

Chapter 6 Revitalization of Industries and Livelihoods

Section 2 Agricultural and Food Industries

1. Overview of damage

The damage to agriculture, forestry and fisheries caused by the Great East Japan Earthquake was enormous. The cost of damage to agriculture, forestry, and fisheries caused by the Great East Japan Earthquake was 2,443.2 billion yen, 27 times that of the Great Hanshin-Awaji Earthquake and 18 times that of the Chuetsu Earthquake in Niigata Prefecture. Of this cost, damage to agriculture totaled 900.5 billion yen, including 428.8 billion yen in damage to 26,000 ha of farmland and 471.7 billion yen in damage to 18,143 agricultural facilities, etc. (Figure 6-2-1).

Figure 6-2-1 State of damage related to agriculture, forestry and fisheries

区分	主な被害	被害数	被害額(億円)	主な被害地域
農地・農業用施設等	農地	2万6千ha	4,288	青森県、岩手県、宮城県、秋田県、山形県、福島県、茨城県、栃木県、群馬県、埼玉県、千葉県、神奈川県、長野県、静岡県、新潟県
	農業用施設等	18,143か所	4,717	
	小計		9,005	
農作物等	農作物、家畜等		142	青森県、岩手県、宮城県、秋田県、山形県、福島県、茨城県、栃木県、群馬県、千葉県、山梨県、長野県、新潟県
	農業・畜産関係施設		493	
	小計		635	
林野関係	林地荒廃	458か所	346	青森県、岩手県、宮城県、秋田県、山形県、福島県、茨城県、栃木県、群馬県、千葉県、新潟県、山梨県、長野県、静岡県、高知県
	治山施設	275か所	1,262	
	林道施設等	2,632か所	42	
	森林被害	(1,065ha)	10	
	木材加工・流通施設	115か所	467	
	特用林産施設等	476か所	29	
	小計		3,956か所 (1,065ha)	
水産関係	漁船	28,612隻	1,822	北海道、青森県、岩手県、宮城県、福島県、茨城県、千葉県、東京都、神奈川県、新潟県、静岡県、愛知県、三重県、和歌山県、徳島県、高知県、大分県、宮崎県、鹿児島県、沖縄県から被害報告。 (さらに、富山県、石川県、鳥取県の漁船が被災地で係留中、上架中に被害。)
	漁港施設	319漁港	8,230	
	養殖施設		738	
	養殖物		597	
	市場・加工施設等 共同利用施設	1,725施設	1,249	
	小計			

- As of July 5, 2012, according to the Ministry of Agriculture, Forestry and Fisheries (data on farmland and agricultural facilities, etc. as of January 31, 2022)
- The cost of damage does not include the cost of damage caused by the nuclear disaster.

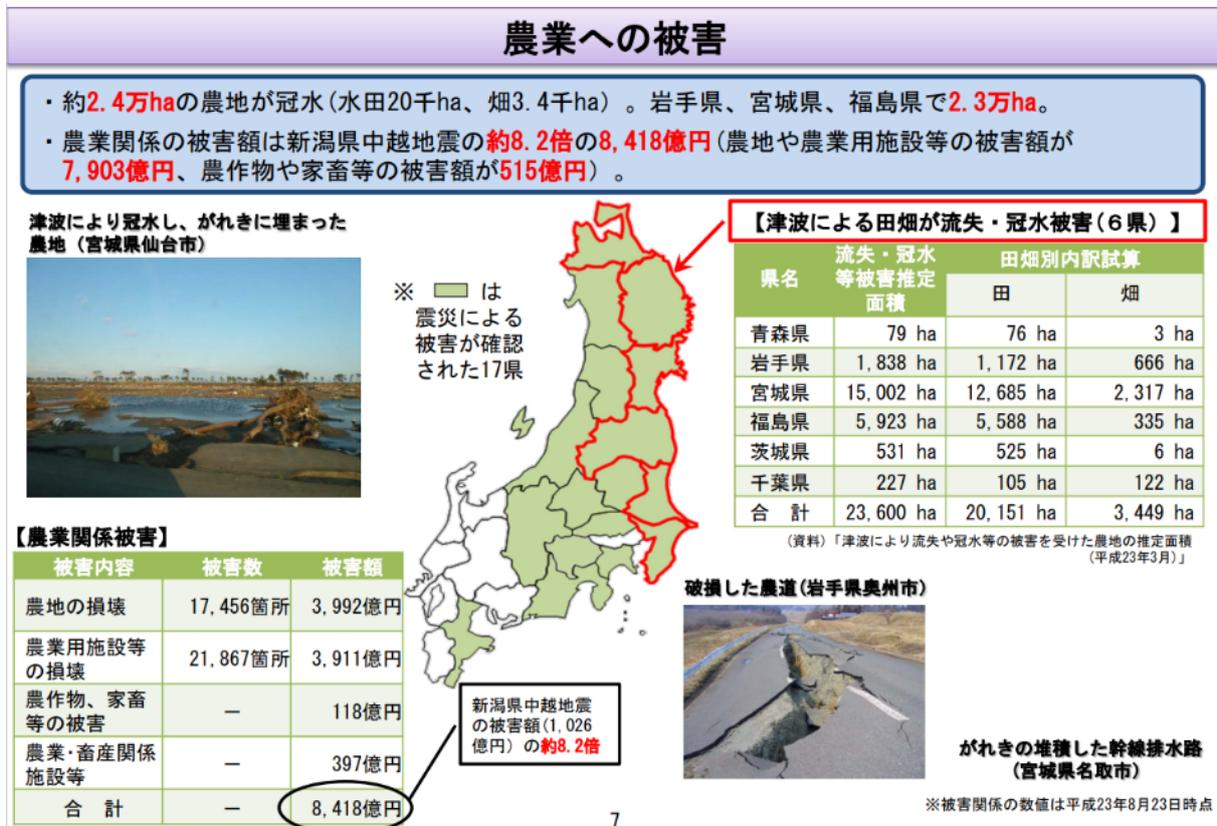
(1) Agriculture

The cost of damage to crops, livestock, etc. totaled 14.2 billion yen, and the cost of damage to agricultural, livestock-related facilities, etc. totaled 49.3 billion yen.

Farmlands that were flooded by the tsunami suffered wide-ranging damage, including debris accumulation, plant death and root rot due to salt damage, and damage not only from destruction but also from the loss of power, which lowered the room temperature in plastic greenhouses.

Of the 21,480 ha of farmland damaged by the tsunami, farmland subject to recovery that excluded farmland expected to be converted to public land totaled 19,660 ha.

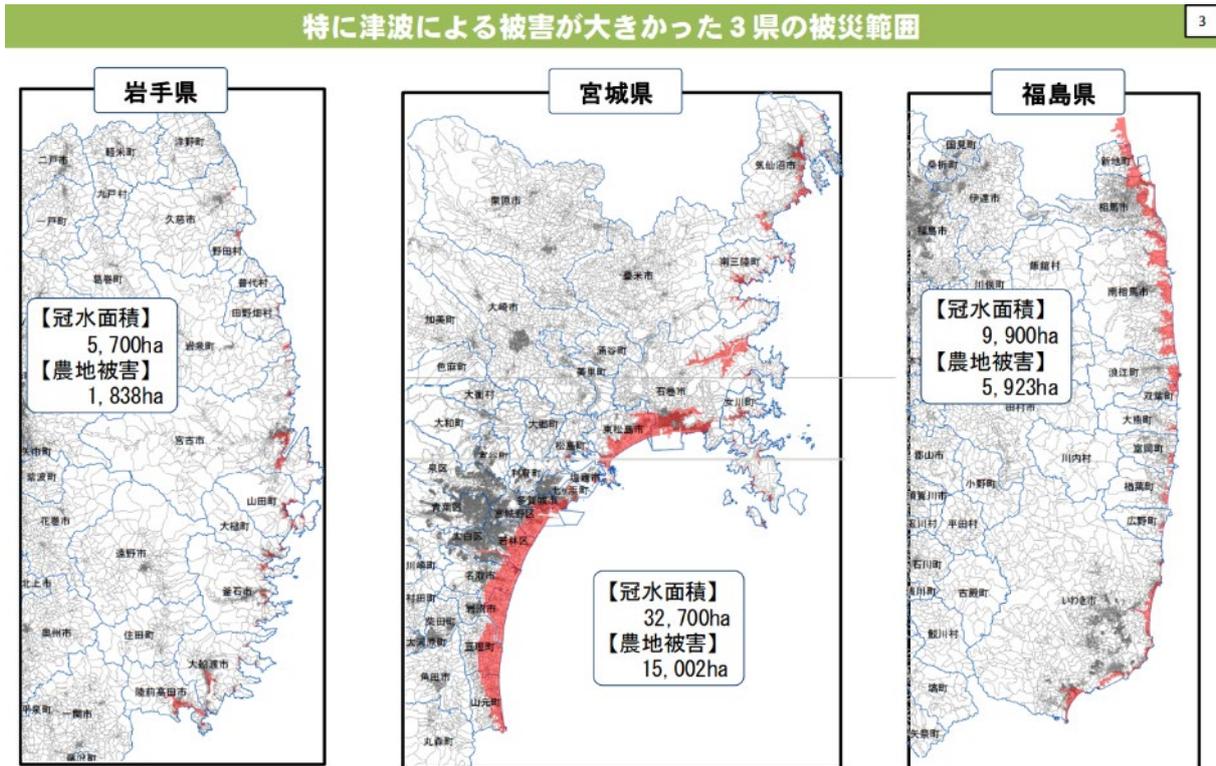
Figure 6-2-2 Overview of damage to agriculture



Source) Ministry of Agriculture, Forestry and Fisheries, "Impact of the Great East Japan Earthquake on Agriculture, Forestry and Fisheries and Response," September 2011.

<https://www.maff.go.jp/j/kanbo/kihyo02/fukkou/pdf/0912.pdf> (accessed July 27, 2023)

Figure 6-2-3 Overview of tsunami damage in the three affected prefectures



※赤塗り箇所が津波被災地域 (<http://www.stat.go.jp/data/chiri/map/index.htm>)より改変

※被害関係の数値は全体面積については国土地理院平成23年4月8日プレスリリース、農地面積については平成23年3月29日農林水産省プレスリリースより引用

(Source) Ministry of Agriculture, Forestry and Fisheries, "Damage to farmland and agricultural facilities caused by the Great East Japan Earthquake and the state of recovery" (July 22, 2011)

https://www.maff.go.jp/j/council/seisaku/nousin/bukai/h23_2/pdf/data2.pdf (accessed July 27, 2023)

(2) Livestock industry

In addition to livestock drowning or being crushed to death and barns being damaged or washed away, there were also feed shortages and starvation deaths as a result of damage to feed mills along the Pacific coast, deaths from freezing due to loss of heating caused by power outages, and raw milk wastage due to distribution function stoppages caused by fuel shortages.

Feed mills on the Pacific coast of the Tohoku region were also affected by the tsunami. These mills provided most of the livestock feed supply for the Tohoku region. Damage to and flooding of these facilities caused the production lines to cease functioning, resulting in a severe shortage of feed, which in turn hurt the livestock farmers who were supplied by these mills.

