

[Outline of three Earthquake-stricken Prefectures]

This section summarizes the structure of marine fisheries in the areas hit by the Great East Japan Earthquake based on the results of the 2013 Fishery Census. It reveals the status of management entities, etc. in the three earthquake-stricken prefectures (Iwate, Miyagi and Fukushima prefectures) that had a great damage by Tsunami.

1. Fishery Management Entities

The total number of fishery management entities in the three earthquake-stricken prefectures was 5,690, which was a decrease of 4,372 (56.5%) compared to the previous survey (10,062 entities). The number of re-opened management entities was 4,971 and the number of suspended management entities was 2,878.

Table 31: Status of Re-Opened Management Entities, etc.

Classification	2008 (1)	2013 (2) (3) + (4)	Management status as of November 1, 2013				Ratio compared to the previous survey (2013/2008)
			Newly opened management entity (3)	Re-opened management entity, etc. (4) (1) - (5) - (6)	Suspended management entity, etc. (5)	Discontinued management entity (6)	
	Entity	Entity	Entity	Entity	Entity	Entity	%
Total of three quake-hit prefectures	10,062	5,690	719	4,971	2,878	2,213	56.5
Iwate Prefecture	5,313	3,365	507	2,858	1,001	1,454	63.3
Miyagi Prefecture	4,006	2,311	211	2,100	1,201	705	57.7
Fukushima Prefecture	743	14	1	13	676	54	1.9

Note: 1. A "newly opened" entity includes a household that did not engage in fishery activity at sea for more than 30 days in the 2008 Fishery Census.
 2. A "re-opened" entity refers to a fishery management entity in the 2008 Fishery Census that re-opened the operation of fishery or a fishery management entity that continued the operation of fishery as of November 1, 2013.
 3. A "suspended" entity refers to a fishery management entity in the 2008 Fishery Census that suspended or refrained voluntarily from the operation of fishery as of November 1, 2013 or a household that did not engage in fishery activity at sea for more than 30 days during the past one year.

2. Number of Fishery Management Entities Managed and Operated by Fishery Cooperatives, etc. and Number of Fishery Workers

The number of fishery management entities that engaged in set net or aquaculture, which were operated by fishery cooperatives (including branches) in the three earthquake-stricken prefectures was 85, which showed an increase of 44 (207.3%) from the previous survey, thanks to the use of "Ganbaru Fisheries and Aquaculture Restoration Support Project," which is a restoration support project for the Great East Japan Earthquake.

The number of fishery workers (juujisha) in fishery cooperatives, etc. was 2,525, which was an increase of 1,680 (298.8% from the previous survey).

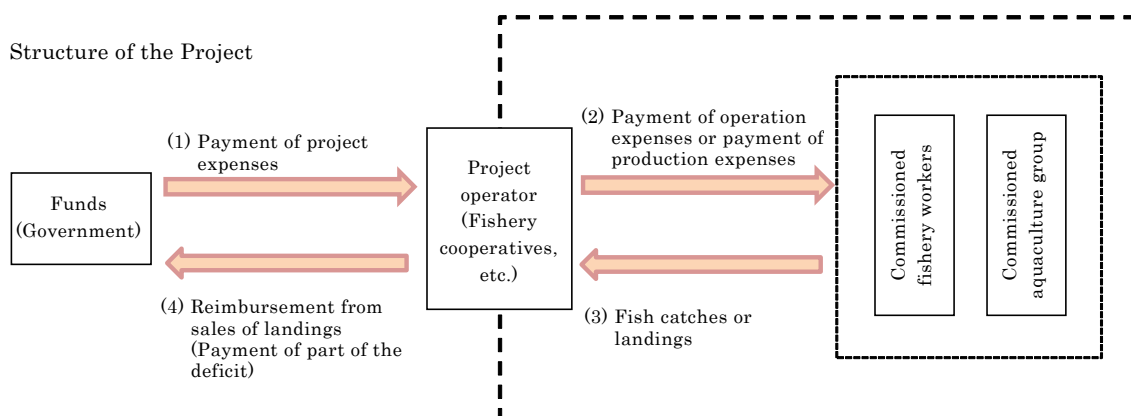
Table 32: Number of Fishery Management Entities Managed and Operated by Fishery Cooperatives, etc. and Number of Fishery Workers

Classification	Unit	Total			Fishery cooperative, etc.			Private management entity, corporation, joint management, etc.		
		2008	2013	Ratio compared to the previous	2008	2013	Ratio compared to the previous	2008	2013	Ratio compared to the previous
		%			%			%		
Fishery management entity										
Total of three quake-hit prefectures	Entity	10,062	5,690	56.5	41	85	207.3	10,021	5,605	55.9
Iwate Prefecture	Entity	5,313	3,365	63.3	32	33	103.1	5,281	3,332	63.1
Miyagi Prefecture	Entity	4,006	2,311	57.7	6	52	866.7	4,000	2,259	56.5
Fukushima Prefecture	Entity	743	14	1.9	3	-	-	740	14	1.9
Fishery workers										
Total of three quake-hit prefectures	People	21,598	13,827	64.0	845	2,525	298.8	20,753	11,302	54.5
Iwate Prefecture	People	9,545	6,173	64.7	805	1,202	149.3	8,740	4,971	56.9
Miyagi Prefecture	People	10,280	7,245	70.5	21	1,323	6,300.0	10,259	5,922	57.7
Fukushima Prefecture	People	1,773	409	23.1	19	-	-	1,754	409	23.3

Note: A fishery worker (juujisha) refers to a person aged 15 years or older and who engaged in fishery work at sea as of November 1, 2013.

