

## Chapter 6 Revitalization of Industries and Livelihoods

### Section 4 Fisheries

#### 1. Overview of damage in fisheries

The cost of damage to fisheries-related facilities caused by the earthquake and tsunami was 1,263.7 billion yen. Since the fisheries and seafood processing industries were core industries of the three Tohoku prefectures that were particularly hard hit by the tsunami, Miyagi Prefecture, Iwate Prefecture, and Fukushima Prefecture suffered damage totaling 668 billion yen, 397.3 billion yen, and 82.4 billion yen, respectively (these three prefectures accounted for 91% of the total).

By facility, damage to aquaculture facilities and aquaculture products amounted to 133.5 billion yen, and damage to joint-use facilities amounted to 124.9 billion yen.

Apart from that, seafood processing facilities and ice-making, freezing and refrigeration facilities owned by private companies also suffered damage of about 160 billion yen.

Figure 6-4-1 Fisheries-related damage caused by the Great East Japan Earthquake and tsunami (as of March 5, 2012)

被害額合計： 1兆2,637億円（うち7道県：1兆2,544億円）				
主な被害	全 国		うち7道県	
	被害数	被害額（億円）	被害数	被害額（億円）
漁 港 施 設	319漁港	8,230	319漁港	8,230
漁 船	28,612隻	1,822	28,479隻	1,812
養 殖 関 係		1,335		1,254
（うち養殖施設）		（738）		（719）
（うち養殖物）		（597）		（534）
共同利用施設	1,725施設	1,249	1,714施設	1,247
合 計		12,637		12,544

注：1） 都道府県からの報告を平成24（2012）年3月5日現在で取りまとめたもの。

2） 「7道県」とは、北海道、青森県、岩手県、宮城県、福島県、茨城県及び千葉県をいう。

3） 本表に掲げた被害のほか、民間企業が所有する水産加工施設や製氷冷凍冷蔵施設等に約1,600億円の被害がある（水産加工団体等からの聞き取り）。

Source) 2011 White Paper on Fisheries

[https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03\\_dai1shou.pdf](https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03_dai1shou.pdf) (accessed July 28, 2023)

Many operators in the seafood processing industry had developed their businesses after starting with processing seafood landed at local ports, adding value to it, and shipping and selling it. For this reason, many fish processing plants are located in the hinterland of fishing ports that serve as regional hubs. Of the Pacific Ocean-side fishing ports from the Tohoku to Kanto regions, Hachinohe, Kesenuma, Ishinomaki, Choshi, and others had formed large-scale fishery processing complexes with common facilities for processing leftover fish, wastewater, etc.

Fish processing plants located in the hinterland of fishing ports therefore suffered damage from the tsunami, including the loss of plant buildings, damage to processing machinery due to flooding, and spoilage of frozen raw materials due to power outages. According to reports from seafood processing industry organizations, the cost of damage to seafood processing facilities totaled 163.9 billion yen in seven prefectures from Hokkaido to Chiba. Of this total, the cost of damage to facilities in Miyagi

Prefecture and Iwate Prefecture was exceedingly high, at 108.1 billion yen and 39.2 billion yen respectively, with these two prefectures accounting for 90% of the total damage in the seven prefectures.

Figure 6-4-2 State of damage to seafood processing facilities

	主な被災状況	被害額 (百万円)	(参考) 加工場数 (漁業センサス)
北海道	一部地域で被害 (半壊4、浸水27)	100	570
青森県	八戸地区で被害 (全壊4、半壊14、浸水39)	3,564	119
岩手県	大半が施設流出・損壊 (全壊128、半壊16)	39,195	178
宮城県	半数以上が壊滅的被害 (全壊323、半壊17、浸水38)	108,137	439
福島県	浜通りで被害 (全壊77、半壊16、浸水12)	6,819	135
茨城県	一部地域で被害 (全壊32、半壊33、浸水12)	3,109	247
千葉県	一部地域で被害 (全壊6、半壊13、浸水12)	2,931	420
計	全壊570、半壊113、浸水140	163,855	2,108

注：1) 被害の大きかった7道県の太平洋側の施設について取りまとめたもの。  
2) 被害状況は北海道、青森県、宮城県、茨城県、千葉県は水産加工団体から、岩手県、福島県は県庁からの聞き取り（平成24（2012）年3月5日現在）。  
3) 被害額は水産加工団体からの聞き取り。なお、共同利用施設に係るものも含まれる。

Source) 2011 White Paper on Fisheries  
[https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03\\_dailshou.pdf](https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03_dailshou.pdf) (accessed July 28, 2023)

A tsunami is a phenomenon in which all the seawater from the seafloor to the sea surface rushes to the coast as a huge body of water. For this reason, the large tsunami in this disaster physically disturbed shallow-water areas in various regions. In addition, as the land subsidence caused by the earthquake was also significant, the ecosystems of seaweed beds and tidal flats were also severely affected. The Fisheries Research Agency and fisheries-related testing and research institutes in each prefecture jointly conducted surveys on the recovery status of seaweed beds and tidal flats, coastal fishing grounds and aquaculture farms, and the impact of harmful substances on the ecosystem, and other related organizations conducted comprehensive analyses to understand the situation.

## 2. Recovery and reconstruction from the earthquake and tsunami disaster

### (1) Basic framework

Since the fisheries and seafood processing industries were core industries in the three prefectures affected by the disaster, the early restoration of fishing facilities and equipment, the early resumption of the fishing and aquaculture industries, and the resumption of business in the small-scale seafood processing industry were also important issues for revitalization and reconstruction of the local economy.

In April 2011, the Fisheries Agency established the “Reconstruction Support Project Team” to enhance the local support system in response to the Great East Japan Earthquake, and dispatched team members to the disaster-affected areas to hold direct discussions with people involved in fisheries in the disaster-affected areas in order to understand the current situation and needs for reconstruction support, as well as publicize fishery-related recovery and reconstruction measures and provide various types of advice.