A significant number of dairy farmers were forced to dispose of their raw milk because collection of milk was impossible due to fuel shortages and also because the dairy plants were damaged and could no longer process raw milk.

Figure 6-2-4 State of damage to the livestock industry in the three prefectures Aomori, Iwate, and Miyagi



被災した飼料工場。青森県八戸市、岩手県釜石市、宮城県仙台市・石巻市など太平洋沿岸には飼料工場が多数ある

Source) Ministry of Agriculture, Forestry and Fisheries, “State of damage to agriculture caused by the Great East Japan Earthquake”
https://www.maff.go.jp/j/pr/aff/1105/spe1_03.html (accessed July 27, 2023)

Figure 6-2-5 State of damage to the livestock industry in Aomori, Iwate, and Miyagi Prefectures

○ 青森県、岩手県、宮城県 の 3 県における畜産関係被害状況（6月23日までの報告分、福島県は調査中）

	家畜被害(頭・羽)			飼養頭羽数 b (被害割合 a/b)	施設被害(棟・基・式) [※]			生乳廃棄(t)	その他
	a	水死 [津波]	圧死・餓死・凍死		全壊	半壊	一部損壊		
乳用牛	187	171	16	85,900 (0.2%)	9 畜舎2、農具庫1		畜舎等6	13,866	
肉用牛	458	446	12	271,400 (0.2%)	10 畜舎2、農具庫1、 飼料タナ2	畜舎等2	飼料タナ3		
牛 (乳用牛か 肉用牛かは 不明)	17	0	17	-	0				
養豚	5,850	4,037	1,813	1,065,000 (0.5%)	22 畜舎7、飼料タナ2、 給水施設等2、 畜舎等9	畜舎1	畜舎1		
養鶏 (採卵鶏及びブロ イラー)	4,548,955	174,800	4,374,155	39,611,000 (11.5%)	32 畜舎3		畜舎23、ケージ倒壊 4、飼料タナ等2		卵廃棄40t
畜種 不明					93 畜舎57、畜舎1、 飼料貯蔵庫1、 たい肥センター1		畜舎等12、 粗飼料貯蔵庫等6、 食肉処理施設3、た い肥センター10、家畜市 場等2		
被害計	4,555,467	179,454	4,376,013		166	91	3	72	

出典：東北農政局調べ

飼養頭羽数については「畜産統計」（乳用牛・肉用牛：平成22年2月1日現在、養豚・採卵鶏：平成21年2月1日現在）、

「食肉流通統計」（ブロイラー：平成21年2月1日現在）

※ 施設被害で四角で囲ったものは津波によるもの

Source) Ministry of Agriculture, Forestry and Fisheries, "State of damage to the livestock industry in the three prefectures Aomori, Iwate, and Miyagi"

<https://www.maff.go.jp/j/kanbo/joho/saigai/pdf/110630-3.pdf> (accessed July 27, 2023)

(3) Food industry

The Great East Japan Earthquake also caused a major impact on the food industry. For a period of time immediately after the disaster, production lines at many food factories were shut down, and the supply of food packaging materials could not keep up with demand due to rolling blackouts and damage to material manufacturers, affecting the production of natto, milk and dairy products, etc. In addition, many wholesale markets were damaged, gasoline shortages hampered food distribution, and many retailers and businesses in the food service and restaurant industry were forced to suspend operations in the six prefectures in the Tohoku region and Ibaraki Prefecture.

Damage to the food manufacturing industry was concentrated in factories on the Pacific side of the Tohoku region, the northern Kanto region, and the southern Kanto region (Figure 6-2-6). By industry, the largest number of businesses that were affected belonged to the seafood processing industry, followed by the dairy product manufacturing industry, soybean processing industry, and seasoning manufacturing industry.

Looking at the percentage of each type of damage, the most common type was lifeline outage, which is indirect damage, followed by damage to buildings and facilities, which is direct damage, shortage or difficulty in obtaining raw materials, distribution problems, and shortage or difficulty in obtaining packaging materials, which are indirect damage (Figure 6-2-7).

Figure 6-2-6 Distribution map of damaged factories



第1図 被害が確認された工場

Source) Ministry of Agriculture, Forestry and Fisheries, “State of damage and recovery response of food manufacturing industry in the Great East Japan Earthquake - Quantitative analysis of the actual damage situation, the response to damage, and the shutdown period from the perspective of technical paper-,” November 2014.
https://www.maff.go.jp/primaff/kanko/review/attach/pdf/141128_pr62_02.pdf
 (accessed July 27, 2023)

Figure 6-2-7 Breakdown of damage

被害の種類	被害工場数	割合 (%)
直接被害		
① 建物・設備損壊	231	43.2
(a)被害甚大	42	7.9
(i)うち浸水	38	7.1
(b)部分的被害	189	35.3
(i)うち浸水	34	6.4
② 倉庫損壊	79	14.8
間接被害		
③ 原材料不足・入手困難	175	32.7
④ 包装資材不足・入手困難	168	31.4
⑤ ライフライン停止	255	47.7
(a)設備損傷停電	74	13.8
(b)計画停電	162	30.3
(c)断水	57	10.7
(d)重油不足	40	7.5
⑥ 物流障害	171	32.0
(a)ガソリン不足	71	13.3
被害を受けた工場数の合計	535	100.0

Source) Ministry of Agriculture, Forestry and Fisheries, “State of damage and recovery response of food manufacturing industry in the Great East Japan Earthquake - Quantitative analysis of the actual damage situation, the response to damage, and the shutdown period from the perspective of technical paper-,” November 2014.
https://www.maff.go.jp/primaff/kanko/review/attach/pdf/141128_pr62_02.pdf (accessed July 27, 2023)

2. Recovery and reconstruction from the earthquake and tsunami disaster

(1) Basic framework

The Great East Japan Earthquake Reconstruction Headquarters formulated the “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake” on July 29, 2011. These basic guidelines state that agriculture, forestry, and fisheries, which are the core industries of the Tohoku region, should be revitalized to make Tohoku a new food supply base, that a combination of ① High value-adding strategies, ② Cost reduction strategies, and ③ Business diversification strategies should be used to help realize a strong agricultural structure, and that new agriculture should be proposed through large-scale demonstrative research, etc.

In order to put these policies into practice, on August 26, 2011, the Ministry of Agriculture, Forestry and Fisheries formulated the “Master Plan for Agriculture and Rural Area Reconstruction,” which sets forth ① A roadmap for regional agricultural reconstruction with a focus on the restoration and development of farmland, ② Creation of a new Japan from regional recovery, and ③ Responses to the nuclear accident, and also put together a project plan and a timetable.

(2) Budget

On May 2, 2011, the first supplementary budget of 381.7 billion yen (including 34.4 billion yen for forestry and 215.3 billion yen for fisheries) was approved for agriculture, forestry, and fisheries. In order to achieve early recovery from the earthquake, support was provided to efforts including the following:

① Restoration of production means and distribution functions (restoration of agricultural production facilities, introduction of agricultural machinery, support for restoration of wholesale markets, etc.), ② Support for continuation and reconstruction of business (provision of support funds to local agricultural reconstruction associations (reconstruction associations) that conduct joint expansion work in the disaster-affected areas, provision of Japan Finance Corporation funds and other recovery-related funds, measures such as unsecured and unguaranteed loans for which the burden of interest payments is effectively eliminated for a certain period, etc.), and ③ Confirmation of the safety of agricultural and livestock products, etc. (strengthening of the inspection system and investigation of soil, etc. on farmland in areas where radioactive materials fell, etc.).

On July 25, 2011, the second supplementary budget of 20.7 billion yen (including 300 million yen for forestry and 19.8 billion yen for fisheries) was approved for agriculture, forestry, and fisheries. This included measures to address the double-loan problem (the problem of difficulty in procuring new financing due to the burden of pre-disaster debts) and nuclear disaster measures (investigation of the concentration of radioactive materials in soil, etc.).

On November 21, 2011, based on the “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake,” the third supplementary budget of 1,126.5 billion yen (including 235.9 billion yen for forestry and 498.9 billion yen for fisheries) was approved for agriculture, forestry and fisheries. This included support for continuation and reconstruction of business (support for efforts necessary for farmland consolidation to resume community farming, support for training provided by agricultural corporations that newly hire farmers affected by the disaster, etc.).

(Agricultural reconstruction measures based on the Master Plan for Agriculture and Rural Area Reconstruction)

For the restoration and reconstruction of agriculture, budgetary measures were taken to restore and improve farmland and other production infrastructure and to continue and reconstruct business operations, in accordance with the “Master Plan for Agriculture and Rural Area Reconstruction.”

In order to quickly restore farmland, agricultural facilities, and coastal protection facilities damaged by the earthquake and tsunami, salt removal projects and disaster recovery projects were implemented, and agricultural drainage channels, reservoirs, and other agricultural water utilization facilities that were at risk of damage due to aftershocks, etc. were upgraded to strengthen their earthquake resistance. In addition, in conjunction with the reconstruction plans formulated by municipalities, plans were formulated for the development of agricultural infrastructure for the revival of regional agriculture, and support was provided for surveys and coordination activities by farmers’ groups for farmland consolidation in conjunction with land readjustment, replotting, etc.

In the area of “Continuation and reconstruction of business,” support was provided for the creation of a plan for the future resumption of local agriculture in the affected municipalities based on community discussions, as well as for the efforts required for the consolidation of farmland, etc. to achieve this plan. In addition, support was provided for practical training programs for agricultural corporations, etc. that newly employ farmers affected by the disaster, and financial support continued to be provided in the form of unsecured and unguaranteed loans for which the burden of interest payments was effectively eliminated for funding related to recovery and reconstruction.

With regard to the “Sextiary industrialization and utilization of renewable energy,” support was provided for the development of production, processing, and sales facilities for agricultural, forestry, and fishery products necessary for the efforts to achieve the sextiary industrialization through cooperation between agricultural, forestry, and fishery and food industry businesses in the disaster-affected area.

(3) Reconstruction measures

1) Pathway for regional agricultural reconstruction with a view to restoring and improving farmland

a. Securing income for affected farmers until farmland is restored, etc.

Since it may take several years for affected farmers to restore their damaged farmland and resume farming and their business, it was necessary to secure employment and income-generating opportunities for them during this period.

For this reason, consideration was given to ensure that affected farmers are given priority in employment as workers on disaster recovery projects. In addition, the necessary support was provided to farmers in the region for their joint efforts in restoration work, etc., until they could resume their business operations, by providing grants through reconstruction associations, etc., organized under the Project for Supporting the Resumption of Business at Affected Farmers.

