

Chapter 1

Dealing with Disasters of Unprecedented Magnitude: The Local Government's Tribulations and the Road to Reconstruction

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Abstract The large 9.0 magnitude earthquake, followed by the unexpected tsunami disaster, reached Soma City on the afternoon of March 11, 2011. In all, 5,027 citizens lost dwellings, and among them, 10 % lost their lives. The city urgently undertook major efforts in searching for dead bodies, rescuing survivors, and providing food and shelter for victims. In addition, the citizens of Soma were both extremely terrified and very confused by the severe radioactive pollution issues caused by the meltdown catastrophe at the 1st nuclear power plant of Fukushima. As the mayor of a city, I have conducted various measures to recover and reconstruct from such an unexpected disaster as quickly as possible. This essay tells the whole truth story about the trial and errors to overcome disaster. Also, I hope this essay will give you better understanding of the actual sufferings and efforts of the Soma citizens who cannot understand any other ordinary disaster records.

Keywords Soma city • Tsunami disaster • Radioactive pollution

1.1 Siege Conditions (March 24, 2011)

First, I wish to offer a prayer for the souls of the many people who lost their lives in the earthquake and tsunami.

Here in Soma, as soon as the earthquake's tremors stopped, I convened a meeting of the emergency response task force and instructed its members to issue a tsunami evacuation alert and guide residents to designated evacuation sites. Tragically, however, 5,027 people had their homes along the coast swept away and reduced to wreckage, and around one-tenth of that number lost their lives. To the volunteer firefighters who evacuated so many people I owe the deepest gratitude and respect, as well as my sincerest apologies. Seven firefighters gave their lives in the course of duty because it was their job to instruct residents to evacuate and lead them to

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Fig. 1.1 The Haragama district, reduced to a mound of debris by the tsunami's onslaught

safety, and as a result they themselves were unable to escape in time. I feel that the only way I can try to atone for that loss is to do everything in my power to help rebuild the lives and community of the many citizens who were saved in return for those individuals' lives.

Immediately after the earthquake, we focused all our efforts on collecting information and rescuing survivors. At that point only one person had lost their life as a result of a building collapsing from the earthquake. But 50 min later the emergency response task force was informed of something unthinkable: the tsunami was about to cross the Route 6 bypass. I simply could not imagine it, but in fact the communities of Haragama and Isobe had already been obliterated, and Obama and Matsukawa had also been submerged by the waves, leaving only the elevated areas (Fig. 1.1). Nothing resembling a house was left. As anxiety and alarm coursed through our minds and bodies, the task force's next job was to protect survivors from harm and attend to the health of those who had been rescued. By evening the sea had engulfed everything along the coast, and all through the night we devoted ourselves to the task of finding as many as possible of those who had lost their homes and were alone amidst the waters. We took them to evacuation centers and gave them warmth, food, and water to drink.

From day two, the evacuation centers were overcrowded with those whose houses had been washed away, as well as others forced to leave their homes because of the lack of essential utilities. Somehow I think we just about managed to provide



Fig. 1.2 A tense atmosphere prevails at an emergency response meeting

the basics by distributing rice with the assistance of the female fire prevention volunteers and the self-defense forces, and by using the relief supplies that had already arrived. We worked together closely as a team, and began to take the very first steps toward implementing our medium- to long-term plans (Figs. 1.2 and 1.3). These measures would eventually include doing what we could to clear up the area affected by the earthquake and tsunami, helping people who had lost their homes to make the move from living in evacuation centers to living independently in apartments or temporary accommodation, and offering psychological care and help with staying healthy to citizens whose day-to-day activities would by then have been severely constrained for a long time.

But little did we realize that we would be assailed by a second “demon,” this time from the far-flung county of Futaba, 45 km away (Fig. 1.4). This demon was the anxiety caused by fear of radiation. As the nuclear disaster escalated relentlessly, the frenzied reporting all day long incited terror, not only in people living near the power station but all across the country. From around the time the national government ordered residents within a 20-km radius of the power station to evacuate, the citizens of Soma started wanting to run far away, and that feeling began spreading.

