content

2008 number 4

introduction

If you generally scan a fresh ITC News for reports on international workshops and conferences, then this issue won't disappoint. If it's details of courses - or particularly new programmes (page 9) - that you're after, then read on. Awards, new publications, alumni gatherings, all find their place in the following pages. In fact, such was the array of articles that poured through our door that it looked as though space restrictions would consign some to the holding bay. According to an old saying, you can't get a quart into a pint pot. But it's a saying that shows its age: not only because today's sage is unlikely to resort to the use of imperial measures but also because it fails to take into account the skills of Design&PrePress. So, dexterous manipulation of mouse and menus means yet again we can deliver a newsletter varied in content.

ITC News paints on a broad canvas. The devastating Wenshuan earthquake that struck last May, less than three months before Beijing hosted the Summer Olympics, dominated screens and headlines across the world. Page 2 reports on ITC's cooperation and activities in disaster geo-information management in China, illustrating the role that the Institute can and does play when such catastrophes occur. Turning to Sri Lanka and a completely different topic (page 24), the national survey department, which falls under the umbrella of the Ministry of Lands and Land Development, has launched the second edition of The National Atlas of Sri Lanka, marking yet another milestone in its long history. The creation process makes for interesting reading.

Milestones were a feature on the home front too. The Dies Natalis celebration in December highlighted the 40th anniversary of urban studies at ITC (page 19), and the seminar organised to mark the occasion provided an opportunity to debate the dynamic and challenging issues facing our "urban age". Within this context, indicators (page 16) are proving to be a useful tool.

Staff, students and alumni of ITC are all familiar with the name of Willem Schermerhorn, founder of the Institute. In an issue that brings 2008 to close while hovering on the threshold of change, it seems only appropriate to give fuller coverage to his life and achievements (page 22) - and I'm sure you will discover one or two surprises along the way.

Janneke Kalf
Managing Editor

colofon

ITC NEWS is published quarterly, by ITC, Enschede, the Netherlands

Managing Editor:	Janneke Kalf	Correspondence to:	Managing Editor
Editor:	Jorien Terlouw		ITC NEWS
			P.O.Box 6
Editing:	Janice Collins		7500 AA Enschede
Design&PrePress:	Henk Scharrenborg	Phone:	+31 (0)53 487 44 11
	(Composer DTP service)	Fax:	+31 (0)53 487 45 54
Printing:	PlantijnCasparie Zwolle	E-mail:	itcnews@itc.nl

ITC's Cooperation and Activities in Disaster Geo-information Management in China

Cees van Westen westen@itc.nl

In December 2007, the United Nations University-ITC School for Disaster Geo-Information Management (UNU-ITC DGIM) and the Chengdu University of Technology-State Key Laboratory on Geohazard Prevention (CDUT-SKLGP) signed a Memorandum of Understanding

Introduction

CDUT-SKLGP, which specialises in slope stability, was established in 1991. Since that time the laboratory has worked with academia and industry partners to develop integrated research into geohazards. Through implementing projects, SKLGP has contributed greatly to eliminating threats to the environment in China, particularly in Southwest China. It has been very successful in attracting projects funded by the Chinese government concerning the stability of slopes in large hydropower projects (e.g. the Three Gorges project).

SKLGP has built a highly competent and dedicated team of professionals to conduct research on geohazard prevention and geo-environmental protection, as well as to facilitate the implementation of the research results. But it has identified a gap in applying advanced technical aspects in this work, particularly in the use of GIS and remote sensing for hazard and risk assessment. ITC and CDUT share an interest in applying geo-information science and earth observation to disaster management through the UNU-ITC DGIM and the CDUT-SKLGP. The former vice-rector of ITC, Dr Niek Rengers, was appointed visiting professor by CDUT-SKLDP and visits Chengdu for a number of months each year.

In December 2007, Martin Hale and Cees van Westen visited Chengdu while Niek Rengers was also there, and the two organisations signed an MoU. The MoU focuses on research collaboration, upgrading the staff of CDUT-SKLGP in GIS and remote sensing applications, and the organisation of joint courses and workshops. Two of their professors, Professor Tang Chuan and Professor Xu Qiang, visited ITC in April 2008 in connection with a visit to the EGU conference in Vienna. The first PhD candidate under the MoU, Fan Xuanmei, visited ITC for three months in 2008 (May-July) and followed two short courses (advanced modelling and multi-hazard risk assessment). During her stay at ITC, she also translated into Chinese a part of the RiskCity training package dealing with urban multi-hazard risk assessment which dealt with landslide hazard and risk assessment.

Wenshuan Earthquake

On 12 May 2008, Sichuan was hit by an earthquake with a magnitude of 8.0, a depth of 12 to 18 km, and a rupture zone of 300 km. The epicentre, near Wenshuan, was located at around 100 km northwest of Chengdu. The earthquake affected a wide area in several provinces, with Sichuan being the most severely hit. Movement took place along three parallel faults, with dextral-thrust oblique displacement, and with surface fault ruptures up to 8 m vertical and 6 m horizontal surface displacements. The maximum peak ground acceleration recorded was between 1 and 2 g, which is exceptionally large. The earthquake caused 70,000 casualties; an estimated 25,000 of these were victims of earthquake-triggered landslides. Apart from the damage caused by groundshaking and surface fault ruptures, the mountainous area was severely hit by landslides. In some parts of the area, up to 40% of the terrain was directly affected

A rick avalanche buried the Beichuan middle school (700 casualties)

by landslides, either in the erosion zone or in the depositional area. Many landslides also dammed the rivers. Of these, around 38 very large earthquake-triggered landslide dams created temporary lakes, which also flooded several urban areas. As a consequence, the Chinese government evacuated several large cities in the downstream part, as there was fear of lake outburst flooding. One of these cities, Mianyang, had over two million people.

Most of the landslide dams have now been broken by the Chinese army, using explosive and heavy equipment. Nevertheless, landslide-dammed lakes still exist in many places, although the danger from these has been greatly reduced. Over an area of some 250 x 50 km, more than 80% of the buildings have been destroyed, and many villages and towns in the area have been completely destroyed. One example is the city of Beichuan, which was located on the main faultline. It was hit by the earthquake in the form of groundshaking and surface rupture. The slopes around this city failed catastrophically. On one side, a rick avalanche buried the Beichuan middle school (700 casualties), and on the other side another large landslide covered a large part of the city (1600 casualties). Further downstream, a major landslide caused the damming of the river, resulting in the city centre being flooded. After several months, the destabilised slopes around the city were reactivated during a rainstorm event, and debris flows covered the ruins of part of the city.

Beichuan city will not be reconstructed and has been declared a monument site by the Chinese government. The Chinese Geological Survey and CDUT-SKLGP have made a rapid inventory of landslides and counted around 10,000 landslides in the area. The largest of these, the Daguangbao landslide in Anxian county, was estimated to have a volume of 742 million m3, creating a landslide dam 570 m high. A total of four million people are estimated to be homeless after the earthquake, and most of the infrastructure in the area has been lost. The Chinese government has built an estimated one million temporary houses (often outside the earthquake area), constructed of corrugated iron barracks with electricity and water supply but no heating. Aid to the affected counties has been distributed over the various provinces of China. The Chinese government intends to reconstruct the area over a period of three to five years. The first necessity is the elaboration of hazard maps

for the reconstruction planning. Much of the area will not be able to sustain the same numbers of people and activities, particularly owing to the large numbers of landslides and unstable slopes expected to cause problems in the years ahead. Therefore, the Chinese Geological Survey has been requested to carry out a hazard mapping project taking into account the multi-hazards (earthquakes, landslides, floods). CDUT-SKLGP has been requested to assist in this and we are currently evaluating whether ITC can also provide assistance under the current MoU. The aim is also to carry out several investigative projects, such as a study on the failure mechanisms of the large earthquake-triggered landslides that have dammed the rivers. The PhD researcher Fan Xuanmei is contributing to this research by carrying out an inventory of landslide dams and by modelling the mechanisms.

Field Visits

Together with staff from CDUT-SKLGP and two other groups of landslide and earthquake experts, we visited the earthquake area on 3, 4 and 6 November. One of these was a group of Japanese scientists from the Japanese Landslide Society; the other was an earthquake reconnaissance group from the New Zealand Society of Earthquake Engineering, which also included a major from an earthquake-affected city in New Zealand (Gisborne) and experts on structural engineering, infrastructure vulnerability and engineering geology. On 3 November, we visited a large damsite project in the MinJang river, close to the epicentre, which was completed only three years ago. The top of this huge rockfill dam had received an acceleration of 2 g, and showed some settlement and a large crack. We also visited the actual epicentral area, where existing roads had been completely destroyed, and the city of YinXiu, where 92% of the buildings, including a large secondary school, had been destroyed. On 4 November, we visited the Beichuan area (see above) and on 6 November we visited the Mianzhu river, along which a chain of dammed lakes had been created by a series of very large landslides. We also visited the completely deserted city of HanWang, which originally had an estimated population of 15,000 but, owing to the great damage, has now been completely evacuated. At a symposium held on 5 November, an overview was given of the earthquake and the associated hazards, and the foreign guests delivered their presentations. On 15 November, I also visited the very large Donghekou landslide in Qiang Chuan county together with Fan Xuanmei, as this is a potential test site for her PhD. This landslide covered several villages and dammed two rivers. The Chinese government has made this into a memorial site..

Beichuan city will not be reconstructed and has been declared a monument site by the Chinese government

The Chinese government intends to reconstruct the area over a period of three to five years

The Chinese government has built an estimated one million temporary houses, constructed of corrugated iron barracks with electricity and water supply but no heating

Most of the infrastructure in the area of Beichuan has been lost

UPM student wins Young Voice Award on Urban Air Quality and Climate Change

Mark Zuidgeest zuidgeest@itc.nl
Deepty Jain jain20577@itc.nl

During the Better Air Quality (BAQ) workshop from 12 to 14 November 2008 in Bangkok, Thailand, ITC student Deepty Jain (India) was awarded one of four Young Voice Awards on Urban Air Quality and Climate Change, based on her essay on transport impact assessment for urban policy and planning in India.

