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2004

number 2

introduction

Can you think of a relationship between ITC and Genghis Khan - Is there any such relationship? Perhaps not one that immediately springs to mind. So let's put the theory of six degrees of separation to the test, but with a slight modification - instead of a chain of six linking stages of circumstance or acquaintance, we'll try to establish six individual links, based on this issue of ITC News.

Well, to start off with, an ITC delegation recently visited Mongolia, land of that famous overlord, to explore the possibilities for cooperation and to attend an international workshop (page 2). What's more, earlier in the year, an ITC Mongolian alumni association was set up, and its inaugural party was celebrated in - yes, you've probably seen which way the wind's blowing - the Genghis Khan Restaurant in Ulaan Baatar (page 24). No stranger to conflict, Genghis Khan, leading his warrior hordes across the steppes, increased his domains to such an extent that his rule stretched from the Black Sea to the Pacific. But he was more than just a conqueror, he was an able administrator, creating a permanence within the subject states on which his successors could build. So that's two reasons why his participation in the symposium on land administration in post-conflict areas (page 6) would have attracted considerable interest. Moreover, silk undershirts to prevent arrows piercing the skin, or at the very least to aid their removal, would have been considered advanced technology back in the 13th century - and advanced technology and its applications is something ITC certainly knows all about, as you'll read on pages 15 and 10.

Now for the sixth link. Well, I confess to feeling somewhat at a loss, so perhaps it's time to follow the good example set on page 11 and adapt to circumstances, which in this case means 'reconstructing' the task, and settling for five links only. Can't win 'em all!

Turning our attention elsewhere, on several occasions we've urged alumni to get in touch with us and we're happy to say this call has met with a tremendous response. Perhaps old friends will be among the names on pages 18-22. Fortunately e-mail addresses are attached to these names, so the rest is up to you. And while you're about it, why not drop us a line too!

Janneke Kalf

Managing Editor

colofon

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ITC Delegation Visits Mongolia

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Mongolia evokes the name of Chinggis Khan and his 13th century conquest of most of the known world. His empire extended from the Mediterranean Sea to the Pacific Ocean, and the reputation of his hordes of soldiers has endured until today.

Now Mongolia is landlocked between two large neighbours: the Russian Federation and China. With an area of more than 1.5 million square kilometres and a population of less than 2.5 million, Mongolia has a population density of only 1.5 people per square kilometre, one of the lowest in the world.

After 1990, when Mongolia was released from Soviet control, the country opened up rapidly. ITC's involvement in Mongolia dates back to that time. The first Mongolian student, Mr Bataar Enkhtuvshin, came to ITC in 1990 for the short course GIP.5, while the first MSc student, Mr Damdinsuren Amarsaikhan, graduated in 1992 from the IGP.2 course. In the following years several Mongolian students came to ITC, with the total number of Mongolian alumni to date standing at 32, of which half are female graduates. Furthermore, from 1990 to 1995 ITC was involved in a UNDP remote sensing project in Mongolia.

A four-strong delegation from ITC visited Mongolia in the first week of June 2004 to further explore the possibilities for ITC in the country of endless steppes and to participate in the 1st International Workshop on Land Cover Study of Mongolia Using Remote Sensing/GIS. The workshop was organised by the National University of Mongolia and the Mongolian Geoscience and Remote Sensing Society. Professor Andrew Skidmore gave a keynote address at the workshop and Professor John van Genderen chaired the opening session. Dr Hein van Gils presented a paper, and Ms Marjan Kreijns gave a brief introduction to ITC and its relations with Mongolia. The workshop was attended by many GIS and remote sensing specialists from Mongolia, while the foreign contingent



The alumni reception

was composed of participants from Japan, Belgium, Hungary and the Netherlands. The workshop was very well organised by Dr Renchin Tsoimon of the Research Centre for Geophysics, National University of Mongolia.

During its visit to Mongolia the ITC delegation visited several organisations active in the use of GIS and remote sensing applications. We were very pleasantly surprised to meet ITC alumni at almost all these organisations. ITC's alumni play a key role in the relatively small GIS and remote sensing sector in Mongolia. During the alumni reception hosted by ITC on Tuesday, 8 June, we met many of them and enjoyed many interesting discussions on the way ahead for this sector in Mongolia and ITC's potential role. In a big country such as Mongolia GIS and remote sensing are crucial tools for monitoring and managing the resources, and our discussions with Mongolian organisations clearly indicated that more attention will be given to the use of these tools in the future.

We visited the Ministry of Agriculture, who asked for our help in establishing an efficient information system, which would include data on pasture degradation, snow cover

and land use, as well as data to support better crop yield forecasting. We had similar discussions at the Ministry of Nature and Environment (MNE). There is a lack of (geo-) information, but most important is to translate data into useful information for decision makers. The Ministry informed us that 80% of Mongolia's GDP is related to natural resources and that the ambitious goal the Mongolian government has set itself is to increase the area of national parks in Mongolia from 13.5% to 30% in the next 10 years. MNE has its own Information and Computer Centre (ICC), which also hosts the National Remote Sensing Centre. Its director, Dr Khudulmur, explained the main tasks of the centre, also referring to the huge need for additional staff capacity building. We briefly discussed the difficulties surrounding the sharing of data and information. Later in June Dr Khudulmur attended a conference on scientific data sharing held in Beijing, which gave us the opportunity to continue our discussions.

Turning to the field of projects, we visited the UNDP office and were informed that there was a need for GIS in most of its projects. In close contact with our alumni who are presently working on several UNDP projects, we will monitor opportunities to become involved in these projects. ITC is also actively involved in preparing a tender for the AsDB project Capacity Building for Cadastre and Land Registration. Under the leadership of the Belgian company Eurosense, a consortium with MonMap and ITC will bid for this contract. We will make use of our alumni network to execute the training at provincial and district levels.



Marjan Kreijns in front of a traditional ger (felt tent)

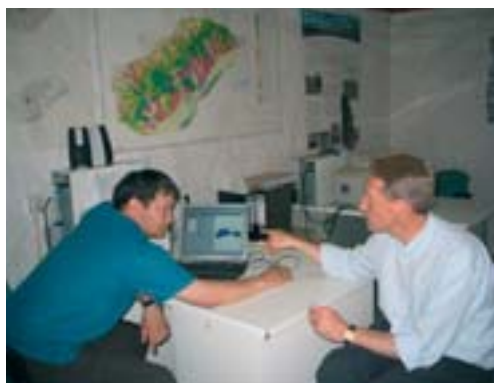


Professor Skidmore presented the National University of Mongolia with a package of recent literature and ITC PhD theses on geo-information applications in natural resources

As far as education is concerned, we have had close contact with the National University of Mongolia for many years. During this visit Professor Andrew Skidmore gave a guest lecture for the students in the Faculty of Geography and we were present at the opening of the new GIS/remote sensing laboratory at the university. On that occasion Professor Skidmore presented the university with a package of recent literature and ITC PhD theses on geo-information applications in natural resources. Furthermore, we visited the Eco-Asia Institute and discussed ITC's interest in conducting a tailor-made training course in sustainable development and environmental management for their staff.

We enjoyed two field trips outside Ulaan Baatar, which gave us the feeling we had stepped back in history. Relatively unchanged for centuries, Mongolia has one of the last remaining horse-based nomadic cultures in the world, and we were warmly welcomed by one of the nomadic families in their traditional ger (felt tent).

Our second trip took us to the Hustai National Park, located 95 km west of Ulaan Baatar. Hustai has a unique landscape and is now home to the only species of wild horse, the Takhi (Przewalski's) horse. These horses were reintroduced in Hustai with financial support from the Netherlands government. Hustai has a research centre that deals



Hustai National Park has a research centre that deals mainly with ecosystem research



Professor John van Genderen chaired the opening session of the 1st International Workshop on Land Cover Study of Mongolia Using Remote Sensing/GIS in the presence of the Vice-minister of the Ministry of Nature and Environment Mr. Bolat A. (left)

mainly with ecosystem research. One of their specialists is using GIS for storing their large data set but would be interested to learn more about using GIS for analysis and about using remote sensing.

We were certainly impressed by Mongolia, a land of undisturbed nature and untouched culture. Our whole visit was extremely well

organised by Ms Davaa Narantuya, an ITC alumna, and she provided excellent translation services when needed. Mongolia offers many opportunities, and we hope that ITC will become involved in projects, research and educational activities in a country with such a rich nomadic cultural heritage dating back to the time of Chinggis Khan.

Contact with International Centre for Geohazards (ICG) in Norway

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ICG is a centre of excellence funded by the Research Council of Norway.

Its objective is to be an international centre of expertise with regard to basic and applied research into geo-related natural hazards (geohazards) such as landslides and earthquakes. Its first aim is to develop knowledge that can help to save lives and prevent damage to infrastructure and the environment; its second is to train students and highly qualified researchers from Norway and abroad. The centre will also focus on the use of new information technology, GIS, 3D modelling and simulation. Further details can be found on the ICG website (www.geohazards.no).

The centre was established in 2003 and forms a research consortium with the following partners:

- Norwegian Geotechnical Institute (NGI) (<http://www.ngi.no/english/>)
- University of Oslo (UiO) (<http://www.uio.no/english/>)
- Norwegian University of Science and Technology (NTNU) (<http://www.ntnu.no/indexe>)
- Norwegian Seismic Array (NORSAR) (<http://www.norsar.no>)
- Geological Survey of Norway (NGU) (<http://www.ngu.no>)



ICG has a budget of around Euro 3 million per year, and 15 to 20 person-labour years per year, including visiting scientists and PhD students.

On 11 June a meeting was held in Oslo to evaluate the possibilities for collaboration between ICG and ITC. This meeting was attended by Farrokh Nadim (director ICG), Jan Ketil Rød (NTNU), Bernd Etzelmüller and Bård Romstad (UiO), and Cees van Westen (ITC).

After the discussion and presentations the participants came to the conclusion that there are many similarities between ICG and ITC in the field of geohazards. These include common interests, research with PhDs and visiting scientists, and development cooperation in the field of capacity building. NGI has also been quite active in regions similar to those of ITC.

ICG and ITC signed a Memorandum of Understanding, which may lead to cooperation in the following areas of interest, where appropriate:

- postgraduate studies in geohazards and related fields
- application of state-of-the-art GIS, remote sensing and modelling tools to natural hazards
- exchange of knowledge on disaster reduction and risk assessment
- organisation of training courses and workshops for specialists in developing countries
- establishment of European and international university networks
- decision support systems in hazard reduction policy
- geological hazards and risk assessment methodologies
- studies on providing assessment of landslide, earthquake and flood hazards
- other areas of mutual interest, as agreed by the participants.

