19) Preparing to formulate reconstruction city development plans

[emergency response phase, recovery phase]

[Issues] (1) How to organize information, conditions, and other data to formulate plans.
(2) How to secure organizational structures and human resources required to formulate plans.
(3) How to determine the emergency measures needed before the start of reconstruction projects.

[Situation and issues created by the Great East Japan Earthquake]

The 2011 Tohoku earthquake off the Pacific coast was the largest mega-thrust earthquake in recorded history. The ensuing tsunami spread across a wide area and caused extensive damage primarily in the coastal areas. Inevitably, urban areas and villages that had been entirely washed away had to be rebuilt from the ground up. Out of necessity, some local authorities needed to consider city development in a new light because existing comprehensive plans and city development master plans did not contain preliminary arrangements for reconstruction.

Many local authorities affected by the disaster had limited experience in project-based city development. With administrative functions severely compromised in some areas, the lack of information, human resources and technical expertise posed a challenge in terms of how to proceed with the process of ascertaining damage and formulating plans.

Many of the local authorities impacted by the disaster started to explore reconstruction-based city planning sometime in June 2011, when the Ministry of Land, Infrastructure, Transport and Tourism launched a study on reconstruction methods for urban areas affected by the tsunami. However, these areas were compelled to formulate their own plans, as specific project systems and financial resources for reconstruction-based city development had not been finalized since the Act on Special Zones for Reconstruction in Response to the Great East Japan Earthquake and General Plan for Subsidies for Reconstruction from the Great East Japan Earthquake were not enacted until nine and ten months later, respectively.

A secondary issue lay in the need to find a balance between building restrictions for planned city development and in helping the affected population rebuild as quickly as possible, since decisions on specific reconstruction plans and projects took time.

[Initiatives in the aftermath of the Great East Japan Earthquake]

・Assessing damage conditions and examining patterns for reconstruction through surveys directly supervised by the Ministry of Land, Infrastructure, Transport and Tourism (Issues 1, 2)

The Ministry of Land, Infrastructure, Transport and Tourism launched and directly supervised a joint survey in June 2011 with related ministries and agencies to examine methods for reconstructing urban areas affected by the tsunami. The survey was first conducted in 62 municipalities in the six prefectures affected by the tsunami, namely, Aomori, Iwate, Miyagi, Fukushima, Ibaraki and Chiba,

and covered tsunami inundation areas, damage to buildings and infrastructure, and status of evacuation of residents. Results of the survey were provided to local authorities and published online. In response to requests by municipalities, the Ministry of Land, Infrastructure, Transport and Tourism also studied reconstruction patterns in urban areas affected by the disaster and specific reconstruction methods in urban areas in 43 municipalities in six prefectures, in accordance with damage conditions, urban characteristics and community intentions, and provided assistance to municipalities for the formulation of reconstruction and project plans. This survey was conducted in coordination with local authorities and in close contact with local communities, which included the opening of local consulting offices for the survey. Local authorities involved in implementing the survey were able to utilize the results to formulate reconstruction plans.(1)

・Planning work implemented with various specialized sectors (Issue 2)

Planning work for reconstruction from the Great East Japan Earthquake far exceeded the ability of any one local authority to handle. Support staff were dispatched from the national government, prefectures and other local authorities, with assistance provided by the Urban Renaissance Agency (UR), in addition to the use of consultants from the private sector.

The reconstruction vision in the Kitakami district of Ishinomaki City, Miyagi Prefecture was formulated with active support from universities and private organizations and reflected detailed feedback from residents affected by the disaster, not simply through the government's efforts alone. Including third parties in the support process allowed the government and disaster victims to engage in forward-thinking discussions and avoid confrontation.(2) Support staff were dispatched to Noda Village, Iwate Prefecture (Case study 22-1) at an early stage (April 2011), which made it possible to provide technical expertise and access to information on other areas, starting in the formulation stage for reconstruction city development plans.(3)

→*Related topics: 61) Dispatching support staff (Initiatives by supportive local authorities)*

・Restrictions on construction of buildings based on the Building Standards Act and other laws and regulations (Issue 3)

