

Analysis of Recovery Policy of Japan in Post 2011 the Great East Japan Earthquake and Indonesia in Post 2004 Aceh and Nias Tsunami

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The devastating earthquake and tsunami in Banda Aceh in 2004 and Tohoku in 2011 had to go through reconstruction and recovery process. Due to this, both Japan and Indonesia government established reconstruction guidelines in some layers of governance level. This paper aimed to find the relation between those policies to the implementation in local and community level, and to analyze the comprehensiveness and integration in those policies.

Keywords : *reconstruction and recovery policy, comprehensiveness, integration, community participation.*

1. Disaster Overview and Current Situation

(1) Japan Case – the Great East Japan Earthquake and Tsunami

The Great East Japan Earthquake and Tsunami occurred on March 11th, 2011, in which total fatalities and missing were 19,295 people¹⁾. There were at most about 124 thousand people evacuated in June, 2011²⁾. The tsunami hit 62 municipalities in 6 prefectures and the inundated area expanded to 528 km²³⁾.

Kato explained the feature of this disaster as follows. First, this occurred in declining era of Japan. Second, the damaged area extended extremely broad. Also, the damage is quite serious. And the situation is beyond the existing urban planning and disaster management system in Japan⁴⁾.

(2) Indonesia Case - Nanggroe Aceh Darussalam and Nias Islands Tsunami and Earthquake

The earthquake and tsunami in Nanggroe Aceh Darussalam and Nias Islands hit most of the coastal areas in December 26th, 2004. It was 8.9 Richter scale earthquake, which occurred below the Indian Ocean, northwest of Sumatra Island, caused tsunami waves mostly in part of Aceh and Nias in Indonesia, part of Thailand, Sri Lanka, Maldives, Bangladesh, Myanmar, and even Somalia in East Africa⁵⁾. The casualties in Aceh and Nias were 635,384 people displaced, 127,720 people killed, and 93,285 people were missing¹⁾. 139,195 houses, more than 73,000 hectares of agricultural land, and more than 5,690 public facilities were destroyed⁶⁾.

2. Reconstruction Process

(1) Legal Framework of Reconstruction

• Japanese Case

After the disaster, the Reconstruction Design Council was organized by the government in order to raise the recovery vision and ideas of policies for reconstruction⁷⁾. It consisted of 12 external experts from politics, economy, architecture, urban planning, disaster prevention, folklore, drama and religion, and the governors of the most severely affected 3 prefectures⁸⁾. Their Report of Recommendation was submitted to the government on June 25th, 2011.

At the same time, the government settled the Basic Act on Reconstruction in response to the Great East Japan Earthquake on June 24th. This contains general principles, the organization

system and special programs for the reconstruction⁹⁾.

The Reconstruction Headquarters, which consisted of all of the ministers, compiled the Basic Guidelines for Reconstruction in response to the Great East Japan Earthquake on July 29th, 2011. These guidelines basically show how the government helps the municipalities, who are the main stakeholders of reconstruction. It mainly contains basic reconstruction concepts, general systems for some parts of this reconstruction, detailed policies and measures related to each component, and organization system of the government¹⁰⁾.

The Reconstruction Agency was settled in February 2012 in order to be a one-stop manager for the affected municipalities by connecting their needs to the various ministries, creating or managing the governmental policy of reconstruction across the ministries and distributing the subsidies¹¹⁾.

After that, by the end of May 2012, all of the municipalities (besides in Fukushima Prefecture) completed their master plans for reconstruction^{12) 13)}.

The planning and implementation process was left to the decision of each municipality. In general, the municipalities requested construction consultants to draw reconstruction plans, and hold explanation meetings for the affected residents mainly about structural reconstruction plans. Also, they have to consult with the Reconstruction Agency on the plan to get permit before receiving the governmental subsidies¹⁴⁾

• Indonesia Case

Following the devastating tsunami in 2004, a recovery guideline was made by Bappenas (National Development Planning Agency), a coordinating body of some ministries who establishes the National Planning Document. The Recovery Guideline consists of several parts, which are the Basic Principles, General Policy, and Elements of Recovery which was explained in the 11 books of recovery (Master Plan for Rehabilitation and Reconstruction for the Region and People of the Province of Nanggroe Aceh Darussalam (NAD) and Nias Islands of the Province of North Sumatra).