Furthermore, in order to reduce the burden on the affected farmers as much as possible and motivate them to resume their business, support was provided to them as unsecured and unguaranteed loans for which the burden of interest payments was effectively eliminated, etc. In addition, a mechanism was established to support businesses, including affected businesses in agriculture, forestry, and fisheries,

through the purchase of their claims (Industry Reconstruction Corporation of each prefecture, Organization for Supporting the Turnaround of Businesses Damaged by the Great East Japan Earthquake). In addition, in districts that were reimbursing land improvement contributions, interest subsidies were provided for the reimbursement of the contributions until business resumed, thereby reducing the financial burden on farmers. Support was also given to efforts to help affected farmers acquire agricultural technology and business know-how through temporary employment at agricultural corporations, etc., until the resumption of business. Furthermore, in order to resume farming as soon as possible, the normal operation of the land improvement districts that managed land improvement facilities essential for farming and controlled the water distribution for agricultural use in each district was ensured.

For affected farmers who had no choice but to relocate from their familiar places, information was provided on farming, mountain and fishing villages that were accepting farmers to promote matching them with areas that could accept them.

In providing these types of support, it was also effective to introduce and encourage the use of Hello Work, which provided information on agricultural job openings for disaster victims, job placement assistance, and support for employers to create employment opportunities for affected farmers.

In addition, for affected farmers who were resuming farming on dilapidated farmland at evacuation destinations, etc., support was provided for rehabilitation work on the dilapidated farmland and farming activities on the rehabilitated farmland.

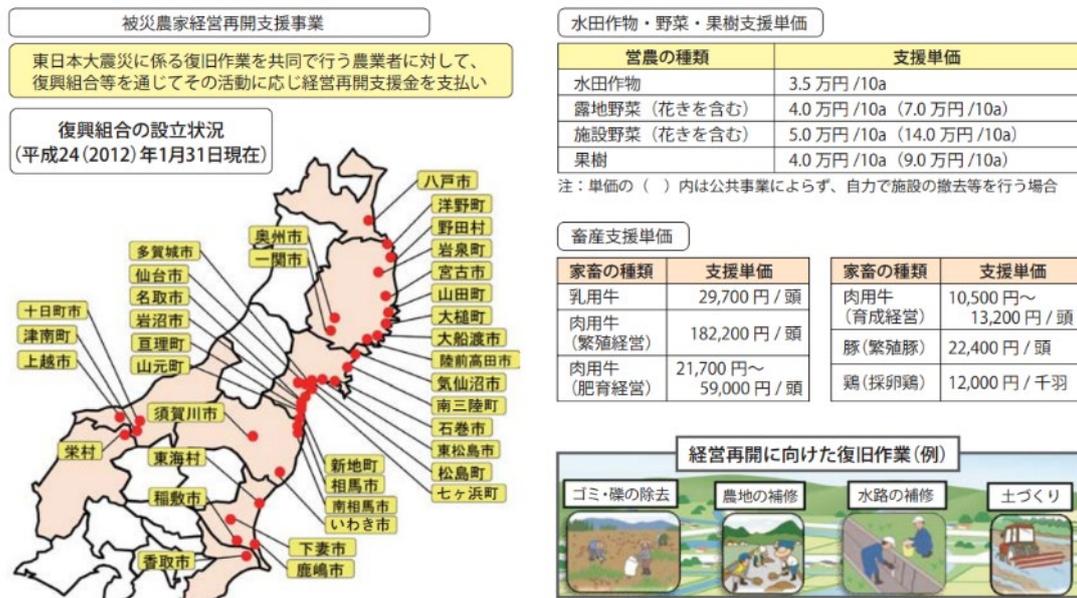
An overview of specific budgetary measures and the achievements and effects is provided below.

① Project for Supporting the Resumption of Business at Affected Farmers [Reconstruction Agency appropriation] [Implementing entities of the project: Prefectures, municipalities]

As part of regional efforts in areas affected by the Great East Japan Earthquake, grants were provided to farmers who jointly carried out restoration work to resume their business, with the aim of reviving local agriculture and restarting businesses as soon as possible.

As of March 2016, 286 grants totaling 10,720,615,000 yen had been awarded.

Figure 6-2-8 Overview of support for continuation and resumption of businesses



資料：聞き取り調査等を基に農林水産省で作成

- ② Financial Support for Restoration and Reconstruction of Agricultural Business [Reconstruction Agency appropriation] [Handling financial institutions, etc.: Japan Finance Corporation, agricultural cooperatives, etc.]

Support was provided to affected farmers for their restoration and reconstruction efforts through unsecured and unguaranteed loans for which the burden of interest payments was effectively eliminated.

As of March 2021, 10,365 loans (including 41 for forestry and 3,461 for fisheries) totaling 391.9 billion yen (including 6.5 billion yen for forestry and 152.6 billion yen for fisheries) were made. In addition, the provided guarantees totaled 5,225 (including 142 for forestry and 4,351 for fisheries) and 160.8 billion yen (including 9.2 billion yen for forestry and 140.2 billion yen for fisheries).

- ③ Subsidy for Reimbursement of Land Improvement Contributions in disaster-affected areas of the Great East Japan Earthquake [Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations]

The government subsidized the interest on the land improvement project contributions being reimbursed for affected farmland and agricultural facilities until the resumption of farming.

As of March 2017, 124,104,000 yen had been granted to the implementing entities of the project, and it was utilized in a total of 275 districts.

- ④ Agricultural Employment Project for Disaster Victims [Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations, etc.]

The subsidy covers part of the cost of practical training programs implemented by agricultural corporations, etc. for acquiring farming techniques and management know-how, etc. when they newly employ affected farmers, etc.

As of March 2016, 664,699,000 yen had been utilized for 379 cases.

- ⑤ Project to Support the Reconstruction of Disaster-Affected Land Improvement Districts [Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations]

In order to facilitate the prompt resumption of farming by farmers who had difficulty paying the current levy due to the disaster, support was provided for land improvement districts in the form of interest-free borrowing of funds and restoration of business documents and equipment.

As of March 2017, 413,203,000 yen had been granted to the implementing entities of the project and used for a total of 158 land improvement districts.

- ⑥ Project for Facilitating Acceptance of Disaster Victims from Farming, Mountain and Fishing Villages [Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations, etc.]

With the cooperation of prefectures and organizations related to agriculture, forestry, and fisheries, affected farmers were provided with information on employment in agriculture, forestry, and fisheries, and acceptance related to farmland, and housing, etc. in farming, mountain and fishing villages, and affected farmers who wished to relocate to other areas were matched with farming, mountain and fishing villages that could accommodate them. This supported smooth relocation based on the wishes of the affected farmers.

As of March 2016, there had been 87 matches.

- ⑦ Grant Project for Supporting Projects for the Revitalization of Farming, Mountain and Fishing Villages (Reconstruction Measures/Fukushima Reconstruction Measures) (Great East Japan Earthquake Reconstruction Grant/Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] [Implementing entities of the project: Prefectures, municipalities, agricultural cooperatives]

The development of production facilities, production environment facilities, and inter-regional exchange base facilities, etc. was supported to help the smooth and rapid reconstruction of areas severely damaged by the Great East Japan Earthquake and the resumption of agriculture, forestry, and fisheries through the early return of evacuees.

As of March 2021, there were 49 cases of Great East Japan Earthquake Reconstruction Grants totaling 7,473,836,000 yen (5,678,319,000 yen of government funds) being allocated, and 11 cases of Fukushima Revitalization Acceleration Grants totaling 4,113,284,000 yen (2,986,732,000 yen of government funds) being allocated.

For example, Naraha Town in Fukushima Prefecture faced the issue of creating new agricultural businesses in order to facilitate the return of residents to the town after the lifting of the evacuation orders for areas under preparation for the lifting of evacuation orders in September 2015. Shirohato Farm Corporation, a subsidiary of the Shirohato Food Industry Corporation, which was seeking to grow sweet potatoes in its pursuit of the sextiary industrialization of sweet potatoes, was considering new cultivation sites and asked Naraha Town for cooperation in securing farmland, which was granted, and the company began growing sweet potatoes in 2018. In addition, all sweet potatoes produced by farmers who received technical assistance from the company were purchased by Shirohato Food Industry Corporation. Fukushima Shirohato Farm Corporation was established in April, 2019, expanding the area under cultivation, and the town built a sweet-potato storage facility in September, 2020 and leased it to the company, enabling a stable supply throughout the year. The town is also working to create a major sweet potato production area in cooperation with the company by expanding the number of growers.

- ⑧ Project for the Utilization of Abandoned Cultivated Land to Support the Continuation of Farming by Disaster Victims [Reconstruction Agency appropriation] [Implementing entity of the project: Council for Abandoned Cultivated Land Measures]

For affected farmers who were utilizing abandoned farmlands at evacuation destinations, etc., support was provided for rehabilitation work on dilapidated farmland and farming activities on rehabilitated farmland.

As of March 2020, there were 110 cases of utilization.

b. Securing of the management entities to be the center of future agriculture and farming villages

In order to achieve the reconstruction of local agriculture, it was essential to revive the community by creating a place for farmers to gather and think about the future of local agriculture, etc. It was also necessary to discuss the reconstruction of local agriculture and the creation of new farmers, etc. by using

the reconstruction associations, etc. organized under the Project for Supporting the Resumption of Business at Affected Farmers as the basis.

Specifically, it was decided that the affected municipalities were to ascertain and confirm the future farming intentions of farmers in the disaster-affected areas, their willingness to entrust farmland to third parties, their support needs, etc., while holding thorough discussions at the community and regional level by using the reconstruction associations as the basis, and discuss how farmers in the affected communities and regions operate, how farmland should be used, etc.

At the same time, as indicated in the “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake,” it was important for the affected municipalities to hold meetings with the municipalities, JA, reconstruction associations, community farmers, agricultural corporations, and other related parties, and create a plan that outlines a roadmap for securing the farmers for local agriculture after the reconstruction, by combining (1) High value-adding strategies, (2) Cost reduction strategies, and (3) Business diversification strategies, in order to develop a future vision that is suited to the characteristics of the region.

In addition, it was important in the reconstruction process to make maximum use of women's abilities, and thus appropriate to seek their active participation from the planning and drafting stages of the plan.

In order to promptly realize the reconstruction of local agriculture as envisioned in this plan, the government promoted accelerated use accumulation of farmland to local users, improvement of their management capacity, introduction of agricultural machinery and facilities, and improvement of affected farmlands with large plotting for cost reduction.

An overview of specific budgetary measures and the achievements and effects is provided below.

① Measures to stabilize business income

Grants were provided directly to certified farmers, certified new farmers, community farmers, etc. who produce rice, wheat, soybeans, etc.

As of March 2021, 1,118,194 grants totaling 812.2 billion yen had been awarded.

② Loan for Young and New Farmers [Handling financial institutions: Japan Finance Corporation, Agricultural Cooperatives, etc.]

Support was given to young, new farmers who wished to start farming businesses by providing interest-free, virtually unsecured and unguaranteed loans for the funding necessary to launch farming businesses.

③ Comprehensive Infrastructure Development Project for Reconstruction and Revitalization of Rural Areas [Reconstruction Agency appropriation] [Implementing entities of the project: Prefectures, municipalities]

In the areas affected by the Great East Japan Earthquake and the nuclear disaster, development of farmland, agricultural facilities, village roads, etc. necessary for the reconstruction and rehabilitation of agriculture and farming villages was comprehensively implemented.

