Priority 4: “Build Back Better” in recovery, rehabilitation and reconstruction

Recommendations

1. The primary goal of recovery, rehabilitation and reconstruction should be “building disaster-resilient cities and communities with long term vision” to be better prepared against possible future disasters.

2. “Build Back Better” should include “rebuilding livelihoods,” “rebuilding economy” and “rebuilding regional communities,” as common paradigms to be shared by relevant stakeholders in the recovery, rehabilitation and reconstruction process.

3. The process of recovery, rehabilitation and reconstruction needs to be structured systematically. Indicators on “Build Back Better” need to be developed to measure the achievements and progress towards “building disaster-resilient cities and communities” and “rebuilding livelihoods, economy and regional communities”. Guidelines based on scientific evidence should be formulated, provided by multi and interdisciplinary perspectives of science.

4. Cities and communities need to continue their efforts for improving and renovating themselves with the aim of building resilient societies. These efforts should not presuppose disasters (including devastating cases) alone. However, in the unfortunate event of a disaster, recovery, rehabilitation and reconstruction should be conducted with the same aim. To this end, cities and communities should, prior to disasters and based on scientific scenarios on possible disaster damage, plan for disaster recovery, rehabilitation and reconstruction processes and prepare legislations and procedures, land tenures and civic rights, as well as public access to such scientific information, so as to gain prior public consensus on post-disaster actions and to enable their smooth implementation after a disaster.

5. Science and research can provide an essential foundation to support decision makers in the private sector and government as they seek to build back better. Case studies and other research tools should be used to identify and assess options to strengthen recovery and rebuilding efforts. This research should focus on issues that include the identification of alternative rebuilding strategies, sources of funds for reconstruction, evidence to measure the cost and benefit of specific enhancements, risk of delays in recovery time, and public acceptance of change.

Background and key directions

The primary purpose of recovery, rehabilitation and reconstruction is to rebuild livelihoods, economy and regional communities. However, such rebuilding must not be just bringing them back to what they were before the disaster; rather, it should be building them back better towards a better future for the city or the region. In the aftermath of recent disasters, various actions are taken under the name of “recovery, rehabilitation and reconstruction.” However, in reality, such actions are often
taken without common understanding of “what are the actions which lead to successful recovery, rehabilitation and reconstruction” and “how can successful recovery, rehabilitation and reconstruction be appreciated”, which often ends up with merely passing the time with un-concerted actions.

The Great Hanshin-Awaji Earthquake, which hit the city of Kobe in 1995, is the first disaster whose nearly decadal recovery, rehabilitation and reconstruction process from the earthquake was scientifically recorded. This full record found that the physical recovery was conducted with a heavy emphasis on the reconstruction of social infrastructure, and points out that the affected population felt a real sense of ease of life when their communities, economy and livelihoods were restored.

On the other hand, great disasters occurred in 2010 for example hurricane Katrina 2005 in the United States or the Mentawai tsunami or Sinabung volcano eruptions in Indonesia in 2010, and other examples had changed the social fabric of the society, being unprepared with the unbearable changes after disasters, and taking communities ‘far’ from their original livelihood situations due to land tenure conflicts, segregation issues, access to livelihood infrastructures, to name a few. In most unfortunate cases, communities were not able to return back to their ‘normal lives’. Such challenges are partly caused by the significant deficient contributions of social perspectives in understanding the complexities of recovery, rehabilitation, and reconstruction processes.

An unfortunate disaster can be seen as the biggest chance to “Build Back Better.” Ideas and opinions for the realization of a resilient community and the improvement of livelihoods should be sorted out and presented as common understanding to execute recovery, rehabilitation and reconstruction, with indicators developed to visualize the progress of the recovery process.

Explanation of recommendations

1. **The primary goal of recovery, rehabilitation and reconstruction should be “building disaster-resilient cities and communities with long term vision” to be better prepared against possible future disasters.**

   With a view to “Build Back Better”, cities and communities should take necessary action during recovery, rehabilitation and reconstruction after a disaster to increase resilience to next and future disasters. The relocation of residential areas to other locations with lower disaster risk is one example to strengthen the structural resilience of cities and communities and thus reduce potential disaster risk.

   After the Great East Japan Earthquake in 2011, the Japanese government established the Act on Development of Areas Resilient to Tsunami Disasters. Taking lessons from the tsunami disaster, the law requires local governments to zone the area according to tsunami risk levels using scientific risk assessment and to limit land use and develop an evacuation plan in each zone. The law designates places where people are at risk of being killed or injured due to tsunamis as “tsunami disaster special
warning zones (or called orange or red zones),” and allows local governments to officially advise residents living in such places to relocate. In relation to this provision, local governments can also develop land on higher ground for a “tsunami disaster prevention residential area” in which houses, schools, hospitals and other facilities can be built at once. These measures in the law are defined based on the idea of building multiple protections against hazards, along with the elevation and improvement of seawalls.