The team members interviewed fishermen and people from fishery cooperatives, wholesale markets, seafood processing complexes, etc. about the current state of fisheries in the disaster-affected areas and what was needed to resume business, and took measures suitable to the situation in each disaster-affected area, including providing explanations on governmental support projects and giving advice on points to note in preparing application documents.

On May 2, 2011, the FY2011 first supplementary budget was approved. Of this amount, a total of 215.3 billion yen was appropriated for fisheries-related budgets. Furthermore, in light of the latest situation regarding recovery from the Great East Japan Earthquake, the FY2011 second supplementary budget was approved on July 25, 2011, and 19.8 billion yen was appropriated for fisheries-related budget in order to take all possible measures for recovery in the immediate future.

The fisheries-related measures implemented using the first supplementary budget included, ① Restoration of fishing ports, fishing grounds, fishing villages, etc., ② Handling of fishing boat insurance and fisheries mutual aid payments (to support the large insurance payments arising from the Great East Japan Earthquake), ③ Support for fishing ground restoration activities such as beach and sea bottom cleanup (removal of debris from fishing grounds by fishermen groups and specialized businesses), ④ Support for the construction of fishing boats and the rebuilding of joint-use set nets (introduction of small fishing boats for joint use, fishing boats and joint-use set nets based on joint use plans), ⑤ Support for the reconstruction of aquaculture facilities and seedling production facilities, ⑥ Support for the reconstruction of local markets and processing facilities (restoration of facilities owned by fishery cooperatives, etc.), and ⑦ Financial assistance such as interest-free funds, unsecured and unguaranteed loans and support for rebuilding fishery cooperatives.

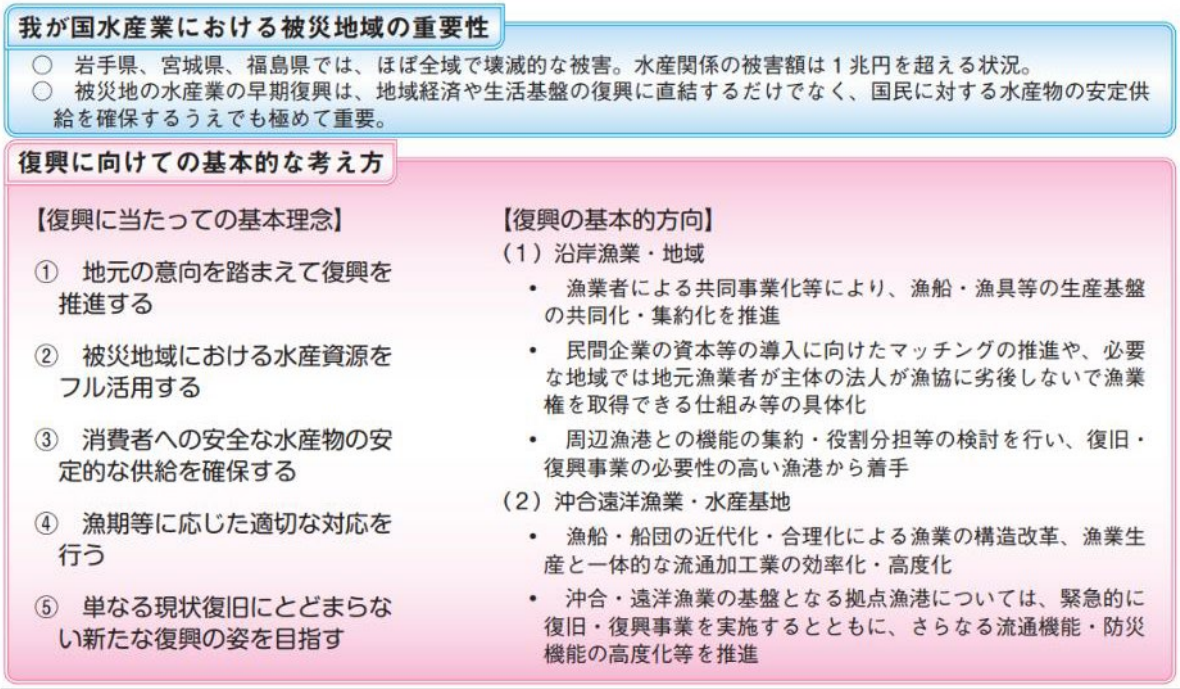
In addition, the second supplementary budget provided support for the maintenance of equipment, etc. necessary for the early restoration of fisheries joint-use facilities at fishery cooperatives and marine product processing industry cooperatives that were damaged by the disaster, as well as measures such as surveys on radioactive materials in marine products.

(Formulating the Master Plan for Fisheries Reconstruction)

On June 28, 2011, the Fisheries Agency formulated the “Master Plan for Fisheries Reconstruction,” which presented the overall direction of reconstruction of the fisheries industry to act as guidelines for the specific measures to be taken by the national government and the regions. In addition to presenting the basic principles for fisheries reconstruction, the Master Plan also laid out the basic policies for

