

# **After the Tsunami – How the Surveying Profession Can Participate in the Reconstruction**

**Daniel ROBERGE, Canada**

**Key words :** disaster, land tenure, reconstruction, resettlement

## **SUMMARY**

In the early hours of the day after Christmas 2004, a major earthquake measuring 9.0 on the Richter scale struck the coast of many South-East Asian countries. The quake triggered a powerful tsunami reaching ten to twenty metres in height moving through the Indian Ocean at over 500 kilometres an hour. The tsunami flooded coastal areas in India, Indonesia, Sri Lanka, Thailand, Maldives, Myanmar, Seychelles and Somalia, wiping away homes and lives.

This cataclysm made us realize how vulnerable humanity is in the face of nature's strength. The weeks that followed the tragedy were focused on rescue efforts and tending for the survivors; trying to meet the latter's primary needs by providing them care, food and water, and emergency shelters were obvious priorities. Reconstruction of infrastructures such as roads, bridges, sanitary networks, etc. would have to follow. Now, how can we resettle communities while respecting land rights that prevailed before the deadly wave that wiped out all land marks?

During the reconstruction phase, the international community of land surveyors will have to be present in order to promote the importance of land rights issues and tenure. If the land related issues are well managed in the resettlement plan, it can translate into an opportunity to improve the land rights situation. If not, it can aggravate an already problematic situation.

The International Federation of land surveyors (FIG) must take the lead along with the United Nations (UN) agencies to promote land tenure issues and ensure that they are taken into consideration in the reconstruction and resettlement plans for the communities affected by such natural disasters.

## SOMMAIRE

Aux premières heures du lendemain de Noël 2004, un fort tremblement de terre de 9.0 à l'échelle de Richter a secoué plusieurs pays côtiers du Sud-Est asiatique. La secousse a provoqué un gigantesque tsunami générant des vagues de dix à vingt mètres de hauteur et se déplaçant dans l'océan Indien à plus de 500 kilomètres heure. Le tsunami a inondé les régions côtières de l'Inde, du Sri Lanka, de la Thaïlande, des Maldives, des Seychelles et de la Somalie, emportant avec lui demeures et vies.

Ce cataclysme nous a fait réaliser à quel point l'humanité est vulnérable face aux forces de la nature. Les semaines qui ont suivi l'évènement ont été consacrées à secourir les survivants et à leur offrir soins et abris d'urgence. Il faudra maintenant s'attaquer à la reconstruction des routes, des ponts, des infrastructures sanitaires, etc. Mais comment rétablir les communautés en tenant compte des droits fonciers qui prévalaient avant que la vague meurtrière de décembre dernier ne vienne effacer toute marque d'occupation du sol ?

Au cours de cette phase de reconstruction, la communauté internationale des géomètres devra être présente afin de promouvoir l'importance des enjeux relatifs aux droits fonciers et à la tenure. Si ces aspects sont bien gérés, le désastre pourra devenir une occasion d'améliorer la situation des droits fonciers. Dans le cas contraire, la situation, déjà problématique, ne fera que s'aggraver.

La Fédération internationale des géomètres (FIG) doit prendre le leadership auprès des agences de l'Organisation des Nations Unies (ONU) pour promouvoir et assurer la prise en charge de ces enjeux dans les plans de reconstruction et de rétablissement des communautés affectées par de tels désastres naturels.

# **After the Tsunami – How the Surveying Profession Can Participate in the Reconstruction**

**Daniel ROBERGE, Canada**

## **1. CONTEXT**

Like most of us, I was horrified by the death toll left by the tsunami, saddened by the thought of all the orphans and broken up families and amazed by the magnitude of the disaster. Then, I asked to myself, what can I do? I wondered what I could personally do to help; how my knowledge and experience could benefit the victims at a tangible level?

In a near future, it will be necessary to start the resettlement of these devastated communities. The scope of the task ahead is staggering? In certain areas, everything was completely destroyed, wiped out by the devastating wave. They have to rebuild everything ... from scratch. It is worst than after a war.

How can you resettle communities and land owners without any fences, buildings or occupation marks? What a challenge ... even for a land surveyor!

