Introduction

1. Purpose of this Book

More than 10 years have passed since the Great East Japan Earthquake.

The 2011 Tohoku earthquake and tsunami, with a moment magnitude of 9.0, was the largest earthquake ever recorded in Japan's history. It triggered a seismic intensity of 7, along with widespread and devastating tsunami damage, resulting in multiple disasters including the accident at the TEPCO Fukushima Daiichi Nuclear Power Station. The disaster claimed nearly 20,000 lives, with over 2,000 people still missing. Additionally, approximately 120,000 homes were completely destroyed and about 280,000 partially damaged, forcing many people to lose their livelihoods and endure long-term evacuation. Even now, there are still victims living as evacuees. The disaster caused widespread devastation, primarily in the Tohoku region, destroying vital infrastructure such as lifelines, roads, coastlines, rivers, ports, and railways. It also ravaged centers of production such as agricultural land and fishing ports, while the shutdown of nuclear power plants led to a power shortage, further disrupting supply chains and causing severe economic and industrial impacts on Japan.

The disaster's scale exceeded pre-disaster assumptions, leading to extensive and severe damage across multiple prefectures. The simultaneous nuclear power plant accident, combined with the disaster hitting regions already grappling with social issues such as population aging and decline, significantly expanded the scope and range of reconstruction efforts. As a result, the national government faced numerous unprecedented challenges in its reconstruction efforts. During the 10 years of the initial "concentrated reconstruction period" and the subsequent "first reconstruction/revitalization period," the government made steady progress in the reconstruction of the disaster-affected areas, with housing reconstruction and infrastructure development mostly completed in areas affected by the earthquake and tsunami. However, challenges remain, such as the need for continued mental care for disaster victims and the recovery of key industries in the disaster-affected areas, such as the seafood processing industry. Additionally, in areas affected by the nuclear disaster, where medium- to long-term responses are required, efforts are ongoing to achieve full-fledged recovery and revitalization.

The progress in reconstruction is undoubtedly thanks to the tremendous efforts of disaster victims. local governments, volunteers, NPOs, and private companies. The national government also took measures unprecedented in past large-scale disasters, including extensive support, special legislation, and the establishment of dedicated organizations, engaging in various new initiatives through a series of trial and error. While Japan was already experiencing population decline, especially in the coastal Sanriku region of Tohoku, which was facing severe challenges such as aging populations and declines in regional economies and local government finances, it became necessary to rebuild towns from scratch. This led to substantial financial support through means such as reconstruction taxes. The concept of "build back better" was proposed, aiming for recovery beyond mere restoration, and reconstruction efforts surpassed traditional disaster recovery projects. Unlike previous disasters where the focus was on physical recovery, this disaster also required finely tuned support addressing the specific needs of survivors. The government exceeded traditional principles, such as refraining from using public funds for private property, by providing direct support for the recovery of business facilities and equipment through programs like group subsidies. These reconstruction policies following the Great East Japan Earthquake were also applied in subsequent disasters, such as the 2016 Kumamoto earthquakes. Reconstruction from the nuclear disaster posed unprecedented challenges for Japan. The government faced numerous difficulties in determining how to proceed with recovery, and it remains a medium- to long-term issue to this day. Furthermore, the involvement of NPOs and private companies in systematically supporting reconstruction efforts in disaster-affected areas represents a new trend that emerged from the Great East Japan Earthquake.

Meanwhile, since the Great East Japan Earthquake, Japan has continued to face natural disasters almost annually, including earthquakes, typhoons, and heavy rains. Various preparations are underway for large-scale disasters predicted to cause significant damage, such as an earthquake directly beneath Tokyo, a Nankai megathrust earthquake, a Japan Trench/Kuril Trench earthquake, and volcanic eruptions. The experience of past disasters like the Great Hanshin-Awaji Earthquake and the Great Kanto Earthquake provided valuable insights during the reconstruction efforts following the Great East Japan Earthquake. Similarly, the policies and initiatives implemented in the aftermath of the Great East Japan Earthquake will undoubtedly serve as references for reconstruction from future large-scale disasters.

This book, titled the Great East Japan Earthquake: Reflection on the Past Decade of Reconstruction

Policy, compiles the evolution of government systems, organizations, and efforts related to reconstruction over the past 10 years into a unified record, as well as detailing the intentions and circumstances behind unprecedented policies. It also provides a reflection on these efforts, along with their evaluations and remaining challenges. This book is primarily intended as a reference for national and local government officials who will be responsible for planning and implementing reconstruction policies in the event of future large-scale disasters. At the same time, it is expected to be useful for various entities involved in promoting reconstruction policies, such as volunteers, NPOs, private companies, and research institutions, alongside other resources like the *Great East Japan Earthquake: Lessons Learned & Know-How Gained* and its accompanying case studies (published by the Reconstruction Agency in March 2021).