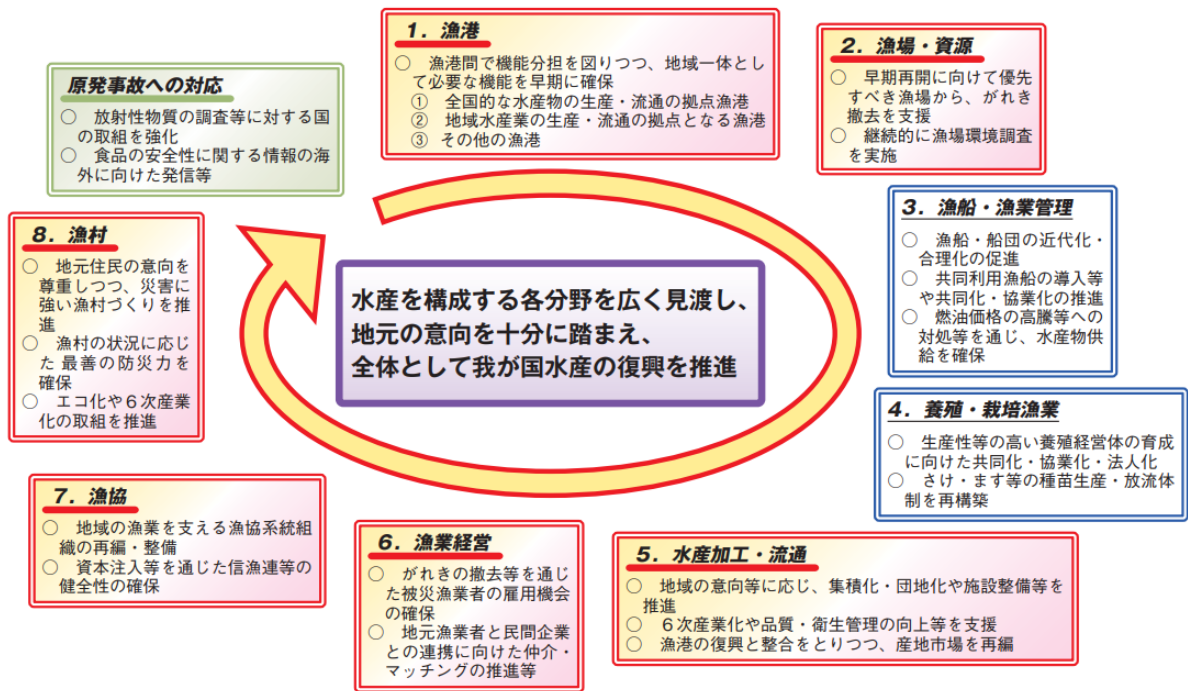
reconstruction, including the promotion of the comprehensive and integrated reconstruction of each area of the fisheries industry such as fishing ports, fishing grounds, fishing boats, aquaculture, and seafood processing and distribution.

Figure 6-4-3 Overview of the Master Plan for Fisheries Reconstruction



Source) 2011 White Paper on Fisheries  
[https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03\\_dai1shou.pdf](https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03_dai1shou.pdf) (accessed July 28, 2023)

Figure 6-4-4 Reconstruction of each area of the fisheries industry by comprehensive and integrated efforts



Source) 2011 White Paper on Fisheries  
[https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03\\_dai1shou.pdf](https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03_dai1shou.pdf) (accessed July 28, 2023)



## (Formulating the Basic Guidelines for Reconstruction)

The “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake” presented reconstruction measures in each field, of which, the following measures were proposed with regard to fisheries.

## 「東日本大震災からの復興の基本方針」(水産業に関する復興施策(抜粋))

- ① 漁船、漁具、養殖施設の復旧、冷凍冷蔵施設等共同利用施設の整備、被災漁業者等によるがれき撤去の取組に対する支援などにより、漁業経営再開、地域水産業の復旧のための支援を実施。
- ② さけ・ます等の種苗生産体制の再構築や藻場・干潟の整備、科学的知見も活かした漁場環境の把握、適切な資源管理により漁場・資源を回復。  
養殖業は生産開始から収入を得られるまでに一定期間が必要である等、個々の漁業の特性にきめ細かく対応しながら、安定した漁業経営の実現に向け、漁船・船団の近代化・合理化の促進、経営の共同化や生産活動の協業化を進め、漁業を体質強化。
- ③ 水産加工・流通業は、6次産業化の取組も視野に、漁業生産と一体的な復興を推進。さらに、造船業などの関連産業の復興を支援。
- ④ 漁港については、拠点漁港の流通機能等の高度化、漁港間での機能集約と役割分担の取組を図りつつ、地域一体として必要な機能を早期に確保。  
全国的な水産物の生産・流通の拠点となる漁港については、流通・加工機能の強化等を推進。  
地域水産業の生産・流通の拠点となる漁港については、周辺漁港の機能の一部を補完することに留意しつつ、市場施設や増養殖関係施設等の集約・強化等を推進。  
その他の漁港については、漁船の係留場所の確保など必要性の高い機能から事業を実施。
- ⑤ 地域の理解を基礎としつつ、漁業者が主体的に技術・ノウハウや資本を有する企業と連携できるよう仲介・マッチングに努めるとともに、必要な地域では、地元漁業者が主体の法人が漁協に劣後しないで漁業権を取得できる特区制度を創設。

Source) 2011 White Paper on Fisheries

[https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03\\_dailshou.pdf](https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03_dailshou.pdf) (accessed July 28, 2023)

## (Fisheries reconstruction measures based on the Basic Guidelines for Reconstruction and the Master Plan for Fisheries Reconstruction)

On November 21, 2011, the FY2011 third supplementary budget was approved. With regard to fisheries, a total budget of 498.9 billion yen was allocated for full-scale reconstruction measures in line with the “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake” and the “Master Plan for Fisheries Reconstruction,” and measures such as the following were taken: ① Support for the restoration of fishing boats and set nets for joint use, and the resumption of boat fishing operations; ② Support for the reconstruction of aquaculture facilities and the resumption and stabilization of aquaculture operations; ③ Support for the recovery of fisheries resources through nursery stock release and the development of seedling production facilities; ④ Support for the reconstruction and functional enhancement of seafood processing and distribution business, etc.; ⑤ Restoration and reconstruction of fishing ports and villages; ⑥ Support for fishing ground restoration activities through the removal of debris; ⑦ Measures to counter the surge in the price of fuel and formulated feed and to secure workers; and the ⑧ Promotion of interest-free, unsecured, and unguaranteed loans to fishermen and processors.

