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in terms of Machidukuri**

特集:

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**TeLL-Net: Conveying the Experience of Disaster
from the Great Hanshin-Awaji Earthquake
阪神・淡路大震災から災害を語り継ぐ「TeLL-Net」**

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Simeulue is a small island of 200 ha to the west of Aceh in Indonesia. At the time of the Indian Ocean tsunami on December 26, 2004, a major disaster in which nearly 200,000 people lost their lives, there were reportedly no deaths on this small island with a population of 84,000. On this island, 80% of the residents are engaged in fishing on the coast. So why were there no casualties?

In a report to the TeLL-Net Kick-Off Commemorative Forum held on January 20, 2006, titled "Local wisdom that saves lives," Drs. Darmili, the mayor of Simeulue, spoke as follows (<http://tellnet.jp/jp/highlights/index.html>):

"As a result of the tsunami, all of our houses were damaged; 7,000 were completely destroyed, and 6,500 suffered damage. All of our facilities, such as hospitals, suffered damage; 75% of schools and 300 religious facilities were damaged. Twenty thousand children had to go to schools set up in temporary tents. Even now, 33,000 people have still not been able to return to their previous lives." But despite this catastrophic damage, there were no deaths on the island.

"On December 26, 2004, we felt the earthquake. Then there was a backwash, and fish were leaping about above the sand. Somebody shouted 'Smoong! Tsunami!' Then everybody started shouting 'Tsunami!' as they ran away from the shore toward the hill. It was our local wisdom relating to tsunami that prompted everyone to evacuate. In 1907 Simeulue suffered enormous damage as a result of a tsunami, and senior citizens passed on the experience to the next generation through tales and songs and explained the characteristics of a tsunami. They

インドネシア・アチェの西にシムル島という面積 200ha の小さな島がある。20 万人近くが亡くなるという大被害をもたらした 2004 年 12 月 26 日インド洋大津波の時に、人口 8 万 4000 人のこの小さな島では、死者はなかったという。80% の住民は海岸での漁業で生活しているというこの島で、それはなぜだったのか？シムル島ダーミリ市長の報告（2006 年 1 月 20 日 TeLL-Net 発足記念フォーラム）「地域の英知が命を救う Local Wisdom that saves lives」で、次のように話していた。

<http://tellnet.jp/jp/highlights/index.html>

[大津波では全ての家が被害を受けた。7000 が全壊、6500 が損傷した。全ての病院等施設が損害を受けた。学校の 75%、300 の宗教的施設が被害を受けた。2 万人の生徒が仮設のテントで学校生活を送ることとなった。3 万 3000 人がいまだに元の生活に戻っていない。]、にもかかわらずである。

2004 年 12 月 26 日の出来事、地震を感じた。引き波が起こる、魚が砂の上で跳ねる。誰かが叫んだ「SMOONG! 津波だ!」。次々と逃げながら皆が「津波だ!」と叫び、丘へ向かった。皆の避難を促したスモン（津波）に関する地域の知恵。1907 年の津波でシムル島に大きな被害があり、年長者



シムル島の位置



シムル島のインド洋大津波



ダーミリ市長夫人が SMOONG を歌う

conveyed to people what they should do and what they should not do in the event of a tsunami.”

The Great Hanshin-Awaji Earthquake (1995; 6,434 deaths) was a major natural disaster. It was the first time in 35 years, following the Ise Bay Typhoon (1959, 5,091 deaths), for a natural disaster to result in more than 1,000 deaths in Japan. In the 14 years since then there have been many earthquakes, floods, and other disasters, but in terms of the extent of the disaster they do not stand comparison with the immense damage caused by the Great Hanshin-Awaji Earthquake. For this reason, there have been countless presentations by the administration, academic societies, the media, nonprofit organizations, citizens, and others from many angles regarding the physical seismic vibrations and damage, the social and psychological damage and their impact, and the subsequent restoration and reconstruction, including detailed records and many lessons. Such information can be easily accessed at many archives in disaster areas or via the Internet and so on.

Through these records, recommendations, and lessons, centered on disaster areas, various activities have been carried out to transmit what was learned about immediate emergency response, first-aid treatment, and restoration and reconstruction after the disaster to other regions. Ten years after the disaster, however, I came to realize that the most important problem is not what to convey but how to convey it. The important thing for disaster prevention and disaster reduction is to convey the live lessons of disasters widely to every corner of the world over a long time and transcending generations, as memories rather than records, culture rather than lessons. In this respect, the most condensed activity is the TeLL-Net (Transfer Live Lessons Network; <http://tellnet.jp/>), which has its secretariat in the Disaster Reduction and Human Renovation Institution (DRI).

TeLL-Net is an international network with the objectives of conveying experiences of major disasters beyond countries and regions, preparing for natural disasters in the future, and contributing to reducing the number of disaster victims as much as possible. On January 18, 2005, in commemoration of the tenth anniversary of the Great Hanshin-Awaji Earthquake, representatives from many areas that had suffered natural disasters in Japan and overseas gathered in Kobe for the Disaster Reduction Forum 2005, which proposed that “conveying the experience of major disasters from the perspective of victims will lead to the reduction, even by a little, of the number of natural disaster victims in the future.” Then, continuing our cooperation with other countries, we met in Kobe again on January 20, 2006, for a kick-off assembly and launched TeLL-Net. At the kick-off commemorative forum, 11 groups and individuals from 10 countries participated, and disaster-prevention personnel from regions that have experienced major disasters as a result of earthquakes or tsunami, such as Indonesia, Iran, Niigata, and Kobe, introduced their respective efforts to promote disaster prevention and convey the experience of disasters. One of the speakers was Drs. Darmili, the mayor of Simeulue, who I mentioned earlier.

In terms of handing down stories about disasters, we have also continued exchange between Kobe and New Orleans, which was devastated by the fierce

は次世代に話と歌で教訓を引き継ぎ、津波の特徴を説明した。何をすべきか、何をしてはいけないかを伝えている。

阪神・淡路大震災（1995年、死者6434人）は、日本では第2次世界大戦後伊勢湾台風災害（1959年、死者5091人）以降35年ぶりの死者1000人を超える大規模自然災害であった。その後の14年間にも多くの震災・水害などはあったが、その被災状況は比べるまでもない飛び抜けた巨大災害であった。そのため、これまでその物理的な地震動や被害の状況、社会的あるいは精神的な被災や影響、それからの復旧・復興といった多方面にわたる詳細な記録や多くの教訓など、行政や学会、マスコミやNPO・市民などから数え切れないほど発表されており、それらについて、被災地の多くの資料室やインターネットなどで容易に知ることができる。