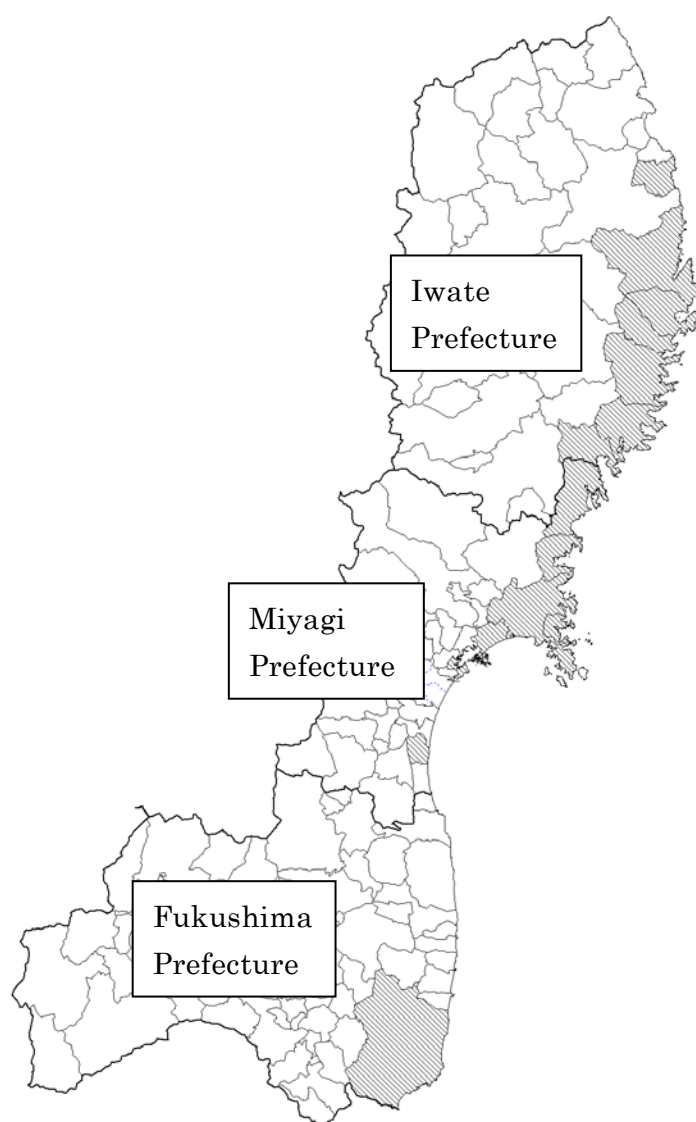
[Ganbaru Fisheries and Aquaculture Restoration Support Project]

The government funds necessary expenses for the operation, production and materials to fishery cooperatives, etc. that conduct activities contributing to the development of a stable system for fishery production to respond to the environmental situation after the earthquake, by working in coalition in aquaculture such as the introduction of new energy-saving high-performance fishing vessels in a fishery based on the restoration plan for fishery or aquaculture which was formulated in the region.



Reference 1: Implementation Status of Ganbaru Fisheries and Aquaculture Restoration Support Project
(As of August, 1, 2014)

Source: Fisheries Agency



Iwate Prefecture No. of accepted projects: 50	
[Ganbaru Fisheries] No. of accepted projects: 9	
2011: 1	Ofunato City
2012: 3	Miyako City/Kamaishi City, Otsuchi Town, Ofunato City
2013: 5	Tanohata Village, Miyako City/Kamaishi City, Yamada Town, Ofunato City
[Ganbaru Fisheries] No. of accepted projects: 41	
2012: 32	Miyako City, Yamada Town, Otsuchi Town, Kamaishi City, Ofunato City, Rikuzentakata City
2013: 7	Yamada Town/Kamaishi City, Ofunato City
2014: 2	Ofunato City

Miyagi Prefecture No. of accepted projects: 45	
[Ganbaru Fisheries] No. of accepted projects: 14	
2011: 4	Kesennuma City, Onagawa Town
2012: 8	Ishinomaki City, Kesennuma City, Onagawa Town, Watari Town
2013: 1	Ishinomaki City
2014: 1	Ishinomaki City
[Ganbaru Fisheries] No. of accepted projects: 31	
2011: 1	Higashimatsushima City
2012: 26	Kesennuma City, Ishinomaki City, Ishinomaki City/Onagawa Town, Higashimatsushima City, Shiogama City, Minamisanriku Town, Onagawa Town, Shichigahama Town, Watari Town
2013: 4	Ishinomaki City, Minamisanriku Town, Onagawa Town

Fukushima Prefecture No. of accepted projects: 2	
[Ganbaru Fisheries] No. of accepted projects: 2	
2011: 2	Iwaki City

A fishery cooperative can be accepted for one or more projects as the number of accepted projects is determined for each fishery or aquaculture restoration plan.

3. Iwate Prefecture

(1) Fishery Management Entities

The total number of fishery management entities in Iwate Prefecture was 3,365, which was 63.3% compared to the previous survey. Of total management entities in Iwate, those that were managed and operated by fishery cooperatives and that engaged in aquaculture, etc. was 33, which was an increase of 1 compared to the previous survey.

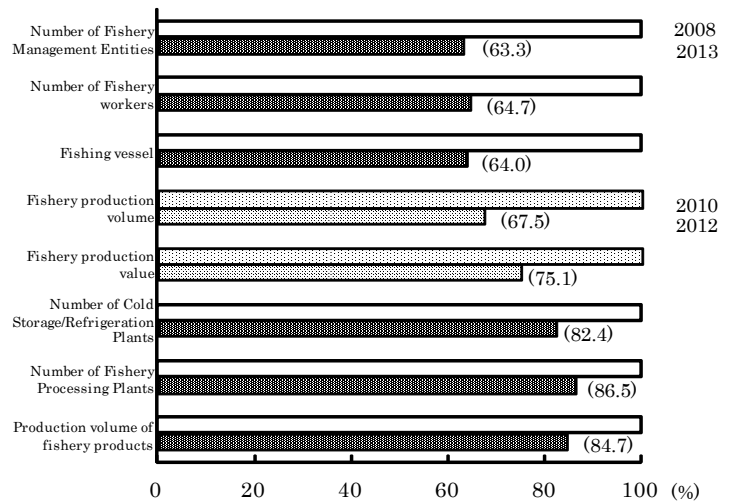
The number of fishery

workers (juujisha) was 6,173, which was 64.7% compared to the previous survey. The number of fishery workers in fishery cooperatives, etc. was 1,202, which was an increase of 397 (149.3%) from the previous survey.

