A post-doc researcher from EAWAG working on the farmers' water use behaviour in the Chaobai catchment included questions on farmers' fertiliser application decisions in her questionnaire and field survey.

Task 3: Organise a network meeting: This task was not fulfilled. It was considered premature to organise such a meeting before the development of a full project proposal. Nevertheless, the research network with several Chinese partners was substantially expanded.

Task 4: Formulate research questions, determine methodologies, establish a research framework, and draft a full research proposal: This task is partially fulfilled. It is now relatively clear which research questions need to be further explored. The Soil and Water Assessment Tool (SWAT) and GIS-based Erosion-Productivity Impact Calculator (GEPIC) appear adequate models for the study of the relevant issues.

NIDECO financed the seed money project **Establishment of essential tools for cassava plant regeneration and transformation in China: A case of international biotechnology transfer** running from May to December 2006, submitted by Wilhelm Gruissem and Peng Zhang from the Institute of Plant Sciences (BIOL). Peng Zhang is also affiliated with the Institute of Plant Physiology and Ecology (SIPPE) of the Chinese Academy of Sciences in Shanghai.

Cassava is an important crop in South China. To improve the research level of cassava biotechnology and breeding in China, the applicants organised a joint programme with four courses on cassava biotechnology and marker-assisted breeding in Shanghai and Hainan, China.

The courses covered: 1) Cassava somatic embryogenesis and shoot organogenesis; 2) Current genetic transformation system in cassava; 3) Molecular analysis of transgenic cassava plants; 4) Molecular markers and marker-assisted breeding in cassava; and 5) Cassava wild-cross hybridisation and novel variety screening. The course was co-organized by researchers from the Institute of Tropical Biosciences and Biotechnology (ITBB), the Chinese Academy of Tropical Agricultural Science (CATAS) in Haikou, the Institute of Tropical Crops Genetic Resources (ITCGR), CATAS, in Danzhou, and from the International Center for Tropical Agriculture (CIAT) in Colombia. The 20 participants that joined the course included cassava breeders, biotechnologists, students and researchers from five different institutions in China.

The project outputs include: plant regeneration and transformation protocols of several Chinese cassava genotypes; successful biotechnology transfer from the ETH Zurich to two or three laboratories in Chinese research institutes; development of a Chinese model cultivar for genetic transformation; and capacity development of young Chinese scientists in cassava biotechnology and breeding.

The most important output is that a cassava network on biotechnology and breeding has been established through the intensive communications during the cassava courses. Several cassava initiatives have been developing between the ETH Zurich, CIAT, SIPPE and CATAS. For example, the Shanghai Center for Cassava Biotechnology (SCCB), a joint research laboratory for cassava and sweet potato between SIPPE and the ETH Zurich has been officially opened in April 2007.



Cassava breeding field visit, Haikou, China



Strengthening the visibility of the international engagement of the ETH Zurich

Roger Pfister promoting NIDECO during the Cinfo Forum (p. 13)

Being a network by its institutional nature, networking within the ETH Zurich and with partners in Switzerland and abroad is the core of NIDECO activities.

Networking

Networking within NIDECO

In 2006, NIDECO membership grew further from 82 to 94. The NIDECO constituency is composed of scientists from 12 out of 15 departments of the ETH Zurich and from its ETH sister institutions EAWAG and PSI. In March 2006, a General Assembly was convened, mainly for electing the new Steering Committee and President (p. 38).

The electronic mailing list on upcoming events and NIDECO related business has developed into a well appreciated means of communication with NIDECO members. In 2006, 30 news and events messages were sent out, as were ten announcements of funding opportunities and one message on other topics. Individual consultations and bilateral meetings are practised as a continuous routine by the NIDECO management.

Networking within ETH Zurich

Networking within the ETH Zurich has been the prime NIDECO activity in 2006. The integration process with the **Swiss Centre for International Agriculture (ZIL)** and the affiliation of the future Centre with the **School Domain of Earth, Environment and Natural Resources (S-ENETH)** and its three constituting departments AGRL, ERDW and UWIS has been a significant networking exercise to create ownership of the future centre. The most important step in this process was the stakeholder workshop in September, directed at the members of both, NIDECO and ZIL as well as all S-ENETH scientists and other interested ETH staff, among them representatives of the Pro-Rectorate for International Relations.