Cooperation may come in such forms as:

- exchange visits of individual scientists, teaching staff and students
- training and education of research personnel, including joint financing of PhD candidates
- collaboration on individual research problems of mutual interest, and the study of techniques and methods
- development of contacts (both nationally and internationally) in the industrial sectors and academia.

Research cooperation with ICG is one of the aspects related to the ITC research programme Strengthening Local Authorities in Risk Management.

ICG

announcements

Symposium on Land Administration in Post-conflict Areas

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Commission 7, Cadastre and Land Management, of the International Federation of Surveyors held a symposium entitled "Land Administration in Post-conflict Areas" in the Palais des Nations, Geneva, Switzerland, from 29 to 30 April 2004. Commission 7 is chaired by Paul van der Molen, who is a visiting professor of land management and cadastre at ITC. Professor van der Molen also chaired the symposium in Geneva. The subject of the symposium is relevant in many areas throughout the world.

The causes of conflicts and violence are many - for example, ethnic envy, nationalistic tendencies, opposing interests, class conflicts, disputed frontiers, acts of expansion, or economic interests. During such conflicts people are killed or disappear, buildings and physical infrastructure are wrecked, legal frameworks are set aside, public registers are destroyed, markets cease to function, properties are confiscated, and lands are occupied.

When the conflict comes to an end, peace treaties, UN resolutions or national development plans are put in place, with the aim of restoring governance and the rule of law in all its variety. In many cases, a substantial component of the restorative process consists of (re)introducing secure land tenure, mechanisms for resolving land conflicts, land allocation, restitution, transparent land markets, land use planning, land taxation and the like.

Papers Presented

During the symposium, presentations were given on the following subjects:

- Challenges to sustainable peace: land disputes following conflict
- Strategic action planning in post-conflict societies
- Legal aspects of land administration in post-conflict areas
- Land administration in post-conflict Cambodia
- Experiences with land administration in Guatemala
- Putting registration in perspective in rural areas: the case of Afghanistan
- Land administration in post-conflict Chile
- Land administration in Kosovo before and after the war (1999)
- Land administration in post-conflict Serbia
- The creation of an immovable property registration system in Albania
- Transition of land administration in post-war Croatia
- Land administration in Bosnia and Herzegovina after the war
- Slovenian experiences: an example from a transition country.

Unfortunately a paper entitled "Land administration in Rwanda post-genocide" could not be presented, as the author was unable to attend the symposium because of visa problems.

Conclusions

Professor van der Molen concluded that land registration represented not the beginning of a reconciliation process but its end. The relationship between land reform and reconciliation was very strong, so that land reform might indeed be part of the reconciliation process. It was most likely that differing approaches would be needed in different post-conflict situations. Apart from the fact that countries differed in history, culture and attitude, post-conflict situations might themselves differ, requiring a specific policy. Land registration concepts might result in unconventional approaches. He went on to say that surveyors often failed to be involved in peace treaties. Experience had been built up on such unconventional approaches, but further research was required here.

Palais des Nations, Geneva





Professor Paul van der Molen summing up

Attention to this subject will be given in ITC's research plan on land administration, which is currently under development.

Recommendations

The relationship between land administration and land policy is relevant and should be recognised in peace treaties. Parties involved in formulating peace agreements and/or strategic action plans should embed wider

development and land policy in such plans rather than simply mention land registration as an isolated objective. Territorial land issues are a basis for conflict; there is acceptance within the international community that we need to be better prepared for this.

Workshops and reference materials have to be organised for humanitarian practitioners. FIG Commission 7 is committed to informing the United Nations on the importance of land policy and land administration in relation to peace treaties, in order to raise awareness on this issue.

Crux of the Symposium

In our view the most important conclusion is that there are basically two ways of dealing with land administration in post-conflict areas. When, at the end of the day, a land registrar writes down the name of an owner in a land register, and a land surveyor draws a boundary line on a cadastral map, it could be either the start of

prosperous economic development or the overture to a new conflict. It all depends on how wisely and sensitively the peace treaties or (interim) governmental action plans deal with the allocation of land ownership rights and access to land-related opportunities, and whether these are perceived by the people as being fair and bringing social justice.

Proceedings

Proceedings are published at www.oicrf.org and www.fig.net/commission7/index

A printed version is available; please contact Mrs Pauline van Elsland (Pauline.vanElsland@kadaster.nl).

The symposium was supported by: UN-HABITAT, FAO, Land Tenure Service, Kosovo Cadastral Agency, The Central European Land Knowledge Center (Celk Center), Budapest, Hungary, and the Netherlands Cadastre and Land Registry Agency.

UNESCO Geopark Conference in Beijing

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"Preservation of geological heritage sites needs concerted efforts by international organisations, governmental departments, academic and research institutions, as well as other social forces." These were the remarks that signalled the opening of the 1st International Conference on Geoparks, which was held from 27 to 29 June in Beijing, China.

Have you ever walked across a landscape and wondered how so many varieties of rocks and so many shapes of mountains, hills and valleys came into being? If so, welcome to the world of geoparks! On the initiative of UNESCO, a large number of countries across the world are beginning to learn about the geopark concept and have started to develop schemes for recognising and

protecting important geological sites for sustainable development.

At this first conference on geoparks, experts from eight countries were invited to explain about the establishment and management of geoparks in their home countries, and among them was Dr José Luis Palacio-Prieto from Mexico, an ITC alumnus.

Dr Richard Sliuzas and Marjan Kreijns from ITC greatly enjoyed the opening ceremony, but the large exhibition on the 40 national geological parks of China even more so. At the request of the Ministry of Land and Resources (MLR), ITC's most important partner in China, Marjan Kreijns brought her son Joost along to show him the beautiful images of the Chinese

geoparks. Geoheritage conservation is crucial if we want our children to be able to enjoy these unique geological features in the future. Their visit attracted much media attention, and the next day a picture appeared in the national English-language newspaper China Daily.



Madam Shou Jiahua of the Ministry of Land and Resources (MLR) and Joost, Marjan Kreijns' son

education news

Students Receive Double MSc Degree in Wuhan, China

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ITC and Wuhan University, China, enjoy a relationship that dates back more than 25 years (see article in ITC News 2003-4 pp 9-11). On Thursday, 24 June 2004, the partnership between the two organisations produced its first graduates when 11 students received two MSc degrees: one from ITC and one from Wuhan University. The students had spent a total of three years on their study, of which six months was spent at ITC working on their research and thesis writing. The remainder of the time was spent at the School of Urban Studies in Wuhan, where they studied subjects comparable to those of ITC's UPLA programme and also executed a second research study and thesis written in Chinese.

At the degree ceremony, which was opened by the vice-president of Wuhan University, Professor Huang Congxing, ITC was represented by Drs Sjaak Beerens, Dr Richard Sliuzas and Drs Paul Schoonackers. In total 47 students received MSc degrees

from Wuhan and 11 of these also received MSc degrees from ITC. Four of the new ITC alumni have passed the PhD entrance examinations at Wuhan University and will continue with their studies; the other seven will soon take up professional positions throughout China.

It was a unique and exciting occasion for all, marking the end of three years of dedicated work from all sides. ITC is extremely grateful for the dedicated efforts made by Professor Zhao Bing, Ms Du Ningrui, Ms Xiao Yinghui and the many other SUS staff who are committed to making this course a success, and looks forward to expanding its cooperation in both education and research activities.

As we know, China is changing rapidly and these changes are also affecting education. The duration of the Chinese MSc courses has recently been reduced to two years, requiring the two partners to modify their joint MSc degree course. A new structure is being developed that would allow

students to follow one of two options: an 18-month MSc stream leading to an ITC degree or a 24-month stream leading to a double degree. The course is scheduled to start in September 2005. Details of the content, and information on costs and application procedures can be obtained from Ms Xiao Yinghui at the School of Urban Studies, Wuhan (yhxiaoitc@126.com), or Dr Richard Sliuzas at ITC (sliuzas@itc.nl).



Awarding the degrees: 47 students received MSc degrees from Wuhan, of whom 11 also received MSc degrees from ITC



Group photograph of staff and new graduates



Professor Huang Congxing (centre), vice-president of Wuhan University

Short course on Applications of GIS and Remote Sensing to Risk Assessment for Indian Chamber of Commerce, Calcutta

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Over the period 26th April to 21st May ITC was pleased to welcome two staff members, Mr. Debanjan Bandyopadhyay and Mr. Nilanjan Paul, from the Indian Chamber of Commerce, Calcutta, for a special short course on Applications of GIS and Remote Sensing to Risk Assessment.

The course was based upon ITC's annual elective module on 'Risk Assessment' which was coordinated by Dr. Cees van Westen. In addition three days personalised training was provided on specific industrial risk assessment scenarios.

This collaboration took place under the "Environmental Risk Reporting and Information Systems (ERRIS)" project which is part of the Corporate Social Responsibility (CSR) Initiative for the eastern region of India. The project is funded by the European Commission under the Economic-Cross Cultural Program.

Every year, industrial accidents take their toll on business and communities - in terms of lives, injury to workers and financial resources. The most telling example of such an accident has been the Bhopal gas tragedy of 1984, which killed or maimed over 20,000 people. There also been numerous other industrial emergencies across the world in which the death toll may have been as high as in Bhopal if the areas where the accidents took place were not sparsely populated.

Hazardous industries that are primarily responsible for such incidents inherently involve reactors, conduits and storage vessels in which hazardous substances or chemicals are handled at high temperatures or pressure. Accidents in such units, have been caused either by material failure (such as a crack in a storage vessel), operational mistakes (such as rising of pressure, temperature or flow-rate beyond critical limits), or external perturbation (such as damage caused by a projectile).

The project envisages the setting up of a spatial management information system for dealing with industrial emergencies at the towns of Haldia and Durgapur in West Bengal, India and creating the supporting framework to enable proper functioning of the system.

Further collaboration is planned, both in terms of further training courses at ITC and short advisory missions to India.