At the same time, logistics service providers within Japan had become jittery and started to avoid entering the Soma area or the city of Iwaki. Gas tanker trucks and other delivery vehicles were stopping in Koriyama, so unless we sent our own drivers out we could not even obtain fuel. Meanwhile, the convenience stores and

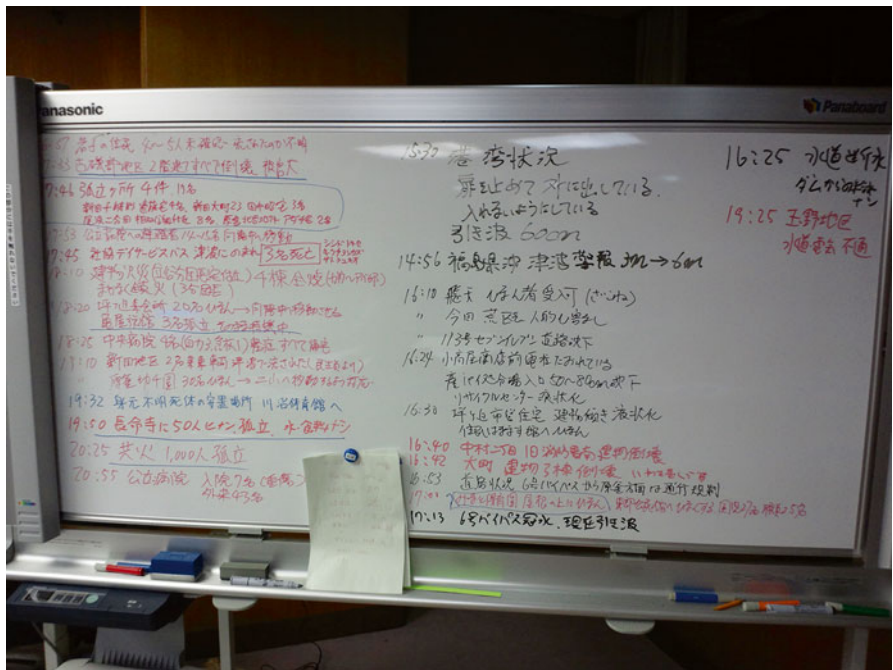


Fig. 1.3 A whiteboard lists issues to be resolved



Fig. 1.4 One of the steam explosions at the Fukushima Daiichi Nuclear Power Station that left people terror stricken about the radiation threat

supermarkets that had opened briefly after the earthquake no longer received any goods to sell, so they have closed. And in addition to the inconvenience of daily life with no supplies of gasoline or other commodities, fear of radiation spreading from

the nuclear power station has swept through the Soma area. But it is out of the question for the emergency response task force to make an independent decision to voluntarily evacuate the city before the national government issues an evacuation order. That much seemed obvious, but we confirmed that it was in fact the case at an emergency response meeting, and have visited three evacuation centers to give speeches explaining the situation.

In emergency response meetings since then we have devised a plan of action to lead us along the path to reconstruction. We are distinguishing between short-term responses, medium-term responses, and long-term planning, and have decided to pursue our plan of action one step at a time according to the situation on the ground in Soma itself. If, in the course of that process, the national government instructs us to temporarily evacuate the city, we have to consider the health and lives of our citizens and implement a systematic mass evacuation. But if we allow a vague sense of anxiety to delay our plans for reconstruction, we will not be doing justice to the memory of those who died. My key concern is that life in evacuation centers outside Soma would be very hard on senior citizens and others who are particularly vulnerable when disaster strikes. I therefore have no intention whatsoever of taking Soma's citizens away from the city at this stage, when no evacuation order has been received from the national government.

The commotion surrounding the nuclear disaster and the situational damage affecting the distribution of commodities are unlikely to continue forever. If we give in to them, we will be letting down the memories of the volunteer fire chief and firefighters who gave their lives while on duty protecting the residents of our worst-hit communities from the tsunami. We can survive so long as we at least have rice, miso, and pickled plums. The Tenmei famine that our ancestors endured in the 1780s must have been worse than this. So we will persevere here under siege conditions. Fortunately, the mayors of other cities across the country are behind us, so we do not need to worry about our food supply running out.

1.2 Mayoral Address to City Government Employees (March 22, 2011)

Today is the twelfth day since the earthquake and tsunami. First and foremost I would like to express my deepest appreciation to all of you for your calm, reliable, and orderly response under the emergency response task force's chain of command during these past days.

