The Reality of the Fishing Industry in Fukushima Prefecture
— Fishery Reconstruction Efforts —

Fukushima Prefectural Federation of Fisheries Cooperative Associations
## Timeline

<table>
<thead>
<tr>
<th>Time</th>
<th>Status</th>
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<tbody>
<tr>
<td>March – April 2011</td>
<td>○ Contaminated water is flowing out to the ocean from the Fukushima Daiichi nuclear power plant</td>
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<td>March 15, 2011</td>
<td>○ Self-restraint of coastal fishing was agreed upon at union presidents’ meeting (Offshore fishing continues operation)</td>
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<td>April 2011-</td>
<td>○ The prefecture started monitoring inspections for seafood</td>
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<td>April 2011</td>
<td>○ Restrictions placed on taking and shipping sand eels offshore of Fukushima</td>
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<td>April 2011-</td>
<td>○ Stored monitoring inspection results of seafood as data</td>
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<td>* Began comprehending the trends of radioactivity by area and fish species</td>
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<td>○ Some fishermen and distributors made requests to resume operations</td>
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<td>February 2012</td>
<td>○ Established Fukushima regional fisheries reconstruction conference</td>
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<tr>
<td>March 2012</td>
<td>○ Established Soma-Futaba fishery test operation and distribution committee</td>
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<td>March 2012-</td>
<td>○ Planned test operation schedule</td>
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<td>* Discussed contents at committees and conferences</td>
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<td>June 2012</td>
<td>○ Test operation plan was approved at union presidents’ meeting</td>
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<td>June 22, 2012</td>
<td>○ Started test operation limited to 2 kinds of octopus and 1 kind of whelk at Soma-Futaba fisheries cooperative</td>
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<tr>
<td>July 2012</td>
<td>○ Established Iwaki fishery test operation committee</td>
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<tr>
<td>October 18, 2013</td>
<td>○ Started test operation at Iwaki city fisheries cooperative and Onahama fisheries cooperative</td>
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Test Operation Efforts

Self-restraint in coastal fishing in Fukushima Prefecture (including offshore bottom fishing)

- Confirmed the effects of radiation through about 38,000 (as of August 2016) prefectural monitoring survey results
  - Some fish are not affected by radiation
  - The effects of radiation clearly decline with time

Small scale operations and sales have been tested for limited kinds of fish since June 2012

Objective:

- Study reputation in shipping destinations
- Promote the safety of Fukushima fish by distribution
Test Operation Decision Making Process

Confirmed the safety of candidate target species with prefectural monitoring.

1. Fishermen and distributors’ conference
   - Target species, operation, and distribution system

2. Regional test operation committee
   - Agreements with each region

3. Regional fisheries reconstruction committee
   - Discussions with fishermen’s representatives, consumers and distributors, experts, and administrative agency

4. Union presidents’ meeting
   - Finalizing plans

Plans for test operation are carefully discussed and determined in a lengthy process.
Voluntary Inspection System (Placement of Testing Equipment)

- **Soma Haragama fish market**
  - CsI detector: 6 units
  - NaI detector: 2 units

- **Fisheries Research Institute, Soma branch**
  - Germanium detector: 1 unit

- **Onahama fish market**
  - CsI detector: 6 units
  - NaI detector: 3 units

- **Fisheries Research Institute**
  - Germanium detector: 1 unit

- Inspection by trained union members
- 7 to 10 people performing inspections per room
Voluntary Inspection System (Shipping Policy)

Standard set for voluntary inspections is **50 Bq/kg**
This prevents shipping of seafood exceeding the **100 Bq/kg national standard**.

**Screening Inspection (Fisheries associations)**
- **Over 25:** Under 25
- **Under 25:**

**Detailed examination by the Prefecture**
- **Over 50:** Over 100
- **Under 50:**

**Instructed by government to restrict shipping**

**Strengthen monitoring**

**Shipping**
- **Over 100:**
  - Voluntary restrictions

**Virtually no products exceed the standard**

Unit Bq/kg
Launched with 3 kinds, expanding to 92 kinds by October 2016

92 kinds

The number of kinds

Fish - 66 kinds
Bigeyed greeneye, angler fish, sand eel, flounder, brown sole, etc.

Crustaceans - 8 kinds
Kegani crab, queen crab, swimming crab, etc.

Squid, octopus - 7 kinds
Common squid, spear squid, octopus, north-pacific giant octopus, etc.

Shellfish - 9 kinds
Clams, abalone, surf clam, etc.

Others - 2 kinds
Okinamako, Strongylocentrotus nudus
Test operation is conducted in all areas offshore of Fukushima except within a 20 km radius from the Fukushima Daiichi power plant.

A trawl-net fishery is operated 90 m or deeper below sea level to avoid by-catch of non-target species.

* The numbers in the above map describe the order of expansion of the trawl-net fishery area.
The catch in fisheries in test operation has increased steadily, but the catch in 2015 is still very low: only 5.8% of the 10-year average before the earthquake.
Status of Sales & Shipments

- At first, shipments were only made within Fukushima Prefecture
- Produce is now shipped to consumer markets in the Tohoku, Kanto, Chubu, and Hokuriku regions in Japan

Fukushima seafood is priced similarly to seafood produced elsewhere in Japan on the consumer market.