

# THE GLOBAL ROLE OF SURVEYING FOR THE NEW MILLENNIUM

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The theme chosen by the US Bureau members during the years we were still a “shadow bureau”, was The Global Role of Surveying in the 21<sup>st</sup> Century. Two concepts we are hearing more and more about these days speak directly to the condition of our changing world in the 21st century. Those concepts are globalization and sustainable development.

## GLOBALIZATION

In his keynote address to the XX FIG Congress in Melbourne, Australia in 1994, Dr. Peter Ellyard pointed out that the global trend most relevant to the future of surveying is what he called creation of a planetary society and culture, and what we commonly refer to as globalization. The term “globalization” is used in the popular press to refer to a growing web of trade and investment between and among nations, bringing economies into close proximity - and dragging societies and cultures along in the process. The emergence of a common market and common currency in Europe is an example. The North American Free Trade Agreement, an event of considerable controversy in my country, is another. The General Agreement on Trade in Services provides for a set of multilateral rules for the conduct of services trade and creates a framework for a process of liberalization.

One commentator recently stated, “If anything seems obvious today, it is that globalization is a new and powerful force that is erasing national borders and linking the world in an unprecedented web of trade and investments.”

Many surveyors do not see themselves affected by globalization. Many of us work no more than a few kilometers from our home offices. We do not sell our services beyond local boundaries and see little prospect for doing so in the near future. We recognize that for the producers of products and commodities globalization is a major economic factor determining prosperity or failure. A few service industries, like banking, communications and entertainment find immense opportunity in the globalization phenomenon, but for many of us surveying is a local service to be marketed locally. This is the myopic view of surveying. It is the limited vision of the local practitioner (of which I am one) who provides surveying services in his or her own community and perhaps the immediately adjacent communities.

The broader view recognizes surveying in all its applications. Consider the FIG definition of surveying which describes nine activities “which may occur either on, above or below the surface of the land or the sea and may be carried out in association with other professionals”. Those activities, briefly, are

- The determination of the size and shape of the earth
- The positioning of physical features, structures and engineering works

- The determination of the position of boundaries of public or private land
- The design, establishment and administration of geographic information systems
- The study of the natural and social environment for the planning of development in urban, rural and regional areas
- The planning, development and redevelopment of property
- The assessment of value and the management of property
- The planning, measurement and management of construction works
- The production of plans, maps, files, charts and reports

In my country only one of those nine is the exclusive activity of the licensed surveyor in most jurisdictions. Four more are activities commonly performed by some US surveyors. The remaining four activities are not considered to be within the scope of what we call “surveying” in the United States. What is true in the US is also true in many other countries: the FIG definition of surveying goes well beyond surveying as it is practiced in much of the world. I maintain that if we are to be active in the globalization of this new millennium, we must be consistent in our definition of who we are and what we do. And, not incidentally, if measuring and positioning are to become, as many in the profession predict, purely mechanical activities due to the new technologies, it behooves us to broaden the scope of our activities. Where planning, valuation and the management of land are not considered “surveying”, associations in those countries should seek to include them. It will not be easy. Legislation, educational systems and institutional arrangements must be addressed. Political considerations may play a role. There will be resistance both from within and from outside the profession. None the less, if “surveying” is to be a player on the world scene it must expand its activities and it must be clear in its definition of itself.

But globalization will have its own impact on surveyors with a local base of operations. In a negative sense, globalization may bring foreign competitors into their own backyards, especially if standardization for competency in geomatics becomes a reality, as has been proposed to the International Standards Organization, ISO. In a positive sense the international recognition of surveying in its broader definition may bring greater status to all surveyors. Surveying is not yet seen as a discipline vital to all the world’s economies.

Returning to Dr. Ellyard’s 1994 address in Melbourne: he advised that the surveying profession must develop “a clear vision of where it wants to go and then organize itself to go there.” FIG has accepted that challenge. The current FIG Strategic Plan has as one of its stated objectives, “Facilitating in the evolution and development of the profession”. The surveying profession must evolve and develop in order to keep pace with the evolution and development of the world’s economies through globalization.