An expanded (three-month) short course on 'GIS and Remote Sensing for Natural Hazard and Risk Assessment' is scheduled to commence on 14 February 2005. Full details can be found on ITC's website under:
http://www.itc.nl/education/programme_levels/short_courses/2005/004.asp



Dr Cees van Westen, Mr. Nilanjan Paul, Mr. Debanjan Bandyopadhyay and Mr. John Horn during the closing of training course

Refresher Course on the Potential of Geoinformatics to Combat Drought, Desertification and Food Insecurity in Southeast Africa

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In recent decades the number of natural disasters has increased, and vulnerability is rising worldwide. In addition to the human tragedy, disasters hamper economic growth. Over the past decades, developing countries have suffered more than 90% of all fatalities and have also been burdened by a disproportionate share of the costs because of their lower GDP, limited reserves and underdeveloped insurance industry, among other reasons.

Drought, often leading to famine, is a severe disaster affecting nearly all parts of Africa. Therefore, NUFFIC allocated funding for two ITC refresher courses, which were given in Ethiopia in October 2003 and in Mozambique in June 2004 respectively. These courses addressed the problem of natural disasters, and particularly drought, from a geo-information perspective, aiming at capacity building in regional institutions concerned with agriculture, resource management and rural development. NUFFIC also granted funds for a three-week short course on the same topic, this to be held at ITC in April 2005.

The two-week refresher course in Mozambique was held from 7-8 June 2004 at the premises of SETSAN, a governmental organisation in charge of food security in Mozambique. Participants were ITC alumni, and SETSAN and FAO staff. Lectures were given by staff from ITC (Norman Kerle, Wietske Bijker, Louise van Leeuwen), from the SADC-RRSU early warning unit based in Harare (Elijah Mukhala, Tamuka Magadzire, Dorothy Nyamhanza, Tinashe Mandaza) and from FAO (France Lamy, Patrizia Monteduro). Some of the participants stayed for an extra

week to attend a course on the tools developed by FAO for drought monitoring and early warning.

A warm welcome was extended by Mr Raul Varela of SETSAN, host of the course, who then gave the floor to the Permanent Secretary of the Ministry of Agriculture for the opening speech. After an introduction to the course, and an inventory of the experience of course participants in related fields and their expectations of the course, an overview of current international and continental disaster management efforts set the stage. This was followed by a lecture on the main components of remote sensing-based monitoring systems. Together we took a look at the different types and aspects of drought and how these could be monitored directly or indirectly using remote sensing. Regional practice was illustrated by the SADC/RRSU regional disaster management strategy, providing vivid examples of what can be done regionally in the case of volcanic eruptions, as well as for monitoring drought. Hands-on experience with imagery from Mozambique and software developed by SADC/RRSU made it all the more tangible.

Many drought monitoring and early warning systems use crop models based on remote sensing data, weather data, etc. to predict yields. Therefore, both empirical and explanatory models passed across the stage. A lecture on the use of radar for crop monitoring complemented the section on crop yield.

Since data availability and data handling are important issues, we looked at available data sets, new sensor developments, data infrastructure and data sharing issues, both in general and with specific reference to the SADC region. New techniques for field data capturing, using a handheld GPS with IPAQ computer, were practised on the SETSAN premises and during the excursion. The excursion took us to an area northwest of Maputo, which had been prone to both drought and flooding.

The second week started off by examining with food security aspects: the analytical framework for food security including the socio-economic context with emphasis on vulnerability and coping strategies, availability versus needs. The role of GIS/Remote sensing in food security information



Participants and some of the lecturers of the refresher course in the garden behind the SETSAN building

systems, identification of areas with high risk of food insecurity, areas with surplus, analysis of anomalies and trends as well as immediate problem areas, was covered with lectures and practicals using WINDISP software and series of NDVI images from NOAA-AVHRR. Using these images, graphs of vegetation development over time were created, and linked to crop calendars. Maximum and anomaly images were calculated, facilitating the analysis of the history of an anomaly area, to be used in detection of high risk areas for early warning. By the end of the second week, a small group of 'experts' amongst the

participants had calculated biomass maps. SADC/RRSU gave presentations on their currently implemented Early Warning information system, FAO staff presented some tools to disseminate information to decision makers, and gave a presentation on data management, standardisation and metadata. One morning was spent on a role play and discussions on data sharing and data quality. The week was concluded with a presentation of other monitoring products such as drought risk maps, the start and length of the growing season, grazing capacity and a bioclimatic zoning maps.

The two-week course was intense and well appreciated. Apart from refreshing their GIS and remote sensing knowledge and learning more about the use of geo-information science to mitigate natural disasters, participants appreciated the networking possibilities, both with former classmates as well as with professionals from SADC and FAO. To quote one participant's evaluation form: "Please keep it up and organise more courses in future."

If you are interested in following a similar course, please take a look at the description of the short course Remote Sensing-based Monitoring of Continuous Processes and Discrete Events, with Focus on Vegetation and Disaster Applications that appears on the ITC web pages (www.itc.nl/education/shortcourses.aspx) and the NFP website (www.nuffic.nl/nfp).



Practising with GPS and mobile GIS

Planning and Coordination for NRM in the Province of Overijssel

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At the end of their specialisation modules, participants of the specialisation Planning and Coordination for NRM undertook a study tour of the Province of Overijssel. The aim of the tour was to appreciate elements of regional planning in the Netherlands, with a focus on the rural areas.

At Provincial House in Zwolle, officials gave introductory talks on the regional planning and the provincial spatial plan, as well as the "recon-

struction" of the rural areas. Rural areas in the Netherlands are presently undergoing reconstruction as a response to the shift from intensive livestock agriculture. These presentations were followed by lively discussions, where representatives of the Province were interrogated by ITC course participants regarding spatial planning processes at provincial level, the involvement of the various stakeholders, and the use of GIS in the provincial planning efforts. Participants were quite surprised to

hear that such use was relatively modest.

In the afternoon the participants paid a visit to the farm of Mr and Mrs Brunninkhuis, which is located in Springendaal, Hezingen, in the middle of an area of high natural value. Ancestors of the Brunninkhuis family started farming in the area over 400 years ago. About 10 years ago, the farmer and his wife decided to give up intensive livestock agriculture and convert the farm into a recreation

and camping site. The Province assisted them with the various procedures necessary to comply with the land use regulations.

Participants could appreciate the successful combination of their occupation with concern for a sensitive nature area, and were impressed by the resilience of the couple in responding to the less favourable circumstances for agriculture by adapting their activities. Issues that stimulated further discussion were the future role of agriculture and food security in the Netherlands and the private and public resources required to make these changes possible.

At the end of the day, participants had a somewhat better insight into spatial planning processes and had learned about ways of reconciling possibly conflicting land uses in the Netherlands.

Some student reactions:

It was very good to see how the Province of Overijssel and farmers are jointly shaping the future of agriculture in the Netherlands. The level of collaboration and consultation is very high, making the whole process a success. Change is a very difficult thing to handle. Overijssel should give farmers like Jan and Marjan, who have voluntarily decided to play a part in the reconstruction project, a pat on the back. Issues being raised at global level (WTO) are very real, and it is good to plan ahead.
(Student from Zambia)

The desire and confidence shown by Overijssel in planning for society's advantage is impressive. Its ability to link central government and society was demonstrated during our visit in the afternoon. We could see in practice what had been related in the presentations. The province serves as a good example when it comes to turning problems into opportunities for collaborating with society. For example, animal disease and the effects of manure on water quality have become an opportunity to develop tourism.
(Student from Ethiopia)

The study tour was really interesting. However, I do have one concern. If this tendency leads to a change from agricultural activities to tourist activities, this country will surely have to import the majority of its food - with the implication that the developing countries that provide the Netherlands with food would be forced to extend their agricultural land. This would put greater pressure on the natural forest and cause major losses of natural resources and biodiversity in these countries. I do not know whether the authorities have already thought about these issues; if so, what action would they take to avoid this situation?
(Student from Ecuador)

Another important lesson I learned was that putting plans into effect requires strong determination. In times gone by, the land was labelled for farming purposes but now the reverse is being done. I also admire Mr Jan and Mrs Marian for being models in responding to change. I also learned that all the staff we met realised what the consequences of their effort could be in the future.
(Student from Ethiopia)



Jan Eleveld (civil servant, Province of Overijssel) explaining the provincial land use zoning plan



Farmer Jan Brunninkhuis and ITC student Santoso Edy Widayat Anggoro exchanging Dutch shag and Indonesian kretek

GIM Students Participate in International Seminar

Christiaan Lemmen

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ITC's Geo-Information Management (GIM) programme focuses on professionals working in organisations where large volumes of geo-information are produced, used and exchanged. Such professionals need not only GIS knowledge and expertise but also appropriate management skills to make these data available, affordable and accessible to different application fields.

The programme is organised in modules. GIM module 12, held in June 2004, dealt with spatial data infrastructure development, and this year included a visit to Austria and Germany. In Germany the Bayerisches Landesvermessungsamt (Bavarian Survey Department) was the port of call. A lively discussion between the GIM students and top management and experts of this organisation covered a range of topics, including users of products and services, user requirements, spatial data infrastructure developments, quality management, pricing policy, methodologies, ICT, GPS services, impressions of the latest developments, marketing and customer satisfaction. The atmosphere was highly positive, with both sides appreciating the open and transparent debate. Moreover, the information provided proved very useful during the module.

Commission 7, Cadastre and Land Management, of the International Federation of Surveyors (FIG) held an international seminar on e-Land Administration from 2 to 4 June 2004 in Innsbruck, Austria. The GIM students participated in this seminar and contributed to the discussions. It also turned out to be a good opportunity for networking, as many contacts

were established between the ITC students and professionals in this area.

Cadastral data as part of geographical information has developed into a new tool for crucial political, economic and legal decision making. But there is still a lack of awareness concerning the importance of digital cadastral data. e-Government has become an issue in all fields of public administration, requiring transformation of background procedures into models offering the client simple solutions as a product of differing content on various levels of quality yet without evidence of unique standards. e-Land Administration is a major part of e-Government and may be considered a strong fundament for legal, administrative and technical structures for an entire public administration. Land administration data are indicators for a wide range of related information and are essential

for creating value-added data for e-Government.

Ms Gerda Schennach organised the symposium on behalf of FIG, in close cooperation with the Austrian Society for Surveying and Geoinformation (OVG) and the Austrian Federal Office for Metrology and Surveying (BEV). Thanks to the efforts of Ms Schennach, we were provided with accommodation at the Olympic Hotel in Innsbruck.

The GIM group was pleased to participate, to attend the social events, to enjoy the hospitality, to learn from SDI developments in many countries, and to witness the performance of Professor Paul van der Molen (chair of FIG Commission 7) in an environment outside ITC. (Further details and conclusions can be found at www.fig.net; look for Commission 7.)



