立法會CB(2)581/10-11號文件

# 香港特別行政區立法會

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# 食物安全及環境衞生事務委員會
# 代表團

# 於2010年9月8日至11日
# 進行職務訪問

# 研究日本靈灰安置所設施
# 及漁業的報告

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# 目錄

# 第1章 —— 引言

## 報告目的

1.1 立法會食物安全及環境衞生事務委員會代表團於2010年9月8日訪問東京，以取得日本運作及發展靈灰安置所設施及確保食物安全方面的第一手資料，並於2010年9月9日至11日期間訪問札幌，以瞭解該國如何持續發展其漁業。本報告闡述代表團的主要考察結果及觀察所得。

## 背景

1.2 食物安全及環境衞生事務委員會負責監察及研究與食物安全、環境衞生及漁農事宜有關的政府政策及公眾關注的事項。

*靈灰安置所設施*

1.3 隨着香港人口日漸增加和老化，死亡人數和相應的火化數目按年遞增。根據政府當局的資料，每年的死亡人數預計會由2010年的43700人增加至2020年的52 800人，而每年的火化宗數也會相應地由2010年的39 200宗增加至2020年的49 600宗。隨着火化服務需求的上升，靈灰龕供應的需求也日益增加。

1.4 目前，除了由非政府機構(例如華人永遠墳場管理委員會)、宗教團體和私營機構營辦的靈灰安置所設施外，食物環境衞生署轄下共有8間公眾靈灰安置所，合共提供約167 900個公眾靈灰龕。在2011年年底或2012年年初之前，在和合石墳場內位於橋頭路的新靈灰安置所亦會提供約41 000個公眾靈灰龕。

1.5 為解決靈灰龕日益增加的需求，政府當局必須進行的其中一項工作，是在全港不同地區(包括市區)尋找適合的地點發展靈灰安置所設施，例如興建或改建大廈為多層式的靈灰安

置所。此類大廈佔地不多，亦免除市民長途跋涉到偏遠地區拜祭先人的需要。事務委員會察悉，海外國家(例如日本)在使用高樓大廈作靈灰安置所方面有成功的經驗。

*本地漁業的可持續發展*

1.6 漁業在香港有悠久的歷史，可分為捕撈漁業和水產養殖業兩種。在捕撈漁業方面，香港現時約有3 700艘捕魚船，當中約有1 100艘為拖網漁船，其餘主要是在近岸作業捕魚的舢舨及小型漁船。在2009年，香港捕魚船隊的產量約為159 000公噸，產值約為20億元，供應約30%本港消耗的海產。在水產養殖業方面，香港共有約1 000名海魚養殖牌照持有人，在26個指定的海魚養殖區經營。海魚養殖在2009年的產量約為1 400公噸，總值約9,200萬元。在塘魚養殖方面，現時全港魚塘的總面積約為1 000公頃，主要位於新界東北部。2009年的塘魚養殖產量約為2 100公噸，總值約3,500萬元。

1.7 在本港直接從事捕撈及水產養殖業的漁民約有10 000人，另約有8 000名內地漁工受僱於漁船或魚場協助營運。

1.8 與上世紀相比，香港捕撈船隊作業的傳統漁場(即本港水域和南中國海)內的漁業資源受到捕撈過度、海洋污染和海上工程等問題影響，導致漁獲的質素和數量大幅下降。加上營運成本上漲，漁民的經營日益困難，情況與全球各地的捕撈業相若。政府於2006年成立漁業可持續發展委員會，負責研究本港漁業的長遠發展方向和目標，以及促進漁業可持續發展的可行策略及方案。委員會在2010年4月把其報告提交政府考慮，當中作出多項建議，以落實以下推動漁業可持續發展的兩大方向 ——

(a) 協助漁民發展或轉型至現代化和可持續的作業模式；及

(b) 存護、保育和恢復海洋生態及漁業資源。

1.9 為使委員掌握有關靈灰安置所設施的供應和促進漁業可持續發展的最新進展，並方便委員就有關事宜進行商議工作，事務委員會認為值得參考海外經驗。事務委員會要求立法會秘書處資料研究及圖書館服務部搜集有關東京的靈灰安置所設施和北海道漁業的資料。

1.10 經考慮資料研究及圖書館服務部的研究結果後，委員認為，在2010年9月初前往日本進行訪問，以取得有關該國靈灰安置所設施的運作和發展及當地漁業持續發展的方法的第一手資料，將會有所裨益。委員在日本亦會造訪有關當局，瞭解該國保障食物安全的食物溯源機制。

1.11 2010年6月4日，食物安全及環境衞生事務委員會獲內務委員會批准訪問日本。

1.12 代表團在逗留東京期間，亦訪問了厚生勞動省，瞭解日本爲確保食物安全所採取的措施。

## 代表團的成員

1.13 代表團包括以下議員 ——

李華明議員，SBS, JP (事務委員會主席及代表團團長)
黃容根議員，SBS, JP (事務委員會副主席)
陳鑑林議員，SBS, JP
劉江華議員，JP
譚耀宗議員，GBS, JP
李鳳英議員，SBS, JP
李國麟議員，SBS,
陳克勤議員
梁家騮議員

1.14 總議會秘書(2)5蘇美利及高級議會事務助理(2)2張美儀陪同代表團出訪。

## 訪問行程

1.15　代表團於2010年9月8日至11日期間訪問日本。在訪問期間，代表團聽取了厚生勞動省、北海道漁連協同組合連合會及水產廳北海道漁業調整事務所，以及小樽市漁業協同組合進行的簡報。代表團也參觀了多磨靈園、東京御廟、漁連総合食品(道漁連子會社)加工場、佐藤水產三文魚工場及札幌中央批發市場。

1.16　訪問行程的進一步詳情載於**附錄I**。代表團曾會晤的政府官員和代表名單載於**附錄II**。訪問期間取得的參考資料一覽表載於**附錄III**。

# 第2章 —— 日本的靈灰安置所設施

## 訪問行程

2.1 代表團訪問了厚生勞動省，並聽取有關日本的靈灰安置所設施發展的簡介。代表團亦參觀了多磨靈園，一個由東京都政府營運的墓園，以及東京御廟，一座由宗教團體營辦、樓高四層的機械化靈灰安置所，並聽取有關其運作的簡介。在簡介後，代表團在聽取簡介後參觀了這些墓園及靈灰安置所的設施。

訪問團聽取厚生勞動省職員簡介日本政府為應付公眾對靈灰安置所的需求而發展靈灰安置所的政策

## 概覽

2.2 日本土地稀缺，加上死亡率因嬰兒潮世代老化而持續上升，導致全國出現墓地短缺的情況。而日本的主要城市(例如東京)多年來有大量人口湧入，因此對墓地的需求更為殷切。

2.3 在日本人口密集的市區難以覓得墓地，這是令火化在當地獲得廣泛接受的部分原因。現時，日本的整體火化率接近100%。

2.4 東京在日本47個都道府縣中屬第三小，但人口則為全國最高，約1 300萬人。作為日本人口最稠密的城市，東京在過去20年來每年對新墓地的需求均遠超供應。例如在2003年，一個位於東京心臟地帶、由東京市政府管理的墳場公開出售50個墓地，吸引逾2 200名申請者。這些墓地的面積介乎1.6至3.65平方米，價格由450萬日圓至逾1,000萬日圓。成功購買墓地的人士以抽籤形式選出。

2.5 根據2005年出版的一部著作所述，東京市政府管理的8個墓園中，只有4個存在空位。而在東京，更有多達100萬死者火化後的遺骸(或稱骨灰)因家屬未能作出合適的殮葬安排而被安置於家中。此外，東京市政府於2009年進行的調查結果顯示，在受訪的東京居民中，有41%並不擁有墓地，而61%希望擁有墓地。在選擇墓地時，76%的受訪者表示會考慮有關地點的位置是否就近和方便到達。

## 日本的火化及殮葬設施

2.6 在日本，先人經火化後的遺骸可安葬於墳地或置於靈灰安置所內的靈灰龕。根據日本法例，只有某類團體(例如宗教法人、公益法人和地方政府)獲准營辦殮葬及火化服務。以營利為目的的機構尤其不允許經營墓地。下表顯示日本在2008年的墓地、靈灰安置所及火葬場數目 ——

| | 個人 | 宗教法人 | 地方團體 | 其他 | 總數 |
|---|---|---|---|---|---|
| 墓地 | 686 107 | 58 127 | 33 065 | 107 402 | 884 701 |
| 靈灰安置所 | 無 | 7 302 | 893 | 3 562 | 11 757 |

## 其他殮葬安排

多層式的靈灰安置所

2.7 在東京，一些建於佛寺內或由空置工業大廈改建而成的多層式靈灰安置所於近期落成。這些靈灰安置所主要由宗教

法人或私人公司管理。這些多層式靈灰安置所有部分利用機械化設施，減少每個靈灰甕佔用的存放空間。該等靈灰安置所並非依照傳統做法永久展示靈灰龕，而是把安放先人骨灰的靈灰甕存放在儲藏窖的層架上。訪客使用智能卡和電腦設施(例如輕觸式屏幕)啟動機械臂，取出正確的靈灰甕，然後擺放在其中一個檢視區內，以便進行悼念儀式。檢視區或會設置電腦屏幕，展示先人的影像及其他裝飾，例如花卉背景。

自然葬

2.8 在日本，自"殯葬自由推進會"(Grave-Free Promotion Society)(下稱"推進會")在1991年成立後，自然葬(亦稱綠色殯葬)在當地漸趨普遍。推進會是一個致力推廣撒放先人骨灰的民間團體。日本並無法例禁止撒放先人骨灰，雖然《有關墓地、埋葬的法律》第4條訂明，先人遺骸必須葬於墳場，但這項禁令只適用於傳統殮葬。

2.9 日本自然葬的形式主要是把骨灰撒海或撒於山上。推進會及多家公司(例如在日本JASDAQ證券交易所上市的Sun Life Group)均有提供自然葬服務。把骨灰撒海的商業服務最先由公営社提供。公営社於1994年成立，是一家以東京為基地的殯儀公司。

2.10 推進會提供的骨灰撒海或撒於山上的服務收費介乎10萬至18萬日圓，另加文件處理費2,000日圓。至於公営社提供的骨灰撒海服務，個別服務收費為283,500日圓，團體儀式則每人收費為105,000日圓。

## 法例

2.11 日本規管殮葬及火化服務和設施的主要法例為：

(a) 《城市規劃法》(City Planning Act)(1968年)確保墓地、火葬場和靈灰安置所的設立或清拆均符合城市發展計劃；

(b) 《土地重整法》(Land Readjustment Act)(1954年)確保墓地、火葬場和靈灰安置所的設立或清拆均配合在都會區實施的土地重整項目；

(c) 《有關墓地、埋葬的法律》(Law concerning Graveyards and Burial)(1948年)規管墓地、火葬場和靈灰安置所的管理工作，以及有關殮葬的事宜。

有關當局

2.12 在中央層面，厚生勞動省負責執行《有關墓地、埋葬的法律》和實施有關管理墓地及相關設施的政策。厚生勞動省亦向地方政府主管提供指引，協助他們履行在相關範疇的職責。

**參觀多磨靈園**

2.13 多磨靈園於1923年4月開始運作，是東京都政府興建的日本首個公園式墓園。靈園原名為"多磨墓地"，在1935年才改稱"多磨靈園"。在1940年，其面積由原來的100萬平方米擴展至128萬平方米。自此，多磨靈園成為日本市政府營運下的東京最大墳地，也成為日本建造其他墓園的典範。

2.14 在多磨靈園，殮葬地佔墓園總面積低於50%，因此，綠化地在整個墓園中達一半以上。墓園分為26個部分。埋葬在多磨靈園的先人約有400 000 ，其中部分為日本的名人。

2.15 在1993年，多磨靈園內興建了一座漏斗型的靈灰安置所，以協助紓緩葬地短缺的問題。靈灰安置所提供5 600 個靈灰龕，可供貯存22 000個靈灰甕，每30年續期一次。靈灰龕有3種不同類型，分別可貯存2、4及6個靈灰甕。此外，可暫時貯存7 500個靈灰甕的一些靈灰龕可按年出租。該等租約可每年續期，最長達5年。死者的家人只准在安置骨灰時進入靈灰安置所的貯存區。貯存靈灰甕的貯物櫃鑰匙由管理處保管。從靈園

的中央廣場，並不察覺有這些貯物櫃，而靈灰甕／靈灰龕前也沒有設置／展示名牌。靈灰安置所的入口提供一個共用的香爐，因為靈灰安置所內是不准燒香的。

2.16　　在2010年，有220幅介乎1.8至6平方米的殯葬地可供出售，售價由1,625,400至5,418,000日圓不等，而每年的管理費為1,200 至3,600日圓。至於靈灰龕，在2010年，有60個靈灰龕的租約期為30年。在這些靈灰龕中，50個可貯存4個靈灰甕，而10個則可貯存10個靈灰甕。貯存4個靈灰甕的靈灰龕收費396,000日圓，另外每年的管理費為4,200日圓，而貯存兩個靈灰甕的靈灰龕則收費297,000日圓，另加每年管理費3,150日圓。

訪問團參觀多磨靈園的設施

訪問團團長李華明議員向多磨靈園管理事務所長岩崎良司致送紀念品

## 參觀東京御廟

2.17　東京御廟於2009年7月開業，是一間由宗教法人(金戒光明寺)營辦的5層高機械化操作靈灰安置所。廟宇座落火車站附近，每天的開放時間由上午10時至下午7時。東京御廟可貯存的靈灰甕多達7 000個，若把這些靈灰甕存放在墓地，類似的空間只能貯存100個靈灰甕。訪客以智能卡指示機械臂，指定的靈灰甕便會從貯存窖被移送至9個拜祭室中的其中一個。取出靈灰甕的最快時間是40秒。只要付額外費用，死者的照片及／或錄像便可在拜祭室中展示。

2.18　在東京御廟貯存靈灰甕是永久性的。個人龕位收費380,000日圓，另加每年管理費8,000日圓，而家庭龕位(供兩名死者共用)則收費750,000日圓，另加每年管理費10,000日圓。


訪問團參觀東京御廟的設施

訪問團團長李華明議員向東京御廟的住職大洞龍德致送紀念品

# 第3章 —— 日本的食物安全

## 訪問行程

3.1 代表團聽取了厚生勞動省醫藥食品局轄下的食品安全部就日本的食物安全措施進行的簡報。

## 日本食物安全的管理工作

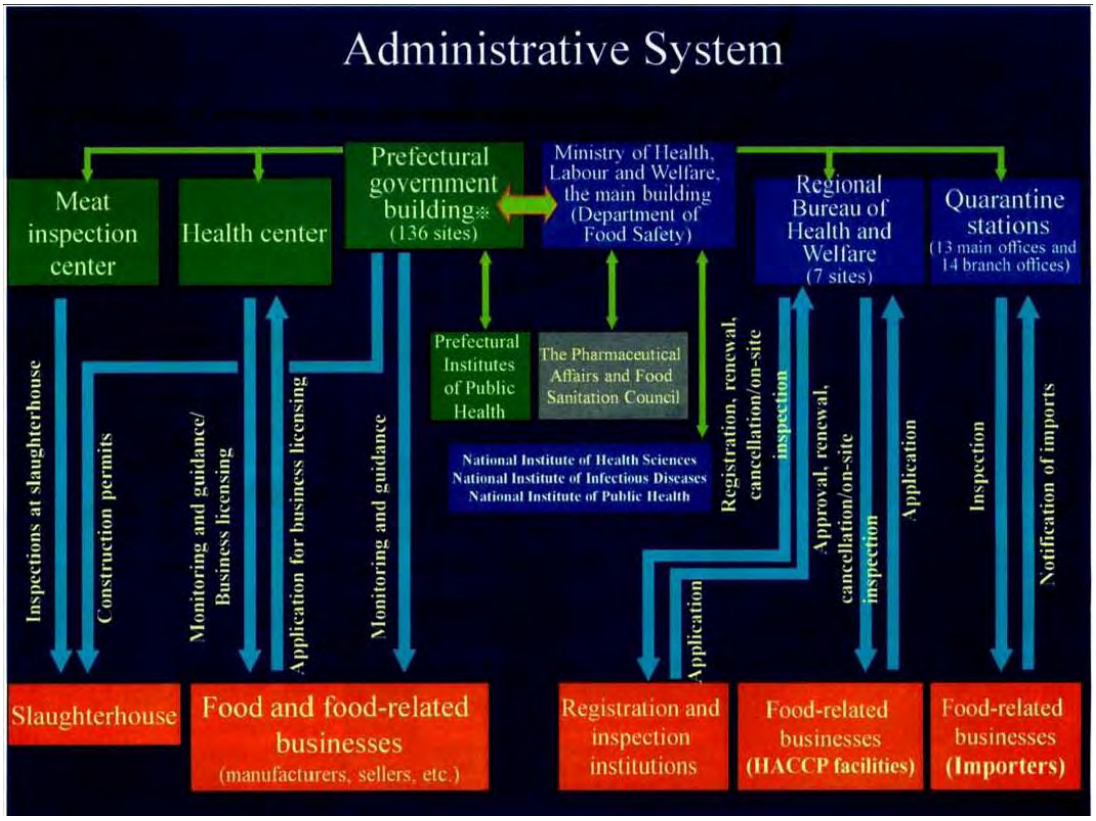
3.2 日本的食物安全管理是基於《食品安全基本法》(Food Safety Basic Law)、《食物衞生法》(Food Sanitation Law)、《屠宰場法》(the Abattoir Law)、《家禽屠宰商業控制和家禽檢查法》(Poultry Slaughtering Business Control, the Poultry Inspection Law)及其他相關法律.

3.3. 《食品安全基本法》在2003年制定，以回應公眾因多宗食物安全事故(如牛海綿狀腦病(俗稱瘋牛症)及假標籤醜聞)而對食物安全的日益關注。《食品安全基本法》是一項全面的法例，透過設立基本原則、澄清全國及地方政府、與食物相關業務及消費者的角色及職責，以及提供有關制訂食物安全政策的指示，從而確保食物安全。這項法例就食物安全引入風險分析的方法，當中包括3個主要元素，即風險評估、風險管理及風險通報。

3.4 具體而言，風險評估屬食品安全委員會(Food Safety Commission)的職責，它是根據《食品安全基本法》在內閣辦公室下成立的獨立機關，而風險管理則由厚生勞動省及農林水產省負責。厚生勞動省負責訂定適用於所有類型食品的一般規定及標準，而農林水產省則主理漁農產品及牲畜的風險管理，並把焦點集中於食物標籤及保障動植物的衞生。地方政府在推行風險管理方面也扮演重要角色。在每個司法管轄區的衞生當局之下成立的衞生中心負責向有關司法管轄區內的食物商發出牌照、巡查食物業經營場所及對食物進行測試。

3.5 風險評估及風險管理機關均須進行風險通報。這些機關之間就食物安全的事宜互相通報，並向感興趣的團體，例如消費者，提供有關的資料。

3.6 日本的食物安全管理工作概述於下表(只備英文本)——

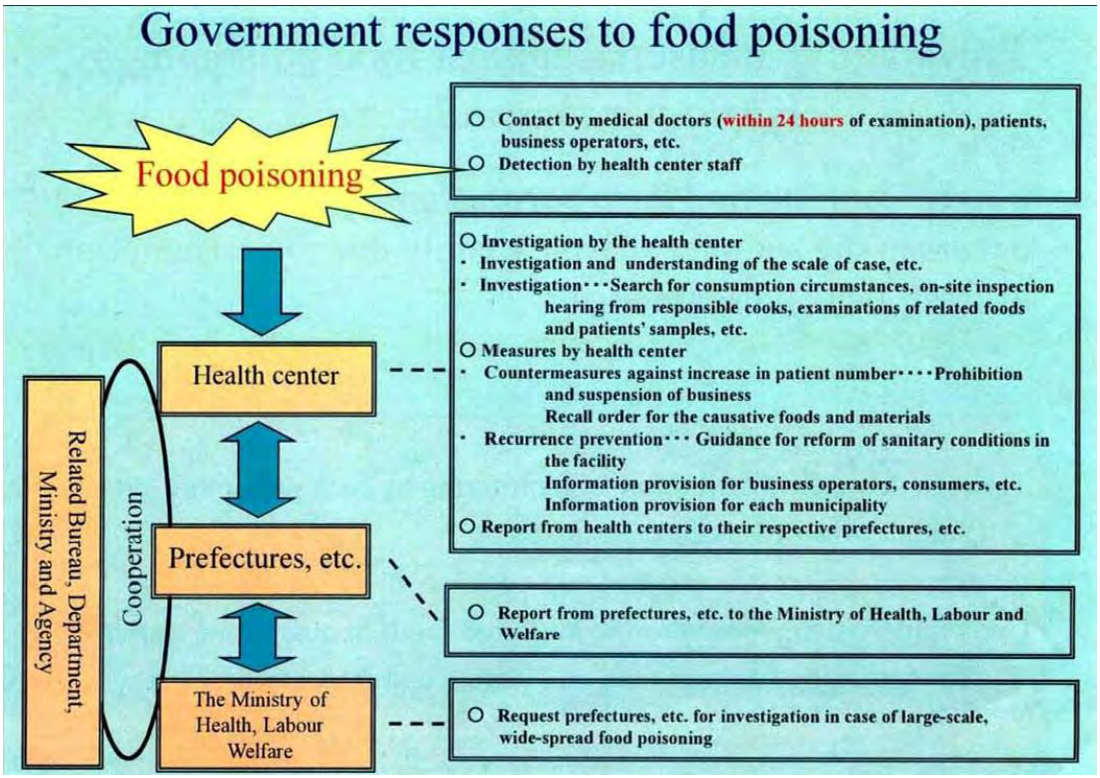


## 日本如何處理食物中毒

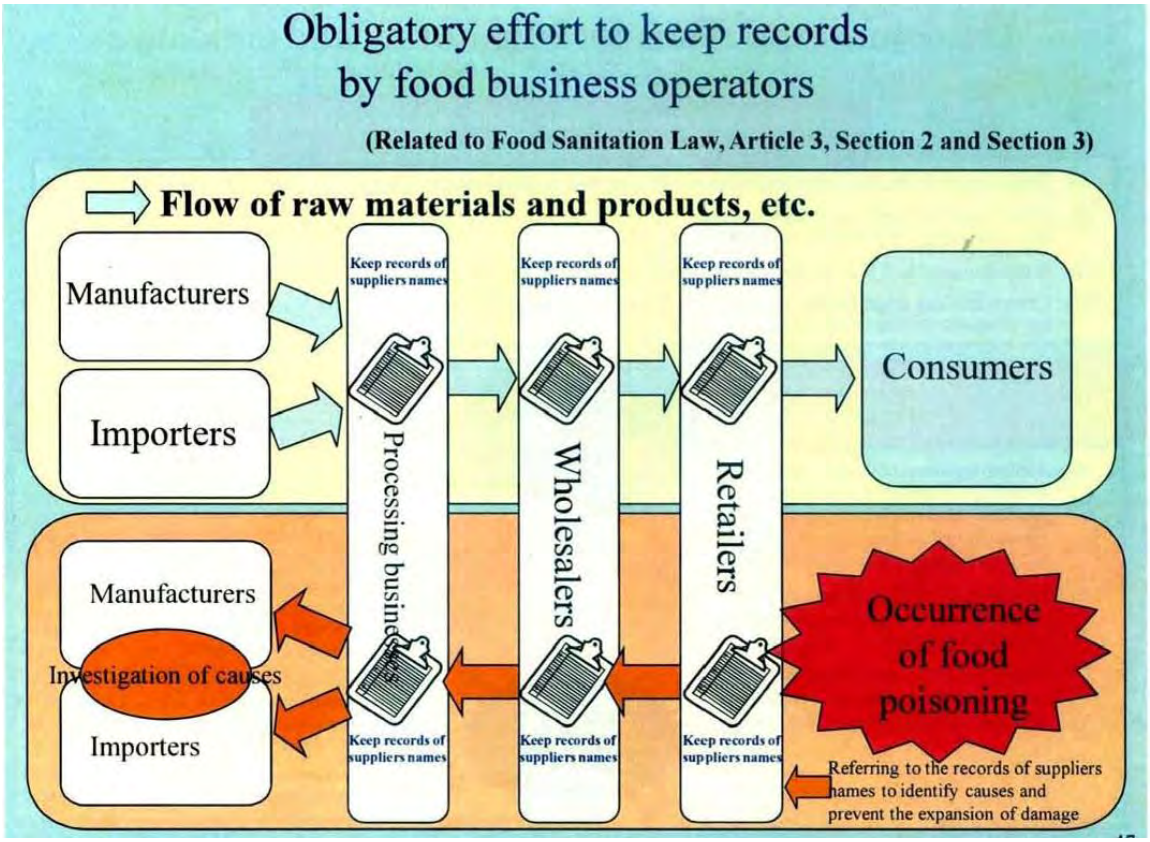
3.7 在2009年，有1 369宗食物中毒個案報告，涉及24 303名病人及4 宗死亡個案。下表顯示日本發生的食物中毒個案及按原因分類的食物中毒個案——

| 食物類型 | 2006 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|
| | 宗數 | 比率 (%) | 宗數 | 比率 (%) | 宗數 | 比率 (%) |
| 總數 | 1,491 | 100 | 1,289 | 100 | 1,369 | 100 |
| 魚及海產 | 80 | 5.4 | 68 | 5.3 | 106 | 7.7 |
| 經加工的魚及海產 | 8 | 0.5 | 22 | 1.7 | 15 | 1.1 |
| 未烹煮及經加工的肉類等 | 71 | 4.8 | 83 | 6.4 | 96 | 7.0 |
| 未烹煮及經加工的蛋類 | 7 | 0.5 | 8 | 0.6 | 10 | 0.7 |
| 奶類及經加工的奶類 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 |
| 穀物及經加工的穀物 | 26 | 1.7 | 22 | 1.7 | 23 | 1.7 |
| 未烹煮及經加工的蔬菜 | 97 | 6.5 | 78 | 6.1 | 87 | 6.4 |
| 甜點 | 11 | 0.7 | 12 | 0.9 | 9 | 0.7 |
| 綜合熟食 | 141 | 9.5 | 95 | 7.4 | 103 | 7.5 |
| 其他 | 582 | 39.0 | 547 | 42.4 | 531 | 38.8 |
| 不知名 | 467 | 31.3 | 353 | 27.4 | 389 | 28.4 |

