

POST-EARTHQUAKE RECONSTRUCTION: TOWARDS A MUCH MORE PARTICIPATORY PLANNING

Sheng YING

Shanghai Tongji Urban Planning & Design Institute, Shanghai, China
sheng.ying@hotmail.co.uk

Abstract

After the devastating Great Wenchuan Earthquake occurred in May 2008, China responded rapidly to mitigate the losses caused. Post-earthquake reconstruction planning plays a crucial role to the future development of earthquake struck areas. The post-earthquake reconstruction planning work has demonstrated to be an immediate action and tends to be a much more open and participatory. Since the influence of long term planned economy in the past and its centralised administration system, planning in China is comparatively information-close to ordinary people. However, the post-earthquake reconstruction planning turns to be a much wider participatory and more open than before, though it is still immature and there still many obstacles need to be overcome. This paper firstly introduces the Great Wenchuan Earthquake and the quick response of reconstruction planning in China. It depicts the intensive work of the reconstruction planning. Then it reviews the concept of participatory planning and the history of participatory planning in China. Thirdly, it identifies three new trends that a more participatory planning has showed in the reconstruction planning. Lastly, this paper points out some problems still exist in the reconstruction planning.

Keywords: Wenchuan Earthquake, reconstruction planning, public participation

1. Introduction

The western part of China is located on the active Indian-Himalayan seismic gaps. According to a statistic released, more than 550 thousand people have been killed because of earthquakes since 1900, which makes up 53% of the people who died in earthquakes around the world. Since 1949, more than 100 destructive earthquakes have hit 22 provinces of China, which caused 27 thousand people died. The total earthquake affected area has reached 30 thousand km² and approximate 700 thousand houses collapsed (the Ministry of Civil Affairs of the People's Republic of China, 2008). This demonstrates that earthquake is one of the serious natural disasters in China. Figure 1 outlines the recent major earthquakes in China.

Date	Description
12 May 2008	8.0 earthquake in Wenchuan County, Sichuan - 69179 dead (up to 13 July 2008); losses US \$ 20 billion (estimated by AIR Worldwide Corp)
21 March 2008	7.2 earthquake in Yutian County, Xinjiang - damage limited
3 June, 2007	6.4 earthquake in Puer County, Yunnan - 3 dead; losses US \$ 0.3 billion
1 January 2006	6.5 earthquake in Taitung County, Taiwan - 42 injured; losses unknown
24 February 2003	6.8 earthquake in Jiashi, Xinjiang - 268 dead; losses US \$ 1.625 billion
15 January 2000	6.5 earthquake in Yaoan County, Yunnan - 4 dead; losses US \$ 0.2 million
21 September 1999	7.6 earthquake in Hualien County, Taiwan - 2403 dead; losses US \$ 9.2 billion

FIGURE 1. RECENT MAIN EARTHQUAKES WITH MAGNITUDE HIGHER THAN 6.0 IN CHINA
Source: AIR Worldwide Corp (2008) and China Earthquake Authority (2008)

Occurred at 14:28 (local time, 6:28 AM GMT) on 12 May 2008, with the epicentre in Wenchuan, a county about 92 km from Chengdu, capital city of Sichuan province, Sichuan province was struck by an earthquake measured at 8.0 on the Richter scale. As released by the Ministry of Civil Affairs of the People's Republic of China, up to 13 July 2008, 69,197 people have been confirmed dead, 374,176 injured and 18,289 lost.

Just 4 days later, on 16 May 2008, the Ministry of Housing and Urban-Rural Development of the People's Republic of China (MOHURD) urged volunteer planners to support and devise reconstruction plans for earthquake affected areas such as Wenchuan County, Qingchuan County, Beichuan County, Dujiangyan City, Pengzhou City, Chongzhou City, Shifang City, Aba City and so on. With this announcement, major urban planning and design institutes and universities in China have been proactively participating in this grand reconstruction planning work. Within 2 months, planners have investigated the earthquake struck areas and checked the desirable sites for temporary shelters and tents and permanent residential areas and devised 3 years short term reconstruction plan (2008 – 2010) and 10 years long term development plan (2011-2020). On 8 June 2008, the State Council approved *Regulations on Post-Wenchuan Earthquake Rehabilitation and Reconstruction* which is the first regulation formulated for post-earthquake rehabilitation and reconstruction in China. (Xinhua News Agency, 2008) These regulations ensure post-earthquake reconstruction work in a legislated way. The other main guidance *The Work Scheme for Post-Wenchuan Earthquake Reconstruction Planning* was also approved by the State Council on 13 June 2008. These two documents become the main plans formulation basis. The reconstruction planning was claimed to fully consider the diverse concern of ordinary people and undertake a participatory approach.