Commission 7, Cadastre and Land Management, of the International Federation of Surveyors (FIG) held an international seminar on e-Land Administration; ITC's GIM students participated in this seminar and contributed to the discussions

Building and Publishing a National Basemap Using the ESRI Production Line Tool Set (PLTS)

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In April 2004 ITC organised the three-week short course Building and Publishing a National Basemap using PLTS, which was attended by 11 participants. The course was open to both regular ITC students and external parties, and included participants from VIDAGIS in Vietnam and Buraidah Municipality in Saudi Arabia, as well as a group of IIRS students.

PLTS (production line tool set) has been developed by ESRI to provide national mapping agencies with an application that can be successfully employed in high-volume production environments. PLTS operates on top of ArcGIS and provides tools for data-base creation and maintenance, and the creation of high-quality output. The functionality includes feature-driven validation and symbolisation, batch and visual quality assurance, and customisable cartographic and map series generation.



ITC staff and participants of the short course Building and Publishing a National Basemap Using PLTS

This course, part of a lasting relationship between ESRI and ITC, was based on a similar training course offered by ESRI in Redlands (USA). Ellen-Wien Augustijn was present in Redlands the first time ESRI offered the course and was also responsible for the course given at ITC. Mr Javier

Morales and Ms Jantien Stoter provided special lectures.

Although no immediate repeat has yet been scheduled, the course may be given again as a special course, if sufficient interest is shown.

Fellowships for courses at CLAS, Bolivia

Starting in 2005, in connection with the programme of Decentralisation of Education, NUFFIC will offer fellowships to study on the Professional Masters courses at CLAS (within the Universidad Mayor San Simon, Cochabamba, Bolivia). These courses have been set up in cooperation with ITC under the Netherlands funded CLAS project.

The courses available are:

- Water Resource Survey
- Irrigation and Drainage
- Soil information for Natural Resource Management

The fellowships will be available not

only to Bolivians, but to all other nationals eligible for Netherlands Fellowships, although as the courses are run in Spanish, interest is expected mainly from candidates in South and Central America.

To apply for the fellowship, interested candidates need to first send a course application form to ITC (by 1st September).

If accepted on to the course, the candidate then needs to apply for the fellowship via the Netherlands Embassy in their own country (by 1 October).

Information on the courses can be found on the CLAS website at <http://www.clas.umss.edu.bo> alternatively, you may contact Ronald Vargas at CLAS. E-mail: vargas@clas.umss.edu.bo or John Horn at ITC. E-mail horn@itc.nl

Information on the Netherlands Fellowship Programme can be found on the NUFFIC website at: <http://www.nuffic.nl/nfp-npt>

New Specialisation on Biodiversity Conservation in NRM Programme

Jan de Leeuw

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ITC is continuously upgrading its curriculum. In 2003 we reconsidered the content of the Rural Land Ecology (RLE) specialisation in the NRM programme. As this specialisation was increasingly attracting participants with an interest and background in the management of natural ecosystems and biodiversity conservation, it was decided to modify the title and content to better satisfy the demand for

professionals capable of applying spatial information in the field of biodiversity conservation. It was decided to change the title of the specialisation to Geo-information for Biodiversity Conservation (BIOCON). The specialisation will focus on techniques to acquire and analyse spatial information for the management of natural ecosystems and biological diversity.

More information on the BIOCON specialisation, which will be offered from 2005 onwards, can be obtained by contacting the specialisation adviser Eduard Westinga (westinga@itc.nl).

project news

Geoinformation Applications for Off-Reserve Tree Management in Ghana

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Martien Gelens

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While the Ghanaian Forestry Commission regularly monitors the condition of the forest reserves under its authority, relatively little is known about the quantity and condition of the tree resources outside these reserves (Figure 1). An inventory of the off-reserve tree resources has been made only once, in 1995, and then only of timber trees. This is partly due to the highly dynamic, scattered nature of these resources and partly due to the fact that conventional inventories are costly and labour-intensive.



However, with the ongoing intensive logging and gradual degradation of many forest reserves, these so-called off-reserve tree resources are becoming increasingly important as a source of wood products (for local commu-



FIGURE 1 Off-reserve tree resources in annual cropland

nities as well as the commercial sector) and for biodiversity conservation (Figure 2).

With the establishment of protected forest reserves in the first half of the 20th century, the pressure on off-reserve areas has increased. Discussions with the Forestry Commission reveal that agricultural intensification, restricted forest reserve accessibility for



FIGURE 2 Local use of off-reserve trees: mortars for pounding grain and plantain

local communities, increasing demand from the commercial sector for timber to a level beyond the annual allowable cut from the forest reserves, and the absence of effective protection mechanisms have all contributed to a situation in which the degradation of off-reserve tree resources is now taking place at a prohibitive rate. Importantly, this increasing degradation underscores the growing importance of these off-reserve tree resources, making it imperative to know more about their occurrence, distribution, functions and management, in order to sustainably maintain or even enlarge such resources.

In this context the Ghanaian traditional land and tree tenure system is not the most favourable when it comes to protecting trees on farmlands. In this system revenues coming from timber exploitation go exclusively to the local chiefs or stools and none to the individual farmer who tends the land and the trees on it. The situation is further aggravated by the fact that insufficient compensation is paid to farmers for damage suffered on removal of timber trees from their land by logging companies.

With the aim of preventing or reducing damage and losses, farmers illegally remove or kill potentially harvestable specimens of timber trees in particular, and/or remove seedlings, saplings and trees well before they reach harvestable size (Figure 3). During a recent field visit by the authors, dead ring-barked or partially burned trees were frequently seen, especially in annual cropland. From interviews with farmers it emerged that only those trees that have an explicit function in the farming system or in rural livelihoods are allowed to grow to sizeable dimensions, which implies that the function of a tree is very much the key to its occurrence in farmlands. This means that the in-

volvement of local communities is crucial, and information on the uses and functions of trees in rural livelihoods essential, to ensure the proper protection and management of off-reserve tree resources, and the halting and even reversal of their degradation.

Some studies have been carried out on the general role of trees in rural livelihoods, but relatively little information is available on the specific uses and functions of the various tree species, their place or role in specific land use systems, and (the mechanisms affecting) their spatial distribution - and even less on the implications of all this for their conservation and management.

The Forestry Commission recognises the increasing importance of the off-reserve tree resources and intends to improve their use and management, but lacks the funds, methods and tools to regularly monitor the woody tree stands outside the boundaries of the forest reserves or study their role in rural livelihoods. Consequently the absence of appropriate (spatial) information on off-reserve tree resources in terms of quantity, functions, distri-

bution and dynamics hampers the development of management plans.

The GORTMAN project (Geoinformation Applications for Off-Reserve Tree Management) aims to contribute to the above-mentioned efforts to improve off-reserve tree management by the Ghanaian Forestry Commission. More specifically, the project aims to develop and test methods and tools focusing on the collection and analysis of especially spatial data (of both a biophysical and a socio-economic nature) on off-reserve tree resource conditions and current and past use/management practices. This will ultimately lead to the development of scenarios for improved land use. Within this context the project is in the process of making a detailed inventory of the present situation, assessing the productive potential of the land and exploring various options for "change", including alternative farming systems and incentive mechanisms to enhance stakeholder collaboration, such as income generation through NTFP. Furthermore, possibilities to extend the proposed national certification scheme into the off-reserve areas will be explored.

A GIS will be used to visualise and integrate spatial data on the current conditions of the remaining off-reserve tree resources in terms of quantity and diversity (including NTFPs), other aspects related to the biophysical potential of the land, and the needs and aspirations of local stakeholders. This will lead to the identification of zones based on current quality or future potential, for which different options for a more sustained type of use/management will be recommended. The strength of the project lies in its spatial integration of biophysical as well as socio-economic aspects.



FIGURE 3 Illegal removal of a tree by farmers

The project is strongly connected with the Forestry Commission and its outputs will be incorporated in the national forest sector information system that is currently being established at the Forestry Commission's headquarters in Accra.

The research is carried out in Ghana's so-called high forest zone, in Goaso Forest District, Brong Ahafo Region (Figure 4), where off-reserve tree resources occur mainly as individual trees scattered in or around agricultural fields, as shade trees on cacao plantations, or as small groups of trees in older fallow systems. Large parts of the area have been con-

verted into cacao plantations which, for a long time, were considered as a driving force for improving the national economy. Fields of half a hectare on average, mainly with subsistence crops such as plantain, cassava and maize, are scattered in between these plantations. Remnants of intact natural forests are scarce, but several forest reserves (in various stages of exploitation/degradation) are located in the area.

The project is carried out under the auspices of the Tropenbos Ghana Programme, with the cooperating bodies being ITC, the Netherlands (Figure 5), the University of Ghana (UG), the Resource Management and

Support Centre of the Forestry Commission in Ghana (RMSC), and the University of Freiburg, Germany. A major component of the project is knowledge, skills and technology transfer and related capacity building through informal on-the-job training, as well as more formal training and education provided to relevant institutes/organisations at various (district, national) levels.

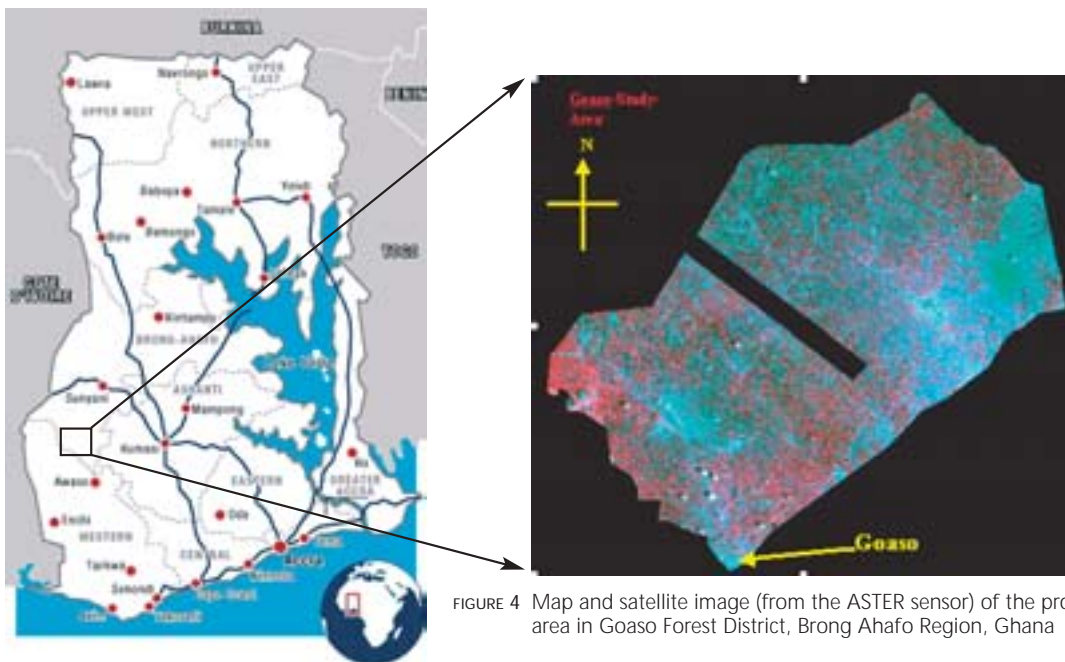


FIGURE 4 Map and satellite image (from the ASTER sensor) of the project area in Goaso Forest District, Brong Ahafo Region, Ghana



FIGURE 5 Field data collection by ITC staff and students and Forestry Commission

life after itc

Messages from Alumni

Janneke Kalf

alumni@itc.nl

In 2002 ITC started offering its alumni a free lifelong alumni e-mail account in order to stimulate communication between fellow course participants and to keep them informed about the latest activities and developments at ITC. Since then 1,200 e-mail addresses have been distributed. Since December 2002, students leaving ITC - and so becoming alumni - have been given the option of keeping a free e-mail address at ITC. Those who graduated from ITC before December 2002 can apply for an alumni e-mail account via Internet (www.itc.nl/alumni).