そうした記録・提言・教訓によって、直後の緊急対応・応急処置、災後の復旧・復興について多くの学んできたことを各地に伝えるべく、さまざまな活動が被災地を中心に発信されてきた。しかし、10年経って、最も重要なことは、何を伝えるかではなく、「どのように」伝えるかが問題であることに、思い至ったのである。記録ではなく記憶を、教訓ではなく文化として、広く世界の隅々まで、長く時代を超えて伝承し、災害からの活きた教訓を語り継いでいくこそが防災・減災に大切だ、ということである。その最も凝縮した活動が、人と防災未来センター（DRI）で事務局をつとめるTeLL-Net（Transfer Live Lessons Network：<http://tellnet.jp/>）である。

TeLL-Netは、国や地域を越えて大災害を語り継ぎ、これからの自然災害に備え、被災者を少しでも減らすことへの貢献を目的とする国際ネットワークである。2005年1月18日、日本の多くの自然災害被災地から、世界各地の災害に遭遇した国から、阪神・淡路大震災10周年を祈念して神戸に参集し、「国際防災・人道支援フォーラム2005」を開催し、「被災者の視点から『大災害を語り継ぐ』ことは、これからの災害で被災者を少しでも減らすことにつながる」と提言した。そして、その後、各国との連絡を続け、2006年1月20日に再び神戸に集まって設立総会を開き「世界災害語り継ぎネットワークTeLL-Net」を発足させ、発足記念フォーラムでは、10カ国11団体・個人が参加し、インドネシアやイラン、新潟や神戸など、地震や津波で大きな被害を受けた経験をもつ地域で、防災や災害語り継ぎ活動に関わる防災担当者から、それぞれの取り組みが紹介された。そのひとりが、先に紹介したシムル島のダーミリ市長であった。

2005年8月末ニューオーリンズを襲った超

Hurricane Katrina at the end of August 2005. In October 2006 a delegation of eight persons headed by New Orleans City Council President Oliver Thomas visited Kobe through the Japan Foundation Center for Global Partnership program and offered valuable suggestions concerning citizen community development activities in post-disaster reconstruction. In September 2007 we were invited to a symposium on disaster management ("The Great Hanshin-Awaji Earthquake and Hurricane Katrina") held at the Louisiana State Museum. The representatives from Kobe formed the Sunflower Troupe for Transferring Live Lessons About the Earthquake Disaster, and speakers introduced efforts that must be made to pass on stories about the earthquake experience and reconstruction. Exchange is not limited to reconstruction, either. Reflecting a shared traditional culture, the Kobe and New Orleans Jazz Exchange was held in October 2008 in the Takatori and Rokkomichi districts and elsewhere.

From now on also, TeLL-Net, which emerged from the Great Hanshin-Awaji Earthquake disaster, intends to link natural disaster areas around the world, centered on Kobe, and to develop its activities to convey disaster experiences to future generations.

大型ハリケーン・カトリーナ災害と神戸の被災地交流もまた、語り継ぎ活動を軸に積み重ねられている。

2006年10月トーマス・ニューオリンズ市議会議長はじめ8名が国際交流基金CGPのプログラムで神戸を訪問し、震災復興における市民まちづくり活動に大きな示唆を受けた。2007年9月にはルイジアナ州立博物館でのシンポジウム「阪神大震災とハリケーン・カトリーナ」に招待され、神戸から「震災語り継ぎひまわり団」を結成し、語り部による「語り継ぎしていかねばならない震災の体験・復興への取り組み」の話をした。さらに、2008年10月には、復興の交流だけにとどまらず、共通の伝統的文化である「神戸とニューオリンズのジャズ交流」が鷹取・六甲道地区などで行われた。

阪神・淡路大震災で生まれたTeLL-Net(世界災害語り継ぎネットワーク)は、神戸を核に、世界各地の自然災害被災地をつないで、「災害語り継ぎ活動」を今後も展開していく。



市議会議員一行（松本せせらぎ06年）



震災語り継ぎひまわり団（07年）



ジャズ交流（たかとり教会中庭08年）

Mount Unzen-Fugendake Eruption Disaster and Reconstruction

雲仙普賢岳噴火災害と復興

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● Introduction

In the case of volcanic disasters, the size of the disaster differs enormously depending on the scale of the eruption. In the eruptions of Mount Unzen-Fugendake from 1990 to 1995, however, mudflows and pyroclastic flows were frequent (Photo-1), and the scale of the damage (44 persons dead or missing, 1,399 houses damaged) almost reached the limit of reconstruction that was possible with the economic strength and technological capability of the time. Amid the prolonged volcanic damage, the reconstruction plan was extremely effective in quickly indicating a blueprint for reconstruction. In addition, the reconstruction plan played a role in grasping the intentions of local residents, identifying prospects for the restoration of daily life, and establishing a cooperative setup with related organizations toward reconstruction. In the case of volcanic disasters, in particular, volcanic eruptions and

● まえがき

火山災害の場合、噴火規模によって災害の大きさが著しく異なるが、雲仙普賢岳の火山災害（1990-1995年）では土石流、火砕流（写真-1）が頻発し、当時の経済力、技術力で復興できる限界に近い規模の災害であった（死者行方不明44人、住家被害1,399戸）。復興計画は長期化する火山災害の中で早く復興の青写真を示すためにきわめて有効であった、また、復興計画は地域住民の意向の把握、生活再建の目途をつけることや復興に向けての関係機関の協力体制の構築に役立った。特に火山災害の場合、火山噴出物、災害遺構が火山学習体験の場や観光資源になることから、火山観光に代表される事業主体が明確でない計

disaster remnants become places for practical volcanic studies and tourist resources. In such a situation, the reconstruction plan was essential to launch and promote those business activities which are conducted without specific leading entities as typified by volcano tourism.

写真-1 民家に迫る火砕流
撮影者：杉本伸一(2002年9月27日)

画の立上げ、推進には不可欠であった。



● Reconstruction Plan for Shimabara City and Fukae-cho Town

1. Necessity of reconstruction plan

After the eruptions had subsided, the departments responsible in Nagasaki Prefecture and the central government conducted investigations relating to restoration of the region, and projects were formulated for infrastructure and community development, including erosion- and flood-control facilities, road improvements, and river improvements. However, although these projects indicated individual facilities that were necessary for disaster-prevention community building and feasible given the technological level and economic strength of the time, they did not include land use policies in the disaster area or plans for the reconstruction of daily life reflecting the intentions of local residents. In addition, given the sectionalism that exists in administrations, having the departments responsible engage separately in improvement work in the disaster area would not lead to consistent local reconstruction. Furthermore, when the local disaster area, Shimabara City and Fukae-cho Town, made requests for local reconstruction measures to the prefecture or state, it would lack persuasion without a reconstruction plan indicating an overall concept.

Given the above, although there were limits to financial and technological strength, I realized that Shimabara and Fukae-cho, which are the closest entities to the residents, must formulate a reconstruction plan. I therefore proposed the formulation of such a plan in various quarters (Figure-1). Moreover, I hoped that by clearly expressing their intentions regarding reconstruction, the local governments could indicate prospects for the restoration of daily life to the residents and put a brake on the outflow of population and companies. There was also meaning in building an environment for the easy injection of funds into Shimabara while the area was still in the national limelight following the unprecedented disaster.