2. An Intensively Comprehensive Planning Mission

The Great Wenchuan Earthquake was such a destructive one, as it severely struck 3 provinces including Sichuan, Shaanxi and Gansu. Taking Sichuan as an example, up to 12 June 2008, an area of 28 thousand km² has been affected, 129.5 thousand ha farmland, 114.5 ha construction land and 101 thousand ha forests have been destroyed (*Post-earthquake Land Use Plan of Sichuan Province (2008-2010)*, Draft Version, 2008) The figures released by the Ministry of Civil Affairs of the People's Republic of China on 13 July 2008, showed that 69,197 people have been confirmed dead, 374,167 injured and 18,289 lost in the earthquake. On 14 July 2008, the Headquarters of Post-earthquake Resilience and Reconstruction of the State Council identified 51 counties (cities or districts) as the reconstruction planning area. Actually, the reconstruction planning work is much more than that. According to *the Report of Post-Wenchuan Earthquake Reconstruction Land Use Planning of Sichuan Province*, composed by the Department of Land Resource of Sichuan Province, there are 50 counties damaged severely among the 140 counties which were affected by the earthquake. According to Zhiqiang Wu, the Dean of College of Architecture and Urban Planning, Tongji University, Shanghai, also the chief planner of the Expo sites of Shanghai Expo 2010, the reconstruction team led would carry out "one day survey, the second day drawing and the third day construction" way. More than 40 towns' temporary sheltering sites would have to be built within 2 months. (Shanghai Expo 2010 Website, 2008)

Nonetheless, the post-earthquake reconstruction planning is far more than common planning. The response of the volunteer planning teams from different regions of China is obviously quick. Just only 4 days later, on 16 May 2008, the Ministry of Housing and Urban-Rural Development of the People's Republic of China (MOHURD) called for volunteer planners to support and devise reconstruction plans for earthquake affected areas. On 1 June 2008, the officially announced the beginning of reconstruction planning, while the actual reconstruction planning work was much earlier than that.

One of the major difficulties harassing the planning work is that the geological conditions of the earthquake-affected areas are still not stable. According to the statistic released by the China Earthquake Administration, up to 16 July 2008, 18,084 times of aftershocks have been recorded, among which the biggest one was recorded on 25 May with 6.4 M, and 235 times of aftershocks scale higher than 4.0 M with 201 times between 4.0 to 4.9 M and 5.0 to 5.9 M 29 times, higher than 6.0 M 5 times. Until the real situation of geologically confirmed, any rash decision could render an unknown disaster in the future. Thus whether a town or a county should be moved or not could not be decided hastily and those plans are not so easily to be devised.

Even geological disasters have been checked and measured, the reconstruction plans are still not easily to be formulated. Qingchuan County, 200 km away from the epicentre of the great earthquake, has been investigated and surveyed by geological experts from the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources and local experts from Sichuan. A typical case is that the scheme whether Qingchuan County should be moved to other place has been heated debated until January 2009. Eventually, it was finally agreed to move the county to other place.

The other headache troubling the reconstruction teams lies in the lack of reconstruction experiences. Although China is a country accompanying many natural disasters, and even though the Chinese planners involved in the reconstruction planning work are full of passion and commitment, lacking of reconstruction planning experiences is an obvious weakness. At the first period of the reconstruction planning work, many planners were confounded at what to do. And the first plans were just like just ordinary plans, ignoring or at least not fully considered the special aspects of reconstruction. The lacking of experience can also be seen from the *Regulations on Post-Wenchuan Earthquake Rehabilitation and Reconstruction* which is said to be the first regulation formulated for post-earthquake rehabilitation and reconstruction in China (Xinhua News Agency, 2008). Until the catastrophe of the Wenchuan Earthquake, there has been no special legislation on counter-natural disaster response system in the passed 57 years. It is obviously a failure of the disaster response system.