Furthermore, in the FY2012 budget, various budgetary projects were developed with a focus on policies aimed at resuming fisheries business.

## (Positioning of the Great East Japan Earthquake in the Basic Plan for Fisheries)

In the Basic Plan for Fisheries approved in the cabinet decision in March 2012, the first basic policy was that efforts for reconstruction from the Great East Japan Earthquake should be promoted. Its

contents were as follows.

- Reconstruction philosophy

The region that was severely affected by the Great East Japan Earthquake contains one of the richest fishing grounds in Japan and plays a major role in the supply of fishery products throughout the country. It also delivers various functions to support the fisheries in other regions, such as refueling and supplying goods to fishing boats from other regions, and is positioned as an important part of our country's fisheries.

The early reconstruction of the fisheries in the disaster-affected areas is not only directly linked to the reconstruction of the local economy and livelihood infrastructure, but is also an extremely important issue in ensuring a stable supply of marine products to the public.

Therefore, in order to restart livelihoods as soon as possible, we will actively provide the necessary support in terms of human resources, budget, know-how, etc., according to the characteristics of the diverse fisheries industries operating in the disaster-affected areas and the damage situation. In addition, full-scale reconstruction efforts will be promoted in order to rebuild the disaster-affected areas as a new food supply area through integrated reconstruction with distribution, processing, and other related fields.

In the reconstruction of the fisheries, fishing villages and fishing ports in the disaster-affected areas, efforts will be promoted based on the following basic philosophy.

- ① Promote reconstruction based on local wishes.
- ② Fully utilize fishery resources in the disaster-affected areas.
- ③ Ensure a stable supply of safe marine products to consumers.
- ④ Take appropriate measures according to the fishing season, etc.
- ⑤ Aim to achieve a new form of reconstruction that goes beyond mere restoration to the original state.

In addition, the damage to Japan's marine products caused by the accident at TEPCO Fukushima Daiichi Nuclear Power Station has not yet ended, and consumer confidence in safety has been undermined. Based on this situation, we will take direct measures to overcome the damage.

Based on the above, the policy for fisheries reconstruction, which was presented and implemented under the “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake” and the “Master Plan for Fisheries Recovery,” was re-positioned in the fisheries policy for the 10 years following the earthquake.

(Formulating reconstruction plans for disaster-affected prefectures)

Each disaster-affected prefecture formulated recovery and reconstruction plans, guidelines, etc., and clarified policies for dealing with the fisheries-related damage that occurred in each prefecture. Looking at the situation in Iwate Prefecture, Miyagi Prefecture, and Fukushima Prefecture, Iwate Prefecture formulated the “Iwate Prefecture Great East Japan Earthquake and Tsunami Reconstruction Plan” on August 11, 2011, and Miyagi Prefecture formulated the “Miyagi Prefecture Earthquake Disaster Recovery Plan” on October 18. In addition, after formulating the “Vision for Revitalization in Fukushima Prefecture,” which established the basic principles and major measures for future reconstruction, on August 11, Fukushima Prefecture formulated the “Plan for Revitalization in Fukushima Prefecture (First Version),” which presented the specific efforts and major projects for the 10 years following the

earthquake, on December 28, based on the vision.

The direction of fisheries reconstruction indicated in the reconstruction plans of the three prefectures is unique, according to the situation each prefecture finds itself in.

Figure 6-4-5 Overview of fisheries reconstruction plans of the three disaster-affected prefectures

#### 岩手県、宮城県、福島県の復興計画のうち水産復興に関する記述の概要

##### (岩手県)

- ・計画等の名称：「岩手県東日本大震災津波復興計画」
- ・策定日：平成23（2011）年8月11日
- ・水産復興の方向性
  - ①地域に根ざした水産業を再生するため、両輪である漁業と流通・加工業について、漁業協同組合を核とした漁業・養殖業の構築と産地魚市場を核とした流通・加工体制の構築を一体的に推進。
  - ②地域の防災対策や地域づくり、水産業再生の方向性を踏まえた漁港・漁場・漁村生活環境基盤や海岸保全施設の復旧・整備を推進。

##### (宮城県)

- ・計画等の名称：「宮城県震災復興計画」
- ・策定日：平成23（2011）年10月18日
- ・水産復興の方向性
 

水産業に関連する生産基盤や関連産業が壊滅的な被害を受け、また、漁業者の高齢化などが進む厳しい状況下においては、これまでの水産業の「原状復旧」は極めて困難。

このため、水産業の復興と発展に向けて、法制度や経営形態、漁港の在り方等を見直し、新しい水産業の創造と水産都市の再構築を推進。

##### (福島県)

- ・計画等の名称：「福島県復興ビジョン」
- ・策定日：平成23（2011）年8月11日
- ・水産復興の方向性
  - ①地震・津波により被害を受けた漁港、市場などの早期復旧に努め、漁業地域の再生を図るとともに、農林水産物とその加工品の風評被害を払拭するため、安全性のPRと安全を確保する仕組みを検討。
  - ②漁業に関しては、共同利用漁船の導入による経営の協業化や、低コスト生産による収益性の高い漁業経営を進めるとともに、適切な資源管理と栽培漁業を再構築。

資料：各県のホームページに基づき水産庁で作成

Source) 2011 White Paper on Fisheries, p. 33-34

[https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03\\_dailshou.pdf](https://www.jfa.maff.go.jp/j/kikaku/wpaper/h23/pdf/03_dailshou.pdf) (accessed July 28, 2023)

#### (Formulating reconstruction plans for disaster-affected municipalities)

Each municipality in the disaster-affected prefectures also formulated plans for the restoration and reconstruction of fisheries in their areas based on the reconstruction plan of the prefecture, etc. In the restoration and reconstruction of fisheries, it is important for fishing and aquaculture industries and the seafood processing and distribution industries to work closely together to function like the wheels of a car, and many of the reconstruction plans formulated by municipalities also indicate policies for the restoration and reconstruction of fishing and aquaculture industries and the seafood processing and distribution industries with the fish market at each base fishing port at the core. Soma City, Fukushima Prefecture, promoted efforts to resume coastal fishing operations, introduce joint-use fishing boats, and promote cooperative management, in addition to restoring Matsukawaura, which served as a laver farm and nursery for flounder, etc.