● 島原市・深江町の復興計画

1. 復興計画の必要性

噴火終息後の地域の復旧に関して長崎県、国の担当部署により調査が行われ、砂防・治山施設、道路、河川等の整備及びまちづくりのメニューが策定された。しかし、これらは防災都市づくりのために必要な施策を当時の技術レベルと経済力を背景に個別に示したもので、地元の意向を反映した被災地の土地利用の方針及び生活再建計画が入っていなかった。また、縦割り行政の中で各担当部署が個別に被災地を整備することも整合性がある地域復興にはつながらない。さらに、地元の被災地の島原市及び深江町から県や国に地域の復興対策を要望する場合にも全体構想を示す復興計画がないと説得力がない。以上から財政力や技術力には限界があるが、住民に一番近い島原市や深江町が復興計画を策定するしかないと著者は認識し、各方面に復興計画の策定を提案してきた(図-1)。

さらに、復興に対して地元の自治体が明確な意思を示すことで、住民が生活再建に見通しを持って、人口や企業の流出の歯止めとなることも期待された。未曾有の災害で全国から注目を浴びているうちに島原へ資金の投入しやすい環境づくりの意味もあった。

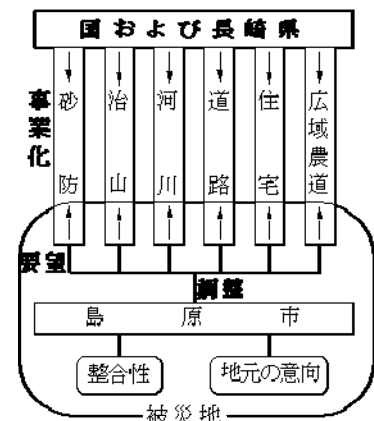


図-1 島原市が復興計画を作成する理由

2. Process of formulating a reconstruction plan

For the formulation of a reconstruction plan, the Shimabara City Disaster Reconstruction Study Committee was set up, consisting of experts and representatives from neighborhood associations, community groups, administrative bodies, and so on. The committee cited six items as key points for the formulation of the plan:

- (1) Emphasis on local autonomy
- (2) Efforts to establish organic links among parties related to reconstruction
- (3) Early announcement of reconstruction policy
- (4) Aiming for reconstruction with the participation of all citizens
- (5) The committee will take the initiative in formulating the plan.
- (6) In consideration of the special characteristics of the situation, projects should be flexibly promoted.

Since it was necessary not only to grasp the intentions of victims but also to formulate the reconstruction plan quickly in cooperation with parties related to reconstruction, the committee was given a role as described in (5) above. The reconstruction plan was formulated in the order of basic policy, basic concept, and basic plan. Since it was formulated in a short time, we made efforts to coordinate with the local community, Nagasaki Prefecture, and the state by reporting on events as we progressed. Ideas were necessary for the formulation of the plan, and proposals that emerged included, in Unzen, raising of the Annaka-Sankaku district (Photo-2); preservation at its present site of the former Fukae-cho Municipal Onokoba Elementary School building, which was burned by pyroclastic flows (Photo-3); establishment of the Mount Unzen Disaster Memorial Hall in order to promote volcano tourism (Photo-4); the utilization of sand erosion-control districts as places to study disaster-prevention facilities and their surroundings; and the establishment of rest areas.



写真-2 かさ上げ事業の状況 国土



写真-3 1991（平成3）9月15日の火砕流で焼失した深江町立大野木場小学校。この校舎は火砕流災害遺構として保存された。
1991年（平成3年）11月 撮影 杉本伸一



写真-4 雲仙岳災害記念館
2002（平成14）年6月 雲仙岳災害記念館提供

2.復興計画策定のプロセス

復興計画の策定にあたって、専門家、町内会、地域団体及び行政機関等の代表から構成された島原市災害復興検討委員会が設置された。災害復興検討委員会で示された計画策定のポイントは6項目からなる。

- ①地元自治体としての主体性を打ち出す
- ②復興関係者と有機的な連帯を図る
- ③復興の方針を早めに打ち出す
- ④市民全員参加の復興を目指す
- ⑤委員会が前面に立って計画を策定する
- ⑥事態の特殊性に配慮し、弾力的に事業化を推進する

復興計画は被災者の意向の把握のみならず、復興関係者との連携、早期に策定する必要があることから委員会による⑤のような役目が設けられた。復興計画は、基本方針、基本構想及び基本計画の順に策定された。短期間で策定するため、途中経過を示しながら地域、長崎県及び国との調整を図った。策定にはアイデアが必要で、雲仙では安中三角地帯の嵩上げ（写真-2）、火砕流遺構である旧深江町立大野木場小学校被災校舎の現地保存（写真-3）、火山観光化のための雲仙岳災害記念館（写真-4）、防災施設及びその周辺を学習体験の場に活用する砂防指定地利活用、道の駅の整備等が生まれた。

3. Main content of reconstruction plan

Based on the lessons and issues of the disaster, we centered the basic policy of reconstruction on the three pillars of reconstructing daily life, building a disaster-prevention community, and reinvigorating the region. The aim was for the local governments to coordinate the existing core reconstruction plans of the state and Nagasaki Prefecture, such as erosion-control projects and road projects, adjust them systematically from the perspectives of reconstructing daily life, building a disaster-prevention community, and reinvigorating the region, supplement uncovered areas, and realize consistent reconstruction from the point of view of the local community (Figure-2).

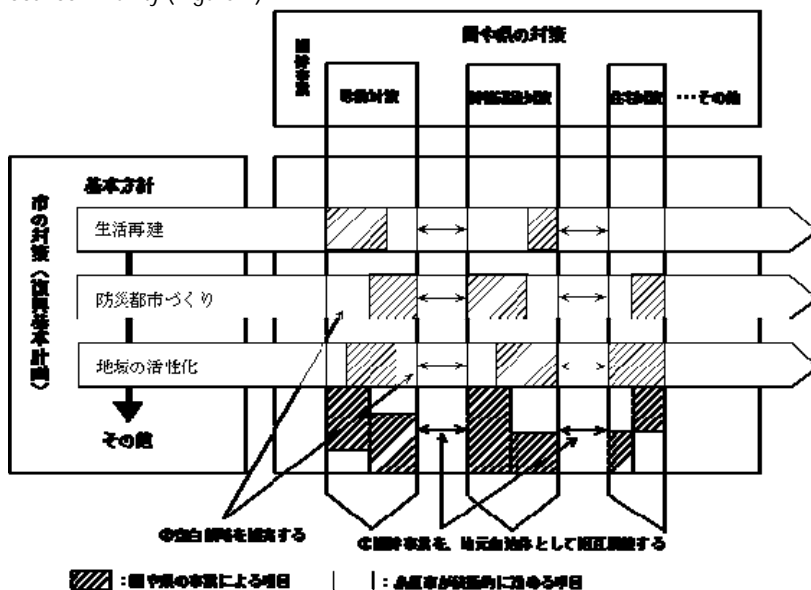


図-2 島原市の復興計画策定の基本的考え方

The reconstruction plan was compiled so that the three pillars of reconstruction would be implemented simultaneously. We judged that once measures for the victims had ended and interest in Shimabara had waned, it would be difficult to attract investment for local reinvigoration. Since the parties concerned were fully aware of the necessity of a reconstruction plan, the formulation went smoothly. Moreover, the plan turned out to be very substantial.