The Basic Principles contains some principles, such as community-oriented and participatory, sustainable development, holistic, integrated, efficient-transparent-and accountable, effective monitoring and evaluation, etc.⁵⁾

Following the basic principle is the General Policy, which has four main components, such as the reconstruction of community, reconstruction of economy, reconstruction of infrastructure and housing, and reconstruction of governance⁵⁾.

The Basic Principles and General Policy were realized in the 11 sectors of recovery plan, which was used to lead the recovery process. This was written in the Regulation of the President of Republic of Indonesia Number 30 Year 2005 on Master Plan for Rehabilitation and Reconstruction for the Regions and People of the Province of Nanggroe Aceh Darussalam and Nias Islands of the Province of North Sumatra. Those 11 sectors are 1. Spatial planning, 2. Environment and natural resources, 3. Housing and infrastructure, 4. Economy and labor, 5. Regional institutions or district governance, 6. Education and health, 7. Religion, socio-culture, and human resources, 8. Law or jurisdiction, 9. Security and defense, 10. Governance or supervision and management, and 11. Funding⁵⁾.

This recovery guideline was formed to be implemented by BRR (NAD-Nias Rehabilitation and Reconstruction Agency). BRR itself was formed by the president one day after the master plan was developed¹⁵⁾. It was formed to take the lead of the reconstruction process in Aceh.

The recovery process of Aceh, as planned in the Master Plan for Rehabilitation and Reconstruction, was done in 5 years period (from 2006 until 2010). The cooperation between various stakeholders, especially NGOs and local community plays important role in the recovery process. The involved stakeholders during the participatory practice in recovery were the local Acehnese people, religious leaders, the Indonesian government officials, foreign government representatives and NGOs¹⁶⁾. According the fulfilment of the tasks, BRR was dissolved in 2010. Afterwards, the development process was based on the common process of development which is planned every 5 years.

3. Analysis and Discussion

(1) Common necessity of comprehensiveness and integration

Comprehensiveness is required universally in disaster recovery process to cope with various aspect of the damage. In situation where any policy could be implemented easily, such as in a small scale disaster, proper recovery would be done with the existence of comprehensiveness only. But in these Japanese and Indonesian case, the disaster is large in terms of scale and devastating. Moreover, resources for recovery such as manpower, funds and potential of the region are limited. In such situation, besides comprehensiveness, integration is also needed as a factor to enhance the effectiveness of recovery.

(2) Comprehensiveness and integration implied in the policies

From the Japanese reconstruction policy, it is implied that comprehensiveness is what is achieved when ministries or departments carry out programs within their own fields. And integration is the status of initial abstract concept related to plural fields. In the policies, such concept should be separated to be practiced and subsequent integration is not intended.

From Indonesia's policy of recovery, integration is explained as the "spatial integration of the sectoral and regional policies which is described in the work plan, based on the location, activity conducted, party performing the activity concerned, time of implementation, and funding source"⁵⁾. There is

integration between community, economy, infrastructure and governance. The involvement of 11 sectors of recovery is the implied meaning of comprehensiveness in Indonesia.

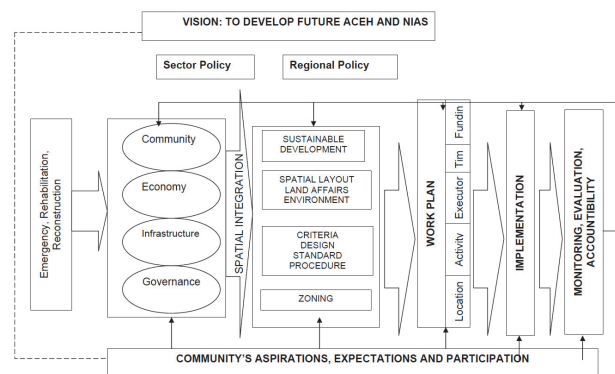


Fig. 1 Framework of NAD and Nias Islands-North Sumatra Rehabilitation and Reconstruction Planning⁵⁾

(3) Diagrams of reconstruction planning system

Fig. 2 and 3 show the entire reconstruction planning system in Japan and Indonesia.

• Japan case

The basic structure is as follows; in the beginning, abstract concepts are worked out; then they are broken down into specific programs or projects.

