

Fishing boats below the Cape Coast Castle, Ghana.

The castle, home to the West African Historical Museum, held African captives in dreadful conditions before being shipped to a life of slavery 350 years ago.

**THE** FIG regional conference in Accra in March 2006 was very successful, with over 650 people attending, strong media coverage and high level political interest. There were attendees from 20 African countries, with a large last minute turnout from local and regional surveyors, and from 30 countries beyond the continent. This report summarises key topics from the week as seen by members of the ICES and RICS delegations.

# **Opening thoughts**

Deliberations centred on the rapid urbanisation process in sub-Saharan Africa and the resulting economic and social problems. The conference set out to share experiences and lessons learnt, specifically from across the continent, as a necessary step forward. FIG President, Holger Magel, focused the challenges for surveyors in three themes; politics, people and places.

As he has said many times in his presidency, Magel believes good land administration is an integral part of good governance. Quoting the German President, Horst Koehler, "*our humanity will be decided by the fate of Africa,*" he stated that solutions identified now and in the future from within Africa will have a positive impact on the growth of world humanity — a message that is mirrored on the international stage through the UN's millennium development goals.

The president's address pointedly referred to land administration, management and spatial development as a bedrock of governance, with surveyors playing a key role in this: A role that involves taking responsibility beyond a technical level. As surveyors, we should, and need to, be involved in the solutions to social and political issues. He went on to ask the important questions: "Are we prepared enough? Do we have sufficient skills and competencies?"

To illustrate broadly the challenges and, in some cases, possible solutions to be found in the papers delivered, Magel went back to his three themes:

#### Politics

Political challenges in African countries involving the dual land tenure systems that often operate between the traditional lands governed by chiefs and the elected governance of democracy: How do we make them work in parallel?

Places

The challenges of rapid urbanisation, coupled with the often consequential degradation of the environment, and the decreasing sustainability of communities in rural areas as people migrate to urban towns to generally settle in slums: How do we make the interrelationship of urban and rural work?

People

People politics was perhaps the central theme, both at an individual level, i.e. training and capacity building, and also at a community level, i.e. enhancing civil societies and working towards inclusive cities. Will pro-poor tools, such as the UN social tenure domain model (UN Habitat), help?

Suggestions highlighting how the surveying profession fits in to these themes included:

- Integrated land management based on GDI/GIS.
- An African reference frame.
- An integrated approach to land, coasts and marine environments.
- Balancing public and private approaches to surveys.
- Multiple activities involving coordination, cooperation and, above all, communication.
- The creation of well-grounded specialised generalists at all levels (technical, managerial and policy).
- Making strategic planning decisions in environmental, urban and rural developments.
- Facilitating and encouraging the reality of the need to implement, monitor and assess.

- Coherent and coordinated government land agencies.
- Public and private open-mindedness and cooperation between sister organisations.

Although these recommendations were made with specific reference to Ghana, the president was quick to point out their relevance in not only the wider African continent, but also, as some papers demonstrated, to the world community.

# **Technical sessions**

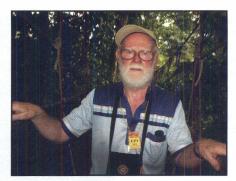
The technical programme was very comprehensive. There were three plenary sessions, 24 technical sessions and several round-table discussions and working group meetings. Here are some brief insights on those sessions attended by the various UK delegates and their highlights.

#### **Plenary sessions**

In the first plenary session, Mika-Petteri Torhonen of the UN Food and Agricutural Organisation (UNFAO) once again highlighted how good governance and effective land administration are two sides of the same coin. The pressing need to ensure effective activity in these areas has led to UNFAO setting up a project focusing on them.

A session on capacity building in Africa contained excellent presentations from Stig Enemark, Vice-President of FIG, and Ian Dowman, President of the International Society of Photogrammetry and Remote Sensing, highlighting the ongoing challenges of making a sustained difference. Enemark pointed out that capacity building, itself an amalgam of capacity assessment and capacity development, needs to occur at societal, organisational and individual levels overall success cannot be relialised if it is not achieved at these three levels.