Immediately after the earthquake struck we set up the emergency response task force to make the major decisions about how to proceed. The task force decided that we should first of all protect citizens living along the coast from any tsunami triggered by the earthquake, and that we should rescue any people who might still be alive in houses that had collapsed. However, the actual tsunami was huge—far bigger than we could have imagined. That was what made this particular disaster different from any other.



Fig. 1.5 Saving lives by rescuing survivors and opening evacuation centers promptly

Once the tsunami hit, our primary concern was naturally to safeguard lives amidst this unprecedented natural calamity. Our response in the immediate short term, therefore, was to save people waiting to be rescued, and to evacuate people from dangerous locations to places where they would be safe. Of course, searching for missing people in the course of that process has also been part of the short-term response. We have now reached the stage where the likelihood of being able to save any more survivors is close to zero. But the fact is that there are citizens like you and me who lost their lives and are now still lying under the debris. That is something we need to deal with properly going forward (Fig. 1.5).

But what are the medium- and long-term issues we also need to consider? In the medium term, we need to help people living in evacuation centers to move within the city to apartments, disused public housing, or newly built temporary accommodation, where they can lead independent lives. In the long term, meanwhile, our ultimate goal is of course to ensure that reconstruction is achieved in the districts where the impact of the disaster was particularly catastrophic, such as Haragama, Matsukawa, and Iwanoko, as well as Isobe.

Moving on to the nuclear issue, our citizens are now experiencing considerable anxiety in this regard, and I would like to consider it in terms of two distinct goals. One is ensuring that our citizens suffer no damage to their health as a result of radiation from the power station; the other is to ensure that they do not end up changing the way they live their day-to-day lives because of anxiety about radiation.

I am 99 % certain that the government will not issue Soma with an evacuation order, but the possibility cannot be completely denied, so I believe we need to anticipate that eventuality as well, and I am in fact thinking about what would happen in that case. At the initial planning stage our fundamental policy was to take a slow and steady approach in deciding both how to reconstruct our city—a substantial area of which has been destroyed by the earthquake and tsunami—and how to maintain quality of life for our citizens during that process. That is the course that Soma is following. The nuclear problem does not change that in any way. We will still continue to plant one foot firmly in front of the other to follow our chosen course. Unless the national government issues an evacuation order, I intend to continue moving forward one step at a time in line with our initial reconstruction plan.

That is the course I will be pursuing, so I would like to ask you all please to work together and help me to revive Soma. And I would also ask you to encourage our citizens to do the same. Thank you.

1.3 Soma's Reconstruction Plan (June 12, 2011)

On June 3 we launched the Soma Reconstruction Council to deliberate on the future course of reconstruction in Soma. I listed the issues requiring discussion as I saw them and presented them as points for consideration. But at this stage it was still not really possible to draw a clear picture of what the disaster zone will look like in 3 or 5 years, or of the kind of life those affected by the disasters see themselves living. Part of the problem is that progress will be impossible unless systemic changes are made at the national level, but more importantly, our plans will remain mere pipe dreams unless we have some prospect of obtaining the necessary funds. While heading the emergency response task force during the past 3 months I have placed top priority on minimizing the harm caused to people's physical and mental well-being by the disaster, and on preventing communities from falling apart as a result of the nuclear crisis or other sources of secondary damage. Everyone at City Hall, and the citizens in general, have pulled together and persevered to promptly and carefully handle each new problem as it arises, and consequently we were able to avoid anybody dying as a consequence of delayed action. The members of the emergency response task force have done a particularly good job, working with virtually no time off at all.