Besides ZIL and S-ENETH, the **Postgraduate Course on Developing Countries (NADEL)** has been a most important partner of NIDECO. This is not only reflected by the active involvement of its director, Rolf Kappel, in the NIDECO Steering Committee, which he presided until March 2006. It has also been practiced in informal exchange of experience and information on issues of mutual interest. Furthermore, the role of NADEL in the future North-South Centre has been discussed intensively.

Similarly, a closer institutional relationship with **ETHsustainability** has been explored with regard to the new Centre. As in earlier encounters, both parties concluded, however, that in spite of many common interests their mandates and target groups were quite distinct. Both units are complementary in their activities and benefit from exchange of experience. The NIDECO Executive Manager has continued to serve on the Strategic Board of ETHsustainability.

NIDECO Partners within the ETH Zurich	
ZIL Swiss Centre for International Agriculture www.zil.ethz.ch	ZIL is an association based at the ETH Zurich. Established in 1993, its mission is to initiate, support, and coordinate collaborative research by its members and partners to enable resource-poor farmers in low-income countries to achieve sustainable improvements of their livelihoods. This includes mobilising Swiss research capacity and promoting awareness about the role of agricultural and food science in meeting the human and environmental challenges of low-income countries.
S-ENETH School Domain of Earth, Environment and Natural Resources www.seneth.ethz.ch	S-ENETH consists of the three ETH departments AGRL, ERDW and UWIS. It was established in 2005. S-ENETH stands for internationally renowned research and education in earth, environmental and production systems. S-ENETH aims at developing systems knowledge on the basis of fundamental scientific research connected to target and transformation knowledge to prospectively contribute to an environmentally and socially sound development and resource use.
NADEL Nachdiplomstudium für Entwicklungsländer www.nadel.ethz.ch	The Postgraduate Course on Developing Countries NADEL provides basic and advanced training as well as research and consultancy in the field of cooperation with developing countries and countries in transition.
ETHsustainability www.ags.ethz.ch	ETHsustainability was founded in January 2003 with the aim of supporting efforts of the ETH Zurich in the field of sustainable development. ETHsustainability focuses on education and training with emphasis on programmes outside the traditional university curriculum.
CCES Competence Center Environment and Sustainability www.cces.ethz.ch	The CCES aims to foster advancements in research for achieving a visible societal impact with a focus on socio-economic implementation. The CCES programme is based on five Education and Research Units and seven Integrative Elements, among them the North-South-Dialog. The North-South dialog will be expanded, with specific focus on developing countries where the sustainability pressure is high. This will be realized with an effective integration with NIDECO and ZIL. CCES will support the operationalisation of the MoU between UNEP and the ETH Zurich.
Sino-Swiss Science and Technology Cooperation Program www.china.ethz.ch	In order to intensify cooperation in science and technology with China the SER, the Swiss National Science Foundation (SNSF) and the ETH Zurich have developed the Sino-Swiss Science and Technology Cooperation Programme. The goal of the project is to launch multidisciplinary cooperation.

In 2006, two new NIDECO relevant units have become operational at the ETH Zurich: The **Competence Centre for Environment and Sustainability (CCES)** of the ETH domain, and the **Sino-Swiss Science and Technology Cooperation**, hosted by the ETH Zurich. While contacts with the latter have been mainly informal, NIDECO and ZIL are explicitly mentioned for the implementation of the North-South dialogue of the CCES. The NIDECO President is a member of the CCES Steering Committee and participated in its strategic planning retreat in July 2006. The NIDECO management is represented in the CCES Taskforce "Education and Outreach".

The NIDECO President took part in several international activities of the ETH management, such as a visit of the Indian delegation of the Aditya Birla Group to the ETH Zurich and the mission of an ETH delegation to Singapore.

Networking with national partners

NIDECO has links to three offices of the federal administration: the **Swiss Agency for Development and Cooperation (SDC)**, the **State Secretariat for Education and Research (SER)**, and the **Federal Office for the Environment (FOEN)**.

The SDC Director, Walter Fust, is a member of the NIDECO Patronage Committee, represented in this function by Willi Graf of the Section Natural Resources and Environment. W. Graf is the SDC counterpart of ZIL, and in this role is the most knowledgeable SDC partner for the integration of ZIL and NIDECO, which in fact was partly triggered by the SDC interaction with ZIL.

