FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND
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Recovery from disaster

Welcome Address FIG Working Week 2016

By Chryssy A Potsiou, FIG President

Distinguished guests, Dear Colleagues,

It is an honor and my privilege to welcome you to this 78th FIG Working week in New Zealand.

There may be no place on earth where the subject, Recovery from Disaster, is more relevant. What the people here in Christchurch have done is truly remarkable and an example of what can be achieved with energy, innovation and dedication.

While you are here in this beautiful city I hope that you will take time to see and appreciate all that has been done in a very short time.

There is a role for the surveying community to play in the process of disaster recovery.

We will consider that role but first we ought to consider the various forms of disaster that can, and do, fall upon the public.

We think immediately of earthquake and its impact here on this city;

in other parts of the world fires, tsunamis, floods, droughts and tornados strike at human settlements. These *natural disasters* are said to be mainly exogenous events, events beyond human control, whose only human involvement was the decision made by people to live there in the first place.

A different form of disaster, that I call *cultural disaster,* is that which is the direct result of human decision-making and activity.

Buildings that fall because of poor design, site selection or construction control like the recent bridge collapse in India, that killed dozens of people;

mudslides that are the result of overbuilding on unstable slopes;

the flooding of homes built in identifiable flood zones;

extensive toxic pollution of waters, air or land;

wars or terror attacks that damage the territories and kill a great number of people.

These are disasters that cannot be blamed on the ambiguities of nature.

A third form of disaster may be thought of as *compound* in its cause. Disease epidemics and pandemics, like ebola in our days, are disasters of a natural causation but are also apt to be the result of population overcrowding, poor sanitation and inadequate medical services.

The one thing that all three forms – natural, cultural and compound disaster – have in common is the human component: both the tragic impact on people and the human decision of *where* to live and *how* to live.

If there were no human development of any kind in a flood-prone area, a flood would be merely an event, not a disaster. There is an earthquake occurring every day somewhere on earth but these are disasters *only when they strike where people live or work.*

On the other hand, cultural and compound disasters involve people simply by definition and result in loss – loss of property at least, loss of life at worst.

According to the *Sendai Framework for Risk Reduction* over 700 thousand people have lost their lives, worldwide, over the past ten years, and approximately 23 million have been made homeless by various disasters.

What role then, is there for the surveying community in "recovery from disaster", according to our theme for this Working Week?

Where dense populations of people are settled in communities of homes and businesses there is risk – in some places there is risk of natural disasters.

Good planning, building and permitting practices minimize cultural risk.

Risk of disease epidemic grows as populations increase in number and density.

One of the surveyors' roles, then, is in the geographic-demographics of risk. Engineers and geo-technical experts may identify certain risk, such as aging bridges or poorly administered earthquake codes. Surveyors will measure and demonstrate the proximity of these risks to population centers in an application of GIS technology.

Geographic-demographics is important in devising emergency rescue measures. For instance, following the Katrina hurricane that devastated New Orleans in the United States ten years ago, it was discovered that over half the people who died were 65 years old or older.

Knowing where the most vulnerable people are is vital for emergency personnel during natural disasters; making the connection is a job for the geospatial professionals and is a classic example of risk assessment.

The surveyor's role in risk assessment involves more than the geographic-demographic element. Hydrographic surveyors are uniquely involved in the more esoteric activity of

sea level calibration and tidal range as the world attempts to track climate change and its effects.

The engineering surveyors are already measuring settlement and deformation of such public works elements as dams, bridge structures and landfills. These, too, are examples of risk assessment.

The *Sendai Framework for Disaster Risk Reduction* makes the obvious point that, "Reducing disaster risk is a cost-effective investment in preventing future losses," and "contributes to sustainable development." Risk reduction can only follow risk assessment.

An example of **disaster calibration** is in the use of scanning technology in the recent Himalayan earthquakes in Nepal in which the volume of earth movement was calibrated, while GPS technology was applied in measuring the horizontal and vertical movement of the earth's surface and the underlying continental plate. We look forward to hearing how these technologies in disaster calibration were applied here in Christchurch.