Deepty Jain is an MSc student at the ITC Department of Urban Planning and Management (UPM), as well as a student of infrastructure planning with ITC's partner the Center for Environmental Planning and Technology (CEPT) University in Ahmedabad, India.

Deepty's essay discusses the common problems faced by today's cities of degrading air quality and increasing pollutants in the atmosphere. This has raised concern among various authorities. As discovered in literature, transport is a major contributor towards the resulting situation. Hence different strategies have been pursued to mitigate the problem and these have shown significant results. But still, some of the components (such as NOx) have shown minimal change. The root cause identified is the spatial structure of the city, resulting in ever-increasing demand for transportation. Many researches and authorities are thus talking about adopting integrated land use and transport planning approaches. The essay sets out a proposal to deal with this. The approach talks about doing a transport impact assessment (TIA) for urban development plans before approval. This implies the use of integrated land use and transport models that are yet at the experimental stage. This then has to be developed for every city and hence allow the possible impacts of development strategies on the travel behaviour to be studied. The impacts can be studied in the form of changed travel distances or trip lengths, lengthwise number of trips and modal choice. The approach also requires amendments to be considered in the institutional framework. As a result, decision makers would be able to make amendments to the plans in line with the impacts and reduce the ever-increasing transportation demand.

The approach envisaged has the following benefits:

- contributes to sustainable development
- reaches out to achieve four of the eight Millennium Development Goals directly and the other three indirectly (see table)
- may eventually lead to reduced emissions and fuel consumption per capita
- may eventually lead to reduced investments for transportation infrastructure.

The BAQ meeting in Bangkok was organised under the theme "Air quality and climate change: scaling up win-win solutions for Asia" and was the fifth BAQ meeting held since 2001. The meeting was organised by the Clean Air Initiative for Asian Cities, together with the Bangkok Metropolitan Administration, the Pollution Control Department of the Ministry of Natural Resources and Environment of Thailand, in cooperation with the Asian Development Bank (ADB), the United Nations Environment Programme, and the United Nations Economic and Social Commission for Asia and the Pacific. The BAQ is seen by many as one of the most important urban transport events in Asia. Also, because of available

sponsorships, the workshop attracts a very interesting mix of representatives from (local) governments, non-governmental organisations, the private sector, academia and intergovernmental agencies. Over 43 countries were represented from Asia and elsewhere, including a large contingent from international organisations such as the ADB, World Bank, UN, GTZ, SIDA and Cities Alliance. In addition to many pre-event events, some 225 presentations were delivered in plenary and working group sessions within three thematic streams: air quality management and climate change; transport and climate change; and stationary sources and indoor air pollution. The overarching goal of the workshop was to cultivate a consensus on how Asian cities can more actively improve air quality and mitigate climate change by adopting a co-benefits approach that integrates urban air quality management, energy management and climate change mitigation (see also www.cai-asia.org).

ITC staff made a presentation in the session on land use planning as a transport planning and environmental management tool, organised one pre-event for the INDF project (see page 9), and participated in another one for the Cycling Academic Network. A small ITC booth in the registration area demonstrated ITC's capacity in the field of geo-information science for infrastructure, transport and environmental management.

Millennium Development Goals

Direct	Indirect
Eradicate extreme poverty and hunger	Achieve universal primary education
Promote gender equality and empower women	Reduce child mortality
Ensure environmental sustainability	Improve maternal health
Develop global partnership for development	

Mark Zuidgeest, Deepty Jain with her award, Mark Brussel and Leo de Jong (from Keypoint Consultancy)

education news

Advanced Training Course in Land Remote Sensing

Lichun Wang lichung@itc.nl
Laura Dente dente@itc.nl

From 13 to 18 October 2008, a six-day advanced training course on land remote sensing applications over China took place in the State Key Laboratory for Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS), Wuhan University, Wuhan, P.R. China. Over 60 PhD students and post-doctoral and research scientists from more than 30 Chinese institutes attended the course.

The European Space Agency (ESA) and the National Remote Sensing Centre of China sponsored the course within the framework of the Dragon 2 Programme, which is a wide-ranging research initiative designed to encourage increased exploitation of earth observation satellite data, in particular data from the ERS and Envisat missions for applications development in China.

Eight lecturers from five different European countries and China were invited to give lectures for the course. ITC's Professor Bob Su and Professor Wout Verhoef were involved in the teaching. Professor Su gave five lectures on AATSR, SMOS and ASCAT sensors, surface energy balance basics, and advanced water resources applications. Professor Verhoef gave four lectures on MERIS and PROBA-CHRIS sensors, radiative transfer basics, atmospheric correction and parameter retrieval, and advanced radiative transfer and retrieval.

The course held by LIESMARS focused on the theory and application of radar and optical and thermal remote sensing. In particular, it aimed at stimulating and supporting the exploitation of ESA, earth observation, and both SAR and optical/thermal remote sensing data for land applications; introducing available software tools and methods for the exploitation of these data; and training the students to apply tools and use the complementary remote sensing datasets for land use and land cover forestry and agriculture applications, disaster (e.g. flood, fire, terrain motion) monitoring applications, and surface energy balance, soil moisture and drought applications.

The practical sessions covered:

- an introduction to ESA toolboxes (BEAM, EOLI SA, BEST, POLSARPRO)
- land resources monitoring
- flood monitoring
- rice monitoring
- terrain motion
- surface energy balance estimation and soil moisture retrieval using ILWIS.

The course was very interesting and well organised, and was evaluated highly by the students. All in all, it was an excellent chance for students to gain access to the latest information, to acquire new knowledge, and to master advantageous tools for land remote sensing.

Professor Bob Su and Professor Wout Verhoef were appointed guest professors of LIESMARS, Wuhan University, for the period 2008-2010.

The course material is available on the ESA-MOST Dragon 2 website (http://dragon2.esa.int/landtraining2008/dr2_lt_programme.html).

Group picture in front of the LIESMARS hall

Dragon Project presentation to students

ITC's Lichun Wang and Laura Dente provided help and support to students during the practicals

New MSc Programme: Management of Infrastructure and Community Development

Mark Brussel brussel@itc.nl
Mark Zuidgeest zuidgeest@itc.nl

In September 2009, a new MSc course will start in Yogyakarta, Indonesia, focusing on the various aspects of policy, planning and management of physical infrastructure and its contribution to community development.

The course results from collaboration between the Universitas Gadjah Mada (UGM) in Yogyakarta and ITC and Keypoint Consultancy, both in Enschede, the Netherlands. In addition to developing the postgraduate programme Management of Infrastructure and Community Development, the partners are also setting up a PhD programme and a short course programme. All three partners are working together on the development and the first-time implementation of the education programme as a whole. If successful, the cooperation with ITC is expected to continue into the future. The project has received financial support by means of a grant from the Netherlands Ministry for Economic Affairs through its Indonesia Facility Programme.

The MSc programme is managed by the Postgraduate School of UGM and will be supported by staff from different research centres and faculties in UGM.

Programme Background and Rationale

Infrastructure systems are essential for providing a range of services in support of economic development and quality of life. Although policies guiding infrastructure investments are aimed at alleviating poverty and reducing unemployment, success is limited. Prevailing approaches to infrastructure provision have generally remained centrally led and engineering-driven, and are known to often fail in fulfilling socio-economic development objectives.

To improve the benefit of infrastructure provision, it is believed that a paradigm shift to community-centred infrastructure development is needed. Such a shift is supported by current academic and professional debates, where physical infrastructures are increasingly seen as systems that provide the physical facilities and their associated services to meet social and economic needs. These facilities and services are to be planned and designed according to sound planning and engineering fundamentals, guided by principles of equity and fairness, and directed towards environmental, economic and social sustainability. This requires an approach that typically would actively involve communities in recognising infrastructural problems, identifying potentials and resources, and formulating alternative planning and engineering solutions.

To address this need for sustainable community-based infrastructure systems, organisations at all levels are increasingly in need of staff with multidisciplinary knowledge of infrastructure systems and their interaction with and impact on people, land, the economy and the natural environment. To contribute to this aim, the MSc programme Management of Infrastructure and Community Development (MICD) has been developed. It is hoped that a critical mass of professionals can be trained that will be capable of implementing an integrated community-oriented approach to infrastructure development.

Aim, Competence and Degree

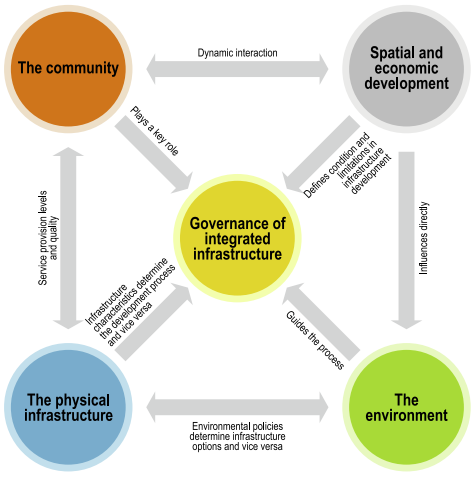
The MSc programme is research-based and multidisciplinary, promoting personal capacities for the realisation of equitable and sustainable infrastructure policies and plans. The aim of the programme is to develop highly competent professionals, with good academic and practical abilities in policy, planning, and designing and managing infrastructure at the system as well as the facility level. The MICD graduate will hold an MSc degree issued by Universitas Gadjah Mada. National and international professional and academic accreditation will be established.

The team working on the programme development

Integrated infrastructure development

Content

The MICD curriculum is based on the philosophy that infrastructure development is a multidisciplinary process. It provides an innovative combination of theory, methods and techniques relevant to infrastructure development from various disciplines, such as engineering, planning, social sciences, economics and geography. Another innovative element is the role of geo-information science, which provides an umbrella of concepts, methods and tools to help to analyse, plan, design, optimise and visualise infrastructure systems in their local geographical, social and physical (thus environmental) context and support decision making in infrastructure planning and management. The conceptual framework governing the programme content is given in the following chart.