In 2006, the SER launched its education, research and technology policy for the period 2008 to 2011 (BFI policy). For the first time, this policy includes funding of partnerships with selected partners from emerging economies. In the consultation process, NIDECO had the opportunity to present its activities as part of the response of the ETH management.

The relationship with FOEN developed around the ETH partnership with UNEP because FOEN has the political mandate for UNEP relations. Initial meetings took place with FOEN representatives to explore further collaboration. Although FOEN will not get involved at the operational level, it remains interested in the ETH UNEP partnership.

B. Becker has remained an *ad personam* member of the **Commission for Research Partnerships with Developing Countries (KFPE)**, while NIDECO continues to be one of about 60 institutional associate members. W. Kinzelbach was one of the key speakers in the annual KFPE Conference (p. 13).

Linkages with the NCCR North-South “Research Partnerships for Mitigating Syndromes of Global Change” continued through the participation of NIDECO members in various functions and the joint membership of Marcel Tanner in the governing bodies of both entities. Interactions took place at the working level, e.g. through the participation of NCCR doctoral students in the NIDECO Colloquium.

The relationship with other Swiss universities active in development research was maintained bilaterally case-by-case (University of Basel, EPF Lausanne, IUED in Geneva). The collaboration with the University of Zurich was most obvious through the joint lecture series on “Africa in Transition” (p. 16f).

The NIDECO Executive Manager continued to represent the ETH Zurich on the Board of the Student Hostel Justinus Heim, which offers accommodation to students from developing countries. This Hostel is a convenient address for accommodating NIDECO or ZIL visitors at a modest rate.

Networking with international partners

NIDECO members are part of this network because of their genuine interest in collaboration with partners in developing countries. Most of them have well established linkages with institutions in the South, even though these may not be channelled through NIDECO. The most important NIDECO collaboration with international partners is through funding of bilateral activities between ETH researchers and their international counterparts, mainly centred round individual relationships. These activities are documented in the respective chapters on p. 6ff. Institutionally, the most important international partner of NIDECO is UNEP, described on p. 23ff.

Beyond these individual and programme-based partnerships, many NIDECO members and management staff are active in various international boards and fora. *Inter alia*, R. Pfister is a member of the Steering Committee of the African Technology Development Forum (ATDF), which facilitates the formation of partnerships and linkages between research centres, industry and government. B. Becker served on the review committee of the Volkswagen Foundation in Hanover, Germany, for the programme „Resources, their Dynamics and Sustainability“ within the foundation’s funding initiative „Knowledge for Tomorrow - Cooperative Research Projects in Sub-Saharan Africa“. The wide ranging network of NIDECO members and management is the basis for its strategic development and the positioning of North-South matters in the ETH portfolio.

Website

The NIDECO Website is the most up-to-date presentation of NIDECO activities and services. It is updated regularly so as to ensure current information about all NIDECO matters. The section "Research at ETH Zurich" now includes 109 research projects and 67 doctoral theses concluded since 2000. This database can be accessed by subject or by geographical region. Furthermore, the website contains reports of all NIDECO funded activities. In 2006, the NIDECO website was accessed 99'000 times, with peaks in April and May.

Public Relations

Public Media

The integration of NIDECO and ZIL to the new North-South Centre was presented by the ETH online magazine ETHlife online on September 4, 2006. The timing was most appropriate just before the stakeholder workshop on September 8. This article gave the NIDECO and ZIL plans another push in making its case towards the School Management.

Public media coverage in 2006 was lower than in other years because no public event was organised due to the priority of the internal integration process. However, articles on the lecture series on Africa appeared in October and November 2005. The preparation of the book to the lecture series occupied NIDECO staff throughout the year; the book was published early in 2007.



NIDECO Portrait and Annual Report 2005

The NIDECO Annual Report appeared in May 2006 with a slightly different layout, portraying the NIDECO activities based on its strategic objectives. Some 850 copies of the brochure on NIDECO were printed and distributed widely within the ETH Zurich and beyond. It was also used as a Public Relations tool at various conferences or other events.