## **SUSTAINABLE DEVELOPMENT**

Consider what we know - or believe - about the current condition of our world and its occupants:

- The world's population has doubled in the last 40 years and passed the 6 billion mark only a few months ago. It is predicted to reach 8.5 billion by the year 2030, a population level thought by many scientists to be the maximum number of people supportable by the world's resources and capacity for food production.
- Less than half the world's population has secure access to land. Women comprise roughly half the world's population yet 70% live in poverty and women own less than 1% of the world's wealth.
- The world's tropical rain forests are crucial to the global climate and give living space to half of all living species, but were being destroyed at a rate of 20 million hectares a year by 1990 according to the World Resources Institute.
- The United Nations Intergovernmental Panel on Climate Change predicts that global warming may cause a significant rise in sea levels by the year 2090 due to melting of the polar ice caps. Vast coastal areas could be inundated, from the harbors of the world's industrial nations to the desert areas of North Africa. Other sources predict that 80% of the world's population will be living within 50 km of the coastal zones by mid-century. The combination of massive coastal flooding and the tendency of populations to settle in coastal areas suggests enormous social hardship and dislocation in the near future.

It is an irony, on the other hand, that two thirds of the world's population will live in water-stressed conditions by the year 2025, according to current forecasts.

The sustainable development concept is a response to these reports of social inequities and the physical condition of our earth. Sustainable development may be defined as the utilization of the world's resources in order to meet our needs without inhibiting future generations from meeting their needs. The Bathurst Workshop on Land Tenure and Cadastral Infrastructure for Sustainable Development, held in Australia last October, produced "The Bathurst Declaration on Land Administration for Sustainable Development". It is a document that will be a major center of discussion and reference in the months and years ahead. The Declaration recommends a global commitment to:

1. Providing effective legal security of tenure and access to property for all men and women, including indigenous peoples, those living in poverty and other disadvantaged groups;
2. Providing the land administration reforms essential for sustainable development and facilitating full and equal access for men and women to land-related economic opportunities, such as credit and natural resources;
3. Investing in the necessary land administration infrastructure and in the dissemination of land information required to achieve these reforms;
4. Halving the number of people around the world who do not have effective access to secure property rights in land by the year 2010.

The recommendations are ambitious and will require a nearly unanimous international commitment to their objectives. The question for us is, how shall the surveying community participate in these worthy goals? I will suggest three general ways in which we may participate:

1. We are the data-gathering experts. Our members are the professionals who will assemble and quantify data as to the world's land and resources, their value and

their current distribution.

2. Our members are the professionals who will plan the cadastral and land registration systems to enable markets to deal equitably in the distribution of land and its resources; others of our members will provide crucial urban and rural land use planning. Land management and land administration are the specific interests of Commission 7 of FIG but the Bathurst Declaration defines land administration as the process of determining, recording and disseminating information about the tenure, value and use of land when implementing land use policies. By that definition all the commissions of FIG are involved in land administration.
3. The greatest difficulty in achieving sustainable development may prove to be the political problem of convincing all nations to concentrate on the development of resources and distribution of land in order to meet people's needs while the richer nations continue to spend resources meeting people's less vital wants and desires. Such political problems can only be overcome by effective public education, an effort in which all our members can participate.

## **THE ROLE FOR FIG**

We know what our members can contribute in the effort to achieve sustainable development; now the question is, what should be FIG's role at the beginning of this new millennium?

The current FIG Bureau recognizes two main principles of organization. First, the commissions of FIG are the very heart of the Federation. They do the work in the technical fields for which the Federation exists. We intend to support the commissions financially to the limits permitted by budgetary constraints. We also intend to hold the commissions accountable for their work plans. We will encourage their efforts and we will look expectantly for results.

Secondly, we recognize that the member national associations are FIG. The member associations provide the funds and the delegates for FIG. Yet we have found that historically, the leadership of the member associations is removed from direct contact with the leadership and workings of FIG. A member association characteristically pays its subscription and appoints its delegates, but has little more to do with the operation of the Federation. Rarely do the member associations comment on either the objectives of FIG or its policies and actions. Immediate past president Dale began a tradition of inviting the leaders of the member associations to the FIG working weeks for discussion of matters of interest to them. We intend to continue this practice. We will also urge all the delegates to carry information back to their associations. We do not believe that the delegates should participate in commission work and the deliberations of the General Assembly without the involvement of, and some direction from, their home associations.