3.8 政府就食物中毒的回應摘錄於下表(只備英文本)——



3.9　　在日本，食物業營辦商有責任確保他們供應的食物適宜供人食用。食物業營辦商指從事製造、進口、加工、推銷及售賣食物的人。根據《食物衞生法》，食物業營辦商應盡力備存交易紀錄及採取措施，如在發生食物中毒時，盡快棄置有問題的食物。若食物業營辦商未有採取上述行動，也不會受到制裁。若食物中毒的問題日後趨於嚴重，日本政府不排除會強制規定食物業營辦商備存交易紀錄。下表(只備英文本)顯示食物業營辦商現時備存的紀錄，以便在出現食物中毒事件時可追溯源頭 ——



# 第4章 —— 日本的漁業

## 日本漁業概覽

4.1 在2007年，日本漁業佔國內生產總值的比率少於1%。漁業的主要角色是提供穩定的漁業產品供應，供內銷之用。在2007年日本全國消耗的漁業產品中，62%屬本地生產。

4.2 日本的漁產量自1980年代後期起逐漸萎縮，原因是日本捕魚區的資源數量減少，以及日本從鄰近國家的200哩捕魚地帶內的捕魚區退出。與1995年的749萬噸相比，2007年的總漁產量只有572萬噸[1]。在2007年，漁業生產總值為1萬6,540億日圓，其中海漁業和海產養殖業的漁產佔該生產值的95%。

4.3 日本漁業架構的統計資料撮錄於下表。

| | 日本全國總數 |
|---|---|
| 漁港數目 | 2 917 |
| 漁業機構數目 | 115 196 |
| 從事漁業人數 | 221 908 |
| 海漁業的機動漁船數目 | 289 456 |
| 沿岸地區的漁業協同組合數目 | 1 166 |

## 漁業政策

4.4 水產廳是農林水產省下的一個附屬機關，負責發展及推行日本的漁業政策。為解決日本漁業界遇到的問題(如本地生產下降及工作人口老化)，日本政府在2001年制定《漁業政策基本法》(Basic Law on Fisheries Policy)，為發展及刺激／再活化漁業界提供政策指引。主要的政策目標是要獲得穩定的漁業產品供應，以及建立一個可持續發展及強而有力的漁業。

[1] 日本統計局(2009)。

4.5 根據《漁業政策基本法》，政府在2002年制訂基本漁業計劃，並在2007年作出修訂，以訂定政策的推行計劃。基本漁業計劃涵蓋下列的主要發展方向——

(a) 推動處於低水平的漁業資源的復蘇及可持續管理；

(b) 透過採用節省能源的漁業操作及新業務管理方法，提高漁業營辦商的競爭力及生產力，並透過提供資訊及培訓，吸引新入行者；

(c) 改善漁業產品的銷售及分發渠道，以確保向消費者供應新鮮及安全的食品，並加強漁業產品的增值工序；

(d) 發展及普及新科技，如節能科技及改善漁業產品質素的科技；

(e) 改善漁港及漁村的生產能力、基本設施及居住環境，以支援其發展，並推動生態保育；及

(f) 推動漁業合作社及相關機構的重組。

## 規管架構

4.6 在日本，政府透過根據《漁船法》(Fishing Vessels Law) (1949)設立的登記制度，監察及管控從事漁業的漁船總數及總噸數，藉以規管漁業。此外，政府藉根據《漁業法》(Fisheries Law)(1949)設立的下列牌照／管控制度，監督漁業運作 ——

(a) 全國的發牌制度規管在國內沿海或國際水域海上作業的漁業運作；

(b) 都道府縣政府的發牌制度規管在地區／都道府縣沿岸以外離岸海上作業的漁業運作；及

(c) 捕漁權制度規管在沿岸地區海上作業及水產養殖。

4.7 關於捕魚權制度，都道府縣政府向當地沿岸漁村的漁業合作社批予捕魚權，以在指定的海域作業。每個漁業合作社負責在全國及都道府縣的法律架構下訂定規例，以管理其成員之間的作業，以及在指定海域內的漁業資源的合理開採及保育。根據該制度，漁業合作社在決定其成員之間的使用權分配，以及在發展漁業適合當地情況的管理措施方面，享有高度自治。此外，漁業合作社履行如為會員提供信貸設施及設備，以及進行推銷及教育活動等職能。《漁業合作社法》(Fisheries Cooperative Association Law) (1948) 訂明漁業合作社在組織和行政方面的法律架構。

4.8 為管制及保護日本的專屬經濟區內的漁業資源，政府根據《海洋生物資源保護及管制法》(Law on Preservation and Control of Living Marine Resources) (1996)就漁業活動引入兩個管控制度 ——

(a) 總漁穫量制度 —— 為7種主要漁種，即沙丁魚、鯖魚、竹筴魚、秋刀魚、阿拉斯加狹鱈、常見的魷魚及雪蟹，就每年的獲准捕撈量訂定上限；及

(b) 總漁穫勞力量制度 —— 為專屬經濟區內的指定區域的捕魚日數及作業船隻訂定上限。

4.9 其他規管日本漁業的相關法例包括 ——

(a) 《漁業資源保護法》(Law on the Protection of Fishery Resources) (1951) —— 為保育日本沿海水域的漁業資源提供法律架構；

(b) 《保證可持續水產養殖生產法》(Law to Ensure Sustainable Aquaculture Production) (1999) —— 旨在防止魚場附近的自我誘發環境惡化及魚類疾病散播，以確保水產養殖的穩健及可持續發展；及

(c) 《海洋政策基本法》(Basic Law on Ocean Policy) (2007) —— 旨在促進海洋資源的發展及使用，以及保育海洋環境。

## 漁業產品的分銷及銷售

4.10 漁業產品是透過着陸區及耗用區的批發市場網絡分發。耗用區的批發市場包括由地方政府及其他地方市場設立的中央批發市場。在這些批發市場，來自各着陸區的漁業產品會以拍賣的方式，由批發商賣給中級批發商，中級批發商會隨即把產品賣給大手買家，以供零售或獲授權的買家，他們是食肆、食物加工公司及大型零售商的代理人。漁業產品的中央批發市場共有超過50個，而東京都(築地)中央批發市場(Tokyo Metropolitan (Tsukiji) Central Wholesale Market)是全日本最大的。

4.11 正如在1999年修訂的《農林產品統一及正確標籤法》(Law Concerning Standardization and Proper Labelling of Agricultural and Forestry Products )所建議，政府在2000年為新鮮及加工食品，包括漁業產品引入了一個標籤制度，為消費者提供準確的產品資料，以便他們作出知情的選擇。在該制度下，新鮮漁業產品的標籤上必須列明產品的名稱及捕獲水域的詳細資料。至於加工的漁業產品，標籤上須包括產品名稱、原料、淨容量、保質期、貯存方法、及製造商的名稱及地址。

4.12 為提升本地漁農產品的競爭力，政府在2006年推出了一個以地區為基礎的集體商標制度。在該制度下，地方的漁業合作社可登記一個載有地方及產品名稱的品牌，作為地區機構的商標，只要該品牌已在多個都道府縣所認識。截至2007年3月，日本有18個漁業產品的註冊地區機構商標。

## 研究及發展

4.13 水產綜合研究中心(Fisheries Research Agency) 透過合併9個前國立漁業研究所，於2001年成立為一間獨立的行政機關，負責進行多項不同的研究及發展活動，以支援國家的漁業政策。水產綜合研究中心的成員包括下列的研究所及中心：

(a) 9間研究所 —— 負責就漁業進行全面的研究，當中的北海道區水產研究所(Hokkaido National Fisheries Research Institute)負責進行與物理及生物海洋學、主要漁業資源評估，以及海岸生物的生態及基因研究有關的研究及發展活動，以提升北太平洋亞極水域及北海道附近海域的族羣；

(b) 位於北海道的國立鮭鱒類資源中心(National Salmon Resources Center) —— 負責鮭鱒類的孵化及排放、鮭魚的資源評估及族羣保育；

(c) 海洋研究和開發委員會(Marine Fisheries Research and Development Center) —— 負責發展科技，以改善漁業運作的效率，並提高海洋漁業資源的可持續使用；及

(d) 國立水產統合中心(National Center for Stock Enhancement) —— 負責為魚類及貝介類發展穩定的苗種生產技術，以及提升族羣技術。

## 北海道漁業概覽

4.14 北海道土地面積83 457平方公里，是日本最大的都道府縣。截至2008年10月，北海道人口554萬，佔日本總人口約4%。北海道四周被太平洋、鄂霍次克海及日本海環繞，海岸線長3 085公里，為該國海岸線的9.1%。

4.15 在1988年，於北海道從事海漁業和海產養殖業的漁業機構共有23 222家，到2008年下跌至14 780家。在2008年，海漁業和海產養殖業共聘用33 568名僱員，當中大部分為男性(86%)及40歲或以上(74%)。有關2008年北海道漁業架構的統計資料綜述於下表 ——

| | 北海道 | 日本全國總數 | 佔日本全國百分比 |
|---|---|---|---|
| 漁港數目 | 284 | 2 917 | 9.7% |
| 漁業機構數目 | 14 780 | 115 196 | 12.8% |
| 從事漁業人數 | 33 568 | 221 908 | 15.1% |
| 海漁業的機動漁船數目 | 30 062 | 289 456 | 10.4% |
| 沿岸地區的漁業協同組合數目 | 77 | 1 166 | 6.6% |

4.16　北海道的漁產量自80年代後期起一直下降，與日本的整體趨勢相符。在2008年，北海道的漁產量為147萬4 000噸，佔日本總數約26%。漁業生產總值(只包括海漁業和海產養殖業的漁產) 為2,958 億日圓，佔日本總數約19.2%。有關2008年按漁業活動種類分項列出北海道漁產的統計資料載於下表 ——

| | **生產量 (千噸)** | **生產值 (億日圓(億港元))** |
|---|---|---|
| 海漁業 | 1 314 | 262.0 (19.80) |
| 海產養殖業 | 151 | 33.8 (2.56) |
| 內陸水域漁業及內陸水產養殖業 | 9 | 沒有資料 |
| **總計** | **1 474** | **295.8 (22.36)** |

4.17　2008年總生產量最高的3種漁業產品為：扇貝(總生產量的30.4%)、阿拉斯加狹鱈(13.6%)及北海道花魚(11.7%)。生產值最高的3種漁業產品為：鮭魚(總生產值的21.2%)、扇貝(19.3%)及海藻(9.4%)。扇貝是最主要的海產養殖產品，佔生產量的78%。

4.18　為管理漁業資源，沿岸一帶的漁戶通常透過重新放養魚苗，以繁殖漁業資源。在2008年，有關活動佔北海道總漁產量約37%。

4.19　在2008年，北海道共有1 097家商業機構從事漁業產品的加工，僱用員工32 726人。加工漁業產品在2008年的總生產量為74萬3 000噸，佔日本總數的19.1%。付運貨品總值7,002億日圓，佔日本總數的20.6%。

4.20　截至2009年3月，北海道共有1 530家註冊機構經營休閒漁業，營運1 675艘漁船。政府對休閒漁業的垂釣範圍、時段、工具及方法均施加管制，以保護北海道的漁業資源。

## 北海道的漁業推廣政策

4.21　北海道漁業近期的衰退受多項因素影響，例如漁業資源數量下降、漁業產品的本地需求下跌、燃料成本上升、漁業員工人數減少和老化、進口產品帶來競爭，以及產品價格下降。

4.22 為振興北海道的漁業，北海道政府在2002年3月通過《北海道漁業振興法》(Hokkaido Fishery Industry Promotion Act)，並於2003年3月推出漁業發展計劃(Fishery Industry Development Plan)。該發展計劃由農林水產部管理，目的是活化漁業，並為國內穩定地提供安全及優質的漁業產品。發展計劃訂明，北海道政府的目標是提升每年的漁產量，由2008年的147萬4 000噸增加至2017年的172萬噸。

4.23 漁業發展計劃訂立了下列主要發展方向 ——

(a) 推廣漁業資源的正確管理和使用方法；

(b) 透過發展新技術、改善生產效率及加強漁業設施，從而提升水產養殖業的生產；

(c) 改善漁業機構的管理，並提升其資本設備，以增加生產能力；

(d) 加強分發及食物安全監察制度，確保漁業產品的新鮮程度和質素；

(e) 提升北海道漁業產品在本地及海外市場的競爭力；

(f) 發展漁業時推動保護生態系統；

(g) 改善漁村的環境及基礎設施；

(h) 推動漁業的科技發展；

(i) 為從事漁業的女性和年長工人提供支援，並吸引有意投身該行業的年輕工人加入；及

(j) 教育市民認識漁業，並引起他們對漁業產品的興趣。

發展計劃的首個階段在2003年3月推出，而第二個階段在2008年3月推出。

## 訪問行程

4.24 代表團訪問了水產廳北海道漁業調整事務所(Hokkaido Fisheries Coordination Office)、北海道漁連協同組合連合會(Hokkaido Federation of Fisheries Cooperative Associations)及小樽市漁業協同組合(Otaru shi Fisheries Cooperative Association)，並聽取它們就日本漁業界所作的簡介。代表團也訪問了漁連総合食品（道漁連子會社）加工場(Gyoren Sogo Food Processing Factory)及佐藤水產三文魚工場(Sato Suisan Salmon Factory)，並瞭解其運作。代表團在聽取簡報後參觀了這些場所的設施。代表團並藉此機會參觀札幌中央批發市場，觀察漁業產品的拍賣過程。

## 北海道漁業調整事務所

4.25 水產廳是農林水產省的附屬機關，負責發展及推行漁業政策，規管漁業，以及管理日本的漁業資源及基建設施。水產廳包括以下部門 ——

(a) 漁業政策規劃部；

(b) 資源管理部；

(c) 資源提升推廣部；及

(d) 漁業基建部。

北海道漁業調整事務所是水產廳在北海道的地方辦事處。事務所的主要職責是 ——

(a) 確保北海道漁業的順利運作；

(b) 規管其水域內外國漁船的作業；及

(c) 推動保育漁業資源。

辦事處包括以下各組 ——

(a) 漁業管理組 —— 負責規管本地及外國漁船的捕魚活動；

(b) 資源組 —— 負責管理及保育海洋漁業資源及授權海上漁船的運作；及

(c) 行政組 —— 負責人力資源、會計及一般行政管理。

訪問團聽取水產廳北海道漁業調整事務所所長森田正博的簡介

訪問團團長李華明議員向水產廳
北海道漁業調整事務所所長森田正博致送紀念品

## 北海道漁連協同組合連合會

4.26　北海道漁連協同組合連合會在1949年由漁民成立，以促進北海道漁民的生活。截至2010年4月1日，該會共有82名會員，由338名僱員提供服務。

4.27　北海道漁連協同組合連合會設有16個辦事處10家子公司。該會的主要活動包括 ——

(a) 漁業產品的銷售和市場推廣；

(b) 為會員搜羅各種燃料和材料，以減低其經營成本；

(c) 營運漁業產品加工廠；

(d) 就保育和管理漁業資源向會員提供意見；及

(e) 為會員及消費者舉行教育活動

訪問團聽取北海道漁連協同組合連合会代表理事専務小倉孝史的簡介

訪問團團長李華明議員
向北海道漁連協同組合連合会代表理事専務小倉孝史致送紀念品

## 小樽市漁業協同組合

4.28　小樽市漁業協同組合在1949年由漁民成立，以促進北海道漁民的生活。截至2007年，小樽市漁業協同組合有219名會員，由38名僱員提供服務。小樽市漁業協同組合包括下列各組 ——

(a) 行政組；

(b) 信貸組；

(c) 諮詢及互助組；

(d) 市場組；及

(e) 冷藏組。

小樽市漁業協同組合的主要活動包括 ——

(a) 向會員提供信貸設施及財政資助；

(b) 為會員購置捕魚設備；

(c) 營運批發市場；

(d) 營運冷藏業務；及

(e) 就管理漁業資源及與漁業運作有關的其他事宜向會員提供意見。

訪問團與
小樽市漁業協同組合代表會晤

訪問團團長李華明議員
向小樽市漁業協同組合代表董事兼
工會領袖Takeshi IWAKI致送紀念品

## 漁連総合食品(道漁連子會社)加工場

4.29　漁連総合食品(道漁連子會社)加工場於1995年成立，是北海道漁連協同組合連合會的子公司。該公司主要從事製造及銷售海鮮產品。主要產品包括各類冷凍(未烹煮、半烹煮、以醬油泡煮)及曬乾的海產，如鮭魚柳、魷魚、八爪魚、帶子及不同類型的魚。日前，該公司共有220名僱員。截至2010年3月，該公司的每年銷售額約為42億日圓。

訪問團聽取
漁連総合食品(道漁連子會社)
加工場社長成田照一的簡介

訪問團團長李華明議員
向漁連総合食品(道漁連子會社)
加工場社長成田照一致送紀念品

訪問團參觀漁連総合食品(道漁連子會社)加工場

## 佐藤水産三文魚工場

4.30　佐藤水産三文魚工場於1948年成立。在2010年，它僱用217名全職員工及53名兼職員工。該公司主要從事海鮮產品的製造及銷售。該公司於1954年開業，在石狩經營鮭魚加工廠，主要生產冷凍鮭魚產品。總公司設於札幌，並在其他城市設有多間分店，如東京、千歲及石狩。佐藤水産三文魚工場有超過300種海鮮產品，透過各種渠道分銷，包括直接銷售、網上銷售及營運食肆。截至2010年1月，每年的銷售額約為70億日元。


訪問團參觀佐藤水産三文魚工場的設施


訪問團團長李華明議員
向佐藤水産三文魚工場課長代理
中瀨勝一致送紀念品


訪問團於佐藤水産三文魚工場
合照留念

## 札幌中央批發市場

4.31　札幌中央批發市場是札幌市於1959年設立的公眾批發市場，一直是北海道分銷易腐產品的最大市場。札幌中央批發市場有下列主要職能 ——

(a) 以高效率及具成本效益的方式收集及分發易腐產品；

(b) 確保產品可透過拍賣機制以公平價格出售；

(c) 提供準確及最新的市場及價格資料；及

(d) 由中央批發市場的衞生視察辦事處執行定期的衞生檢查。

4.32　中央批發市場包括果菜部及海產部。來自各着陸區的漁業產品會以拍賣的方式，由批發商賣給中級批發商，中級批發商會隨即把產品賣給大手買家，以供零售或獲授權的買家，他們是零售商及超級市場的代理人。批發商就出售的產品收取佣金。在2009年，札幌中央批發市場處理的漁業產品總重量達122 176噸，當中39.6%為新鮮的漁業產品，37.7%為冷凍漁業產品，而22.7%為加工產品。處理的漁業產品總值10,100億日圓。而漁類產品所佔的價值分別為新鮮產品38.3%，冷凍產品34.6%及加工產品27.1%。

訪問團於札幌中央批發市場合照

訪問團聽取
札幌中央批發市場代表的簡介







訪問團參觀札幌中央批發市場

# 第5章 —— 觀察所得

## 整體意見

5.1 代表團認為，訪問期間取得有關靈灰安置所設施、食物安全措施及可持續發展的漁業的資料，對香港有很大的參考價值。代表團的觀察所得載於下文各段。

## 日本的靈灰安置所設施

5.2 代表團得悉，日本的火化率接近100%。先人的骨灰可安葬於墳地或置於靈灰安置所的靈灰龕內。隨着人口不斷老化，日本正面對墓地短缺的問題。

5.3 代表團得悉，雖然日本設有法例監管殮葬及火葬的服務和設施，但日本政府並無制訂有關提供靈灰安置所設施的中央政策，以應付該國的整體公眾需求。這項工作(包括簽發牌照)屬地方政府的職權範圍。

5.4 代表團觀察到，與香港及其他地方的情形相似，日本的地方社區抗拒及不願在其地區設立靈灰安置所設施。地方政府的慣常做法，是先行獲取當地人士的同意，然後才准許在區內興建靈灰安置所設施。代表團進而觀察到，日本政府不再向個別人士發出經營墳場的牌照，但持牌人去世後，該牌照可由直系親屬承繼。

5.5 代表團得悉，在日本購買一個靈灰龕的價錢一般比購買一幅墳地的價錢便宜30%至40%。代表團進而察悉，購買的墳地主要供家庭單位使用，通常可容納最多4個靈灰甕。

5.6 由東京御廟經營的機械化多層式靈灰安置所不但能節省空間，亦能在短短40秒內取出靈灰甕，議員對此留下甚為深刻的印象。對於東京御廟的設計把對附近居民的視覺影響和滋擾減至最少，議員亦留下深刻的印象。

5.7 位於多磨靈園的靈灰安置所的建築既莊嚴又寧靜，亦令議員留下甚為深刻的印象。

5.8　代表團得悉，部分日本非政府機構正積極推廣處理骨灰的其他方法。日本政府准許市民在選定的指定範圍把骨灰撒海，務求把對環境及市民的影響減至最少。

## 日本的食物安全措施

5.9　代表團認為，日本政府在保障食物安全方面採用的措施十分全面，能與其他已發展國家所採用的標準看齊。

5.10　議員又認為，在監管擬供人食用的食物供應方面，日本的法例十分全面，儘管議員察悉，目前並無法例規定食物商須備存交易紀錄，以便一旦出現食物事故，能更有效地追溯源頭。

5.11　議員得悉，隨着日本公眾對食物安全日益關注，日本為其食物安全工作引入風險分析的做法。除中央政府外，地方政府亦在保障食物安全方面擔當重要的角色。尤為明顯的是，地方政府會巡查食物商，並為其提供意見；向在有關司法管轄區內營業的食物商發出牌照，並在他們違法時暫時吊銷／撤銷其牌照；以及進行食物測試。該等活動透過有關司法管轄區轄下的健康中心進行。進口食物由中央政府在日本全國設置的31個檢疫站負責檢驗。

## 日本漁業

5.12　代表團得悉，日本漁業可分為3個主要類別，分別為遠海漁業、近海漁業及沿岸漁業。沿岸漁業的漁穫維持在相對穩定的數量，但遠海及近海漁業的漁穫數量則一直下降，原因是漁民過度捕撈，以及有關遠洋漁業運作的國際責任已變得更為嚴格。每年漁產量(包括海產養殖)在1984年達致高峰，數量為12億8 200萬公噸，其後多年一直下跌，在2008年減至5億5 900萬公噸。

5.13　為解決魚類資源不斷下降的問題，日本政府自1997年實施總漁穫量制度，以及自2002年實施總漁穫努力量制度。在總漁穫量制度下，若超出每年配額，特定魚類的捕撈活動便會被禁止。總漁穫努力量制度則限制若干魚類的捕撈日數。其他資源恢復計劃包括把遠洋漁船船隊縮小、實施休漁期、劃定拖網禁漁區、鼓勵沿海漁民轉型至其他作業方式，以及進行漁業

資源增殖放流計劃。截至2009年3月，正在實施或制訂的資源恢復計劃共有49項，涉及74種魚類。在制訂資源恢復計劃時，漁民均獲得諮詢。

5.14 中央及都道府縣政府在捕魚方法、使用漁具及其他技術性措施上規管捕魚活動，而沿岸漁業的管理則基本上透過實施捕魚權制度進行。都道府縣政府向當地漁民合作社發出捕魚權。該等漁民合作社負責某一地理範圍，而其會員均屬來自該範圍內各社區的漁民。漁民合作社獨享獲批的捕魚權，但有關權利不得轉讓他人，只有合作社會員才可在捕魚權的適用範圍內捕魚。

5.15 議員觀察到，漁民合作社在推動日本漁業的可持續發展上發揮關鍵的作用。舉例而言，北海道漁連協同組合連合會的部分主要活動是推廣當地漁產業、經營漁產加工場(例如漁連總合食品(道漁連子會社)加工場)、生產更多高增值產品，以及就海洋資源的保育和管理向漁民提供意見。小樽市漁業協同組合亦為有財務需要的漁民提供信貸服務。

5.16 議員又觀察到，按既定做法，漁民合作社的會員會向他們所屬的漁民合作社售賣其漁穫。若漁民把漁穫售予他人，漁民合作社會向其徵收費用。

5.17 代表團察悉，日本政府採取下述措施，以應付在過往5年已上升160%的燃料成本 ——

(a) 若漁民能顯示他們已減少耗用燃料10%或以上，政府會資助燃料成本升幅的90%；

(b) 向漁民提供免息貸款，以便他們轉用較節省能源的漁船；及

(c) 鼓勵漁民羣體作業。

當局亦於2008年推出一套"新管理穩定措施"(New Management Stabilization Measures)，以紓緩現時漁業互助保險並不涵蓋的較輕的收入跌幅。在2005年，沿岸漁戶每戶的捕魚收入為527萬日圓，而全國的平均金額則為627萬日圓。

5.18. 全球暖化令漁產品的漁穫減少，當中的例子包括2010年秋刀魚的漁穫量。日本政府正在評估全球暖化對漁業的影響，並研究有何措施應付該等影響。

5.19 代表團得悉，日本約40%的漁業產品屬進口產品，原因是消費者傾向購買較為廉宜並易於烹調的進口海鮮，例如三文魚柳和吞拿魚柳。日本政府正致力把進口漁業產品的數量在2019年之前減至35%。

5.20 議員得悉，截至2007年，日本的漁民人口為204 000人，當中年屆65歲以上的佔37.4%。另一方面，新入行者在2003年只有1 514人，在2008年則只有1 784人。為吸引更多人成為漁民，當局一直致力透過舉辦職業講座、在職培訓及提供資助，吸引及協助有興趣人士投身漁業。

5.21 議員察悉，日本休閒漁業的發展有助為漁民提供更大機會，轉型至其他作業模式及／或提升收入。

5.22 議員認為，漁連總合食品(道漁連子會社)加工場的運作極具效率，並且管理妥善。從漁業產品加工製成的食品種類繁多，令議員印象尤深。議員又發現，該等工場的衞生標準水平甚高。

5.23 對於札幌中央批發市場內龐大的貿易額及多樣化的食品和設施，議員留下深刻的印象。議員得悉，雖然該市場的經費主要來自商店租金及拍賣佣金，但亦獲得地方政府資助。

**結論**

5.24 代表團認為是次訪問日本甚具啟發性，亦獲益良多。代表團聽取了日本官員及行政人員的詳盡介紹，並互相交換意見，從中可作為借鑑，有助議員考慮政府就在香港規管靈灰安置所設施、推動可持續發展的漁業及保障食物安全等方面所提出的建議。