Immediately after the disasters, the national government launched its council for reconstruction, and to be honest I felt uneasy about it at the time. For at least the first month after the earthquake we were completely absorbed in dealing with immediate problems, and the issues they were discussing at the council seemed completely foreign to us. These disasters were on an unprecedented scale and affected every municipality in the area in a distinct way. The big difference compared with other disasters is that reconstruction is not going to be a case of simply returning to what we had before. Even the definition of what "reconstruction" means varies according to the unique nature of each community. Municipalities in Fukushima Prefecture have all been affected by the nuclear accident to a greater or lesser extent, and their process of reconstruction is likely to take a completely different form from the reconstruction process of municipalities in Iwate and Miyagi Prefectures. Even within Fukushima, the extent of the damage and the attitudes toward reconstruction differ from one municipality to another. Only the citizens of Soma can possibly understand Soma's situation, so we have no choice but to rack our own brains to work out a reconstruction plan and nurture it into being. I think the government's reconstruction council should liaise closely with the municipalities affected by the disasters and discuss measures for reconstruction based on the realities of their situations. What distinguishes the colossal damage sustained from a huge tsunami such as this is the fact that there is no way reconstruction can be achieved by returning to the way things were before it happened (Fig. 1.6).



Fig. 1.6 The Soma Reconstruction Council explores reconstruction measures appropriate to the local situation

Another key consideration is the need to manage the long journey to reconstruction. However impressive our reconstruction plan may be, it would be tragic if anybody died alone or took their own life along the way. That is why our reconstruction plan includes a strategy for managing the entire process until our goal is finally achieved. Naturally it also includes measures to address the many challenges we anticipate, including maintaining the health of people living in temporary accommodation, preventing people from dying alone, caring for children suffering from posttraumatic stress disorder (PTSD), protecting the health of people working to remove debris, revitalizing the local economy, and solving problems related to radiation. Resolving these issues is essential to our reconstruction, so the central concern will naturally be to rebuild the lives of the citizens affected by the disasters. At the risk of overstating our aims, I personally think that reconstruction could best be defined as a situation in which those affected by the disaster, whatever their age, are able to make new life plans.

1.4 Haragama Morning Market (August 18, 2011)

Haragama, where I was born and raised, has been a fishing village since time immemorial. When I was a boy the fishermen would go fishing in the rowing boats that were lined up on the shore, but from about the 1960s onward motorized boats took

over and the coastal fishing industry, the port, and the associated industries all steadily increased in size. As a result, the fiscal 2010 catch at Matsukawaura fishing port was valued at slightly under 5 billion yen. At the same time, related businesses such as wholesaling and, in the case of certain types of fish, processing, also developed.

The tsunami was so massive that more than half of the 300 or so coastal fishing boats disappeared, but about 40 % of the fishermen made a dash for their boats when the earthquake hit and drove their engines to the limit heading for the open sea where the tsunami was looming. Even when a massive tsunami threatens, if the fishermen can just manage to get past it before the waves break, they can wait safely out at sea until it is over. But if they get caught in a wave that has broken, their boat will be smashed to smithereens. In fact, there were some fishing boats that were engulfed by this enormous tsunami because they were only very slightly behind the others that survived. Afterward, the fishermen who had been out all night in the open sea had difficulty reaching the shore when they returned because the port's quay had been damaged, but once they ran out of food and water out at sea they had no choice but to attempt the risky return to port. One can hardly imagine what they must have thought when they finally managed to reach dry land and witnessed the sight of Haragama changed beyond all recognition.

Then, having lost not only their homes, but also family members and relatives, they were relentlessly assailed with demands for repayment of loans on their fishing boats and equipment. One particularly conscientious fisherman begged me to get the fishing port at least temporarily restored as soon as possible, saying that he wanted to go fishing again as soon as he could, because if he did not ultimately he would have to commit suicide because of the loans he owed. Another fisherman had resigned himself to not taking his boat out into the open sea when the tsunami was looming, and instead escaped by car to drive his grandchildren to safety. He chose his grandchildren's safety knowing that he would most likely be plagued by a loan repayment nightmare afterward. A fisherman who loses his boat has to invest several tens of millions of yen to continue making a living, whether he buys a second-hand or a new boat. In most cases fishermen have not finished paying the loan on their previous boats, so any new expenditure entails so-called "double loans" (having to take out a new loan to replace an asset for which the existing loan is still outstanding). Attempts to restart the fishing industry are now hindered by the problem of these double loans. That is why we are very keen to see the enactment of the double loan relief bill currently under consideration in the Japanese national assembly. I sincerely hope that somehow it can be passed soon.