Although the number of management entities in fishery cooperatives, etc. increased only by one, the number of fishery workers increased as fishery cooperatives, etc. that had already been engaged in aquaculture, etc. were accepted as the operators of the "Gambaru Fisheries and Aquaculture Restoration Support Project" (50 projects) which are restoration support projects for the Great East Japan Earthquake.

The number of fishing vessels was 5,740, which was 64.0% compared to the previous survey. Looked at fishing vessels by main fishery type of used vessel, oyster culture was 21.0%, wakame seaweed culture was 61.5% and large set net was 80.5% compared to the previous survey.

Figure 12: Fishery Management Entities (Iwate Prefecture)



Note: The latest survey results before the Great East Japan Earthquake was set to 100.

Survey results of 2010 were used for fishery production volume (statistical survey of marine fisheries production) and fishery production sales other than those in the Fishery Census. (Same for Figure 14 and 16)

Table 33: Main Survey Results in Fishery Census (Iwate Prefecture)

Classification	Unit	2008	2013	Ratio compared to the previous survey (2013/2008)
				%
Fishery management entity	Entity	5,313	3,365	63.3
Private management entity	Entity	5,204	3,278	63.0
Organized management entity	Entity	109	87	79.8
Corporation, joint management, etc.	Entity	77	54	70.1
Fishery cooperative, etc.	Entity	32	33	103.1
Fishery workers	Person	9,545	6,173	64.7
Private management entity	Person	5,853	4,004	68.4
Organized management entity	Person	3,692	2,169	58.7
Corporation, joint management, etc.	Person	2,887	967	33.5
Fishery cooperative, etc.	Person	805	1,202	149.3
Fishing vessel	Vessel	8,964	5,740	64.0
By main fishery type of used fishing vessel				
Oyster culture	Vessel	376	79	21.0
Wakame seaweed culture	Vessel	317	195	61.5
Large set net	Vessel	185	149	80.5
Fish market	Market	14	14	100.0
Marine product volume handled	t	186,999	136,169	72.8
Marine product value handled	10,000 yen	4,542,668	3,759,894	82.8
Cold Storage/Refrigerating Plants	Plant	176	145	82.4
Worker	Person	4,940	3,824	77.4
Fishery processing plant	Plant	178	154	86.5
Worker	Person	5,314	4,302	81.0
Production volume (excluding roasted or flavored nori laver)	t	145,932	123,572	84.7

(2) Change in Engaged-in Fishery Types

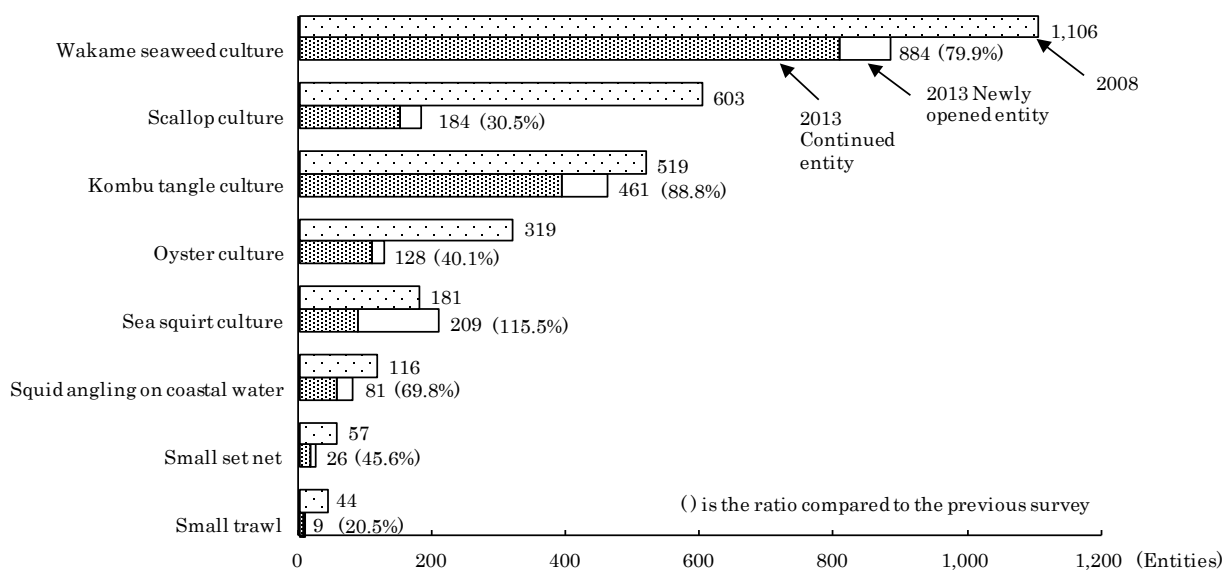
Compared fishery types in which re-opened management entities engaged to those of the previous survey, the number of fishery management entities that engaged in scallop culture and oyster culture was 30.5% and 40.1%, respectively, both of which decreased significantly.

On the other hand, the number of management entities that engaged in wakame seaweed culture and kombu tangle culture decreased to 79.9% and 88.8%, respectively. Those engaged in sea squirt culture increased to 115.5% compared to the previous survey. 76 management entities that newly started wakame seaweed culture include those previously engaged in scallop culture (21 entities) and oyster culture (7 entities).

68 management entities that newly started kombu tangle culture include those previously engaged in common scallop culture (10 entities) and oyster culture (5 entities).