## (2) Budget

In FY2011, three supplementary budgets provided approximately 734 billion yen for fisheries. Specifically, measures were taken for fishermen and processors, such as support for the restoration of fishing boats and set nets for joint use, and the resumption of boat fishing operations, support for the reconstruction of aquaculture facilities and the resumption and stabilization of aquaculture operations, support for the recovery of fisheries resources through nursery stock release and the development of seedling production facilities, support for the reconstruction and functional enhancement of seafood processing and distribution business, etc., while also utilizing the Great East Japan Earthquake Reconstruction Grant.

For FY2020, an initial budget of 66.5 billion yen has been allocated to continue providing necessary support.

## (3) Reconstruction measures

As mentioned above, the reconstruction of fisheries was included and implemented as a measure to be taken in the Basic Plan for Fisheries, based on the “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake” and the “Master Plan for Fisheries Recovery.”

### 1) Fishing boats

In rebuilding the strength of the fishing fleet, the modernization and rationalization of fishing boats and fleets were promoted based on the results of the demonstration of efforts aimed at improving profitability, such as energy saving, cost saving, and cooperative efforts, with a view to achieving appropriate resource management and medium- to long-term stability in fishery management.

In addition, through the Project to Support the Restoration of Joint-use Fishing Boats (budget of 39.2 billion yen), the introduction of joint-use fishing boats continued to be promoted, and the fishery production cooperative system was also utilized to promote joint management and cooperative production activities to further improve the efficiency of management. For example, in the Shishiori district of Kesennuma City, Miyagi Prefecture, 17 disaster-affected seafood processors joined together to establish the Kesennuma Shishiori Processors’ Cooperative Association, with supports from several major trading companies. After construction was completed, a large refrigeration facility and seawater sterilization facility were constructed using the Project to Promote the Restoration and Development of Joint-Use Facilities for Fisheries. The development of highly versatile facilities in the district has led to increased operational efficiency, and the joint ownership of facilities has significantly reduced the cost of capital investment.

Regarding the number of fishing boats, the goal was to recover the number to at least 12,000 by the end of FY 2013 for the approximately 29,000 fishing boats affected by the disaster nationwide, based on requests from fishermen. The goal was achieved by the end of FY2012, and approximately 19,000 boats were restored by the end of March 2022.

As for set nets, support was provided to all those who wished to resume operation by the end of FY2015 through the Project to Support the Restoration of Joint-use Fishing Boats in a similar fashion to fishing boats. As a result, the project was applied to 423 cases.

### 2) Aquaculture and cultivation fisheries

Regarding the full-fledged recovery of the aquaculture industry, the support provided went beyond the



restoration to the previous state and promoted the establishment of an aquaculture production region that would serve as a model for other regions, given that the disaster-affected area was a major center of aquaculture production in Japan. To this end, cooperative production activities, joint management, incorporation, etc. were promoted through measures based on the characteristics of aquaculture management, such as the fact that it takes a certain period of time from the start of production activities until income is earned, and through the redevelopment of aquaculture facilities, etc., in order to foster highly productive and profitable aquaculture management entities. In addition, through the advancement of sanitation management systems and the promotion of production at appropriate aquaculture densities, an aquaculture industry that is trusted by consumers was established. For such cooperative production activities, joint management, incorporation, etc., the “Support Project for the Reconstruction of Ganbaru (hard-working) Aquaculture” was implemented and utilized by 981 management entities in 75 cases so far. In this project, for example, Minamisanriku Town, Miyagi Prefecture, produced meaty oysters by sacrificing the number of oyster culture rafts, and the production volume and production value of oysters now exceed those before the earthquake. In Onagawa Town, Miyagi Prefecture, cooperative efforts are being made to cultivate coho salmon, which is still being worked on as the main species for local aquaculture.

As for the seedling production and release system of species to be propagated in the Tohoku region, the Miyako Office Building of the Japan Fisheries Research and Education Agency (then the Miyako Office Building of the Tohoku District Fisheries Research Institute, Fisheries Research Agency) was rebuilt in March 2014 as a center for technological development. A system to promote efficient and effective resource proliferation was established with this facility as its core.

As for the cultivation fishery, in order to recover the stock level to that before the disaster, the restoration of seedling production facilities in the affected prefectures was promoted, while also introducing seedlings from seedling production facilities in other waters to secure a total of 29 species of fish, including flatfish and abalone, for release by FY2021 until the seedling production system is in place.

As for the aquaculture facilities, development of the facilities was completed at the end of June 2017 for all those who wished to resume aquaculture.

### 3) Seafood processing and distribution

In addition to promoting the early recovery of the seafood processing and distribution industries through the development of temporary and joint-use facilities, the following efforts were promoted in full-scale reconstruction, depending on the recovery status of regional infrastructure, etc. as well as regional characteristics.

- ① Concentration and complex development of seafood processing and distribution industries combined with groundwork by local authorities and reorganization and location of fishery-related businesses
- ② Development of facilities that contribute to the integrated revitalization of the local fisheries through collaboration and cooperation between fishery-related industries such as seafood processing, seafood distribution, and ice making, and fishermen organizations
- ③ Establishment of new joint-use facilities through the establishment of business cooperatives in which multiple companies participate, etc.