立法會秘書處
議會事務部2
2010年12月16日

**附錄I**

# 食物安全及環境衞生事務委員會

## 前往日本的職務訪問
## (2010年9月8日至11日)

## 訪問行程

| **2010年9月8日星期三** | |
|---|---|
| 上午10時至中午12時 | **拜訪厚生勞動省**<br><br>- 由醫藥食品局食品安全部監視安全課課長補佐松岡隆介先生簡介有關食物安全的監察制度及食物中毒的對策<br><br>- 健康局生活衞生課課長補佐奧田幸生先生簡介日本政府為應付公眾對靈灰安置所的需求而發展靈灰安置所的政策 |
| 下午2時至3時30分 | **參觀多磨靈園**<br><br>- 多磨靈園管理事務所長岩崎良司先生簡介日本的靈灰安置所設施 |
| 下午4時30分至5時30分 | **參觀東京御廟**<br><br>- 住職大洞龍德先生簡介日本的私營多層靈灰安置所 |
| **2010年9月9日(星期四)** | |
| 下午時30分至2時 | **參觀北海道漁連協同組合連合會**<br><br>- 北海道漁連協同組合連合會代表理事專務小倉孝史及參事井澤一晴先生簡介該機構 |

| | |
|---|---|
| 下午2時40分至3時30分 | **參觀漁連総合食品(道漁連子會社)加工場**<br>- 漁連総合食品(道漁連子會社)加工場社長成田照一先生簡介該機構的運作 |
| 下午4時至5時 | **參觀佐藤水産三文魚工場**<br>- 課長代理中瀨勝一先生簡介該機構的營運<br>- |
| **2010年9月10日(星期五)** | |
| 上午9時30分至11時30分 | **拜訪水産廳北海道漁業調整事務所**<br>- 所長森田正博先生簡介漁業的支援機制 |
| 下午2時30分至3時30分 | **參觀小樽市漁業協同組合**<br>- 代表董事兼工會領袖Takeshi IWAKI先生簡介該機構 |
| **2010年9月11日(星期六)** | |
| 上午5時至7時 | **參觀札幌中央批發市場**<br>- 札幌市政府經濟局札幌中央批發市場業務部部長Tetsuya SASAKI先生、札幌中央批發市場協會公司的Masami TAKA女士及Mayumi NOGAMI女士簡介在北海道成立和營運一個典型水產市場 |

**附錄II**

# 代表團會見的政府官員及代表名單

## 厚生勞動省

課松岡隆介先生，課長補佐
　醫藥食品局食品安全部監視安全課

奧田幸生先生，課長補佐，
　健康局生活衛生課

## 多磨靈園

岩崎良司先生，多磨霊園管理事務所長

## 東京御廟

住職大洞龍德先生

## 北海道漁連協同組合連合會

小倉孝史先生，理事專務參事
井澤一晴先生，參事

## 漁連総合食品(道漁連子會社)加工場

成田照一先生，社長
原田隆志先生，副社長

## 佐藤水産三文魚工場

中瀨勝一先生，課長代理

**水産廳北海道漁業調整事務所**

森田正博先生，所長
山崎聖先生，總務課長
澤田龍治先生，資源課長
伊藤正輝先生，漁業監督指導官
熊谷浩二先生，資源管理係長

**小樽市漁業協同組合**

Takeshi IWAKI先生，代表董事兼工會領袖
Yasuo SAKAMOTO先生，高級執事
Noboru NAKAYAMA先生，參事
Hitomi KIMURA女士，行政部主管

**札幌中央批發市場**

Tetsuya SASAKI先生，札幌市政府經濟局札幌中央批發市場業務部部長
Masami TAKA女士，札幌中央批發市場協會公司
Mayumi NOGAMI女士，札幌中央批發市場協會公司

**附錄III**

# 訪問期間取得的參考資料一覽表

農林水產省水產廳提供、題為“Visual Japan's Fisheries”的資料

北海道政府漁農部印製、題為“Fisheries in Hokkaido 2010”的資料冊

農林水產省就日本的海鮮出口而印製的資料冊

有關日本御廟的資料單張

厚生勞動省醫藥食品局食品安全部監視安全課就有關食物安全的監察制度及食物中毒的對策提供的投影片簡介資料

有關札幌中央批發市場的資料冊

# Visual

# Japan's Fisheries

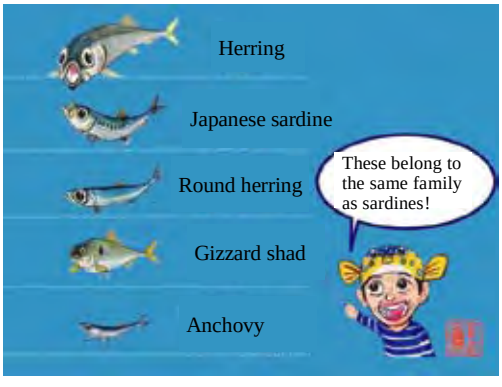

Fisheries Agency

January 2009

* "Itadakimasu" is a Japanese phrase used to express one's gratitude for food.

# Contents







[Sources for illustrations and photos (in the page order)]
Sakanakun (Anan International); Japan Fisheries Association; Fisheries Research Agency; National Fisherman Recruiting and Training Center (tentative translation); Irabu branch, Miyakojima, Okinawa Prefecture; Kochi Prefecture; Asahi Shimbun; Institute of Cetacean Research; National Federation of Fisheries Cooperative Associations; Banzu Satoumi-No-Kai (Nonprofit Organization); Marine Foods Corp.; National Association of Saury Fishery; Kushiro Shi Fisheries Cooperative Association; Shimonyuzu Branch, Oita Fisheries Cooperative Association; Kanagawa Prefectural Fisheries Technology Center; Sakana-kun (Entertainer, Illustrator)

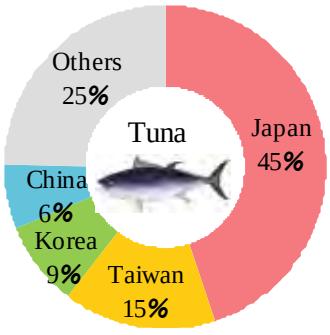
# 1 The State of Fisheries in Japan and the World

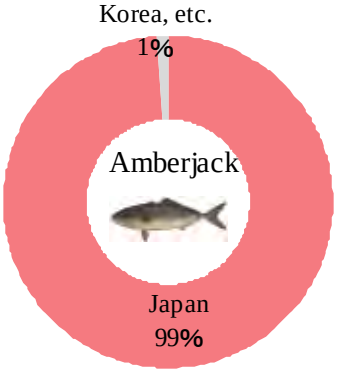
## Where Does the Seafood in Sushi Come from?

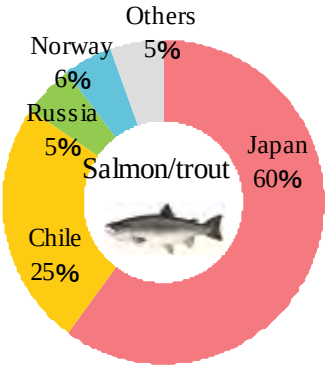
### Seafood for sushi is imported from all around the world

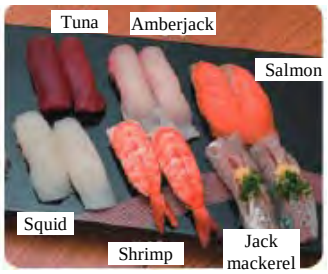
Let's look at imports of fish for nigiri sushi as a favorite for Japanese people. Seafood for sushi includes imports from abroad as well as domestic products.

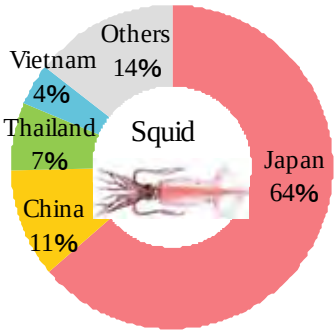
Percentages of Japan's Production and Imports (2007)

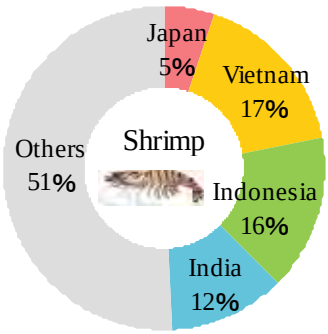


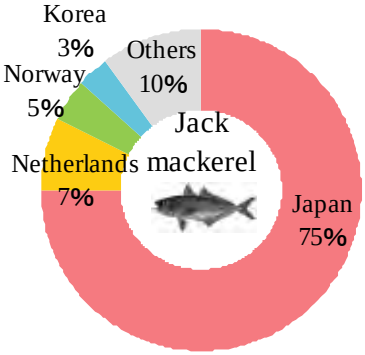




Source: Fisheries Agency

# Japan as a Big Seafood Importer

Although Japan's seafood imports have tended to decrease over recent years, Japan is the world's second largest seafood importer after China.

## Changes in Japan's Seafood Import Volume and Value

(1,000 tons for volume, ¥100 million for value)

| | | 1975 | 1985 | 1997 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|
| Volume | Total | 710 | 1,577 | 3,411 | 3,343 | 3,154 | 2,892 |
| | Shrimp | 114 | 192 | 282 | 242 | 238 | 215 |
| | Tuna/Marlin | 100 | 151 | 280 | 337 | 287 | 247 |
| | Salmon/trout | 7 | 116 | 209 | 225 | 202 | 238 |
| | Crab | 10 | 34 | 124 | 99 | 95 | 75 |
| Value | Total | 3,855 | 11,760 | 19,456 | 16,691 | 17,074 | 16,373 |
| | Shrimp | 1,375 | 3,356 | 3,930 | 2,352 | 2,480 | 2,259 |
| | Tuna/Marlin | 383 | 860 | 2,034 | 2,190 | 2,326 | 2,190 |
| | Salmon/trout | 58 | 1,166 | 1,189 | 1,095 | 1,070 | 1,421 |
| | Crab | 48 | 335 | 1,089 | 694 | 697 | 658 |

Source: Created based on "Japan Trade Statistics," Ministry of Finance
Note: Salmon/trout imports in 2007 included "salmon fillet (frozen)" for the first time and lost continuity with the past data.

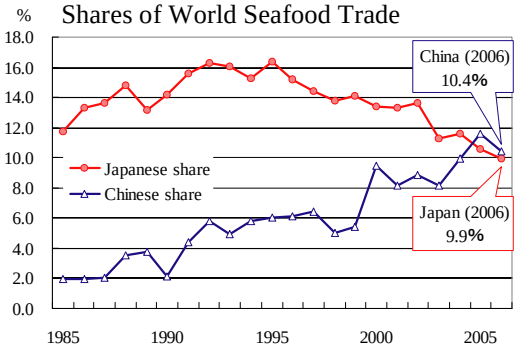
T O P I C !

### China becomes largest seafood importer in the world

Japan's share of world seafood trade in volume declined from 16% in 1996 to 10% in 2006.

In 2005, China replaced Japan as the world's largest seafood importer in volume through a substantial increase in fishmeal purchases as well as cod and salmon imports for processing into exports.

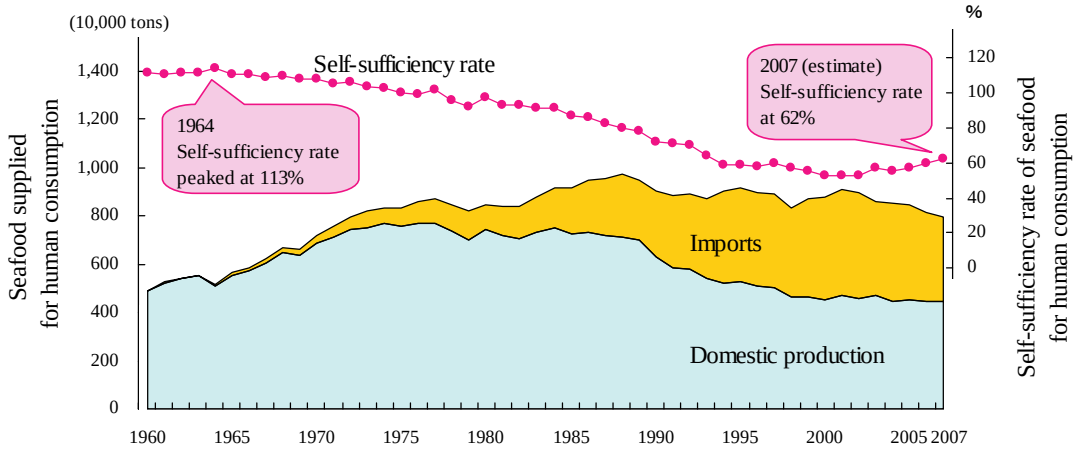
Source: "Fishstat," FAO (Fisheries Commodities production and trade 1976-2006)




## Japan's self-sufficiency rate of seafood for human consumption stands at 62%

Japan's self-sufficiency rate of seafood for human consumption declined after peaking at 113% in 1964. Over recent years, the rate has ceased the downtrend and posted a small rise. But Japan still depends on imports for some 40% of fishery product supply.

## Changes in Self-sufficiency Rate of Seafood for Human Consumption

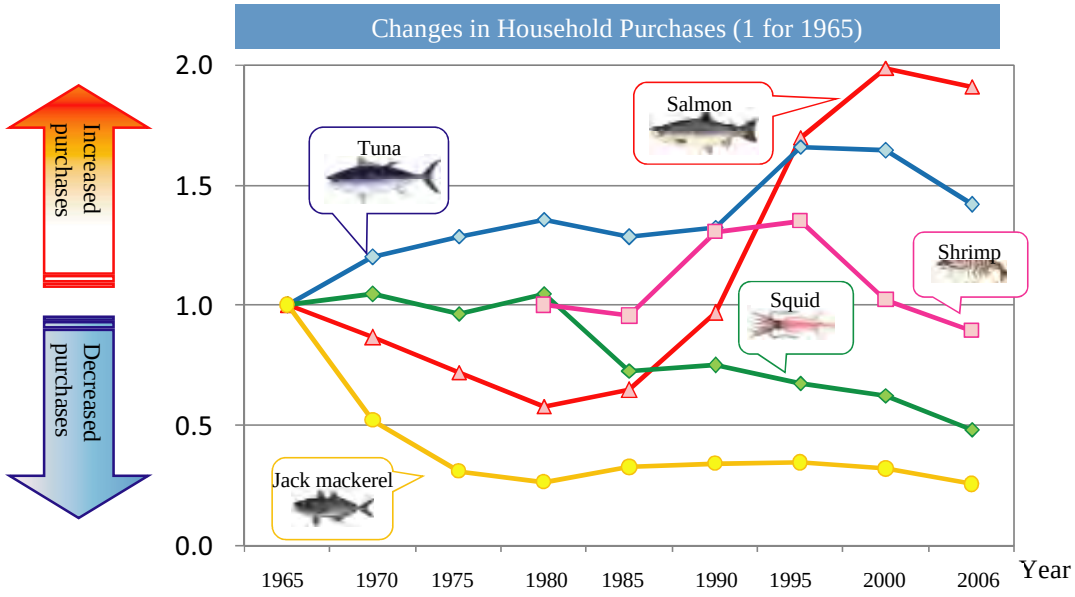



Source: "Food Balance Sheets," Ministry of Agriculture, Forestry and Fisheries

# Why Does Japan Import Massive Seafood?

## Domestic demand for seafood has been so strong despite a limit on domestic production

There are mainly three reasons for Japan's mass seafood import. First, as tougher international regulations have forced to reduce Japan's production through distant water fishery operations since around 1985, Japan's fishery imports have increased fast to make up for the decline. An increase in consumption of tuna and shrimp despite their limited domestic production since around 1989 and Japanese consumers' shift from domestic products to imports including salmon have also contributed to the fast increase in Japan's fishery product imports.




Source: Prepared by the Fisheries Agency based on "Annual Report on the Family Income and Expenditure Survey," Ministry of Internal Affairs and Communications

## Behind fast import growth has been consumers' inclination toward "lower prices" and "easiness"

Since the burst of economic bubbles, consumers have growingly been inclined toward lower prices. An increase in double-income and single-person households has led to consumers' inclination toward simplification. As a result, consumption of squid and jack mackerel has apparently decreased, which are rather difficult to cook, and consumption increased for salmon fillet, tuna fillet and other fishery products that are easier to cook.

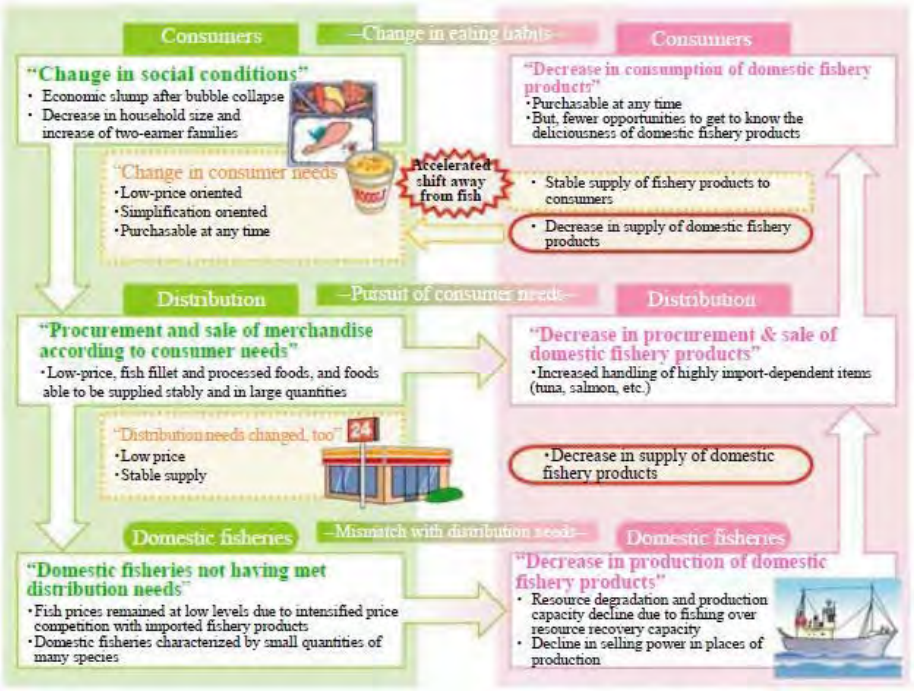
A dining table seen some 40 years ago

A recent dining table

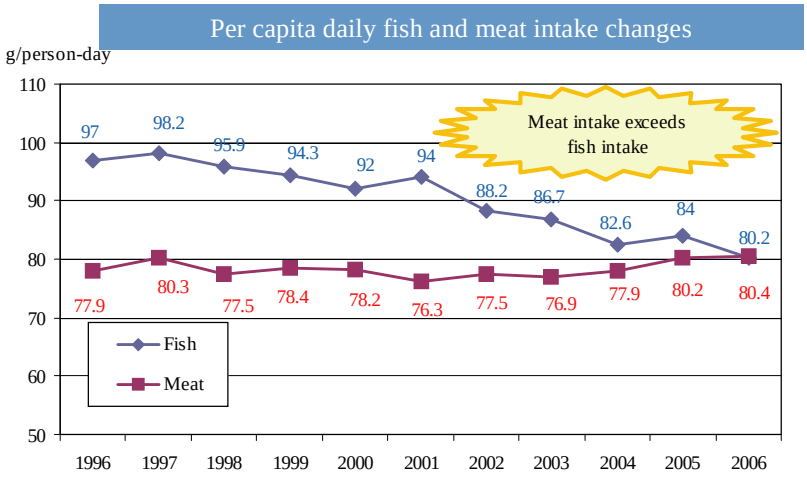
## Easiness meeting consumer needs has accelerated changes

Large retailers have begun to sell mainly easier-to-cook products and large-lot imports for mass distribution to meet consumer needs.

Import growth has led to slacking prices for domestic fishery products and Japan's fishery productivity decline on a fierce fishing competition affecting the resilience of fish resources.




As a result, opportunities have declined for consumers to taste a variety of fishery products produced in waters surrounding Japan, accelerating their shift away from fish.




Source: "National Health/Nutrition Survey Report," Ministry of Health, Labor and Welfare

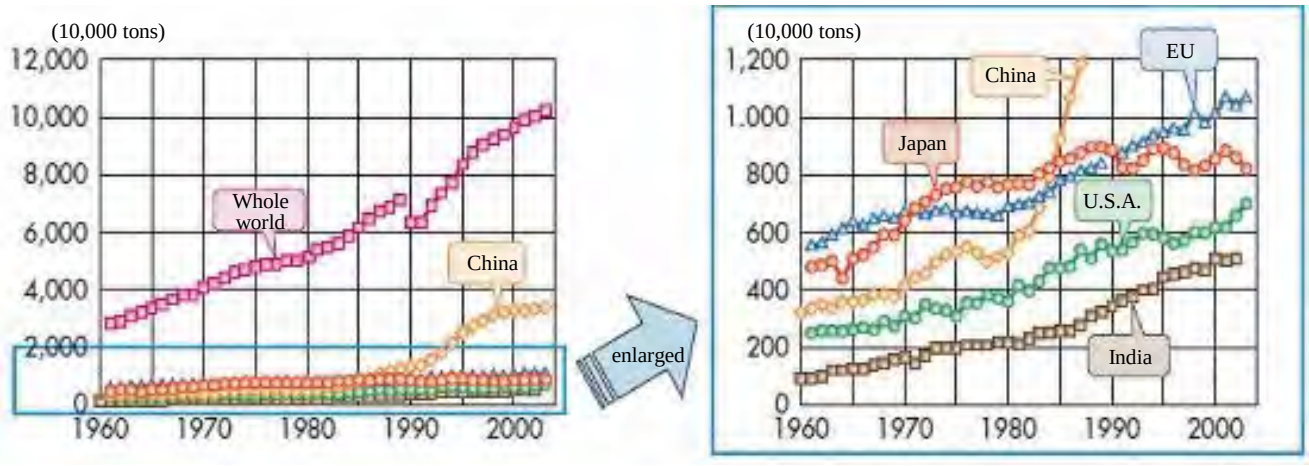
Japan has imported fishery products from throughout the world on dietary pattern changes. Consumers have accelerated their shift away from fish.

# Can Japan Continue to Import Massive Seafood?

## Fish consumption has been increasing throughout the world

While a shift away from fish has accelerated in Japan, the world's seafood consumption has increased on growth of health-conscious people in Western countries and China's rapid economic development.

Changes in Supply of Fishery Products by Major Countries




Sources: "Food Balance Sheets," FAO; "Food Balance Sheets," Ministry of Agriculture, Forestry and Fisheries

Per capita annual consumption of seafood has grown fast. Growth in 30 years between 1973 and 2003 was as high as 1.5-fold in the United States, 1.1-fold in the 15 EU countries and 5-fold in China.

Changes in Per Capita Annual Supply

Unit: kg

| | Japan | World | U.S. | EU (15) | China |
|---|---|---|---|---|---|
| 1973 | 66.5 | 11.8 | 15.6 | 19.6 | 5.1 |
| 2003 | 64.3 | 16.8 | 23.8 | 22 | 25.9 |
| 2003/1973 | 1.0 | 1.4 | 1.5 | 1.1 | 5.1 |

Sources: "Food Balance Sheets," FAO; "Food Balance Sheets," Ministry of Agriculture, Forestry and Fisheries

COLUMN

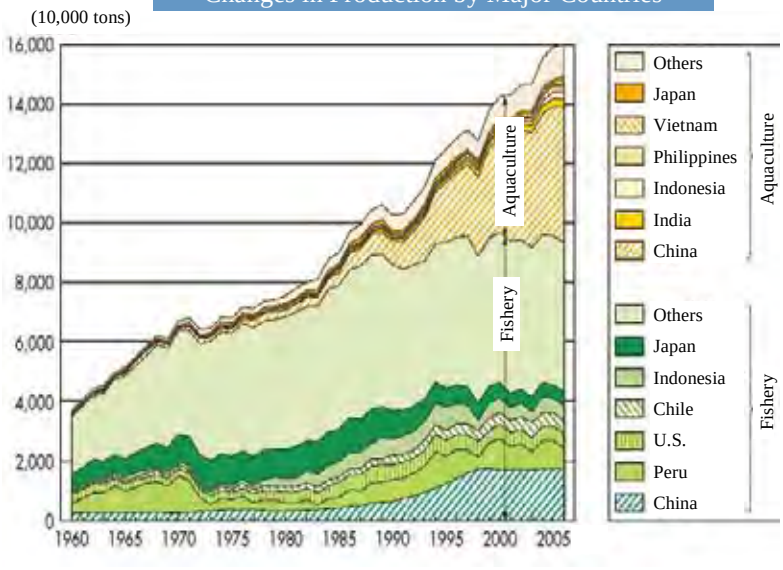
### Sushi culture spreading throughout world

Nigiri sushi has been spreading globally, mainly in Europe and North America. In the United States where no one was used to eating raw fish, the word "sushi" has settled. Americans have even devised new sushi varieties including California Rolls.

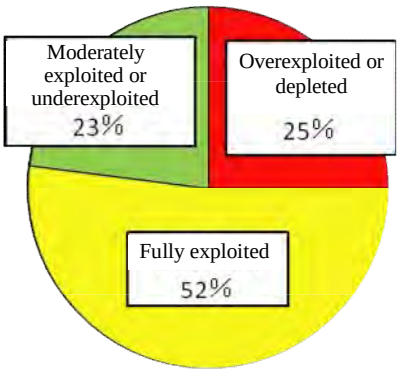
# World Fishery Production Stagnant

Marine fishery production has recently been stagnant, while aquaculture (mainly in China) has been expanding. According to the Food and Agriculture Organization, some half of marine stocks in the world have been fully exploited, one quarter overexploited or depleted, and another quarter moderately exploited or underexploited.

## Changes in Production by Major Countries




## World Marine Stock Levels

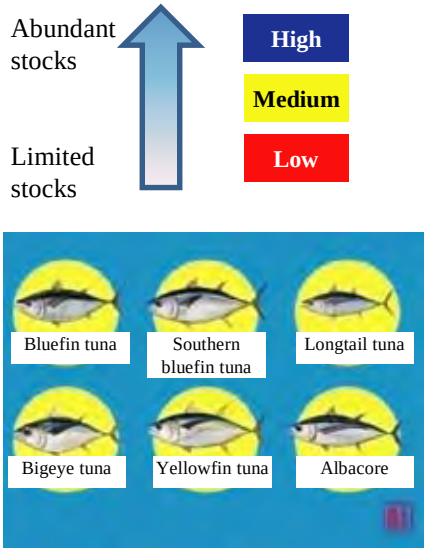



Source: "SOFIA 2006," FAO

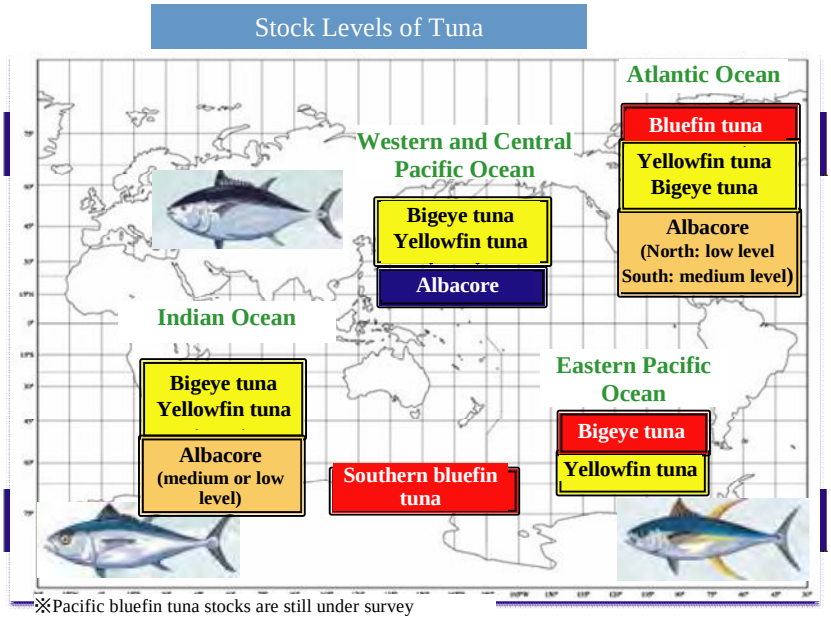
Sources: Prepared by the Fisheries Agency based on "Fishstat (Capture production 1950-2006)" and "Aquaculture production 1950-2006" (for countries other than Japan), FAO; "Annual Report on Fishery and Aquaculture Production Statistics" (for Japan), Ministry of Agriculture, Forestry and Fisheries.