## **2. THE IMPORTANCE OF LAND TENURE ISSUES**

Many of us have been involved, in our respective countries, in a project of reconstruction or resettlement after a natural disaster. Flood, landslide, hurricane, avalanche, and, on rare occasions, tsunami, are some of the situations in which land surveyors have to get involved. Our contribution is neither spectacular nor glamorous. We are not under the spotlight like rescue teams, policemen, doctors, etc. Nevertheless, our role is no less important but merely, too often, unknown or misunderstood.

As land experts and guardians of land rights, we are what could be called « peace keepers by anticipation». In fact, our intervention regarding land rights and land tenure issues may avoid further land conflicts. We must remember that every war between nations or conflict between two neighbours finds its source in the right to a piece of land. This is why the land surveyor's role is so important in a project of resettlement after a natural disaster. And it is that much more critical after the Asian Tsunami because the level of devastation is colossal.

In a best case scenario, some spatial data infrastructure and a geo-based cadastre may exist. Hopefully it is the case in some areas like Phuket. But elsewhere? It will almost be like starting over. And that is why it will be crucial to resettle people correctly, to respect everyone's land rights, both legal and customary rights.

### 3. STATE OF THE SITUATION

We, as land surveyors, are aware of the role that we can play after a natural disaster like the one that affected countries surrounding the Indian Ocean last December. But how can we be sure that our role will be taken into consideration within the reconstruction plans if we are not there on the ground?

As far as we know, a non-governmental organization (NGO) formed to intervene after a natural disaster to manage the land tenure issues, a kind of *Land Surveyor Without Frontiers* does not exist.

So, who takes care of land tenure issues? How are they managed?

With its Land Tenure Service, the Food and Agriculture Organization (FAO) promotes land tenure issues. Without having a specific document about resettlement, FAO published some very good points enhancing the importance of these concerns. Here's one of their statement:

«Failure to consider land tenure implications at the beginning of an intervention is likely to result in unanticipated outcomes and may lead to it not generating improvement. In some cases, it may even worsen the situation, for example by inadvertently dispossessing people of their rights to land. Situations of this kind have arisen, for example, when projects have resettled people on land that was incorrectly identified as vacant»<sup>1</sup>.

In guides and handbooks regarding resettlement after a natural disaster, we found two documents produced by the World Bank Group:

- The Economics of Involuntary Resettlement, published by the World Bank<sup>2</sup>
- Handbook for Preparing a Resettlement Action Plan<sup>3</sup>.

Both of them mention the World Bank Directive OD 4.30 which is about Involuntary Resettlement. In this directive, Section 17 clearly addresses land tenure issues:

#### «17. Land Tenure, Acquisition and Transfer

Resettlement plans should review the main land tenure and transfer systems, including common property and non title-based usufruct systems governed by locally recognized land allocation mechanisms. The objective is to treat customary and formal rights as equally as possible in devising compensation rules and procedures. The plan should address the issues raised by the different tenure systems found in a project area, including (a) the compensation eligibility of land-dependent populations; (b) the valuation procedures applicable to different tenure types; and (c) the grievance procedures available for disputes over land acquisition.