Conceptual framework governing the programme content

The curriculum is built up of 10 blocks of varying duration, and these are shown in the following schedule, which also indicates the dominant relation to the elements in the framework.
For more details on content, please consult the complete study guide on the website given below.

Career Perspectives

The graduates of the study programme will have the capabilities of both a process manager and a system analyst. As a process manager, the graduate has the capability to oversee the development process of infrastructure and to understand and manage the performance of infrastructure systems. As a system analyst, he or she has the capability to analyse the infrastructure system in its physical, social and natural environment. Such an analysis contributes to developing effective policies and programmes based on the contribution of infrastructure and community development.

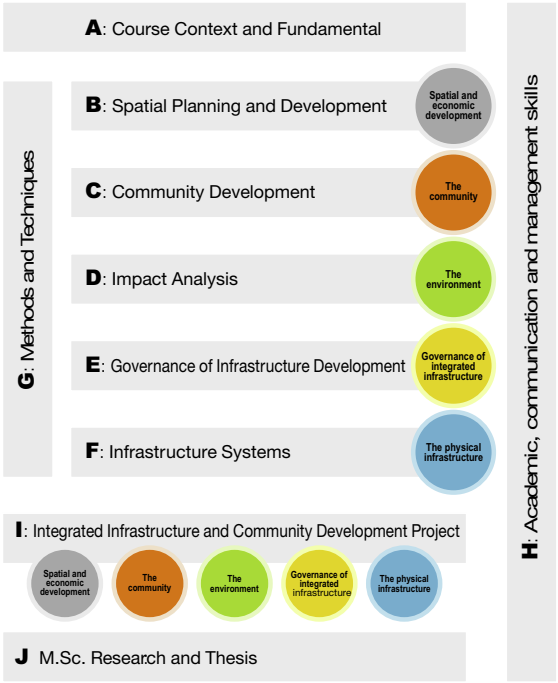
It is expected that graduates possessing these qualities will have a variety of employment opportunities: as consultants and engineers for infrastructure development, infrastructure development policy analysts, community development specialists, infrastructure process managers, academics in infrastructure planning and management, and staff of NGOs advocating equitable infrastructure.

Eligible Participants/Students

The MSc programme is open to BSc-level graduates of relevant disciplines who have graduated from either foreign or domestic universities. Eligible participants for this MSc programme are typically officials from institutions working in infrastructure development and management, such as transportation, water supply and sanitation, irrigation, settlement, social services such as education and health, local economic development, public service improvement and environmental preservation.

Further Information and Student Admission

For further information on programme content and organisation and on student admission procedures, please visit the programme website:
http://pipm.pasca.ugm.ac.id
e-mail: pipm@ugm.ac.id
or pustral-ugm@indo.net.id
wismadi@telkom.net
brussel@itc.nl



The curriculum is built up of 10 blocks of varying duration (the dominant relations to the elements are shown)

Transparency in Land Administration Training in Francophone Africa

Source: *GLTN News,* November 2008 (www.gltn.net/en/gltn-newsletter.html)

The fourth and final edition of Transparency in Land Administration (TLA) training was successfully executed in M'bour, Senegal, from 9 to 11 September 2008. The training is a joint initiative of the Global Land Tool Network (GLTN) / Training and Capacity Building Branch (TCBB) of UN-HABITAT and the International Institute for Geo-Information Science and Earth Observation (ITC). The recent event in Senegal was implemented in cooperation with ENDA Ecopop of Senegal, which is a part of Enda Tiers Monde, an international non-governmental organisation.

The training attracted 28 participants from five Francophone countries: Benin (6), Burkina Faso (7), Chad (4), DR Congo (4) and Senegal (7). Training participants represented a wide range of professional groups and organisations: central government (6), local authorities (3), customary chiefs (2), civil society organisations (4), professional association (1), academia (7) and the media (5). Further, 11 of the participants were women. But this number belies the real representation of women's concerns, which were more vocally and convincingly expressed both during breakout group and plenary sessions.

Mr Pape Mor Ndiaye, director of decentralisation, Ministry of Decentralisation and Local Government Authorities of Senegal, officially launched the training with a keynote address. A substantive presentation that followed the opening session anchored the training agenda in generic land governance and transparency concepts. This paved the way for the introduction of tools that have always been the centrepiece of the programme. The tools were presented in a simple and user-friendly "how to" format: how to assess the level and nature of land corruption; how to improve information and public participation; how to enhance ethics and professionalism; how to reform institutions and organisations. The skills and knowledge aspect of the training has always been premised on sharing these tools, which are meant to improve transparency in land administration and/or prevent and cure land corruption. Exercises on the relevance and utility of the tools were provided using real-life regional case studies obtained from Benin, Burkina Faso and Senegal. As always, the training concluded with event evaluation and the award of certificates of participation.

A shorter version of the training course will feature as one of the 23 training events of World Urban Forum IV (WUF IV). Further, a training toolkit and trainers' development guide, which are the final outputs of the programme at this stage, are expected to be made available at the end of the year and should provide valuable resources to promote the sustainability of the initiative. With these resources, stakeholders interested in running the training course at local, national and regional levels will be able to do so without waiting for the expert inputs currently coming from institutions partnered to execute the training.

On the margins of the training, leading partners of the TLA initiative, GLTN/TCBB and ITC, held meetings and discussed pertinent issues related to post-training support (as a strategy to sustain initiative gains) and ways and means of further scaling up of the Sub-Saharan Africa experience (i.e. taking the training outside Africa). After additional consultations and depending on budget availability, regional partners and demand for the training, these may well constitute elements of forthcoming activities.

With the implementation of the Francophone edition, partners involved in designing and implementing the training have completed second-phase activities and, in doing so, have reached an important milestone. The training programme that entailed running four successive events in four different regions of Africa has to date trained 114 change agents (73 men and 41 women). This has been made possible by the generous financial support GLTN received from the Swedish and Norwegian governments.

Participants at work

Awarding Certificates of Attendance by Mr. Chris Paresi

GIS for Spatial Territory Planning: A Tailormade Course in Hanoi, Vietnam

Dick van der Zee vanderzee@itc.nl

At the special request of the Development Strategy Institute (DSI) of Vietnam, which falls under the Ministry of Planning and Investment, a tailor-made training course on the application of geographical information systems for land use planning (spatial territory planning) in Vietnam (shortened to GIS for Spatial Territory Planning), was organised for 20 of their, mostly junior, research staff members from 6 to 24 October 2008.

Support in the implementation was obtained from the Remote Sensing Center of the Ministry of National Resources and Environment of Vietnam, which provided us with a lecture room/computer cluster at their premises and a section of a recent SPOT image covering the area to the west of Hanoi and including Hanoi itself.

The course aimed to create awareness of the usefulness and effectiveness of the application of GIS in spatial planning and to enable the trainees to start applying basic GIS routines in their day-to-day work. The course tried to achieve this by letting the participants get some hands-on experience with GIS through exercises and by giving some (guest) lectures (two of which by ITC alumni) on particular application fields. Short field trips served to support the exercises. In their final presentations, some of the participants showed practical examples on how to use GIS for one of their planning assignments. Many participants showed keen interest in the potential of GIS for their work.

Anticipating that not all participants would have a sufficient command of English, two ITC alumni were engaged as "local experts". Their help in translating instructions on the spot and facilitating discussion sessions was especially valued.

The course evaluation, all in all, was quite positive. At times there were some problems with computers and software, but these could eventually be solved. The teaching approach and the balance between theory and practice were highly appreciated. However, many participants found that the time had been too short. Nevertheless, the objective of raising awareness of the possibilities of GIS for activities with respect to spatial (territorial) planning at the participants' institute was certainly met. The enthusiastic core of the 20 participants may come with suggestions on how to introduce the use of GIS in their daily work and what requirements have to be met to make that successful. The DSI now has to review the findings of the staff members that it allowed to participate in the course and then decide to what extent and for what activities it wants to introduce the use of GIS. On this basis, it can then be assessed which and how many people need to have further training in which aspects of GIS and/or remote sensing and at what level. When this is known, it can be determined where such training can be obtained - in Vietnam or abroad.

Participants get some hands-on experience with GIS through exercises and by giving some lectures on particular application fields. Short field trips served to support the exercises

Group photo

visits

Visit of the State Minister of Environment from Indonesia

Tom Loran loran@itc.nl

At the beginning of December, the State Minister of Environment from Indonesia, Professor Rachmat Witoelar, visited Enschede. After the World Climate Conference in Bali, which took place at the end of 2007, the Indonesian government launched an action programme on the environment and climate change. The National Action Plan, in which both government institutions and universities are taking part, was officially announced by presidential decree. The Ministry is developing an international consortium of universities to support the initiative. On his way to the Climate Conference in Poznan, Poland, Professor Witoelar paid a visit to the University of Twente and ITC to discuss opportunities for capacity building, research and expert exchange on the subjects of water management, climate change and environmental assessment. The UT and ITC brought together a group of scientists who are actively involved in research on various aspects of climate change.

On behalf of the UT, a presentation was given on IMPACT, a multidisciplinary research institute that is carrying out research on sustainable energy and greenhouse gas emissions, and on minimising the environmental effects of products and processes. IMPACT is currently focusing its research on such issues as energy-efficient and clean conversion of fossil fuels, biomass conversion and the utilisation of biofuel, sustainable production, and materials for sustainable energy (see also http://www.impact.utwente.nl/).

Presentations were also given on the applications of membrane technology (e.g. in water purification), on water engineering (focusing, for example, on water and vegetation roughness for flood research and river basin management) and on the Twente Water Centre. The Twente Water Centre, in which the UT and ITC have been working together since the end of 2007 (www.water.utwente.nl), brings together both technical and social scientists in order to study water systems and river basins from a broad perspective that encompasses governance as well as technology.

The Minister and his entourage were invited to a buffet lunch, which was also attended by all the Indonesian students from the UT and ITC.