As of March 2021, 597 grants totaling 55,752,000,000 yen had been awarded.

c. Support for production-related facilities, etc. and farming, etc.

In order to make the necessary machinery and equipment available starting in the areas where farming was expected to resume by the time the farming work would start, etc., support was provided for the restoration and maintenance of production-related facilities, utilizing measures including subsidies for the restoration of affected community-use facilities and the introduction of machinery by affected farmers, etc.

In doing so, from the viewpoint of reducing the burden on affected farmers, support was provided in the form of financial support, etc. through disaster recovery- and reconstruction-related loans that were unsecured and unguaranteed loans for which the burden of interest payments was effectively eliminated (in cases where collateral or guarantors were required, only collateral for the property to be financed or guarantors within the scope of the same management were required), and a combination of these subsidy measures and financial measures in line with the actual conditions in the disaster-affected areas.

In addition, in order to support the prompt resumption of farming by affected farmers, related organizations such as expansion guidance centers, research institutes, municipalities, and JA cooperated to provide support to farmers and production areas, including consultation and guidance activities regarding production technology for affected farmland.

For the resumption of farming, efforts were also made in cooperation with related organizations to provide support for the introduction of new farming and distribution systems such as grouping and large-scale production, and the introduction of new items and advanced production and management technologies, in order to establish a more efficient farming system, taking into account the wishes of farmers, as well as the restoration and maintenance of facilities.

In particular, in the tsunami-affected areas, efforts were made to resume farming as soon as possible with a view to promoting hydroponics and other forms of horticulture that can easily cope with salt damage.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Grants for Agricultural Production Measures after the Great East Japan Earthquake
[Reconstruction Agency appropriation] [Implementing entities of the project: Prefectures, municipalities, organizations formed by farmers, etc.]

In areas where agricultural facilities and farming materials and equipment were damaged, the program provided support for the restoration and reorganization of facilities, the introduction of agricultural machinery, and the materials necessary for the next crop, etc.

As of March 2021, 23,326,800,000 yen had been utilized for 1,100 cases.

For example, in the Koizumi district of Kesenuma City, Miyagi Prefecture, Mitsubishi Corporation made a proposal to Kesenuma City for a large-scale greenhouse effort, and in October 2014, local farmers established Sun Fresh Koizumi Noen Co., Ltd. With support such as Grants for Agricultural Production Measures after the Great East Japan Earthquake and investment from the Mitsubishi Corporation Reconstruction Assistance Foundation, the farm built a large-scale Dutch-style nutriculture facility (2 ha) where it grows approximately 43,000 tomato seedlings and ships approximately 600 metric tons per year. The facility is equipped with state-of-the-art ICT technology that provides fully computerized control of nutrient solutions, temperatures, and carbon dioxide concentrations in the greenhouses, and records and analyzes data on crop growth, labor, and inventory control of pesticides and other chemicals to identify problems and make improvements. This has resulted in improved yields and reduced costs, and the system was certified under “Global GAP,” an

international certification that is gaining in popularity. In addition, the company's hydroponic cultivation facilities do not require heavy labor compared to conventional systems, making it easier for women to work there. 70% of the company's employees are women, which contributes to solving the shortage of agricultural workers and the creation of local jobs.

- ② Grant Project for Supporting Projects for the Revitalization of Farming, Mountain and Fishing Villages (Reconstruction Measures/Fukushima Reconstruction Measures) (Great East Japan Earthquake Reconstruction Grant/Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] (repost)
- ③ Financial Support for Restoration and Reconstruction of Agricultural Business [Reconstruction Agency appropriation] (repost)
- ④ Cooperative Agricultural Expansion Project [Implementing entities of the project: Prefectures] Expansion instructors with advanced skills and knowledge were posted in each prefecture, and the extension instructors provided technical and management guidance, etc. in direct contact with farmers. Specifically, efforts were made toward recovery and reconstruction from the Great East Japan Earthquake, including measures for controlling the absorption of radioactive materials and support for the resumption of farming in the disaster-affected areas.
- ⑤ Financial Support Based on the Act on Enhancement and Restructuring of Credit Business Conducted by The Norinchukin Bank and Specified Agricultural and Fishery Cooperative Savings Insurance Cooperation, etc.
In order to maintain and strengthen the financial functions of agricultural and fishery cooperatives, etc. in order to provide appropriate support for the resumption and reconstruction of the operations of agricultural and fishery businesses in the disaster-affected areas, the Agricultural and Fishery Cooperative Savings and Insurance Corporation and the supporting corporations of financial institutions affiliated with the agricultural and fishery cooperatives implemented recapitalization of the affected agricultural and fishery cooperatives, etc. in an integrated manner.
A total of 57 billion yen was used in recapitalization of eight agricultural cooperatives and one fishery cooperative in Iwate, Miyagi, and Fukushima Prefectures.

d. High value-adding such as sextiary industrialization

In the Tohoku region, the food industry share has been low because agricultural products have been supplied mainly as primary products to the Tokyo metropolitan area, etc. However, in order to increase the added value of agricultural products and create income and employment in the region in the future, it was essential to strengthen efforts for sextiary industrialization with a view to export, while taking advantage of the unique characteristics of the Tohoku region.

In this case, since it is sometimes difficult for farmers and fishermen in the affected areas to resume operations and engage in sextiary industrialization alone, revitalization and creation of brands were attempted in the disaster-affected areas by cooperating with other businesses, etc. In addition, efforts were made to develop a system to provide expert advice on marketing, etc., and build capital strengthening measures for farmers engaged in processing, marketing, etc.

In addition, in order to achieve high-value addition to agricultural products, support was given to efforts for producing agricultural and livestock products that have “strengths” through cooperation with actual consumers by promoting the development and dissemination of new varieties and technologies and comprehensively utilizing intellectual property, and also to further advancing and expanding environmentally friendly agriculture by utilizing the human resources and technological capabilities that have been cultivated in the Tohoku region with its advanced environmentally friendly agriculture. Furthermore, support was given to the establishment of production bases for safe and secure agricultural and food products by implementing efforts that enable objective evaluation of quality, such as hazard analysis critical control point (HACCP).

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Full-scale development of the Fund to Transform Agriculture, Forestry, and Fisheries into Growth Industries [Implementing entities of the project: Agriculture, forestry and fisheries Fund corporation for Innovation, Value-chain and Expansion Japan]

Through the Fund to Transform Agriculture, Forestry, and Fisheries into Growth Industries (Agriculture, forestry and fisheries Fund corporation for Innovation, Value-chain and Expansion Japan (A-FIVE)), support by capital investment, etc. was provided for business activities to build a value chain from production to consumption.

As of March 2021, eight projects totaling 284,800,000 yen (Iwate, Miyagi, and Fukushima Prefectures) had been funded.

For example, since before its incorporation in 2001, Tomato Land Iwaki Ltd. had been engaged in the production of tomatoes, figs, and strawberries, etc. after constructing the first Dutch-style nutriculture facilities in Japan, and expanded its business by launching the agricultural products processing business in 2007.

After the earthquake, while working on replanting seedlings and establishing an inspection system to counter negative rumors which were spread due to the nuclear power station accident, they established Wonder Farm Co., Ltd. in 2013, and opened “Wonder Farm,” a complex facility with a tomato picking experience, development of processed foods such as tomato juice, a restaurant using fresh local vegetables, and a shop selling local agricultural products, in 2016, following a decision on support in 2014 by the Fukushima Regional Industry Sextiary Reconstruction Fund, in which A-FIVE invested.

In addition, they established JR Tomato Land Iwaki Farm Co., Ltd. in 2014 as a joint venture with East Japan Railway Company, and have been expanding and diversifying the business beyond agriculture, including construction of tomato cultivation greenhouses in a plant factory method and expansion in the Tokyo metropolitan area by utilizing JR East’s network.

- ② Grants for Sextiary Industrialization Network Activities (the current Innovation Measures from Farming, Mountain and Fishing Villages as a part of the Farming, Mountain and Fishing Village Development Grant) [Implementing entities of the project: Local authorities, private organizations, etc.]

In order to increase income and employment in farming, mountain and fishing villages and improve regional vitality, the program supported the development of new products, development of sales channels, establishment of processing and sales facilities for agricultural, forestry, and fishery products, etc., by building a network of diverse businesses while taking advantage of local ingenuity,

as well as community-wide sextiary industrialization efforts in line with the municipal sextiary industrialization strategy and concept.

As of March 2021, 152 grants totaling 2,168,547,000 yen had been awarded.

- ③ Project for Strengthening Food Quality Control Systems [Implementing entities of the project: Private organizations, etc.]

In addition to strengthening the sanitation and quality control systems of domestic food manufacturers, the program supported efforts to promote the introduction of international standards such as HACCP.

As of March 2021, 57 grants totaling 1,392,621,000 yen had been awarded.

- ④ Support for the Development, Protection, and Expansion of New Varieties and Technologies [Implementing entities of the project: Regional councils, private organizations, etc.]

The program supported efforts to create agricultural and livestock products with “strengths” in terms of quality and brand power by accurately responding to the needs of consumers and actual users by using new varieties and production technologies, as well as strategically utilizing intellectual property.

e. Livestock industry

In order to foster and secure a variety of motivated and diverse operations including small-scale family operations in the restoration and reconstruction of livestock production, it was decided that the management structure should be strengthened and shifted to sustainable livestock production through a variety of efforts that take into account local characteristics and the environment in each region, including efforts for sextiary industrialization such as processing and sales, instead of only pursuing efficiency through expansion in scale.

Regarding related facilities damaged by the disaster, it was also necessary to consider the decentralization of the layout of dairy plants and other facilities, while giving consideration to the rationalization of distribution in order to reduce risks in case a disaster occurs. In addition, to ensure a stable supply of feed to livestock farmers, a system that allows for inter-regional and intra-regional cooperation was established, and an appropriate stockpile level of feed grains was secured.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Grants for Agricultural Production Measures after the Great East Japan Earthquake [Reconstruction Agency appropriation] (repost)
- ② Project for Supporting the Resumption of Business at Affected Farmers [Reconstruction Agency appropriation] (repost)
- ③ Financial Support for Restoration and Reconstruction of Agricultural Business [Reconstruction Agency appropriation] (repost)
- ④ Grant Project for Supporting Projects for the Revitalization of Farming, Mountain and Fishing Villages (Reconstruction Measures/Fukushima Reconstruction Measures) (Great East Japan Earthquake Reconstruction Grant/Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] (repost)

- ⑤ Comprehensive Infrastructure Development Project for Reconstruction of Farming, Mountain and Fishing Village Areas (Great East Japan Earthquake Reconstruction Grant) [Reconstruction Agency appropriation] (repost)
- ⑥ Comprehensive Infrastructure Development Project for Reconstruction of Farming and Mountain Village Areas (Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] (repost)
- ⑦ Comprehensive Infrastructure Development Project for Reconstruction and Revitalization of Rural Areas [Reconstruction Agency appropriation] (repost)
- ⑧ Project for Establishment of High-profit Livestock Production Systems [Implementing entities of the project: Private organizations, etc.]