2. Structure of this Book

The focus of this book is on the national systems, organizations, and efforts related to recovery and reconstruction during the 10 years from the concentrated reconstruction period to the end of the first reconstruction/revitalization period (as of the end of March 2021). However, even for efforts that began during the emergency phase, such as the provision of emergency temporary housing and the disposal of disaster waste, if these efforts extended into the medium- to long-term and are closely related to the recovery and reconstruction phase, they are covered as necessary.

In addition, in order to accurately understand the efforts over these 10 years, progress and policy developments after the end of March 2021 are also mentioned where relevant. Therefore, statistical data and other figures in this book are not uniformly limited to those as of the end of March 2021. It is important to note that the purpose of this book is not to present the latest information but to record the situation, changes, and developments at that time. As such, some sections retain the names, systems, and statements used at the time, which may differ from the present.

Furthermore, the primary focus of this book is on the intentions and background of national policy efforts. Although examples of on-the-ground efforts and innovations by local governments and private organizations are included to aid understanding, they are not comprehensively detailed. For the lessons learned and know-how gained from such on-the-ground efforts, refer to *Great East Japan Earthquake: Lessons Learned & Know-How Gained* mentioned above.

This book consists of eight chapters, with Chapters 1 to 3 covering general topics and Chapters 4 to 8 addressing more specific issues.

First, Chapter 1, "General Remarks (Before the Establishment of the Reconstruction Agency)," outlines the facts, focusing on the overview of the earthquake and initial emergency responses in Section 1. Section 2 summarizes the measures taken before the establishment of the Reconstruction Agency, based on the Basic Act on Reconstruction, including the Reconstruction Headquarters, the Reconstruction Design Council, and the Basic Guidelines for Reconstruction.

Chapter 2, "General Remarks (Following the Establishment of the Reconstruction Agency)," provides a chronological overview of the overall reconstruction policies during the concentrated reconstruction period and the first reconstruction/revitalization period in Section 1. Sections 2 to 4 detail the organizational structure, legal frameworks, budget, tax systems, and other major frameworks related to reconstruction, with a focus on the period after the establishment of the Reconstruction Agency.

Chapter 3, "New Efforts," highlights unprecedented policies implemented during reconstruction from the Great East Japan Earthquake, particularly those led by the Reconstruction Agency across various fields. Specifically, it covers the reconstruction grants, accelerated land acquisition measures, the general subsidy to support disaster victims, and the "New Tohoku" initiative in collaboration with businesses and NPOs.

Chapter 4, "Support for Disaster Victims," summarizes the measures implemented by ministries for individual disaster victims and those funded by the general subsidy to support disaster victims. It summarizes efforts such as safeguarding and mental care, community revitalization, medical and welfare support, as well as initiatives related to education and other support measures.

Chapter 5, "Reconstruction of Homes and Cities," covers the process of recovery and reconstruction, focusing mainly on physical restoration and recovery projects, such as reconstructive urban development, housing, roads, coastlines, rivers, ports, agricultural land, and fishing ports. It also includes an organized section on the disposal of disaster waste.

Chapter 6, "Revitalization of Industries and Livelihoods," organizes the financial and policy support

provided for the recovery of small and medium-sized enterprises, agriculture, forestry, fisheries, tourism, and other industries, as well as institutional support for developing new markets and launching new businesses.

Chapter 7, "Specific Measures for the Nuclear Disaster," summarizes efforts specific to the areas affected by the nuclear disaster, such as promoting return and resettlement, environmental revitalization initiatives, addressing reputational damage, and the Fukushima Innovation Coast Framework. Note that even though some nuclear disaster-related efforts are included here, organizational and legal measures are discussed in Chapter 2, victim support policies for nuclear evacuees in Chapter 4, and the recovery and reconstruction of agriculture, forestry, and fisheries affected by the nuclear disaster in Chapter 6.

Chapter 8, "Collaboration and Posterity," details policies that promote collaboration and cooperation among various entities, such as NPOs and dispatched support staff, in Sections 1 and 2. In Section 3, it organizes efforts related to preventing the fading of memories and communicating lessons learned, as part of preserving the memory and legacy of the disaster.

Relevant materials that could not be included in the main text are attached as supplementary documents.

3. Points to Note

In this book, the chapters cover sets of policies organized by major administrative fields, but when focusing on specific policy issues, there are measures mentioned in each chapter that are interrelated across chapters and influence one another depending on the timing of their implementation.