On behalf of ITC, presentations were given by Dr Mannaerts of the Department of Water Resource Science (WRS) and Professor de Gier of the Department of Natural Resources Science (NRS). WRS is carrying out research on the relationships between water issues and climate change (including managing water scarcity, water cycle–climate interactions, and earth observation applications). Dr Mannaerts also gave an impressive presentation on the current ITC capability of real-time satellite observation around the world. Professor de Gier presented an overview of the ITC research programme on the carbon cycle and climate change (including the carbon cycle, the use of remote sensing techniques in mapping, modelling and monitoring biomass, and carbon sequestration).

Professor Martien Molenaar meeting Professor Witoelar

More information on the ITC research themes:
http://www.itc.nl/research/themes.asp
For further information, please contact Tom Loran (loran@itc.nl) or Hanna Lange (hanna.lange@utwente.nl).

events

Workshop on Developing Academic Programme in Geomatics Engineering in Nepal

Rabin K. Sharma, Land Management Training Centre, Nepal lmtc@ntc.net.np
Dr Arbind Man Tuladhar tuladhar@itc.nl

In view of the environmental protection programmes and socio-economic development in Nepal, there are various demands for new GIS knowledge for such fields as land, agriculture, natural resources, urban and rural planning, infrastructure development, water resources and geology. To meet such demands, the education programme Geomatics Engineering, leading to academic degrees at the Bachelor and Master levels, is now being launched in Nepal. Currently the Bachelor of Engineering (BE) programme is being jointly implemented by the Land Management Training Centre (LMTC) of the Ministry of Land Reform and Management and the School of Engineering of Kathmandu University. During the month of April 2008, ITC was invited to conduct a fact-finding mission and advise on these education programmes.

Recognising the new policy shifts and the needs for new geo-information technologies, a four-day workshop was initially organised during the month of November 2008 at Kathmandu University to identify the required curriculum for a BE in geomatics engineering. Around 65 participants from various ministries, departments, local governments and other universities, including ITC alumni and experts from private schools and consulting companies involved in geo-information science and land administration, attended the workshop. During the workshop, several technical papers were presented by experts and discussed. Four sessions of group discussion were organised and the outcomes of each group were then presented and discussed in a wider audience. Additionally, smaller group meetings were held. Dr K. Tempfli and Dr A. Tuladhar from ITC attended the workshop, contributed by delivering key lectures, and participated in all group discussions and meetings with professors from Kathmandu University and LMTC. The main results of the workshop are the framework for designing the curriculum and the suggestions and recommendations for the content of the BE Geomatics Engineering syllabus.

Inauguration ceremony

Core group meeting

Vietnamese on Study Tour

Dick van der Zee vanderzee@itc.nl

The Sweden Cooperation Programme on Strengthening Environmental Management and Land Administration in Vietnam (SEMLA), which is also operating in the Ministry of Environment and Natural Resources (MoNRE) Department of Natural Resources and Environment in Ha Giang province, Vietnam, is very interested in studying the way in which land administration and environmental management is practised in the Netherlands, and especially in learning from ITC's experiences.

Considering the long period of cooperation between ITC and the MoNRE of Vietnam, it was decided to accept the request to assist in organising a study tour in the Netherlands. So it happened that a small group of five persons arrived in a big bus on Monday afternoon (3 November) and, after being welcomed by Mark Noort, they were given an introduction to land administration by Professor Paul van der Molen.

On Tuesday, following a lecture by Dr Jan de Leeuw on policy for the use of remote sensing in environmental management, they visited the dairy farm of Mr Smelt near Buurse and in the afternoon rambled through the Haaksbergerveen, while listening to Mr Roy Dear, who explained about nature conservation and nature management in this part of the Netherlands. Wednesday was reserved for a trip under the guidance of Dr Dick van der Zee through the polder areas of the Netherlands, starting in the old polders around Giethoorn, with a short walk in this Venice of the North, and then passing on to the much younger Northeast polder, with stops at the former islands of Schokland and Urk. Next, the even newer Flevoland was visited, with its extensive modern windmill park, the new town of Lelystad, and the new nature reserve Oostvaardersplassen. On exiting the polder, a short stop was made at the medieval town of Elburg. On Thursday morning, a visit was arranged to the Dutch Cadaster in Apeldoorn, again involving Professor Paul van der Molen. This visit had to be cut short owing to special circumstances. After that, the group continued their journey through Germany and France.

Our input into the study tour programme was highly appreciated, in particular the proper mix of theory and real-life examples.

Picture time on the dyke of Flevoland with the modern electricity-generating windmill

In the Haaksbergerveen with Mr Roy Dea

Indicators Bring Academics and Local Government Together

Javier Martínez jmartinez@itc.nl
Emile Dopheide dopheide@itc.nl

On the afternoon of 5 November, ITC's Department of Urban and Regional Planning and Geo-information Management, together with KISS *(Kennis Instituut Stedelijke Samenleving)*, an urban policy forum of universities, local governments and the private sector in the province of Overijssel, organised the seminar "Indicators: interplay between policy and methods".

During the seminar, participants discussed conceptual, methodological, practical and institutional issues concerning the use of indicators in urban and regional planning. The seminar numbered more than 50 participants, including local government officials, academic staff, and PhD and MSc students.

Central and local governments in many countries are involved in indicator projects to support area-based initiatives with an evidence-based planning approach. Likewise in the Netherlands, on the basis of a set of 18 debated indicators the Ministry of Housing recently selected 40 deprived neighbourhoods that are now receiving additional support to improve their local situation. Within the province of Overijssel, a similar exercise has been conducted to identify the most deprived neighbourhoods in the five major cities of the province. Mr Peter Scheltinga, policy researcher for the municipality of Hengelo, presented the basic idea of the indicator exercise in Overijssel. Ms Evy Trisusanti, MSc student of the Urban Planning and Management programme and part of ITC's double-degree programme with the Institut Teknologi Bandung in Indonesia, reviewed this exercise in terms of the sensitivity of the final outcome in relation to the various techniques that could be used to construct indices of multiple deprivation.

Karin Pfeffer, GIS researcher at the University of Amsterdam, gave a presentation on the so-called Regiomonitor, explaining its use and outlining experiences. The Regiomonitor is an instrument that indicates the status of neighbourhoods in the municipalities in the Amsterdam region in terms of spatial concentration of specific societal themes such as unemployment and ethnicity. The Regiomonitor is a good example of how to open up various available databases for public use. Furthermore, it is an illustration of how academics could cooperate with local governments in the field of policy information.

Finally, Cecilia Wong, professor of spatial planning at the University of Manchester and author of the book *Quantitative Indicators for Urban and Regional Planning: The Interplay of Policy and Methods* (Royal Town Planning Institute Library Book Series, Routledge, London, ISBN: 0415274516) reflected on the usage of indicators and the changing ethos of indicator usage for urban and regional planning.

Based on the UK experience, Cecilia Wong stated that, despite ongoing conceptual, methodological and institutional challenges, indicators remain very attractive to policy makers as they often act as an interface between the technical and more political rationality. Besides, stronger emphasis on user engagement in the development of indicators helps to bring together the rational paradigm and the more communicative, social learning approach, which are both present in government and academic circles.

Overall, the seminar touched on a number of relevant issues concerning the use of indicators and stimulated the debate between academics and local government representatives on actual daily practice - leading to possible further strengthened cooperation in research and education between ITC, the University of Twente and the local governments in the region of Overijssel.

During the seminar participants discussed conceptual, methodological, practical and institutional issues concerning the use of indicators in urban and regional planning

One-Day Tutorial Hyperspectral Remote Sensing during ACRS 2008

Harald van der Werff vdwerff@itc.nl

On 13 November, Professor Freek van der Meer and Dr Harald van der Werff gave a tutorial on hyperspectral remote sensing at the Galadari Hotel in Colombo, Sri Lanka. This tutorial was held in parallel with the 2008 ACRS conference and was sponsored by ITC.

The tutorial was designed for students, researchers and practitioners in remote sensing with a background in earth and/or life sciences who wanted to learn the basics and prospective applications of hyperspectral remote sensing.
Hyperspectral remote sensing deals with data from instruments acquiring reflectance images in a large (>40) number of narrow (<0.01 to 0.02 µm in width) contiguous spectral bands, allowing the derivation of chemical information concerning objects. More specific for earth and life sciences, spectroscopy allows information to be obtained on soil, water and biochemical composition.

Twenty-six participants, of which 15 were ITC alumni, had been selected from over 60 applications. The participants were exposed to the basic physics of spectroscopy, and learned how to interpret field and laboratory spectra and how to process image data. The entire processing chain, from data acquisition through calibration and up to thematic mapping, was covered in the tutorial. Case studies were shown to introduce participants to the various uses of hyperspectral data, covering the fields of geology and exploration, environmental sciences, geo-engineering, vegetation science, agriculture and water quality studies.

Participants working on an assignment

Each participant received a certificate

Group picture of all tutorial participant

Drs Sjaak Beerens, ITC's director external affairs, opened the tutorial in the early morning and closed it in the afternoon with drinks and a ceremony where certificates were presented to all participants.

Participants Applaud Successful GEOSS Workshop

Tsehaie Woldai woldai@itc.nl
Rob Lemmens lemmens@itc.nl

Dr Chris Mannaerts, Dr Ben Maathuis and Dr Rob Lemmens conducted a very successful and highly praised three-day pre-conference workshop with the title "GEOSS interoperability and application to water security and governance" (24 to 26 October 2008) during the 7th African Association of Remote Sensing of the Environment (AARSE) Conference in Ghana. ITC is a GEO capacity building committee member and global task lead for several capacity-building-related activities within GEO.

This three-day AARSE2008 pre-conference workshop focused on human capacity building for the Global Earth Observation System of Systems (GEOSS) and provided the latest update on the implementation of the GEOSS information infrastructure. Special attention was given to developing operational end-user applications and actively working with end users to facilitate informed decision making for water security and governance. The workshop was organised in collaboration with AARSE, IEEE/IGARSS, ICEO, INPE (Brazil), ISPRS, OGC, 52N, and the University of Johannesburg, South Africa.