# Some tuna stocks have deteriorated

Japan consumes some one-third of global tuna production (2 million tons). Stocks have remained low for Pacific and southern bluefin tuna.




## Stock Levels of Tuna




※Pacific bluefin tuna stocks are still under survey

Source: "FY2007 Present Conditions of World Fishery Resources," Fisheries Agency and Fisheries Research Agency

# Supply/Demand Relationship Could Tighten

The FAO states that while demand for seafood is expected to increase, marine fishery production is projected to stagnate with aquaculture covering a future demand expansion. A supply-demand gap is expected to expand to 11 million tons in 2015.

Seafood prices are predicted to rise at an annual pace of 3.0% until 2010 and at 3.2% from 2010 to 2015. The world's seafood supply/demand relationship is expected to tighten further to boost prices.

Fishery Product Supply/Demand Outlook

| | Per capita fish product consumption per year | Global demand A | Global output B | Demand - Output A−B |
|---|---|---|---|---|
| 1999／2001 | 16.1kg | 133 million tons | 129 million tons | - 4 million tons |
| 2015 | 19.1kg | 183 million tons | 172 million tons | - 11 million tons |

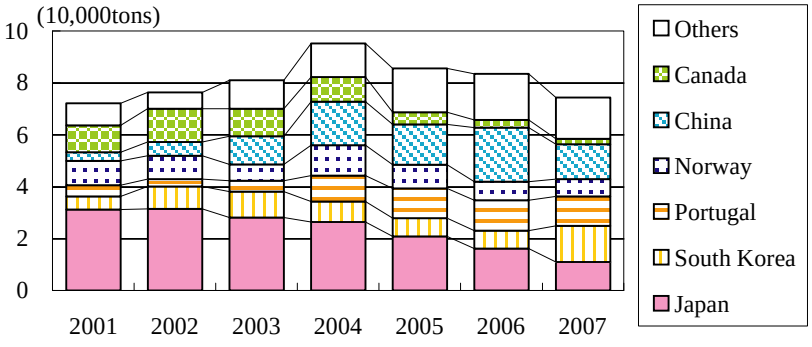
Source: Created based on "The state of world fisheries and aquaculture 2004," FAO
Note: Global demand or output includes noneligible products.

# Japanese imports' share of world trade is falling for some fish

As international fishery product prices have soared on global demand growth, Japanese imports' share of world trade has been falling for some fish.

Case for Pacific Cod

U.S. Pacific Cod Exports (frozen, refrigerated or fresh) and Export Destinations




| Japanese share | 43.2% | 41.2% | 34.7% | 27.7% | 24.3% | 19.4% | 14.7% |
|---|---|---|---|---|---|---|---|

Source: "U.S. Trade Statistics," U.S. Department of Commerce

Global demand for seafood has been increasing. In the future, Japan should expand its domestic production capacity and consumption.



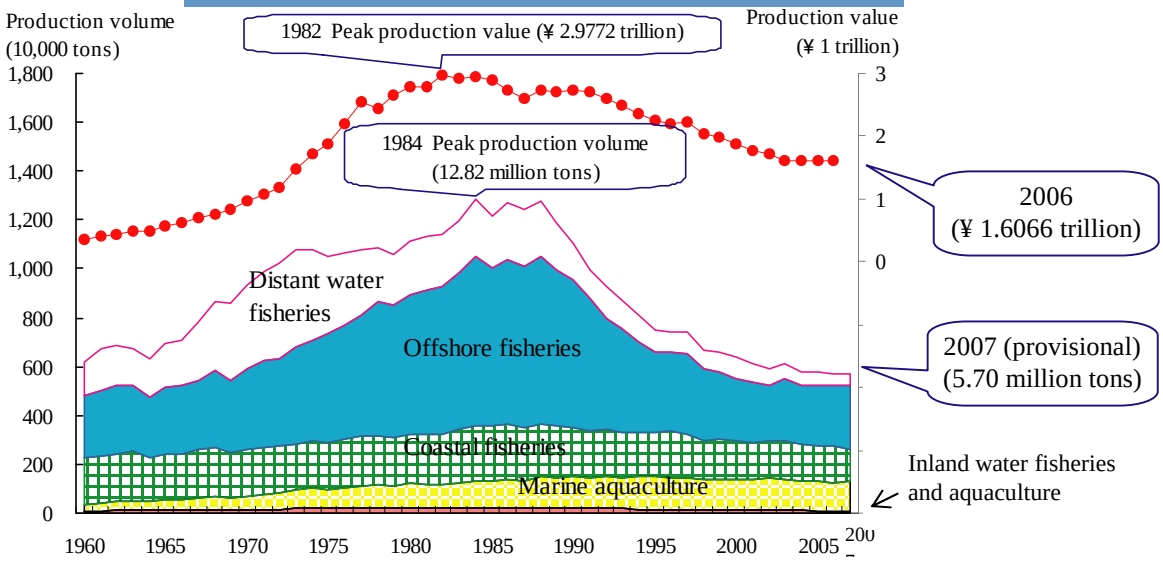
# 2 What's Going on in the Seas Around Japan Now?

## What Is Japan Doing to Increase Benefits from the Seas through Proper Conservation and Management of the Seas?

### Japan's fishery production has been decreasing

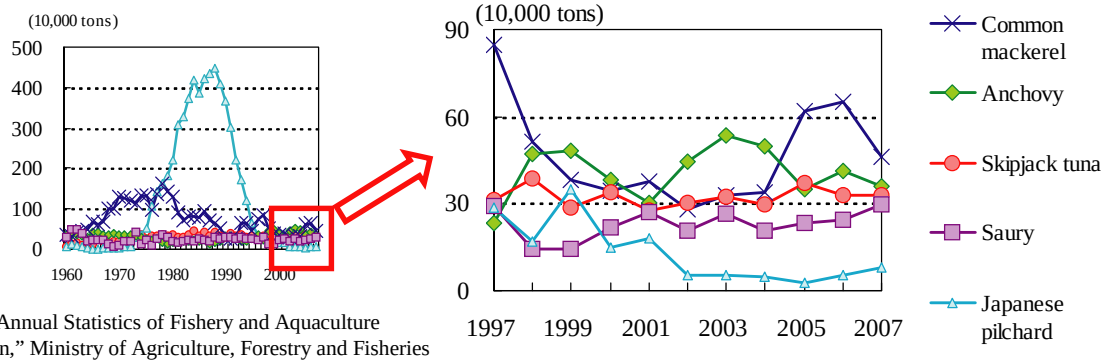
While Japan is one of the world's leading fishing countries, its fishery production has declined due to the tougher international regulations on distant water fishery operations, overfishing exceeding rebuilding capacity of stocks, and import growth emerging from dietary pattern changes.

Changes in Production Volume and Value by Fishery Category




In 1985, Japanese pilchard output alone totaled 4.49 million tons. Over recent years, output has increased for mackerel varieties, anchovy and bonito.

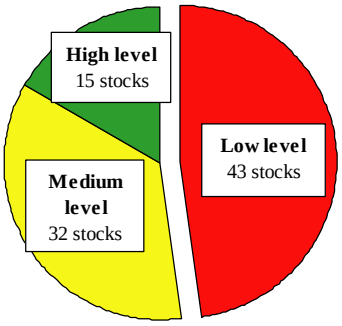
Changes in Catches by Species




Source: "Annual Statistics of Fishery and Aquaculture Production," Ministry of Agriculture, Forestry and Fisheries

# Nearly a half of marine stocks are at low levels

Nearly a half of marine stocks in Japanese waters are at low levels after overfishing exceeding rebuilding capacity of stocks and industrial development for factories of coastal spawning and growth areas.




| | Main species or stocks |
|---|---|
| High | Saury (Northwestern Pacific stock)<br>Southern mackerel (Pacific and East China Sea stocks) |
| Medium | Japanese mackerel (Pacific and Tsushima warm current stocks)<br>Japanese common squid (winter and autumn stocks)<br>Snow crab (Northern Pacific and Sea of Japan stocks) |
| Low | Pacific mackerel (Pacific and Tsushima warm current stocks)<br>Japanese pilchard (Pacific and Tsushima warm current stocks)<br>Alaska pollack (Northern Seaof Japan and Pacific stocks) |

Source: "Marine Fisheries Stock Assessment in Japanese Waters," Fisheries Agency and Fisheries Research Agency.

# Resource recovery plans are ongoing.

Marine resources will be renewable eternally through proper conservation and management. In order to maintain and recover marine resources, we will have to restrict catches and fishing days and exploit resources rationally with priority given to quality rather than quantity.

## ○Total Allowable Catch (TAC) system

Annual catch quotas have been set to manage stocks (since 1997)

Pacific saury, Alaska pollack, horse mackerel, Japanese pilchard, mackerel, common squid, snow crab

## ○Total Allowable Effort (TAE) system

Restrictions are set on the number of fishing days for specific waters, fishing methods and periods to manage fishing efforts (since 2002).

Flathead flounder, sand eel, sharkskin flounder, Spanish mackerel, tiger puffer, small-mouthed sole, slippery flounder, spear squid

## ○Resource Recovery Plans

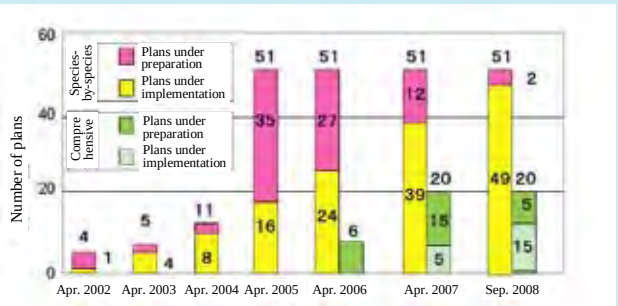
(Resource Recovery Plans by Species)

The specific recovery target is set for the period of the plan regarding fish species that require urgent resource restoration, and comprehensive efforts including the following are promoted to achieve this target: (1) reduction in fishing efforts such as reducing the number of vessels and suspending fishing operation; (2) active cultivation of resources through release of seedlings, etc.; and (3) conservation of the fishing ground environment.

(The Comprehensive Resource Recovery Plan)

The comprehensive resource recovery plan is formulated for multiple species with focus on the types of fisheries such as set net and trawl net fishing, which are difficult to be covered by the species-specific plans.

Number of resource recovery plans prepared and implemented




Source: Fisheries Agency

## COLUMN Considering TAC and other systems

The Fisheries Agency created a panel of experts in April 2008 for consideration of TAC and other systems. Specifically, the panel is tackling the TAC system and the IQ/ITQ system (see explanations below). By September, the panel discussed the roles, challenges and improvements of the TAC system in Japan's marine stock management and compiled an interim report on the TAC system.

【Explanation】

IQ (Individual catch Quota)

An allowable catch quota is set for each fisherman or fishing boat.


80t

An allowable catch quota for each boat


50t

ITQ (Individual Transferable Quota)

Individual catch quotas are transferable to others.


80t
↓
90t

Transfer
10t


50t
↓
40t

C O L U M N

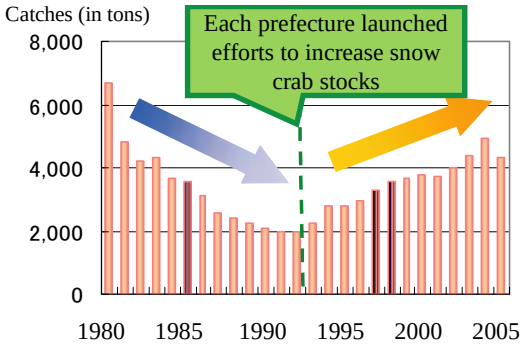
## Snow crab stocks increased through appropriate control (Sea of Japan)

In addition to fishing ban seasons and zones as set by government ordinances for snow crabs, fishery operators have voluntarily imposed tougher controls including extension of fishing ban seasons, and restrictions on sizes and volume of crabs for catching.

Since the Japan-Korea Fisheries Agreement was concluded in 1999, Korean fishing boats' operations have been limited to the Korean exclusive economic zone and the so-called provisional waters designated by the two countries.

As a result of such efforts, snow crab stocks have been increasing.

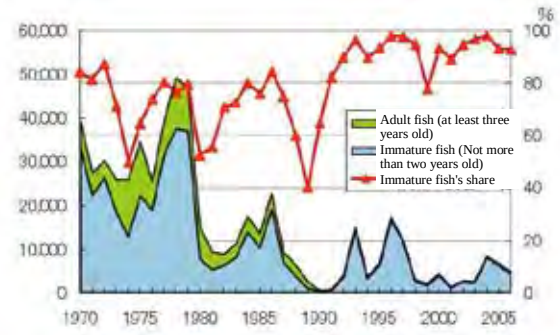
Snow Crab Catches in Sea of Japan




Sources: Fisheries Agency and Fisheries Research Agency

## Pacific mackerel stocks expected to recover (Pacific Ocean)

Pacific Mackerel Catches and Immature Fish's Share




Pacific mackerel catches in the Pacific Ocean peaked at 1.47 million tons in 1978 and declined to only 20,000 tons in 1990. In 1992 and 1996, dominant year class mackerel emerged. But immature fish catches prevented stocks being restored. Overall catches are still limited to low levels.

In a bid to protect immature fish and secure spawning fish, Japan has suspended mackerel fishing operations using medium to large encircling nets in the Northern Pacific since fiscal 2003.

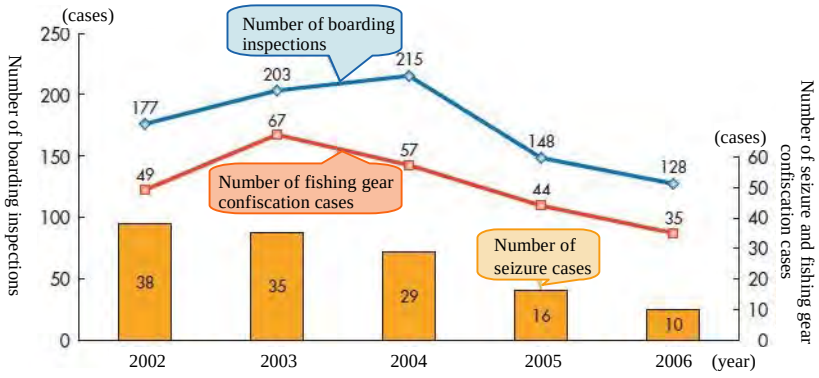
Source: "Fish Stock Assessment in Japanese Waters," Fisheries Agency and Fisheries Research Agency

(HP) Stock Management Room http://www.jfa.maff.go.jp/suisin/index.html

# Enhancing Crackdown on Foreign Fishing Vessels

Japan monitors and cracks down on foreign fishing vessels' illegal operations in its exclusive economic zone and territorial waters. Recently, foreign fishing vessels' malicious actions have stood out. Some foreign fishing vessels have rejected boarding inspections and fled from Japanese patrol boats. Japan has thus been enhancing its monitoring and crackdown activities.

Fisheries Agency's Boarding Inspections and Other Actions




Source: Fisheries Agency

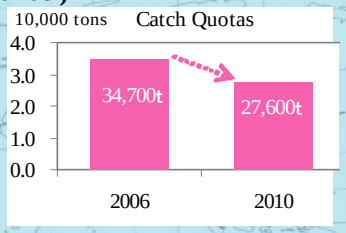
# Responsible fisheries management is needed internationally

Given that tuna and other highly migratory stocks migrate widely, over-fishing in a certain sea area could affect catches in other sea areas. Therefore, regional tuna fishing management organizations have been created to implement management measures such as total allowable catch and national quota systems and quantitative restrictions on tuna-fishing vessels.

## Recent major decisions

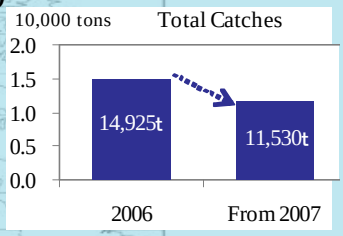
### ICCAT (International Commission for the Conservation of Atlantic Tunas )

・Atlantic bluefin tuna catch quotas will be reduced gradually (from 34,700 tons in 2006 to 27,600 tons in 2010)
・Introduction of a catch documentation scheme




### CCSBT (Commission for the Conservation of Southern Bluefin Tuna)

・Total southern bluefin tuna catches will be reduced from 14,925 tons in 2006 to 11,530 tons in and after 2007.




### IOTC (Indian Ocean Tuna Commission)

・Restrictions on the number of fishing boats for bigeye tuna, yellowfin tuna, swordfish and albacore tuna

### IATTC (Inter-American Tropical Tuna Commission)

・Encircling net fishing ban season in 2007
・Restrictions on bigeye tuna catches with the long line fishing method in 2007

### WCPFC (Western and Central Pacific Fisheries Commission)

・Limiting bigeye and yellowfin tuna fishing capacity or efforts with encircling nets to levels for recent years
・Limiting 2006-2008 bigeye tuna catches with the long line fishing method to levels for recent years

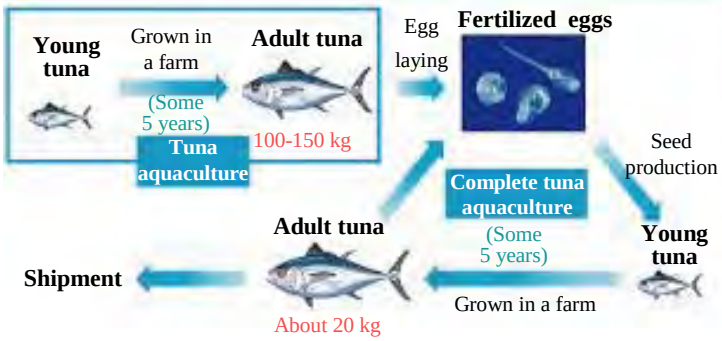
(HP) Tuna information http://www.jfa.maff.go.jp/j/tuna/index.html

## TOPIC! Expectations on Tuna Aquaculture

Japan's bluefin tuna aquaculture production has increased year by year. Such production was expected to exceed 4,000 tons in fiscal 2007. As bluefin tuna demand is growing globally, efforts are required to secure stable bluefin tuna supply for the future.

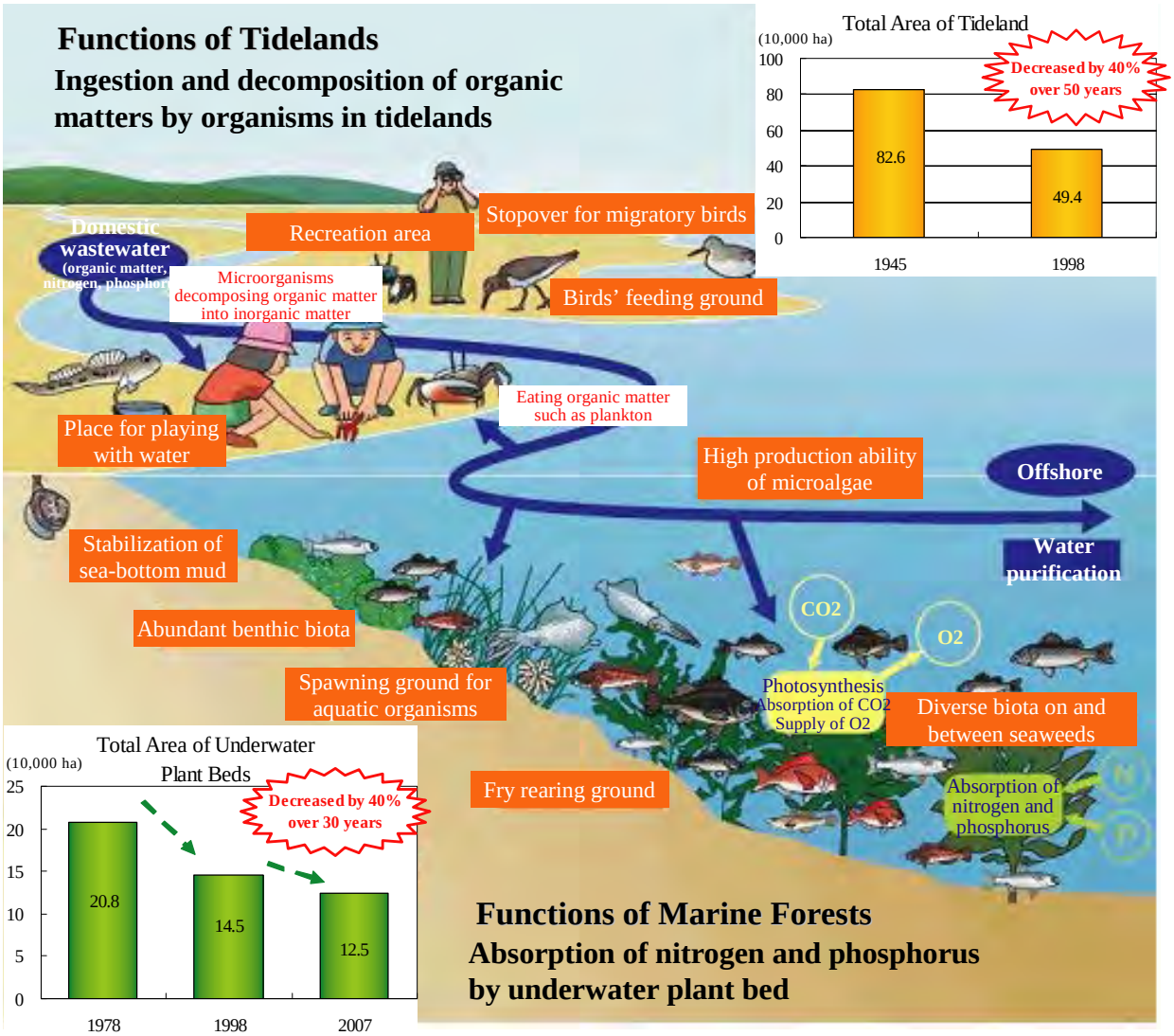
But seed supply has been unstable and assorted feed has yet to be developed. Given these problems, the government has been promoting development of artificial seed production technology and assorted feed in a bid to build infrastructure for stable bluefin tuna supply.

### Hopes placed on progress in studies on complete tuna aquaculture




# Marine forests and tidelands have declined

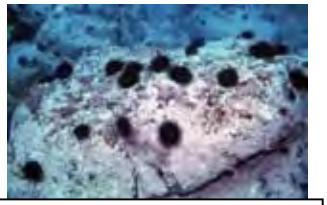
Japan's coastal areas have had marine forests and tidelands that are suitable for fish spawning and growth as well as purification of water. But their space has declined substantially.



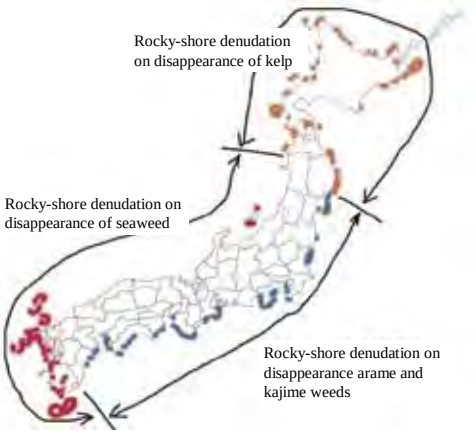

Sources: "Basic Survey on Natural Environment Conservation," Ministry of the Environment; Fisheries Agency

"Rocky-shore denudation" has emerged nationwide to affect fish living in marine forests.

"Rocky-shore denudation" means the disappearance of marine algae due to rising water temperatures or an increase in sea urchin and rabbitfish.



"Rocky-shore denudation" emerging on sea urchin's feeding damage (Saimura Fisheries Cooperative, Aomori Prefecture)



## Promotion of conservation of marine forests and tidelands

In a bid to conserve marine forests, fishermen have taken leadership in culling sea plant eaters including sea urchin and setting up nets to prevent sea plants from being eaten.

Exterminating sea urchin

Disappearance of seaweeds on rocky-shore denudation (Kuroshio, Kochi Prefecture)

Monitoring after sea urchin culling

Recovery from rocky-shore denudation

Source: Guidelines against rocky-shore denudation, Kochi Prefecture

We also dredge up tideland mud regularly and eliminate unnecessary sand and sea lettuce to restore and conserve tidelands.

## Countermeasures for Global Warming

In May 2007, Japanese Spanish mackerel that usually live in warmer waters were caught in the northeastern Japanese prefectures of Aomori and Iwate. Catches have increased in the Sea of Japan as well.

These changes may be attributable to a medium-term rise in water temperatures. Environmental changes are feared to affect fisheries.

Therefore, we are assessing global warming's effects on the fisheries industry and developing projected technologies and considering countermeasures.

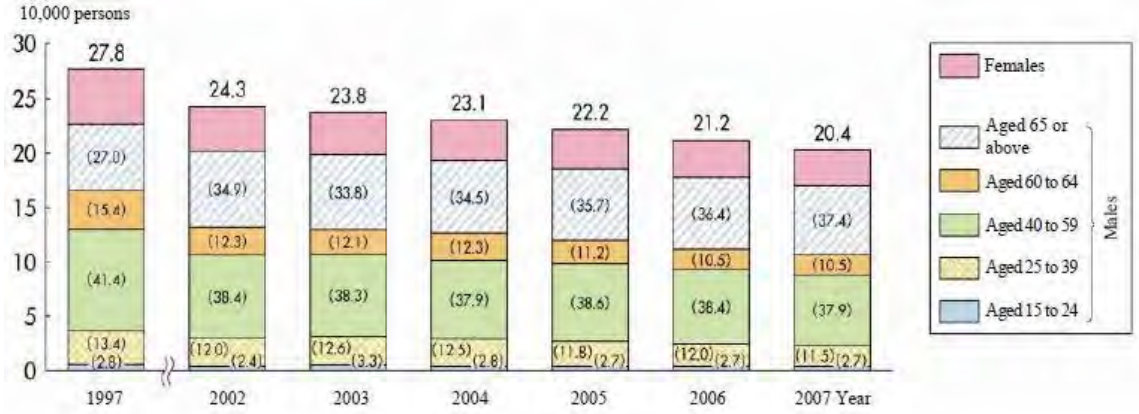
Japanese Spanish mackerel caught in fixed netting (off Misawa, Aomori Prefecture)
Source: Asahi Newspaper

# How Many People Are Fishing in Japan? How Have Fuel Price Hikes Affected Fishing?

## Shrinking and aging fishermen population

The fisherman population has been on the decline, standing at 204,000 as of 2007, of which those over 65 years old accounted for 37.4%. Despite the progress in aging, only about 1,200 people newly joined the fishery workforce.