On the topic of rebuilding the livelihoods of disaster victims, in addition to Chapter 4, there are legal frameworks such as the Act on Special Financial Supports Responding to the Great East Japan Earthquake (Act No. 40 of 2011) in Section 3 of Chapter 2. Other measures include the support in evacuation shelters mentioned in Section 1 of Chapter 1; the Reconstruction Fund in Section 4 of Chapter 2; the general subsidy to support disaster victims in Section 3 of Chapter 3; securing emergency temporary housing and disaster public housing in Section 2 of Chapter 5; the response to the issue of double loans and employment support in Section 1 of Chapter 6; and the promotion of return and resettlement in Section 2 of Chapter 7.

For reconstructive urban development, in addition to Chapter 5, there are legal frameworks such as the Act on Special Zones for Reconstruction in Response to the Great East Japan Earthquake (Act No. 122 of 2011) in Section 3 of Chapter 2; the reconstruction grant system in Section 1 of Chapter 3; efforts to accelerate housing reconstruction and reconstructive urban development in Section 2 of Chapter 3; school restoration and reconstruction in Section 3 of Chapter 4; the transition from temporary shops to permanent ones and the rebuilding of shopping streets in Section 1 of Chapter 6; the improvement of living environments in Section 2 of Chapter 7; and the preservation of earthquake memorial sites in Section 3 of Chapter 8.

For the revitalization of regional economies, in addition to Chapter 6, there are legal frameworks such as the Act on the Corporation for Revitalizing Earthquake-Affected Business (Act No. 113 of 2011) in Section 3 of Chapter 2; various tax systems in Section 4 of Chapter 2; the restoration of key infrastructure and production bases in Chapter 5; efforts to dispel harmful rumors in Section 4 of Chapter 7; the Fukushima Innovation Coast Framework in Section 5 of Chapter 7; and the rebuilding of businesses and agriculture, forestry, and fisheries in Section 6 of Chapter 7.

For reconstruction from the nuclear disaster, in addition to Chapter 7, there are legal frameworks such as the Act on Special Measures for the Reconstruction and Revitalization of Fukushima (Act No. 25 of 2012) in Section 3 of Chapter 2; the strengthening of Fukushima-specific measures in Section 2 of Chapter 2; the general subsidy to support disaster victims in Section 3 of Chapter 3; support for evacuees outside the prefecture in Section 1 of Chapter 4; the restoration of key infrastructure and production bases in Chapter 5; the recovery and reconstruction of agriculture, forestry, and fisheries affected by the nuclear disaster in Sections 2 to 4 of Chapter 6; and the promotion of tourism in Fukushima in Section 5 of Chapter 6.

In all administrative fields, the reconstruction from the Great East Japan Earthquake was supported not only by local governments in the affected areas, but also by volunteers, NPOs, and private companies, who played a significant role. To promote and establish an environment for collaboration among these diverse entities, measures were implemented, such as the New Tohoku initiative in Section 4 of Chapter 3, partnerships with intermediary organizations in Section 1 of Chapter 8, and mutual cooperation between administrative agencies in Section 2 of Chapter 8.

In order to understand the full picture of the national policies related to the reconstruction from the Great East Japan Earthquake and to apply the lessons learned to future reconstruction efforts from large-scale disasters, it is important to be mindful of these interconnections between the chapters and the measures.

Furthermore, the reconstruction plans created by local governments, particularly at the municipal level, generally include not only physical infrastructure projects but also institutional measures for rebuilding lives. For this reason, when local governments work on preparatory reconstruction efforts or create actual plans, they should refer to the relevant chapters and sections—such as Sections 3 and 4 of Chapter 3 for efforts to rebuild the livelihoods of disaster victims, and Sections 2 and 5 of Chapter 3 for urban development—along with the challenges and lessons learned from the Great East Japan Earthquake discussed in Section 1 of Chapter 2. Additionally, during the reconstruction from the Great East Japan Earthquake, the timing of national policies outlined in this book and the creation of reconstruction plans by local governments did not always align perfectly, nor did the progress of efforts to rebuild the livelihoods of disaster victims and urban development within the same reconstruction plans. In future reconstruction efforts from large-scale disasters, it is essential to be mindful of potential time lags across different systems and fields and the complexity of policies, and to ensure that municipalities, as the main actors in integrated administration, utilize their discretion to advance more effective reconstruction. This book is intended to aid in those efforts.