The workshop was opened by Dr Tsehaie Woldai, who introduced Her Excellency Mrs Cecilia Dapaah (MP), the Minister of Water Resources, Works and Housing. In her opening address to the GEOSS workshop, the Minister commended the organisers for choosing the highly relevant theme of water. The need to develop strategies for an effective earth-observation-based assessment and monitoring system for the sustainable and integrated management of water resources in Africa, taking into account in-continent applied research capacity, could not be over-emphasised. An effective strategy would need to be drawn up for the development and sustainability of human resources, infrastructure and institutional capacity within Africa. Ghana had taken significant steps towards integrated water resource management with the creation in 1996 of the Water Resources Commission, in which all main stakeholder groups and sectors involved in water resources are represented. The Minister expressed her hope that the efforts made by GEO and its partners would be sustained in a way that would make African professionals and policy makers self-sufficient and proficient in the use of geo-based technologies and products for the effective management of that most valuable, but also very vulnerable, resource: water.

In addition to the presentations on GEOSS, OpenGIS and open-source software development, hands-on training was provided on the latest open-source software releases of ILWIS (52 North, http://52north.org/ilwis) and Terralib/Terraview (INPE, Brazil). The participants learned how to use ILWIS for water security monitoring, based on satellite images from GEONETCast.

Over 60 people from various parts of Africa attended the workshop. The participants were well balanced in terms of the countries they represented, of high calibre, highly motivated and engaging

The workshop was opened by Dr Tsehaie Woldai (right), who introduced Her Excellency Mrs Cecilia Dapaah, the Minister of Water Resources, Works and Housing

40th Anniversary of Urban Studies at ITC

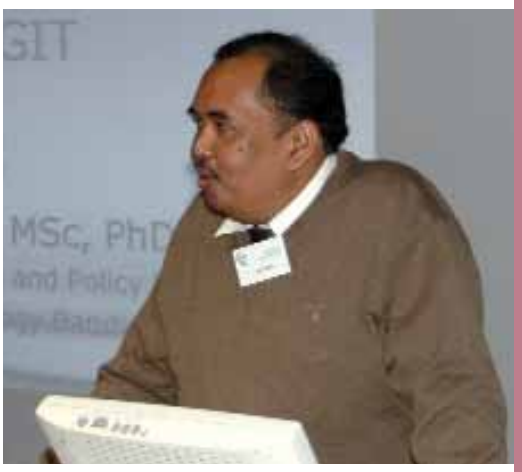
Richard Sliuzas sliuzas@itc.nl
Emile Dopheide dopheide@itc.nl

December is always a busy month at ITC and December 2008 was no exception. The day of the traditional Dies Natalis celebration was used to draw attention to another milestone, that of the 40th anniversary of urban studies at ITC. To mark the occasion, a seminar was organised for past and present students and staff. Naturally much has changed over 40 years. Not the least of the most recent developments is that we now live in a world in which more than 50% of the global population lives in cities. We can now speak of an urban age and there are considerable needs and opportunities for capacity development related to geo-information technology application in the urban studies domain.

The seminar comprised a mix of short presentations on past and current activities related to urban studies, planning and management; discussions on future trends in the field; and opportunities for social exchanges between participants. After a brief historical overview of the development of urban studies at ITC by Richard Sliuzas, two alumni provided participants with insights into some recent developments in their organisations. Ms Sarah Kyessi (USH.2 1993) from the Ministry of Lands, Housing and Urban Development, Tanzania, spoke about the use of geo-information in issuing a new form of land tenure for informal settlements called residential licences and the process of decentralising this activity to local government level. Dr Roos Akbar (USH.2 1991) of the Institute of Technology Bandung, Indonesia, informed the audience about ITB's partnerships in capacity building, in which ITC recently became engaged. To round off the first session of the seminar, Ms Christel Hoogland from the Dutch organisation Cordaid spoke about its Urban Matters programme, providing a good example of the growing importance of non-government organisations within contemporary urban development.

The final session of the seminar focused on some examples of current research activities in the urban planning and management field. In a lively presentation, Ms Regina Muchai, Kenya, explained some aspects of her research on community participation in spatial planning, concentrating particularly on her fieldwork experiences in Kisumu, Kenya. There are now increasing research links between ITC and Dutch, European and other universities. For example, Benno Bock, a student at the Technical University of Berlin, is now conducting research on the use of remote sensing to supply data for transportation modelling at ITC. His presentation was followed by an explanation by Dr Mark Zuidgeest of the Cycling Academic Network, one of the major new research initiatives that combines the expertise of ITC with that of the Interface for Cycling Expertise (I-CE), the University of Twente, the University of Cape Town, the Federal University of Rio Grande Do Sul, Brazil, and the Indian Institute Of Technology, Delhi. The last speaker at the seminar, Professor Isa Baud from the University of Amsterdam, drew attention to the issue of urban poverty and how geo-information can be used to address poverty, and reflected on the value of the recently established research partnership with ITC in urban poverty alleviation. The seminar was concluded with a short but lively discussion, combining re-


Ms Sarah Kyessi


Dr Roos Akbar


Ms Regina Muchai

flections on the historical development of urban studies over the last 40 years by Drs Victor Pollé, founding member of urban studies at ITC in 1968, and other contributions oriented towards the future challenges that the field is facing in dealing with dynamic and complex urban development processes. This is an ongoing debate and provided a fitting introduction to the afternoon's Dies Natalis programme, which included the inaugural addresses of Professor Martin van Maarseveen and Professor Yola Georgiadou, both of whom will have a leading role to play in future urban research at ITC.

The PGM department is very pleased to have had the opportunity to bring several alumni and former colleagues together with current staff, students and some of our partners on this occasion. We are grateful to all who helped to make the seminar and the related social events a big success.

Victor Pollé cuts the birthday cake

AARSE Conference: Application of Earth Observation and Geo-information for Governance in Africa

Tsehaie Woldai

woldai@itc.nl

The 7th biennial conference of the African Association of the Environment (AARSE) took place at the Accra Conference Center, Accra, Ghana, from 30 October to 2 November 2008 and was hosted by the Centre for Remote Sensing & Geographic Information Services (CERSGIS), University of Ghana, Legon, Accra, Ghana. The main theme of the conference was the application of earth observation and geo-information for governance in Africa.

The conference featured:

- over 300 presentations and 40 posters, 10 keynote addresses in four plenary sessions, 31 technical sessions representing eight subthemes on various aspects of geo-information sciences and earth observation, two poster sessions, and a GEOSS workshop on water security and governance in Africa organised by AARSE, IEEE/IGARSS, ICEO, ISPRS, ITC, OGC, 52N and the University of Johannesburg
- eight special sessions: (i) TIGER Project by the European Space Agency; (ii) Global Dialogue on Emerging Science and Technology by the US Department of State; (iii) African Reference Framework by the UN Economic Commission for Africa; (iv) Un-SPIDER by UNOOSA; (v) University Network for Disaster Risk Reduction in Africa by ITC; (vi) ESRI USER and Application by SAMBUS, Ghana; (vii) GeoEye and (viii) ERDAS
- a half-day youth forum on space science and applications organised by ISPRS and CERSGIS, involving more than 100 Ghanaian university and high school students
- in addition to the four meetings (AARSE Council, AARSE General Assembly, EIS Africa, UNEDRA), three round tables and many business meetings
- the installation of a full GEONETCast reception facility for the whole conference period (the antenna being provided by the Ghana Meteorological Organization and the other necessary components through EUMETSAT).

The 7th AARSE conference was attended by 540 registered participants from 40 countries, and included over 30 exhibition stands emanating from national and international organisations in Africa, Asia, Europe, Middle East, North America and Russia. The conference was opened by His Excellency Dr Alhaji Alieu Mahama, the vice-president of Ghana, who was introduced to the conference participants by Mr Alhaji Ahmed Yirimea Awudu, the deputy minister, Ministry of Local Government, Rural Development and Environment. In his keynote address, the guest of honour commended the conference for its facilitating role in increasing awareness of the benefits of geo-information for good governance. He said that it was essential to develop innovative ways to bridge the geospatial science-policy gap in Africa and devise strategies to effectively educate and sensitise African policy makers regarding the role of geospatial technologies in the management of sector-wide plans and programmes. He concluded by suggesting that many important questions should be asked concerning such topics as the extent to which geo-information tools were being used by African policy makers to plan and manage natural resources in their

respective countries; the monitoring of land cover and land use change, climate change, deforestation and desertification; and the efforts being made to strengthen the human and institutional capacities of African geo-information scientists, researchers and practitioners to build decision support databases for use by planners and policy makers to understand the usefulness of geo-information tools and space-based technologies for disaster and emergency management, as well as marine surveillance and pollution control. The vice-president expressed his hope that these issues would be addressed if African countries were to move forward as developing nations towards the achievements of the Millennium Development Goals, particularly Goal 7 on environmental sustainability.

Before the vice-president's speech, both the chairman of the Local Organizing Committee, Mr Foster Mensah, and the president of AARSE, Dr Tsehaie Woldai, welcomed participants to the conference. The president pointed out the significance of natural resources in Africa as the most important potential source of wealth in a continent that is paradoxically the richest in terms of endowment of natural resources but poorest in terms of development. He suggested that the geo-information specialists attending the conference had a responsibility to innovatively influence policy to change this situation.

Immediately after the welcoming address of the AARSE president, congratulatory messages followed from the 1st vice-president (and past president) of the ISPRS, Professor Ian Dowman, and the president of IEEE-GRSS, Professor Tony Milne. This was then followed by an address by Dr Giovanni Rum, on behalf of GEO director Dr José Achache, entitled "Global Earth Observation Systems (GEOSS) build-up in Africa", and the award ceremony.

This year's AARSE Merit Award went to Professor Ian Dowman for his unflinching support for AARSE and its ideals in promoting geo-information sciences and earth observation in Africa. His Excellency Dr Alhaji Alieu Mahama, the vice-president of Ghana, presented the award (a plaque and commemorative award) to Professor Dowman. Nominations for the awards were made by African national organisations and individuals, which were subsequently approved by the AARSE Executive Council after the deliberations required by the constitution.