On the top of the diagram, the Report by the Reconstruction Design Council provides an entire vision of recovery, basic concepts against tsunami disaster and some specific policies⁸⁾. The Basic Act complements this with official declaration of the government about financial resources, special zoning system and establishment of the Reconstruction Agency⁹⁾. The shaded small circles in this layer mean specific policies which could be directly and commonly applied such as special zoning system, classification of structural reconstruction measures based on geographical features of the affected regions, role distribution among public sectors and reconstruction subsidy program.

In the second layer, the Basic Guidelines were made in accordance with the previous two documents, but the vision of entire recovery seems to become vaguer. Also, the concepts inside seem to have shrunk compared to the first layer.

Then, collective programs from the related ministries follow^{17) 18)}. These correspond especially to the chapter 5 in the Basic Guidelines, which contains components of reconstruction covering the entire view of the government. Those programs are independent of each other.

At the same time, municipality makes its own reconstruction plan. It includes the entire recovery vision of their region and conceptual goals as well as the Reconstruction Design Council. And these concepts are broken down into specific projects and they can choose from the governmental programs. The detail of the concepts is a little different from the national government, while the point of view is similar. However, the governmental policies can not completely fulfill the municipalities' needs. Thus, the Reconstruction Agency between the national government and the municipalities was expected to fill the policy lack by creating new systems or programs, although in fact this function does not work. Another function of this agency is to check the municipalities project plans if they are worth giving the subsidies. Since all of the costs are paid by the

national government, the Reconstruction Agency often rejects the municipalities' project plans.

Finally, in the bottom of the diagram, when the plans of the municipality are accepted by the Reconstruction Agency, the projects can be determined in the local level. However, the entire vision in the smallest unit of the region has not been considered. Also, such specific projects and programs are not integrated. Actually, the governmental policies in the upper layers do not have such guidance as having the entire view and integrating projects and programs in the local level. Usually, the municipalities request only construction consultants, who do not deal with the related theme except for the contract, whereas some of the municipalities autonomously collaborate with planning experts who can facilitate discussion with community, and also can help to integrate various components as forming an entire vision.

In this reconstruction system, as the components are simply narrowed through the planning process without consideration about the purposes on the previous planning phase, comprehensiveness decreases consistently. Also, integration or relation between plural components exists only in the conceptual master plans, but it disappears as the concepts get broken down into specific programs.

• Indonesia case

In the recovery policy, firstly the government established General Policy which included the 9 Basic Principles. Those general policies were explained in the Recovery Guideline, or which was called Master Plan for Rehabilitation and Reconstruction. The term of integration was mentioned at the General Policy, to the integration between 11 sectors of the Recovery Guideline. The comprehensiveness existed in this level, where it includes all components needed as written in this document. This integration exists in all level. It means that integration is the included sectoral policies together in spatial plan and its instrument¹⁹⁾.

BRR substituted the role of all ministries, provincial

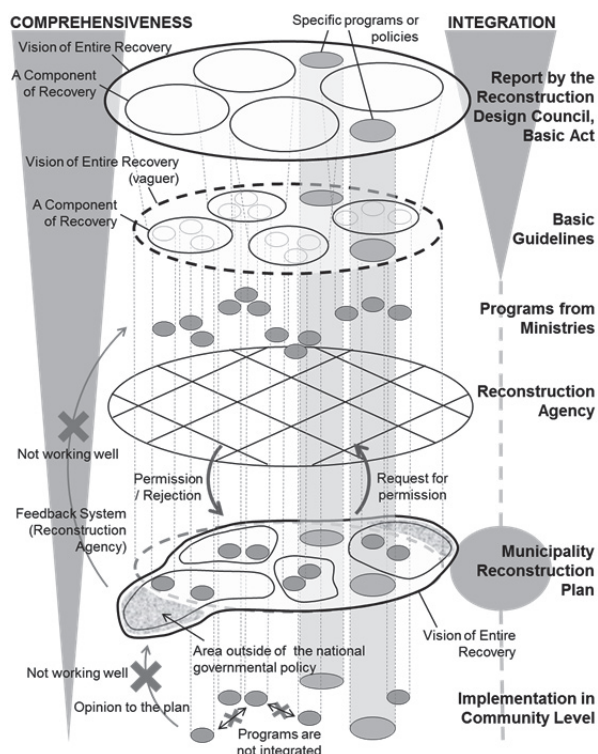


Fig. 2 Comprehensiveness and Integration in Japan's Recovery Policy System

government, and municipal government. As an implementing agency, it had role to create the Annual Work Plan, based on the Recovery Guideline (Master Plan) and the actual situation at the local level. Therefore, at the beginning, its structure consisted of 11 sectors, but then, adjusted with the local situation, it was extended or reduced following the needs¹⁹⁾. The comprehensiveness in this Work Plan level decreased compared to the previous stage, due to its reducing some parts of the sectors.