Strengthening the integration of the international development in the ETH Zurich portfolio

The ETH Zurich main building

NIDECO was founded in 2002 as a Competence Centre of the ETH Zurich with a time horizon of five years. During this period, it had to prove its viability and develop a longer-term perspective. Although in principle Competence Centres of the ETH Zurich are expected to mobilise external funding after an initial five-year phase, it became clear to the NIDECO stakeholders that this potential does not apply to the NIDECO mandate in the same way as for Competence Centres with partners in industry, for example. The challenge was therefore to establish a sustainable institutional basis within the ETH Zurich through partnerships and conviction of the key players, in particular the ETH Management.

Towards the North-South Centre of the ETH Zurich

In 2005, the NIDECO Steering Committee explored various options to continue the mandate of NIDECO beyond 2007. The most promising avenue was seen in a merger with the Swiss Centre for International Agriculture (ZIL). The new unit should be attached to the School Domain of Earth, Environment and Natural Resources (S-ENETH). The rationale for this option was based on two considerations: First, the merger of NIDECO and ZIL would produce positive synergies because both units share common goals and complement each other in their activities. In addition, ZIL and NIDECO already share the same staff in their headquarters, located in the same premises provided by the ETH Zurich. Secondly, the majority of NIDECO members with research activities in developing countries deal with issues in the realm of S-ENETH, i.e. environmental problems in the widest sense. S-ENETH was therefore considered as the most logical harbour for the research-related activities of NIDECO. Vice versa, many of the research and teaching activities within S-ENETH relate to issues of the earth and the use of natural resources and the environment in developing countries, in countries in transition or on a global scale; hence, the new unit would fit well into the overall concept and programme of S-ENETH.

In the course of 2006, the integration of these two units was pursued through a series of meetings between the leaders and management of NIDECO, ZIL and S-ENETH. This "Steering Group" agreed on the essential elements to achieve its objectives:

- A businessplan outlining the future programme, structure and a tentative budget;
- A stakeholder workshop with all members of NIDECO and ZIL and other interested participants;
- Negotiations with the ETH School Board ("Schulleitung") to confirm the integration of NIDECO and ZIL into the so-called North-South Centre, and make a substantial financial commitment to its programme and administration;
- Negotiate the transfer of the position of the Executive Manager into the core budget ("Grundauftrag") of the Departments of Agriculture and Food Sciences, and Environmental Sciences, respectively.

The “Steering Group” was an ad hoc group composed of the Heads of the Departments AGRL (Michael Kreuzer [outgoing] and Emmanuel Frossard [incoming]), ERDW (Jean-Pierre Burg), UWIS (René Schwarzenbach, at the same time Chair of S-ENETH), and the Presidents of NIDECO (Wolfgang Kinzelbach) and ZIL (Felix Escher), as well as the Executive Manager of both NIDECO and ZIL (Barbara Becker). This group met several times for strategic decisions and for negotiations with the ETH School Board.

The business plan suggests five programme areas of the new North-South Centre:

- Research collaboration with developing countries and countries in transition
- Capacity development
- Networking
- Public relations
- Strategic positioning within the ETH Zurich.

Vision and mission of the North-South Centre

Vision: The ETH Zurich is in its field a leading institution on North-South matters. It has a long-term commitment to research and teaching in favour of globally accessible knowledge for sustainable development.

Mission: The ETH Zurich promotes research and education in the field of international development and cooperation. It facilitates collaboration with relevant institutions in developing countries, countries in transition and Switzerland in the technical, natural, human and social sciences. These activities are visible nationally and internationally.

On September 8, 2006, the overall vision and mission of the future North-South Centre and the five programme components of the business plan were discussed in a stakeholder workshop with more than 40 representatives of NIDECO, ZIL, the ETH School Board and SDC. In parallel working groups, the workshop participants elaborated objectives and expected results as a tentative logical framework for the future North-South Centre. The workshop was facilitated by Peter Reinhard from Agridea. He managed to create a most constructive atmosphere, which enabled the participants to express their expectations and fears vis-à-vis the integration of the two existing units with rather distinct internal cultures. In this way, the workshop achieved to generate ownership of the future programme among the participants. The identification with the future North-South Centre was further enhanced by the presentation of its justification by the NIDECO President Wolfgang Kinzelbach along the lines of the Editorial of this Annual Report.