In addition to providing support for expenses necessary to demonstrate new efforts to improve profitability on a community-wide basis, support was provided to the national dissemination activities, etc. of such efforts.

As a result, during the two-year period of FY2014 and FY2015, four demonstration studies were conducted in the disaster-affected areas (Iwate, Miyagi, and Fukushima Prefectures) on new efforts to improve profitability by taking advantage of regional characteristics, which amounted to 8,426,000 yen.

2) From regional reconstruction to the creation of a new Japan

In order to revitalize and create the Tohoku region as a food supply base for Japan, projects were actively promoted in cooperation with related organizations.

For example, in order to establish a self-sustaining and decentralized energy system, it was decided that the introduction of renewable energy sources utilizing various regional resources such as solar, wind, geothermal, biomass and small hydropower would be promoted, including the effective use of dilapidated farmland difficult to reuse as farmland if it contributed to maintaining and improving food supply capacity for the region as a whole, while working in cooperation with municipalities and various related organizations in the region as necessary, and energy-saving agriculture was actively promoted at the same time as efforts for regional coordination, facilitation of funding, improvement of business profitability, etc.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Farmland and Water Conservation and Management Payment Grants [Reconstruction Agency appropriation]
- ② Project for Establishment of Woody Biomass-related Facilities, etc. as a part of the Project for Urgent Establishment of Woody Biomass-related Facilities, etc. (Great East Japan Earthquake Reconstruction Grant/Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation]

Support was given to feasibility studies on the introduction of woody biomass-related facilities in disaster-affected areas using local timber such as woody earthquake waste and unused thinned wood, as well as the establishment of such facilities.

③ Measures to Accelerate Forest Development and Forestry Revitalization [Implementing entities of the project: Local authorities, private organizations, regional councils]

In addition to supporting the construction of facilities for the collection and transportation of unused thinned wood, wood chip and pellet production facilities, wood boilers, etc., support was also given as financing for the main body of wood biomass power generation facilities.

As of March 2019, 92,221,218,000 yen had been utilized for 8,522 cases.

④ Project to Promote the Introduction of Renewable Energies Such As Small Hydropower [Implementing entities of the project: Local authorities, private organizations, etc.]

Support was provided for efforts such as appropriate site selection, schematic design, consultations based on various laws and regulations, and training sessions to improve technical capabilities for the establishment of small hydropower generation facilities, etc.

As of March 2019, 367,638,000 yen had been utilized for 89 cases.

⑤ Project to Promote the Introduction of Renewable Energies Such As Small Hydropower (Restoration and Reconstruction Measures) [Reconstruction Agency appropriation] [Implementing entities of the project: Local authorities, private organizations, etc.]

Support was provided for efforts such as survey design for the introduction of renewable energy power generation facilities such as small hydropower and solar power generation facilities in the disaster-affected areas (Iwate Prefecture, Miyagi Prefecture, and Fukushima Prefecture).

As of March 2019, 160,100,000 yen had been utilized for 24 cases.

⑥ Comprehensive Promotion Project for Renewable Energy to Revitalize Farming, Mountain and Fishing Villages [Implementing entities of the project: Private organizations, local authorities]

Comprehensive support was provided for renewable energy power generation projects led by agriculture, forestry, and fishery operators that utilize the resources of farming, mountain and fishing villages, including the various procedures and efforts required from project conception to the start of operation.

As of March 2018, 33,052,000 yen had been utilized for three projects in disaster-affected areas (Iwate, Miyagi, and Fukushima Prefectures).

⑦ Project to Promote the Introduction of Renewable Energy in Farming, Mountain and Fishing Villages [Implementing entities of the project: Private organizations, local authorities]

While conducting surveys on the feasibility of introducing renewable energy in the disaster-affected areas, support was provided for survey design and facility establishment related to the introduction of renewable energy such as small hydropower and photovoltaic power generation facilities.

As of March 2013, 578,755,000 yen had been utilized for 37 cases.

⑧ Grant Project for Supporting Projects for the Revitalization of Farming, Mountain and Fishing

Villages (Reconstruction Measures/Fukushima Reconstruction Measures) (Great East Japan Earthquake Reconstruction Grant/Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] (repost)

- ⑨ Regional Water Environment Improvement Project (including Small Hydropower Establishment) as a part of the Grant for Rural Area Development [Implementing entities of the project: Prefectures, municipalities, land improvement districts, etc.]

Support was provided for the construction and renewal of small hydropower facilities utilizing agricultural irrigation facilities.

As of March 2021, 244,384,000 yen had been utilized for six projects in disaster-affected areas (Iwate and Miyagi Prefectures).

- ⑩ Project to Support Accelerated Introduction of Next-generation Horticulture Facilities [Implementing entities of the project: Consortium consisting of private companies, producers, local governments, etc.]

The project supported the development of a large-scale horticultural complex that can be operated even on farmland damaged by salt due to the tsunami by combining the use of energy from local resources and cutting-edge technology with strong marketing capabilities.

As of March 2016, the Miyagi Prefecture base had been established (855,948,000 yen utilized).

- ⑪ Measures to Prevent Fuel Price Hikes for Horticulture Facilities [Implementing entities of the project: Farmers' groups]

They supported the establishment of a safety net that provides compensatory payments in the event of a sharp rise in fuel prices, targeting production areas that systematically implement energy conservation measures in facility horticulture, etc.

As of March 2021, the system was in use in Iwate Prefecture (three regions), Miyagi Prefecture (ten regions), and Fukushima Prefecture (two regions).

- ⑫ Earthquake Disaster Measures for Agricultural Irrigation Facilities [Implementing entities of the project: National government, prefectures, municipalities]

Improvements were made to agricultural drainage channels that were at risk of damage due to aftershocks, etc. and drainage facilities in areas where the ground had subsided, and to strengthen the earthquake resistance of reservoirs and other agricultural irrigation facilities.

For example, the project was implemented in the Waga Chubu District, Iwaki River Sagan (second stage) District, and Matsuzawa District.

- ⑬ Earthquake Disaster Measures and Strategic Crop Production Infrastructure Establishment Project (Great East Japan Earthquake Reconstruction Grant) [Reconstruction Agency appropriation] [Implementing entities of the project: Municipalities]

In areas that were severely damaged by the Great East Japan Earthquake, the establishment of farmland and agricultural irrigation facilities to promote the expansion of business scale and production of strategic crops and regional promotion crops was implemented in detail. The project

was implemented in the Teizan District, Okaido District, and Kama District of Ishinomaki City, Miyagi Prefecture, and the Ushikawa District of Shinchi Town, Fukushima Prefecture.

- ⑭ Agricultural Infrastructure Development Promotion Project (Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] [Implementing entities of the project: Fukushima Prefecture, municipalities, land improvement districts, farmland intermediary management institutions, etc.]

In order to promote the early return of evacuees and accelerate the revitalization of the region, detailed and simple maintenance of farmland, agricultural irrigation facilities, and aging facilities necessary for the reconstruction and revitalization of farming and mountain village areas was carried out.

For example, it was implemented in the Yamakiya District and Naraha District.

3) Fostering vibrant industries with nature-friendly industries at their core

The rich natural environment of the Tohoku region's farming, mountain, and fishing villages is a major attraction, and it was important in reconstruction to use them as a selling point to attract people to the region.

In cooperation with tourism-related industries and the food industry, the project aimed to contribute to the reconstruction of the Tohoku region's tourism industry by proposing to related businesses in the region a new tourism style unique to the region that makes use of the Tohoku region's rich food ingredients and food culture, and that works in partnership with agriculture, forestry, fisheries, and other local industries.

In addition, in order to develop new industries in the fields of materials, energy, medicine, etc., utilizing various resources in farming, mountain and fishing villages, with agriculture and other nature-friendly industries at the core, it was important to make maximum use of the knowledge and strengths of private companies, public testing centers, universities, and independent administrative institutions throughout Japan, and promote technology innovation that supports the reconstruction under industry-academia-government cooperation. In particular, efforts to expand the use of woody biomass, which was expected to return profits to the local economy and further contribute to the growth of the forestry industry, were important.

Therefore, it was necessary not only to cooperate with stakeholders in each region, but also to cooperate with research institutions, etc. throughout the country to examine the potential for regional development.

In addition, the Act on Special Zones for Reconstruction in Response to the Great East Japan Earthquake (Act No. 122 of 2011) included special provisions in the Cropland Act, etc. to promote the development of facilities for food supply, etc. (processing and sales facilities for agricultural, forestry and fishery products, biomass energy production facilities, etc.) in tsunami disaster-affected areas.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Farming, Mountain and Fishing Village Development Grant (measures for urban-rural symbiosis, exchange, and regional revitalization, and measures to promote overnight farm stays) [Implementing

entities of the project: Regional councils, etc.]

Support was provided for efforts to promote coexistence and exchange between urban and rural areas by utilizing the rich nature and “food” of farming, mountain and fishing villages, as well as for efforts to promote “overnight stays in farms.”

As of March 2021, 995,560,000 yen had been utilized for 149 cases.

- ② The development and practical application of advanced technologies was strategically promoted by mobilizing the collective efforts of national research and development corporations, universities, the private sector, prefectures, etc., including the implementation of demonstration research on large-scale agriculture using cutting-edge agricultural technologies. [Implementing entities of the project: Private organizations, etc.]

For example, research was conducted on the development of labor-saving technologies using robots, etc., as well as on field demonstrations and efforts toward social implementation that contribute to solving the issues faced in the field.

4) Formation of a rich living infrastructure rooted in nature

As well as the food supply function, rural areas also have a rich environment and beautiful rural landscape where farmland, surrounding nature and topography such as mountains and rivers, forests, and settlements are in harmony.

By taking advantage of the attractiveness of these rural areas, new lifestyles can be offered in terms of medicine-welfare-food-agriculture cooperation and education, where different industries collaborate with farm work for the purpose of health and motivation at welfare facilities, etc.

In addition to taking the lead in communicating the attractiveness of these rural areas and cooperating and coordinating with related departments, it was decided that the farming, mountain and fishing communities should be maintained and revitalized, and that participation of NPOs, businesses, etc. from within and outside the region should be promoted in the reconstruction process.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Promotion of nutrition education in local communities as a part of the Grant for Measures for Food Industry and Sextiary Industrialization (currently the Grant for Consumption and Food Safety Measures) [Implementing entities of the project: Prefectures, municipalities, agricultural cooperatives, etc.]

Of the goals set forth in the Nutrition Education Promotion Plan, support was provided for nutrition education activities in which local stakeholders worked in cooperation to achieve the goals related to the Ministry of Agriculture, Forestry and Fisheries, such as providing opportunities to experience agriculture, forestry, and fisheries. (Supported areas: Iwate Prefecture, Kurihara City, Miyagi Prefecture, and Wakuya Town, Toda County, Miyagi Prefecture)

- ② Farming, Mountain and Fishing Village Development Grant (measures for urban-rural symbiosis, exchange, and regional revitalization, and measures to promote overnight farm stays) (repost)

③ Model Project to Expand the Use of Local Food Ingredients for School Lunch [Implementing entities of the project: Municipalities, private organizations, etc.]

