



**Nepal Earthquake 2015 – Beyond Disaster, Relief and  
Restoration,  
Azorean Notes for effective Reconstruction and  
Development**

Tomaz Ponce Dentinho

June, 2015

**ISSN 2406-5617**

## ABOUT THE AUTHOR



**Tomaz Ponce Dentinho** is SADF's Regional Co-operation Research Programme Director. He is also the coordinator of the Group for Nature Conservation and Management at the Azores University, in Angra, Portugal, and member of the Research Centre for Applied Economics of the Atlantic based in Ponta Delgada. He is the promoter and coordinator of the Master on the Management of Nature Conservation and of the PhD on Interdisciplinary Management of the Landscape (joint PhD with the University of Évora and the Technical University of Lisbon). He is a lecturer on: economics (undergraduate); regional and urban economics (undergraduate, master and doctorate programmes), environmental economics (master), cost-benefit analysis (master) and agricultural economics (undergraduate). His research group, involving around ten researchers undertakes studies on regional sustainable development, integrated water management, marine resources' economics, agricultural economics and cost-benefit analysis. Since 2008, he chairs the Portuguese Association for Regional Development ([www.apdr.pt](http://www.apdr.pt)). Since 2007 he is a member of the European Organizing Committee of the European Regional Science Association. Since 2010 he is a member of Council of the Regional Science Association International. He is the Executive Director of the Regional Science Association International.

## ABOUT SADF FOCUS

The SADF Focus series offers insightful and profound research findings on emerging topics and contemporary developments as well as on future-orientated debates. Intended for a broad audience, the SADF Focus series provides a forum to exchange ideas as well as to stimulate discussions between research communities, policy-makers, practitioners involved in/with South Asia.

## ABOUT SADF

The Brussels-based South Asia Democratic Forum (SADF) is a non-partisan, autonomous think tank dedicated to objective research on all aspects of democracy and regional co-operation within a contemporary study of South Asia. It aims to reach policy makers, academics as well as the general public. SADF's core goal is to bridge the gap between South Asia and Europe and pull both regional and political worlds closer together in order to increase understanding and cooperation.



## 1- Introduction

The earthquake on 25 April 2015 killed more than 8,000 people, injured more than 19,000 and more than 450,000 are now displaced. In the aftershock of 16 May more than 100 people were killed and more than 2,500 people were injured. Public awareness after the disaster fades away quickly as demonstrated in the Graph in Figure 1; in the first day there were more than 120 news reports, but after 20 days, less than 20 news reports were issued, even on the day of a major replica of the earthquake.