The three-pillar composition of the reconstruction plan, which was announced publicly in March 1993, was also adopted in the reconstruction plans of Kobe, which was hit by the Great Hanshin-Awaji Earthquake, and Abuta-cho, which suffered damage from the eruption of Mount Usu. On the occasion of a disaster, it is difficult to restore the vitality of a region to a level higher than before, but a plan can be utilized effectively for local reconstruction if employed strategically. As a result of the formulation of the reconstruction plan, efforts toward local reconstruction began through the cooperation of local residents and the administration. The division of roles between local residents, local municipalities, the state, and the prefecture was discussed. I learned that the principal actors in reconstruction are the local residents and the local communities, and that the existence of leaders is essential. In addition, from the step at which related parties pool their wisdom and think about methods

3.復興計画の主要内容

災害の教訓と課題を元に復興の基本方針を生活再建、防災都市づくり及び地域の活性化の3本柱とした。復興計画は、国や長崎県の既定の基幹的な砂防事業、道路事業等の復興事業計画を地元の自治体として相互調整するとともに、生活再建、防災都市づくり、地域の活性化の観点から体系的に調整して空白領域を補完し地域にとって整合性の取れた復興を目指す構成とした(図-2)。

復興計画は、復興の3本柱が同時併行で実施される内容となっている。被災者対策が終って、島原への関心が薄くなった段階では、地域の活性化に対して投資が行われにくいと判断されたためである。復興計画の必要性を関係者は十分認識していたため、策定はスムーズに行えた。また、完成度も高いものであった。1993年3月に公表された復興計画の3本柱の構成は、阪神・淡路大震災の被災地神戸市及び有珠山の火山災害の被災地虻田町の復興計画でも採用された。災害を契機として地域の活力を元の水準以上にすることは困難であるが、戦略的に行えば有効に地域振興に活用できる。復興計画の策定の策定から、地域住民と行政の協働による地域復興の取り組みが始まった。地域住民、地元市町及び国・県の役割分担が議論された。復興の主役は地域住民であり、地域のコミュニティであり、リーダーの存在であることを学んだ。また、復興に向けて、関係者が知恵を絞り、方法を考えるステップから情報公開が進み、公助の限界や共助・自助の重要性も共通の認識となった。さらに、復興に当

toward reconstruction, information disclosure advanced and we had a common recognition of the limits of public assistance and the importance of cooperation and self-help. Furthermore, I learned that in the process of reconstruction, the existence of community development planners and go-betweens is essential. After the end of the eruptions as well, our efforts toward reconstruction led to the holding of the Cities on Volcanoes Conference and application for "geopark" status.

4. Wide-area reconstruction plan by Nagasaki Prefecture

The prolonged volcanic disaster and expansion of the consequent direct and indirect damage brought about a decline in economic activity not only in the disaster area itself but in Shimabara Peninsula as a whole in the form of damage to agricultural crops caused by falling ash and so on, a drop in the number of sightseers due to the area's negative image, an outflow of population, and a fall in enthusiasm to make purchases. Therefore, in order to stimulate the economic recovery of the peninsula as a whole and promote regional development utilizing the volcano, in fiscal 1993 Nagasaki Prefecture formulated the Shimabara Peninsula Reconstruction and Development Plan. With this plan, the content of reconstruction to be implemented on the initiative of the prefecture was clarified, and volcano tourism, which had been proposed by municipal reconstruction plans, received authorization as a prefectural plan.

After the volcanic activity had subsided, Nagasaki Prefecture declared 1996 to be the "first year of reconstruction" and formulated the Gamadasu Plan covering the entire peninsula. (Gamadasu means "do your best" in the Shimabara dialect.) Based on the reconstruction plans drawn up by municipalities and the prefecture while the eruptions were still continuing, this plan included wide-ranging projects and clarified the implementing business entity, the fiscal year of implementation, the financial burdens, and so on. It was a comprehensive and concrete action plan embracing not only the state, prefecture, and municipalities on Shimabara Peninsula but also the private sector. Such efforts were effective in promoting projects like volcano tourism that covered multiple business entities and were centered on the private sector.

● Conclusion

Finally, from my experience of involvement in reconstruction following the Mount Unzen-Fugendake eruption disaster from beginning to end, I would like to conclude by proposing the following issues:

- (1) The formulation of reconstruction plans is not clearly positioned.
- (2) Commercial and industrial countermeasures are centered on loans and are not an effective means of support for long-term disasters.
- (3) In volcanic disasters that damage housing and agricultural land, support for the rebuilding of lives by individuals (housing, work) is necessary for reconstruction.
- (4) There are few wide-area infrastructure programs in disaster reconstruction projects.

たつては、まちづくりプランナーのようなきっかけ作り役や橋渡し役の存在が欠かせないことも学んだ。このような復興への取組みは、噴火終了後も火山都市国際会議の開催、ジオパークの申請と展開した。

4.長崎県による広域的な復興計画

火山災害の長期化とこれに伴う直接・間接被害の拡大は、被災地のみならず島原半島全域にわたり、降灰による農産物等の被害、マイナスイメージによる観光客の減少、人口の流出及び購買意欲の低下による経済活動の低減をもたらした。そこで、半島全体の経済的な復興と火山を活用した地域振興を図るため、長崎県は島原半島復興振興計画を1993年度に策定した。この計画で県が主体となって実施する復興計画の内容が明らかになり、市町の復興計画で提案された火山観光が県の計画として認定された。噴火活動が終息状態になると、長崎県は1996年を復興元年と位置付けて半島全体を視野に入れたがまだ計画（島原地方の方言で、がんばるという意味）の策定をした。噴火継続中に策定された市町及び県の復興計画を基本としながら幅広い事業を対象に、事業主体、実施年度、財源負担等を明らかにした。国、県及び島原半島内の市町はもちろん、民間も含めた総合的かつ具体的な行動計画にした。このような取組みは火山観光のように、事業主体が複数にわたり、民が中心となるプロジェクトの推進に有効であった。

●まとめ

雲仙普賢岳の火山災害で復興に終始携わった経験から最後に課題をまとめる。

- ①復興計画の策定の位置付けがないこと
- ②商工業対策は融資が中心で長期災害に対して有効な支援策がないこと
- ③宅地や農地が失われる火山災害では、個人の生活再建(住宅、仕事)の支援が復興に必要なこと
- ④災害復興事業に面的整備事業のメニューが少ないこと

The Problems of Intermediate and Mountainous Areas, Efforts Toward Disaster Reconstruction While Overcoming Them, Issues, Etc.