The scope of the necessary work is also broad, with effective land management relying on land policy, land administration and land information infrastructures. Again, it is only with all three elements in place that systems to underpin sustainable development can progress. Ian Dowman highlighted the particular challenges in Africa, with some 30% of Africa's university trained



In Jakarta 2004, he had to contend with a giant snake, now Alan Wright displays his dedication to the FIG cause by braving the Canopy Walkway a precarious rope bridge 100ft above the forest floor in the Kakum National Park.

professionals estimated to live beyond the continent's boundaries (meaning that an estimated 50,000 Africans with PhDs are working outside the continent). Although much is being done by a range of organisations, there is a decided lack of collaboration; almost certainly meaning that resources are not being used effectively. There is a zeal to do something but little sign of people working together.

The third session was on cadastral domain models, an area in which FIG Commission 7 (Cadastre and Land Management) has been working for the last few years. The session included a joint presentation by Christiaan Lemmen, of FIG, and Clarissa Augustinus, of UNFAO, complemented by a presentation on the benefits and importance of standardisation per se by Iain Greenway. A workshop session on the cadastral domain model followed, concluding that some further work was required (in particular concerning certain aspects of customary tenure) before the model was sufficiently mature to enter the ISO standardisation process.

### **Commission 1 (Professional Practice)** Many sessions suffered from a large

number of papers being crammed into a 90-minute period; one that did not, due to cancellations, was TS21 on professional practice — enhancing professionalism. In this, lain Greenway gave a paper on FIG's publication on business matters, which led to a broad-ranging discussion on ethical and other issues facing surveyors,



particularly in west Africa. This was complemented by a paper from Ken Allred of Canada on practical ways of raising the profile of the surveying profession among key stakeholder groups, not least politicians.

### **Commission 2 (Professional Education)**

In TS25, a key paper was by Teo Chi Hai on the work of the Association of Southeast Asian Nations (ASEAN) in implementing mutual recognition arrangements for four professions, including surveying. The draft intergovernmental agreements are at an advanced stage with referencial FIG definitions and standards currently being put in place.

### Commission 4 (Hydrography)

Ghana was an important milestone for Commission 4 for a number of reasons, not least the further consolidation of the relationship with the International Hydrographic Organisation (IHO). FIG and IHO signed a memorandum of understanding two years ago at the FIG conference in Athens. Subsequently, Commission 4 was invited to participate in an IHO capacity building committee seminar in Trieste, Italy in October 2005, which focused on the west African region and followed extensive visits and reports by the IHO East Atlantic Hydrographic Commission's West African Action Team.

Leading on from this, the IHO was invited to present a key-note paper in Accra. In the second plenary session, capacity building in Africa, Capt. Hugo M Gorziglia, Director of the International Hydrographic Bureau, presented a paper on IHO capacity building efforts in the region. This was further expanded on in a later session by Capt. Dominique Baggio, of the French Hydrographic and Oceanographic Service (SHOM), who presented an assessment of future prospects for hydrography in western and central Africa.

Given the unique opportunity that the conference provided, Commission 4 and IHO held a meeting with a representative from the Accra Regional Maritime Academy (RMA). Both FIG and IHO are committed to supporting the RMA in its work and a detailed workplan is being



From left to right: The meeting with Ghanaian and Nigerian QS representatives that was attended by Commission 10's Andrew Morley, a slight problem with the coach during an organised tour to the Kakum National Park and Cape Coast and Holger Magel (second right) at the closing ceremony.

prepared. A joint article highlighting this ongoing work is being compiled for a mainstream hydrographic journal.

TS20 included a paper from Nigeria entitled *Charting Nigerian Waters for Safer Navigation*. It is an easily readable grass-roots paper that highlights the many economic, political and cultural challenges the region faces. This paper was selected as the April 2006 FIG website article of the month.