Changes in Number of Fishery Workers




Sources: "Annual Statistics on Fishery Industry" (1997), "Annual Statistics on Fishery Workers" (2002), "Fishery Census" (2003), and "Survey Report on Fishery Workers" (from 2004), Ministry of Agriculture, Forestry and Fisheries.

## Harsher reality of fishing businesses

The average earnings of coastal fishing households have been on the decline. Many fishery companies offset the losses in fishery business by the profits in fishery processing business and other non-fishery business and by non-operating profits.

Financial situation of coastal fishing households

(Unit: thousand yen)

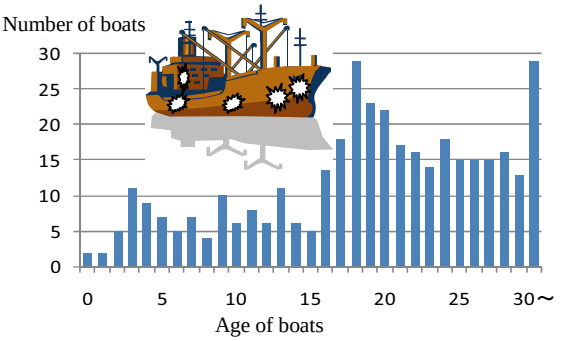
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| Fishery earnings | 2,257 | 2,267 | 2,156 | 2,153 | 2,143 | 2,466 |
| Fishery income | 5,160 | 5,153 | 5,002 | 4,943 | 4,908 | 6,321 |
| Fishery expenditure | 2,903 | 2,887 | 2,846 | 2,790 | 2,766 | 3,855 |
| Fuel expenses | 411 | 401 | 416 | 423 | 482 | 730 |
| Proportion to the expenditure | (14.2) | (13.9) | (14.6) | (15.2) | (17.4) | (18.9) |
| Non-fishery earnings | 282 | 264 | 238 | 190 | 180 | 84 |
| Business earnings | 2,540 | 2,530 | 2,394 | 2,343 | 2,323 | 2,550 |

Source: Prepared by the Fisheries Agency based on the "Fishery Business Management Report" issued by the Ministry of Agriculture, Forestry and Fisheries

Note: Since the survey of 2006 was conducted under a significantly modified survey system, the results of the survey in 2006 do not have continuity from those of previous years.

Fishing boats are aging too.

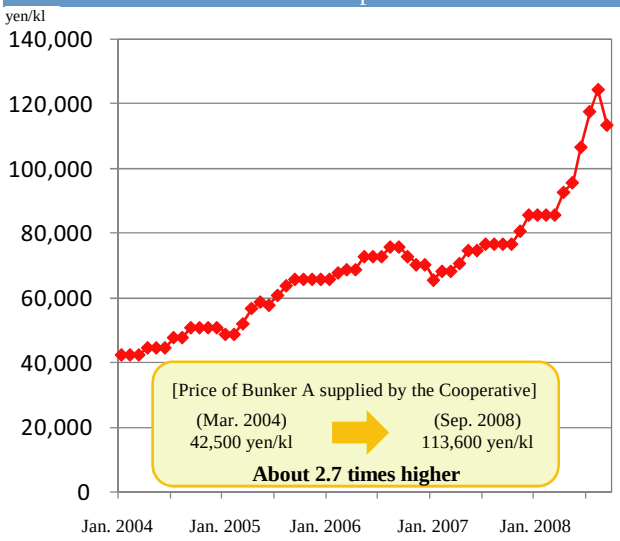
Although the lifespan of fishing boats is usually 15 years, about 40% of the boats used in offshore trawl net fishing have been in use for 20 years or longer (See the graph on the right). The aging of boats could decrease the productivity and safety while increasing the maintenance costs.



# Rising fuel prices

The crude oil price has been on the rise worldwide. In the fishery industry, the proportion of fuel expenses in the total costs is higher than in other industries. As a result, the rising fuel prices have greatly impacted fishery business management.

Trend in the price of Bunker A supplied by the National Federation of Fisheries Cooperative Associations




Source: Fisheries Agency

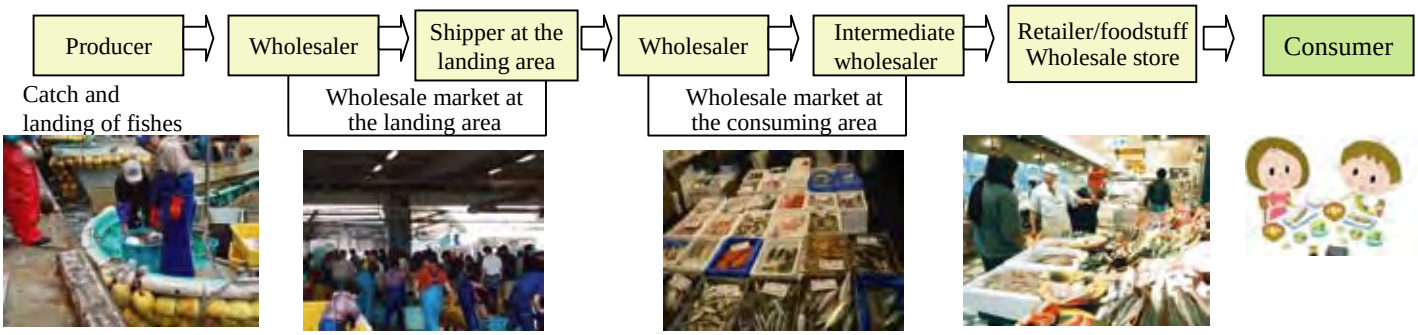
Proportion of furl costs in the total fishery expenditure

(%)

| | 2004 | 2008 |
|---|---|---|
| Small bottom trawl fishing | 23.8 | 31.3 |
| Gill net fishing | 15.8 | 21.4 |
| Offshore bottom trawl fishing | 23.6 | 31.0 |
| Coastal squid fishing | 30.7 | 39.3 |

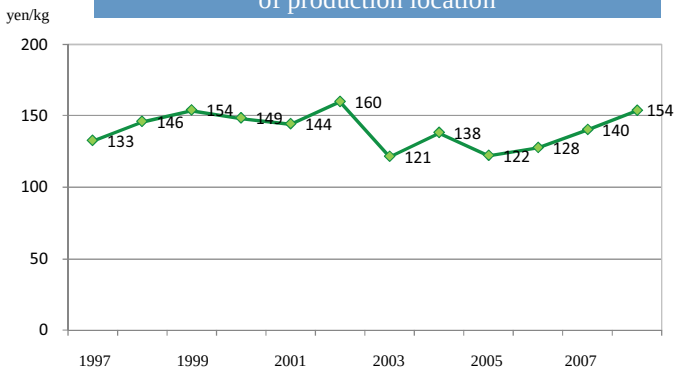
Source: Fisheries Agency
Note. The data for 2008 was calculated in consideration of an increase in the fuel cost while assuming that the non-fuel fishery expenditure remains the same. (Calculation was made based on the average fuel costs in 2008 on the assumption that the fuel price stays at the level in September (¥113,600).)

The characteristics of fishery products, such as great fluctuations in production volume, wide variances in terms of type and size, and rapid deterioration of quality, have contributed to the development of a diversified distribution system.




As a result, the diversified distribution system coupled with the high cost of processing and freshness maintenance tends to raise distribution costs. The prices of fish are determined based on the market mechanism regardless of high fuel prices. Consequently, the rising production costs are not sufficiently reflected in the product prices in the fish market of production location.

Trend in the wholesale prices in the fish market of production location




Source: Source: Prepared by the Fisheries Agency based on the “Fishery Product Distribution Statistics” issued by the Ministry of Agriculture, Forestry and Fisheries
Note: The data for 2008 was calculated based on the weighted average for a period up to July.

# What Is Japan Doing for Fishermen Capacity Building and for Competitive Fisheries Industry Building?

## Measures have been taken to promote the entry of new workers and companies into the fishery industry.

In addition to fishery job information service, a 6-month on-the-job training program is offered to young people in cities. Measures have been taken to support the initiatives of groups of fishery operators lead by veteran fishery operators.


### Fishery job placement fair

### Experience-based education program for fishery

### Training program at fishing sites

Job placement at the training site!

**TOPIC!**

### Formation of “The Ryoshi’s (The Fishermen)”

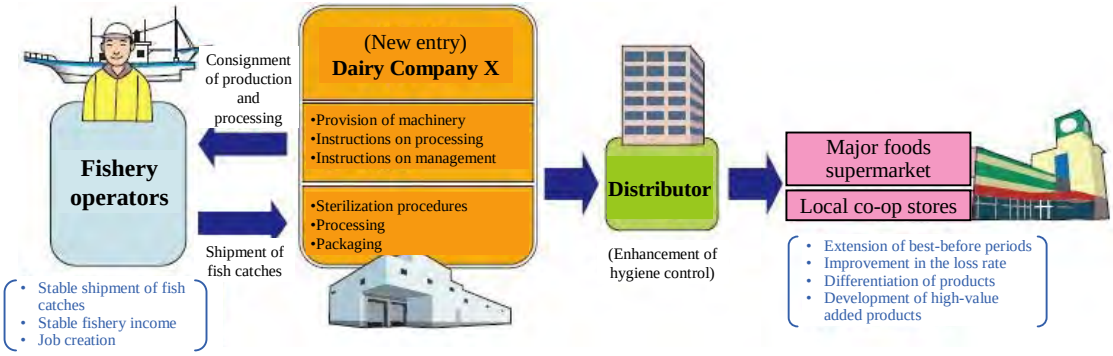
For the Fishery Job Placement Fair 2008, “The Ryoshi’s” was formed to convey the appeal of fishery and fishing villages.

The four fishermen forming the group are called “fishery executives,” who quit their previous jobs to become fishermen. They are eager to convey the thrill of being fishermen.

(HP) National Fisherman Recruiting and Training Center, Ryoshi jp http://www.ryoushi.jp/

## New business developed through cross-industry collaboration

Efforts have been made to revitalize the fishery industry and fishing villages by encouraging companies and entrepreneurs in non-fishery fields to use their know-how and skills to make business out of fishery resources and develop new business models.

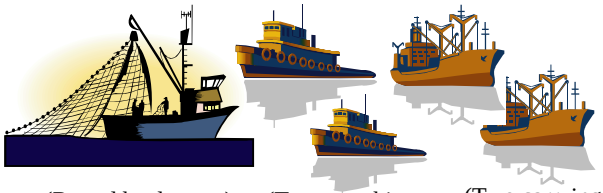



For example, in the case of Chirimen (boiled and dried baby sardines) and Kounago (boiled and dried baby sand lance), for extension of best-before periods, efforts have been made to enhance hygiene control and improve the loss rate through better bacterial control.

# Support for the Initiatives to Promote the Structural Reform of the Fishing Boat Operation and the Fishing Industry

Measures have been taken to promote managerial changes through introduction of high-profit operation and production systems and replacement of old boats with human-resource-saving, energy-saving boats.

[Initiative 1: Smaller fleet of round haul netter]



(Round haul netter) (Two searching boats) (Two carrying boats)

Smaller fleet

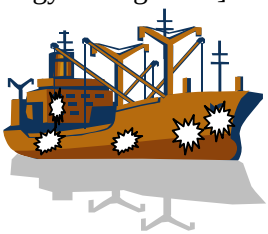
[Mini fleet]

(Round haul netter)

(Searching and carrying boat)

Reduction of operation costs

[Initiative 2: Human-resource-saving, energy-saving boats]



Replacement of an old boat with a low-cost boat

•Introduction of human-resource-saving machines (Automatic net hauler)
•Introduction of energy-saving fish-luring lights

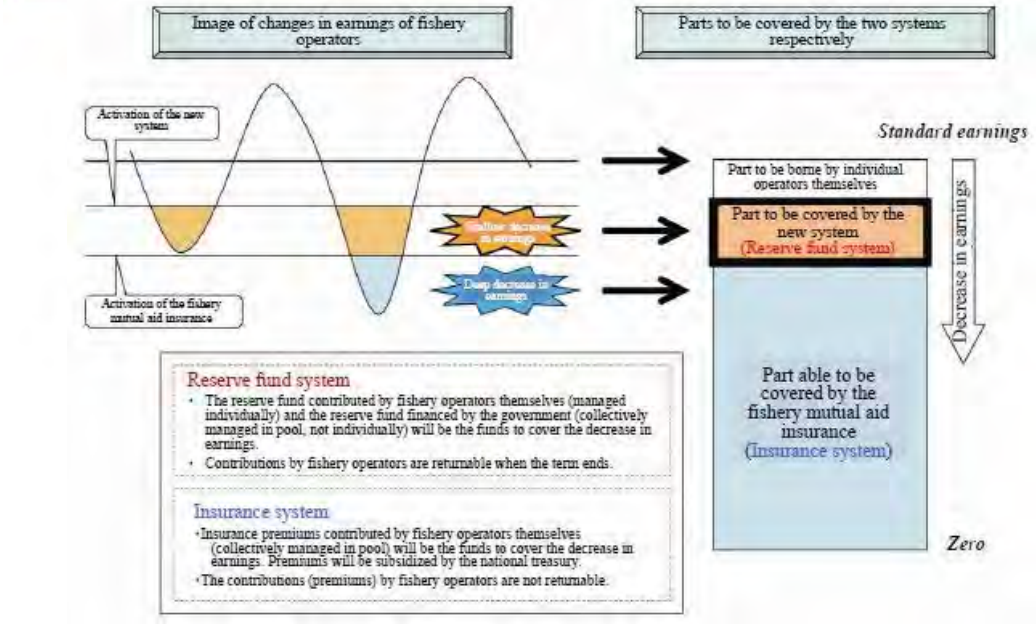
Use of human-resource-saving, energy-saving fishing boats

(HP) Structural reform of fishing boat fisheries http://www.jfa.maff.go.jp/j/enoki/gyosen/index.html

# New Program to Stabilize Fishery Business Management: "Reserve Plus"

A program called "Fishery Business Stabilization Program" has been offered since 2008 in order to realize "effective and stable fishery business management." This is a new program targeted at fishery operators seeking proactive and strategic improvement of their fishery business management. This program is designed to supplement the currently available management stabilization programs offered by the Fishery Mutual Relief Fund in order to alleviate the negative effect of income reduction on fishery business management.

Image of New Fishery Business Stabilization Measures



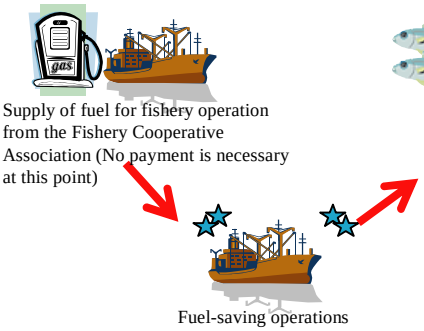

(HP) Fisheries Agency "*Tsumitate Purasu* (Reserve Plus)" http://www.jfa.maff.go.jp/j/hoken/keieiantei.html

# Measures against Rising Fuel Costs

To cope with the rising fuel costs, measures have been taken to promote energy-saving initiatives of fishery operators. Furthermore, Japan has been promoting a structural reform of fishery business management.

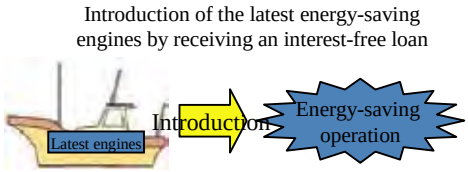
### ○Demonstrative project with the focus on fuel cost increase

In this project, Japan will subsidize 90% of the increase in fuel costs upon request from fishing groups that cut fishery fuel consumption by 10% or more.



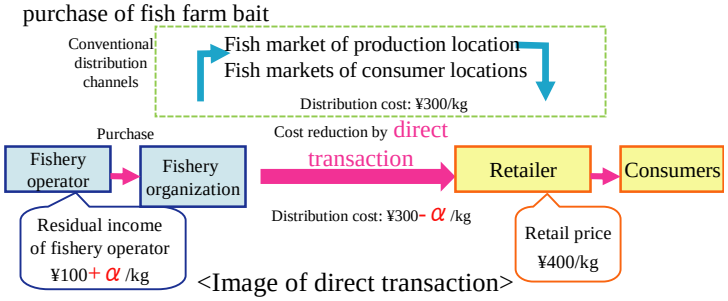

### ○Interest-free loan system to promote energy saving

The criteria for receiving the Coastal Fishery Improvement Fund were modified in such a way that allows fishery operators to receive fund repeatedly for introduction of energy-saving facilities and equipment and provides them with interest-free loans for energy-saving fishery operations.




### ○Measures to increase the residual income by taking advantage of diversification of distribution channels

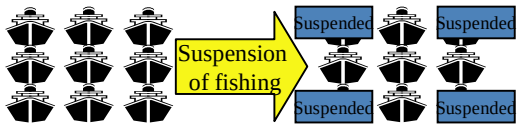
In order to increase the residual income of fishery operators, the following measures have been taken:
(1) Increase in the purchase size of fishery products, (2) Improvement of measures to support direct transactions, and (3) Promotion of direct purchase of fish farm bait




<Image of direct transaction>

### ○Suspension of fishing and decrease in the number of fishing boats

In view of the rising fuel cost, financial obligation on fishery operators has been eliminated. Further measures that best suit the reality of each fishery type have been taken such as the suspension of fishing and decrease in the number of fishing boats.




* Financial burden on fishery operators, etc., during the suspension period

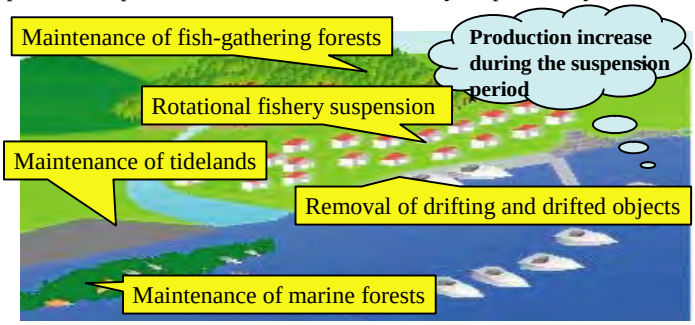
| | |
|---|---|
| Burden on the Nation | (Conventional rule) 1/3→ (New rule) 1/3 |
| Burden on prefectural and city governments | (Conventional rule) 1/3 → (New rule) No requirement |
| Burden on fishery operators | (Conventional rule) 1/3 → (New rule) No requirement |

### ○Measures to enhance fishery business management culture

Measures have been taken to promote group operations (use of jointly-used searching boat and carrying boats) and replacement of old facilities with energy-saving facilities.

### ○Measures to support the activities of energy-saving promotion organizations

Measures have been taken to promote initiatives taken by fishery operators suspended under the rotational fishery suspension system.




(HP) Fisheries Agency: Measures against Rising Fuel Costs in Fishery http://www.jfa.maff.go.jp/j/keiei/nenyu/index.html

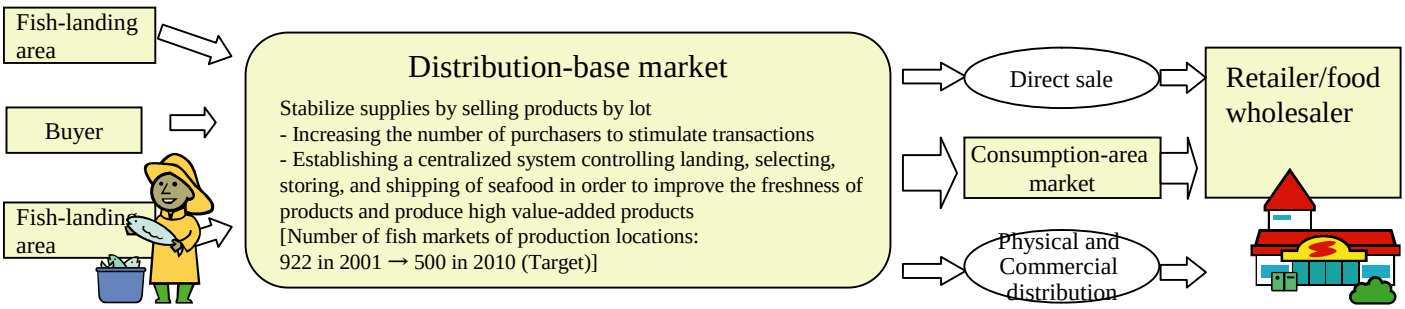
Initiatives by fishermen are indispensable for sustainable use of fishery resources for stable fishery business and conservation of marine ecosystem.

# How Is Seafood Treated before Becoming Available for Eating?

## Measures to Distribute Seafood Efficiently

In order to provide fresh, safe seafood stably, fish-landing areas should enhance sales capacity and exactly meet consumers' needs.

As for great seafood demand for mega-supermarkets, efforts are ongoing to develop distribution bases for stable supply through unification of lots and standards.




As for a wide variety of products for small-lot foreshore production and distribution, diverse distribution channels including direct sales to consumers should be developed to reduce distribution costs.

**Producer**

- Landing various fishes
- Sales channels are not ready for fresh, delicious fish
- Fish prices slumping in absence of buyers

Matching

**Consumer**

- Willing to eat fresher, safer fish
- Willing to eat various fishes, while failing to know what fish to buy

## Hygiene Control and Quality Control

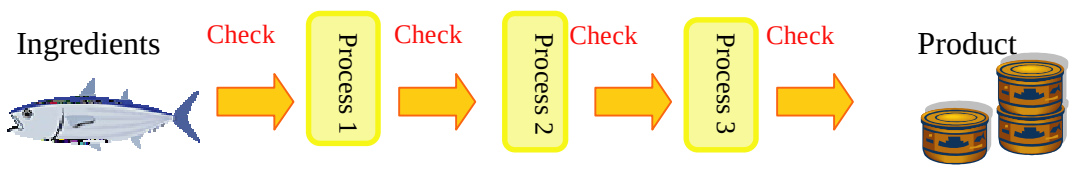
In order to provide consumers with safe, reliable seafood, fishery industry workers are improving quality control through such measures as introduction of the HACCP system at fishery processing plants and development of facilities at fish-landing area markets.

●HACCP●

HACCP is a system to control hazards (biological, chemical, and physical factors that could cause disease or injury) by establishing critical control points in the manufacturing processes from food ingredients to the final product.

**HACCP**

**(Hazard Analysis) (Critical Control Point)**

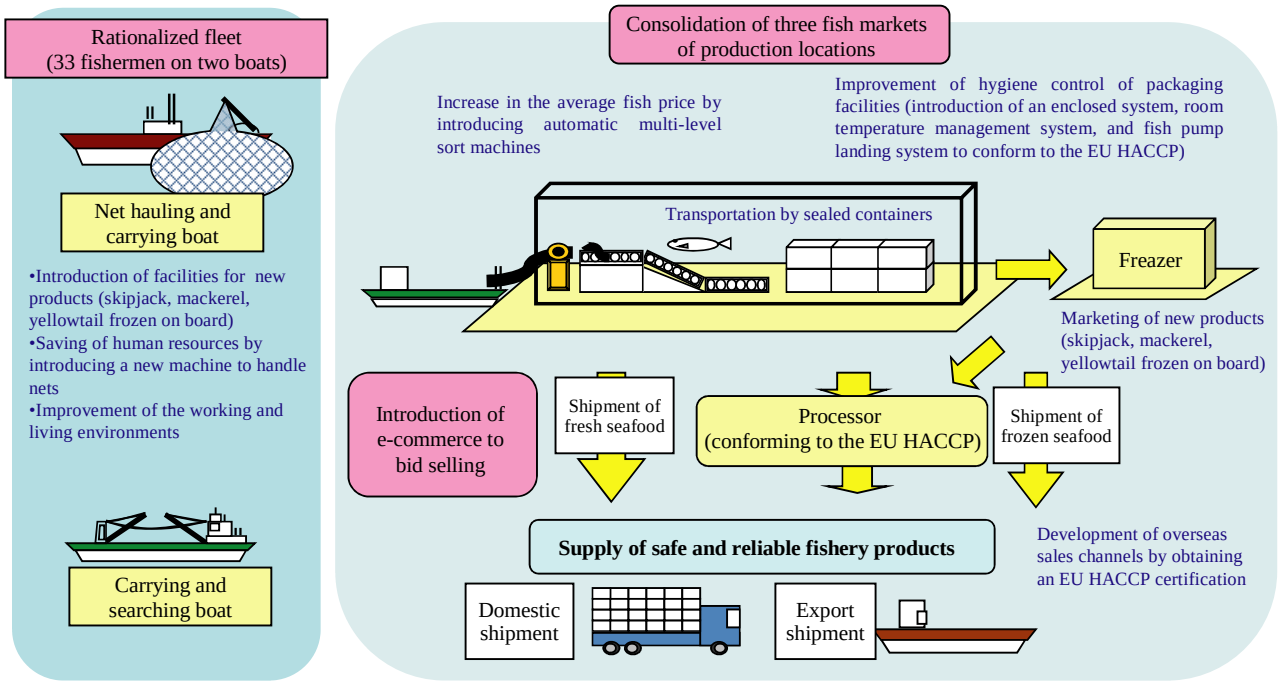



Controlling the processes in real time
Creating and storing process-control records

Food safety assured

## Outline of the Hachinohe Area Project Reform Plan (large and midsize round haul net fishing)

-Improvement of the hygiene control of fish market facilities → Promoting the structural reform of the fish market of production location and the distribution of seafood
- Enhancement of the value added to fish catches and development of new sales channels including export → Establishment of new business models




C O L U M N

## In-Store Fish Advisor

### Fresh fish promoting communication with customers

In a supermarket in Tokyo, a sales assistant of the fish section is busy helping customers. He recommends which cooking method best suits a certain kind of fish, advises which fish are in season, and cuts fish for sashimi or for any other purpose upon request.

The presence of such a fish sales assistant has contributed to the recent increase in the number of young housewives shopping there. Face-to-face sales of fresh fish is an effective way to promote communication with customers.