The broad mobilisation of NIDECO and ZIL members attending the Stakeholder Workshop was a convincing argument in the negotiations with the ETH School Board. Similarly, the delegation of the heads of all S-ENETH Departments, together with the presidents and management of both NIDECO and ZIL demonstrated their strong support to the proposed North-South Centre at the first meeting with the then ETH President, Ernst Hafen. In a series of consultations with the ETH management, a proposal was prepared for the School Board and – after some minor revision – finally accepted on 29 November 2006. The main items of this decision comprise

- Recognition of the new North-South Centre (provisional name) as a Competence Centre of the ETH Zurich;
- Substantial funding from 2007-2011, allowing to continue and expand the former NIDECO activities, including new activities related to the Memorandum of Understanding with UNEP;
- Administrative affiliation with the Department for Environmental Sciences (UWIS) until the S-ENETH has been approved as a fully functional legal entity.

Furthermore, the School Board has encouraged the future integration of NADEL into the North-South Centre.

Independent of the negotiations of the North-South Centre with the ETH Management, the Steering Group succeeded to convince both the Departments of Agriculture and Food Sciences, and of Environmental Sciences (AGRL and UWIS) to incorporate 50% each of the Executive Manager position into their core budgets. This agreement allows the Executive Manager to continue in her function on a permanent basis. This commitment of the two departments was a convincing argument in the negotiations with the ETH Management. Furthermore, it is a strong signal towards SDC as the main donor for ZIL research to recognise the ETH investment into the management of the new Centre.

With these approvals, the North-South Centre has a solid financial and administrative basis for shaping its future legal and organisational structure. The challenge for the year 2007 is to conclude this process until the end of June. The inauguration ceremony is scheduled for June 29, 2007.

The People behind NIDECO



R. Hütter, D. Poulidakos, M. Tanner, W. Graf, representing W. Fust

Patronage Committee

The Patronage Committee provides oversight on the overall development of NIDECO. It meets once a year.

Dimos Poulidakos, Chair (from Dec. 2005)
Vice President for Research at the ETH Zurich

Walter Fust
Director of the Swiss Agency
for Development and Cooperation (SDC)
represented by Willi Graf

Ralf Hütter
Former ETH Vice President for Research
and former President of the Swiss Centre for International Agriculture ZIL, ETH Zurich

Hans Peter Ming
Former Chairman of the Board of Directors Ska AG
Chairman of Swisscontact

Marcel Tanner
Director of the Swiss Tropical Institute, Basel



W. Kinzelbach, M. Faber, E. Frossard, J. Ghazoul,
R. Kappel, R. Schulin, J. Zeyer, B. Becker

Steering Committee

The Steering Committee has the strategic leadership of NIDECO. In 2006 it met in January, April, July and November. In March 2006 a new team was elected as Steering Committee:

Wolfgang Kinzelbach (BAUG), President

Michael Faber (BAUG)

Emmanuel Frossard (AGRL)

Jaboury Ghazoul (UWIS)

Rolf Kappel (GESS)

Rainer Schulin (UWIS)

Joseph Zeyer (UWIS)

Barbara Becker (Management, ex of Ócio)

Until March 2006 the Steering Committee was composed of R. Kappel (President), E. Frossard, W. Kinzelbach, Claudia Binder (UWIS), and B. Becker.

NIDECO Management

The NIDECO Management team is responsible for all operational matters, assisting its members and governing bodies.

Barbara Becker
Executive Manager

Roger Pöster
ScientiC Assistant

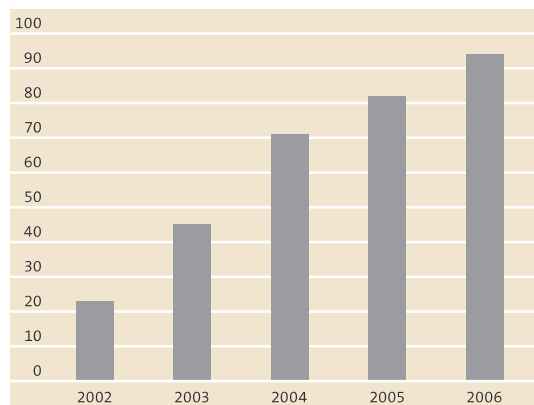
Manfred Kaufmann
ScientiC Assistant

Dorota Niedzwiecka
Administrative Assistant ZIL (in-kind support)