Figure 13: Main Fishery Types in Which Re-Opened Management Entities Engaged (Multiple Answers Accepted)

Iwate Prefecture (2,858 management entities)



Note: "Newly started" refers to fishery management entities that previously engaged in a different fishery type and "continued" refers to fishery management entities that previously engaged in the same fishery type.

<Reference>

Unit: Entity

	Wakame seaweed culture	Kombu tangle culture
Continued (Business has been continued since 2008 or before)	808	393
Newly started (Business started after 2008)	76 $\left[\begin{array}{l} \text{from scallop culture: } 21 \\ \text{from oyster culture: } 7 \end{array} \right]$	68 $\left[\begin{array}{l} \text{from scallop culture: } 10 \\ \text{from oyster culture: } 5 \end{array} \right]$
Total	884	461

(3) Fishery Production

According to the "Statistical Survey of Marine Fisheries Production," the production volumes in marine fisheries were 84,740 tons in 2011, 126,788 tons in 2012, and 144,618 tons in 2013, which were 45.1%, 67.5% and 77.0%, respectively compared to that in 2010.

Compared production volume in 2013 to that of 2010 by fish type, tuna and abalone increased to 102.6% and 134.3%, respectively. Cod and wakame seaweed culture was 100.0% and 92.3%, respectively.

According to "fishery production sales," the production sales in marine fisheries were 22.809 billion yen in 2011 and 31.362 billion yen in 2013, which were 59.3% and 81.5%, respectively compared to that in 2010.

Compared production sales in 2013 to that of 2010 by fish type, abalone, cod and tuna increased to 126.3%, 107.1% and 100.8%, respectively.

Reference 2: Production Volume of Marine Fisheries and Fishery Production Sales (Main Fish Type)
(Iwate Prefecture)

Classification	Unit	2010	2011	2012	2013	Ratio over 2010		
						(2011/2010)	(2012/2010)	(2013/2010)
						%	%	%
Marine Fishery production volume	t	187,850	84,740	126,788	144,618	45.1	67.5	77.0
Marine fisheries	t	136,416	80,210	103,276	113,423	58.8	75.7	83.1
Cod	t	23,562	11,232	21,597	23,557	47.7	91.7	100.0
Brit	t	18,561	3,141	11,428	13,203	16.9	61.6	71.1
Saury	t	19,325	6,454	7,898	10,993	33.4	40.9	56.9
Tuna	t	5,450	4,595	5,802	5,592	84.3	106.5	102.6
Abalone	t	283	242	278	380	85.5	98.2	134.3
Marine aquaculture	t	51,434	4,530	23,512	31,195	8.8	45.7	60.7
Wakame seaweed	t	19,492	408	15,336	17,984	2.1	78.7	92.3
Kombu tangle	t	14,517	-	6,862	9,588	-	47.3	66.0
Common scallop	t	6,673	759	750	1,544	11.4	11.2	23.1
Oyster (with shell)	t	9,578	3,288	565	2,074	34.3	5.9	21.7
						%	%	%
Marine Fishery production value	1 million yen	38,496	22,809	28,898	31,362	59.3	75.1	81.5
Marine fisheries	1 million yen	28,721	21,708	24,050	26,535	75.6	83.7	92.4
Cod	1 million yen	1,556	1,513	2,878	1,667	97.2	185.0	107.1
Brit	1 million yen	957	103	499	410	10.8	52.1	42.8
Saury	1 million yen	1,233	324	443	838	26.3	35.9	68.0
Tuna	1 million yen	3,803	3,469	4,161	3,835	91.2	109.4	100.8
Abalone	1 million yen	2,627	2,835	2,081	3,318	107.9	79.2	126.3
Marine aquaculture	1 million yen	9,775	1,101	4,848	4,827	11.3	49.6	49.4
Wakame seaweed	1 million yen	3,036	86	3,313	2,375	2.8	109.1	78.2
Kombu tangle	1 million yen	1,947	-	1,134	1,190	-	58.2	61.1
Common scallop	1 million yen	2,097	282	275	566	13.4	13.1	27.0
Oyster	1 million yen	2,216	705	111	671	31.8	5.0	30.3

Source: Statistics Department, MAFF "Annual Statistics of Fishery and Fish Culture," "Fishery Production Sales"

(4) Distribution and Processing

The number of fish markets was the same as the previous survey, handling volume of marine products was 136,169 tons, and handling monetary value of marine products was 37,598.94 million yen, which were 72.8% and 82.8%, respectively compared to the previous survey.

The number of cold storage and refrigerating plants was 145 and the number of workers was 3,824, which were 82.4% and 77.4%, respectively compared to the previous survey.

The number of fishery processing plants was 154 and the number of workers was 4,302, which were 86.5% and 81.0%, respectively compared to the previous survey. However, the numbers increased by 36 from 118, which was the result of "Statistical Survey on Fishery Distribution and Statistical Survey on Fishery Processing (2012)". The production volume of fishery products for food was 16,026 tons, which was an increase of 79.0% compared to that in 2010. Looking at the breakdown of main products, the production volume was 5,209 tons in frozen seafood, 1,887 tons in pickled fishery products, and 4,615 tons in frozen cooked fishery food, which were 96.0%, 80.0% and 57.0%, respectively compared to those in 2010.

The production volume of frozen fresh fishery products was 90,063 tons, which was 89.8% compared to that in 2010. Looking at the breakdown of main products, the production volume was 18,662 tons in frozen cod, 25,299 tons in frozen saury, and 14,226 tons in other frozen fish and frozen fishery products, which were 141.5%, 91.2% and 75.2%, respectively compared to those in 2010.