2. **“Build Back Better” should include “rebuilding of livelihoods,” “rebuilding of economy” and “rebuilding of regional communities,” as common paradigms to be shared by relevant stakeholders in the recovery, rehabilitation and reconstruction process.**

   “Rebuilding of livelihoods,” “rebuilding of economy” and “rebuilding of communities” should be set as the goals of recovery, rehabilitation and reconstruction. The “reconstruction project model,” which conceptualizes the relationship between means and ends, should be used as the paradigm for the implementation of recovery, rehabilitation and reconstruction policies. Rebuilding livelihoods of disaster survivors depends on rebuilding houses and restoring jobs, and rebuilding houses and restoring jobs rely on rebuilding communities and economy in the whole area. Furthermore, rebuilding economy and communities cannot be realized without rebuilding social infrastructure.

   In the case of the Great Hanshin-Awaji Earthquake, it took two years to complete the reconstruction of social infrastructure and five years to complete the reconstruction of houses, which is only half of the work for “rebuilding of communities,” however. As many as ten years were needed to implement the recovery, rehabilitation and reconstruction plans for cities and communities in the affected area. As the economy at that time was not necessarily great, a decade was not even enough to finish the work of revitalization of the economy and local businesses as part of “rebuilding of economy,” and because of that, “rebuilding of livelihoods” is reported to have reached only 80% of the pre-disaster level even a decade after the earthquake.

3. **The process of recovery, rehabilitation and reconstruction needs to be structured systematically. Indicators on “Build Back Better” need to be developed to measure the achievements and progress towards “building disaster-resilient cities and communities” and “rebuilding livelihoods, economy and regional communities” Guidelines based on scientific evidence should be formulated.**

   A common yardstick is necessary to evaluate the progress and achievement of recovery, rehabilitation and reconstruction. The monitoring of the reconstruction of social infrastructure, communities, economy and livelihoods and the categorization and development of comparable and verifiable indices are necessary steps to take towards the realization of science-based recovery, rehabilitation and reconstruction.
In recovery, rehabilitation and reconstruction, two types of indices are needed: macro indices to evaluate the overall progress concerning a city or community and micro indices to evaluate the progress concerning individual disaster survivors and businesses. Existing macro and micro indices used in normal times can be employed to evaluate the progress made by the country or some areas, while new indices are also essential to evaluate recovery, rehabilitation and reconstruction.

4. Cities and communities need to continue their efforts for improving and renovating themselves with the aim of building resilient societies. These efforts should not presuppose disasters (including devastating cases) alone. However, in the unfortunate event of a disaster, recovery, rehabilitation and reconstruction should also be conducted with the same aim. To this end, cities and communities should, prior to disasters and based on scientific scenarios on possible disaster damage, plan for disaster recovery, rehabilitation and reconstruction processes and prepare legislations and procedures, so as to gain prior public consensus on post-disaster actions and to enable their smooth implementation after a disaster. Therefore not only scientific scenarios needed on possible disaster damage, but science-based foresights on livelihood after disasters should have equal attention. In these cases, studies related with land rights and ownership, gender issues, child protections, and understanding on its social factors are considerably important.

One of the reasons for delays in recovery, rehabilitation and reconstruction after a disaster is that residents and other stakeholders often need a considerable amount of time to form a consensus on the future vision of cities and communities after a disaster. Past cases indicate that recovery can take place faster in communities that had continued discussing the matter before a disaster. A disaster typically brings about confusion in the area and among stakeholders, which interrupts the realization of cities and communities with better resilience to disasters.

Recovery, rehabilitation and reconstruction after a disaster are a great chance for communities to make drastic changes in social structure and other aspects to increase their resilience to disasters by learning lessons from current and past disasters and overstepping the existing concept of how a city or community should be structured. Equally important is planning recovery, rehabilitation and reconstruction before a disaster. However, since only a limited number of cities and communities have addressed this issue, more action should be taken on this matter including studying methodologies.

5. Science and research can provide an essential foundation to support decision makers in the private sector and government as they seek to build back better. Case studies and other research tools should be used to identify and assess options to strengthen recovery and rebuilding efforts. This research should focus on issues that include the identification of
alternative rebuilding strategies, sources of funds for reconstruction, evidence to measure the cost and benefit of specific enhancements, risk of delays in recovery time, and public acceptance of change.

Build back better is a relatively new concept in disaster risk management. Presently there are relatively few documents examples available as a guide to support action by decision makers in private industry and government. There would be considerable international benefit if emerging build back better decisions are documented, perhaps in the form of case studies, to share this experience. Some issues that will likely be of interest include the identification of reconstruction alternatives in the period of crisis when most parties are focused on rebuilding as quickly as possible. How are alternative approaches identified? Much concern also focuses on financial issues. Where can funds be sourced to pay be better construction? A process of better construction may increase the time required to rebuild as alternatives are assessed and implemented. Does the risk of delay offset the potential benefits of better construction? In addition, the parties affected by disaster will have specific views about change. Some may prefer a return to old practices while others welcome renewal. What evidence is available about public acceptance of change? Research on critical issues can help facilitate decisions to build back better.