

# Coastal areas and land administration: FIG in Costa Rica

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**T**HE SIXTH FIG regional conference was held in San Jose, Costa Rica from 11-15 November 2007 with a theme of 'Coastal Areas and Land Administration'.

The first day, Sunday, was occupied with administrative and organisational meetings and the opening ceremony took place on the second day. On behalf of the executive director of Colegio Federado de Ingenieros y de Arquitectos de Costa Rica (CFIA), Ing Freddy Bolaños welcomed the 120 delegates from 40 countries and then the tone setting addresses were given by Ing Manuel Castro Alfaro (CFIA president), Prof Stig Enemark (FIG president) and Fernando Zumbado (Costa Rica Minister of Housing).

All three spoke about the requirement to properly develop the 200 metres of coastal strips with respect to the needs,

the social relationships and the sustainable environment of the nation and of the existing residents of the land.

## Plenary sessions

The plenary session for the Monday was chaired by Rob Mahoney (UK) and was an excellent introduction to the conference theme. Three speakers covered coastal zone management (Alexander Gonzales, Costa Rica), land, sea and people and their equitable access to coastal resources (Dr Diane Dumashie, UK) and land management and administration (Dr Michael Sutherland, Trinidad and Tobago). All three presentations interlocked and gave the audience a full understanding of the problems being faced in the development of these areas.

Tuesday's session was chaired by Dr Chryssy Potsiou (Greece) and covered land administration throughout the world. The speakers covered LAS projects in Costa Rica (Daniel AcuAa Ortega, Costa Rica), information systems and land administration (Francisco J Proenza, Italy) and developing resilient and responsive land administration systems in Latin America (Grenville Barnes, USA).

The third plenary session was on Wednesday. It was chaired by Ken Allred (Canada) and concerned capacity building. Speakers covered developing the profession in Costa Rica (Ing Daniel Hernández, Costa Rica) and curriculum development in Costa Rica (Ing Daniel Hernández, Costa Rica and Prof Pedro Caverro, Spain).

Papers presented in the 21 technical sessions covered most of the 10 commissions but not all could be attended by the writers because of simultaneous presentations.

All of the papers can be seen on the FIG website ([www.fig.net/costarica](http://www.fig.net/costarica)).



Left to right: Andrew Morley, Tine Svendstorp (Denmark) and Alan Wright.

## Commission 5 (positioning and measurement)

The second technical session on GNSS CORS fundamentals was chaired by Dr Rudolph Staiger (Germany). The first three speakers brought us up-to-date on GNSS CORS infrastructure and general principles, linking reference frames and standards and best practice. The fourth speaker looked at positioning infrastructure business and the future.

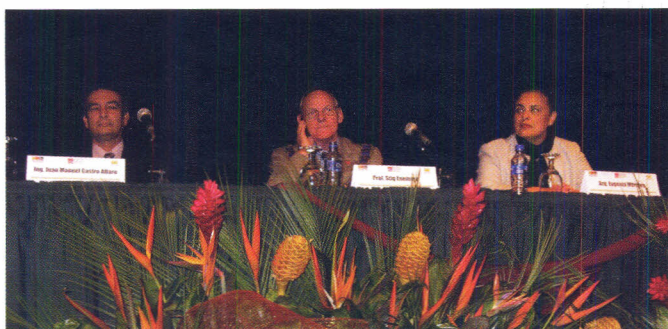
As with the plenary sessions, all four speakers gave in-depth presentations to the large audience attending this session.

The fifth technical session on operational GNSS and CORS infrastructure was another well-attended and educational session. This was chaired by Dr-Ing Volka Schwieger (Germany). Five speakers from Brazil, Columbia and the USA presented details of some of the very many GNSS CORS networks already operating throughout the world. The time and cost savings from using these networks are very large and now a single surveyor using a single GPS receiver is able to obtain fast results with good accuracy.

The eighth session on positioning and measurement was chaired by Rob Sarib



Dr Michael Sutherland (Trinidad & Tobago) presenting his paper during the first plenary session.



Left to right: Juan Manuel Castro Alfaro (CFIA president), Stig Enemark (FIG president) and Eugenia Morales (sub director of CFIA) at the closing ceremony.



Left to right: Bob Foster (past president of FIG), Dr Chryssy Potsiou (Greece) and Rob Mahoney (UK).

(Australia). This session comprised another four papers on equipment and projects using real-time networks, low cost high accuracy surveying and on DGNSS based multi-sensor railway monitoring. Again, it was well attended.

### Commission 4 (hydrography)

Technical session 13 was on administering marine spaces and chaired by Gordon Johnston (UK) with speakers from Costa Rica, the USA and Trinidad and Tobago. All covered projects in their own countries and all provoked much interest from the large audience.

The 21st session covered the economic benefits of hydrography. This was chaired by Andrew Leyzack (Canada) and featured four papers all linked but all covering different aspects of the topic. The speakers were from Canada, UK, Monaco and Germany.

### Commission 1 (professional standards and practice)

The 17th technical session on development of the profession was chaired by Matt Higgins (Australia) and including three papers; all of which should be of particular interest to us in the ICES. Ken



Dr Diane Dumashie (UK) presenting her paper during the first plenary session.

Allred (Canada), Teo Chee Hai (Malaysia) and Casey Brennan (USA) all showed the need for a change in the profession.

A 10-year programme of study in Malaysia points to a direction that needs to be studied by surveyors in the rest of the world if our profession is to survive! Practising survey companies currently provide four levels of service; plain selling, specialist selling, total service selling and change generating. We all need to move to this fourth level.

### Commission 8 (spatial planning and development)

The ninth technical session covered natural resources and risk management. This session (chaired by Andrew Morley) featured two papers both enthusiastically presented in Spanish by their engineer authors, with simultaneous translation to English.

The first paper on tidal stations and benchmarks as tools for spatial information management by Prof Linda L Vélez-Rodríguez, of the University of Puerto Rico, was about Puerto Rico's plan to



Some of Costa Rica's wildlife. Clockwise from top left; humming bird, sloth, *Heliconius Erato* (also commonly known as 'the postman' butterfly because it always returns to the same plants or flowers at the same time each day) and a white faced monkey.

install a state of the art tsunami ready tidal gauge network. Puerto Rico has a 325km shoreline and is vulnerable to the occurrence of tsunamis generated by local earthquakes or submarine landslides as well as from elsewhere in the Caribbean or the Atlantic. The alert system will be a critical part of the island's emergency management programme.

A paper on the planning of the project to install a GIS in Columbia was presented by Angelica Ladino-Parra with support from her project manager. The project is receiving significant support from the Swedish National Land Survey organisation. From the many points made in the paper, it is particularly plain how helpful foreign support can be for project development and implementation in countries that are still building their institutional capacities.

### Organisation and social programme

The conference was well organised and the evening social events were educational and enjoyable. The welcome reception included the choir of the Costa Rican Association of Engineers! The FIG office and the Costa Rican organisers are to be congratulated on a very successful meeting.

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