The conference organisation and logistics were very good. The LOC had devoted a great deal of thought, time and energy to the planning - not only to selecting the excellent facilities, the technical programme and the scientific exhibits, but also to arranging the social activities. Despite the long duration of the sessions (sometimes up to 18.30 hrs), attendance was reasonable and constant right up to the end, with short focused oral presentations followed by lively discussions. The technical programme was accompanied by visits to various exhibition stands, while the social events (such as the conference reception, the AARSE gala dinner, the ITC alumni party) stimulated better social interaction and fruitful discussions.

Accra workshop participants take a picture break

Partial view of one session

ITC exhibition stand during the conference

announcements

Street in Delft Named after ITC's Founder

Homme Martinus martinus@itc.nl

Earlier this year, the city council of Delft decided to name a new street after Willem Schermerhorn. This new street is located near the former ITC building in Delft. ITC was located in Delft from its inception in 1950 until 1999 when the last remaining department moved to Enschede. The building was sold and with that the tight bonds with the city of Delft were loosened. By naming the new street after Willem Schermerhorn, the relation between Delft and ITC will last forever.

Some of ITC's alumni of earlier years may recall Willem Schermerhorn. To others the name of Schermerhorn is bound with the ITC Guesthouse where they lived during their stay in Enschede. Later alumni might remember the statue of Schemerhorn in the meeting room in the ITC hotel or the plaque that can be found in the hall of ITC's building at Hengelosestraat.

For the benefit of all readers of *ITC News*, I will try to give a brief summary of Schermerhorn and his life.

Willem Schermerhorn was born on 17 December 1894 in Akersloot, a small place in the province of North Holland. He was the first son in an old farming family, and therefore initially destined to continue the farm of his father. As he had a small accident with his hand in his youth, he was unable to milk cows and therefore unqualified for farming work. Consequently, he was allowed to study and in 1918 he graduated from Delft Polytechnic. Ending his study, he became assistant to Professor Heuvelink, who taught land surveying and geodesy to civil engineers in Delft. In 1921, Schermerhorn started his own geodetic consulting agency for land surveying, which later formed the basis of the Dutch *Landmeetkundige Dienst van Rijkswaterstaat* (Land Surveying Service of the Public Works Department).

In 1926, Schermerhorn succeeded his master Heuvelink as professor at Delft Polytechnic in the field of surveying and geodesy. In the late 1920s, photogrammetry became an important field of interest in Europe. Schermerhorn, who was one of the first to recognise the possibilities of this new technique, dedicated most of his scientific career to the development of this part of science.

Schermerhorn's social interest was fostered by his Liberal Protestant conviction and focused on the relation of the consequences of the technical development of society with agriculture. In the 1930s, he established the movement *Eenheid door Democatie* (Unity by Democracy), a non-parliamentarian movement that fought against growing anti-democratic developments.

During the Second World War, Schermerhorn was arrested and held prisoner in St Michelsgestel. There he played an important role in discussions on the necessity of renovating the political structure of the Netherlands. After his release from prison, he became a member of the Committee of Professors resistance and went into hiding in Amsterdam, where he cooperated in many resistance activities.

After the liberation of the Netherlands, Schermerhorn was asked by HRH Queen Wilhelmina to lead the first new parliament as prime minister. Schermerhorn became a contested politician because of his role in the discussions on the decolonisation of the Netherlands Indies. He aimed for an independent federation for Indonesia. This was not understood by the Dutch people and the results of the elections of 1946 can be seen as a firm "No" to the policy pursued by Schermerhorn.

He became president of the Committee General for the Netherlands Indies to negotiate on the future political status. This resulted in a concept agreement signed in Linggadjati by the Committee and Indonesian leaders. Through this agreement, Indonesia would become an independent federation that would be bound to the Netherlands by a kind of union. Shortly after the signing, riots broke out, leading to military action in 1947.The Committee General was dissolved and Schermerhorn

ITC's founder Professor Willem Schermerhorn (1894-1977)

The former ITC building at Kanaalweg in Delft was opened in 1956 by HRH Prince Bernhard of the Netherlands

withdrew from politics. During his negotiations, Schermerhorn kept a diary and this was published in 1970.

In July 1948, Schermerhorn returned to Parliament and in 1951 he became a member of the Senate, serving until 1965. After his political duties, Schermerhorn took up his scientific work. In 1949, he visited the headquarters of the United Nations at Lake Success. He advised the UN on the use of cartography in the economic and social development of humankind. He was asked whether he saw possibilities for establishing a training centre for aerial survey in the Netherlands. Before the end of 1949, Schermerhorn had presented his ideas that were to become part of the Dutch programme for international technical aid. And so ITC was established in 1950 and embarked on the first introduction course in September 1951. In those days, ITC did not have a building of its own but used various rooms in the geodesy building of Delft Polytechnic at Kanaalweg in Delft.

When in 1952 the Dutch government granted ITC a loan, preparations were made to build its own premises, especially designed for training students in photogrammetry and photo interpretation. The new ITC building was built at Kanaalweg in Delft and in 1956 it was opened by HRH Prince Bernhard of the Netherlands.

Not only were the training facilities of the new institute located in the new building, but accommodation for the students also occupied the top floors. A central dining room and a meeting room were also included. All these facilities accorded with Schermerhorn's social conscience: the new Institute should not only have a responsibility for the educational and scientific content but also care about the wellbeing of students during their stay at the Institute. Schermerhorn himself lived in the penthouse at the top of the ITC building until his resignation. Until his death in 1977, he remained adviser to the ITC Board of Governors and the Directorate.

For his work, Schermerhorn was honoured more than once. He received the decorations of Knight in the Order of the Dutch Lion, Great Officer in the Order of Oranje Nassau, Officer in the Crown Order of Belgium, and Officer Legion d'Honneur (France), and was honoured with the Medal of Freedom with Golden Palm (USA). In addition, he received six honorary doctorates and many honorary memberships of national and international scientific societies.

Schermerhorn died on 10 March 1977 in Haarlem, where he had lived since leaving Delft. After his cremation on 14 March, his ashes were buried on 25 March in Stompetoren in the Schermer in the province of North Holland.

The name of Schermerhorn remains alive within ITC. Every two years, the Schermerhorn Lecture is presented by a prominent scientist and the Institute still celebrates its foundation day (Diës Natalis) on 17 December: Schermerhorn's birthday.

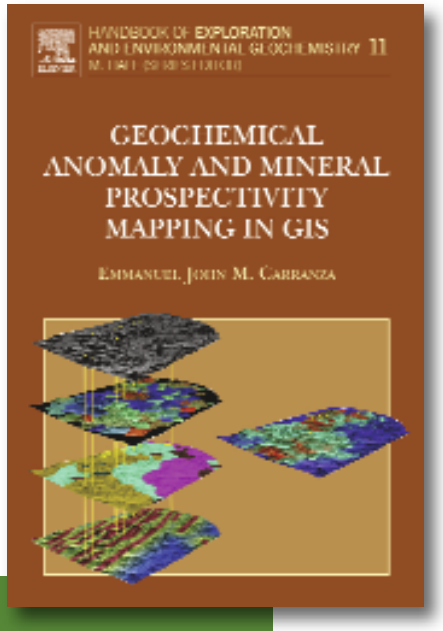
Emmanuel John M. Carranza's Geochemical Anomaly and Mineral Prospectivity Mapping in GIS Published by Elsevier

Description

The book, in three parts, documents and explains geochemical anomaly and mineral prospectivity mapping by using a geographical information system (GIS). Part I reviews and couples the concepts of (i) mapping geochemical anomalies and mineral prospectivity and (ii) spatial data models, management and operations in a GIS. Part II demonstrates GIS-aided and GIS-based techniques for the analysis of robust thresholds in mapping of geochemical anomalies. Part III explains GIS-aided and GIS-based techniques for spatial data analysis and geo-information synthesis for conceptual and predictive modelling of mineral prospectivity. Because methods of geochemical anomaly mapping and mineral potential mapping are highly specialised yet diverse, the book explains only methods in which GIS plays an important role. The book avoids using language and functional organisation of particular commercial GIS software, but explains, where necessary, GIS functionality and spatial data structures appropriate to problems in geochemical

anomaly mapping and mineral potential mapping. Because GIS-based methods of spatial data analysis and spatial data integration are quantitative, which can be complicated for non-numerate readers, the book simplifies explanations of mathematical concepts and their applications so that the methods demonstrated would be useful to professional geoscientists, to mineral explorationists and to research students in fields that involve the analysis and integration of maps or spatial datasets. The book provides adequate illustrations for more thorough explanation of the various concepts.

Audience
Professional geochemists, geologists, geoscientists, mineral explorationists and researchers and graduate students in fields that involve the analysis and integration of maps or spatial datasets.



The book can be ordered from
http://www.elsevier.com/wps/find/bookdescription.cws_home/710888/description#description

Second Edition of the National Atlas of Sri Lanka

K. Dayananda
dsgmap@sltnet.lk
Senior Deputy Survey General (Mapping)
ITC alumnus Cartography 1983/84
Survey Department, Sri Lanka

Marking yet another milestone in its long history of 208 years, the Survey Department of Sri Lanka, which functions under the Ministry of Lands and Land Development, is proud to launch the second edition of the *National Atlas*, following its first publication in 1988.
It is an important milestone for many reasons. During the past two decades, the country has undergone significant social and economic changes that have had an impact on the physical, social and economic conditions of the nation. Apart from that, remarkable changes have taken place in the fields of agriculture, demography, transport, industry, commerce, administration and infrastructure development. Two unfortunate events, namely the civil unrest in some parts of the country and the unprecedented impact of the 2004 tsunami, have also contributed to the changes in the socio-economic scenario.