Analysis of the cause of any disaster, whether natural or cultural, follows the calibration process and is necessary for future risk assessment which will lead to risk reduction and mitigation, all a part of the disaster management process.

As for **prevention of recurrence**, the Sendai report identifies several global targets for the reduction of disaster risk.

They include the reduction of global disaster mortality,
the reduction of the number of affected people,
the reduction of disaster-caused economic loss,
the reduction of disaster-caused damage to critical infrastructure,
an increase in the number of countries with disaster risk reduction strategies,
an enhancement of international cooperation and
an increase in multi-hazard early warning systems.

These goals invariably raise the issue of population centers and their proximity to disaster risk. The *relocation of large populations* out of risk areas everywhere around the world, either from informal settlements build on risk areas or from coastal settlements in areas of high sea level risk, may prove impractical.
Then the Sendai goals must be met by *the development of specific new tools and local measures*.

In all of this what is our role? It will be a matter of measurement, analysis and tool development; a calibration of the relationship of populations to the earth; and the natural singularity of different regions. To put it another way, it is *the role of our professionals in geo-spatial data analysis applied to the interface of culture and nature*.

It is not a new role, however; it is what surveyors have been doing for centuries; it is what energizes us; and it is what the world expects of us.

Our theme for this Working Week is “Recovery from Disaster” but FIG is also looking to address professional involvement from a broader perspective than the recovery stage.

Surveyors are committed to make a global change happen quickly.

We are here to improve our role in developing the tools for the resilient development and good management of urban areas, of land and natural resources, their uses and functions, land administration, land use planning, property valuation, climate smart agriculture, landscape restoration, forest conservation and reforestation, that indirectly affect our efficiency in dealing with disasters.

We live in an era of Urbanization which has seen millions moving from the rural areas to the cities of the world. This urbanization is further exaggerated by the escalating number of displaced people fleeing war zones, migrating to new lands as a result of wars, oppression and starvation.

How will the cities deal with the impact of these new populations?
It will be a challenge not only for the politicians and statesmen of the world, but for the professions, as well:

Infrastructures must be expanded while protecting the environment.

New and greater urban services must be provided, including educational and medical services.

All public institutions must grow to meet the demands of this historically unprecedented population expansion.

Perhaps most of all, *housing* must be provided and at every level of income, including low income as well as moderate and above average income levels.

What is required is:

a “*fit-for-purpose*” *planning* and *land administration*.

This urbanization presents both challenge and opportunity to our geo-spatial professionals – our surveyors, hydrographers, geodesists, cadastral surveyors, valuers, planners. Whether in academia, government, industry or private practice our members are faced with an exciting and challenging future.

To our Young Surveyors especially, I say congratulations and welcome to a world that is waiting for your skills, energy and enthusiasm.

Our vision is for a world free of poverty, fear and inequality, where life is safe and growth is resilient and sustainable, where everyone has clear and secure property rights, where sustainable land use practices are the norm rather than the exception.

So, how do we get there?

We need to move toward more holistic, multi-sector partnerships to more systematically address the global challenges among them to achieve secure land rights for all by 2030.

FIG has developed a close relationship with United Nations Agencies, the World Bank, the European Union and other important international institutions.

It is important that FIG build on these relationships. It is important for FIG to lend its collective expertise to all aspects of disaster management for the betterment of societies everywhere.

It is also important that FIG be directly involved in these activities for the growth and vitality of its members and their activities in this era of Globalization.

We strongly believe in the power of *joint research* with the UN and the World Bank, in advising people and partners on making smart, evidence-based solutions that shape the development agenda.

We, our member associations, academic members, affiliate members, corporate members, our commissions, task forces and networks, need to *coordinate more* of what we do so that we are *more strategic* in our collective actions and ensure that *priority goes to activities with the highest returns.*

We need to do more to *build on new technologies*; create *new opportunities for surveyors*; and *capitalize on more affordable high-resolution spatial data*.

As you can see in the program of this Working Week there's a huge amount of experience to be presented here.

We in FIG are honored that we can contribute to this global exchange of knowledge and experience, and therefore we wish to congratulate the organizers, the New Zealand Institute of Surveyors, NZIS, for facilitating this effort so efficiently.