中山間地域の課題とそれを克服しながら取り組む災害復興のありかたと課題

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Unlike other earthquake disasters in recent years, the Niigata Chuetsu Earthquake, which struck in October 2004, caused immense damage in agricultural villages in intermediate and mountainous areas; a total of 61 rural communities in seven municipalities were isolated. Since the Great Hanshin-Awaji Earthquake in 1995, a lot of experience and knowledge had been accumulated regarding urban disaster prevention and disaster reconstruction in cities. But then a disaster occurred in the type of area that had not been covered, so it was necessary to think anew about responses in various situations of restoration and reconstruction.

Because the number of dead and injured, the number of collapsed homes, and the number of homes destroyed by fire were kept small compared with the Kobe disaster, at first restoration to an extent went according to plan. Three years after the disaster, roads that had been cut off by the impact of landslides and so on had been restored except for a few places, and restoration of the livelihood base, including fields and paddies, had been almost completed as well. As of December 2006, two years after the disaster, which had been stipulated as the deadline for accommodation in the 3,460 temporary housing units that had been built in the disaster area as a whole, about 500 households were still occupying them, but they were almost all cases in which occupancy had been extended because of delays in the restoration of housing in evacuation areas or in the construction of public housing for victims. Three years after the disaster all of the temporary housing estates had been cleared.

The Earthquake Disaster Reconstruction Vision, which was announced by Niigata Prefecture about four months after the disaster, stated that the first three years after the disaster would be the "preparing for takeoff" and "takeoff" phases toward reconstruction and the next three years would be the "flying" phase. And indeed, three years after the disaster the governor of Niigata Prefecture announced full-fledged reconstruction from now on. So restoration of the disaster area was completed just about according to the schedule indicated in the initial vision, and it was in the fourth year that reconstruction, centered on local regeneration and rebuilding of the livelihood base in the disaster area, began.

In restoration and reconstruction work after the Chuetsu Earthquake, as well as support measures through existing schemes and assistance from the state for rebuilding the lives of residents, the Niigata Prefecture Chuetsu Earthquake Disaster Reconstruction Fund was set up with the aim of realizing the early reconstruction of the disaster area by responding accurately and flexibly to individual and local community needs that were not be covered by these frameworks. For a while after the start of the project in March 2005, the assistance menu consisted of the maintenance and administration of temporary housing, mental care, livelihood

2004年10月に発生した新潟県中越地震では、7市町村で計61の集落が孤立するなど、近年の地震災害とは異なり、中山間地域の農業集落において甚大な被害が発生した。1995年に発生した阪神・淡路大震災以降、都市防災や都市の災害復興に関しては多くの経験や知見が蓄積されてきたが、そこでは包含し切れなかった部分での被害の発生であったため、復旧や復興の様々な場面において新たに対応を考えなくてはならなかったといえる。

しかし、死傷者数や倒壊家屋数、焼失家屋数が神戸の被害に比べて少なく抑えることができたこともあり、ある程度は当初からの計画通りの復旧が行われてきた。震災から3年が経過した時点で、各地で地滑り等の影響で寸断されていた道路網は一部を除いて復旧し、田畑をはじめとする生活基盤の復旧もおおむね完了している。被災地全体で3460戸建設された仮設住宅に関しても、入居期限として定められている2年間が経過した2006年12月時点で約500世帯が残っていたが、これらは避難指示発令地域で宅地等の復旧が遅れたケースや、罹災者公営住宅の建設の遅れに伴い退去期限が延長されたものがほとんどであり、3年経過した時点ですべての仮設住宅団地が解消されている。

震災発生から約4ヵ月後に新潟県から発表された「震災復興ビジョン」では、震災発生後3年までを復興に向けた滑走・離陸期であるとし、その後6年までを上昇期としている。実際に震災から3年が経過した時点で、新潟県知事はこれから復興の本番であると発言をしており、当初のビジョンで示されたスケジュールにおおむね従う形で被災地の復旧が完了し、各被災地での地域再生・生活再建を軸とした復興が具体化してきたのが4年目の状況であった。

中越地震からの復旧・復興にあたっては、住民の生活再建のためには既存の各種制度による支援策や国からの援助だけではなく、それらの枠組みでは対応しきれない被災者個々、地域としてのニーズに的確かつ柔軟に応えることで被災地の早期復興を実現することを目的として「新潟県中越大震災復興基金」が設立されている。事業が開始された2005年3月からしばらくの間は、仮設住宅の維持管理や心のケア、高齢者・障害者向け住宅整備支援などの生活支援や、中小企業者仮設店舗等設置など

support, including support for the building of housing for the elderly and disabled, and business support, such as the provision of temporary stores and offices to small and medium-sized companies. After that, through district meetings and so on, the contents became more specific, such as hands-on support for the restoration of paddies. The project achieved a certain effect as a framework for providing support for local conditions without missing opportunities. About three years after the earthquake disaster fund schemes relating to the rebuilding of local communities were turned into projects. In addition, regarding support to temples and shrines, each hamlet in most of the disaster area has a shrine, but it is extremely difficult for such facilities to receive direct assistance from the administration. However, restoration and so on was made possible by utilizing the fund menu under the recognition that these facilities are important parts of community life.

Furthermore, immediately after the earthquake disaster various assistance reached the disaster area from around the country, and the fund menu was shaped so as to connect the bonds thus cultivated to the rebuilding of the hamlets and reconstruction of the region. As a result, various events and exchange were attempted at several places, and specific efforts are being made for the sustainable maintenance of the hamlets, such as the establishment of a rental ownership system for idle farmland and exchange between mothers and children in neighboring cities and the hamlets through farming activities.

In hamlets that suffered especially heavy damage, however, the decline in the number of households since the earthquake disaster is a major problem. In the former Yamakoshi Village (now the Yamakoshi district of Nagaoka City), which was once evacuated completely, hamlet reconstruction plans were formulated for six communities that suffered especially heavy damage, and support was provided for the rebuilding of housing there. In a survey of the residents of these hamlets conducted in February 2006, about 65% of households replied that they wanted to return, but in the end only about 52% of them did return to their hamlets and rebuild their homes or enter public housing. In addition, the Higashiyama district of Ojiya City, which is adjacent to Yamakoshi and has a very similar hamlet environment, adopted measures that contrasted with those of Yamakoshi and provided support for people who left their hamlets, such as the implementation of projects to promote the transfer of disaster-prevention groups and promoting the transfer of people, centered on households with school-age children, away from their hamlets to transfer sites built in Ojiya. But even so, as of 2008, the ratio of households remaining in their hamlets was almost the same at about 52%.