Table 34: Change in the Production Volume of Fishery Products (Iwate Prefecture)

Classification	Unit	2010	2011	2012	2013	Ratio over 2010		
						(2011/2010)	(2012/2010)	(2013/2010)
						%	%	%
Processed foods	t	20,284	5,532	11,438	16,026	27.3	56.4	79.0
Frozen food	t	13,525	2,908	6,543	9,824	21.5	48.4	72.6
Seafood	t	5,424	1,540	3,058	5,209	28.4	56.4	96.0
Cooked fishery food	t	8,101	1,368	3,485	4,615	16.9	43.0	57.0
Other processed foods	t	3,002	1,224	2,348	3,405	40.8	78.2	113.4
Pickled fishery products	t	2,360	770	1,636	1,887	32.6	69.3	80.0
Frozen fresh fishery products	t	100,292	36,066	76,242	90,063	36.0	76.0	89.8
Frozen saury	t	27,731	14,411	22,868	25,299	52.0	82.5	91.2
Frozen cod	t	13,188	820	17,472	18,662	6.2	132.5	141.5
Other frozen fish or frozen fishery products	t	18,930	3,624	12,052	14,226	19.1	63.7	75.2

Note: Production volume from 2010 to 2012 was the result of "Statistical Survey on Fishery Distribution and Statistical Survey on Fishery Processing."

"Seafood" refers to whole fishery products or degutted/filleted fishery products that are frozen and packed.

4. Miyagi Prefecture

(1) Fishery Management Entities

The total number of fishery management entities in Miyagi Prefecture was 2,311, which was 57.5% compared to the previous survey. Of total management entities in Iwate, those that were managed and operated by fishery cooperatives and that engaged in aquaculture, etc. was 52, which was an increase of 46 compared to the previous survey. This is because the

number of management entities in fishery cooperatives, etc. increased because the fishery cooperatives formulated a new restoration plan by branch and aquaculture type, and were accepted using the "Gambaru Fisheries and Aquaculture Restoration Support Project" (45 projects) which are restoration support projects for the Great East Japan Earthquake.

The number of fishery workers (juujisha) was 7,245, which was 70.5% compared to the previous survey. The number of fishery workers in fishery cooperatives, etc. was 1,323, which was an increase of 1,302 (6,300.0%) from the previous survey. This is because the number of fishery workers that conduct project activities in an organization of new fishery cooperatives increased.

The number of fishing vessels was 4,704, which was 57.6% compared to the previous survey. Looked at by fishing vessels by main fishery type of used vessel, oyster culture was 32.9%, common scallop culture was 33.0% and large set net was 82.6%.

Figure 14: Fishery Management Entities (Miyagi Prefecture)

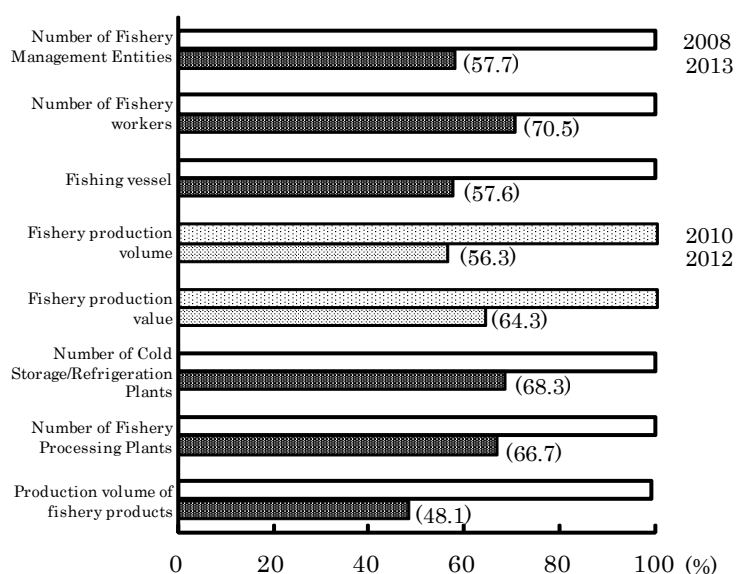


Table 35: Main Survey Results in Fishery Census (Miyagi Prefecture)

Classification	Unit	2008	2013	Ratio compared to the previous survey (2013/2008)
				%
Fishery management entity	Entity	4,006	2,311	57.7
Private management entity	Entity	3,860	2,191	56.8
Organized management entity	Entity	146	120	82.2
Corporation, joint management, etc.	Entity	140	68	48.6
Fishery cooperative, etc.	Entity	6	52	866.7
Fishery workers	Person	10,280	7,245	70.5
Private management entity	Person	5,349	4,405	82.4
Organized management entity	Person	4,931	2,840	57.6
Corporation, joint management, etc.	Person	4,910	1,517	30.9
Fishery cooperative, etc.	Person	21	1,323	6,300.0
Fishing vessel	Vessel	8,173	4,704	57.6
By main fishery type of used fishing vessel				
Oyster culture	Vessel	511	168	32.9
Scallop culture	Vessel	315	104	33.0
Large set net	Vessel	46	38	82.6
Fish market	Market	11	10	90.9
Marine product volume handled	t	469,595	317,815	67.7
Marine product value handled	10,000 yen	14,938,994	12,536,124	83.9
Cold Storage/Refrigerating Plants	Plant	268	183	68.3
Worker	Person	10,956	5,364	49.0
Fishery processing plant	Plant	439	293	66.7
Worker	Person	14,015	8,644	61.7
Production volume (excluding roasted or flavored nori laver)	t	482,301	232,123	48.1