### Important roles to be played by Fish Meisters

A private qualification system, “Fish Meister” was started in October 2007 to foster experts who can convey the appeal of fish and promote fish consumption. In August 2008, 31 people were certified as the first generation of Fish Meisters. They are expected to become intermediaries between consumers and producers in the future.

(HP) Fish Meister: http://www.osakana-center.com/meister/meistertop.html

Distributors play an important role in delivering fishermen’s catches to consumers in such a way that minimizes waste and deterioration in quality and taste. Distributors are also exploring new markets and providing consumers with the thrill of new discoveries and the joy of enjoying good fish.



# 3 Getting Familiar with Seas and Fish to Conserve Bountiful Seas

## Why Is It Good to Eat Fish?

### To convey the fish-eating culture full of wisdom and wishes of ancestors

Japan is surrounded by bountiful seas and is also blessed with highly productive brackish waters and lakes. Here, seafood are closely related to people's daily lives. They are also incorporated in seasonal ceremonies such as "*osechi*" dishes for new year and carp streamers.

### "*Osechi*" dishes are full of Japanese spirit

There are many dishes that use fish in "*osechi*," which is the series of traditional dishes for celebrating new year.

You can find the Japanese spirit in its traditions, such as using shrimp, whose bent back symbolizes old age and therefore longevity, with a wish for long life, or eating "*tazukuri*," which means to make a rice paddy, with a wish for abundant harvest.

### Whale-eating culture

Japanese lifestyle is also closely related to whales. It became a popular foodstuff among the general public in the Edo era. Art and culture related to whales also developed.

Whale meat is rich in vitamin A, good for the eyes. It contains more protein and less cholesterol compared to beef, pork or chicken, so it is a healthy food.

### COLUMN Number of whales is increasing except for certain kinds

Because of the temporary ban of whale hunting by the IWC (International Whaling Commission), Japan stopped commercial whaling other than for scientific research from 1998. Whales consumed in Japan are mainly those caught in accordance with a treaty, for the purpose of examining whether the number of whales is increasing and what whales are eating.

It became clear from this research that the number of whales is increasing except for certain kinds. Because whales eat massive amounts of fish, it is important to use the increased whales as a resource, from the perspective of not only supporting human lives but also to ecologically maintain the numbers of other fish.

**Whales with numbers increasing**


minke whale


Bryde's whale


sperm whale


sei whale

[HP] Fisheries Agency: http://www.jfa.maff.go.jp/whale/indexjp.htm

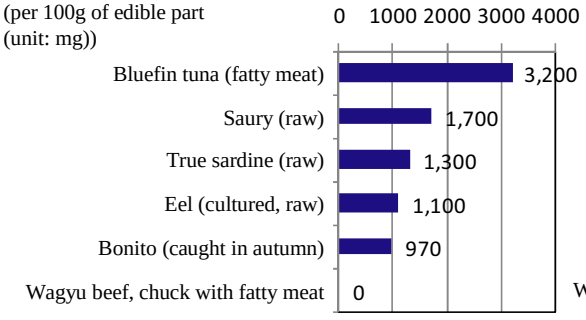
Illustration source: Institute of Cetacean Research

# Seafood is very nutritious!

It is widely known that DHA included in fish oil has a brain-enhancing function, and EPA works to improve the flow of blood. Recent research results show that people eating more fish are less likely to have a myocardial infarction.

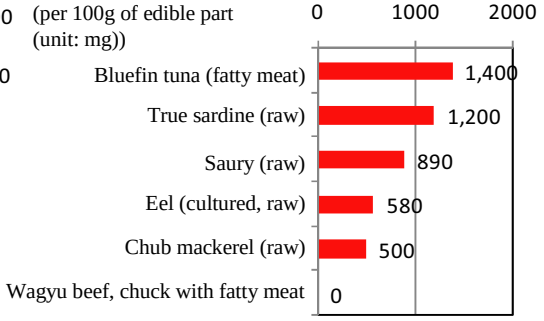
## Docosahexaenoic acid (DHA)

Helping develop or maintain brain and nerve system functions, working against allergy and inflammation




## Eicosapentaenoic acid (EPA)

Preventing blood clots and vascular constriction, reducing blood lipid




Source: STANDARD TABLES OF FOOD COMPOSITION IN JAPAN Fifth Revised and Enlarged Edition

| Functional components | Major functions | Major seafood containing functional components |
|---|---|---|
| Taurine | Adjusting blood pressure, eliminating cholesterol, improving liver functions, maintaining eyesight | Squid, oyster, octopus, abalone, scallop, prawn, salmon |
| Calcium | Forming bone, adjusting blood pressure and nerve systems | Small fish |
| Iron | A main component of blood erythrocyte (hemoglobin), helping maintain human body functions | Laver, hizikia, lam |

# Japanese seafood now attracts people worldwide.

Due to reasons such as stronger health concerns in Western countries, the global trend of a Japanese-cuisine boom and increase in wealthy people based on the economic development of Asian countries, export of seafood is increasing.

Changes in Japan's Seafood Export Volume and Value

(1,000 tons for volume, ¥100 million for value)

| | | 1975 | 1985 | 1997 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|
| Volume | Total | 603 | 786 | 343 | 468 | 594 | 612 |
| | Dried sea cucumber | … | … | … | 0.230 | 0.273 | 0.345 |
| | Salmon/trout | 5 | 15 | 58 | 25 | 26 | 48 |
| | Mackerel | … | … | 49 | 58 | 180 | 156 |
| Value | Total | 1,687 | 2,876 | 1,698 | 1,748 | 2,041 | 2,382 |
| | Pearl | 177 | 822 | 573 | 302 | 338 | 365 |
| | Dried sea cucumber | … | … | … | 79 | 126 | 167 |
| | Salmon/trout | 8 | 54 | 150 | 89 | 101 | 151 |
| | Mackerel | … | … | 33 | 37 | 127 | 141 |

Source: Created based on "Japan Trade Statistics," Ministry of Finance

### TOPIC! Japanese cuisine featured also at Toyako Summit

During the period of the Hokkaido Toyako Summit, dishes such as frozen salmon, spit-roasted scallops and Ishikari-style stew were offered to foreign press/media personnel at the international media center, which was the base for news coverage. On this occasion, food culture of Japan, the appeals of Japanese cuisine and the attractiveness of Japanese foodstuff were extensively communicated to other parts of the world.

Frozen salmon

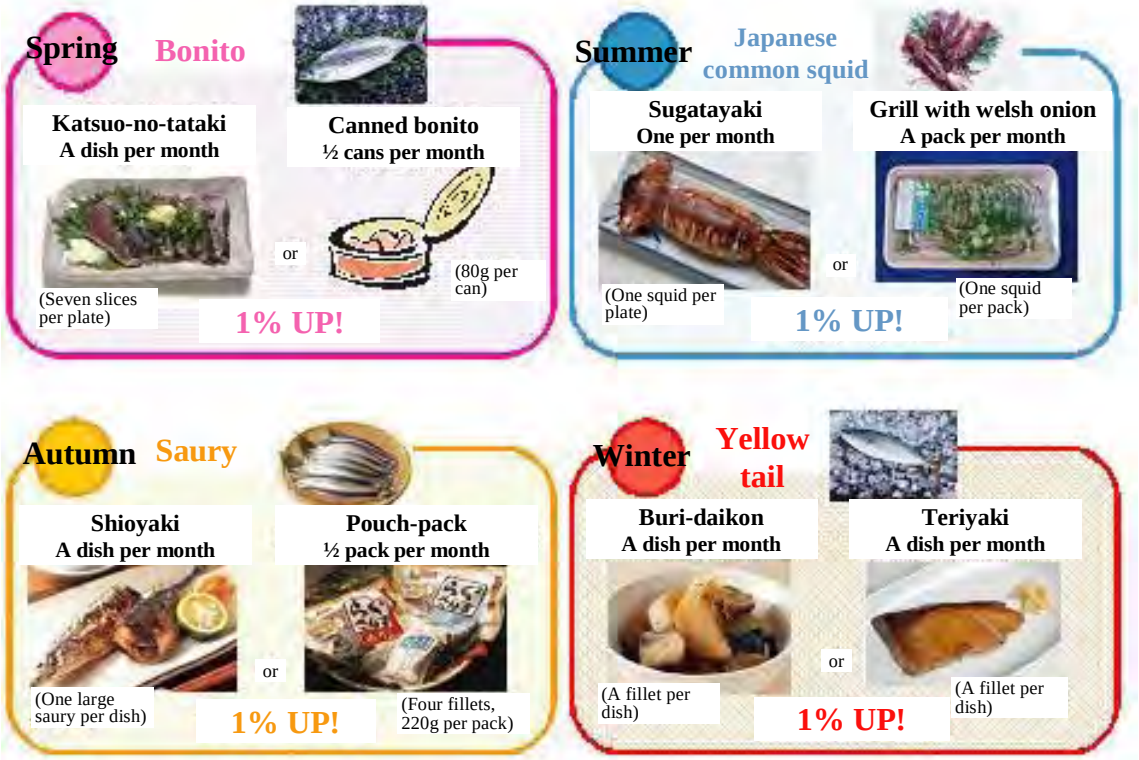
(HP) Ministry of Agriculture, Forestry and Fisheries, "Promotion of the export of agricultural and marine products": http://www.maff.go.jp/sogo_shokuryo/yusyutu.html

# What Fish Are Good for Eating?

## Let's eat seafood more ecologically

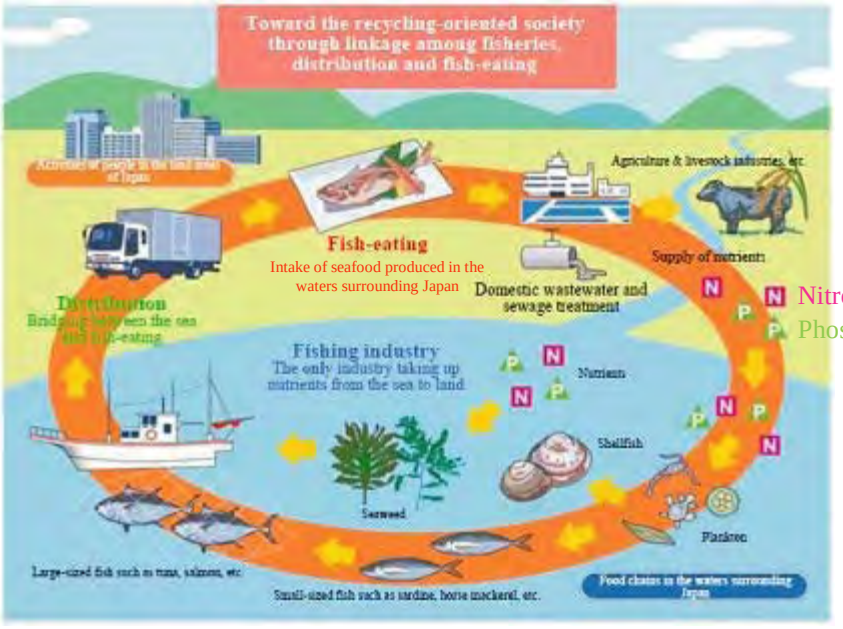
Fish resources such as saury and bonito found in waters near Japan are currently abundant. Moreover, they are relatively low-priced and rich in seasonal taste. Eating these fish in season will also raise the self-sufficiency rate and will result in conservation of the sustainable fisheries and food culture.

If each Japanese person eats more fish in the respective seasons than before, Japan's self-sufficiency rate will increase!




Source: "Food Balance Sheets (FY2007)," Ministry of Agriculture, Forestry and Fisheries
Photos: Marine Foods Corp.; National Association of Saury Fishery; Kushiro Shi Fisheries Cooperative Association

Consumption of local-caught seafood is also expected to have a significant favorable impact on environment.



## What Can We Do In Addition to Eating Fish?

Fisheries industry and fishing communities have various roles (multiple roles) other than their intrinsic role to supply seafood stably.


Source: Created by the Ministry of Agriculture, Forestry and Fisheries based on the Reports by the Science Council of Japan

# Let's go out to the sea and fishing communities!

There are fresh seafood, abundant nature and beautiful scenery in fishing communities. People can enjoy recreational activities such as clam digging, and the places have their own attractiveness different from that of urban areas.

Recently, an increasing number of communities are offering opportunities to experience fisheries and establishing product stands and morning markets. Efforts to revitalize the town through "marine business" are emerging by fusing fisheries with tourism and leisure, with a view to creating a new value to the citizen.

The website below includes information on events held around the country. Using these kinds of information as a reference, let's go out to the sea and fishing communities!

(HP) Let's go to fishing communities!: http://www.gyoson-go.com/index.html


Sea industry: a collective term for "businesses in which people make a living by using the sea and beaches, including fisheries and marine leisure."

### "The best 100 agriculture, forestry and fisheries guest house mothers" Guest House Maruni-maru, Ms. Masae Hashimoto [Saiki City, Oita Prefecture]

"No extravagant measures, no pretense" is the true hospitality, zest for living is given from natural wind, tide and sky.

Ms. Hashimoto manages a fishery guest house that use a building built as a private residence as-is, and provides dishes using abundant seafood to guests. With "Kamae Blue Tourism Study Group" serving the central role of activities, she offers opportunities to experience fisheries and study about them. Ms. Hashimoto is also making exertions to vitalize the Kamae area as the president of the tourism association.

(HP) Guest House Maruni-maru: http://marunisuisan.at.infoseek.co.jp

Implanting peal cores

PR of lobster (woman wearing the costume of a fish boat banner is Ms. Hashimoto. She is in the photo with governor Higashikokubaru.)

# Let’s join forces to conserve the sea.

In accordance with the rising awareness of environmental problems among citizens, there is a growing interest in programs for citizens to participate in maintaining underwater plant beds and tidelands.

In addition, the idea of “Satoumi (home-sea)” is proposed to conserve biodiversity and maintain the high productivity of the sea, and to nurture traditional culture, through interaction between nature and human. The number of such programs is increasing for participation by city residents.

## Kanazawa Hakkei - Council for restoring Amamo (eelgrass) beds (Yokohama City, Kanagawa)

### Recover bountiful Tokyo Bay through the restoration of Amamo

This council was established 15 years ago with an aim to recover the rich nature in Kanazawa Hakkei through the restoration of Amamo and to transmit valuable nature and culture of the sea to future generations. Various sectors, including fishermen, fisheries research institutes, universities, companies and local schools are cooperating to restore Amamo beds.

Planting of Amamo

(HP) Kanazawa Hakkei -Tokyo Bay Amamo Bed Restoration Conference: http://www.amamo.org/

# The sea is a mirror reflecting our lifestyle.

Contaminants and wastes generated in our daily lives are ultimately washed out to the sea.

Lives of consumers are connected with the sea via rivers. It is necessary for us to live in such a way to take care of resources and the environment.


## TOPIC! Eco-label system has started!

Eco-label shows that the fishery product was caught in a way that gives little impact on the ecosystem and the sustainability of resources.

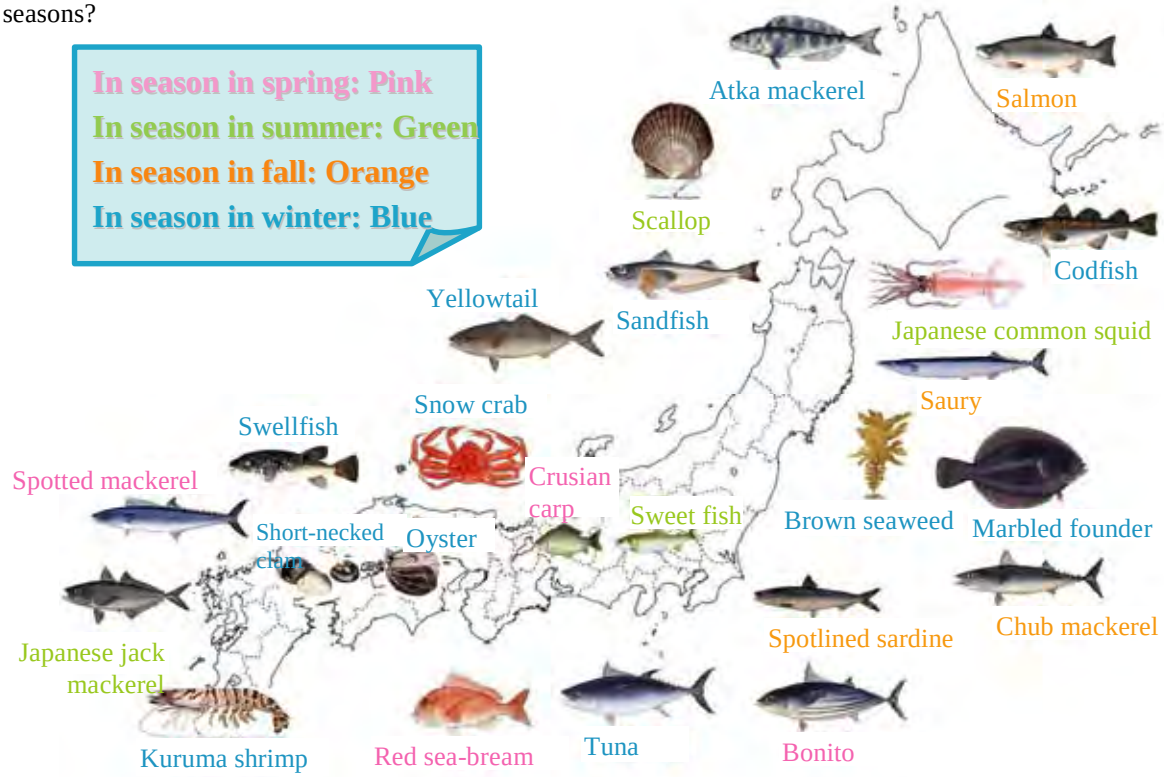
In December 2007, Japan’s own eco-label system was established, reflecting the characteristics and advantages of the Japanese fisheries production and resource management. Products with this eco-label are scheduled to be on sale by the end of 2008. It is expected that purchasing fishery products with this eco-label attached will result in conservation of the ecosystem and promotion of the sustainable use of resources.

(HP) Marine Eco-Label Japan: http://www.melj.jp/

## Slow Seafood Movement

Neighboring waters of Japan are bountiful seas, where there are both warm and cold currents and which produce various seafood such as originating from the north or in warm currents. Do you know what kinds of fish are caught and what kinds of dishes are eaten in your homeland?

Different types of fish are caught according to the four seasons in Japan. When it becomes the time when the fish is most delicious to eat, we say the fish is “shun” (“in season”). This means that the fish in season is abundant and has high nutritional value at the same time. The fish are also sold at reasonable prices. Why not enjoy the delicious local fish and feel the change of seasons?




## Let’s cook!

By reading up to here, you might now feel like eating fish. How about making seafood dinner today? Here are some simple tips to make your daily seafood dishes even more delicious!

**Spring**

### Katsuo-no-tataki (lightly roasted bonito)

**☆Ingredients (for four servings)**

| | | | |
|---|---|---|---|
| Bonito | half a fish | Welsh onion | 8 stems |
| *Daikon* radish | 200g | Ginger | 40g |
| Garlic | 2 cloves | Soy sauce | 5 tablespoons |
| | | *Pon-zu* | 3 tablespoons |

Point!
You can add a slightly different touch to the dish by sprinkling on fried garlic slices and chopped cashew nuts.

① Grate *daikon* and drain briefly. Slice garlic. Chop welsh onion, and grate ginger.
② Skewer three sticks into bonito. Roast the surface of one side using the highest flame of the stove. Dip it in ice water to cool and wipe off the water.
③ Slice the bonito putting the roasted side up. (*Tosa-zukuri*)
④ Place the bonito slices on a dish. Put grated *daikon* and ginger evenly on top, sprinkle welsh onion and garlic and put into the refrigerator.
⑤ Serve with soy sauce mixed with *pon-zu*.

[HP] Japan Fisheries Association “Fish World”:: http://www.fishworld.or.jp/
JF Zengyoren “The Complete Seafood Recipes”: http://www.jf-net.ne.jp/jf-net/syun/recipe_index.html

## Summer

# Squid saute with garlic

**☆ Ingredients (for four servings)**

| | | | |
|---|---|---|---|
| Japanese common squid | 1 | White wine | ½ cup |
| Garlic | 1 clove | Salt | as needed |
| Red chili | 1 husk | Pepper | as needed |
| Celery | 1 stick | Olive oil | 2 tablespoons |
| Bell peppers (red, yellow) | 1 each | | |

**☆ Direction**

① Remove arms, insides and skin the squid. Cut the body in rings in widths of about 7-8mm. Cut fins and arms into adequate sizes.
② Finely chop the garlic. Remove fibers of celery and cut diagonally into widths of about 7-8mm. Chop bell peppers into pieces of about 1cm size.
③ Heat 2 tablespoons olive oil in a frying pan, and saute garlic and red chili. When it becomes aromatic, add squid and saute until covered evenly with oil. Add celery and bell pepper, pour white wine in and saute thoroughly. Season with salt and pepper.

**Point!**

Be careful to keep the garlic from burning.

## Autumn

# Rice bowl with lightly fried saury

**☆ Ingredients (for four servings)**

| | | | |
|---|---|---|---|
| Saury | 4 fish | A (seasoning) | |
| Flour | as needed | Soy sauce | 3 tablespoons |
| Cooking oil | 3 tablespoons | Sugar | 3 tablespoons |
| Green pepper | 6 husks | Japanese sake | 3 tablespoons |
| Rice, white sesame | as needed | Mirin | 3 tablespoons |

**☆ Direction**

① Remove the head of saury. Cut the stomach diagonally to remove insides and wash thoroughly under running water. Fillet the saury and coat in flour. Poke a few holes into green pepper with bamboo skewer.
② Heat oil in a frying pan and saute the saury fillet with the skin down. When the surface is browned, turn over and saute the other side as well. Add green pepper and saute together.
③ Briefly wipe off excessive oil and pour in mixed A. Season the fillet evenly.
④ Fill the bowl with cooked rice, place ③ on top and sprinkle white sesame.

**Point!**

Remember to wipe off excessive oil in ③, which allows the seasoning cover the saury thoroughly.

## Winter

# Buri-daikon (yellowtail stewed with *daikon* radish)

**☆ Ingredients (for four servings)**

| | | (Mixed seasoning) | |
|---|---|---|---|
| Lean parts of yellowtail | 800g | Water | 6 cups |
| Daikon radish | 1 stick | Japanese sake | 1 cup |
| Konbu seaweed | 10cm long | Mirin | ½ cup |
| Some salt | | Soy sauce | ½ cup |
| | | Some ginger | |

**☆ Direction**

① Cut lean meats of yellowtail into adequate size, sprinkle salt and leave for a while, and blanche to wash away blood and unclean parts.
② Cut daikon into large rounds. Peel the skin, plane off the corners and boil.
③ Cut ginger into fine strips.
④ Put konbu, ① and ② into a pot, add mixed seasoning, cover with drop lid and stew.
⑤ When the daikon becomes soft, add soy sauce and stew until the liquid is reduced to about 1/3 of the original amount.
⑥ Place konbu cooked in ⑤ in the dish, put daikon and yellowtail on it, and sprinkle ginger strips on top.

**Point!**

Sprinkling salt and blanching removes the unpleasant smell of lean meat. This process is very important!

To have interest in the sea and marine industry and to enjoy eating seafood in season results in protecting the fisheries industry and food culture.


## Fisheries Agency

1-2-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8907
Tel: +81-3-3502-8111 (ext. 6578)
Website for the Fisheries Agency at
http://www.jfa.maff.go.jp/
(Contact for this material: Trend Analysis Section, Policy Planning Division, Fisheries Policy Planning Department, Fisheries Agency)


# 2010 北海道の水産

# Fisheries in Hokkaido

北海道水産林務部
Department of Fisheries and Forestry, Hokkaido Government

# はじめに

本道は太平洋、日本海、オホーツク海の３つの海に囲まれ、北方に広く展開する大陸棚や、黒潮から分かれて北上する暖流と北からの親潮（寒流）が交錯する道東太平洋沖などの好漁場を有しており、ホタテガイやスケトウダラ、サケ、ホッケ、コンブなど様々な水産資源に恵まれた我が国最大の水産基地となっています。

道では平成14年に「北海道水産業・漁村振興条例」を制定し、「将来にわたっての安全かつ良質な水産物の安定的な供給」、「地域を支える活力のある産業としての水産業の発展」、「水産業の基盤のみならず、自然とのふれあいなど多様な機能を発揮する漁村の発展」という水産業や漁村の振興を図るための基本理念を定めるとともに、15年から「北海道水産業・漁村振興推進計画」の基本方針のもとに、施策を展開してきました。

しかしながら、近年は漁業生産の減少や漁業就業者数の減少・高齢化がさらに進んでいるほか、若者を中心とした「魚離れ」が問題となっています。その反面、海外では欧米や中国等を中心に、水産物需要が高まっており、世界人口の増加と相まって、将来の水産物不足が危惧されています。

このため、道では、これら水産業をめぐる情勢の変化や、これまでの施策の効果に関する評価を踏まえ、20年３月に「北海道水産業・漁村振興推進計画（第２期）」を策定したところです。

本道水産業・漁村の振興のためには、条例や計画に基づき、道民の皆さんの声に耳を傾けながら、効率的・効果的な施策を展開することが重要です。

本書は、本道の漁業生産やこれに携わる人々の様子、栽培漁業や試験研究の状況などを写真、グラフ等によってわかりやすく紹介するために作成しました。本書が本道の水産業、漁村のすがたを理解していただく一助となれば幸いです。

# Preface

Surrounded by the Pacific Ocean, the Sea of Japan and the Sea of Okhotsk, and with good fishing grounds that include a broad continental shelf to the north and an intersection in the Pacific Ocean off eastern Hokkaido between a warm current flowing northward separately from the Kuroshio current and the Oyashio Current (cold current) flowing from the north, Hokkaido is Japan’s largest fishery base and abounds in fishery resources such as scallop, Walleye pollock, Arabesque greenling, salmon and kombu.

In 2002, the Hokkaido Government enacted the "Hokkaido Fisheries and Fishing Villages Promotion Ordinance" in order to boost fisheries and fishing villages in Hokkaido. The Ordinance clarifies the basic principles of "ensuring a long-term stable supply of safe and high-quality marine products", "achieving sound development of fisheries that vigorously supports our local community" and "developing fishing villages that have various functions including a basis of the fisheries industry as well as a place where people can experience nature". Since then, measures have been taken to promote the industry, under the philosophy of the "Hokkaido Fisheries and Fishing Villages Promotion Plan" in 2003.

In recent years, however, fisheries have faced the difficult problems of the decline in fishery production, the decrease and aging of fishery workers, and the reduced consumption of fish, particularly by young people. At the same time, with an increase of global population, more concerns have arisen over a shortage of marine products, stemming from a higher demand in seafood across the world, especially the US, Europe and China.