In view of the above, and the availability of more recent data from the 2001 Population Census and numerous other surveys conducted since the publication of the first edition of the *National Atlas*, the Survey Department embarked on this challenging task of producing a more detailed and comprehensive publication. This task involved an editorial board and authors - eminent personalities and academics with considerable experience and expertise in their respective fields drawn from the national universities and government institutions.

Despite many constraints, the new edition of the *National Atlas* has been published. The nine themes in the first edition have been increased to 12 and the 58 sub-themes have been increased to 80, with each section being devoted to well-documented and authentic information. The atlas comprises 253 pages, with 31 colourful full-page maps, 27 multiscale maps and 207 other map figures, as well as numerous tables and 80 texts. Colourful photographs have been used for visual impact where necessary. Within the 80 sub-themes, special emphasis has been laid on the physical and biological environment.


Mr K. Dayananda and Mr Sjaak Beerens during the ACRS, November 2008

Apart from a few reproductions of early maps, all the maps and diagrams have been specially prepared for this atlas, and most of them are completely original.

As in the case of the first edition, this edition too is truly an indigenous effort. No foreign experts have been involved, which once again has proved the ingenuity of our experts. It is our fervent belief that the new edition of the atlas projects authentically and comprehensively the identity of Sri Lanka, and we hope that readers will find it a useful source of information on a wide array of subjects concerning our country. As far as possible, the information contained in the atlas was the most up to date at the time of text preparation. There are some texts and maps dealing with general subjects where data change was minimal, whereas others required considerable modification. The *National Atlas* thus presents a snapshot picture of historical and current events as seen in more recent periods.

Another concern for the publishers was the pricing of the new edition. Though the cost of producing the atlas was high, for the benefit of the users it has been moderately priced at Rs 6,000 per copy. Having in mind the wider English-language readership worldwide, it was decided to print the *National Atlas* in English. As in the case of the first edition, however, it is also planned to publish an abridged school edition in the national languages of Sinhala and Tamil and also in English at an affordable price, so it can reach the student population.

The Survey Department is thankful to all those who were involved in this noble task and is confident that a wide range of people in Sri Lanka and overseas will share our proud belief that the task has been well accomplished. At present, this atlas is available to international communities at US$ 250 from the Sri Lanka Survey Department (see www.survey-dept.slt.lk

A copy of the *Second National Atlas of Sri Lanka* was presented to Mr Sjaak Beerens by the surveyor-general of Sri Lanka

NBV Hissinkprijs Again Won by an ITC MSc Graduate

Abbas Farshad farshad@itc.nl

A few years ago, Dante Margate (Philippines) received the Hissinkprijs of the Dutch Soil Science Society (Nederlandse Bodemkundige Vereniging (NBV)), and now once again an ITC MSc thesis has carried off the prize.

This time the winner was Juan Francisco Sanchez Moreno (Colombia), and he received an award and a cheque for € 500. Juan's thesis is entitled *"Applicability of knowledge-based and fuzzy theory-oriented approaches to land suitability for upland rice and rubber, as compared to the farmers' perception: a case study of Lao PDR"*. Juan, who enjoyed the Alban fellowship when doing his MSc in environmental modelling and management, has come back to ITC and been offered one of the PhD positions within the DESIRE project (in the ESA department, with Professor Victor Jetten).

Juan Francisco Sanchez Moreno

The thesis is available from the ITC Library at www.itc.nl/library/papers_2007/msc/gem/sanchez.pdf

Africa GIS Conference 2009: Kampala, Uganda, 26-30 October 2009

Geospatial information and sustainable development in Africa: Facing the challenges of global change

The 2009 edition of the Africa GIS Conference (the ninth since its inception) is scheduled to take place in Kampala, Uganda, from 26 to 30 October this year. The conference was first organised in 1993 in Tunis and has been held biennially since then.

The 2009 Africa GIS Conference is being organised by the Department of Geography of Makerere University, which is home to a large group of ITC alumni. Several of them are deeply involved with the organisation. The conference will take place at the Commonwealth Resort Munyonyo in Kampala. Recently announced, the central theme of the conference is: "Geospatial information and sustainable development in Africa: facing the challenges of global change". In general, the conference will address developments and applications of GIS and remote sensing in application areas such as climate change, disaster reduction, agriculture, the environment, natural resources management, education, business communication, spatial data infrastructure, and visualisation.

The 2009 Africa GIS Conference is being organised by the Department of Geography of Makerere University, which is home to a large group of ITC alumni. Several of them are deeply involved with the organisation

It has generally been acknowledged that the timely and accurate provision of information is an essential aspect of informed decision making at all levels in society. The acquisition, processing, sharing and dissemination of this information plays a very important role in this respect and the key question right now is how the broad potential of geospatial information technology can be harnessed to enable Africa to counter the challenges that it is facing. The conference theme focuses exactly on that: facing the challenges of global change, facilitating sustainable development across the continent, and at the same time realising the development goals of its people.

The conference will centre on four broad sub-themes:

- geospatial information for climate change, vulnerability and disaster risk reduction
- spatial data infrastructure in Africa: geo-visualisation enhancing science-policy interface
- geospatial information science for business solutions, intelligence, communication and education
- earth observation and geospatial technologies for integrated environment and natural resources management for Africa's development.

Cross-cutting issues that will be addressed during the conference include poverty, urbanisation, rural development, gender, health, the land question, displacement and refugees, water and energy. The conference will be flanked by an exhibition, and will be preceded by a number of pre-conference training workshops.

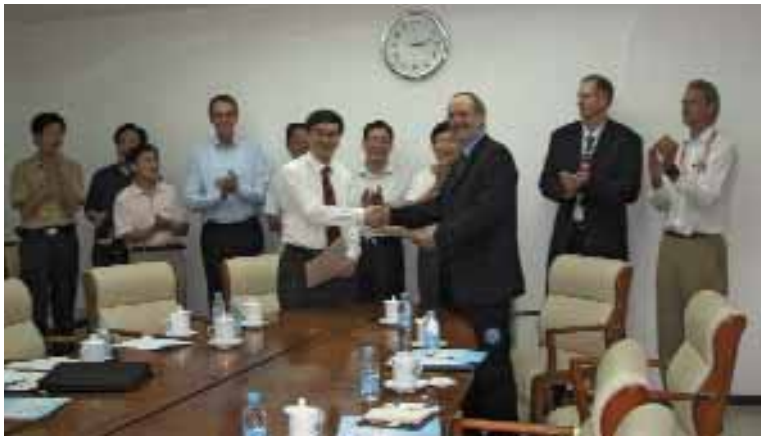
General information on the conference, as well as on registration, abstract submission and registration for pre-conference training workshops, is now available on the conference website (www.africagis2009.org). Abstracts should be submitted through the website by 30 May 2009 and interested contributors are encouraged to visit the website regularly for updates or contact the organisers for further details at the following addresses: info@africagis2009.org, chair@africagis2009.org or sec@africagis2009.org.

partnership news

CMA Signs Cooperation Agreement with ITC

On 8 July 2008, the China Meteorological Administration (CMA) signed a cooperation agreement with ITC that aims to strengthen the exchange of talents. CMA Vice-Director Xu Xiaofeng was present at the meeting.

Yu Jixin, the director of the Department of International Cooperation of CMA, and Sjaak Beerens, ITC´s director external affairs, signed the Memorandum of Understanding on cooperation in education, training, research and counselling service between CMA and ITC. According to the agreement, the two sides will continue to cooperate on talent training and ITC will provide professional training for CMA.



Yu Jixin, director of CMU´s Department of International Cooperation, and Sjaak Beerens, ITC director external affairs, signing the Memorandum of Understanding between CMA and ITC

Source: *China Meteorological News Press* (www.cma.gov.cn/english/)
By: Li Xin
Editor: Zhang Yong

staff news

Tsehaie Woldai Fellow of the Geological Society of Africa

Tsehaie Woldai woldai@itc.nl

During the 22nd Colloquium of African Geology in Tunis, Africa, a most prestigious society honoured Dr Tsehaie Woldai, associate professor at ITC's Department of Earth Systems Analysis, by making him a Fellow of the Geological Society of Africa in recognition of his contributions to the geology of Africa and for promoting geosciences in Africa during the past few years.

The award ceremony took place at the Grand Palace, Hammamet, Tunisia, and was attended by many scientists and Tunisian dignitaries. The presentation was made by Dr S. Felix Toteu, president of the society.

Award given by Professor Felix Toteu, GSAF president

A few of the award winners present during the conference

Diane Forsythe Award for Dr Gianluca Miscione

Dr Gianluca Miscione, staff member of the Department of Urban and Regional Planning and Geo-information Management, has won the 2008 prestigious Diane Forsythe Award of the American Medical Informatics Association. This award is given yearly to a paper that best exemplifies scholarship at the intersection of medical informatics and social sciences.

The winning paper is: Miscione, G. (2007), Telemedicine in the upper Amazon: interplay with local health care practices. In: *MIS Quarterly*, 31(2007)2, pp 403-423.

Alfred Stein Appointed Honorary Professor at CASM, China

Alfred Stein stein@itc.nl

Professor Alfred Stein was appointed honorary professor by Prof. Dr Zhang Jixian, president of the Chinese Academy of Surveying and Mapping (CASM), during his visit to China at the end of June 2008.

CASM (Bejing) was established in 1959 and is the largest multidisciplined comprehensive research institute in China in the field of surveying and mapping. ITC has a longstanding relationship with CASM and in spring 2008 a delegation from this institute visited ITC. Honouring Alfred Stein fits in with the tradition of awarding mutual professorships. CASM research and education fields are data mining, image mining and data quality, and Martien Molenaar, John van Genderen and Wolfgang Kainz are among former and current honorary professors.

On accepting the distinction, Professor Stein said, "It is an honour and pleasure for me to receive this appointment and I expect to be able to serve the questions raised during the working processes and projects at CASM. We hope to improve upon the scientific output of CASM and in this way to increase the level of our collaboration. Meanwhile, we are confident that the working relations will continue and that these will help the Department of Earth Observation Science to further focus on relevant issues in developing countries. As I have presented in my speech of acceptance, contributions from the side of ITC would typically consider image mining issues related to uncertain objects. Methodology to be developed, implemented and applied to issues addressed by CASM will rely on probabilistic and fuzzy logic. I was very impressed in particular when the consequences of the big earthquake in southern China were shown. These were put on the map by the modern Chinese satellites using the best methods. It shows how the methods that are developed at ITC may find a place in very important and relevant disaster-related research."