(2) Change in Engaged-in Fishery Types

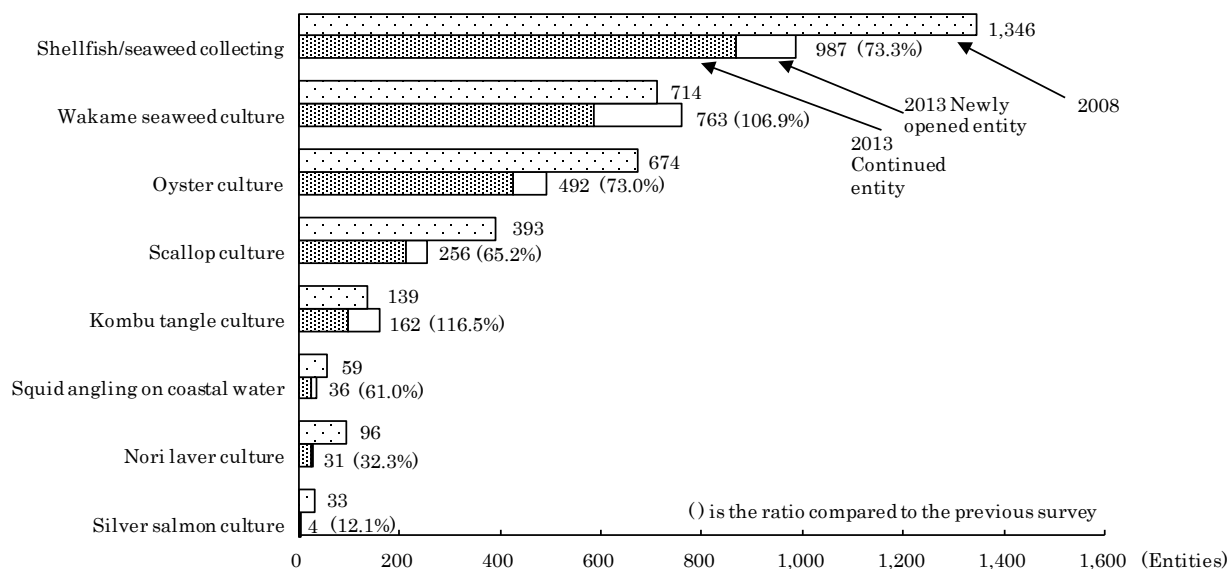
Compared fishery types in which re-opened management entities engaged to those of the previous survey, the number of fishery management entities that engaged in shellfish/seaweed collecting, oyster culture and scallop culture was 73.3%, 73.0% and 65.2%, respectively.

On the other hand, the number of management entities that engaged in wakame seaweed culture and kombu tangle culture increased to 106.9% and 116.5%, respectively compared to the previous survey. 175 management entities that newly started wakame seaweed culture include those previously engaged in oyster culture (15 entities) and scallop culture (14 entities).

62 management entities that newly started kombu tangle culture include those previously engaged in oyster culture (11 entities) and scallop culture (8 entities).

Figure 15: Main Fishery Types in Which Re-Opened Management Entities Engaged (Multiple Answers Accepted)

Miyagi Prefecture (2,100 management entities)



Note: "Newly started" refers to fishery management entities that previously engaged in a different fishery type and "continued" refers to fishery management entities that previously engaged in the same fishery type.

<Reference>

Unit: Entity

	Wakame seaweed culture	Kombu tangle culture
Continued (Business has been continued since 2008 or before)	588	100
Newly started (Business started after 2008)	175 $\left[\begin{array}{l} \text{from oyster culture: } 15 \\ \text{from scallop culture: } 14 \end{array} \right]$	62 $\left[\begin{array}{l} \text{from oyster culture: } 11 \\ \text{from scallop culture: } 8 \end{array} \right]$
Total	763	162

(3) Fishery Production

According to the "Statistical Survey of Marine Fisheries Production," the production volumes in marine fisheries were 159,089 tons in 2011, 195,885 tons in 2012, and 246,260 tons in 2013, which were 45.7%, 56.3% and 70.8%, respectively compared to that in 2010.

Compared production sales in 2013 to that of 2010 by fish type, horse mackerel, sardine, cod and yellow-tail increased to 221.6%, 155.2%, 112.5%, 104.5%, respectively.

According to "fishery production sales," the production sales in marine fisheries were 43.812 billion yen in 2011, 49.934 billion yen in 2012, and 57.0002 billion yen in 2013, which were 59.4%, 64.3%, and 73.4%, respectively compared to that in 2010.

Compared production sales in 2013 to that of 2010 by fish type, horse mackerel and sardine increased to 504.7%, and 166.8%, respectively.

Reference 3: Production Volume of Marine Fisheries and Fishery Production Sales (Main Fish Type)
(Miyagi Prefecture)

Classification	Unit	2010	2011	2012	2013	Ratio over 2010		
						(2011/2010)	(2012/2010)	(2013/2010)
						%	%	%
Marine Fishery production volume	t	347,911	159,089	195,885	246,260	45.7	56.3	70.8
Marine fisheries	t	224,588	129,400	152,792	184,507	57.6	68.0	82.2
Cod	t	15,148	4,960	11,324	17,040	32.7	74.8	112.5
Sardine	t	18,593	4,166	6,978	28,862	22.4	37.5	155.2
Yellow tail	t	2,336	2,281	2,869	2,440	97.6	122.8	104.5
Horse mackerel	t	662	291	855	1,467	44.0	129.2	221.6
Other fishes	t	20,016	7,960	16,162	7,222	39.8	80.7	36.1
Marine aquaculture	t	123,323	29,689	43,093	61,753	24.1	34.9	50.1
Wakame seaweed	t	19,468	3,341	17,367	17,628	17.2	89.2	90.5
Nori laver	t	24,417	11,923	6,843	13,786	48.8	28.0	56.5
Oyster (with shell)	t	41,653	13,321	5,024	11,581	32.0	12.1	27.8
Common scallop	t	12,822	1,003	3,538	6,431	7.8	27.6	50.2
						%	%	%
Marine Fishery production value	1 million yen	77,679	43,812	49,934	57,002	56.4	64.3	73.4
Marine fisheries	1 million yen	52,353	38,522	39,217	43,709	73.6	74.9	83.5
Cod	1 million yen	2,559	721	927	1,919	28.2	36.2	75.0
Sardine	1 million yen	964	167	284	1,608	17.3	29.5	166.8
Yellow tail	1 million yen	362	237	343	325	65.5	94.8	89.8
Horse mackerel	1 million yen	85	42	187	429	49.4	220.0	504.7
Other fishes	1 million yen	4,984	1,855	5,285	1,726	37.2	106.0	34.6
Marine aquaculture	1 million yen	25,326	5,289	10,718	13,293	20.9	42.3	52.5
Wakame seaweed	1 million yen	3,310	641	4,168	2,556	19.4	125.9	77.2
Nori laver	1 million yen	5,340	2,640	1,681	2,717	49.4	31.5	50.9
Oyster	1 million yen	4,904	1,605	789	1,316	32.7	16.1	26.8
Common scallop	1 million yen	3,385	324	1,111	1,865	9.6	32.8	55.1