Working group 4.3, chaired by Michael Sutherland, held detailed discussions on a new publication scheduled for completion by the FIG Munich Congress in October 2006. This is the second publication that Commission 4 will launch at Munich and is part of the overall commission workplan. This is a joint publication with Commission 7 entitled *Issues in the Administration of Marine and Coastal Spaces*. It will include contributions from regions around the world including Africa.

Commission 4 continues to play a significant role within FIG, notably by active participation in the Advisory Committee of Commission Officers (ACCO) other administrative and decision making meetings, and by contributing papers and presentations to the overall conference programme. This was a successful conference for the commission and the Munich Congress in October 2006 promises to be equally engaging.

#### Commission 5 (Positioning & Measurement)

A key scheme discussed during the week was AFREF II — an ambitious project to put in place a GNSS positioning infrastructure that will unify the various coordinate reference systems currently in use in Africa.

### **Commission 8 (Spatial Planning & Development)**

The commission continues to build its profile. Over the past 12 months, activity has concentrated on three key areas: within the commission, inter-commissions and with national member organisations. Coordinating inter-commission activity occurs though the working groups, with the vice chairs continuing to progress their work plans.

Highlights include working group 8.3's (spatial and development aspects within informal settlements) meeting with UN Habitat's chief of land and tenure to clarify and progress projects due in 2006: identifying key people involved and inviting and encouraging papers and presentations for Ghana 2006. Sister organisation CASLE (Commonwealth Association of Surveying and Land Economy) will collaborate on the regional conference in Bagamoyo, Tanzania in March 2006.

Working group 8.4 (disaster risk management) defines the contribution of the surveying profession to disaster risk management. This geodetic applications in geodetic engineering, photogrammetry and remote sensing, GIS, satellite geodesy, as well as urban planning and land management.



The Wli waterfall in the Agumatsa Forest Reserve in the western region of Volta.



Fishing boats in Cape Coast.

There has been continuous improvement and enlargement of the working group's website (www.isbk.uni-bonn.de/fig) and research project activity includes four papers integrating four themes; megacities, tools for prevention, valuation and risk management strategies for planning.

Over the last few years, the number of Commission 8 technical sessions has notably increased at each FIG meeting. Ghana was no different with relevant technical sessions in each morning and afternoon. Commission 8 activities have a tendency to reflect the holistic project management role that land economics and land use skills demand. This ideally places commission delegates to work effectively in cross commission activities, as was reflected in Ghana with joint sessions with commissions 4 (hydrography), 7 (tenure), 3 (GIS) and governance.

The first and second joint sessions occurred as a result of the continued activity in the informal settlements working group, and led to the first joint session combining land tenure and spatial planning to consider the issues of urban growth in Africa, with particular focus on customary title. Further expanding this theme, the second joint session focused on the consequences of the rapid rate of urbanisation, neatly bringing the discussion to the economic resources of land, the demand led response of the formation of slums and the impact of 'missing information' in Greece — starkly reminding everyone that the issue of informality of housing is not only in third world countries. This session concluded with an invitation from Commission 3 to be actively involved in a proposed workshop in Athens in 2007.

The next session debated the interrelationship of making land administration methods 'pro poor' and the inevitable need for tools (including land development economics) often spearheaded by participatory planning approaches. The politics of chiefs as a governance mechanism was also raised in a session that linked planning development to governance; reminding us that in all countries, rich and poor, common problems exist in the economics of revitalising central business districts and commercial properties, the latter through asset based regeneration. With GIS ever in the debating circle, this too featured as a tool to provide an efficient way to monitor land use changes. A rigorous debate centred around the application and translation of these tools in African city governance. The GIS theme was again debated in a joint session with Commission 3, where planning for urban space was discussed, highlighting spatial data interrelationships.

Commission 8 has always considered the land-sea interrelationship through coastal zone management as important; consequently, a joint session with Commission 4 produced some interesting cross fertilisation topics in marine spaces and shoreline management.