As suggested by these trends, depopulation and aging had been taking place in this region even before the Chuetsu Earthquake disaster occurred; in some districts, depopulation countermeasures had been adopted over 40 years ago. The outbreak of the earthquake disaster simply made them even more striking and more serious. In the Higashiyama district of Ojiya, the population structure after the earthquake disaster closely resembles the structure that, by simple estimates, had been predicted for around 2040. So, simply speaking, the area has fast-forwarded by about 30 years and is facing the problems that had been expected to arise then. The situation is still very severe. As a result of experiencing the earthquake disaster,

の産業支援などがメニューとして掲げられていたが、その後も地域別懇談会などを通じて手作り田直し等支援などの特徴的なメニューも事業化されるなど、地域の实情に時機を逸せず支援するための枠組みとして一定の効果を挙げてきている。その基金のメニューとして震災3年が経過した頃から地域コミュニティの再建に関するものが事業化されている。行政支援として従来は直接支援が極めて難しいとされていた寺社等への支援に関しても、被災地域の多くが集落ごとに神社を奉っており、それは十分にコミュニティの重要な一部分であるという認識の下、基金メニューを活用することによる修復等も可能になっている。

さらには、震災直後より全国各地から様々な支援が被災地に対して行われてきたが、そこで培われた絆を集落の再建、地域の復興につなげていくための基金メニューも事業化されている。その結果各地で様々なイベントや交流が試みられ、休耕田のレンタクオーナー制度の設立や、近傍都市の母子と集落の畑作を通じた交流など、集落の持続可能性の維持のための取組みが具体化している。しかし、特に甚大な被害を受けた集落では震災後の世帯減少は大きな問題となっている。

全村避難を行った旧山古志村（現長岡市山古志）では、特に被害が甚大であった6集落を対象に集落再建計画の策定を行い、そこでの住宅再建を支援した。2006年2月に該当地区の住民の実施した住民意向調査では約65%の世帯で集落に戻ると回答があったものの、最終的には約52%が集落に戻って住宅を再建、もしくは公営住宅に入居することとなった。また、山古志地域に隣接し、集落環境も比較的類似している小千谷市東山地区では、防災集団移転等促進事業が実施され、就学児を抱える世帯を中心として集落を離れ、小千谷市街地に造成された移転用地への移転が進められた。集落を離れる人に対する支援を行った点では、山古志地域の施策とは対照的であったが、2008年時点で集落に留まったのは約52%とほぼ同じ割合となっている。

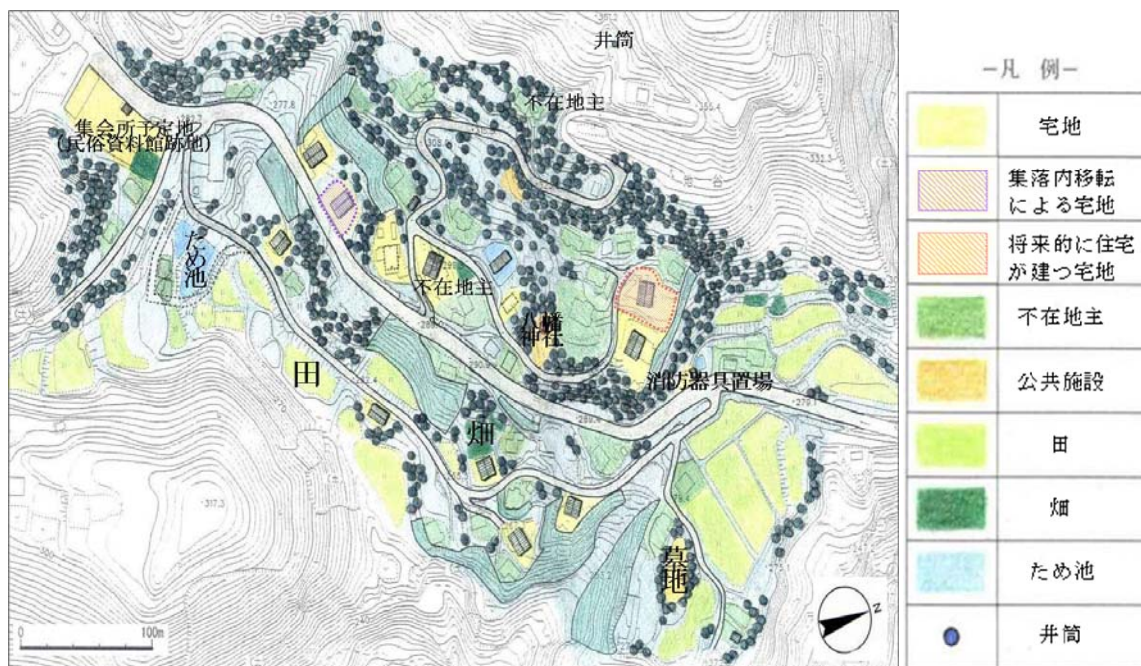
このことに代表されるように、中越地震の主な被災地は震災発生以前から過疎化・高齢化が進んでいた地域であり、40年以上も過疎対策が講じられてきた地域である。それが震災の発生によってより一層顕在化、深刻化しているという状況にある。小千谷市東山地区では震災後の人口構成は単純推計によって予測した2040年頃の人口構成に酷似している。単純に考えると30年程度の時間が早送りされ、そこでの問題を突きつけられているといえ、状況はいまだに厳しいとも言える。しかし震災を経験することによって住民が危機感を

however, it can be said that the residents have come to share a sense of crisis. The experience of leaving familiar communities and living in temporary housing reconfirmed their feelings toward the community. And they were able to make new connections through the support of the fund and bonds with supporters from outside. These can be seen as positive developments. From now on, in order to achieve reconstruction in the true sense, it is important that the search for measures to enable the sustainable maintenance of hamlets even amid the demographic trend of depopulation be actively continued.

共有することができたこと、住み慣れた土地を離れて仮設住宅で暮らした経験が、地域に対する思いを再確認させたこと、そして復興基金による支援や、外部支援者等との絆という新しいつながりを見出したことを肯定的に捉え、また人口減少化でも持続可能な集落維持方策の模索が今後も積極的に行われていくことが本当の意味での復興を成し遂げるために重要であろう。



再建された住宅の例



池谷集落再生計画 (2007年3月)

The Tokyo Metropolitan Government's Advance Reconstruction Measures

東京都の事前復興対策の取り組み

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● Estimated Damage from an Earthquake Directly Under Tokyo

According to disaster estimates by the Cabinet Office, an earthquake in the northern part of Tokyo Bay, directly hitting central Tokyo on a winter's day at 18:00 in the evening, with a strong wind of 15 meters per second, would result in large-scale damage with 200,000 structures collapsing and 650,000 structures completely destroyed by fire resulting from the earthquake. The main disaster area would spread over about 1,300 square kilometers, and dense residential areas with wooden housing covering about 10,000 ha would be burnt down. The principal issues in reconstruction would be rebuilding the burnt-down urban areas and rebuilding the lives of the victims--namely, about 1.5 million households living in completely destroyed structures and about 3 million households living in partially destroyed structures.