More specifically, the US Bureau's Work Plan for the years 2000 through 2003 states its primary objective as "the improving of FIG's responsiveness to the needs of the member organization's members". The Bureau intends to achieve this goal by:

1. Increasing the effectiveness and responsiveness of the commission work plans through Bureau oversight;
2. Developing, through the commissions, products, training and services which have practical application to the member organizations and their individual members, and
3. Communicating the commissions' accomplishments to the member organizations and others.
4. Developing of contacts with UN agencies and other international organizations in the context of the commission work plans.

We believe that another way to bring the member associations into a closer working relationship with FIG is to allow for a more democratic selection of the administrative body of FIG, the body we now call the Bureau. Following the recommendation of the Task Force on Governance, instituted during the UK Bureau, we will bring a proposal to the General Assembly in Prague which will provide for the election of the President and an Administrative Council of FIG. Instead of choosing the administrative body on the basis of the location of the next FIG Congress, there will be a popular election of these leaders by the General Assembly.

“Developing of contacts with UN agencies and other international organizations in the context of the commission work plans” is an FIG Bureau effort that has been underway since the Bureau resided in Finland more than eight years ago. More recently we have appointed Professor Ian Williamson of the University of Melbourne, Australia as Director of FIG-UN Liaison in order to secure and formalize relations between our organizations.

## **FIG AND THE UNITED NATIONS**

An FIG/UN Roundtable meeting was held in Melbourne in October, following the Bathurst meeting. The roundtable's purpose was to develop a cooperative agreement between FIG and the United Nations agencies during the term of office of the US Bureau. The participants were:

- UN Centre for Human Settlements (UNCHS(Habitat))
- UN Food and Agriculture Organization (FAO)
- UN Commission for Sustainable Development
- The World Bank
- UN Economic Commission for Europe, Working Party on Land Administration (former knows as MOLA)
- Permanent Committee on GIS Infrastructure for Asia and the Pacific
- UN Economic Commission for Africa
- Permanent Committee on GIS Infrastructure for the Americas
- The German Agency for Technical Cooperation and
- FIG represented by President Peter Dale, Ian Williamson, Markku Villikka and myself.

From the Roundtable discussions came FIG Publication No. 22, “Co-operation Between FIG and the UN Agencies 2000 - 2003”, which summarizes the comments of the

roundtable participants and sets forth guidelines for future FIG/UN cooperation. Key among the guidelines are the two following statements:

- To recognize that FIG is a non-profit organization whose great strength is its access to a large pool of experienced professionals, who in general contribute their services voluntarily to FIG activities, and
- To recognize that FIG is in a unique position to bring together various UN agencies interested in land administration and spatial information management as a group to discuss issues of common concern. In this regard FIG can act as a facilitator in encouraging networking between UN institutions and bilateral institutions.

The role of FIG in its relationship with the United Nations may be summarized in those guideline statements. It is access to experienced professionals in our various disciplines that makes FIG valuable to the UN; and it is as facilitator creating networking links between UN agencies and others that FIG has proven itself of value to the UN. Value of the relationship to FIG is summarized in other guidelines that encourage progress in advancing our work plans and recognize that seed funding from UN agencies is required in order to support joint UN/FIG activities.

If the new world order of the 21<sup>st</sup> century is globalization, the greatest challenge to civilization may be to achieve sustainable development. Our profession must deal successfully with the globalization phenomenon in order to fulfill its responsibilities in the sustainable development challenge. This is the beginning of a century in which life for all earth's occupants may improve uniformly - or may degenerate to levels of universal hardship unfamiliar to most of us in the so-called developed countries. Mine is the optimistic view, and I believe that these next few decades are to be an exciting and rewarding time for the members of our profession as we involve ourselves in the struggle to preserve and improve living conditions through the "best practices" of land administration.

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