Professor Alfred Stein was appointed honorary professor by Prof. Dr Zhang Jixian, president of the Chinese Academy of Surveying and Mapping (CASM)

Staff

Welcome to ITC	R. Zurita Milla	Assistant Professor Department of Geo-information Processing	1 October 2008
	Dr G. Miscione	Assistant Professor Department of Urban Regional Planning and Geo-information Management	21 October 2008
	Drs C.C.H.M. Nelissen	Head Information Technology Department	1 November 2008
	Dr C.E.B. Benneker	Post Doc Researcher Department of Urban Regional Planning and Geo-information Management	13 November 2008
	Dr S. Frigerio	Post Doc Researcher Department of Earth Systems Analysis	1 December 2008
	Dr G. Peters Guarin	Post Doc Researcher Department of Urban and Regional Planning and Geo-information Management	15 December 2008
Staff leaving	Dr. R. Slootweg	Department of Natural Resources	1 November 2008

life after itc

NANC Distinguished Alumni Award to Prof. Xuehua Liu

Ms. Selano Li

secretariat@nanc.org.cn

The NANC Annual General Event (AGE) was initiated as a review of the alumni events and activities organised throughout the year. The purpose is to get all alumni together to recall the cheerful memorable times they have enjoyed in the past, and to stimulate them to play the role of image ambassador in their field or profession. The second NANC AGE was organised on 13 December 2008 in Beijing - with great success! It was sponsored by NESO China and other business concerns and the highlight was the Alumni of the Year Awards.

More than 180 people attended this event - in fact we have never had so many participants at an event before. Many alumni newly returned from the Netherlands have registered and become members of NANC. The participants were NANC alumni, CSCSE colleagues, NANC business partners, prospective students with their parents, sponsors, and Dutch students studying in China. Mr Jacques van Vliet welcomed all participants and introduced the ongoing projects initiated by NESO China. Ambassador Rudolf Bekink gave a speech and presented the prizes to the winners.

After a dinner buffet, more than 100 people took part in the lucky draw. Six alumni with lucky numbers on their name badges answered the questions related to Dutch and Chinese culture that had been prepared by the sponsors, and memorable presents were given as encouragement. Four of the seven best nominees residing in other places travelled to Beijing especially for the AGE'08. Furthermore, one of the two nominees for the Distinguished Alumni Award travelled all the way from Tilburg to Beijing (sponsored by her host institution, Tilburg University) to accept her prize. The winners expressed their appreciation at being selected as alumni of the year.

Professor Xuehua Liu was presented with the Distinguished Alumni Award. She did her PhD at ITC and wrote a thesis entitled *Mapping and Modelling the Habitat of Giant Pandas in Foping Nature Reserve, China.*

The Distinguished Alumni Award is awarded to individuals who have distinguished themselves by their excellent contributions and achievements in their field of expertise (e.g. in the public community; in arts, sports, culture or entrepreneurship; or in a scholarly field), preferably playing a role in promoting the Sino-Dutch relation to some degree.

In addition, some NANC alumni based in Sichuan, Dalian, Shenyang and other closer regions also travelled to Beijing to attend this event. The whole event lasted more than three hours and all participants had a memorable and joyful evening.

NANC staff and best nominees

Professor Xuehua Liu (right) received the Distinguished Alumni Award from NANC

Ambassador Rudolf Bekink gave a speech and presented prizes to the winners

Development, Environment and TERI

Prasun K Gangopadhyay

prasun@alumni.itc.nl
prasun.gangopadhyay@teri.res.in

After my PhD defence in June 2008 at Utrecht University (promotor Professor Freek van der Meer, co-promotor Dr Paul van Dijk), I came back to India and joined the Energy and Resource Institute (TERI) (www.teriin.org) in November 2008 as an associate fellow in the Energy Environment Policy Division.
TERI is a non-profit research institute and works on climate change, sustainable energy and the like and is directly supervised by Dr R.K. Pachauri, the IPCC chairman. TERI was formally established in 1974 for the purpose of dealing with the immense and acute problems that are likely to face humankind in the years ahead on account of

- the gradual depletion of the Earth's finite energy resources, which are largely non-renewable
- the existing methods of using them, which cause pollution.

The institute is located in the Indian Habitat Centre (IHC), which itself is an energy-saving building. TERI, which has several regional offices located in different cities in Asia, Europe and America, works in highly specialised fields such as engineering, economics, natural and social science, biotechnology, architecture, public policy, information science and administration. I am based in TERI's headquarters in New Delhi. Besides the research institute, TERI has a university that is located in a green belt and this building is highly energy- and water-efficient.

TERI fulfils its mandate of sustainable development by advocating the concept of green buildings that register minimal impact on the environment. In practising what it preaches, TERI has constructed its buildings in Gurgaon (near Delhi), Bangalore (in south India) and Mukteshwar (in the Himalayan mountains) along these lines. Resource- and energy-efficient, these premises are exemplary constructs that demonstrate the sustainable implementation of green practices. In order to popularise this initiative, TERI has also introduced GRIHA ("home" in Sanskrit), a rating system to assess the greenness of buildings.

It was 2001 when I first joined ITC as an MSc student, and later I went on for a PhD. I am now quite happy to continue my research life that started at ITC here. It is really interesting to find that my independent research skills improved during my time at ITC. As a research professional, my responsibilities include research project execution and reporting to the respective agency to take initiatives. Here my first project is to estimate CH4 emissions (CBM) from coalmining and this will be achieved using secondary data such as degree of coal (or gassiness), coal production, etc. The second part of my research is to estimate CO2 emission from coal fires at national level (India). Knowledge of remote sensing and GIS will be used extensively in the second part, along with secondary data such as coal quality/type and the relating capability to emit CO2.

Prasun Gangopadhyay

The Energy and Resource Institute (TERI)

ITC Alumni Gathering Nanjing, China

Chang Zheng chang@alumni.itc.nl

Held by UN-HABITAT every two years, the World Urban Forum (WUF) is the world's summit forum of urban development and an important conference concerning human habitation.
WUF4 was held in Nanjing from 3 to 6 November 2008, and more than 6,000 participants from all over the world participated in the event, including Chris Paresi, Richard Sliuzas, Jeroen Verplanke, Paul Schoonackers and Chang Zheng (ITC representative China) from ITC.

Furthermore, in addition to ITC involvement in the organisation of a training session, workshop and presentation, the Institute had a booth in the exhibition hall. Many young participants visited the booth, displaying a real interest in ITC courses.

The ITC alumni gathering was held on 5 November 2008. All the above ITC delegates attended the gathering, as well as 10 alumni from mainly China and certain African countries. It was a successful and well-appreciated reunion. Everyone had an enjoyable evening sharing their knowledge, experiences and good memories.

ITC booth at the WUF exhibition

ITC alumni at the alumni gathering

ITC Alumni Gathering during ACRS 2008, Colombo

Jorien Terlouw alumni@itc.nl

In the week of 10 to 14 November, the ACRS 2008 (Asian Conference for Remote Sensing) conference was held in Colombo, Sri Lanka. During the conference, ITC hosted an ITC alumni reception in the Galadari Hotel. The gathering was attended by approximately 50 alumni from Sri Lanka and other countries who were present at the conference.

Mr Sjaak Beerens opened the gathering with some words of welcome, reserving a special welcome for Ms Leonie de Cuelenaere, ambassador of the Netherlands in Sri Lanka, and Mr Gerrit Noordam, First Secretary

Alumni enjoying the reception with former classmates and current colleagues

Development Co-operation of the Embassy of the Netherlands in Sri Lanka. Ms Leonie de Cuelenaere spoke some words to all the ITC alumni present and Mr Sarath Jayatilaka invited everyone to become a member of the Netherlands Alumni Association. After the official speeches, everyone enjoyed themselves talking to former class members and friends, renewing contacts and forming a new network. Initial ideas were discussed to form an ITC alumni chapter in cooperation with the Netherlands Alumni Association in Sri Lanka

Group picture at the ITC alumni gathering ACRS 2008

Ms Leonie de Cuelenaere in discussion with an ITC alumnus

ITC Alumni Gathering Accra, Ghana

Arthur Neher neher@itc.nl

During the 5th AARSE Conference in Accra, Ghana, a very successful alumni meeting was organised. The advantage of the international gathering meant many alumni from across the region could attend.

On a balmy evening around the pool in the beautiful setting of Accra's Coconut Grove Regency Hotel, some 100 alumni and ITC staff came together on 28 October. It was good to see the still-warm contacts between old classmates being renewed. Seeing familiar faces brought back many good memories of ITC, as well as providing the opportunity to re-establish useful and up-to-date networks.

The evening was further graced by some speeches and anecdotes that conjured up both the past and the future, while the participants were duly fortified with plentiful drinks and snacks. The ITC rector, Professor Molenaar, took the opportunity not only to thank the many alumni for their presence, but also to give a brief sneak-peak into the near future, when the long-established Institute will join the University of Twente. Although ITC's previous rector, Professor Karl Harmsen, was on his home turf in his present position as director of UNU-INRA, it was also clear that he thoroughly enjoyed the opportunity to dive back into his past.

Two ITC alumni voiced the feelings of all present when they said that being professionally groomed at ITC was something to be proud of and was a big advantage when it came to pursuing a professional career. Because such a gathering was felt to be extremely important in maintaining the unique ITC network, the establishment of a Ghanaian alumni initiative was announced. After this encouraging news, the rector brought the evening to a conclusion.

All in all, the alumni gathering in Accra was a great success and once again showed the veritable significance of these social gatherings.

The vice-president of Ghana, accompanied by alumnus Foster Mensah, visited the ITC booth

ITC alumni gathering