● Advance Reconstruction Measures by the Tokyo Metropolitan Government

The damage would be so enormous because Tokyo is one of the world's megacities with a population, in the metropolitan region as a whole, of 30 million persons. Since the probability of a large earthquake occurring directly beneath Tokyo within the next 30 years is as high as 70%, the Tokyo metropolitan government is promoting advance reconstruction measures with the aim of reducing the damage and conducting reconstruction after the disaster as speedily as possible. One of the reconstruction issues for Tokyo will be to rebuild the dense urban areas that suffer intensive damage into urban areas that are prepared for the next earthquake.

1. Reconstruction Manual and Reconstruction Grand Design

The Tokyo metropolitan government compiled the City Reconstruction Manual in 1997 and the Livelihood Reconstruction Manual in 1998. As a planning process for a city reconstruction plan to lead post-disaster reconstruction, the City Reconstruction Manual considers what urban areas should be targeted and what city reconstruction plans should be formulated. With regard to the philosophy of city reconstruction, the setup to promote reconstruction in the Tokyo metropolitan government, the reconstruction of housing, the reconstruction of daily life, and economic and industrial reconstruction, the Livelihood Reconstruction Manual consists of issues that should be addressed, the thinking behind plans, and guidelines for related systems.

2. Earthquake Disaster Reconstruction Grand Design

In consideration of the reconstruction manual, a specific reconstruction vision and urban area image as concrete plan objectives have not been stipulated. In reconstruction, however, the question of what kind of city image and community image to set as the targets of reconstruction is complicated but also key to the

● 首都直下地震の想定被害

内閣府による被害想定によると、東京区部を直撃する「東京湾北部地震」が、冬18時風速15mの強風下で発生すると、倒壊20万棟、地震火災による全焼65万棟との膨大な被害が想定された。主たる被災地域は約1300平方キロに達し、約10,000haの木造住宅密集市街地が焼失する。最大の復興課題は、焼失市街地の復興と、全壊全焼150万世帯、半壊棟を含めて約300万世帯もの被災者の復興である。

● 東京都の事前復興対策

被害が大きいのは、首都東京が人口3000万人の世界のメガシティだからである。この東京を30年以内に70%の確率で襲うと評価された直下地震から、被害を軽減し、さらに被害からの復興を迅速に行うことを目的に、東京都では「事前復興対策」を推進している。東京にとっての復興課題のひとつは、集中的に被害を受けた密集市街地を、次の地震にも配慮した市街地復興をすることである。

1. 「復興マニュアル」と「復興グランドデザイン」

1997年に「都市復興マニュアル」を、1998年に「生活復興マニュアル」をとりまとめた。都市復興マニュアルは、震災復興を先導する都市復興計画のプランニング・プロセスとして、どのような市街地を対象に、どのように都市復興計画を策定するのか、をまとめたものである。「生活復興マニュアル」とは、都市復興の理念、東京都としての復興推進体制、住まいの復興、生活の復興、暮らし・経済産業の復興について、対策すべき項目と立案の考え方および関連制度の運用基準（ガイドライン）についてとりまとめたものである。

2. 震災復興グランドデザイン

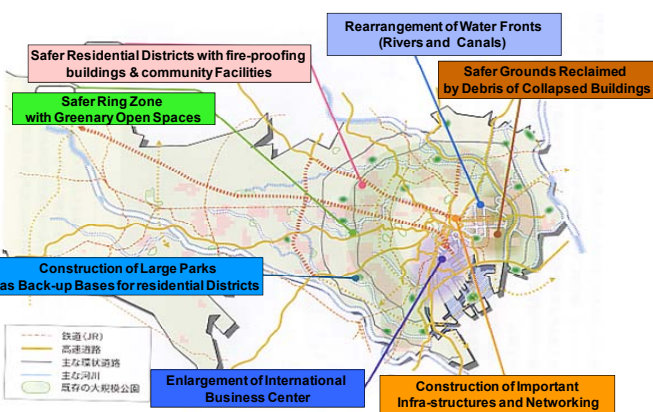
復興マニュアルの検討では、具体的な計画目標としての具体的な復興ビジョンや市街地像については定めていない。しかし復興にあたってはどのような都市像・まち像を復興目標とするかが紛糾し、合意形成の鍵もここにある。そこで、2001年に東京

formation of a consensus. Therefore, based on the “Estimate of Damage Resulting from an Earthquake Directly Under Central Tokyo” (1998), on top of the City Building Vision, which is its master plan, in 2001 the Tokyo metropolitan government compiled the Earthquake Disaster Reconstruction Grand Design (Figure1) addressing what should be the city image and vision objectives of reconstruction.

3. Revision of the Earthquake Disaster Reconstruction Manual and the Philosophy of “Local Cooperative Reconstruction”

It was decided that since the scale of the disaster would be too enormous for the administration to handle, efforts toward reconstruction should be led by the victims and communities in the disaster area with support from the administration. In 2003 the Tokyo metropolitan government completely revised its Earthquake Disaster Prevention Ordinance (1971) and enacted the Metropolitan Tokyo Earthquake Disaster Countermeasures Ordinance. On the basis of this ordinance, the Tokyo metropolitan government revised the City Reconstruction Manual and the Livelihood Reconstruction Manual and issued the Earthquake Disaster Reconstruction Manual (Policy) and the Earthquake Disaster Reconstruction Manual (Process). The process edition emphasizes that in order for Tokyo to recover from enormous damage more than five times that of the Great Hanshin-Awaji Earthquake, it will be essential for the administration to assist reconstruction efforts carried out through self-help and cooperation at the local level. It proposes a reconstruction process based on the philosophy of “local cooperative reconstruction” utilizing community power (Figure2).