---

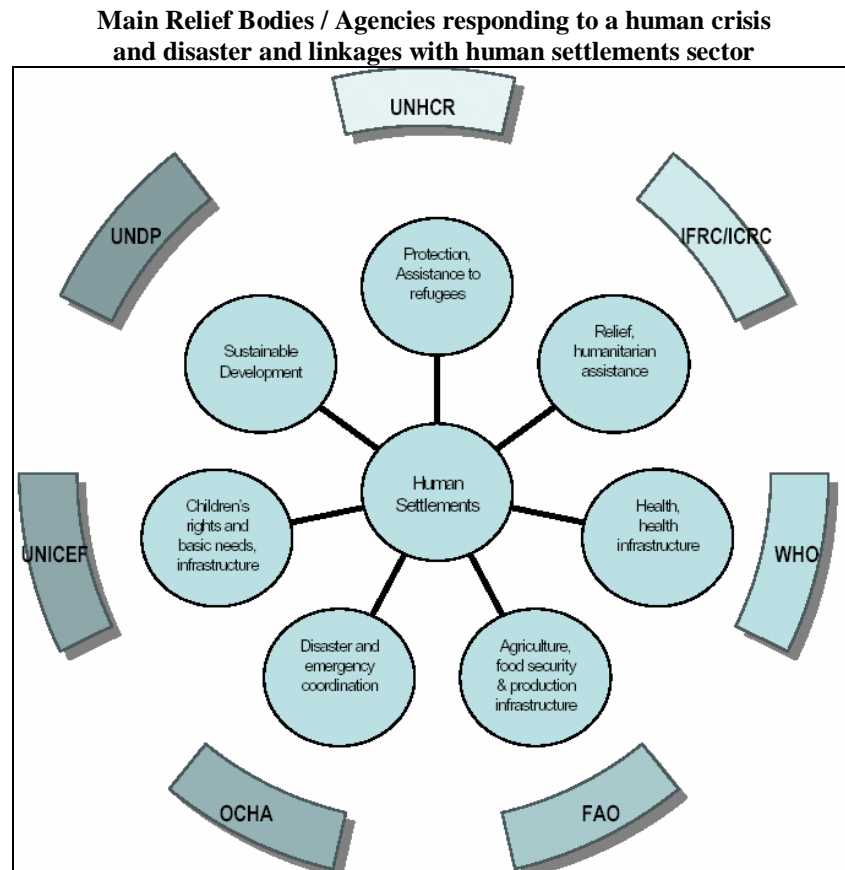
<sup>1</sup> FAO. *Land Tenure and rural development No 3*. 2002. p. 3

<sup>2</sup> World Bank . 1999. *The Economics of Involuntary Resettlement*

<sup>3</sup> International Finance Corporation, 2002. *Handbook for Preparing a Resettlement Action Plan*

Plans should contain provisions for conducting land surveys and regularizing land tenure in the earliest stages of project development. Planning should also anticipate the approximate time needed to acquire and transfer land.»

UN-HABITAT has a central position in the UN's system in terms of sustainable human settlement as we can see in the following diagram:



UN-HABITAT Disaster Management Programme  
Concept document. 2003. p. 5

This UN agency produced two guides regarding post disaster situations:

- Guidelines for the Evaluation of Post Disaster Programmes – A Resource Guide<sup>4</sup>;
- Guidelines for Operational Programme formulation in post disaster situations<sup>5</sup>.

Surprisingly, in these documents, there is not a single word about land tenure issues.

Fortunately, UN-HABITAT launched, in July 2003, the Disaster Management Programme (DMP)<sup>6</sup>. The mission of this programme is to support national governments, local authorities

<sup>4</sup> United Nations Center for Human Settlement (HABITAT). *Guidelines for the Evaluation of Post Disaster Programmes – A Resource Guide*. 2001

<sup>5</sup> <sup>5</sup> United Nations Center for Human Settlement (HABITAT). *Guidelines for Operational Programme formulation in post disaster situations – A Resource Guide*. 2001

and civil society into strengthening their capacity to manage human-made and natural disasters affecting human settlements. The DMP operates under the Disaster, Post-Conflict and Safety Section, Urban Development Branch of UN-HABITAT. It was created to marshal the resources of UN-HABITAT and other agencies to provide local government, civil society and private sector with practical strategies for mitigating and recovering from conflicts and natural disasters in the context of human settlements.

In the DMP Concept Document, we can read some concerns about land tenure. Namely, under the Immediate Objective 3: To assure sound human settlements for Internally Displaced Persons and refugees, there is output concerning security of land and property tenure which has the following activities:

- Development of mechanisms for dispute resolution and conflict management in regard to land and property during the emergency and reconstruction phase ;
- Protection of property rights of refugees and displaced populations, with particular emphasis on access of women to land and security of tenure ;
- Development of sustainable legal systems to regularize and register land property rights and manage land and property issues in a transparent way;
- Strengthening legal frameworks in regard to land and property.

Further in the document we can read that DMP also provides support in land and property management, and facilitates deployment of a team of legal and land management experts to undertake scoping and immediate measures protecting the land and property rights of displaced persons, and developing longer term solutions for land and property dispute resolution.

After the Asian tsunami, or more generally after any natural disaster, many UN agencies are mobilized to help affected countries. DMP/UN-HABITAT has a central position in the UN system in terms of sustainable human settlement and seems to play a key role in post disaster situation.