One day in May some wholesalers who still remained locally came to talk to me about how they might raise spirits in Soma despite the devastation of its fishing industry by delivering seafood to our citizens. I suggested that they could try organizing a morning market similar to the famous one held at Wajima in Ishikawa Prefecture. These people had good intuition, and they came up with a whole succession of new ideas. They suggested forming an NPO (nonprofit organization) to provide a continuing supply of cooking ingredients, and eventually creating a major food market in Haragama that would be used by citizens as their main source of



Fig. 1.7 The morning market acts as a spur to both morale and industrial reconstruction

food. They started to put the plans into action immediately, and since then 3 months have passed. The morning market, started on the Nagatomo Sports Ground in front of Soma Nakamura shrine, now attracts 2,000 citizens a day.

When you start from zero, nothing happens if you do not chase your dreams. But in this case something is already happening. The NPO was approved by the prefectural authorities, and is currently in the process of being registered. Meanwhile, the morning market, now held on weekends in the foyer of the Soma City Sports Arena, is doing a roaring trade and has become something for citizens to anticipate. The Haragama Morning Market NPO took action to revitalize our community, and our hopes for the disaster zone and for ourselves are invested in it (Fig. 1.7). Nuclear contamination and other major obstacles stand before us, but we will keep marching onward and upward!

1.5 Assistance from Tokyo University of Agriculture (March 11, 2013)

The day after the earthquake and tsunami I went to see the inundated rice paddies in the districts of Iwanoko, Niida, Kashiwazaki, Nittaki, Isobe, Yunuki, Kita Haragama, and Niinuma. I was lost for words. The roots of pine trees carried from the Osu district reached upward, exposed, as if they were growing on top of the sludge. Scattered among them was the debris of wrecked houses.

Toward the end of April that year, when the commotion surrounding the nuclear disaster had calmed down to some extent, we started to hear some pragmatic points of view from the farmers affected by the disasters. They said that they could not give up the idea of farming because at their advanced age there was nothing else they could do, so naturally they wanted to farm again. But the cost of buying new farming machinery was prohibitive, so they could not return to farming unless it was possible to take an efficient, community-based approach. When I heard that,

I thought that perhaps these first stirrings of motivation could be cultivated into renewed hope for the future. Community-based farming can be described as the first step toward forming an agricultural corporation, and now that even agriculture is exposed to the effects of globalization, it seems logical that farmers should seek to farm more efficiently. Rather than small-scale farmers having to make excessive individual investments in machinery such as tractors, therefore, they could integrate their farmland through their own business corporation to farm on a larger scale. Hearing what the farmers said, we sprang into action to organize them by establishing agricultural corporations. We did not have to involve all the farmers initially; so long we could create a few successful corporations, then other farmers were likely to follow suit. I had a series of spirited discussions with the chief of the Tohoku Regional Agricultural Administration Office and he promised that he would provide technical assistance to set up the agricultural corporations, and as much support as possible thereafter.

Then, one day in May, I had a visit from Dr. Kanju Ohsawa, the president of the Tokyo University of Agriculture, whose students were helping us as volunteers at the time. Drawn by his unassuming manner, I opened up to him and asked his opinion about the action we had taken since the disasters, and the challenges we still faced. And he responded by saying that, if we wished, Tokyo University of Agriculture would do all it could to help Soma in its efforts to recover. At that point, our major challenges involved finding ways to (a) restore the disaster-stricken farmland covered in washed-up trees and sludge and use it to generate income for the individual farmers making up the agricultural corporations; (b) decontaminate the land and revive agriculture in the district of Tamano (the community adjacent to the village of Iitate), where the radiation dose was relatively high; (c) revive the strawberry-growing association in Wada, half of whose members sustained damage as a result of the disasters, losing their production base; (d) take advantage of this opportunity to consolidate some of the city's farmland, transforming it into new, larger paddy fields; and (e) find new uses for sites offering no prospect of future use as farmland because the farmers responsible had abandoned them as excessive debris made restoration impossible. I asked Dr. Ohsawa for technical guidance in handling these challenges, and we agreed that he would join the Soma Reconstruction Advisory Board, to be launched in June.