The response of supports from non-affected regions was also extremely quick. On 11 June 2008, the State Council approved *Post-Wenchuan Earthquake Resilience and Reconstruction One to One Support Scheme*, 20 provinces will provide reconstruction planning, public infrastructure restoration, farmlands rearrangement, volunteer teachers, medical doctors and other kind of financial supports to the seriously earthquake-struck areas. As a vital part of the resilience team, thousands of planners from different parts of China rushed to the battlefield.

3. Participatory Planning

According to Taylor (1998: 83): "Since town planning action can significantly affect the lives of large numbers of people, and since different individuals and groups may hold different views about how the environment should be planned, based on different values and interests, it is therefore also a political activity."

In the report *Participatory Planning for Sustainable Communities: International experience in mediation, negotiation and engagement in making plans written by Communities and Local Government, UK*, it defines that:

Participatory planning is a set of processes through which diverse groups and interests engage together in reaching for a consensus on a plan and its implementation. Participatory planning can be initiated by any of the parties and the forms it will take and the timetables are likely to be negotiated and agreed amongst participants. The process is rooted in the recognition that society is pluralist and there are legitimate conflicts of interest that have to be addressed by the application of consensus-building methods. Participatory planning is culturally aware and sensitive to differences in power, and seeks to ensure that these do not pre-determine outcomes. The different parties need to exchange information to explore areas of common ground and compromise and to find ways of reducing the extent and intensity of disagreements. No party should lose out entirely.

The emergence of participatory planning began in the 1960s in the Western countries, which becomes one of the most important principles in modern planning theories. Sherry Arnstein (1996) published *A Ladder of Citizen Participation* in 1969, which vividly depicted the public participation as a ladder with eight rungs. See Figure 2 for Sherry Arnstein's participatory ladder.

The later advocacy planning and collaborative planning also strongly spread the idea of participatory planning. Cliff Moughtin (2003) in his classic book *Urban Design: Method Techniques* points out that "Advocacy planning is particularly supportive of civil and political rights together with community involvement in development which is so important in the theory of sustainable development." Again Jonathan Pugh (2003) maintains that "More specifically, therefore, it is now widely accepted that public participation must be an integrated component of moves towards sustainable development." John McCarthy and Greg Lloyd (2007) in their book

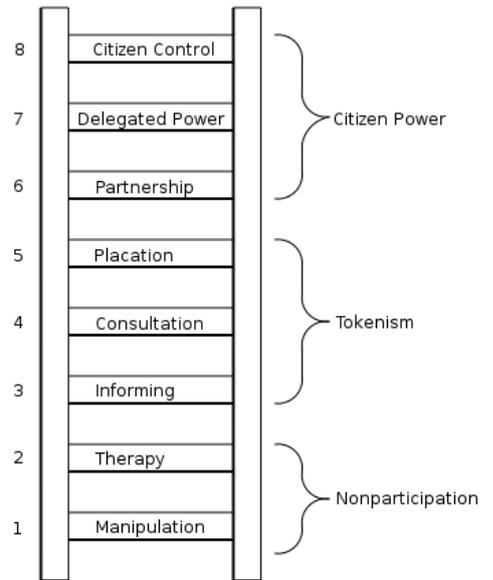


FIGURE 2: EIGHT RUNGS ON THE LADDER OF CITIZEN PARTICIPATION
 Source: *A Ladder of Citizen Participation* (Sherry Arnstein, 1969)

Partnership, Collaborative Planning and Urban Regeneration conclude that “increased participation... can lead to increased social cohesion and an increase in the quality of life...”

The public participation notion in planning in China was introduced in 1980s. Later, in 1996, Shanghai launched a city administration system featured as “Two hierarchs of government, three hierarchs of administration and four hierarchs of grid”. Shanghai began to encourage an open planning administration procedure in July 1997. And Changning District of Shanghai was selected as a pilot district to practice public participation in urban planning. It even pushed the release of Methods for Public Participation in Urban Planning. On 1 July 1998, the City of Shenzhen approved Regulations on Urban Planning of Shenzhen which established a public participation system legally.