In pursuit of the aim to encourage collaboration and communication, the commission sponsored an Ma student's attendance at the conference to provide an opportunity to experience the international networking available at FIG. procurement process and of the many methods, techniques and options available to project owners and sponsors. In the international markets that many of our colleagues are working in, there are often multilateral and cross discipline contractual structures, such as joint ventures and formal or informal partnership arrangements.

These colleagues, and others, need to be able to look to Commission 10 as an integrated and contemporary knowledge base about all issues that arise from these matters. But, the knowledge base needs to be alive so as to grow and accumulate with the real-time experiences of practising professionals whether they are engaged only in construction or the wider surveying professions.

Commission 10 seeks to meet that need by being a forum that assists in the continuous education and development of all professionals to equip them with the appropriate skills and techniques. There is also much knowledge to be won from interchange with other professionals throughout the international surveying community.

Therefore, the authors are committed to both involving Commission 10 more in the work of other relevant commissions and inviting and encouraging all other commissions to become involved in the work of Commission 10. The intent is to work across commissions but to do so in a manner that is clearly integrated within the bounds of the FIG structure.

# The several disciplines of Commission 10

The terms of reference are posted on the FIG website and show that the remit of the commission embraces the following disciplines:

- Construction economics
- Cost management
- · Quantity surveying
- Building surveying
- Cost engineering
- Project management
- Construction management
- Construction law

Associated with these disciplines are other specialist skills of our professions, including estimating and tendering, planning and programming, procurement, risk management and negotiation.

This remit was set as the framework for the Commission 10 work plan 2002-2006 and it now needs review in order to establish the framework for the next 4-year session.

### What actually are the tasks and functions of these professions and its disciplines? Construction economics

All disciplines require a high level knowledge of construction technology (plant/equipment, materials, construction and erection processes) because they are concerned with the economics of the design, construction, operation and maintenance of the built environment. These professionals are also usually involved with the primary and secondary contracts of the supply chains for all goods and services although their involvement may be only at particular stages of the procurement process, e.g. estimators during tendering, or throughout it, like the quantity surveyor. In varying degrees, depending on experience and/or the sector they are employed in, these professionals may also deal with budgets, life cycle costing and financial reporting.

## Cost management

The detailed ways in which cost is recorded and reported upwards into an organisation so that timely and effective decisions may be made about the liability to meet cost and future expenditure.

# Quantity surveying

Includes the specialisms of tender analysis, value engineering and the quantification and valuation of work. Concerns itself with the design, use and maintenance of buildings and their management as facilities for their users. • **Cost engineering** 

The art and skill of analysing and presenting cost in different ways dependent upon what is required to be the expressed content of the cost, and the determination of the elements of cost which primarily influence the outturn cost.

### • Estimating and tendering

Estimating is the science, art and skill of knowing how to predict, in advance of the construction process commencing, what the cost of the project will be, together with its life cycle costs. Tendering is the process by which an estimate produced by a tenderer is expressed and presented against the invitation to tender documents that the project owners/sponsors have issued for the tender to be bid against.

### Planning and programming

Within the construction industries, both planning and programming play an increasingly crucial role in achieving completions on time and to budget. No project of any significance whatsoever can be satisfactorily executed without both contractors and owners/sponsors, and their respective agents/advisors, having a thorough and detailed knowledge of the planning and programming processes. Such is their importance, that these functions have become equally vital to successful dialogue between parties to resolve misunderstandings and contention.

#### Construction management

The detailed hands-on, day-to-day management of the construction process.

#### **Commercial management**

As noted under rationale above, the profession of the commercial manager is distinct; it has evolved through the past 25 years because of the increasing complexities of all aspects of project realisation. Whether in a home or international market, many projects have multi-party, multinational ownership and/or their outputs, e.g. petrochemical products, are traded globally.

Different legal codes and systems may apply to various of the purchase and supply contracts. Capital is international: The new and innovative project financing instruments have global reach and the commercial manager needs to be fully conversant with these arrangements and their potential to facilitate project realisation. Insurance is a sophisticated and global business. Proper and well-understood arrangements are essential for the orderly conduct and development of international trade.