In the summer of 2011, Professors Toshiyuki Monma, Itsuo Goto, and Yukio Shibuya came to survey the sites and give practical guidance with the logistical support of Dr. Katsumi Takano, the vice-president of the university. At City Hall we embarked on setting up agricultural corporations and started telling farmers about them with a view to persuading the more motivated farmers to organize themselves. We also introduced the academics from Tokyo University of Agriculture to local people, explaining what they were doing so that they would be accepted within the communities. At first it was a little awkward, but I think that over time they earned the residents' trust. Professor Monma, who was responsible for radiation countermeasures in Tamano, rented an apartment and lived permanently in Soma while he was working here.



Fig. 1.8 Students from Tokyo University of Agriculture measure radiation in a paddy field

The staff and students from the university surveyed the contaminated soil, taking detailed measurements from one parcel of farmland at a time. Their survey entailed measuring the ambient radiation dose at two different heights and sampling soil from two different depths. They then explained the results of their survey to residents (Fig. 1.8). Their enthusiasm for their work was such that the residents of Tamano would follow Professor Monma's advice, even if they would not listen to what I said. Because of the high ambient radiation doses and the reputational damage, we refrained from planting any rice in 2012, but took the opportunity to reduce the soil radiation dose by planting green manure crops and working them into the soil using deep plowing. As a result, we are planning to plant rice in 2013, and Professor Monma and his colleagues are now thinking about ways to revive our vegetable and dairy farming.

Meanwhile, in the area including the districts of Iwanoko, Niida, and Kashiwazaki, where the village of Itoyo used to be, soil expert Professor Goto came in to lead the reconstruction effort. I thought that, even if we managed to clear away the washed-up trees scattered everywhere, it would be a huge challenge to restore paddy fields on which sludge had accumulated several tens of centimeters thick. However, right from the beginning Professor Goto said something puzzling: nothing could beat rain for removing salt, and reversing the soil with a plow would turn the sludge into fertilizer. So in other words, if we removed all the trees and debris and just furrowed the fields, the salt would disappear naturally. However, we would also have to deal with sulfuric acid produced by the substances the sludge had brought with it, and Professor Goto suggested that we do this by using steelmaking slag to rebalance the



Fig. 1.9 Yamato Welfare Foundation's donation of farming machinery spurred the establishment of agricultural corporations

pH value of the soil and replenish minerals. Naturally, we were surprised at the idea of using a steel by-product as fertilizer, but the professor said he was convinced it would work, and as we listened to him we were all eventually persuaded. Then Nippon Steel & Sumitomo Metal Corporation offered us the slag we needed, and thanks to the kindness of Keiji Aritomi, the president of Yamato Welfare Foundation, we also received a donation of tractors and other farming equipment to replace those that had been washed away in the tsunami (Fig. 1.9). In the fall of 2012, the “plowed-sludge steelmaking-slag-enriched rice” cultivated by the Itoyo District's newly launched agricultural corporation achieved an impressively bumper harvest. It was only 1.7 ha of paddy fields that had been restored, but it was like a dream come true considering the hopelessness we had felt the day after the earthquake and tsunami (Fig. 1.10). No doubt my feelings at the time had something to do with it, but that steelmaking slag rice was the best I had ever tasted in my life.

On March 8, 2013, we held a presentation ceremony, formally accepting donation of a large quantity of steelmaking slag from Nippon Steel & Sumitomo Metal Corporation to help us in our goal of planting 50 ha of rice during the April 2013 to March 2014 fiscal year. The ceremony was held in Soma's City Hall with the university's vice-president, Dr. Katsumi Takano, in attendance. As my name for the rice was not really an option, the 1-kg bags on display were labeled “Revival Rice,” but we need to think of a more sophisticated name, like the title of a Japanese *enka* ballad, that is evocative of the hardships we have overcome. On a different note, the soil decontamination and salt removal process, combined with the high concentration of potassium in the sludge, make any cesium contamination unlikely, but we need to be considerate toward the purchasers of our rice and test every bag for cesium anyway.

In addition to the rice-growing corporation, the strawberry-growing association also formed an agricultural corporation and has been very successful. But if we are to build on such successes to achieve agricultural revival, we need to make decisions about how land is to be used, and we cannot do that unless basic surveys and research are conducted repeatedly. For these reasons, I would like to continue working with Tokyo University of Agriculture on an ongoing basis. I am deeply grateful to our



Fig. 1.10 Students at Tokyo University of Agriculture sell Soma Revival Rice

partners at the university for the kindness they have already shown toward our city. We, for our part, intend to work hard to accomplish an agricultural revival that will earn worldwide recognition and be appreciated by future generations.