But even though, the urban planning in China is still comparatively close to most ordinary people. There are too much administrative orders and decrees. In terms of community planning, the government and developers are still the predominant powers. The level of public participation in China is still low. The types of participation are generally informing, questionnaires and proposed plans demonstration. The ordinary people have little say on the formulation of the plans, which in turn has also caused the undesirable implementation of many plans in China.

4. Towards a Much More Participatory Planning

China has long been influenced by planned economy and centralised administration system. “*The urban planning system has undergone for more than half a century. From plans formulation to urban planning administration and urban construction and development, they are basically all operated by the government. And urban planning is a complete government work.*” (Zonghuang Qin, Zhigang Wang and Yinghui Liu, 2007)

According to Juan Hao (2007), Deputy Chief Planner of Shanghai Pudong New Area Planning and Design Institute, she identifies two main reasons which hinder the development of public participation. One is that although the market economic system has been established, planning decision making has not shifted from government deciding only to a multi-stakeholder involving system. The government only recognises the multi-units of economic structure but not the planning decision-making. The other is that the participation of the public will slow down the work efficiency and increase administrative costs. Thus,

although the government recognises public participation is a must procedure in building a democratic society theoretically, it provides few concrete supports and accessible opportunities for public participation in planning.

Considering the analysis above, it seems that at such a special time, few people will concern the public participation in the post-earthquake reconstruction planning after the Great Wenchuan Earthquake. However, the reconstruction planning process in the earthquake demonstrates to be much more open and participatory than ever before.

Since the start of reconstruction planning work, officially announced as 1 June 2008, mass media call for “Let People be Involved in Post-earthquake Reconstruction” (Xinhua News Agency, 2008), while Deputy Minister of the Ministry of Housing and Urban-Rural Development of the People’s Republic of China Baoxing Qiu addressed that the formulation of reconstruction plans should “respect the wishes of ordinary people” at the Post-earthquake Reconstruction Planning One to One Support Work Conference in Chengdu, Sichuan (Sina News, 2008). These actions echo the central government’s comparatively open policy of the earthquake.

The people in the earthquake-affected areas demonstrate to be more enthusiastic to participate in the reconstruction planning. On 30 June 2008, more than 20 ordinary people took part in the Dujiangyan Reconstruction Planning Ideas Brainstorming Conference, which was a major improvement since the ordinary people could only occasionally be asked to advance their opinions after the formulation of the plans in the past. Moreover, because of the possibility of movement to other places, people concern very much on the tenure of their houses which were destroyed in the earthquake. The devastating earthquake pushed them to nearly own nothing, but also stirred them to safeguard the basic rights for living.

Planners also had more chances to pay particular attention to the people’s concern and adopted their opinions to the formulation of reconstruction plans. Before the formulation of the reconstruction plans, especially when whether a decision on the movement of a settlement needs to be made, the people’s attitudes will be fully evaluated and considered. Together with the opinions from the experts and the government, the planners will finally devise a comprehensive reconstruction plan for the government. Jun Qu, Head of Bureau of Urban Planning of Dujiangyan City, pointed out that during the formulation of the reconstruction plans, indeed, many ideas and opinions from the public have been adopted.

Last but not the least, the call for reconstruction plan formulation itself turned to be more open, transparent and participatory. Besides domestic planning firms, more than 10 international planning firms, including planning firms from the UK, the US, France, Japan and so forth have been permitted to

participate in the reconstruction planning competition of Dujiangyan City, which was severely affected by the earthquake. The process of the reconstruction planning also transparently demonstrated on the official website of Dujiangyan Urban Planning Bureau.

Although by comparing to Sherry Arnstein's participation ladder, the level of participation in the post-earthquake reconstruction planning is still low, in terms of the public participation, three new trends can still be identified. On one hand, the ordinary people became much more concern about their own rights and demonstrated to be more eager to participate in planning. On the other hand, the government is getting more open to the public opinion. And lastly, the planners are more free and willing to listen to the voices from local people and reflect them to their formulation of plans.