4. Background of the Compilation of This Book

The Reconstruction Agency has traditionally focused on advancing the reconstruction from the Great East Japan Earthquake itself, regularly compiling reports on the status of reconstruction for the National Diet, and summarizing efforts at the time of revisions to the Basic Guidelines for Reconstruction. However, with some exceptions, full-scale efforts to pass on the lessons learned from the Great East Japan Earthquake to future generations had not been conducted. When the role of the Reconstruction Agency was reviewed after the completion of the first reconstruction/revitalization period—during which the physical reconstruction projects, centered on infrastructure development, were expected to be largely completed—it was hoped that the accumulated know-how related to reconstruction would be shared with relevant administrative bodies to contribute to enhancing future disaster preparedness. It was also expected that the new function of the Reconstruction Agency would include the collection, organization, and preservation of records on the reconstruction to serve as a reference for large-scale disasters that may occur in the future. This was clearly stated in the supplementary provisions and attached resolutions during the amendment of the Reconstruction Agency Establishment Act.

Moreover, the organization of records relating to changes in the government's structure and efforts was also positioned as follows in the "Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake in the Second Reconstruction/Revitalization Period and Beyond" (Cabinet Decision on March 9, 2021).

- Excerpt from the "Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake in the Second Reconstruction/Revitalization Period and Beyond" (Cabinet Decision on March 9, 2021)
- 1. Basic stance on reconstruction and efforts in each field
 - (3) Communicating the picture of reconstruction and passing on the memories of and lessons learned from the Great East Japan Earthquake to future generations (Partially omitted)
- On the occasion of the 10th anniversary of the establishment of the Reconstruction Agency, materials will be collected, organized, and compiled regarding the changes in government structures and efforts for reconstruction, as well as the progress of reconstruction, leading up to the end of the first reconstruction/revitalization period.

In light of this, this book was initiated as a project to pass on records of the government's 10 years of reconstruction policies to future generations and to make them available as a reference for future large-scale disasters. In addition to preserving facts and materials, the decision was made to also compile evaluations and challenges that could serve as lessons for future policymakers. Therefore, opinions from external experts who had been involved in reconstruction policies, feedback from local governments, discussions in the National Diet, and the evaluations conducted by various ministries were all incorporated into the compilation of this book. Regarding reconstruction from the nuclear disaster, as this process is still ongoing, it was deemed premature to conduct evaluations on lessons to be learned at this

time, and so in principle the book is limited to organizing the measures that have been taken so far.

First, in fiscal year 2021, the Reconstruction Agency created a draft table of contents for this book, and called on related ministries and agencies to provide past materials. Based on the materials gathered, the Reconstruction Agency drafted an outline of the book. At the same time, major issues that should be left as evaluations or challenges were extracted from past Diet questions and editorials from major and local newspapers. Interviews were also conducted with former members of the Reconstruction Design Council and the Reconstruction Promotion Council, and former vice-ministers of the Reconstruction Agency to broadly identify the main issues.

In fiscal year 2022, while utilizing research commissioned as part of the project to pass on the lessons learned from the Great East Japan Earthquake, work progressed on organizing the collected materials and transforming them into written form. In addition, basic data and timelines were organized, and individual interviews were conducted on specific fields to gather the necessary information for the book.

Following these preparations, in October, the "Expert Committee on Reflection on the Past Decade of Reconstruction Policy from the Great East Japan Earthquake" was launched. Four meetings were held throughout the fiscal year to gather opinions on important evaluations and challenges that should be included in the book. This committee was composed of experts who had been involved in past reconstruction policies, disaster prevention specialists, and members of the "Working Group on Summarizing Reconstruction Policies for the Great East Japan Earthquake" from fiscal year 2019. The details of these meetings are as follows, and the minutes and materials from the meetings are attached as supplementary documents.

In parallel with the expert committee's opinion-gathering sessions, the draft contents of the book were gradually refined while consulting with related ministries and agencies. At the first meeting, an overall structure draft was presented; at the second meeting, a more detailed outline draft was shared; at the third meeting, a draft manuscript that would become the original draft of this book was discussed; and at the fourth meeting, a more polished final draft was presented. During this process, feedback from experts and related organizations, presented at the expert committee meetings, was incorporated into the book.