1.6 The Wada Strawberry Farm Agricultural Corporation (March 11, 2013)

The Wada pick-your-own strawberry farm was doing a roaring trade until just before the earthquake. Cheerful staff welcomed visitors to the greenhouses of the 13 strawberry-growing association members involved. It was very popular with children, and particularly kindergarten pupils. Since it opened in 1988, the strawberry farm's plastic greenhouses had become a seasonal fixture in Soma between January and May, welcoming 30,000 to 50,000 visitors in an average year. However, the tsunami swept away about half of these in an instant, and the surrounding paddy fields were left unrecognizable because of the thick layer of sludge brought with the tsunami. Then, the stunned strawberry farmers suffered a further blow, this time as a result of the nuclear disaster. Admittedly, the strawberries were grown inside greenhouses, so even if the plastic had been washed away and cesium had attached itself to the soil, provided the greenhouses were rebuilt and soil was brought in from elsewhere, strawberries grown there subsequently would not be contaminated by

radiation. But, given the reputational damage caused by the radiation, how many strawberries could actually be sold? If fears of radiation caused even logistics service providers to give the region a wide berth, would any visitors actually come? Perhaps because they could see that I was worried, the older association members who had lost their greenhouses in the disasters started to give up on the idea of investing to rebuild them. Of course, growing strawberries takes considerable time and effort, and it is work that involves bending down over the ground, which is hard for older people, so I felt that it would be wrong of me to just blithely try to drum up enthusiasm. But the head of the strawberry-growing association, Kenichiro Yamanaka, had not given up hope. He enlisted the help of a group of students from Tokyo University of Agriculture and other volunteers from all over the country, and began the process of preparing to reopen the strawberry farm. During that time immediately after the disasters it was only our motivation to recover that provided a ray of hope, and he was very strongly motivated to reopen the strawberry farm, even if it was only with the few strawberry farmers who had escaped the ravages of the tsunami.

It was at that point that a young man called Hirasawa, who was the son-in-law of the former chairman of the medical association, visited me with a proposal. He said that it was technically possible to create round, dome-shaped greenhouses supported by positive air pressure, and he suggested the idea of using them to grow strawberries hydroponically (in nutrient-enriched water instead of soil). It made a lot of sense to me: hydroponic cultivation would save the farmers from back pain, and they could put systems in place to fertilize and monitor the water. But if we implemented this scheme as a reconstruction project, focusing solely on the farmers who had lost their greenhouses to the disasters, it would only create a gulf within the association. So should we not instead get all the association members to participate in creating an agricultural corporation, then we could erect a big hydroponic greenhouse for strawberries as one of the city's reconstruction projects and lease it from the city to the corporation free of charge. Having hit on this idea, I felt compelled to suggest it to the members of the strawberry-growing association. However, the suggestion of an agricultural corporation was new to some people, and they did not understand what I was talking about. In the end it proved impossible to persuade everybody to join, but we decided instead to offer shareholdings in the corporation to those who felt they were simply too old to actually grow strawberries any more. The head of the city's industrial affairs department visited such association members repeatedly to secure their support.

Thus, we set up the Wada Strawberry Farm corporation and constructed our first giant plastic greenhouse. Then, on January 13, 2013, we were joined by the national government's newly appointed Minister for Reconstruction, Takumi Nemoto, for the ceremonial opening of the new pick-your-own strawberry farm. The association's members were grinning from ear to ear that day. The minister was an old acquaintance of mine, so we were happy to see each other, but I was especially pleased to be able to show him how an agricultural corporation could operate a restored farm that enabled strawberry farmers to focus on agriculture and tourism without having to worry about radiation. That afternoon, Yoshimasa Hayashi, the Minister of Agriculture, Forestry and Fisheries, also came to inspect the farm.



Fig. 1.11 Wada Strawberry Farm, the symbol of Soma's agricultural reconstruction

Unfortunately we ended up not using Hirasawa's round, domed greenhouses, but it was my encounter with him that switched a light on in my mind, and for that I am most grateful (Fig. 1.11).

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