Together with their applications, many alumni have sent messages addressed to fellow alumni, students, ITC staff or ITC in general. These messages will soon be posted on our alumni web pages but below is a foretaste.

• **Mohammed El Mahdi Siddig ABDEL RAHMAN**, Sudan
mabadelrahman@alumni.itc.nl
EREG.3-AG, 2002

I like to share in all activities, at ITC and all over the world, related to earth resources exploration, evaluation and management using remote sensing and geological, geostatistical and geophysical sciences. Further, I enjoy all forms of sharing and communication, such as refresher courses, workshops and exchanging ideas with ITC staff, students and alumni.

• **Haleem ABDUL**, Pakistan
abdul@alumni.itc.nl
GIM.3, 2002

I think that I was the last student from Pakistan who was offered a scholarship to study at ITC, as since then I haven't heard of anybody from

Pakistan being granted a scholarship to study at ITC. I did my GIM Professional Master's degree in 2002. Although I have tried to apply GIS in my field (project management, planning and development), I haven't had any opportunity to carry out progressive work since then. It is difficult to apply GIS in our routine work because of financial constraints and the shortage of personnel trained in GIS. But now GIS is being rapidly introduced in our country, and many of the foreign aid projects and multinational companies have started work in this field. I am now planning to work with one such organisation and I have got leave without pay from my office for two years to refresh my GIS knowledge.

• **Asmat ALI**, Pakistan
ali00490@alumni.itc.nl
GFM.3, 1998

I would like to be in contact after I have received my ITC alumni account. I thank you very much for now.

• **Ermias AYNEKULU**, Ethiopia
aynekulubetemariam@alumni.itc.nl
EREG.2, 2003

I was quite impressed by the international evening, which reminds me of principal components analysis (PCA). The ITC auditorium was like PCA1, in which culture from the different bands, in this case at least 20 countries, came together to design and print out what the world is all about in a very short time. The Philippine finger was the tip of the night, which stretched to touch the ceiling, while the strong Ugandan leg hit the ITC auditorium floor to the maximum. This is what the world is all about. Thank you ITC for organising such events that stay long in the memory.

• **Jiban B. BAJRACHARYA**, Nepal
bajracharya13205@alumni.itc.nl
ENG.3, 1994

The time I spent at ITC was unforgettable, and with the help of this alumni interaction programme we will be able to share our experiences and see old pals again in action. It's always very difficult to catch up with the advances in new technology. I am sure this alumni interaction will keep us up to date on new developments in our field.

• **Ralph BELAPUNA**, Papua New Guinea
Belapuna01011@alumni.itc.nl
GIR.3, 1998

I am currently working for a mineral exploration company in Morobe Province, Papua New Guinea (PNG). After completing my studies at ITC in August 1998, I returned to PNG and worked for a while for the PNG Department of Agriculture and Livestock. Then I moved on to work for Morobe Consolidated Goldfields Ltd (MCG), who are exploring for minerals in Morobe Province. After



three and a half years with MCG, I moved on to work as a database analyst for Chevron Niugini Ltd for a year and a half. Last October, I moved back to MCG and am currently working there. My training at ITC has honestly enabled me to carry out my GIS and database management tasks very effectively. To all GIR, GIC and GIU intakes in 1997, wherever you are, hope all is going well for you.

• **Jane BEMIGISHA, Uganda**
bemigisha00885@alumni.itc.nl
ESM.2, 1998

I commend the effort ITC puts into maintaining links with us the alumni, which I have found very useful and a motivation in my academic and career development. I'm very proud to be part of the linkage.

• **Prisca CHAPUIS, India**
Chapuis@alumni.itc.nl
MSc, 2002

Hello my dear friends,
 Though we are far away, let's be together. The world is becoming smaller and smaller.

• **Andrew Kangwa CHILUFYA, Zambia**
chilufya@alumni.itc.nl
MSc, 2003

Geographical information technology is just beginning to be appreciated on a wide scale in Zambia. Issues of ICT infrastructure and training have caught the attention of government, the rationale being that ICT contributes a great deal to quick decision making. Any ideas to support my government's initiative are welcome. Please share!



• **Thirumalaivasan DEVARAJAN, India**
devarajan09187@alumni.itc.nl
Special Course GIS, 1997

I am very glad that ITC is providing such a valuable service to the alumni, enabling them to keep in touch with this great Institute. I sincerely believe that it will be of immense value to many alumni, as they will be able to keep themselves updated on the latest developments in the fields of excellence at ITC. Thank you!

• **Itai DHLIWAYO, United Kingdom**
dhliwayo04064@alumni.itc.nl
Urban Planning, 2001

I retired as chairman and president of Certeza Surveying and Aerophoto Systems Inc., a Philippine aerial survey firm, in March 2003, after 32 years of service. I am now pursuing a PhD programme in mathematics at the University of the Philippines, which I started in June 2003. My professor, president of Certeza, is also an ITC alumnus, Reynaldo R. Adorador by the name, MSc in photogrammetry from ITC Enschede.

• **L. LAUD, Philippines**
Laud01825@alumni.itc.nl
FRD.3, 1999

Hi to the ITC alumni management. It's been quite sometime since I communicated with my Alma Mater. Anyway, I wish to thank the group for making this website available. At least we can communicate. I do miss Holland and I'd really love to go back again to that beautiful place. I've missed a lot of those places I visited, the people, and the friends I met. Thanks a lot to the NFP and the Dutch government for giving me the opportunity to study at ITC. I'm proud to say that it has really helped my career. It's already more than a year since I was appointed by our organisation, the DENR, to a higher position. I was given an opportunity to handle the Forest Resources Development Division under the umbrella of Forest Management Services - DENR region 6, Iloilo City. So this is it

for now. I should like to thank ITC for the technology, the knowledge I've acquired. It has really helped me a lot. Lastly, I hope and pray that I will be promoted someday ... God bless, and I hope to return to ITC soon. Regards to my DoS, Robert Albricht of Forestry.

• **M. MAANGO Samuel Chembe, Zambia**
maango01595@alumni.itc.nl
ESM.2, 2000

Dear Editor,
 I graduated from ITC in April 2000. I was in the Geological Survey Department and majored in environmental systems analysis and monitoring (ESM.2). Truly, the knowledge I acquired from ITC has proved to be an asset in my life, scientifically, professionally and socially. Scientifically and professionally, I realised that my analytical abilities had been greatly enhanced. I can clearly see how to enhance the lives of different communities through my improved analytical abilities. Coincidentally, I have been involved in projects that deal with the environment, and natural resources management and development. To my surprise (if I can put it this way), most of my contributions to project operations have been highly appreciated. I have since been linked to various other natural resources-based projects. All in all, the tool (knowledge) that ITC handed to me has proved to be a success in enhancing the lives of people in the developing world. My thanks to ITC!

• **M.G.C. MANDENG Gweth, Cameroon**
Mandeng01059@alumni.itc.nl
Applied Geomorphology, 1993
 Since I left ITC in 1993, this higher education institute has always kept in touch with the alumni, by informing them of changes at ITC, by registering in news magazines such as GIM International, by sending them various brochures. But I am sorry that as a Cameroonian there is no chance for me to follow a short course, since my

country is no longer eligible for Netherlands fellowships. Thank you for keeping us up to date with the changes in IT.

• **Esther Ngina MANDI, Kenya**

mandi11437@alumni.itc.nl

CAR.4, 1991

ITC Lecture Notes on Database Management Systems by Dr Rolf de By helped me to analyse food aid distribution. THANK YOU Dr Rolf de By!

• **R.S.M. MSHALI, Malawi**

Mineral Exploration, 1984

I was working for the Geological Survey of Malawi as a government geologist from 1981 to 2001 before joining Mzuzu University as a lecturer in earth sciences/physical geography. While at the Geological Survey of Malawi, I served in various capacities, namely as mineral exploration geologist, senior geologist (exploration), principal geologist (industrial mineral research and development) and assistant chief geologist (deputy director) responsible for planning and field logistics. All this has been achieved based on the knowledge originally acquired from ITC Delft and Delft Technical University, where I did post-graduate research in coal petrology and coal mining. Currently, I am teaching geological aspects to geography and forestry students, remote sensing, aspects of GIS applied to natural resources evaluation and watershed management. I have actually put all the skills and knowledge from ITC, as well as their applications in geosciences while I was a geologist at the national geological survey, to optimum use in my present job as a lecturer. I hope ITC will keep me posted on recent developments with regard to refresher courses in line with the professional fields indicated.

• **S.M. MSUYA, Tanzania**

Msuya01717@alumni.itc.nl

GIR.3, 1999

Since I left ITC I have been working in the real world, using the technology

(especially GIS) I gained at ITC, and I certainly do not regret having been one of ITC's students. All my work has been good and received good remarks. Keep it up! I am now working for a Swiss agency, trying to map my district with the aid of MapInfo. However, all the basic knowledge I gained from ITC has been useful. I am trying to support the use of ILWIS in my programme.