Meeting proceedings

Meeting	Date	Main agenda items	Attending committee members
First meeting	October 24, 2022 4:00 PM-5:30 PM Central Government Building No. 4, 4F Special Meeting Room No. 2	(1)Operation of the meeting (2)Purpose of the review (3)Free discussion First meeting distributed materials Material 1: Meeting guidelines Material 2: Purpose and structure of the Reflection on the Past Decade of Reconstruction Policy Material 3: Changes in reconstruction policies over 10 years Material 4: Key points for discussion Material 5: Proposed future schedule Material 6: Opinions from committee member Imamura Reference Material 1 Progress of reconstruction over the past 10 years Reference Material 2 Efforts and related systems of reconstruction as of the 10th year	Chair: Reiko Akiike Deputy chair: Hiroya Masuda Committee members: Takashi Onishi Keiko Tamura Retsu Fujisawa Kenya Akiba (Reconstruction Minister)
Second meeting	December 5, 2022 10:30 AM-12:30 PM Central Government Building No. 4, 4F Special Meeting Room No. 2	(1) Presentations from the three affected prefectures (2) Draft summary based on the first meeting (3) Free discussion Second meeting distributed materials Material 1: Iwate Prefecture materials Material 2: Miyagi Prefecture materials Material 3: Fukushima Prefecture materials Material 4: Feedback from the first meeting Material 5: Related materials Material 6: Draft summary Material 7: Materials from committee member Fujisawa Material 8: Materials from committee member Onishi Material 9: Future schedule Reference material Minutes from the first meeting	Chair: Reiko Akiike Deputy chair: Hiroya Masuda Committee members: Fumihiko Imamura Takashi Onishi Keiko Tamura Retsu Fujisawa Kenya Akiba (Reconstruction Minister) Deputy Manager Ohata (Iwate Prefectural Reconstruction and Disaster Prevention Department) Director Chiba (Reconstruction and Crisis Management Department, Miyagi Prefecture)

			Policy Officer Murata (Planning and
			Coordination Department, Fukushima Prefecture)
Third meeting	February 27, 2023 1:00 PM–3:00 PM Central Government Building No. 4, 4F Special Meeting Room No. 2	(1)Results of opinion gathering from municipalities (2)Presentations from mayors (3)Discussion of the draft manuscript (4)Free discussion Third meeting distributed materials Material 1: Summary of opinions from municipalities Material 2: Presentation from the mayor of Miyako, Iwate Prefecture Material 3: Presentation from the mayor of Minamisanriku, Miyagi Prefecture Material 4: Presentation from the mayor of Kawauchi, Fukushima Prefecture Material 5: Previous feedback material Material 6: Key points of the draft manuscript Material 7: Draft manuscript Material 8: Materials from committee member Onishi Material 9: Materials from committee member Fujisawa Material 10: Future schedule Reference Material 1 List of opinions from municipalities Reference Material 2 Minutes from the second meeting	Chair: Reiko Akiike Deputy chair: Hiroya Masuda Committee members: Fumihiko Imamura Committee members: Takashi Onishi Keiko Tamura Retsu Fujisawa Hiromichi Watanabe (Reconstruction Minister) Mayor Yamamoto (Miyako, Iwate Prefecture) Mayor Sato (Minamisanriku, Miyagi Prefecture) Mayor Endo (Kawauchi, Fukushima Prefecture)
Fourth meeting	March 23, 2023 3:00 PM-5:00 PM Central Government Building No. 4, 11F Special Meeting Room No. 1	(1)Presentations from private companies and organizations (2)Discussion of the final draft (3)Free discussion Fourth meeting distributed materials Material 1: Presentation from the Bank of Iwate Material 2: Presentation from Kirin Holdings Company Material 3: Presentation from Fukushima Collaborative Reconstruction Center Material 4: Previous feedback material Material 5: Key points of the final draft Material 6: Final draft (*Tablet) Reference material Minutes from the third meeting	Chair: Reiko Akiike Deputy chair: Hiroya Masuda Committee members: Fumihiko Imamura Committee members: Takashi Onishi Keiko Tamura Retsu Fujisawa Division Manager Fujimoto (Corporate Financial Support Office, Loan Supervision Division, Bank of Iwate) Chief Manager Watanabe (CSV Strategy Department, Kirin Holdings Company) Executive Director Chubachi (Fukushima Collaborative Reconstruction Center)

Committee members

	Committee memoris				
	Name	Title			
Chair	Reiko Akiike	Japan Co-Representative, Boston Consulting Group			
Deputy	Hiroya	President and CEO, Japan Post Holdings			
chair	Masuda				
Committee	Fumihiko	Director, International Research Institute of Disaster Science, Tohoku			
member	Imamura	University			
Committee	Takashi	Chairman, National Land Planning Association			
member	Onishi				
Committee	Keiko	Professor, Risk Management Center, Headquarters for Risk Management,			
member	Tamura	Niigata University			
Committee	Retsu	Representative Director, RCF			
member	Fujisawa				

In fiscal year 2023, the opinions expressed at the 4th expert committee meeting were incorporated, and final confirmation was sought from relevant ministries, agencies, and experts. In addition, further proofreading and editing were conducted to finalize the overall format, supplementary materials were added, and the book was ultimately compiled.