### Procurement

The issues to be addressed when formulating a procurement strategy include legal code/system, risk allocation, funding sources and terms, and the detailed mechanics of the precise contracting arrangements. Each such issue will have a different importance dependant on the phase of the project cycle under consideration at the time, e.g. conception, business case/feasibility, implementation, operation.



#### · Risk management

A new and increasingly important specialist skill that managers are increasingly bringing to bear in order to reduce the overall cost of construction. There are many techniques of risk management but they all have the same objective; to proactively identify and manage out risk to the successful outcome of a project.

## Construction law

The development and application of standard and bespoke forms of contract are also in the remit of the commercial manager. Whilst the aspiration will always be the avoidance of disputes, the complexities and values of many projects frequently give rise to misunderstandings, allegations, claims, and counter claims.

Therefore, contracts need provisions for managing and settling disputes, whether by formal or quasi-legal process, and users need to understand their application and require advisers who have the specialist knowledge and skills to advise and act to avoid disputes and to manage and resolve disputes if they do arise. This is not simply the province of the lawyer, it is also for the specialist dispute resolution manager who has a much broader understanding of the particular industry than a lawyer, albeit necessarily a lesser understanding of the purely legal aspects themselves.

#### Negotiation

One of the newest specialist skills which is being recognised as a function that requires expert understanding and handling if the benefits to be derived from it are to be maximised. The time when negotiation was perceived as the prerogative of the elderly simply because they had many years of experience has passed.

## Project management

The overall management of projects from a high, strategic level, concentrating on addressing problems and risks before they impinge upon a project and generally smoothing out the path of the construction process usually on behalf of the project owners/sponsors.

# Commission 10's work plan 2002–2006

Briefly, the commission's current plan has been to carry out work in four areas:

- Human settlements
- Education
- Procurement
- Standards

Some results are being achieved and the active working groups will report to FIG Congress in Munich in October 2006.

Regrettably, and for a number of reasons, Commission 10's activity in the current four-year plan has been low key. However, that there is little to report is due, in no small part, to a lack of response and participation from our colleagues in FIG member associations and their individual members. This may be because they do not know or understand what Commission 10 does and its relevance to their professional interests — hence the need for this explanatory paper.

### The work plan for 2006–2010

The authors believe that it is important that colleague members of FIG understand, and are thus able to appreciate, the shared need that all surveyors have for the economic and sustainable development of the environment. We all have similar interests in the effective and efficient management of all aspects of the construction environment to provide equal opportunity for all peoples to prosper in the global economy.

The commission's current terms of reference are wide ranging and consequently the mission statement lacks focus. This does not necessarily mean that the terms of reference should be narrowed but rather that there is need for a sharper focus on the objectives so as to encourage and facilitate more participation from FIG colleagues. Historically, the commission has worked on construction economics and commercial management together but the authors propose that they be studied and discussed separately in the future. Interest in, and discussion of, the detailed and technical issues of construction economics may be enlivened by some consolidation of the current separate strands of activity within the commission. The commercial management group would concentrate on the primary/strategic issues, in particular those that are concerned with procurement and contracts. FIG can focus only on strategic issues and the options of different solutions to problems/needs. This is because the detail of application will have to vary with every country's political/economic and social development and needs.

The authors recognise that because a practice is 'best (or even 'good') practice' in one system/culture does not necessarily mean that it is appropriate to, or acceptable in, another. Therefore, it may also be appropriate to pursue all activities on a more regional basis so as to better reflect actual practice in the different systems and cultures within which FIG colleagues operate; this would also parallel FIG's regionalisation policy.

It is hoped that by the time of the Munich Congress there will be strong interest and commitment from member associations and their members to join in with the work of Commission 10. Such participation may be as a delegate to one of the working groups or as an ad hoc contributor to the commission's work. There will be a determined effort to join and share in the work of other commissions — as asserted above, there are a number of common goals in the objectives of the different commissions.

Readers are invited to comment on this paper by email to Andrew Morley at andrew.morley@ccmassociates.com The commission's website can be viewed at www.fig.net/commission10/



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