M. Kaufmann, B. Becker, D. Niedzwiecka, R. Pfister

Development of NIDECO membership 2002–2006



Accounts

in CHF

Financial report 2006	Budget (baseline figures)	Income	Expenses
Income 2006	300'000.00	304'450.00	
ETH contribution		300'000.00	
HazNETH contribution to the Post-Tsunami Initiative		4'450.00	
1. Personnel	120'000.00		152'317.75
2. Operational costs	30'000.00		21'078.30
2.1. Annual Report			10'382.60
2.2. Events			9'321.15
2.3. Management			1'374.55
3. Grants	150'000.00		227'118.38
3.1.1. Pre-doc			143'328.75
3.1.2. Visiting Scientist			32'993.00
3.1.3. Seed Money			10'100.00
3.1.4. Teaching Stay			6'596.75
3.2.1. Post-Tsunami, Seed Money		4'450.00	33'570.68
3.3.1. UNEP, Seed Money			529.20
Total income and expenditures as of Dec. 31, 2006		304'450.00	400'514.43

Balance 2006

Expenses	400'514.43	
Revenue	826'429.10	
Opening balance Jan 1, 2006		521'979.10
Income 2006		304'450.00
		826'429.10
Closing balance as of Dec. 31, 2006	425'914.67	

List of acronyms

All units of the ETH Zurich in italics

ADPC	Asian Disaster Preparedness Centre (Thailand)
AGRL	<i>Department of Agriculture and Food Sciences</i>
AIT	Asian Institute of Technology (Thailand)
ARCH	<i>Department of Architecture</i>
Arch-SEU	Department of Architecture of South-Eastern University (Nanjing, China)
ATDF	African Technology Development Forum
BAUG	<i>Department of Civil, Environmental and Geomatics Engineering</i>
BIOL	<i>Department of Biology</i>
CADRI	Capacity for Disaster Reduction Initiative
CATAS	Chinese Academy of Tropical Agricultural Science
CBRM	Community-Based Risk Management
CCES	Competence Centre for Environment and Sustainability of the ETH Domain
CHAB	<i>Department of Chemistry and Applied Biosciences</i>
CIAT	International Center for Tropical Agriculture
CNPq	Brazilian National Council for Scientific and Technological Development
CS	Computer Science
DDPM	Disaster Prevention and Mitigation
EAWAG	Swiss Federal Institute for Environmental Science and Technology
ECEES	European Conference on Earthquake Engineering and Seismology
ERDW	<i>Department of Earth Sciences</i>
FOEN	Federal Office for the Environment
GEF	Global Environmental Facility
GESS	<i>Department of Humanities, Social and Political Sciences</i>
GRID	Global Resource Information Database
IASPEI	International Association of Seismology and Physics of the Earth's Interior
IDRC	International Disaster Reduction Conference
IITA	International Institute of Tropical Agriculture
INFK	<i>Department of Computer Science</i>
ITBB	Institute of Tropical Biosciences and Biotechnology
ITCGR	Institute of Tropical Crops Genetic Resources
ITET	<i>Department of Information Technology and Electrical Engineering</i>
KFPE	Commission for Research Partnerships with Developing Countries
MAVT	<i>Department of Mechanical and Process Engineering</i>
MoU	Memorandum of Understanding
MTEC	<i>Department of Management, Technology and Economics</i>
NADEL	<i>Postgraduate Course on Developing Countries</i>
NDWC	National Disaster Warning Center (Thailand)
NPS	Non-Point Source
PHYS	<i>Department of Physics</i>
PSI	Paul Scherrer Institute
RFPP	Research Fellow Partnership Programme
SCCB	Shanghai Center for Cassava Biotechnology (China)
SDC	Swiss Agency for Development and Cooperation
S-ENETH	<i>School Domain of Earth, Environment and Natural Resources</i>
SER	State Secretariat for Education and Research
SIPPE	Institute of Plant Physiology and Ecology (Shanghai, China)
SNSF	Swiss National Science Foundation
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UN-ISDR	UN International Strategy for Disaster Reduction
UoP	University of Peradeniya
UWIS	<i>Department of Environmental Sciences</i>
ZIL	<i>Swiss Centre for International Agriculture</i>

The **Network for International Development and Cooperation (NIDECO)** is a centre of competence within the ETH Zurich, bringing together researchers and academics from a wide range of disciplines. Membership is open to all interested professors and scientific staff of ETH. In addition to being a network of individual scientists, NIDECO serves as an umbrella for several ETH units involved in international development and cooperation through research and education at the ETH Zurich.

NIDECO

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