Strategic Projects of Urban Reconstruction after Tokyo’s “Grand Design for Urban Reconstruction”



震災復興グランドデザイン

4. Advance establishment of the Earthquake Disaster Reconstruction Study Council and “reconstruction drills”

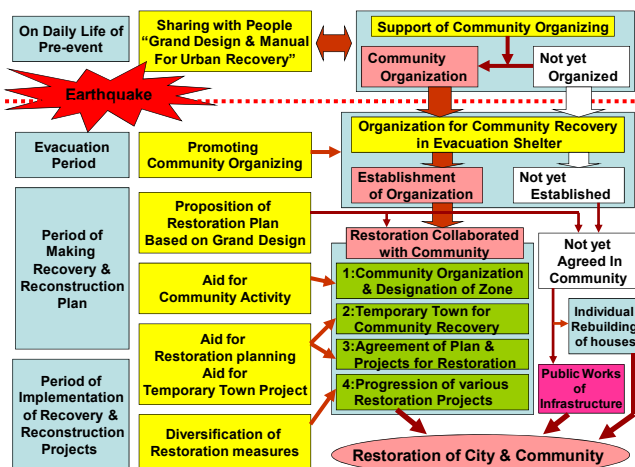
Rather than entrusting everything to committees in the midst of chaos after a disaster, the Tokyo metropolitan government has established in advance the Earthquake Disaster Reconstruction Study Council, an advisory body to the chief of the Reconstruction Headquarters, and convenes meetings every year to discuss the promotion of advance reconstruction measures.

Furthermore, as advance reconstruction measures, the Tokyo metropolitan

都は「区部直下地震の被害想定（1998）」をもとに、東京都のマスタープランでもある「都市づくりビジョン」を重ねて、どのような都市像・ビジョンを目標として都市復興を進めるべきかを「震災復興グランドデザイン」にとりまとめた（図1）。

3. 「震災復興マニュアル」への改定と「地域協働復興」理念

行政主体で復興しようにも、とても手が回らないほどの膨大な被害からの復興の進め方として、被災者主体、被災コミュニティ主体で復興に取り組み、行政はそれを支援することとした。2003年には、東京都震災予防条例(1971)を全面改定して、東京都震災対策条例を制定した。その条例に基づいて、東京都は都市復興マニュアルと生活復興マニュアルを改定し、「震災復興マニュアル(施策編)」と「同(プロセス編)」を公表した。「プロセス編」には、東京だけで阪神・淡路大震災の5倍を超える膨大な被害から復興するには、「地域での自助と共助による復興」の取り組みを「行政が公助する」が不可欠であるとして、「地域力を活かした「地域協働復興」という理念に基づく復興プロセスを提示している。（図2）。



4. 「震災復興検討会議」の事前設置と「復興訓練」

被災後の混乱の中で委員委嘱するよりも、復興本部長の諮問組織である「震災復興検討会議」を事前に設置し、毎年、会議を招集して事前復興対策の推進について審議している。

さらに、事前復興対策として、二つの「復興訓練」を実施している。

government implements two “reconstruction drills.” One is a diagram drill for staff in wards and cities in the metropolitan area regarding their formulation of city reconstruction plans based on the Earthquake Disaster Reconstruction Manual (Policy); it has been implemented every year since 1998. Each time about 50–70 administration staff participate and practice damage survey in a model area, classification of reconstruction districts, the formulation of a reconstruction policy, the compilation of community reconstruction plans, and so on. Japan Disaster Reconstruction Support Organization also participates with the support of the Tokyo Metropolitan University. The other is the Community Reconstruction Mock Drill, which is a reconstruction drill in which local residents play the leading role with the support of the Tokyo metropolitan government, wards, and experts from the Tokyo Metropolitan University and elsewhere. It is a social trial drill that involves actually conducting local cooperative reconstruction activities in a community. In 2003 the world’s first community reconstruction drills were conducted in Nerima Ward and Sumida Ward. From 2004 to 2006, as a project to foster citizen groups involved in reconstruction, appeals were made to community groups that are engaged in ward or city disaster-prevention activities and community development activities, and drills were held that included walking tours, the identification of issues in housing reconstruction and community reconstruction based on disaster estimates, the study of resident-led reconstruction policies and reconstruction principles, and discussion of plan changes and consensus formation based on reconstruction plan drafts for the drill proposed by the administration. Even after the end of the project, the reconstruction drills have been continued in several districts; up to fiscal 2008 they had been conducted in 27 districts (15 wards and cities).

●Reconstruction Strength Lies in Community Power and Citizens’ Power

The keys to overcoming reconstruction dilemmas, such as those between city reconstruction and reconstruction of the lives and housing of victims or between city reconstruction and local community reconstruction, lie in community power and citizens’ power fostered before the disaster. Disaster estimates clarify which areas will suffer most damage. In cooperation with the administration, these areas must draw community development visions, draft plans, and begin to put the process of community building into practice. Those are the ultimate advance reconstruction measures. According to the Tokyo metropolitan government’s Disaster-Prevention City Building Promotion Plan (2003), it is desirable that disaster-prevention city building should serve as the advance implementation of reconstruction city building. It should present not a picture of hell but disaster reconstruction that can be passed on to our children and their children. Improving and stockpiling community power and citizens’ power through city building in cooperation with the administration will enable dilemmas to be overcome and the realization of reconstruction of the victims, by the victims, for the victims.

ひとつは震災復興マニュアル（施策編）にもとづく都市復興計画の策定業務について、都区市の職員を対象とした「図上訓練」で、1998 年以来毎年実施している。毎回、行政職員約 50～70 人が参加し、首都大学東京の支援のもと災害復興まちづくり支援機構も参加して、モデル地区を決めて被害調査、復興区域区分、復興方針の作成、復興まちづくり計画素案の策定などを訓練する。

もう一つは「復興まちづくり模擬訓練」である。都・区と首都大学東京など専門家が支援して、地域住民が主体的に取り組む復興訓練で、「地域協働復興」の取り組みを実際の地域でやってみるといふ社会実験的訓練である。2003 年に練馬区と墨田区で世界初の「復興まちづくり訓練」が行われ、2004～06 年には「復興市民組織育成事業」として、区市が防災活動やまちづくり活動を進めている地域組織に呼びかけ、まち歩き、被害想定に基づき住宅再建・復興まちづくりの課題抽出、住民主導による復興方針や復興理念の検討、行政提案の訓練用復興計画素案を基に計画変更や合意形成のための計画検討を行う訓練である。育成事業終了以降も各地で復興訓練は継承し、2008 年度までに 27 地区（15 区市）以上で実施されている。

●地域力・市民力こそが復興力

都市復興と被災者の生活・住まいの復興、都市復興とまちの復興など、復興のジレンマを乗り越えるのは、災害前に培われた地域力であり市民力である。被害想定は、最も被害を受けやすい地域を明らかにしている。その地域が事前に行政と協働して「まちづくりビジョン」を描き、「プラン」を立案し、まちづくり「プロセス」を実践しはじめておくこと、それが究極の事前復興対策である。東京の「防災都市づくり推進計画（2003）」による防災まちづくりは、復興まちづくりの事前実施と成ることが望ましい。そこに、地獄絵ではない、子供や孫に継承する「災害復興」がある。今、行政との協働のまちづくりを通して地域力・市民力を向上させ、蓄えておくことが、ジレンマを乗り越える「被災者の、被災者による、被災者のための復興」を可能とする。