

For a sustainable world



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He has since 1995 been Head of the "Rural Development" Department and Director General of the Bavarian Administration of Rural Development. He is also been Advisor of the European Commission for Rural Development in Eastern Germany in 1992/93; chairman of the German Bund-Länder Team for Village Renewal from 1984-1995; member of the board of the European Association for Rural Development and Village Renewal.

Prof. Magel is acting as an expert in Eastern- and South Europe as well as in Asia and South America. He has more than 250 expert publications and books on land consolidation, village renewal and rural development.

In an era of globalisation, what are the challenges for surveying? How should surveyors adapt to these new socio-political dimensions?

The International Federation of Surveyors (FIG) has been a leading association in surveying and geomatics profession for the 130 years. Its strengths are that it covers all disciplines of surveying, geoinformatics, geosciences and all kinds of management of land. This broad view on the profession has been successful, especially during the recent years. The demand on the market seems to be for "well-grounded specialised generalists" with excellent management skills and good knowledge of the technical aspects of the profession (like geodesy and modern measurement technology) and at the same time expertise on land administration and management – and in many cases also with spatial planning and valuation. In the FIG concept, the technical disciplines of the profession and the land issues are linked by spatial information management components. This concept applies to the future education models as well as to the professional profile. The challenge of globalisation should be considered as an opportunity for all professions. However, this means that both FIG and individuals should be better educated and more internationally oriented. The winners in the competition will be those professionals who have broad basic knowledge and are able to use the same in a creative way in the changing world.

Globalisation also requires that surveyors are more aware about the international trends and development. At professional level, this means attendance to international conferences and discussions and cooperation at organisational level. It is a shame that professionals in rapidly growing countries with huge potential in the international market like India have not made considerable progress in international professional cooperation. India is almost the only larger country in the world that is not represented in FIG by a member association.

Providing effective legal security of tenure and access to property is an issue of importance for sustainable development. Is surveying successful in playing a role in this? How far are nations committed in creating such a system?

As mentioned many times by leading politicians at the United Nations' conferences and other platforms, the issue of secure tenure and access to land is crucial for improving the conditions of the poor. This is very true in Africa as also in many Asian countries. Surveyors are experts both in land management and administration and also in finding technical solutions in creating modern cadastres and land administration systems. They can also bring in new effective tools like GIS and modern mapping technologies. However, whether there is any real progress or not depends on the policy and decision makers. It seems that land is such a delicate issue that very often, action is missing and it is all left to discussions and promises of good future.

Traditional approaches to land administration result in long delays in design and implementation of projects. What kind of approaches are needed, both from a conceptual and technological point of view?

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The traditional approach to land issues has been the European based cadastre system that has been both expensive and time consuming. It has not worked especially in countries where customary land tenure has long traditions. Surveyors as experts have proposed multi-purpose cadastre as a solution, linking cadastre to all land related issues using GIS technology as a common platform. Recognising different land tenure types has been a step forward. This, together with more cost effective technical solutions and approaches, seem to bring better results. Very often, we discuss low-cost technologies but it would be better we discuss concepts that are more cost effective. Sometimes, modern and even expensive technologies give the best total outcome. These technologies include modern mapping and surveying techniques integrated to innovative recording systems (e.g. video and satellite images linked to land records and geoinformation databases).

In developing countries, what should be the prime focus – mapping the natural environment for proper exploitation or the development of land



Prof Magel at the South East Asia Survey Congress in Brunei in November, 2005



Prof Magel participating in the round table discussion on Surveying and GIS education during FIG Working/Week/GSDI Conference in Cairo in April 2005

information system?

The biggest problem in developing countries is the urban growth. Solving the problem of mega cities needs more and much closer cooperation and interrelationship between urban and rural areas. To solve this problem, we need better information about land and environment and also better and more effective planning tools. In the long run, it will be very essential to take care of natural resources and areas in a sustainable way as a reserve for the future. We should also be aware of environmental risks in planning and construction, either related to floods or other natural disasters.

The major concern of developing countries is to organise the provision of relevant land information in support of their governance. What are the evolving demands of customers and how do nations try to meet them?

At the moment, there are very effective technical tools in GIS and land administration. The critical point is whether there is enough

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understanding for management and use of the information that we are able to produce. In many countries, the most relevant issue is access to information. In general, it should be available to the public for a price that is not prohibiting the use of such information. In some countries, the tradition has been to keep the information only for official use. Today, the role of civil society is increasing and it encompasses more activities. This will also change our attitude towards the information. The role of internet is increasing in distributing information. The duty of professionals and governments is to see that there are standards in integrating different information sources. GIS will offer good tools in this aspect, but its use should be based on national spatial development infrastructures. Creating these NSDIs is a challenge for most governments.

In view of the modern needs, how are the roles of a GIS professional and a land surveyor best defined and understood in creating, preparing and maintaining land records?

First, we should define what we mean by surveyors and GIS professionals. In many countries, especially in Europe, surveyors are also GIS specialists and they are even pioneers in GIS. In this broad definition of a surveyor is included not only the technical aspects of the profession (geodesy, geoinformatics) and land management but also valuation, physical planning and construction economics. In other countries, especially in the United States, there has been a great gap between surveyors and geoinformatics. It is more relevant to discuss how to bridge this gap than discuss the role of different – sometimes artificial – professions in this issue. At the end, our common role and goal should be to contribute to building a more joint, peaceful and sustainable world ■