Community participation activity was done with active role of community. Programs by BRR, NGOs, professional involved community from the planning and designing phase, to the implementation phase. The approach was mostly bottom-up, where lower level of community is more powerful than the municipality which role was replaced by BRR. Integration existed here in the form of relationship between elements in community level.

The support groups such as local and international NGOs, also professionals to Nias and Banda Aceh were registered legally. They had to register to the government, afterwards they will be allowed to carry out their projects, with government-affirmed proposal, composed by the them. The role of NGOs and support group could contribute to comprehensiveness. It means, by having their support in technical, facilitation, and funding the projects, they fill in the gaps of this role where communities were not capable to handle by themselves.

(4) Our definition of comprehensiveness and integration

Comprehensiveness is a condition where the involved stakeholders define sufficient problems or purpose including entire vision, and where they find proper measures to solve a specific problem, or to achieve a specific purpose.

Integration is a condition where the involved stakeholders find relationship among plural components from the viewpoint of efficiency, such as promoting synergistic relation or reducing overlapped parts (E.q. building higher dike and relocating to higher land has overlapped function). Integration

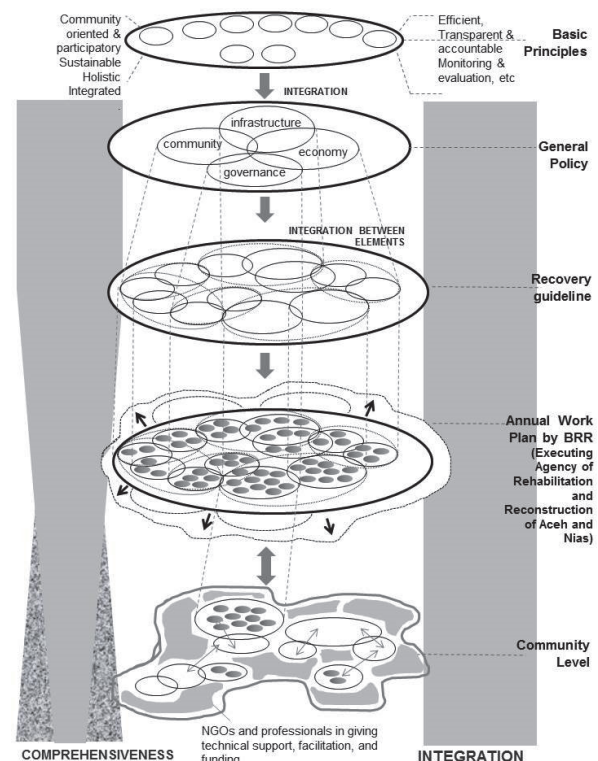


Fig. 3 Comprehensiveness and Integration in Indonesia's Recovery Policy System

also means a condition where the involved stakeholders balance the multiple values or functions which are in trade-off relation (E.g. providing safety against tsunami and daily convenience of fishery activity).

(5) Analysis based on our definition of comprehensiveness and integration

• Japan

Comprehensiveness can be found only in the Report by the Reconstruction Design Council and the municipalities' reconstruction master plans because they are the only plans which have entire vision of the recovery to be the basis of comprehensiveness. However, integration is not intended at all in the planning process.

The community perspective could have helped greatly to increase comprehensiveness and integration in implementation phase because; first, they can have the real vision of their own lives, which could be the basis of comprehensiveness; second, the integration should be based on the sense of values, especially of the local people. However, since the Japanese planning system for the reconstruction does not consider the community as one of the main planning stakeholders, only limited municipalities prepared the environment where the community could be involved properly in planning process.

• Indonesia

Comprehensiveness existed in all phase or all level of policies, from General Policy, Recovery Guideline, to the Annual Work Plan. This means that comprehensiveness was finding proper measures, such as in the sectors or elements of the recovery guideline, or BRR annual work plan, or of the problems and challenge, and in achieving specific purpose of recovery goal. Even in BRR's changing sectors depending on the necessity of local situation, it still fulfills the necessary elements of recovery. It could be said that all the required measures are included.