In addition, for the local markets at fishing ports, which serve as production and distribution centers for marine products nationwide, the activation of transactions was promoted by encouraging the entry of new buyers, etc., and the strengthening and upgrading of distribution functions by improving quality and sanitation management systems. For the local markets in fishing ports that serve as production and distribution centers for the local fisheries, the strengthening of market functions, etc. was promoted while taking into consideration the increase in volume handled in conjunction with the consolidation and sharing of functions with the surrounding fishing ports.

In addition to supporting individual guidance and seminars for businesses by seafood processing and distribution experts, the following projects were implemented with the aim of recovering the sales channels of the seafood processing industry in the disaster-affected areas by supporting the maintenance of processing equipment and the introduction of radioactivity measurement devices that were necessary in efforts by seafood processors in the disaster-affected areas to restore sales channels and develop new ones, based on the guidance provided.

④ Guidance Project to Promote the Recovery of Sales Channels for the Reconstructed Seafood Processing Industry, etc. (Subsidy rate: Fixed amount)

Support was provided for individual guidance, seminars, business meetings, etc. to restore sales channels for processed fishery products from the disaster-affected areas, as well as seminars, workshops, etc. to promote the safety of fishery products from the disaster-affected areas.

In FY2020, 272,244,000 yen was used for 109 cases of individual guidance, etc.

⑤ Project to Support the Efforts for Recovery of Sales Channels for the Seafood Processing Industry, etc. (Subsidy rate: 2/3 or less, fixed amount)

If deemed necessary based on individual guidance, support was provided for expenses such as maintenance of processing equipment, introduction of equipment to ensure the safety of fishery products such as radiation measuring devices, and marketing, etc., necessary for efforts by fishermen, processors, distributors, or the organizations they belong to in order to restore or develop new sales channels for processed fishery products from the disaster-affected areas.

In FY2020, 708,547,000 yen was used for 33 cases of equipment maintenance, etc.

⑥ Project to Support the Efforts to Secure the Stable Supply of Processing Raw Materials (Subsidy rate: 1/2 or less)

Support was provided for additional freight costs to secure raw materials for processing in the disaster-affected area from remote areas.

In FY2020, a total of 9,248,000 yen was utilized in three cases.

In the full-scale reconstruction, fishermen and fishermen organizations promoted the sextiary industrialization, in which fishermen themselves would engage in production, processing, and sales, and strengthened cooperation between fishermen and the seafood processing and distribution industries. In addition, support was provided for efforts to improve quality and sanitation management systems at markets and processing facilities by acquiring HACCP certification, with a view to exporting. For example, in Ishinomaki City, Miyagi Prefecture, ten seafood processing companies in the city established Ishinomaki Umainono Co., Ltd. in 2016, and launched the “Ishinomaki Kinka Chazuke” series in 2018, followed by the development of “Ishinomaki Kinka Kamameshi (rice boiled with various ingredients in a small pot)” and “Gyosho (fish sauce).” These product development operations are supported by a “virtual joint factory” structure in which companies share their manufacturing facilities, know-how, and raw

material information with each other. Also in the area of sales, the strengths of these companies are creating a synergistic effect, such as the ten companies working together to develop sales channels. In developing new products, the company also took advantage of the Reconstruction Agency's Model Project for Revitalization of the Fisheries Processing Industry by Forming Teams (support for innovative efforts in product development and sales channel development carried out by multiple fisheries processors in the affected areas working together).

#### 4) Fishing management

In order to ensure the smooth transfer of fishery skills and the establishment and securing of the next generation of fishermen, opportunities were promoted for young fishermen and the children of fishermen in the disaster-affected areas to engage in fishing in other fishing management entities that escaped the disaster or had newly introduced fishing boats and facilities until the resumption of fishing operations of their own businesses.

To support the formation and development of management entities that would play a future role in the local fishing industry, promotion was implemented for the formation of cooperatives, local fishing organizations and incorporation, and cooperation with the local seafood processing and distribution industries through the introduction of new joint-use fishing boats and facilities. For this purpose, a total of 73.5 billion yen was utilized in 749 cases in the Project to Support the Restoration of Joint-use Fishing Boats and the Project to Promote the Restoration and Development of Joint-Use Facilities for Fisheries (total budget of 113.5 billion yen from FY 2011 to FY 2020). For example, in Shichigahama, Miyagi Prefecture, the construction of cargo handling facilities enabled the establishment of a landing system as planned, contributing to the early restoration of the fisheries.

In addition, the modernization and rationalization of fishing boats and fleets were promoted through a mechanism based on the results of the demonstration of efforts aimed at improving profitability, such as energy saving, cost saving, and cooperative efforts. Use of unsecured and unguaranteed loans for which the burden of interest payments was effectively eliminated, subsidies for guarantee fees, and refinancing funds (debt consolidation funds) for reducing the burden of existing debts was promoted in funding for the acquisition of fishing boats and equipment necessary for these efforts. As of the end of March 2021, 3,461 loans (loan decisions) totaling 152.6 billion yen and 4,351 guarantees totaling 140.2 billion yen were made under the Fisheries-related Interest-free Loan Project, the Fisheries-related Public Finance Unsecured and Unguaranteed Loan Project, and the Emergency Guarantee Project for Fishermen, etc.

Utilizing a mechanism that allows corporations led by local fishermen to acquire fishing rights without being subordinated to fishery cooperatives while ensuring order in resource and fishing ground utilization, fishing rights were approved for an oyster production corporation in Momonoura, Miyagi Prefecture.