The reasons for the much improved reconstruction planning procedures lie in the following aspects:

Firstly, the Wenchuan Earthquake was such a devastating disaster that its influence is far-reaching. As stated by China Earthquake Administration, the Wenchuan Earthquake is the largest earthquake since the establishment of China P.R.. The earthquake affected area is as large as half of Great Britain. The scale of the earthquake drew great attention from the whole world. The devastating earthquake nearly deprived the whole assets of ordinary people in the earthquake affected areas. In view of this situation, the people needed to let their voices be heard by the government especially during the reconstruction planning which would influence their future life.

Then, the mass media, especially the Internet, have become the great strength in monitoring the action of the government. Although the government this time has showed a very open, at the very beginning of the earthquake, there was still a certain degree of registration to the reports. However, with the increasing reports through the Internet, the government changed its attitude to a much open manner. With the monitoring of the mass media, the public became braver to safeguard their own rights and displayed more eager to express their voices.

Moreover, as volunteer planning, the planning itself is free of charge which let the planners feel less restriction. They could hear more voices from the public and those opinions could be reflected during the formulation of the reconstruction plans.

Last but not the least, the monitoring of the netizens has become one of the important social strengths. According to a figure calculated by China Internet Network Information Centre, the number of Chinese netizens has reached at 210 million, which is the largest in the world (China Internet Network Information Centre, 2008). When the common places can not post their opinions, the internet has become one of the major ways to forward opinions. The keen netizens keep posting the first hand

information of the earthquake from the very beginning of the earthquake, which is somewhat more convincing and shocked the people outside of the earthquake affected areas. The monitoring function is also far more rapid than the conventional monitoring from the government itself.

5. Problems Still Exist

Although the post-earthquake reconstruction planning turns to be a much more open and participatory than ever before, there is still a number of problems in the reconstruction planning.

Although the response of Chinese planners and the reconstruction planning process have been characterised as extremely quick, the quick planning may not practically result in the hope of a rapid recover from the disaster. Since the planning work started immediately after the earthquake, in such a short period, it is hard to collect accurate relevant data such as the total losses, the geological stability of the earthquake-affected area and so on for the reconstruction planning.

Moreover, although the planning procedures in the reconstruction planning are much more participatory than ever before, since a majority of ordinary people still have not recovered from the shadow of the disaster, they either have no passion to care about it or have not generated their opinions thoughtfully. Besides, even though the ordinary people's opinions have been weighted much more than ever, how to tactically treat those opinions is a challenge for the Chinese planners.

Lastly, there are a number of new reconstruction planning criteria have been formulated by China Academy of Urban Planning & Design and Sichuan Institute of Urban Planning and Design, however, the reconstruction plans are still much more of physical planning, other aspects such job opportunities creation and so on have little be considered, although it is of great importance in post-disaster reconstruction planning. "*It is important to emphasize that rebuilding jobs and livelihoods is a central element of a people centered recovery strategy.*" (BAPPENAS and The International Donor Community, 2005)

6. Conclusion

The Great Wenchuan Earthquake is such a devastating natural disaster that attracts the great concern from all over the world. From a planning perspective, it poses great challenges for Chinese planners. In seeking to mitigate the affects of the earthquake, the planning procedures have also been improved a lot and have showed to be a much more participatory process, which is a great leap-forward in China.

For a region struck by this enormous devastating disaster, it is of great importance and urgent to reconstruct. Post-earthquake reconstruction not only provides urgent temporary shelters located in safe areas for refugees, but can lay down a foundation for the future development and help to promote resilience in the earthquake affected areas. Moreover, the reconstruction can also be helpful to console people and rebuild confidence.

The future development of earthquake affected areas depends on the sustainability, effectiveness and commitment of reconstruction plans implementers. Obviously, in a sense, the reconstruction also grounded the field for the development of Chinese planning system, especially the emergency response planning system. Although not very mature, the reconstruction planning offers a chance to improve the planning system. To what extent, the more participatory will be, is an issue to be answered and to be promoted by the whole society in the future.

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