The General Policy, Recovery Guidelines and Annual Work Plan have integration inside, as there was relation between infrastructure, community, economy and governance in the General Policies. There was also relation between elements of recovery in the recovery guideline, and connectivity between sectors in the annual work plan of BRR.

According to our definition of comprehensiveness, in community level comprehensiveness existed. For example, to tackle with problems of land verification and housing reconstruction, community had its own structure to solve this challenge, supported by NGOs and professionals. In community level, support group have important role in running the situation. Also, integration existed in this phase, for example, mostly communities did not relocate to higher land, but they were empowered by evacuation capability, and improved infrastructure such as evacuation center building and sufficient road network.

4. Conclusion

The similarities: 1) Comprehensiveness is required universally in the reconstruction and recovery process, 2) Both countries' policies have integration and comprehensiveness point of view, in different level.

The differences: 1) Comprehensiveness in Japan exists and gradually decreasing from the initial visions by the national

government through the local level. While in Indonesia, comprehensiveness existed in the general policy and recovery guideline, and gradually decreasing at the BRR level and local implementation. 2) In Japan, integration exists in the general policies, but disappears at the lower level. While in Indonesia case, integration exists from the national level policy to local implementation level. 3) Community planning works for recovery of Banda Aceh, but might be difficult in Tohoku, 4) Support groups in Indonesia had official status, but in Japan, many of the support groups do not have official registration status. Support group can have significant role to increase comprehensiveness and integration in the recovery process.

References

- 1) 警察庁, 平成 23 年 (2011 年) 東北地方太平洋沖地震の被害情報と警察措置, 2011
- 2) 東日本大震災復興対策本部, 全国の避難者等の数, 2011
- 3) 国土交通省, 津波被災市街地復興手法検討調査 (とりまとめ), 2012
- 4) 加藤孝明, 個々の復興と全体の復興をどうつなぐか, [東日本大震災・原発事故] 復興まちづくりに向けて, pp. 36-49, 学芸出版社, 2011
- 5) Bappenas (National Development Planning Agency): Main Book of Rehabilitation and Reconstruction, Regulation of the President of Republic of Indonesia Number 30 Year 2005 on Master Plan for Rehabilitation and Reconstruction for the Regions and People of the Province of Nanggroe Aceh Darussalam and Nias Islands of the Province of North Sumatra, 2005
- 6) BRR NAD-Nias (The Executing Agency of Rehabilitation and Reconstruction for Aceh and Nias): Tsunami-from Disaster to the Emergence
- 7) 日本政府, 東日本大震災復興構想会議の設置について, 2011
- 8) 東日本大震災復興構想会議, 復興への提言〜悲惨の中の希望〜, 2011
- 9) 日本政府, 東日本大震災復興基本法, 2011
- 10) 東日本大震災復興対策本部, 東日本大震災からの復興の基本方針, 2011
- 11) 日本政府, 復興庁設置法, 2011
- 12) 岩手県, 岩手県内市町村における復興計画策定状況, 公式ウェブサイト, <http://www.pref.iwate.jp/fukukoukeikaku/shichousen/012049.html>, 2014(更新・閲覧)
- 13) 宮城県, 各市町震災復興基本方針・計画等の策定状況, 公式ウェブサイト, <http://www.pref.miyagi.jp/site/hukkousien/keikaku.html>, 2014(更新・閲覧)
- 14) 東日本大震災復興対策本部事務局, 東日本大震災復興特別区域法資料, 2011
- 15) Mardhatillah, Fuad: The Role and Experiences of Badan Rehabilitasi dan Rekonstruksi (BRR), Post-Disaster Reconstruction-Lessons from Aceh, pp.186-209, 2010
- 16) Kenny, Sue: Reconstruction through Participatory Practice, Post-Disaster Reconstruction-Lessons from Aceh, pp.78-104, 2010
- 17) 東日本大震災復興対策本部, 各府省の事業計画と行程表のとりまとめ, 2011
- 18) 東日本大震災復興対策本部, 各府省の復興施策の取組状況の取りまとめ—公共インフラ以外の復興施策—, 2011
- 19) Pardede, Togu. Interview, September 9th, 2014