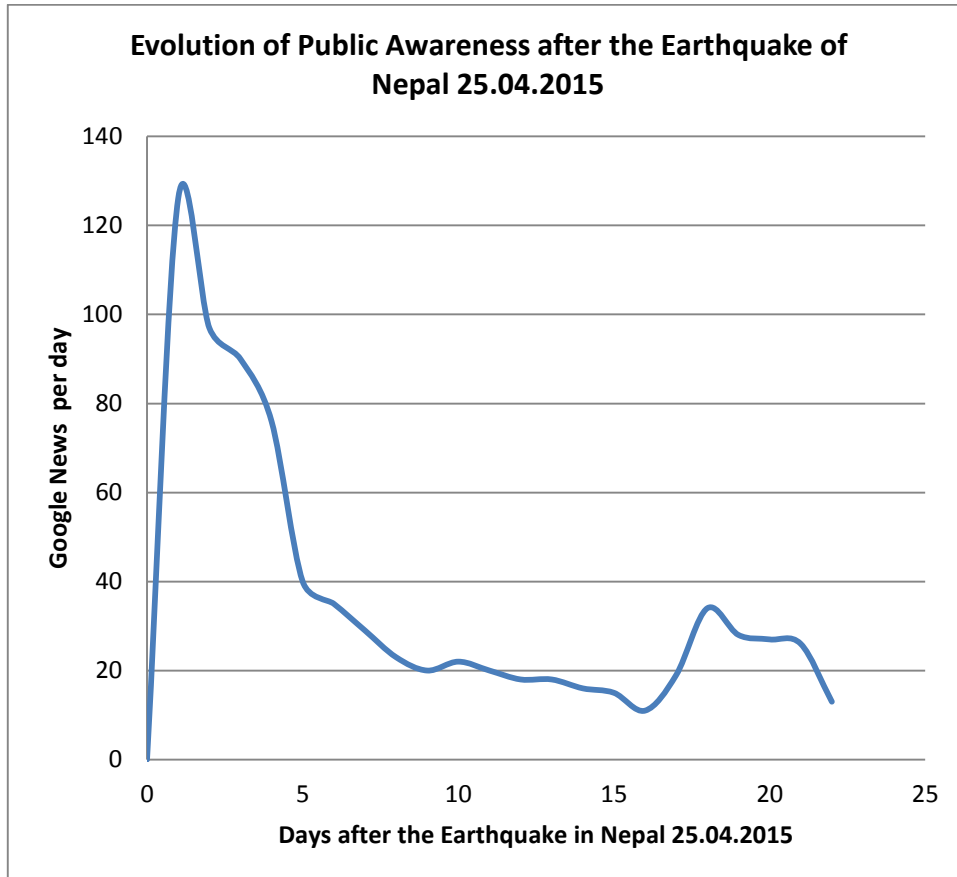


Figure 1: Evolution of Public Awareness after the Earthquake of Nepal

The aim of this SADF Focus is to make some reflections and eventual contributions for the restoration and reconstruction phases after the earthquake. Our attention is on the days after the booming news reporting that, as shown, vanished after five days of the disaster. To follow this aim we first look at some available literature (point 2), then we try to learn from the experience of the reconstruction of Terceira in the Azores after the earthquake in 1980 (point 3), finally we draw some conclusions that might be helpful for the reconstruction and development of Nepal (point 4).



## 2- What can we learn from others?

Robert Geipel (1991)<sup>1</sup>, from his knowledge on the reconstruction of Friuli in Italy (1976-1988) identifies four phases of restoration and reconstruction after an earthquake:

- Phase 1 - **Relief and Rescue** - corresponds to the emergency measures immediately after the earthquake - first crisis - when a lot of outside and inside donors take action to save lives, treat the wounded, provide shelter and restore the elementary services that are urgently required.
- Phase 2 – **Restoration** - begins more or less 18 months after the disaster. It comes with a second crisis, when most altruistic donations finish and international solidarity ceases. This is the period when, hopefully after a careful preparation done before, there is a need to recreate the functioning of society; this is the time to re-establish the rule of law which will face understandable accusations by the population that want to rebuild their lives but begin to face all types of legal constraints by the authorities, it is also the moment to introduce modalities of payment for compensation of the reconstruction.
- Phase 3 - **Reconstruction** - also begins with a crisis more or less three years after the earthquake, when the booming of reconstruction is confronted by the lack of available resources resulting in high prices, increase in the number of construction companies, immigration of construction workers and a shift of the economy to non-tradable goods since local demand offers higher profits than external markets.
- Phase 4 – **Isolation** - arises with a typical Dutch Disease problem (Corden and Neary, 1982)<sup>2</sup> when the reconstruction phase begins to come to an end and most of the economy is focused on non-tradable activities. This can happen ten years after the earthquake but it can be prolonged if the government, pressured by the population and main companies, chooses to continue the mobilization of construction companies for public infrastructures. Many times the process of Dutch Disease continues to deteriorate the competitiveness of the region affected by the earthquake even more when external support continues to support non-tradable activities such as public services and public infrastructures.

---

<sup>1</sup> Geipel R (1991) – Stages of Reconstruction after Earthquake and Expenditure of Funds. In Long Term Consequences of Disasters: Reconstruction of Friuli, Italy, in Its International Context, 1976-88 Springer.