• **Douglas M. MUSIEGA, Kenya/Japan**

musiega14522@alumni.itc.nl

CAR 3 and IGP 2, 1996

Hello ITC,

My name is Douglas Musiega, from Kenya. I was an ITC student for the 1995-96 period and followed the IGP.2 course of the Geoinformatics Department then. I remember the great time I had both as a student of cartography under Corné van Elzakker, Conny Blok, the late Allan Brown, and of course Richard Knippers and Professor Stein, not forgetting Jeroen van den Worm. I was later supervised by Chris Paresi for the MSc at ITC. I was glad to graduate with an ITC MSc; it prepared me for the challenges of being employed as a lecturer. However, the good news came, and the greatest value of the ITC diploma was realised, when I won a scholarship to come to Japan to enrol for a PhD course. Most other MSc degree holders from other countries were asked to re-do the MSc degree in Japan, but the ITC MSc was considered the right standard for pursuing a PhD course in Japan. It was indeed held in high esteem by the interview panel. The ITC diploma saved me time and made me proud that I had had the privilege to study at ITC. Since that time I have indeed realised the impact ITC has had on the world, and the revered name it has made for itself is indeed the source of our pride as alumni.

I pass my best regards to current ITC students from Africa. I wish them great success in the completion of

their courses. Africa needs your skills when you have finished. And we are proud of your achievements so far. And to NFP, we are ever grateful for the scholarships. Thanks ITC!

• **Charles M. MURIUKI, Kenya**

muriuki15409@alumni.itc.nl

GFM.4, 1997

Hallo,

I always get electrified when I read any bit of information from ITC. Besides reading about the latest new technology in my line of GIS, I also get excited to see what is happening at ITC itself, to the ever-friendly staff, and in Holland in general, with its beautiful climate. And NOW here's the chance to reach my long-lost loving friends with whom I associated. A while ago I gave up hope of ever talking to them or hearing from them again. Let's all rise up and share our views and report on the progress we have made so far and what we are intending to do. THANKS!



• **Odetha Vianney NYARUBAJI**

(Karamaga), Tanzania

Nyarubaji00971@alumni.itc.nl

GIS for Cadastral Applications, 1999
I am very happy with the creation of the alumni mailbox and discussion groups. This shows how ITC cares for her students all over the world and makes them utilise and update the knowledge acquired. Please keep it up; we will cooperate fully with all your efforts. I will write more next time!

• **Aaron PHIRI, Zambia**

phiri03444@alumni.itc.nl

GFM.4, 2000

I had an opportunity to take part in the first-ever Internet development

project in my department. The department used a group of only five of our own staff, including me, to manage this site. The knowledge I gained at ITC on website development was such a good investment for me and my department. Our website address is www.zamstats.gov.zm. My thanks go to ITC and the entire staff, Ms Sun and Mr Lemmens and all the lecturers in GFM.4. Your labour has not been in vain but has affected the entire world for the better. Regards.

• **Virupakshaiah PRAKASH, India**
prakash12014@alumni.itc.nl
Postgraduate, 1992

It instilled thinking capabilities. I followed the postgraduate diploma course in water resource survey during the period 1991-1992 under the NFP. The thinking capabilities and confidence gained during my one-year stay at ITC has helped me in many ways. The knowledge is being used in my day-to-day work as the director of the Drought Monitoring Cell, Government of Karnataka.

• **Lilia RAFLORES, Philippines**
raflores07604@alumni.itc.nl
IS.1, 1987

The Netherlands Fellows Foundation of the Philippines, Inc. (NFFPI), an association of graduates of Netherlands training courses, celebrated its 25th anniversary in May 2003. A congress with the theme "25 years of Dutch-Filipino educational cooperation: sharing of best practices" was held at the Bayview Hotel, Manila, from 29 to 30 May 2003 to celebrate the occasion. Despite heavy rains, the congress was well attended. The ambassador of the Netherlands to the Philippines, Ambassador Theo Arnold, was the guest speaker. One of the highlights of the occasion was the Balik Holland Raffle, where a ticket for a round trip to Holland was awarded to the lucky winner.

• **Rodolfo SALAZAR, Ecuador**
salazar03087@alumni.itc.nl
GIM.2, 2001

I was the CLIRSEN director heading research on natural resources and the environment. We have been talking to ITC about signing an agreement for cooperation in Ecuador and the Andean Region because of the strategic position of our country. I hope it can be the starting point for developing further research cooperation and projects involving remote sensing, GIS, natural resources and the environment. We are also developing the national clearinghouse for national natural resources (see www.clirson.com), then a clearinghouse as part of the NSDI. I think the introduction of the new ITC is very difficult, and is hard for many current staff managers to understand. Considerable effort must be made, but I think that is our goal as ITC alumni.

• **Swarna Kumari SENEVIRATNE, Sri Lanka**
seneviratne08750@alumni.itc.nl
Technologist Cart., 1989

I thank you so much because you have allowed me to use the ITC alumni web page and sent me a reply to my letter. I am still reminded of my ITC life in 1988/89 in Holland. It was a tough course, but I followed it successfully and received a certificate. This certificate is very useful to me when I apply for promotion and also for my future career. I am very keen to follow a GIS and remote sensing course. If you are conducting any short training courses, please send me the details through my e-mail.



• **Gwendoline NAKAMBA SEKE, Zambia**
seke@alumni.itc.nl
WREM.3, 2002

After graduating from ITC with a PM in WREM, specialising in GREM, I went back home to Zambia. I was immediately transferred to run the whole province as provincial water officer. I have several engineers and other support staff working under me. The knowledge acquired from ITC in GIS and remote sensing as applied to water resource management has helped me to handle my duties with confidence. I would like to say thanks to ITC and its staff, especially the WREM group, for everything. I still want to pursue an MSc at the same Institute as it is very relevant to my field of operations. I hope I get that chance soon. Long live ITC and God bless! Your work and input, as well as your impact on my life, have not been in vain.

• **Rachapudi SIVA KUMAR, India**
siva10492@alumni.itc.nl
PHM.3, 1994

I have been in touch since I left and ITC has shown keen interest in our activities, especially in building our national spatial data infrastructure.

• **Bitew Bezu TILAYE, Ethiopia**
tilaye02558@alumni.itc.nl
SIS, 2001

It is almost three years since I graduated from ITC. Just after graduation I came back to my home country of Ethiopia and immediately joined my present organisation, the Bureau of Finance and Economic Development (BoFED). Since the date of joining I have been working on an information system, as team leader for one year, as programmer for one year and as department head for nine months. My knowledge from ITC has helped me a lot in working with our new information system, which is called the Integrated Planning Information System (IPIS). This is an automated system that replaces all the manual

work in the planning, budgeting, monitoring and evaluation tasks of BoFED. At this moment we are converting a huge amount of paper/analogue format data of previous years to digital format in order to start the actual automated service. At this time I am following short-term training courses related to computer programming for three months in Mumbai, India. Mumbai (Bombay) is a city with a population of about 20 million. It's surprising that Bombay is a city where everything happens peacefully, not with any of the violations that I have seen in other continents that I have visited in my lifetime. Therefore, I would like to have more news and training courses related to computer science.

• **Victor Francis URBAN, Australia**
urban03331@alumni.itc.nl
BSc, 1962

Although retired now, I would like to hear from 1961 and 1962 ITC graduates.

• **Epaphrodite UTABAJIMANA, Rwanda**
utabajimana03378@alumni.itc.nl
GIS, 2001

What I'd like to say is that I have benefited much from my ITC course. I

now have a good job because of the ITC course taken. My special thanks to ITC's lecturers and to the Dutch government, which guaranteed me a scholarship. I plan to come back to ITC for further studies, and count on giving some sort of contribution to ITC and also to all alumni. Thank you for having made this mailbox facility available.

• **Cris VEIGA, Brazil**
veiga06919@alumni.itc.nl
Urban Survey, 1989

My stay at ITC, in two different periods, 1985/86 and 1987/89, is full of beautiful stories and good friends. The MSc degree in urban survey and human settlements analysis was one of my achievements. It was just a great period of my life and it's a pity I haven't been able to come back many other times to refresh the good memories, to explore the new building and to see ITC friends again. I know some of them I won't see anymore, which makes me very sad, but many are still there. The MSc diploma obtained at ITC opened a professional door for me and I'm working today at IBGE, the most important national mapping organisation in Brazil.

But the period I spent at ITC brought me also some good friends with whom I still keep in touch today, such as Mrs Anne van Adrichen from Enschede, Luisa Pereira from Portugal, Fernanda Guerrieri from Italy and mi hermana Silvia Erni from Peru, without mentioning the friends still working at ITC. So all the time I think about ITC I just feel happiness.

• **Gary WASHBURN, USA**
washburn03428@alumni.itc.nl
N.4.2, 1973

Our class was the first in Enschede. Time has gone by very fast, however. I went on to finish my MA, UCR, and started a small company with other graduate students. We did the early photo interpretation work for ESRI in Redland, CA. Later on I got involved in local government and became mayor of Lake Elsinore. I taught geography and photo interpretation, and now work as a consultant and do site selection work for clients. I would like to hear what the other classmates are doing.



staff news

Welcome to ITC

Jantien Stoter
 André Kooiman
 Bert Boer
 Patrick van Laake

Assistant Professor, Department of Geo-information Processing (per 1 April 2004)
 Lecturer Department of Natural Resources (per 1 April 2004)
 Senior Project Officer, Bureau Project Services (per 1 May 2004)
 Assistant Professor, Department of Natural Resources (per 17 May 2004)

Staff leaving

Willem Kruijer
 Blanca Perez Lapena

Project Assistant, Department of Earth Observation Science (per 15 April 2004)
 Instructor, Department of Geo-Information Processing (per 1 May 2004)

Join a Network of 15,000 ITC Alumni!

Janneke Kalf

alumni@itc.nl

Since its establishment in 1950, ITC's alumni corps has grown to a community of more than 15,000 names and spreads across all continents, with some 160 countries being represented.

In 2002 ITC started investigating the desirability of, and prospects for, setting up more ITC alumni associations. At that time there were two ITC alumni associations, one in Nepal and one in Uganda. The Institute actively promoted, among both students and alumni, the opportunity to set up alumni associations, and this has borne fruit. No less than eight new ITC alumni associations have been, or are in the process of being, established.

Would you like to join the ITC alumni association in your country? Then contact the local coordinator (addresses below)!

Alumni who would like to set up similar associations in their own country or who wish to obtain more information on alumni associations are invited to contact the alumni coordinator (e-mail: alumni@itc.nl).



ITC Alumni Associations

Regularly check out ITC's website to view the latest developments (www.itc.nl/alumni).