Miyagi Prefecture and Ishinomaki City designated building restriction zones on April 8, 2011 in accordance with Article 84 of the Building Standards Act, and implemented restrictions on the construction of buildings until May 11, 2011, in order to prevent construction that could hinder the planned development of urban districts in disaster areas. Both Miyagi Prefecture and Ishinomaki City designated building restriction zones in accordance with provisions in the Act on Special Measures Concerning Building Restrictions of Urban Districts Damaged by the Great East Japan Earthquake (enacted and enforced on April 29, 2011), which restricted or prohibited construction for a period of six months (or up to eight months if extended) from the date the disaster occurred. With the exception of some areas, restrictions were in place until November 11, 2011.(1) In contrast, Iwate and Fukushima prefectures did not designate building restriction zones as per Article 84 of the Building Standards Act. Iwate Prefecture briefed municipalities in disaster areas about the details of systems in place for disaster risk areas (Article 39 of the Building Standards Act) or urban disaster recovery

promotion areas (Act on Special Measures concerning Reconstruction of Urban Districts Damaged by Disasters) and appealed for them to consider designating these zones, with numerous municipalities responding by calling on residents to voluntarily refrain from building for a set period of time.(4)(5)

[Lessons learned and know-how gained]

(1) Clarify processes, timetables and systems for formulating and executing plans as early as possible after a disaster.

- Clearly indicate the processes, timetables and systems that will be used for reconstruction in the future as early as possible after a disaster while assessing damage and organizing records of past reconstruction efforts.
- In this context, surveys should be conducted in a timely and appropriate manner in order to determine the damage in urban areas and the status of disaster victims.

(2) Ensure that systems are in place to formulate reconstruction plans.

- Establish systems within the local authority in order to formulate reconstruction plans in line with the policies in (1) above, and secure the human resources required, as necessary, including support staff from other local authorities, academic experts, consultants, and NPOs engaged in city development.

(3) Examine building restrictions in urban areas in cases of severe damage.

- Building restrictions should be considered for a set period as an emergency measure to prevent construction that could hinder planned development in urban areas, if extensive damage is found in urban areas and a specified period of time is required to formulate reconstruction plans and launch projects. When considering building restrictions, allowances will be made for damage conditions, timetables for formulating reconstruction plans and the status of rebuilding by disaster victims themselves, since there are several methods that can be employed.

(4) Prepare reconstruction city plans before a disaster occurs.

- In the immediate aftermath of a disaster, the above measures ((1) to (3)) will be implemented in a limited period of time and under restricted systems. Preparations should be made to develop reconstruction city plans prior to a disaster, since disasters are expected to involve multiple challenges from the perspective of time and systems, and present situations where it is difficult to make decisions calmly (e.g., incorporate reconstruction systems, procedures, and training drills in local disaster prevention plans; take action to prevent tsunami disasters based on the Act on Development of Areas Resilient to Tsunami Disasters.) Another effective method would be to incorporate activities to prepare for reconstruction in advance in the action plans of municipalities related to urban planning.

- Specific initiatives involved in the development of reconstruction urban plans before a disaster occurs include: the collection and organization of basic data on land use conditions, infrastructure development and other information required to formulate reconstruction plans; continuous updates and upgrades; and verification of systems for reconstruction that set out the roles and chains of command for stakeholders involved in reconstruction. Building cooperative and trusting relationships within local authorities, as well as with outside organizations, and establishing systems before a disaster occurs are also effective measures.
- Issues inherently found in city development emerge or accelerate in a disaster, so it would be effective to look ahead to the future when examining reconstruction city planning by confronting changes in socioeconomic conditions, such as population decline and aging, before a disaster occurs.
- Reconstruction city planning is based on the objectives in a municipality's comprehensive plan, which signals basic approaches to city development before a disaster occurs, and urban structures for the future in city development master plans. However, the direction of conventional city development may need to be reconsidered if a large-scale disaster destroys urban areas and significantly impacts socioeconomic activities. To prepare for such a development, the direction of urban structures for reconstruction can be incorporated into municipal master plans, if needed, in light of damage conditions and public intentions.

* Refer to Guidance on city development to recover from damage from tsunamis and Guidelines for preparations for reconstruction city planning (Ministry of Land, Infrastructure, Transport and Tourism) for more details on the above.

Refernces

(1) 国土交通省「東日本大震災の記録」2012 年３月 11 日　https://www.mlit.go.jp/common/000208803.pdf
(2) 国土交通省都市局「東日本大震災による津波被害からの市街地復興事業検証委員会第２回事務局説明資料」2020 年９月　https://www.mlit.go.jp/toshi/content/001365987.pdf
(3) 野田村役場地域整備課ヒアリング(2020 年 10 月 26 日)に基づく
(4) 贄田純平・姥浦道生・苅谷智大・小地沢将之「東日本大震災後の初動期における建築規制とその空間形成への影響に関する研究」都市計画論文集 Vol.53 No.３ 2018 年 10 月
(5) 岩手県県土整備部建築住宅課「東日本大震災津波対応の活動記録～岩手県における被災者の住宅確保等のための５か月間の取組み～」2011 年 10 月
https://www.pref.iwate.jp/kurashikankyou/kenchiku/saigai/tsunami/1010325.html