In order to expand the use of locally produced agricultural, forestry, and fishery products in school lunch programs and firmly establish such programs, support was provided for the establishment of promotion meetings between administrations, meal service centers, producers, and school officials, as well as model efforts to provide menu items using locally produced foods at schools (implemented areas: Kamaishi City, Iwate Prefecture; Shiwa Town, Shiwa County, Iwate Prefecture; and Aizuwakamatsu City, Fukushima Prefecture).

3. Restoration and reconstruction after the nuclear disaster

The ‘Act on Special Measures Concerning the Handling of Environmental Contamination due to the Radioactive Substances Discharged from the Accident at the Nuclear Power Station Caused by the Tohoku-Pacific Ocean Earthquake that Occurred on March 11, 2011 (Act No. 110 of 2011)’ was enacted in August 26, 2011, and the “Guidelines on Decontamination by Municipalities,” which was issued by the Nuclear Emergency Response Headquarters on the same day, stated that the handling of farmlands was to be announced as appropriate methods of decontamination, necessary range, etc. in September. In response to this, the Nuclear Emergency Response Headquarters set the goal to reduce the air dose rates in areas where the estimated annual exposure dose was below 20 millisieverts by 50% by the end of two years, and to a level below 1 millisievert in the long term in the “Announcement of Appropriate Decontamination Methods for Farmlands,” which was decided on September 30. In November, a basic policy based on the Act on Special Measures Concerning the Handling of Environmental Contamination by Radioactive Substances was formulated, which stipulated that measures such as soil decontamination on agricultural lands should be taken to restore conditions that would allow agricultural production to resume.

Under these circumstances, the Ministry of Agriculture, Forestry and Fisheries compiled its “Removal Technology for Radioactive Substances Included in Farm Soil (Decontamination Technology)” on September 14 of the same year, its “Guidance for Work on Removal Technology for Radioactive Substances Included in Farm Soil (Decontamination Technology)” on March 2, 2012, and its “Technical Manual for Decontamination Measures for Farmland” on August 23, regarding the decontamination technology for farmland.

Regarding decontamination methods for farmland, the following were considered appropriate: ① In areas that have not been plowed, it is appropriate to remove soil from the surface layer; ② In farmland where the concentration of radioactive cesium in the soil is 5,000 becquerels/kg or less, inversion plowing can be used to avoid generating waste soil; ③ In farmland where the concentration exceeds 5,000 becquerels/kg, top soil removal and water agitation, removal or inversion plowing are appropriate.

Based on this, in the “Master Plan for Agriculture and Rural Area Reconstruction” revised in May 2013, the basic approach to dealing with the nuclear power station accident was specified as follows.

Under the Nuclear Emergency Response Headquarters, related ministries and agencies would work in cooperation to ensure prompt and appropriate compensation for damage, supply of safe agricultural and livestock products, and prevention of harmful rumors.

In addition, in order to promote early recovery and the resumption of business by farmers, etc. through appropriate and prompt compensation by TEPCO for the damage caused by the government's instructions to restrict shipments, etc. and the damage caused by so-called harmful rumors, etc., close cooperation was implemented with the concerned prefectures, organizations, TEPCO, etc. to provide information on damage, including the content of the interim guidelines, promote actions and provide advice on how to calculate damage, etc., based on the “Interim Guidelines for Determining the Scope of Nuclear Damage Caused by the Accident at TEPCO's Fukushima Daiichi and Daini Nuclear Power Stations” (August 5, 2011) and “Third Supplement to the Interim Guidelines for Determining the Scope of Nuclear Damage Caused by the Accident at TEPCO's Fukushima Daiichi and Daini Nuclear Power Stations (Damage Caused by Harmful Rumors in the Agriculture, Forestry, Fisheries and Food Industries)” (January 30, 2013), which were formulated by the Dispute Reconciliation Committee for Nuclear Damage Compensation.

- (1) Based on the “Concepts of Inspection Planning and Establishment and Cancellation of Items and Areas to which Restriction of Distribution and/or Consumption of Foods Concerned Applies” set forth by the Nuclear Emergency Response Headquarters for strengthening of the inspection system for agricultural and livestock products to ensure the supply of safe agricultural and livestock products, advice on inspection items and frequency of inspection was provided by the Ministry of Agriculture, Forestry and Fisheries in cooperation with the Ministry of Health, Labour and Welfare when subject prefectures formulated plans for testing the concentration of radioactive materials in agriculture and livestock products.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Subsidies to Local Governments for the Introduction of Inspection Equipment [Ministry of Health, Labour and Welfare, Ministry of Agriculture, Forestry and Fisheries]
Installation of the necessary inspection equipment to determine the concentration of radioactive materials in agricultural and livestock products, etc. was implemented.
As of September 2020, more than 330 units had been installed nationwide.
- ② Inspections at quarantine stations, national research institutes, and contracted testing institutes based on the request from local governments [Ministry of Health, Labour and Welfare, Ministry of Agriculture, Forestry and Fisheries]
Concentrations of radioactive materials in agricultural, livestock, and specialty forest products were tested.
As of September 2020, more than 75,000 inspections had been accepted nationwide.
- ③ Project for Establishment of a Monitoring System for Radioactive Materials at the Livestock Farmer Stage [Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations, etc.]
Support was provided for technical guidance in areas where farming was resumed, and the introduction of inspection equipment to establish a system for inspecting feed, etc. for radioactive materials in the region.
As a result, an operational manual for livestock production for which radioactive material measures are taken was prepared and shared nationwide, including Fukushima Prefecture, and a symposium was held on December 11, 2014 in Ota-machi, Fukushima City, Fukushima Prefecture, on efforts for the production and consumption of safe livestock products, in order to foster the understanding of general consumers of agricultural and livestock products produced in Fukushima Prefecture.
- ④ Measures to investigate the effects of radioactive materials on agricultural and livestock products [Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations, etc.]
Support was provided for inspections of radioactive materials, surveys of farmland soil, etc. conducted by each municipality based on the “Concepts of Inspection Planning and Establishment and Cancellation of Items and Areas to which Restriction of Distribution and/or Consumption of Foods Concerned Applies” and other related documents.

- ⑤ Comprehensive Project for the Revitalization of Agriculture, Forestry, and Fisheries in Fukushima Prefecture (current Fukushima Prefecture Agriculture, Forestry, and Fisheries Reconstruction and Creation Project) [Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations, etc.]

As part of the comprehensive support for the revitalization of agriculture, forestry, and fisheries in Fukushima Prefecture, support was provided for inspections of radioactive materials based on the “Concepts of Inspection Planning and Establishment and Cancellation of Items and Areas to which Restriction of Distribution and/or Consumption of Foods Concerned Applies,” etc., voluntary inspections at production areas, and publicity of safety based on inspection results.

- (2) It was decided that the supply of safe agricultural and livestock products should be ensured by cooperating with inspections of agricultural and livestock products, etc., including the establishment and lifting of food shipment restrictions as directed by the Nuclear Emergency Response Headquarters. In addition, smooth farming by providing producers with technical guidance and preparing and publishing Q&As to contribute to the production of safe agricultural products.

Furthermore, it was decided that provisional allowable levels for radioactive cesium in fertilizers, etc. would be established (“Establishment of Temporary Allowable Limits for Fertilizers, Soil Improvement Materials, Culture Soil, and Feed Containing Radioactive Cesium” (2011 FSCAB Notification No. 2444, 2011 APB Notification No. 3442, 2011 FPWID Notification No. 99, and 2011 REPD Notification No. 418, by the Director-General of the Bureau of Consumption and Safety, Director-General of the Agricultural Production Bureau, Director-General of the Forestry Agency, and Director-General of the Fisheries Agency of the Ministry of Agriculture, Forestry and Fisheries, dated August 1, 2011)), along with establishment of the inspection methods, etc. for measuring radioactive cesium in fertilizers and soil, and appropriate measures taken in cooperation with related ministries, agencies, and prefectures for the appropriate treatment and storage of fertilizers, etc. that exceed the provisional allowable level. In particular, with regard to rice straw containing radioactive cesium, it was decided to ensure appropriate management, etc. based on “Management of Rice Straw Containing Radioactive Cesium in Excess of the Provisional Allowable Level” (2011 Notice No. 1208 from the Director of Livestock Production and Feed Division, and the Director of Agricultural Production Support Planning Division, Livestock Industry Department, Production Bureau, the Ministry of Agriculture, Forestry and Fisheries, dated August 19, 2011), and “Isolation and Temporary Storage of Rice Straw Containing High Concentrations of Radioactive Cesium” (2011 Notice No. 1278 from the Director of Livestock Production and Feed Division, the Director of Livestock Industry Policy Planning Division, and the Director of Agricultural Production Support Planning Division, Livestock Industry Department, Production Bureau, the Ministry of Agriculture, Forestry and Fisheries, dated August 25, 2011).

In addition, the shipment restrictions were lifted in stages through proper livestock feed management including proper feed supply, thorough inspections and guidance, and exchange of opinions and information sharing with related prefectures.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Measures to investigate the effects of radioactive materials on agricultural and livestock products [Reconstruction Agency appropriation] (repost)

② Grants for Agricultural Production Measures after the Great East Japan Earthquake
[Reconstruction Agency appropriation] (repost)

Support was provided for the revitalization and establishment of a recycling and utilization system for agricultural by-products, for which use is stagnant due to the effects of radioactive materials, even though they are still available for use.

As of March 2021, 102,220,000 yen had been utilized for six cases.