<sup>2</sup> Corden WM, Neary JP (1982). "Booming Sector and De-industrialisation in a Small Open Economy". The Economic Journal 92 (December): 825–848

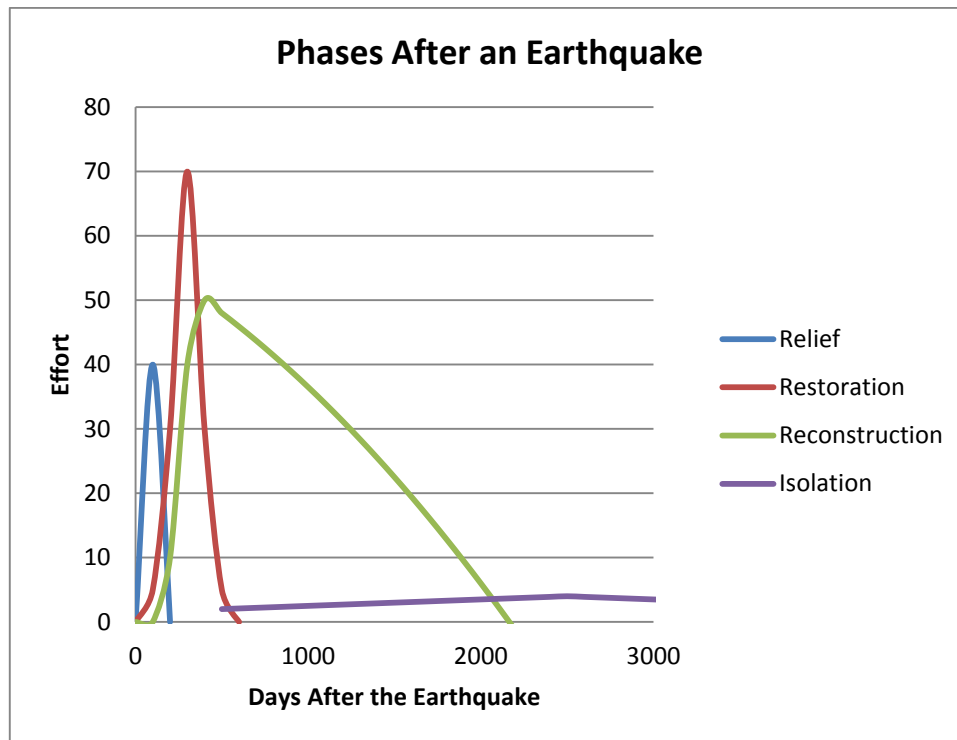


Figure 2: Phases after an Earthquake.

### 3- Lessons from the Earthquakes in the Azores

In this point we pick up the phases of Relief, Restoration, Reconstruction and Isolation that follow an Earthquake to analyse what happened in these phases after the earthquakes in Terceira Island (1980) in the Azores Archipelago.

- Phase 1 – **Relief** - The impact of the Terceira Island Earthquake in 1980 had major visibility in Portugal and in the World. On the one hand the Earthquake killed one person for each 1000 inhabitants (much more than in Nepal with 0,26 per 1000 inhabitants) and resulted in the reconstruction of more than 70% of the buildings. On the other hand the autonomy of the Azores, the presence of an airbase from the United States and the recent establishment of television in the Azores allowed major visibility of the disaster, which helped to mobilize extensive support from the mainland and from abroad. Besides the very good work done by external actors, some exogenously driven decisions to evacuate remote populations in some Fajãs (little coastal strips occupied in the winter) in the nearby island o São Jorge, helped to destabilize the rural life in that island and precipitate the abandonment of those remote but still viable places.
- Phase 2 – **Restoration**. The restoration process cannot be dissociated from the development of the autonomous administration in the Azores Archipelago that had the



originality to spread the Government and the University between the three major of the nine islands of the Archipelago. Actually the presence of public effort in the second island of the Azores avoided, somehow, the concentration of the administration on the main island helping therefore the establishment of a distributed regional government.

- Phase 3: **Reconstruction**. In the reconstruction phase various events deserve to be highlighted in the experience of the Azores. First the classification of a destroyed city as a World Heritage Site by the UNESCO in 1984, which was able to recreate the collective image of the city and guide the reconstruction; nevertheless the importance given to the forms and not to the content precipitated the abandonment of the population to the outskirts of the city and allowed the construction inside the quarters hindering the amenities of the buildings. Second, the creation of social quarters far away from the city centre fostered the creation of social ghettos with dramatic effects in the long term; some local priests were strongly criticized for impeding the construction of these social quarters in their parishes and only 20 years later people realized how wise they were.
- Phase 4, **Isolation**. After 10 years of reconstruction it is difficult to move one economy from inward looking to outward looking. As happens in other earthquake processes around the world the central governments continue to attend the victims of the earthquake with public transferences. The issue is where and for what has this money been spent? When most of the required investment in infrastructures and equipments is depleted there is naturally a crisis, which potentially can even supersede the negative impacts of the earthquake.