#### 5) Fishery cooperatives

In order to reduce the burden of borrowing funds necessary for the restructuring of fishery cooperatives, the Emergency Support Project for Management Restructuring of Fishery Cooperatives was implemented (loans (loan decisions) of 41.4 billion yen in 178 cases as of the end of March 2021) for fishery cooperatives aiming to restructure their organizations and businesses so that they would have sufficient management infrastructure and management systems and continue to play a role in supporting local fishery.

In addition, in order to ensure the soundness of credit federations of fishery cooperatives, etc., the Act

on Enhancement and Restructuring of Credit Business Conducted by The Norinchukin Bank and Specified Agricultural and Fishery Cooperative Savings Insurance Cooperation, etc. was amended, and based on this act, the JF Marine Bank Support Association and the Agricultural and Fishery Co-operative Savings Insurance Corporation conducted necessary capital injection into Miyagi Prefecture fishery cooperatives to maintain and strengthen their financial functions. It was also decided that measures would be examined to restructure the credit business, including the Norinchukin Bank and other related institutions, while looking into the financial situation of the credit federations of fishery cooperatives and other cooperatives in the three disaster-affected prefectures.

## **6) Fishing villages**

The development of disaster-resistant fishing villages was promoted based on land use policies and reconstruction plans by local authorities. Specifically, the plans called for efforts such as emergency evacuation drills and promotion of the updates of hazard maps to ensure the best possible disaster preparedness in accordance with the conditions of the fishing village and the state of reconstruction.



### 3. Restoration and reconstruction after the nuclear disaster

As a result of the nuclear power station accident, contaminated water containing high concentrations of radioactive materials was discharged into the ocean.

Therefore, surveys on the concentration of radioactive materials in marine areas, lakes, marshes, and fishery products were conducted in order to supply safe fishery products. In addition, in order to eliminate harmful rumors, the Fisheries Agency provided accurate and prompt information by posting the results of surveys and Q&A on radioactive materials in fishery products on its website, etc., and supported the holding of seminars and other events to publicize the safety of fishery products from the disaster-affected areas.

In addition, operations off the coast of Fukushima Prefecture were voluntarily suspended in response to the outflow of contaminated water into the ocean. Test operations began in June 2012, and the sea areas and fish species were expanded while confirming safety. The period starting in April 2021 is positioned as a transition period toward full-scale operations.

Figure 6-4-6 Test operations and sales

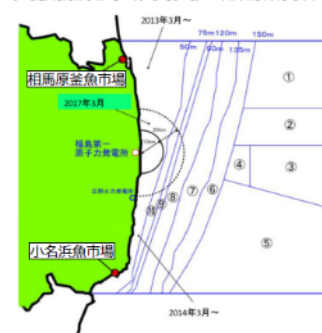
#### 試験操業・販売について

MAFF

##### 試験操業の決定の経緯

- ・福島県によるモニタリング検査で、放射性セシウムの値が基準値（50Bq/kg：自主基準値（国の基準値：100Bq/kg））以下の状態が一定期間続いていることを確認した上で、福島県地域漁業復興協議会及び福島県下漁業協同組合長会で協議し、試験操業の漁業種類、対象種・海域を決定
- ・平成24年6月から、底びき網漁船による3種に絞った試験操業・販売を開始（相馬双葉地区）
- ・平成25年10月から、底びき網漁業による試験操業を開始（いわき地区）
- ・平成29年3月から、東京電力福島第一原子力発電所から半径10km～20kmの水域での試験操業を開始。また、順次、各魚市場で入札による出荷を実施し、漁獲された水産物は、福島県内に加え、仙台、東京等の市場に出荷
- ・令和3年3月までで試験操業を終了。本格操業へ向けた移行期間へと位置づけ、水揚げの拡大を図っている

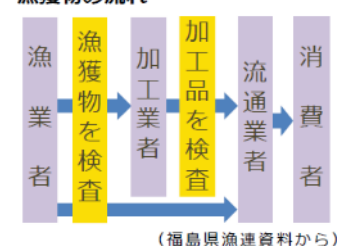
##### 試験操業海域の推移（福島県資料から）



##### 試験操業の漁業種類 出典：「福島県海面漁業漁獲高統計」、「福島県水産要覧」

沖合底びき網漁業	キアコウ、ヒラメ、マアサギ、マコガレイ、マダラ、ミスダコ等
小型機船底引き網漁業	イシカワシラウオ、コウナゴ（イカナゴの稚魚）、サヨリ等
貝けた網漁業	ウバガイ、コタマガイ
機船船びき網漁業	カタクチシラス、マシラス等
さし網漁業	サワラ、ブリ、マサバ等
沿岸流し網漁業	イシガレイ、シロメバル、ヒラメ、マコガレイ等
沿岸はえ縄漁業	アイナメ、スズキ、ヒラメ、マダラ等
釣り漁業	アイナメ、シロメバル、ヒラメ等
沖合たこかご漁業	シライトマキバエ、ミスダコ、ヤナギダコ等
沿岸かご漁業（はもかご・どう漁業を含む）	ヒメエソボラ、ヒラツメガニ、マダコ、ミスダコ等
採貝・採藻漁業（潮水漁業を含む）	ウニ類、アワビ類
松川浦養殖	アサリ、ヒトエグサ

##### 漁獲物の流れ



Specific measures to overcome the effects of the nuclear power station accident were included in the Basic Plan for Fisheries of March 2012 as follows.

#### 1) Supply of safe fishery products and elimination of harmful rumors through thorough survey of radioactive materials in fishery products

In order to supply safe fishery products, it was decided that the survey of radioactive materials in fishery products would be continued in cooperation with related prefectures and organizations until

radioactive materials in fishery products return to normal levels.