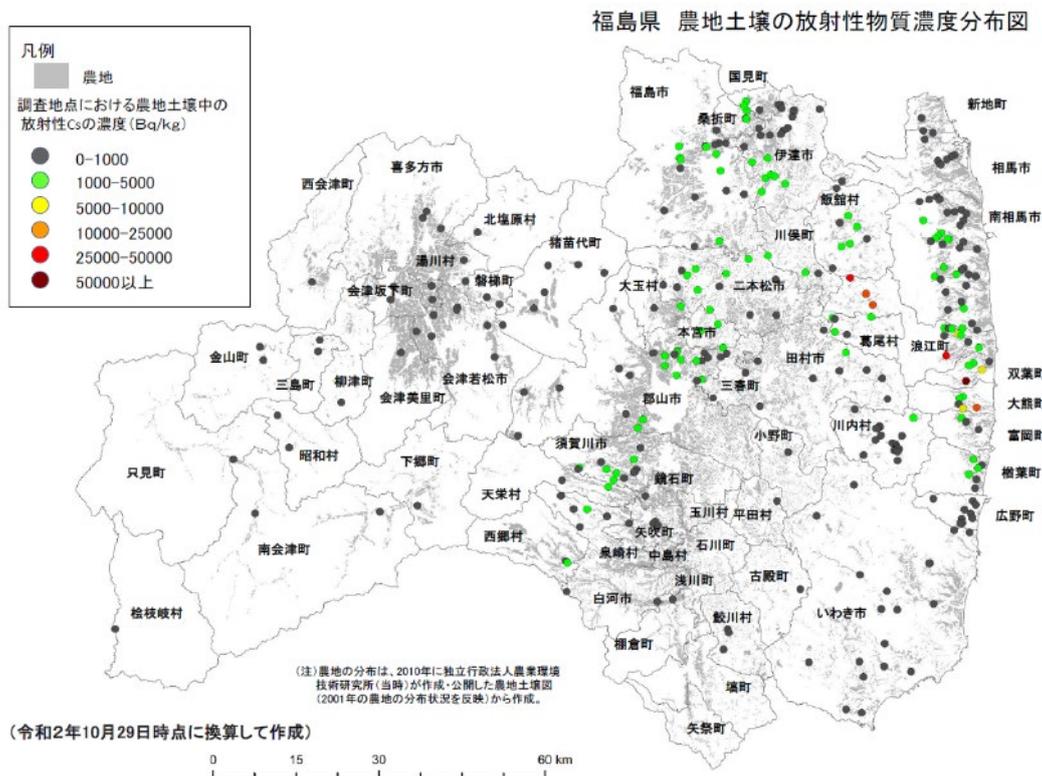
③ Comprehensive Project for the Revitalization of Agriculture, Forestry, and Fisheries in Fukushima Prefecture (current Fukushima Prefecture Agriculture, Forestry, and Fisheries Reconstruction and Creation Project) [Reconstruction Agency appropriation] (repost)

- (3) Surveys were conducted to determine changes in radioactive materials in agricultural soil, etc., and removal and reduction of radioactive materials in agricultural soil, etc. were attempted.

In addition, technologies for reducing radioactive materials in products that exceeded the standard limits for radioactive materials and for maintaining and managing farmland after decontamination were developed, and the introduction and dissemination of the results and technologies obtained were promoted.

Furthermore, in cooperation with related ministries and agencies, prefectures, municipalities, and land improvement districts, the measures for radioactive materials in agricultural irrigation facilities such as reservoirs from the viewpoint of resumption of farming and agricultural reconstruction were promoted.

Figure 6-2-9 Distribution map of radioactive material concentrations in agricultural soil in Fukushima Prefecture



Source) Agriculture, Forestry and Fisheries Research Council, “Distribution Map of Radioactive Material in Agricultural Soil (Fukushima Prefecture)”
<https://www.affrc.maff.go.jp/docs/map/R3/attach/pdf/20211224-93.pdf> (accessed July 27, 2023)

An overview of specific budgetary measures and the achievements and effects is provided below.

① Survey on Trends in Distribution of Radioactive Materials in Agricultural Soil, etc.

[Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations, etc.]

As basic knowledge for promoting decontamination and farming measures in farmland affected by the accident at TEPCO's Fukushima Daiichi Nuclear Power Station, a survey on the concentration of radioactive materials in farmland soil, etc. was conducted, the measurement results were compiled, and a distribution map of radioactive materials in farmland soil was made public.

② Development of Technology to Remove or Reduce Radioactive Materials from Farmland, etc.

[Reconstruction Agency appropriation] [Implementing entities of the project: Private organizations, etc.]

Technology that contributes to the resumption of shipments of items that were found to exceed the standard limits for radioactive materials, and soil risk assessment technology for clarifying the appropriate application amount of potassium, a material that inhibits the absorption of radioactive materials by crops, were developed.

A total of 617 million yen was budgeted from FY2012 to FY2014 for systematic development of technologies for decontamination and reduction in transfer of radioactive materials in paddy rice, field crops, fruit trees, tea, and feed crops. As of March 2021, ten commercially available topsoil scraper units had been installed in Iitate Village, etc. The test results of soil risk assessment were adopted as a guideline for fertilizer application at production sites in Fukushima Prefecture, and the developed transfer reduction technology was distributed and disseminated as a manual, etc., contributing to the early resumption of farming.

③ Development of Measure Technologies for Radioactive Materials for the Resumption of Farming [Implementing entities of the project: Private organizations, etc.]

Technologies for labor-saving maintenance and management of farmland after decontamination and for preventing the inflow of radioactive materials into farmland were developed.

The research and development project was carried out with a total budget of 188 million yen from FY2015 to FY2017, and the project worked on the development of technologies for reducing the transfer of radioactive materials in products such as Anpogaki persimmons and pasture grasses, which had not been fully addressed in FY2015 when the project started, as well as efficient and effective transfer reduction measures and soil risk assessment technologies for other products. The developed transfer reduction technology was distributed and disseminated as manuals, etc., contributing to the expansion in resumption of farming.

④ Measures to investigate the effects of radioactive materials on agricultural and livestock products [Reconstruction Agency appropriation] (repost)

⑤ Grants for Agricultural Production Measures after the Great East Japan Earthquake (Measures to Suppress the Absorption of Radioactive Materials) [Reconstruction Agency appropriation] (repost)

- ⑥ Fukushima Prefecture Support Project for Resumption of Farming (Measures to Suppress the Absorption of Radioactive Materials) [Reconstruction Agency appropriation] [Implementing entities of the project: Fukushima Prefecture, municipalities, agricultural cooperatives, organizations formed by farmers, etc.]

Support was provided for the introduction of materials that inhibit the absorption of radioactive materials into crops, etc.

As of March 2021, 10,198,256,000 yen had been utilized for 657 cases.

- ⑦ Demonstration Project for Preventing the Spread of Contamination in Reservoirs, etc. [Reconstruction Agency appropriation] [Implementing entities of the project: National government, Fukushima Prefecture, municipalities, land improvement districts]

Monitoring surveys of radioactive materials in water and sediment at agricultural irrigation facilities such as reservoirs were conducted to understand the distribution and dynamics of radioactive materials, and measure technologies were established to prevent the diffusion of radioactive materials from agricultural irrigation facilities such as reservoirs.

As of March 2021, 5,030,000,000 yen had been utilized for 51 cases.

- ⑧ Project for the Conservation and Rehabilitation of Agricultural Irrigation Facilities, etc. as a part of the Comprehensive Infrastructure Development Project for Reconstruction of Rural Areas (Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] [Implementing entities of the project: Fukushima Prefecture, municipalities]

Support was provided for measures for radioactive materials in agricultural irrigation facilities such as reservoirs, which needed to be addressed from the perspective of the resumption of farming and agricultural reconstruction.

As of March 2021, a total amount of 58,310,185,000 yen (45,555,941,000 yen as national expenditure) had been allocated to 38 cases.

- ⑨ Project for Measures for Radioactive Materials in Agricultural Irrigation Facilities under Direct Control [Reconstruction Agency appropriation] [Implementing entity of the project: National government]

Surveys were conducted on the water quality and the concentration of radioactive materials in the bottom sediment of reservoirs and other agricultural irrigation facilities. In addition, in the district of the Government-Operated Ukedogawa River Land Improvement Project, measures for radioactive materials were taken in agricultural irrigation facilities such as the Oogaki Dam from the viewpoint of the resumption of farming and agricultural reconstruction.

As of March 2021, 5,714,000,000 yen had been utilized for 74 cases.

- (4) In areas such as areas under evacuation orders where agricultural and livestock production had to be abandoned, a series of efforts aimed at resuming farming, such as conservation and management of farmland and crop planting demonstrations from the end of decontamination until the resumption of farming, were supported without interruption according to the progress of farmland decontamination and the return of the residents.

Figure 6-2-10 Area where farming has been resumed

営農再開面積(令和3年度末時点)

単位:ha

市町村名	営農休止面積 (平成23年12月末)	営農再開面積										営農再開率
		平成24年度	平成25年度	平成26年度	平成27年度	平成28年度	平成29年度	平成30年度	令和元年度	令和2年度	令和3年度	
川俣町	375	0	0	2	2	5	13	115	149	171	213	56.8%
田村市	893	10	316	493	517	523	524	525	523	507	508	56.9%
南相馬市	7,289	509	725	2,023	1,983	2,881	3,161	3,622	3,841	4,262	4,572	62.7%
広野町	269	9	127	177	195	202	202	209	218	230	209	77.7%
楡葉町	585	0	0	4	5	30	48	85	231	385	389	66.5%
富岡町	861	0	0	1	2	3	5	11	15	30	119	13.8%
川内村	605	0	202	247	288	330	366	367	366	354	363	60.0%
大熊町	936	0	0	0	0	0	0	0	0	0	0	0%
双葉町	723	0	0	0	0	0	0	0	0	0	0	0%
浪江町	2,034	0	0	2	2	3	6	17	39	134	272	13.4%
葛尾村	398	0	0	0	0	6	11	29	41	57	68	17.2%
飯館村	2,330	0	0	0	0	0	9	58	146	446	656	28.2%
原子力被災12市町村合計	17,298	528	1,370	2,948	2,994	3,983	4,344	5,038	5,568	6,577	7,370	42.6%
原子力被災12市町村再開率		3.1%	7.9%	17.0%	17.3%	23.0%	25.1%	29.1%	32.2%	38.0%	42.6%	
福島市※	62	0	20	29	33	40	41	41	42	42	43	68.6%
二本松市※	67	0	48	55	56	59	60	63	63	63	63	93.8%
伊達市※	197	0	90	110	110	110	126	114	116	110	108	54.7%
相馬市※	35	0	26	26	35	35	35	35	35	35	35	100.0%
県合計※	17,659	528	1,553	3,168	3,228	4,227	4,606	5,291	5,824	6,827	7,618	43.1%

※県合計には、原子力被災12市町村以外で、稲の作付制限により営農休止した4市を含む。
※ラウンドの關係で合計と内訳が一致しない場合がある。

(Source) Fukushima Prefecture, "Area of resumption as of the end of FY2021"

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Fukushima Prefecture Support Project for Resumption of Farming [Reconstruction Agency appropriation] (repost) [Implementing entities of the project: Fukushima Prefecture, municipalities, agricultural cooperatives, organizations formed by farmers, etc.]

A fund was established in Fukushima Prefecture to provide support for a series of efforts aimed at resuming farming in areas such as areas under evacuation orders without interruption according to the progress of farmland decontamination and the return of the residents.

As of March 2021, 15,922,527,000 yen had been utilized for 1,066 cases.

- ② Support Project for Farmers in the 12 Municipalities Affected by Nuclear Disaster [Reconstruction Agency appropriation] [Implementing entity of the project: Fukushima Prefecture]

A fund was established in Fukushima Prefecture to support the introduction of agricultural machinery and facilities necessary for farmers to resume farming in the 12 municipalities affected by the nuclear disaster.

As of March 2021, 6,301,399,000 yen had been utilized for 812 cases.

- ③ Project for Establishment of a Monitoring System for Radioactive Materials at the Livestock Farmer Stage [Reconstruction Agency Appropriation] (repost)

- ④ Survey for Fukushima Agricultural Infrastructure Restoration and Revitalization Plan

[Reconstruction Agency appropriation] [Implementing entities of the project: National government, Fukushima Prefecture]

In areas under preparation for the lifting of evacuation orders, etc. in relation to the nuclear power station accident, the Ministry of Agriculture, Forestry and Fisheries conducted a survey of damage to farmland, agricultural facilities, and rural communities, and examined the policies for restoring and improving agricultural infrastructure, thereby supporting restoration and reconstruction efforts.