#### **4. HOW CAN WE PARTICIPATE IN THE RECONSTRUCTION?**

In general, UN agencies are not very loquacious about land tenure issues and the different aspects regarding land rights that could be taken into account after a natural disaster. To our knowledge, since December 26<sup>th</sup>, in all the news, press releases and documents issued by the United Nations and its agencies, none were about land tenure issues.

The international land surveyors' community has to promote the importance of land tenure aspects after a natural disaster, specifically in conjunction with UN agencies. We have to be involved early in the reconstruction project to ensure that land tenure and boundary aspects are thought out in the reconstruction/resettlement plan.

---

<sup>6</sup> United Nations Human Settlements Programme. *Disaster Management Programme – Concept Document*. 2003.

One month after the Indian Ocean Tsunami, Mr Jan Egeland, the United Nations Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator said, «I think we are starting now the new phase, as of today, which is the recovery and rehabilitation phase»<sup>7</sup>.

«We did save a lot of lives, but we have not rebuilt their livelihoods nor given them a standard of living that is anywhere near what they should have», he declared. «That is a big, big task ahead and that will be even bigger than the lifesaving emergency phase».

The international land surveyors' community has to be part of this reconstruction phase.

What would be the best way for land surveyors to contribute efficiently to the reconstruction effort after a natural disaster? There are some options:

- Create a new Land Surveyors' NGO (a kind of Land Surveyors Without Frontiers organization) aiming at participating in the reconstruction after a disaster ;
- Intervene with our respective national governments;
- Develop an intervention collaboration strategy between FIG and UN agencies.

Creating a new NGO may not be a good option as there are too many of them and are difficult to coordinate.

The second possibility is not easy to manage and presents a coordination problem. In the days following the tsunami, we have seen a fantastic worldwide movement of solidarity towards ravaged countries. Most governments promised help and money and many of them are willing to send experts to collaborate in the reconstruction. But this help, coming from every direction, is very hard to coordinate. It may, in many cases, worsen the situation.

The option of a collaboration/intervention strategy with UN agencies seems most promising. In my opinion, this strategy has to be put to work and could be developed either by a special working group or through a seminar on the subject, for example. Most importantly, should be developed along with UN agencies to ensure that it corresponds to their needs. FIG should be involved in the Disaster Management Programme to cooperate with UN-HABITAT in the protection of land rights of displaced people and other land tenure issues in a post disaster situation

FIG may choose other ways to build this strategy and opt for a different level of intervention but this international organization has to act now, not only regarding the present situation in South East Asia, but in the possibility of future catastrophes.

---

<sup>7</sup> United Nations. *One month into tsunami relief effort, UN faces even bigger rehabilitation task*. UN Press Release 26 January 2005.

## BIOGRAPHICAL NOTES

**Daniel Roberge** graduated from Laval University's Faculty of Forestry and Geomatics, and is a member of the Québec's Professional Order of Land Surveyors. He is carrying on Graduate Studies in International Administration at École Nationale d'Administration publique.

Manager and Senior Officer at the Ministère des Ressources naturelles, de la Faune et des Parcs (Department of Natural Resources, Wildlife and Parks) since 1993, Mr. Roberge has been involved in the design, development and implementation of two of the most extensive land reforms ever undertaken in North America: the Reform of the Québec Cadastre, which covers all privately-owned land in Québec, and the Modernization of the system to record rights on public land.

He is actually the Director of the Office of the Surveyor General of Québec and the Vice-President of the Champlain Branch of the Canadian Institute of Geomatics.

## CONTACTS

Daniel Roberge, Director  
Office of the Surveyor General of Québec  
Ministère des Ressources naturelles, de la Faune et des Parcs  
Department of Natural Resources, Wildlife and Parks  
5 700, 4e Avenue Ouest, local F 310  
Charlesbourg (Québec) G1H 6R1  
CANADA  
Tel : (418) 627-6263 ext. 2646  
Fax : (418) 643-6512  
Email : [daniel.roberge@mrnfp.gouv.qc.ca](mailto:daniel.roberge@mrnfp.gouv.qc.ca)  
Web site :  
- English : <http://www.mrnfp.gouv.qc.ca/english/land/index.jsp>  
- Français : <http://www.mrnfp.gouv.qc.ca/foncier/index.jsp>