BOLIVIA

ITC Alumni Association of Bolivia
Mr Ronald Job Vargas Rojas, Country Coordinator
Fortin Conchitas st #866
Cochabamba, BOLIVIA
Phone: +591-4-4282445 (home) / +591-4-4540750 (office)
Fax: +591-44256551
E-mail: vargas@clas.umss.edu.bo / vargasrojas@itc.nl

CANADA

ITC Alumni Association of Canada
Mr Rex Camit
Apt 1108, Rose Avenue 135
M4X 1P1 Toronto, CANADA
E-mail: rexcamit2006@yahoo.ca

ETHIOPIA

ITC Alumni Association Ethiopia
Dr Tenaleme Ayenew
c/o Department of Geology and Geophysics
Addis Ababa University
P.O. Box 1176
Addis Ababa, ETHIOPIA
Phone: +251.1.553214
Fax: +251.1.553214
E-mail: tenalema@hotmail.com

INDIA

ITC Alumni Association of India
Prof. Dr. Mahavir
Professor of Planning and Head of Centre for Remote Sensing
c/o School of Planning and Architecture
4-B, I. P. Estate, New Delhi 110002, INDIA
Phone: + 91.11.23702378 / 23702375-80 (office)
Fax: + 91.11.23702383 (office)
E-mail: mahavir09261@alumni.itc.nl

MONGOLIA

ITC Alumni Association of Mongolia
Mrs D. Narantuya
Phone: +976-11353892 (home) / +976-99187780 (mobile)
E-mail: davaa01276@alumni.itc.nl / dnarantuya@yahoo.co.uk

NEPAL

ITC Alumni Association of Nepal
c/o GPO Box 9046
Kathmandu, NEPAL
Phone: +977.1.251625 / 482903
Fax: +977.482957
E-mail: raja@cht.mos.com.np / censusmap@wlink.com.np

PAKISTAN

ITC Alumni Association of Pakistan
Mr Falak Nawaz
c/o National Centre of Excellence in Geology
University of Peshawar, PAKISTAN
Phone: +92.91.9216427 / 9216429
Fax: +92.91.9218183
E-mail: falak03528@alumni.itc.nl

PERU

ITC Alumni Association of Peru
Mr Hildebrando Palacios Berrios
Psje Hermanos Carcamo 175,
Urbanización Astete
Lima 32, PERU
Phone: +51-1-4606827
E-mail: palacios@alumni.itc.nl
or
Mr Luis Urbina Zárate
Municipalidad Provincial de Trujillo
Pizarro 412 - Trujillo, Peru
Phones: +51-44-293119 (trabajo)
+51-44-9653683 (Móvil)
Fax: +51-44-261122
E-mail: lurbina@qnet.com.pe

SURINAM

ITC Alumni Association of Surinam
Ms Virginia P. Atmopawiro, MSc
c/o CELOS - Narena department
Prof. Dr. J. Ruinardlaan
P.O. Box 1914
Paramaribo-South
SURINAM
E-mail: v_atmopawiro@yahoo.com

UGANDA

ITC Alumni Association of Uganda
Department of Forest Products Engineering
Faculty of Forestry and Nature Conservation
Makerere University
P.O. Box 7062
Kampala, UGANDA
Phone: +256.41.543647 / 543648
Fax: +256.41.533574

ITC Alumni Association Established in Mongolia

John van Genderen

genderen@itc.nl

On the initiative of Ms Narantuya (NRM.2, 2001), an ITC Mongolian alumni association was established in Mongolia on 19 April 2004. On that day, an ITC alumni party was organised in the Chengis Khan Restaurant in Ulaan Baatar, the capital city of Mongolia. It was attended by more than 20 ITC alumni.

Since the first Mongolian student arrived at ITC in 1990, more than 30 Mongolians have studied at ITC. During the ITC alumni party, Mr Enkhtuvshin, the first Mongolian to study at ITC, made a speech thanking ITC's head of Communications Department, Ms Janneke Kalf, for hosting this event and for ITC's support in establishing the ITC alumni association. ITC was represented on this occasion by Professor John van Genderen, who has been active in Mongolia since 1992 and who is also an honorary professor at the National University of Mongolia's Department of Geography.

The ITC Mongolian alumni association has drawn up an interesting plan of activities for its first year. This includes establishing an up-to-date database of all Mongolian ITC graduates, with such information as their current job positions, addresses and contact details; organising an annual ITC alumni association meeting; and arranging for guest lectures to be given by ITC staff members visiting Mongolia, in order to update the alumni on new developments at ITC.

In June, five ITC staff members (Professor Andrew Skidmore and Dr Hein van Gils of the Natural Resources Management Department, Drs Paul Schoonackers of the Bureau of Project Services, Ms Marjan Kreijns from ITC's Beijing office in China, and Professor John van Genderen of the

Department of Earth Observation Science) will visit Ulaan Baatar to attend an international workshop hosted by the National University of Mongolia. During their stay in Mongolia, they will not only give presentations at the workshop but also give guest lectures at the university, as well as visit various organisations to discuss cooperation with ITC in the field of research and in joint projects.

On 8 June, another ITC Mongolian alumni association party will be or-

ganised, which the five staff members will also attend. For more information about the ITC Alumni Association of Mongolia, please contact:

Ms D. Narantuya
Coordinator ITC Mongolian Alumni Association
E-mail: davaa01276@alumni.itc.nl;
dnarantuya@yahoo.co.uk
Phone: +976-11353892 (home) or
+976-99187780 (mobile)



An ITC alumni party organised in the Chengis Khan Restaurant in Ulaan Baatar was attended by more than 20 ITC alumni

Inaugural meeting of the ITC Bolivia Alumni Association

Ronald Job Vargas Rojas

vargasrojas@alumni.itc.nl

On the evening of Saturday 26th June, the inaugural ITC - Bolivia Alumni Association was held at the Restaurant Estancia in Cochabamba. Attended by 17 ITC alumni and invited guests, the event marked the establishment of the first formal ITC alumni association in South America. At present there are approximately 80 ITC alumni in Bolivia with the major concentrations being in La Paz and Cochabamba. The latter group largely result from the seven year long Dutch Government funded CLAS project in the city.

The objective of the association is to foster closer links between ITC and its alumni as well as between the alumni themselves.

The principal guests at the event were Lic. Roberto Iriate Noya, the Vice Rector of the Universidad Mayor de San Simon, and Ing. Enrique Fernandez Sanguenza, the Director of the CLAS centre. Whilst not alumni themselves, they have contributed

significantly to ITC's CLAS project in Bolivia, under which several dozen Bolivians have studied at ITC.

Earlier in the day, Lic. Iriate, had reaffirmed the commitment of the UMSS to the continuation of the courses at CLAS in the period after the end of the Dutch funded project.

On behalf of ITC, Mr. John Horn welcomed the guests and was pleased to announce that for the first time in year 2005, Netherlands Fellowships will be available for students to follow the courses at CLAS.

It was fitting on this inaugural evening that both early and recent alumni were present. Representing the 'CLAS of '66' was Alvaro Fernandez, whilst six other alumni had only returned from ITC this year after having successfully completed their Master's degrees.

The local coordinator of the association will be Ronald Vargas (who re-

cently completed his MSc in Natural Resource Management at ITC). Whilst the association is in contact with many alumni, Ronald would be delighted to hear from others who have lost touch.

He can be contacted at CLAS or via e-mail (vargasrojas@alumni.itc.nl or vargas@clas.umss.edu.bo).



Letter to the editor

Dear Editor,

Indeed its my pleasure to receive ITC News. It is also my privilege to get the opportunity to introduce Mr. Tom Loran who was one of our instructor while I was in ITC during the period of 1988-89 in SOL 5 course.

Anyway I want to express my gratitude to all of the allumni of ITC. I hope this massage will go to my fellow course mate who may be in much higher position in their respective country.

Regards to all. I am excited to get the news letter.

Jalal Uddin Md. Shoaib

Principal Scientific Officer

Soil Resource Development Institute (SRDI)

Ministry of Argriculture, Govt. of Bangladesh

E-Mail: shahno@aitlbd.net, jushoaib@aitlbd.net, shoaibju@hotmail.com

letter to the editor

22 May 2004

A word of gratitude

I am Mesfin from Ethiopia and followed the PM course on the planning and coordination of natural resources management (NRM3) from 2001 to 2002. Basic knowledge, skills, dedication, and esteem are just a few of the credentials I acquired during my stay at ITC. Since graduating, I have been working for the Environmental Protection Authority (EPA) for the Benishangul-Gumuz region. Benishangul-Gumuz is one of the newly emerging regions of Ethiopia. I am a general manager and it is the diverse modules that I followed at ITC that enable me to carry out my present tasks.

Although I live far away from ITC, ITC News keeps me in touch with ITC events around the world. Moreover, the establishment of the ITC Alumni Association of Ethiopia allows me to develop personal networks and share ideas, experiences and knowledge with other alumni and our Dutch counterparts. Finally, I would like to take this opportunity to send my heartfelt gratitude to those who are contributing to the realisation of ITC's Alumni Association of Ethiopia. From now on, I can feel that I am still at ITC!

If any one is interested in sharing ideas, experiences or knowledge on the issue of environmental protection, please get in touch with me by e-mail or post.