Based on the results of the survey, the government would implement restrictions on shipments and voluntary restraints on operations as necessary, and since eliminating concerns about the safety of fishery products in Japan and abroad was an important issue in the reconstruction of the fisheries, the survey results would be promptly announced in an easy-to-understand manner. It was also decided that efforts would be made to eliminate consumer concerns and prevent damage caused by harmful rumors in cooperation with related ministries and agencies.

In light of the nuclear power station accident, the labeling method for the place of origin of fresh fishery products in the East Japan Pacific Ocean announced in October 2011 promoted the implementation of the labeling of the place of origin of fresh fishery products caught in the East Japan Pacific Ocean according to the seven production zone classifications, etc. that were established.

It was also decided that efforts to encourage each country to take a calm response based on scientific evidence would be promoted, and that the issuance of safety certificates, etc. requested by partner countries would continue to be facilitated.

2) Support for resumption of operations

In waters where operations have been difficult due to the nuclear power station accident, it was decided that support would be continued for the time being for efforts by fishermen to remove debris from fishing grounds in order to resume operations.

It was also decided that an intensive radioactive material survey would be conducted in order to examine the possibility of resuming operations while ensuring the safety of fishery products.

When operations are resumed, support would be provided to fishermen and aquaculture operators to streamline and rebuild their operations.

Figure 6-4-7 Landing volumes of coastal fisheries (including offshore bottom) and sea culture in Fukushima Prefecture (dependent territories)

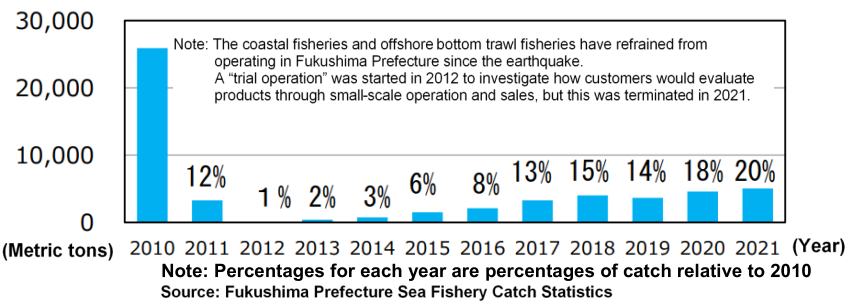
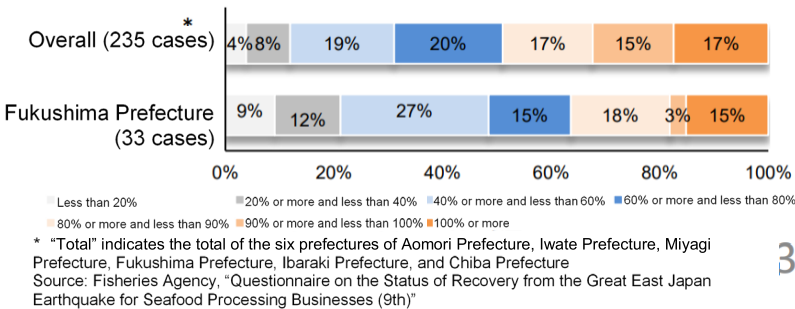


Figure 6-4-8 Status of recovery in sales in the seafood processing industry



Source) Reconstruction Agency, "Efforts toward Reconstruction and Revitalization of Fukushima," July 2022  
[https://www.reconstruction.go.jp/topics/sozai/20220701\\_fukushima-hukko-torikumi.pdf](https://www.reconstruction.go.jp/topics/sozai/20220701_fukushima-hukko-torikumi.pdf) (accessed July 28, 2023)

#### 4. Future issues, measures, etc.

Because of the unprecedented scale of the damage, it became necessary for government officials to conduct direct surveys to determine the actual extent of the damage, and take a long-term approach to support. Since the fisheries and seafood processing industries were core industries in coastal regions of the three prefectures in the Tohoku region where damage from the tsunami was severe, the early restoration of fishing facilities and equipment, the early resumption of the fishing and aquaculture industries, and the resumption of business in the small-scale seafood processing industry were also important issues for the revitalization and reconstruction of the local economy.

Efforts were therefore made to restore major fishing ports on behalf of the national government for early restoration, develop fish markets that meet the requirements of advanced sanitation management and quays that are more earthquake-resistant, realize early resumption by promptly informing the public of the support systems by the national and prefectural governments so that they could be used appropriately, realize early resumption of fishing by sharing fishing boats, enhance the solidarity of cooperative members by making use of cooperative ties, build an efficient management system for small-scale seafood processors by cooperating and establishing cooperatives, and promote highly productive fisheries and aquaculture by utilizing the results of research and development at universities and research institutions.

With regard to the nuclear disaster, the invisible effects of harmful rumors continue to require support for revitalization, as well as efforts to foster understanding about the fisheries in the disaster-affected areas.

The fisheries and seafood processing industries are important issues not only for the revitalization of local economies, but also for the future of Japan's fisheries and seafood processing industries. Fishermen and seafood processing businesses affected by the disaster were required to resume operations and recover lost sales channels as soon as possible. It was also necessary to develop new value-added products that accurately responded to consumer needs and changes in the seafood market, and develop new sales channels both domestically and internationally.

To this end, efforts were made to expand opportunities for business negotiations with businesses with which they had not had a business relationship by holding “trade show/business meeting events,” increase momentum for reconstruction of local fisheries by jointly holding meetings with commercial and industrial organizations and seafood processing industry organizations in the disaster-affected areas, develop new sales channels by developing products that meet the needs of the Asian market, which is expected to grow, take advantage of the disaster as an opportunity to reform the conventional production structure and improve quality to increase brand value and develop new sales channels, develop high value-added products that meet consumer needs by utilizing new technologies, and develop management strategies that accurately grasp consumer needs and market changes and capitalize on a company's individuality and strengths.