As of March 2021, 9,309,000,000 yen had been utilized for 263 cases.

⑤ Project for the Conservation and Rehabilitation of Agricultural Irrigation Facilities, etc. as a part of the Comprehensive Infrastructure Development Project for Reconstruction of Rural Areas (Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] (repost)

⑥ Project for the Conservation of Irrigation Facilities, etc. to Support the Resumption of Farming as a part of the Comprehensive Infrastructure Development Project for Reconstruction of Rural Areas (Fukushima Revitalization Acceleration Grants) [Reconstruction Agency appropriation] [Implementing entities of the project: Fukushima Prefecture, municipalities, private organizations]

In order to resume farming in areas under evacuation orders, etc., support was provided for the maintenance, inspection, repair, etc. of agricultural irrigation facilities, etc., which were necessary to maintain and restore the functions of such facilities.

As of March 2021, a total amount of 8,079,617,000 yen (8,079,617,000 yen as national expenditure) had been allocated to 30 cases.

⑦ Project for Measures for Radioactive Materials in Agricultural Irrigation Facilities under Direct Control [Reconstruction Agency appropriation] (repost)

(5) With the cooperation of prefectures and organizations related to agriculture, forestry, and fisheries, affected farmers who wished to relocate to other areas were provided with information on employment in agriculture, forestry, and fisheries, and acceptance related to farmland, and housing, etc. in farming, mountain and fishing villages. Furthermore, affected farmers who wished to relocate to other areas were matched with rural areas that could accommodate them. This supported smooth relocation based on the wishes of the affected farmers.

In providing such support, it was also effective to introduce and encourage the use of Hello Work, which provided appropriate information on agricultural job openings for disaster victims, job placement assistance, and support for employers to create employment opportunities for affected farmers.

In addition, for affected farmers who were utilizing dilapidated farmlands at evacuation destinations, etc., support was provided for rehabilitation work on dilapidated farmland and farming activities on rehabilitated farmland.

An overview of specific budgetary measures and the achievements and effects is provided below.

① Project for Facilitating Acceptance of Disaster Victims from Farming, Mountain and Fishing Villages [Reconstruction Agency appropriation] (repost)

② Project for the Utilization of Abandoned Cultivated Land to Support the Continuation of Farming by Disaster Victims [Reconstruction Agency appropriation] (repost)

- (6) In cooperation with related ministries and agencies, information was provided and disseminated to consumers and food-related businesses on the results of surveys on radioactive material concentrations, requests for shipment restrictions, etc., as well as accurate knowledge of the concept of provisional regulatory limits and their effects on the human body, etc. Requests were also made to food-related businesses and others to take calm actions based on scientific and objective grounds. In addition, efforts to support the reconstruction of the disaster-affected areas by actively consuming agricultural, forestry, and marine products produced and manufactured in the disaster-affected areas were promoted.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Strategic Information Dissemination Project for Agricultural Products, etc. from Fukushima [Reconstruction Agency appropriation] [Implementing entity of the project: Fukushima Prefecture]

Agricultural products, etc. produced in Fukushima Prefecture were strategically and effectively promoted according to the time of shipment in cooperation with the production areas in order to promote correct understanding of agricultural products, etc. produced in Fukushima Prefecture and restore brand power. Through this project, the price gap between the agricultural, forestry, and fishery products produced in Fukushima Prefecture and the national average was successfully reduced, including peaches (55% in FY2011 -> 78% in FY2016) and beef (78% in FY2011 -> 91% in FY2016). In addition, the percentage of those who are hesitant to purchase products from Fukushima Prefecture decreased to 15.0% as of February 2017, compared to 19.4% as of February 2013 (Survey of Consumer Awareness Regarding Damage Caused by Harmful Rumors (Consumer Affairs Agency)).

As of March 2017, 6,376,022,000 yen had been utilized.

- ② Project for Strategic Promotion of the Sale of Agricultural Products, etc. as a part of the Comprehensive Project for the Revitalization of Agriculture, Forestry, and Fisheries in Fukushima Prefecture (current Fukushima Prefecture Agriculture, Forestry, and Fisheries Reconstruction and Creation Project) [Reconstruction Agency appropriation] [Implementing entity of the project: Fukushima Prefecture]

From FY2017 onward, in the Project for Strategic Promotion of the Sale of Agricultural Products, etc., as a part of the Comprehensive Project for the Revitalization of Agriculture, Forestry, and Fisheries in Fukushima Prefecture, sales promotion of agricultural, forestry, and marine products, etc. produced in Fukushima Prefecture and transmission of their attractiveness to stimulate purchases, etc. were implemented strategically. The project has resulted in increased sales at fairs, online stores, etc., as well as increased purchase intentions among consumers in the Tokyo metropolitan area. In addition, the percentage of those who are hesitant to purchase products from Fukushima Prefecture decreased to 8.1% as of February 2021 (Survey of Consumer Awareness Regarding Damage Caused by Harmful Rumors (Consumer Affairs Agency)).

As of March 2021, 9,468,311,000 yen had been utilized.

- ③ Project to Support the Consumption of Agricultural Products, etc. [Reconstruction Agency appropriation] [Implementing entity of the project: National government]

Efforts through cooperation between government and private sector were promoted, including information transmission to increase consumption of agricultural, forestry, and marine products produced and processed in the disaster-affected areas and surrounding regions as well as food products made from these products, and fairs held by private businesses to support the disaster-affected areas. As a result of this project, the percentage of people who purchased food products, etc. produced in the disaster-affected areas increased in consumption areas, mainly in the Tokyo metropolitan area.

As of March 2016, 331,000,000 yen had been utilized.

- (7) In response to the tightening of import regulations in other countries and the shift away from Japanese food products, provision of accurate information on Japan's measures and the results of monitoring inspections to the governments of partner countries, as well as promotion of the attractiveness of food products produced in Japan, etc. among the consumers of those countries by utilizing various media, etc. through cooperation with related ministries and agencies were implemented. Furthermore, the issuance of export certificates required by foreign countries in connection with nuclear power station accident has been centralized by the national government since April 2013 to reduce the burden on business operators.

An overview of specific budgetary measures and the achievements and effects is provided below.

- ① Export Promotion through the Export Doubling Project, etc. [Implementing entities of the project: National government, JETRO, private organizations, etc.]

In addition to strengthening the comprehensive business support system from finding business operators to supporting business negotiations by strengthening cooperation with JETRO, support was provided for efforts by agriculture, forestry, fishery, and food business operators to establish Japan brands and cooperation among production areas. Surveys, etc. necessary to expand exports were also conducted.

As of March 2021, 17,651 million yen had been utilized.

- ② Strengthening of the System for Measurement of Radioactive Materials in Seeds and Seedlings [Implementing entities of the project: Center for Seeds and Seedlings, National Agriculture and Food Research Organization]

The Center for Seeds and Seedlings measured the radioactive materials in seeds and seedlings and their production sites, and provided scientific data to exporting countries.

As of March 2021, 47,330,000 yen had been utilized for 110 cases.

- (8) As measures to support the businesses of beef cattle farmers, etc., in light of the cesium detection problem in beef and rice straw, measures to restore confidence in domestic beef, measures to support beef cattle farmers, and measures to support the emergency supply of rice straw, etc., were taken on the assumption that compensation by TEPCO would be provided. In addition, requests were made to financial institutions to smoothly lend funds to affected livestock farmers, postpone the redemption of existing loans, and postpone payments by farmers having difficulty paying for feed mixture.

- ① Project for Restoring Confidence in Domestic Beef [Implementing entities of the project: Meat

distribution organizations]

As support for the disposal of beef that may have been fed contaminated rice straw, 180 million yen was granted to eight organizations by June 2012, and all 157 metric tons of beef fed contaminated rice straw was burned and buried.

② Emergency Support Project for Domestic Cattle Business [Implementing entities of the project: Livestock industry association of each prefecture, etc.]

As support for beef cattle farmers who were supplied with contaminated rice straw and were required to conduct total inspections, 31.8 billion yen was granted to approximately 513,000 animals by June 2012.

③ Support Project for Emergency Rice Straw Supply for Disaster Victims of the Nuclear Power Station Accident [Implementing entities of the project: Producers' organizations]

As of August 2014, 3.8 billion yen was granted to seven organizations to support livestock producers who were having difficulty securing feed due to contamination of rice straw and other materials by radioactive cesium, and 51,274 metric tons of grass, etc. were supplied.

4. Future issues, measures, etc.

Regarding the resumption of farming, the following support was provided to position the Tohoku region as a new food supply base and promote advanced farming, including the adoption of high value-added production. In addition, considerable progress has been made in restoring infrastructure through recovery projects, enabling the resumption of farming.

(1) Development of sales channels

Since it took at least a year from the earthquake to restore farmland, including debris removal and salt removal measures, the issue was to recover sales channels lost during that time and develop new sales channels by developing new products.

To solve this issue, local authorities took the lead in implementing efforts to attract companies from outside the disaster-affected areas, cooperate with companies from outside the disaster-affected areas to stabilize the businesses of producers and create local employment opportunities, develop new sales channels by adding value through product development using local resources and branding high-quality agricultural products, and develop new businesses by utilizing the cultivation know-how gained from the land affected by the earthquake.

(2) Sophistication and advancement

In order for agriculture in the disaster-affected areas to continue to develop, grow sustainably and achieve full reconstruction, the issue was to improve productivity by developing high value-added products and introducing new technologies that respond to diversifying consumer needs and changing market structures. In addition, it was necessary to advance and diversify agricultural management by entering into the manufacturing and service industries to develop diversified businesses. In response to this, efforts were implemented such as the realization of stable and efficient production of agricultural products through the introduction of advanced technologies such as ICT, the creation of new business models through cooperation between companies from different industries, the development of diversified businesses including not only production but also processing and sales, food and beverage, and tourism businesses, and the expansion of sales channels through cooperation with companies from different industries.

However, in the 12 municipalities in Fukushima Prefecture that were affected by the nuclear disaster, only 43% of farmers had resumed farming by the end of FY2021, and it is necessary to continue to support the resumption of farming.

As for the food industry, it is an essential measure in maintaining the livelihood of the people in the immediate aftermath of a major disaster, and is expected to play a major role. Support schemes and information communication systems need to be established in advance by the government as a whole.

In the Great East Japan Earthquake, as well as restrictions and voluntary restraints on shipments due to the nuclear power station accident, there was also damage caused by harmful rumors. In particular, since the situation regarding shipping restrictions differed by municipality, it was made possible to manage the business according to the actual situation of each.

However, although the percentage of people who are hesitant to purchase products from Fukushima Prefecture is decreasing year by year, the prices of some agricultural, forestry, and fishery products from Fukushima Prefecture have not recovered to pre-earthquake levels, and it is necessary to continue implementing measures to prevent harmful rumors.