Source: Statistics Department, MAFF "Annual Statistics of Fishery and Fish Culture," "Fishery Production Sales"

(4) Distribution and Processing

The number of fish markets was 10, which was a decrease of 1 compared to the previous survey, handling volume of marine products was 317,815 tons, and handling monetary value of marine products was 125,361.24 million yen, which were 67.7% and 83.9%, respectively compared to the previous survey.

The number of cold storage and refrigerating plants was 183 and the number of workers was 5,364, which were 68.3% and 49.0%, respectively compared to the previous survey.

The number of fishery processing plants was 293 and the number of workers was 8,644, which were 66.7% and 61.7%, respectively compared to the previous survey. The number 293 was the same as the result of the "Statistical Survey on Fishery Distribution and Statistical Survey on Fishery Processing (2012)" although there are new and abolished plants.

The production volume of fishery products for food was 91,189 tons. Looking at the breakdown of main products, the production volume was 10,198 tons in frozen seafood, 32,086 tons in kamaboko, steamed fish-paste patties, and 11,591 tons in frozen cooked fishery food, which were 135.8%, 64.0% and 49.4%, respectively compared to those in 2010.

The production volume of main frozen fishery products was 113,507 tons, which was 44.9% compared to that in 2010. Looking at the breakdown of main products, the production volume was 26,139 tons in frozen mackerel, 18,013 tons in frozen saury, and 16,900 tons in other frozen fish or frozen fishery products, which were 52.3%, 33.0% and 29.5%, respectively compared to those in 2010.

Table 36: Change in the Production Volume of Fishery Products (Miyagi Prefecture)

Classification	Unit	2010	2011	2012	2013	Ratio over 2010		
						(2011/2010)	(2012/2010)	(2013/2010)
Processed foods	t	x	x	60,625	91,189	%	%	%
Fish paste	t	x	20,900	x	x	x	x	x
Kamaboko, steamed fish-paste patties	t	50,115	20,900	32,725	32,086	41.7	65.3	64.0
Frozen food	t	30,966	6,573	7,486	21,788	21.2	24.2	70.4
Seafood	t	7,508	1,710	3,868	10,198	22.8	51.5	135.8
Cooked fishery food	t	23,458	4,863	3,618	11,591	20.7	15.4	49.4
Frozen fresh fishery products	t	252,730	30,903	62,867	113,507	12.2	24.9	44.9
Frozen mackerel	t	49,988	3,459	8,579	26,139	6.9	17.2	52.3
Frozen saury	t	54,553	4,624	16,098	18,013	8.5	29.5	33.0
Other frozen fish or frozen fishery products	t	57,246	7,433	8,979	16,900	13.0	15.7	29.5

Note: Production volume from 2010 to 2012 was the result of "Statistical Survey on Fishery Distribution and Statistical Survey on Fishery Processing."

"Seafood" refers to whole fishery products or degutted/filletted fishery products that are frozen and packed.

5. Fukushima Prefecture

(1) Fishery Management Entities

In Marine fisheries in Fukushima Prefecture, all fishery management entities are managed by companies due to voluntary refraining from operation.

For this reason, the number of fishery management entities was 14, the number of fishery workers (juujisha) was 409 and the number of fishing vessels was 32, which accounted for 1.9%, 23.1% and 3.7%, respectively of those in the previous survey.

Figure 16: Fishery Management Entities (Fukushima Prefecture)

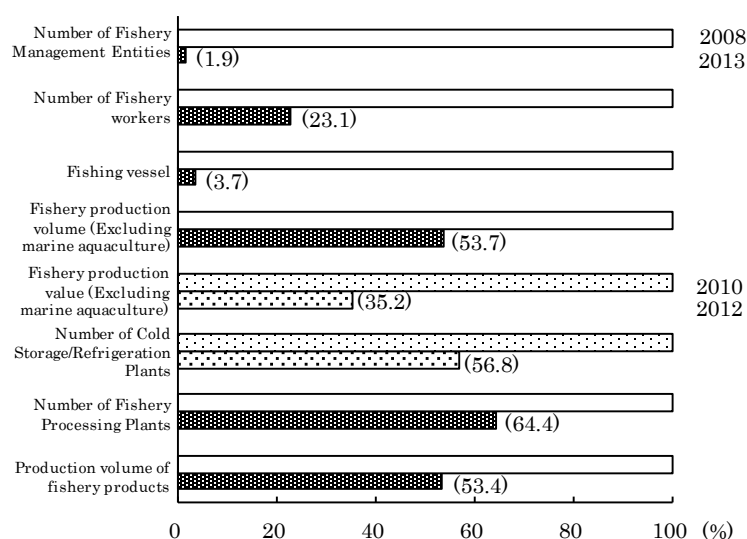


Table 37: Main Survey Results in Fishery Census (Fukushima Prefecture)