Following these changes in fishery trend and evaluations of past measures, Hokkaido settled upon the second term of the "Hokkaido Fisheries and Fishing Villages Promotion Plan" in March 2008.

In order to promote Hokkaido's fisheries and fishing villages, it is vital to follow related ordinances and plans, to listen to our citizens and to build up efficient and effective measures.

This pamphlet is designed to clarify the current state of fishery production and workers involved with commercial fishing in Hokkaido as well as the actual conditions of aquiculture and fishery experiments and research through photographs and graphs. We would be grateful if this pamphlet could help enhance your understanding of the present situations of fisheries and fishing villages in Hokkaido.

王蝶（マツカワ）
"*Oucho*" (barfin flounder)

# 目　　次
## Table of Contents

# 1 北海道水産業の位置

本道の水産業の全国に占める割合をみると、漁業生産量（属人）は26.6%、漁業生産額（属人）は19.2%、水産加工品生産量（陸上加工）は19.1%で、また、漁業経営体数、漁業就業者数、漁船数（海水動力漁船）も１割を超えており、本道は我が国最大の水産基地となっています。

## 1 Hokkaido Fisheries Statistics

Hokkaido is Japan's largest fishery base as described in its various fishery ratios vis-a-vis the national totals:26.6% in quantity of catches (by Hokkaido fishermen only); 19.2% in the value of catches (by Hokkaido fishermen only); 19.1% in production of processed marine products (land processing); and over 10% in the number of fishery management units, people working in fisheries and motorized fishing boats.

### 海面漁業・養殖業生産量　平成20年

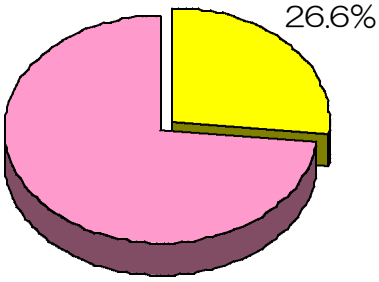
Production volume of marine fisheries and aquaculture 2008

- 全　国　5,515千トン
- 北海道　1,465千トン

（資料：農林水産省統計部「漁業・養殖業生産統計年報」）

- National　5,515,000 tons
- Hokkaido　1,465,000 tons

Source: "Annual Statistics on Fishery and Aquaculture Production" by Statistics Department, Ministry of Agriculture, Forestry and Fisheries




### 海面漁業・養殖業生産額　平成20年

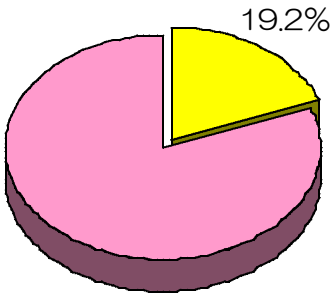
Production value of marine fisheries and aquaculture 2008

- 全　国　15,421億円
- 北海道　2,958億円

（資料：農林水産省統計部「漁業・養殖業生産統計年報」）

- National　1,542.1 billion
- Hokkaido　295.8 billion

Source: "Annual Statistics on Fishery and Aquaculture Production" by Statistics Department, Ministry of Agriculture, Forestry and Fisheries




### 水産加工品生産量（陸上加工）　平成20年

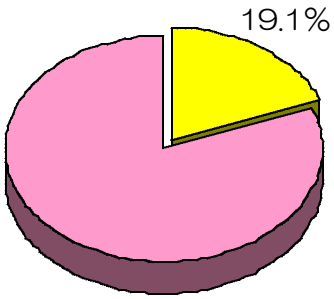
Production of processed marine products (land processing) 2008

- 全　国　3,890千トン
- 北海道　743千トン

（資料：農林水産省統計部「水産物流通統計年報」等）

- National　3,890,000 tons
- Hokkaido　743,000 tons

Source: "Annual Statistics on Marketing of Fishery Products" by Statistics Department,Ministry of Agriculture, Forestry and Fisheries




### 漁協数（沿岸地区漁業協同組合）　平成20年

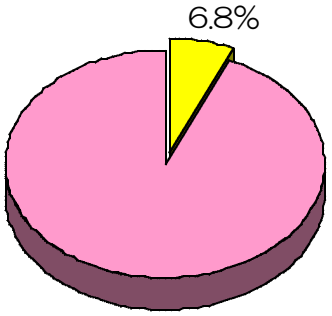
Number of coastal water fishery cooperatives 2008

- 全　国　1,094組合
- 北海道　74組合（平成22年4月1日現在は72組合）

（資料：水産庁「水産業協同組合年次報告」等）

- National　1,094
- Hokkaido　74(72as of April 1,2010)

Source: "Annual Report on Fishery Cooperatives" by Fisheries Agency



## 漁業経営体数　平成20年

Number of fishery management units 2008

■全　国　　115,196経営体

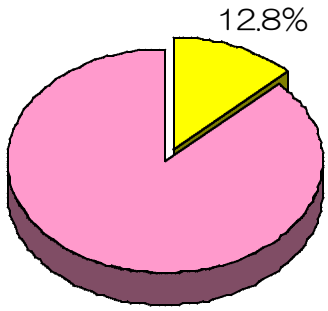
■北海道　　14,780経営体

（資料：農林水産省北海道農政事務所統計部「北海道農林水産統計年報」）

■ National　115,196

■ Hokkaido　14,780

Source: "Annual Report on Agricultural, Forestry and Fisheries Statistics in Hokkaido" by Statistics Department, Hokkaido District Agliculture Office, Ministry of Agriculture, Forestry and Fisheries




## 漁業就業者数　平成20年

Number of people working in fisheries 2008

■全　国　　221,908人

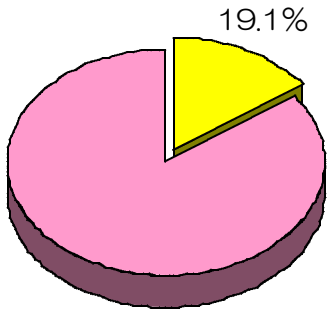
■北海道　　33,568人

（資料：農林水産省北海道暴政事務所統計部「北海道農林水産統計年報」）

■ National　221,908

■ Hokkaido　33,568

Source: "Annual Report on Agricultural, Forestry and Fisheries Statistics in Hokkaido" by Statistics Department,Hokkaido District Agliculture Office, Ministry of Agriculture, Forestry and Fisheries




## 漁港数　平成20年（平成20年4月1日現在）

Number of fishing ports 2008 (as of April 1, 2008)

■全　国　　2,921港

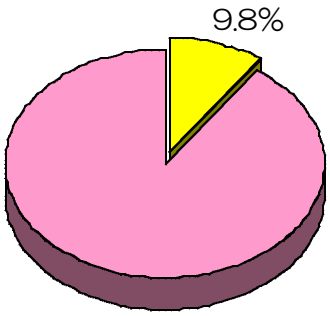
■北海道　　285港

（資料：水産庁漁港漁場整備部）

■ National　2,921

■ Hokkaido　285

Source: Fisheries Infrastructure Department, Fisheries Agency




## 漁船数（海水動力漁船）　平成20年（平成20年12月31日現在）

Number of motorized fishing boats 2008 (as of December 31, 2008)

■全　国　　289,456隻

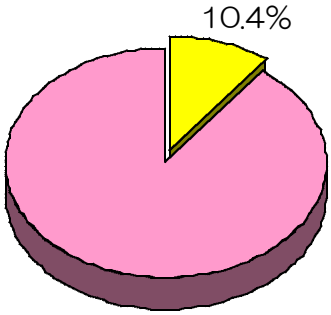
■北海道　　30,062隻

（資料：水産庁「漁船統計表」）

■ National　289,456

■ Hokkaido　30,062

Source: "Annual Statistics on Fishing Vesseles" by Fisheries Agency




※生産量・額は北海道水産林務部「北海道水産現勢」による属地統計
（属地統計：漁獲量・額を水揚げされた地域に計上したもの。水揚げした経営体の所在地域に計上したものは属人統計といい、農林水産省統計部「漁業・養殖業生産統計年報」はこれによる。）

※ Quantity and value of catches are based on statistics within territories as described in the "Annual Statistics on Fishery and Aquaculture Production in Hokkaido"by the Department of Fishries and Forestry,Hokkaido Government.
.(Statistics within territories:Statistics within territories refer to the quantity and value of catches added up to harvesting districts. Those added up to areas where harvesting fishery establishments are located are referred to as statistics by Hokkaido fishermen only,which is applicable to the " Annual Statistics on Fishery and Aquaculture Production "by the Statistics Department,Ministry of Aqriculture, Forestry and Fisheries.)

# 2 水産業の生産状況と生産構造

## （1）漁業・養殖業生産量（属地）

平成20年の本道の海面漁業・養殖業生産量は141万トンで、前年に比べて2万1千トン（1.5%）減少しています。

本道の生産量は、昭和62年に過去最高の316万トンを記録しましたが、その後、国際的な漁業規制の強化やイワシの資源水準の大幅な低下などから急激に減少し、平成5年までの6年間で2分の1程度にまで落ち込みました。

それ以後、持ち直しの動きも見られましたが、ここ数年は、140万トン前後の低い水準で推移しています。

平成20年の海面漁業・養殖業生産量のベスト5は次のとおりです。

① ホタテガイ　42万9千トン
② スケトウダラ　19万1千トン
③ ホッケ　16万5千トン
④ サケ　13万トン
⑤ サンマ　13万トン

# 2 Current Status and Structure of Fisheries Production

## (1) Quantities of fishery and aquaculture production (whitin territories)

Hokkaido's production volume by marine fisheries and aquaculture was 1.41 million tons in 2008, a decline of 21,000 tons (1.5%) from the previous year.

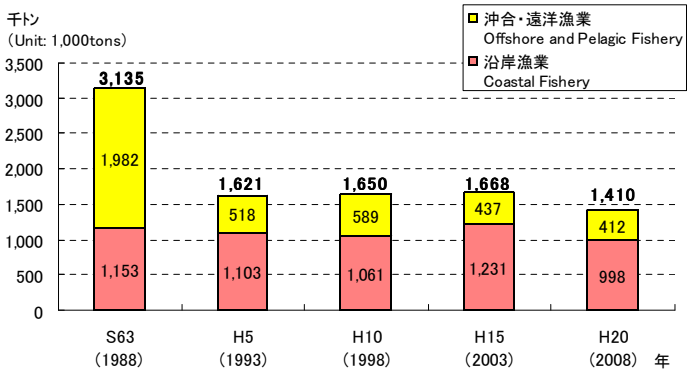
The catch reached an all-time high of 3.16 million tons in 1987, but has declined due to reinforced restrictions on international fishing operations and the drastic decline of the sardine resource level. It was almost halved over the six years until 1993.

Although there were some signs of recovery, Hokkaido's production remains low with 1.4 million tons during the past few years.

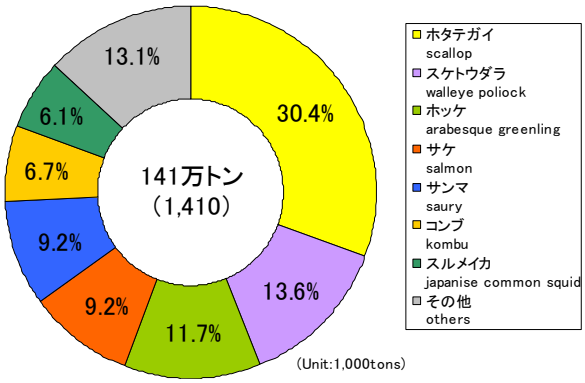
The top five fish caught in 2008 were as follows:

| | | | |
|---|---|---|---|
| ① | Scallop | 429 | |
| ② | Walleye pollock | 191 | |
| ③ | Arabesque greenling | 165 | |
| ④ | Salmon | 130 | |
| ⑤ | Saury | 130 | （Unit: 1,000tons） |

### 生産量の推移（属地）
Production volume in fishery (within territories)

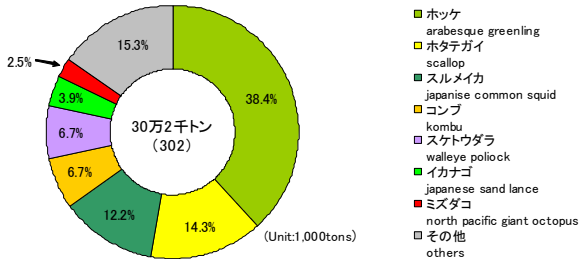



### 魚種別生産量（属地）
Production volume by fish species (within territories)

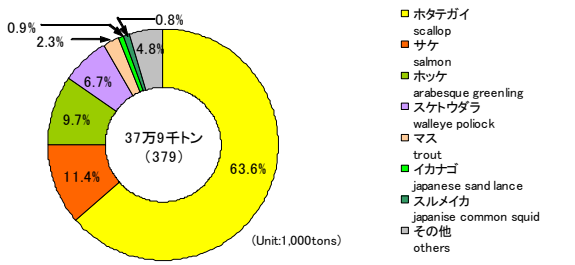



### 各海域の生産量（属地）

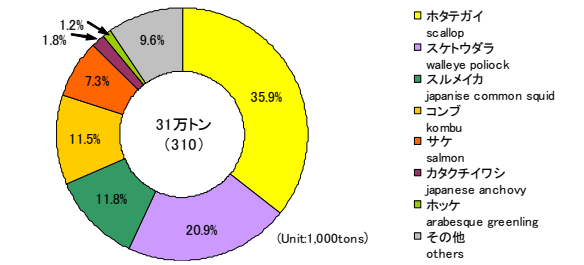
#### 日本海海域（稚内市～函館市（旧檜法華村））
Sea of Japan Area (Wakkanai City ~ Hakodate City (former Todohokke))



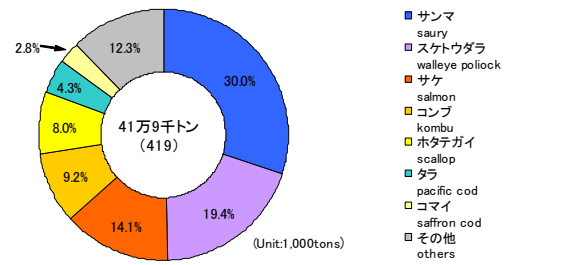

#### オホーツク海海域（斜里町～猿払村）
Sea of Okhotsk Area (Syari Town ~ Sarufutsu Village)




#### えりも以西太平洋海域（函館市（旧南茅部町）～えりも町）
Pacific Ocean Area West of Erimo (Hakodate City (former Minamikayabe Town)~Erimo Town)




#### えりも以東太平洋海域（広尾町～羅臼町）
Pacific Ocean Area East of Erimo (Hiroo Town ~ Rausu Town)




資料：北海道水産林務部「北海道水産現勢」　Source: "Annuall Statistics on Fishery and Aquaculture Production in Hokkaido" by Department of Fisheries and Forestry,Hokkaido Government

## （2）漁業・養殖業生産額（属地）

平成20年の本道の海面漁業・養殖業生産額は2,806億円で前年に比べて95億円（3.3%）増加しています。

本道の生産額は、平成３年に過去最高の4,065億円を記録しました後、イワシやスケトウダラの生産量の減少、ホタテガイや秋サケの価格の低下などから減少しており、ここ数年は、秋サケの価格回復やナマコの価格向上などによりやや上向いたものの、3,000億円を下回る水準で推移しています。

平成20年の海面漁業・養殖業生産額のベスト５は次のとおりです。

| | | |
|---|---|---|
| ① | サケ | 549億円 |
| ② | ホタテ | 540億円 |
| ③ | コンブ | 263億円 |
| ④ | スケトウダラ | 220億円 |
| ⑤ | スルメイカ | 157億円 |

## (2) Value of fishery and aquaculture production (whitin territories)

Hokkaido's value of catch by marine fisheries and aquaculture was 280.6 billion JPY in 2008, a decline of 9.5 billion yen (3.3%) from the previous year.

After the peak of 406.5 billion yen in 1991, Hokkaido has suffered a slump in the value of catches. This is mainly due to the reduced production quantities of sardines and walleye pollock and the lower prices of scallops and autumn salmon.

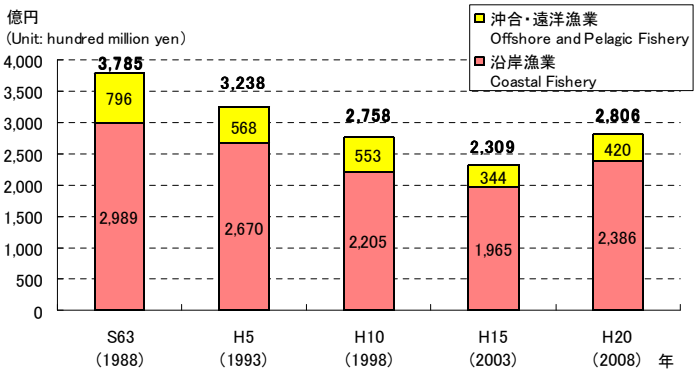
Values over the recent years remain less than 300 billion yen, though higher prices for autumn salmon and sea cucumber slightly increase the total figure.

The top five fish in production value of marine fisheries and aquaculture in 2008 are as follows:

| | | | |
|---|---|---|---|
| ① | Salmon | 54.9 | |
| ② | Scallop | 54.0 | |
| ③ | Kombu | 26.3 | |
| ④ | Walleye pollock | 22.0 | |
| ⑤ | Japanese commom squid | 15.7 | (Unit: billion yen) |

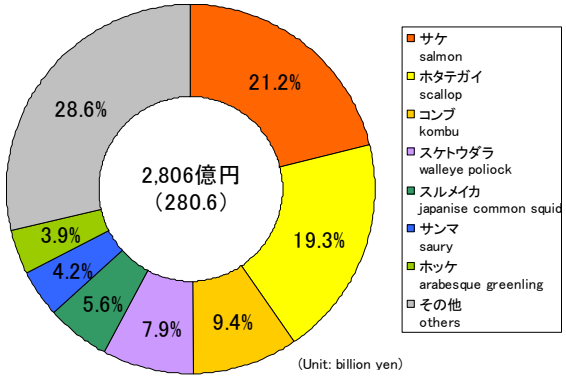
### 生産額の推移（属地）

Production value in fishery (within territories)




### 魚種別生産額（属地）

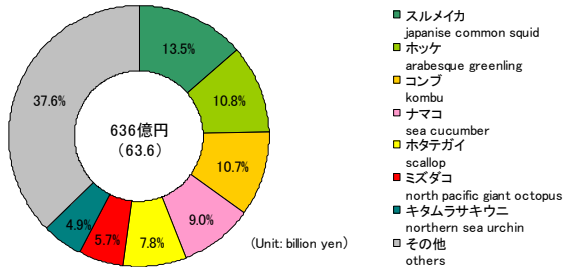
Production value by fish species (within territories)




### 各海域の生産額（属地）

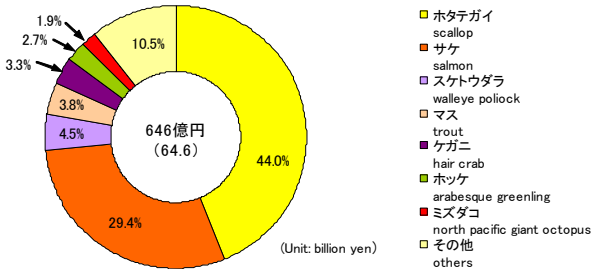
#### 日本海海域（稚内市～函館市（旧檜法華村））

Sea of Japan Area (Wakkanai City ~ Hakodate City (former Todohokke Village))



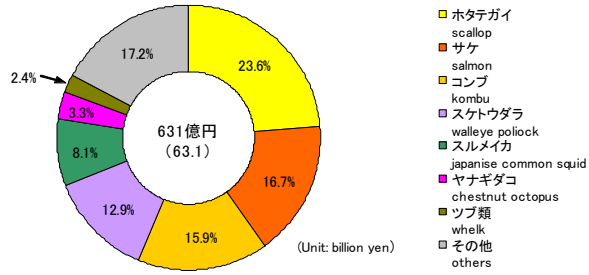

#### オホーツク海海域（斜里町～猿払村）

Sea of Okhotsk Area (Syari Town ~ Sarufutsu Village)



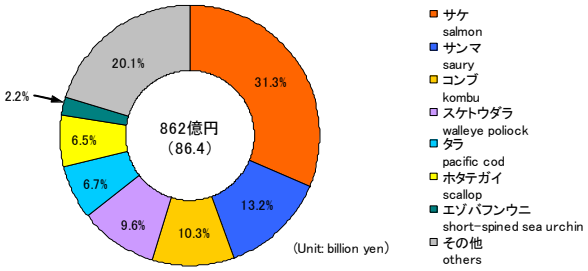

#### えりも以西太平洋海域（函館市（旧南茅部町）～えりも町）

Pacific Ocean Area West of Erimo (Hakodate City (former Minamikayabe Town)~Erimo Town)




#### えりも以東太平洋海域（広尾町～羅臼町）

Pacific Ocean Area East of Erimo (Hiroo Town ~ Rausu Town)




資料：北海道水産林務部「北海道水産現勢」 Source:"Annuall Statistics on Fishery and Aquaculture Production in Hokkaido" by Department of Fisheries and Forestry,Hokkaido Government

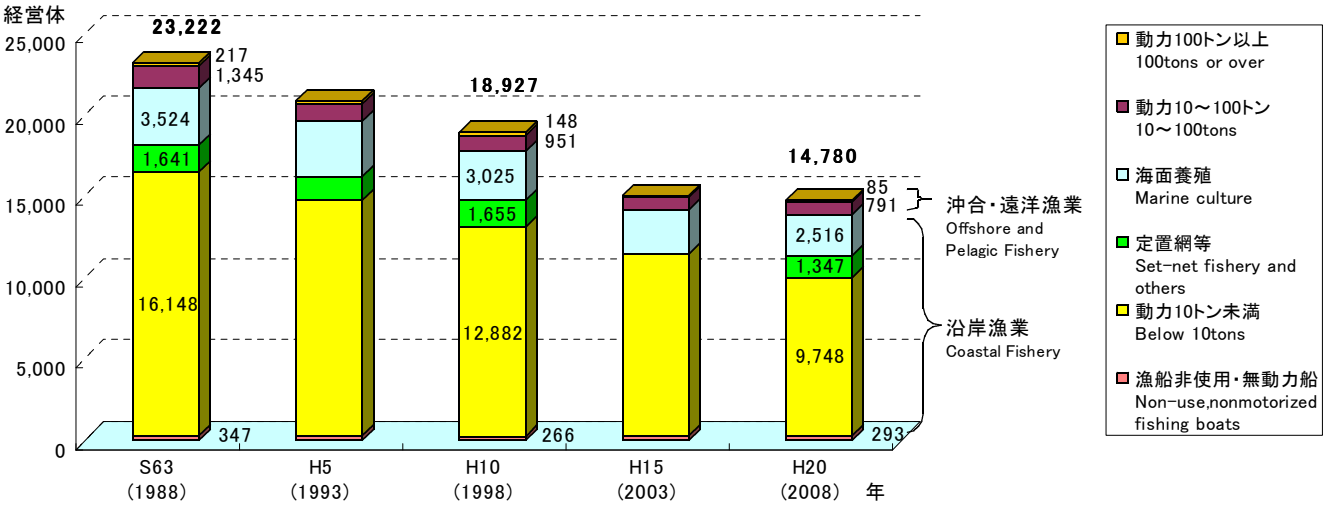
## (3) 漁業経営体数

平成20年における本道の漁業経営体数は14,780で、このうち、沿岸漁業層経営体数は13,904で94.1%を占めています。
また、漁船規模別にみると、10トン未満の動力漁船を使用している経営体（無動力漁船を使用している経営体及び漁船非使用の経営体を含む。）が10,041で67.9%を占めています。
漁業経営体数は高齢化や後継者不足に伴う休廃業などから昭和60年以降減少しています。

## (3) Number of fishery management units

There were 14,780 fishery management entities in 2008; of those, entities that engaged in coastal fishing numbered 13,904 (94.1%).
By size of fishing boat, those using motorized fishing boats under 10 tons (including fishery management units using non-motorized fishing boats and those without using fishing boats) accounted for 67.9% at 10,041.
Due to business suspension and discontinuance caused by the aging of the fishing population and lack of successors, the number of fishery management units has continued to decrease since 1985.

### 漁業経営体数の推移
Number of fishery management units




資　料：農林水産省統計部「漁業センサス」
注：平成20年はデータの集計方法が異なっており、他の年と単純に比較できない

Source: "Fishery Census" by Statistics Department , Ministry of Agriculture, Forestry and Fisheries
Note: The method of collecting data used in 2008 was different from the method used in other years; therefore a simple comparison cannot be made between thefigures for 2008 and figures for other years.

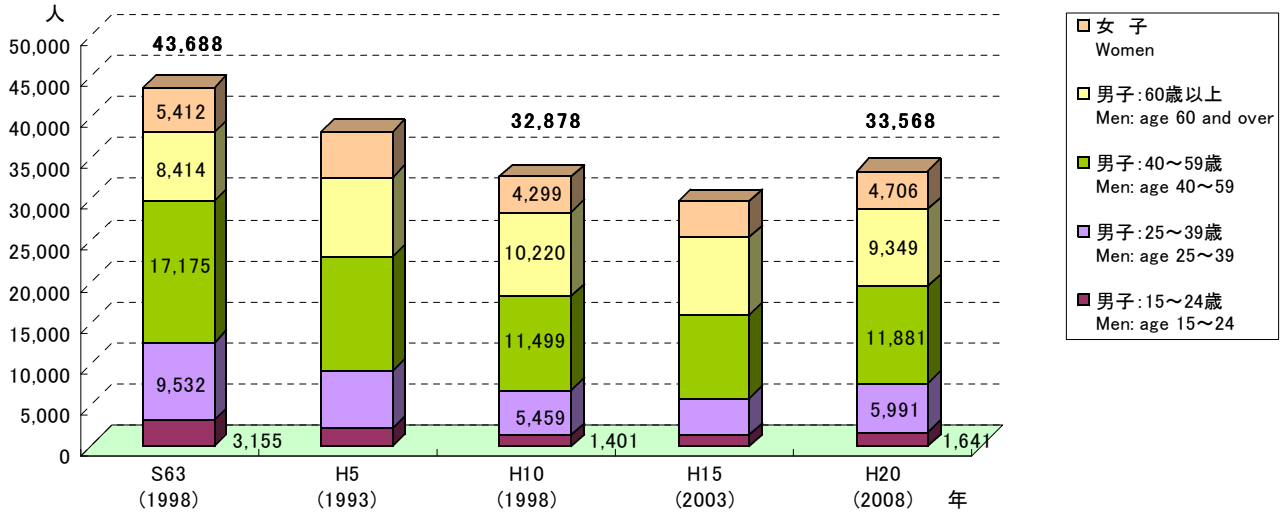
## (4) 漁業就業者数

平成20年における本道の漁業就業者数は33,568人で、男女別にみると、男子が28,862人で86%を占めています。
また、男子就業者に占める60歳以上の割合は32.4%となっており、漁業者の高齢化が進んでいます。

## (4) Number of people working in fisheries

The number of people working in fishery was 33,568 in 2008: 28,862 (86%) were male.
Out of all the male fishery workers, 32.4% were 60 years old or over, signalling that the industry continues to face an aging population.