Mesfin Kebede Retta
EPA-BGRS
P.O. Box 218
Assosa, ETHIOPIA



retta05211@alumni.itc.nl

CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR

CONFERENCE CALENDAR

15th International Symposium on Earth Tides

2 August 2004 - 6 August 2004
Canada, Ottawa

<http://www.yorku.ca/ets/ets.html>
mastroh@ucalgary.ca

International Conference on Water Resources of Arid and Semi-Arid Regions of Africa

3 August 2004 - 6 August 2004
Botswana, Gaborone

<http://www.ub.bw/departments/science/index.html>
waterconference@mopipi.ub.bw

GITA Annual Conference

9 August 2004 - 11 August 2004
Australia, Melbourne

http://www.gita.org.au/conference_2004.html

ESRI International User Conference

9 August 2004 - 13 August 2004
United States, San Diego

<http://www.esri.com/events/uc/index.html>
ucregis@esri.com
ITC attendance: Rolf de By, Lyande Elderink, Mark Noort, Jan Turkstra

International Workshop on Geographic Hypermedia

9 August 2004 - 13 August 2004
United States, Santa Cruz

<http://www.ht04.org/workshops/GeographicHypermedia/index.php>
enquiries@ht04.org

30th Congress of the International Geographical Union

15 August 2004 - 20 August 2004
United Kingdom, Glasgow

[http://www.meetingmakers.co.uk/igc-](http://www.meetingmakers.co.uk/igc-uk2004/index.html)

uk2004/index.html

igc2004@meetingmakers.co.uk

GIS Brazil 2004

17 August 2004 - 20 August 2004
Brazil, Sao Paulo

<http://www.gisbrasil.com.br/english/>

ITALIA 2004, International Geological Congress # 32

20 August 2004 - 28 August 2004
Italy, Florence

<http://www.32igc.org>
ITC attendance: Sabine Maresch, Phil Westerhof

World Library and Information Congress: 70th IFLA General Conference and Council

22 August 2004 - 27 August 2004
Argentina, Buenos Aires

<http://www.ifla.org/IV/ifla70/index.htm>
ifla2004secr@el-libro.com.ar
 ITC attendance: Marga Koelen

SDH 2004

23 August 2004 - 25 August 2004
 United Kingdom, Leicester

<http://www.geog.le.ac.uk/sdh2004/pff1@le.ac.uk>
 ITC attendance: Rolf de By, Richard Knippers, Menno-Jan Kraak, Jantien toter

EuroScience Open Forum 2004

25 August 2004 - 28 August 2004
 Sweden, Stockholm

<http://www.esof2004.org/info@esof2004.org>

Map Asia 2004 (rescheduled dates!)

26 August 2004 - 29 August 2004
 China, Beijing

<http://www.mapasia.org/info@mapasia.org>

URISA's 6th Annual GIS in Addressing Conference

29 August 2004 - 1 September 2004
 United States, St. Louis, Missouri

<http://www.urisa.org/address.htm>
sgrams@urisa.org

Governance for Urban Change

5 September 2004 - 8 September 2004
 Norway, Oslo

<http://www.ifhp2004oslo.no/congress@ifhp.org>

ArabMap 2004

6 September 2004 - 7 September 2004
 Egypt, Cairo

<http://www.ngisc.gov.eg/arabmap@iti.idsc.net.eg>

International Conference on Spatial Planning and Decision Support System 2004

7 September 2004 - 8 September 2004
 Malaysia, Kuala Lumpur

<http://www.iiu.edu.my/advert/spdss/bce-dir@iiu.edu.my>

Remote Sensing and Photogrammetry Society Annual Conference

7 September 2004 - 10 September 2004
 United Kingdom, Aberdeen

<http://www.rspoc.org/rspoc@nottingham.ac.uk>

RSPSoc 2004 Annual Conference

7 September 2004 - 10 September 2004
 United Kingdom, Aberdeen

<http://www.rspoc.org/rspoc@nottingham.ac.uk>

SVG Open 2004

7 September 2004 - 10 September 2004
 Japan, Tokyo

http://www.svgopen.org/2004/call_en.html
SVGOpen2004@yahoo.com

GIS - GRASS Users Conference

12 September 2004 - 14 September 2004
 Thailand, Bangkok

http://gisws.media.osaka-cu.ac.jp/grass04/grass04_office@gisws.media.osaka-cu.ac.jp

SPIE International Symposium Remote Sensing Europe

13 September 2004 - 16 September 2004
 Spain, Maspalomas (Canary Islands)

<http://spie.org/Conferences/programs/04/ers/meetinginfo@spie.org>

URISA's 2004 Caribbean GIS Conference

13 September 2004 - 17 September 2004
 Barbados, St. Michael

<http://www.urisa.org/Caribbean/caribbean.call.htm>
info@urisa.org

GIS IDEAS 2004

16 September 2004 - 18 September 2004
 Vietnam, Hanoi

<http://gisws.media.osaka-cu.ac.jp/gisideas04/gisideas2004@pmail.vnn.vn>

IGARSS 2004

20 September 2004 - 24 September 2004
 United States, Anchorage

<http://www.igarss04.org>

ISG 2004

21 September 2004 - 23 September 2004
 Malaysia, Kuala Lumpur

<http://www.itma.upm.edu.my/isg2004>

3rd Workshop of the EARSel - SIG on Remote Sensing for Developing Countries

26 September 2004 - 29 September 2004
 Egypt, Cairo

<http://www.geoweb.ugent.be/earsel/earsel@meteo.fr>

GIS 2004

27 September 2004 - 29 September 2004
 Bahrain, Manama

<http://www.engineer-bh.com/gis3/bseng@batelco.com.bh>

14th International Symposium on Remote Sensing and Development

27 September 2004 - 30 September 2004
 Syria, Damascus

<http://www.gors-syr.org/gors@mail.sy>

Waste 2004

28 September 2004 - 30 September 2004
 United Kingdom, Stratford-upon-Avon

<http://www.waste2004.com/info@waste2004.com>

GeoSolutions 2004

29 September 2004 - 30 September 2004
 United Kingdom, Birmingham

<http://www.geosolutions-expo.com/sweller@cmpinformation.com>

FIG Regional Conference for Asia and the Pacific

3 October 2004 - 7 October 2004
 Indonesia, Jakarta

<http://www.fig.net/figtree/jakarta/fig@fig.net>

Conference on Laser Scanner Application for Landscape Assessment

4 October 2004 - 6 October 2004
 Germany, Freiburg

<http://www.natscan.de/conference/Michael.Thies@iww.uni-freiburg.de>

24th INCA International Congress

6 October 2004 - 9 October 2004
 India, Calcutta

inca@rediffmail.com

GGRS2004

7 October 2004 - 8 October 2004
 Germany, Göttingen

<http://www.ggrs.uni-goettingen.de/ggrs@uni-goettingen.de>

INTERGEO 2004 (German language mostly)

13 October 2004 - 15 October 2004
 Germany, Stuttgart

<http://www.intergeo2004.de>
hanfried.kohlscheen@vermbb.bwl.de

4th Trans Tasman Surveyors Conference

13 October 2004 - 16 October 2004
New Zealand, Auckland

<http://www.conventions.co.nz/ttsc04/ttsc04.asp>
surveyors2004@cmcevents.co.nz

5th AARSE Conference

Kenya, Nairobi
18 October 2004 - 21 October 2004

<http://www.itc.nl/~aarse/aace/index.htm>
ottichilo@rcmrd.org
ITC attendance: Sjaak Beerens, Janneke Kalf, Tom Loran, Wouther Siderius, Tsehaie Woldai (ITC Booth)

International Conference on Remote Sensing Archaeology

18 October 2004 - 21 October 2004
China, Beijing

<http://www.rsarch.cn/>
wcl@irsa.irsa.ac.cn

12th Australasian Remote Sensing and Photogrammetry Association Conference

18 October 2004 - 22 October 2004
Australia, Fremantle

<http://www.rss.dola.wa.gov.au/12arspc/>
12arspc@ausconvservices.com.au
ITC attendance: Andrew K. Skidmore

8th International Earth Sciences Congress 2004

18 October 2004 - 22 October 2004
Chile, Santiago

<http://www.igm.cl/cct2004>
cct2004@igm.cl

UN International Workshop on the Use of Space Technology for Disaster Management

18 October 2004 - 22 October 2004
Germany, Munich

<http://www.oosa.unvienna.org/SAP/stdm/>
david.stevens@unvienna.org
ITC attendance: Tom Loran, Wouther Siderius, Andrew K. Skidmore, Tsehaie Woldai

RADAR 2004

19 October 2004 - 21 October 2004
France, Toulouse

<http://www.radar2004.org>
radar2004@see.asso.fr

TOPCART 2004 (in Spanish)

19 October 2004 - 22 October 2004
Spain, Madrid

<http://www.top-cart.com>

5th International Symposium on Mining Science and Technology

20 October 2004 - 22 October 2004
China, Xuzhou

<http://ismst.cumt.edu.cn/english.htm>
ismst@cumt.edu.cn

Workshop on Vision Techniques Applied to the Rehabilitation of City Centres

25 October 2004 - 27 October 2004
Portugal, Lisbon

<http://www.visiontec-workshop.org/>
vcamp@parqueexpo.pt

UDMS 2004

27 October 2004 - 29 October 2004
Italy, Venice

<http://www.udms.net>
e.fendel@otb.tudelft.nl

International Symposium on Education and Professional Practice in Geodesy

4 November 2004 - 5 November 2004
Bulgaria, Sofia

<http://acstre-ma.tu-sofia.bg/sofia2004/>
geodesy_union@gis-sofia.bg

URISA 2004

6 November 2004 - 10 November 2004
United States, Reno

<http://www.urisa.org>

ISWC 2004

7 November 2004 - 11 November 2004
Japan, Hiroshima

<http://iswc2004.semanticweb.org>

INGEO2004

11 November 2004 - 13 November 2004
Slovakia, Bratislava

<http://www.fig.net/bratislava/>

ACM GIS 2004

12 November 2004 - 13 November 2004
United States, Washington DC

<http://acmgis2004.cti.gr>

11th Latin American Remote Sensing and Spatial Information System Symposium

15 November 2004 - 19 November 2004
Chile, Santiago

<http://www.cprsig.cl/>

ISPRS Workshop on Processing and Visualization

18 November 2004 - 20 November 2004
Thailand, Pitsanulok

http://www.photogrammetry.ethz.ch/pitsanulok_workshop/index.html
fuse@planner.t.u-tokyo.ac.jp

1st Asian Space Conference

22 November 2004 - 25 November 2004
Thailand, Chiang Mai

<http://acrs2004.gistda.or.th/d.n.soo@let.leidenuniv.nl>
ITC attendance: Paul Hofstee, Paul Schoonackers

ACRS 2004

22 November 2004 - 26 November 2004
Thailand, Chiang Mai

<http://www.aars-acrs.org/invitation.htm>
ITC attendance: Paul Hofstee, Paul Schoonackers

Advanced Remote Sensing for Earth Observation: Systems, Techniques and Applications

4 December 2004 - 7 December 2004
Saudi Arabia, Riyadh

<http://www.remotesensingarabia.org>
registration@remotesensingarabia.com

Workshop on Standardization in the Cadastral Domain

9 December 2004 - 10 December 2004
Germany, Bamberg

<http://www.gdmc.nl/CadMod.htm>
e.fendel@otb.tudelft.nl

Environment 2005

30 January 2005 - 2 February 2005
UAE, Abu Dhabi

<http://www.ee-uae.com/conference/index.html>
ee@gec.co.ae

6th Barcelona Geomatic Week
7 February 2005 - 11 February 2005
Spain, Barcelona
<http://www.ideg.es/>