Classification	Unit	2008	25	Ratio compared to the previous survey (2013/2008)
				%
Fishery management entity	Entity	743	14	1.9
Private management entity	Entity	716	-	-
Organized management entity	Entity	27	14	51.9
Corporation, joint management, etc.	Entity	24	14	58.3
Fishery cooperative, etc.	Entity	3	-	-
Fishery workers	Person	1,773	409	23.1
Private management entity	Person	906	-	-
Organized management entity	Person	867	409	47.2
Corporation, joint management, etc.	Person	848	409	48.2
Fishery cooperative, etc.	Person	19	-	-
Fishing vessel	Vessel	865	32	3.7
Fish market	Market	12	1	8.3
Marine product volume handled	t	50,295	4,071	8.1
Marine product value handled	10,000 yen	1,368,748	64,966	4.7
Cold Storage/Refrigerating Plants	Plant	111	63	56.8
Worker	Person	2,704	1,780	65.8
Fishery processing plant	Plant	135	87	64.4
Worker	Person	2,532	1,781	70.3
Production volume (excluding roasted or flavored nori laver)	t	42,268	22,560	53.4

(2) Change in Engaged-in Fishery Types

Fishery types in which fishery management entities engaged were coastal fishing (trial operation) and tuna long line on distant water, large and medium surrounding net, offshore trawl, distant-water and offshore saury stick-held dip net, etc.

Figure 17: Fishery Types in Which Re-Opened Management Entities Engaged (Multiple Answers Accepted)



(3) Fishery Production

According to the "Statistical Survey of Marine Fisheries Production," the production volumes in marine fisheries (excluding marine aquaculture) were 49,778 tons in 2011, 42,427 tons in 2012, and 45,322 tons in 2013, which were 63.1%, 53.7% and 57.4%, respectively compared to that in 2010.

Compared production volumes in 2013 to that of 2010 by fish type, skipjack, tuna and saury were 85.5%, 79.2% and 77.4%, respectively.

According to "fishery production sales," the production sales in marine fisheries (excluding marine aquaculture) were 8.69 billion yen in 2011, 6.407 billion yen in 2012, and 7.919 billion yen in 2013 which were 47.8%, 35.2%, and 43.6%, respectively compared to that in 2010.

Compared production sales in 2013 to that of 2010 by fish type, saury increased to 109.7%, and skipjack and calamari were 75.8% and 65.9%, respectively.

Reference 4: Production Volume of Marine Fisheries and Fishery Production Sales (Main Fish Type)
(Fukushima Prefecture)

Classification	Unit	2010	2011	2012	2013	Ratio over 2010		
						(2011/2010)	(2012/2010)	(2013/2010)
Marine Fishery production volume	t	80,398	x	x	x	%	%	%
Marine fisheries	t	78,939	49,778	42,427	45,322	63.1	53.7	57.4
Tuna	t	3,980	2,935	3,693	3,153	73.7	92.8	79.2
Skipjack	t	2,845	1,792	1,489	2,432	63.0	52.3	85.5
Saury	t	17,103	19,346	15,800	13,233	113.1	92.4	77.4
Calamary	t	2,146	1,700	2,428	1,109	79.2	113.1	51.7
Marine aquaculture	t	1,459	x	x	x	x	x	x
Marine Fishery production value	1 million yen	18,713	x	x	x	%	%	%
Marine fisheries	1 million yen	18,181	8,690	6,407	7,919	47.8	35.2	43.6
Tuna	1 million yen	3,337	2,593	2,294	1,974	77.7	68.7	59.2
Skipjack	1 million yen	693	364	309	525	52.5	44.6	75.8
Saury	1 million yen	2,052	2,128	1,411	2,252	103.7	68.8	109.7
Calamary	1 million yen	505	377	525	333	74.7	104.0	65.9
Marine aquaculture	1 million yen	533	x	x	x	x	x	x

Source: Statistics Department, MAFF "Annual Statistics of Fishery and Fish Culture," "Fishery Production Sales"

(4) Distribution and Processing

The number of fish markets was 1 (12 in the previous survey), handling volume of marine products was 4,071 tons, and handling monetary value of marine products was 649.66 million yen, which were 8.1% and 4.7%, respectively compared to the previous survey.

The number of cold storage and refrigerating plants was 63 and the number of workers was 1,780, which were 56.8% and 65.8%, respectively compared to the previous survey.

The number of fishery processing plants was 87 and the number of workers was 1,781, which were 64.4% and 70.3%, respectively compared to the previous survey. However, the numbers increased by 9 from 78, which was the result of "Statistical Survey on Fishery Distribution and Statistical Survey on Fishery Processing (2012)".

The production volume of fishery products for food was 15,071 tons, which was 63.7% compared to that in 2010. Looking at the breakdown of main products, the production volume of kamaboko, steamed fish-paste patties was 6,387 tons, that of dried and salted products was 2,996 tons, and that of frozen food was 2,009 tons.

The production volume of frozen fishery products was 6,859 tons, which was 54.8% compared to that in 2010. Looking at the breakdown of main products, the production volumes of frozen salmon and trout and frozen saury were 2,810 tons and 2,201 tons, respectively.

Table 38: Change in the Production Volume of Fishery Products (Fukushima Prefecture)

Classification	Unit	2010	2011	2012	2013	Ratio over 2010		
						(2011/2010)	(2012/2010)	(2013/2010)
Processed foods	t	24,666	12,480	15,543	15,701	50.6	63.0	63.7
Fish paste	t	12,066	6,708	7,460	6,387	55.6	61.8	52.9
Kamaboko, steamed fish-paste patties	t	12,066	6,708	7,460	6,387	55.6	61.8	52.9
Frozen food	t	-	1,021	1,171	2,009	nc	nc	nc
Dried and salted products	t	3,375	617	2,382	2,996	18.3	70.6	88.8
Frozen fresh fishery products	t	12,507	4,116	7,078	6,859	32.9	56.6	54.8
Frozen salmon, trout	t	-	-	x	2,810	nc	x	nc
Frozen saury	t	7,052	2,239	3,368	2,201	31.7	47.8	31.2

Note: Production volume from 2010 to 2012 was the result of "Statistical Survey on Fishery Distribution and Statistical Survey on Fishery Processing."