#### 4- Opportunities and Threats

In Nepal Phase 1 Disaster of the catastrophe cycle finished with more than 8000 deaths. Phase 2 related to Relief and Rescue is coming do an end with a strong reduction in the flows of news reports and the pressing requirement to open the touristic path to the Everest. Furthermore the US, Australia, India, Sri Lanka, the UK, China, Israel and others will soon begin to send their rescue teams back home and Nepal and the Nepalese will have to find their way to restoration and reconstruction.

In fact there are clear signs that the restoration of the rule of law is required and, beyond that, the design and evaluation of reconstruction in terms of long term development and sustainability. In a globalizing world the mobilization of the social capital as occurred after



the Earthquake of 1934 (Bhandari, 2013)<sup>3</sup> is necessary but it may not be enough. In fact much of the reconstruction demands are public goods and the media has reported some problems of governance: failure to provide electricity, failure to attract foreign direct investment, failure to deploy needed infrastructure. This is the time of crisis where small changes in the present have a great impact, positive or negative in the long run.

From the experience of the restoration and reconstruction after the Earthquake in Terceira Island it is clear that the Earthquake in Nepal can be a great opportunity:

- 1) To promote suitable rules for reconstruction against seismic events combining the local wisdom with technical knowledge. This can also promote excellence in Universities and Research Centres linked to anti seismic construction. Notice that in the Azores the rules were too much based on engineering techniques and architectural rules and the result was the abandonment of the city centre by former residents that tried to escape from the high bureaucratic cost also associated with the requirement to combine architectural restrictions with engineering techniques. The accumulation of knowledge in engineering and architecture in the Azores, although being present in the quality of some of the new buildings, was somehow lost because it was not assumed by the small university.
- 2) To develop an efficient and equitable financial system, not only based on microcredit well diffused in South Asia, but also assuming a vision of a financial centre in the Asian Switzerland. From the Azorean experience it was clear that a lot of bank agencies were established during two decades but without a vision to create a sustainable and adapted financial centre; many of those agencies closed after the reconstruction phase.
- 3) To deploy infrastructure in an efficient way undertaking cost benefit analysis and system analysis for every project; the idea is to avoid the common phenomenon of over construction and the Dutch Disease associated with it. A quick look at some of the infrastructure of Terceira island (sewage treatment plant, roads, schools, hospitals etc.) show a double capacity that was necessary because the economic systems created by external support and infrastructure deployment without adequate feasibility studies generated a long term ruin; in terms of built environment the infrastructure boom that become useless can be worse than the earthquake. Notwithstanding this extra effort in

---

<sup>3</sup> Bhandari RB (2013) – Social capital in disaster risk management; a case study of social capital mobilization following the 1934 Kathmandu Valley earthquake in Nepal Disaster Prevention and Management. Vol 23(4) p.314-328



infrastructure can be targeted to improve the connections with the outside in China, India, Bhutan and Pakistan.

- Finally since the Earthquake created more damage in the Valley of Kathmandu and the capital city still has a considerable part of the population of the country it is wise to attend the spatial redistribution effects of the reconstruction phase because it can increase the problems of spatial justice within the country.

Summing up, the advice I could provide from the far away Azores islands to Nepal is that short term and urgent issues should have in mind the adapted spaces, environments, values and economies that are being created in the long run. The opportunities for knowledge creation on construction and finances can be better used with that long term vision. Regarding this threat, a prospective look into the future will surely help to avoid spatial injustice and the Dutch disease. As highlighted by Dr. Siegfried O. Wolf “the major threat for the stability, peace, and security in the country lies in the long-term process of reconstruction, especially when it comes to the distribution of international assistance”<sup>4</sup>.

---

<sup>4</sup> Wolf, S (2015) - Quake devastation 'can help Nepal's Maoists stage a comeback'. <http://www.dw.de/quake-devastation-can-help-nepals-maoists-stage-a-comeback/a-18426998>