### 漁業就業者数の推移
Number of people working in fisheries




資　料：農林水産省統計部「漁業センサス」
注：平成20年はデータの集計方法が異なっており、他の年と単純に比較できない

Source: "Fishery Census" by Statistics Department , Ministry of Agriculture, Forestry and Fisheries
Note: The method of collecting data used in 2008 was different from the method used in other years; therefore a simple comparison cannot be made between thefigures for 2008 and figures for other years.

## （5）漁船数（海水動力漁船）

平成20年における海水動力漁船隻数は30,062隻で、前年に比べて686隻（2.2%）減少しており、昭和55年の51,138隻をピークとして減少傾向が続いています。

規模別にみると、採介藻漁業（浅海における海藻、貝類の採取及びその養殖業）や刺し網漁業に使用される３トン未満の漁船が22,294隻で全体の74.2%を占めています。

また、材質別にみると、FRP（繊維強化プラスチック）船が28,514隻で全体の94.9%を占めていますが、近年は軽合金船（アルミ船）の建造が増えています。

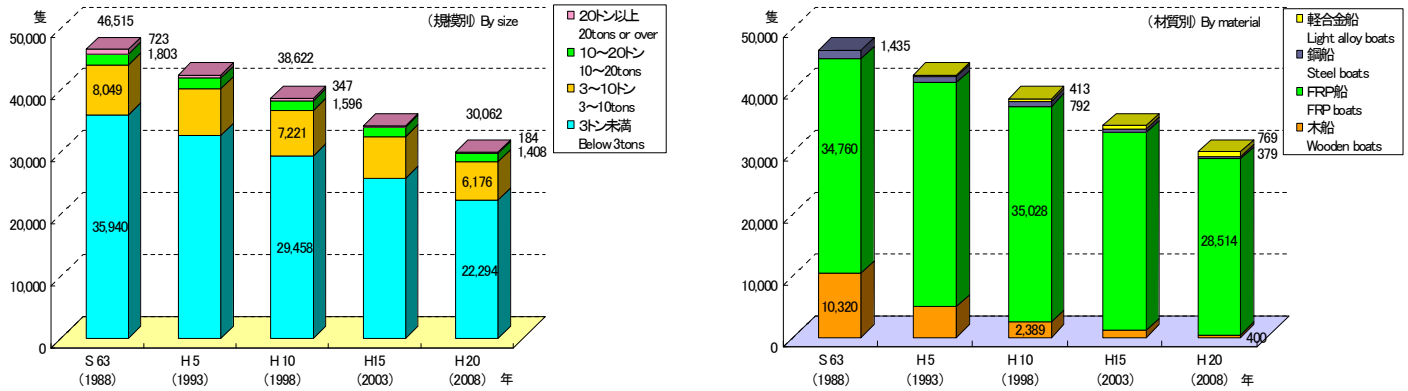
## (5) Number of fishing boats (motorized fishing boats)

There were 30,062 registered shipping boats in Hokkaido in 2008,decreasing by 686 (2.2%) from the previous year. The number has declined annually after recording an all-time high of 51,138 in 1980.

By tonnage, fishing boats below 3 tons, which are used primarily for shellfish and seaweed gathering fishery (both shallow-water gathering fishery and aquaculture) and gill net fishery, accounted for 74.2% of the total at 22,294.

By material, FRP (fiber reinforced plastic) boats accounted for 94.9% at 28,514, and the construction of light alloy ships (aluminum boats) has increased recently.

### 漁船数の推移
Number of fishing boats




資　料：北海道水産林務部「北海道漁船統計表」　Source："Statistical Table for Fishing Boats in Hokkaido" by Department of Fisheries and Forestry, Hokkaido Government

## （6）水産加工品生産（陸上加工）

平成20年の水産食品製造事業所数は1,079で、前年に比べて18（1.6%）減少しており、年々減少する傾向にあります。

また、平成20年における水産加工（陸上加工）品の生産量は74万3千トンとなっています。

このうち、冷凍水産物が43万１千トンで58.0%を占めており、これに続いて塩蔵品が８万３千トンで11.2%、飼肥料が４万１千トンで5.6%なっています。

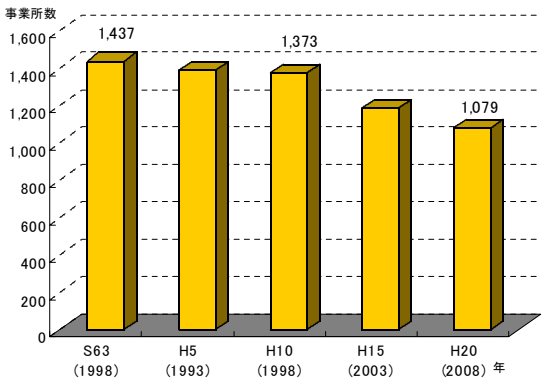
## (6) Production of processed marine products (land processing)

There were 1,079 seafood manufacturers in 2008, a decline of 18（1.6%）from the previous year. The figure continues to drop.

The production of processed marine products (on land) in Hokkaido in 2008 was 743,000 tons.

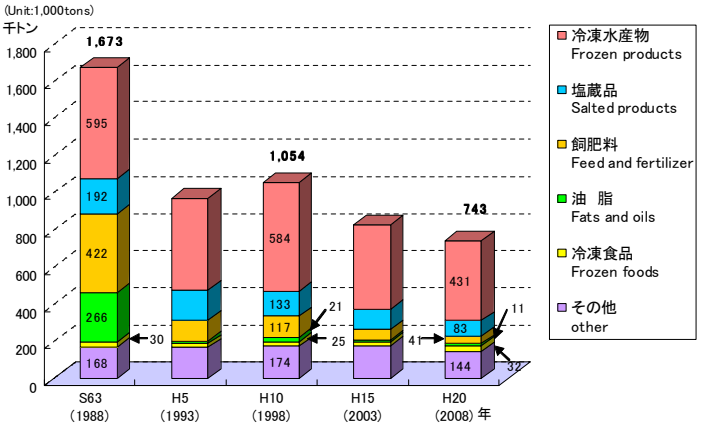
The breakdown of processed marine products for the year showed that frozen marine products accounted for 58.0% of the total at 431,000 tons, followed by salted products (83,000 tons; 11.2%) and feed and fertilizer (41,000 tons; 5.6%).

### 水産食品製造事業所数の推移
Number of seafood manufacturers




資　料：北海道総合政策部「工業統計調査結果」
Source: "Census of Manufacturers report" by Department of Policy Planning and Coordination, Hokkaido Government

### 水産加工品生産量の推移
Production of processed marine products




資　料：農林水産省北海道農政事務所「北海道農林水産統計年報」
（財）日本水産油脂協会「水産油脂統計年鑑」
注：平成15年以降はデータの集計方法が異なっており、他の年と単純に比較できない。
Source："Annual Report on Agricultural, Forestry and Fisheries Statistics in Hokkaido" by Statistics Department, Hokkaido District Agriculture Office, Ministry of Agriculture, Forestry and Fisheries
"Statistical Yearbook on Oil and Fat from Fishery Products" by Japan Marine Oil Association
Note : The method of collecting data used after 2003 was different from the method used in other year therefore a simple comparison cannot be made between the figures.

# 1 栽培漁業の推進

本道では、サケ・マスのふ化放流やホタテガイの地まき放流・養殖、コンブの養殖などが盛んに行われており、これらは本道の基幹漁業となっています。

また、各地でウニの種苗放流が行われているほか、日本海のヒラメ、ニシン、アワビ、えりも以西太平洋のマツカワ※の種苗生産・放流など、海域の特性に応じた栽培漁業が行われています。

さらに、近年急激に需要が高まっているナマコの資源を増やすため、道や漁協が協力し、栽培漁業技術の開発に取り組んでいます。

※マツカワ：ブランド名「王蝶（おうちょう）」で売り出し中の大型のカレイ

## 1 Promotion of Stock Enhancement and Farming Fishery

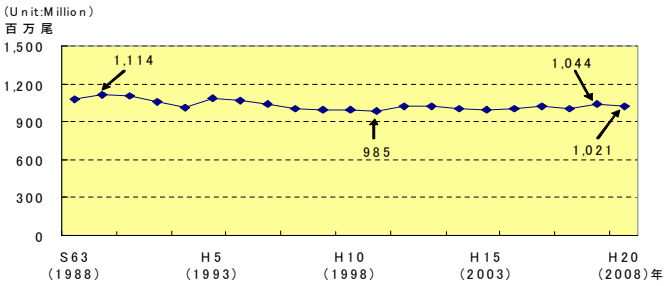
The hatching and releasing of salmon and trout, seabed releases and cultivation of scallops and kombu, etc. have been flourishing in Hokkaido, making up the key fishery of the prefecture.

Stock enhancement varies from seed release of sea urchins in many places to seed production and release of Japanese flounder, herring and abalone in the Sea of Japan, and of Barfin flounder in the Pacific Ocean area west of Erimo Town, respectively.

More recently, demand for sea cucumber has increased drastically. In order to increase the resource quantity, the Hokkaido Government, together with fishermen's cooperatives, works on the development of the technology in its enhancement.

* Barfin flounder: a large species of flounder, with the brand name of "Oucho (king flounder)"

**種苗の放流実績（シロサケ）**
Past record on seed releasing(Chum salmon)




資　料：独立行政法人水産総合研究センターさけますセンター
北海道立総合研究機構さけます・内水面水産試験場
Source: Incorporated Administrative Agency National Salmon Resources Center, Fisheries Research Agency; and Hokkaido Research Organization, Salmon and Freshwater Fisheries Reseach Institute

**種苗放流一覧（主要魚種）**
A list of seed releasing (major fish)

単位：千尾、千個(Unit:1000)

| 区　分 | H16 (2004) | H17 (2005) | H18 (2006) | H19 (2007) | H20 (2008) |
|---|---|---|---|---|---|
| ニシン herrung | 4,014 | 4,737 | 5,540 | 4,809 | 6,453 |
| ヒラメ japanese flounder | 2,342 | 1,158 | 2,482 | 1,786 | 2,763 |
| マツカワ barfin flounder | 173 | 138 | 1,330 | 1,449 | 1,499 |
| ホタテガイ scallop | 2,943,673 | 2,895,425 | 3,074,998 | 3,186,453 | 3,191,539 |
| エゾバフンウニ short-spined sea urchin | 56,741 | 56,075 | 53,564 | 52,364 | 51,815 |

資　料：（社）全国豊かな海づくり推進協会「栽培漁業種苗生産、入手・放流実績」
Source: "Materials on the production and release of fingerlings for stock enhancement" by the National Association for the Promotion of Productive Seas

# 2 資源管理型漁業の展開

本道周辺水域の水産資源は総じて減少しており、今後、漁業経営や水産物供給の安定を図るためには、資源管理型漁業のより積極的な展開が必要です。

道では、行政・研究機関等で構成する「水産資源管理会議」において検討された主要23魚種の資源評価と管理方法などを「北海道水産資源管理マニュアル」として周知するなど、資源管理型漁業の促進に努めています。

## 2 Establishment of Resource Manegement-Oriented Fisheries

In recent years, fishery resources in the seas surrounding Hokkaido have been decreasing. Given such circumstances, further promotion of resource management-oriented fisheries will be required to ensure stable fishery management as well as a stable supply of marine products.

The Hokkaido Government has strived to promote resource management-oriented fisheries. As part of the efforts, government officials, researchers and other related members met at the Marine Resource Management Conference to define the methods of evaluating and managing 23 key fish species. Those methods are now available in the Manual for Management of Fishery Resources in Hokkaido.


**北海道水産資源管理マニュアル（北海道水産林務部）**
The Manual for Management of Fishery Resources in Hokkaido (Department of Fisheries and Forestry, Hokkaido Government)

**資源管理（ケガニの検量）**
Resource management by measurement of hair crab

# 3　漁業経営の安定と漁業経営体の育成・確保

本道の漁業経営は、漁獲量の減少や燃料価格の高騰による漁業経費の増大などから厳しい状況にあるほか、漁業就業者の減少・高齢化等が課題となっています。

道では、漁業経営の体質強化に向けた取組を促進するとともに、道立漁業研修所において漁業者や後継者の技術修得研修を行っています。また、道内各地では、担い手の確保や育成に向け、市町村や漁協の連携による様々な取組が行われています。

## 3 Stabilization of Fishery Management and Security in Fishery Management Entities

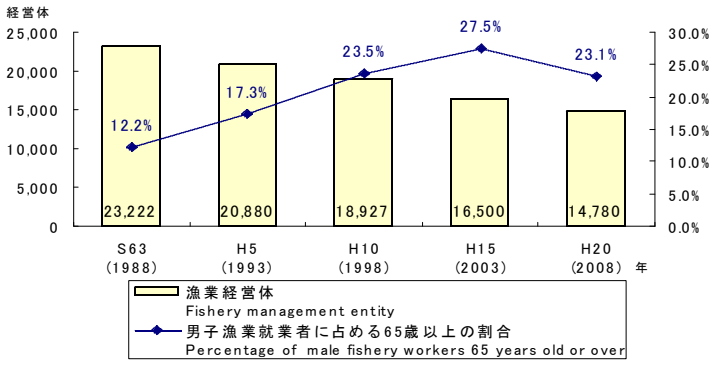
Fishery management in Hokkaido is experiencing severe hardships with the decline of catches, in addition to higher expenses followed by a rise in fuel prices. The fewer number and aging of fishery workers are also serious concerns.

In order to overcome these challenges, the Hokkaido Government promotes actions towards stronger fishery management, and provides both active and prospective fishery workers with training programs.

Various efforts are also conducted by municipal governments and fishermen's cooperatives, hoping to secure the workforce.

**漁業経営体数及び高齢比率の推移**

Number of fishery management entities and the rate of aging of fishery workers




**漁業研修所の研修の様子**

A training session at the fishery training institute

資　料：農林水産省統計部「漁業センサス」　注：平成20年はデータの集計方法が異なっており、他の年と単純に比較できない。

Source: "Fishery Census" by Statistics Department, Ministry of Agriculture, Forestry and Fisheries

Note: The method of collecting data used in 2008 was different from the method used in other years; therefore a simple comparison cannot be made between the figures for 2008 and figures for other years.

# 4　安全・安心な水産物の供給と競争力の強化

近年、国内では食の安全・安心に対する関心が高まる一方、全世代で「魚離れ」が進んでいることから、道内各地で衛生管理体制の整備等による水産物の高品質化の取組や漁業者等によるＰＲ活動、食育活動などを通じた愛食運動が行われています。

また、世界的に水産物需要が増大する中、国内消費の拡大や輸出増大に向けた取組が進められています。

## 4 Stabilization of Fishery Management and Improvement of Fishery Cooperatives Management Base

Today in Japan, a stronger interest in food safety and reliability does not result in larger fish consumption. There is a series of programs running in an effort to encourage people to eat safer and more tasty seafood: quality improvement of seafood with hygiene control systems, promotional activities by fishery workers, and diet education as well as other food campaigns.

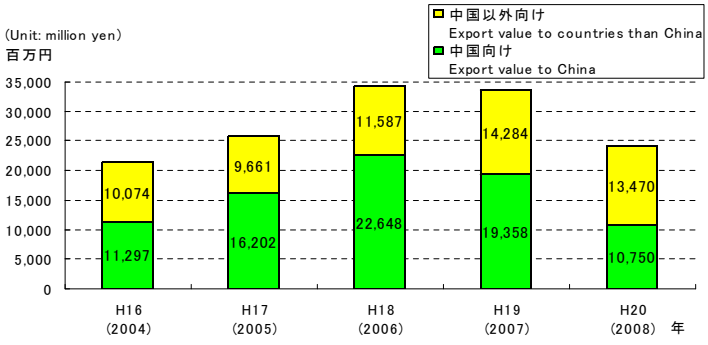
Looking at increasing worldwide demands for seafood, Hokkaido has strived to expand both domestic and international consumption of local marine products.

**漁業者による出前事業の様子**

A lecture on demand, given by a fisherman

**「魚介類及び同調整品」の道内港からの輸出額**

Change in export value of "seafood" and "prepared seafood" from Hokkaido ports




資　料：函館税関　Source: Hakodate Customs

# 5　環境と調和した水産業の展開と環境保全

水産資源を維持増大して持続的に漁業を行うためには、水産資源の生息環境を保全する取組や、漁業に大きな被害を与えているトド等の野生生物との共存対策が必要です。

道内各地で漁業者等が連携し、磯焼け解消に向けた取組や藻場・干潟の保全活動、植樹活動、外来魚の駆除等が進められています。

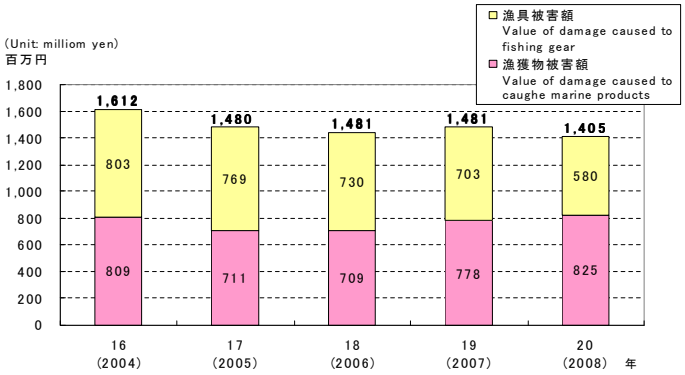
## 5 Development of Environmentally-Sustaining Fisheries and Environmental Conservation

It is essential for sustainable fishery with equivalent and larger resources to safeguard favourable habitats for marine resources. Measures must be introduced to make the industry coexist with wild animals: Steller's sea lions have thus far presented significant damages for the industry.

In cooperation with fishery workers across Hokkaido, the government is making countermeasures against rocky shore denudation, while taking actions to protect seaweed beds and tidal wetlands, planting trees, and exterminating introduced fish species.

**トドによる漁業被害の推移**

Change in the fishery damage caused by Steller's sea lion




**藻場の保全活動（岩盤清掃）**

Cleaning bedrock, as a part of seaweed bed maintenance

資　料：北海道水産林務部
注：トド来遊期の10月から６月までを集計

Source: Department of Fisheries and Forestry, Hokkaido Government
Note: The data was collected from October to June each year, when Steller's sea lions make their annual migration to Hokkaido.

# 6　快適で活力ある漁村地域の創出

快適で活力ある漁港・漁村づくりを進めるため、漁船の係留や水産物の陸揚に必要な漁港の基本施設の整備に加え、漁業集落排水施設や防風防除施設などの就労・生活環境の整備が進められています。

また、海洋性レクリエーションや体験漁業など、漁村に対するニーズの高まりから、道内では海を生かして地域を活性化させる取組が進められています。

## 6 Creation of Comfortable, Vital Fishing Villages

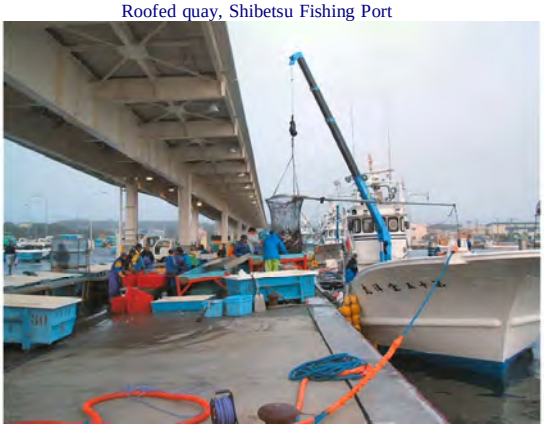
Infrastructure is under development to build better boat mooring and unloading facilities, in an effort to create comfortable, lively fishing ports and villages.

Drainage facilities, windbreaks and snowbreaks are also installed for better working and living environments in fishing communities.

Meanwhile, many sea-focused programs have been introduced to revitalize the community. They are backed by a higher need for fishing villages with marine recreation and hands-on fishery experience.

**屋根付き岸壁（標津漁港）**

Roofed quay, Shibetsu Fishing Port



**体験漁業の取組**

Hands-on fishing approach

# 7 試験研究の充実強化と技術普及

道では、本道水産業の持続的な発展にむけて、水産資源の増養殖・管理に関する技術開発や付加価値の高い製品づくり、環境保全のための調査・研究を推進するとともに、知識や技術の普及に取り組んでいます。

## 7 Enhancement of Research and Experimentation and Dissemination of Technologies

For sustainable development in local fisheries, Hokkaido has been upgrading marine resource enhancement and management technology: inventing value-added products, studying environment conservation, and disseminating new knowledge and technology across the prefecture.

**アカガレイの耳石採取**
Otolith picking from flathead flounder

**船上での調査状況（プランクトン調査）**
Research being conducted on the deck of a ship（Plankton research）

# 8 国際漁業の情勢

我が国は、平成８年の国連海洋法条約の発効に伴い「排他的経済水域及び大陸棚に関する法律」を制定し、排他的経済水域を設定しました。韓国や中国との間で漁業協定を発効しているほか、ロシアとの間では、毎年、政府間協定や民間協定による操業が行われています。また、北方四島周辺水域における日本漁船の操業については、平成10年に協定が締結され、スケトウダラやタコなどが漁獲されています。

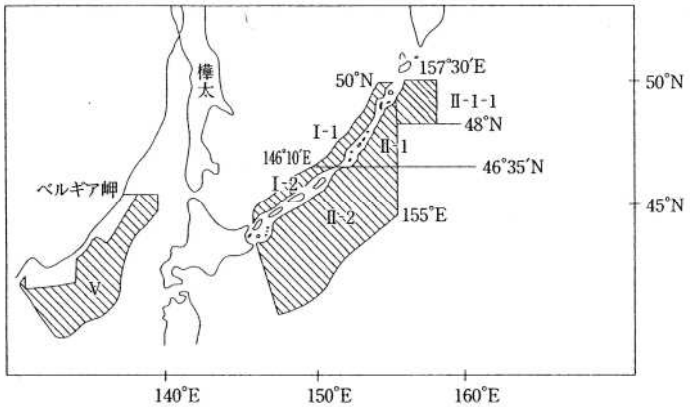
## 8 International Fishery Trends

With the enforcement of the United Nation's Convention on the Law of the Sea, the Japanese Government enacted the Law Concerning Exclusive Economic Zones and Continental Shelves in 1996, to establish an exclusive economic zone.

Japan has entered into fishery agreements with South Korea and China. Meanwhile, Japan and Russia renew governmental and private agreements about fisheries each year.

In 1998, an agreement concerning the operation of Japanese fishing boats around the northern territories was concluded for catching walleye pollock and octopus.

**2010年の日本漁船の操業水域図** Fishing zone for japanese fishing boats in 2010




**○相互入漁水域**

| | | |
|---|---|---|
| **第Ⅰ－１水域** | **千島（オホーツク海側北部）** | 底はえなわ |
| **第Ⅰ－２水域** | **千島（オホーツク海側南部）** | 底はえなわ |
| **第Ⅱ－１水域** | **千島（太平洋側北部）** | 中層及び着底トロール<br>底はえなわ |
| **第Ⅱ－１－１水域** | **千島（太平洋側北部）** | 中層及び着底トロール<br>底はえなわ |
| **第Ⅱ－２水域** | **千島（太平洋側南部）** | 底はえなわ、いかつり |
| **第Ⅱ水域** | **千島（太平洋側）** | 棒受網 |
| **第Ⅴ水域** | **日本海水域** | いかつり |

**○有償入漁水域**

| | | |
|---|---|---|
| **第Ⅱ－２水域** | **千島（太平洋側南部）** | 中層及び着底トロール |

北海道の水産　（平成22年4月）
発　　行　北海道水産林務部
企画・編集　北海道水産林務部総務課
〒060-8588　札幌市中央区北３条西６丁目
ＴＥＬ：(011)231-4111
ＦＡＸ：(011)232-4140
表紙の写真　コンブ干場（浦河町）　写真提供「北海道の漁業図鑑（北海道水産業改良普及職員協議会）」

Hokkaido Fisheries　（Published in April 2010）
Published by Department of Fisheries and Forestry , Hokkaido Government
Planned and edited by the Administrative Division ,
Department of Fisheries and Forestry
Nishi 6 , Kita 3 , Chuo-ku , Sapporo , Hokkaido 060-8588 Japan
Tel : 011-231-4111
Fax : 011-232-4140
Front cover : Sun-drying kombu on the ground（Urakawa Town）

# Japanese
## Seafood Exports;
The Secret Behind the Quality

日本水产品的出口　品质背后的秘密


日本国水产厅

邮编 100-8907 东京都千代田区霞关 1-2-1

电话 +81-3-3502-8111

http://www.maff.go.jp/e/oishii/


Printed in Japan


# Japanese
## Seafood Exports;
The Secret Behind the Quality

日本水产品的出口　品质背后的秘密


おいしい
日本食品的质量

# 生活在大海的怀抱里，
# 日本人永远与渔业相伴。

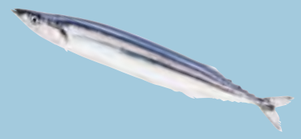
日本四面环海，自古以来就出产丰富的水产品，
因此形成了独特的饮食文化。
源自日本的“SUSHI”现在正逐步被世界各国所接受，
可谓是基于独特饮食文化的典型日本饮食。
日本近海拥有大陆架、寒流与暖流相互交汇的“潮目”，
水产资源极为丰富，被誉为世界三大渔场之一。
目前为实现水产资源的可持续利用，
正在积极开展“创造养育型渔业”，
通过渔业管理、投放渔苗贝苗、
保护渔场环境来实现水产资源的增殖等。



刊登照片仅用于内容说明。根据季节与产地的不同，与实际情况会有一定出入。

# 领导世界料理市场的日本水产品

日本是一个四面环海的水产资源大国。
随着日本饮食在世界各地越来越受欢迎，
使得当今的水产品出口一直保持稳步增长。
下面介绍一下不断变化的日本水产品情况。



## 世界闻名的日本饮食及发展前景

日本饮食所处的环境正在发生着变化。日本料理店原来只是开设在日本人街区毫不显眼的角落里，现在则到处开设分店，当地的人们也开始越来越多地光顾。在有的国家里日本饮食甚至已经深深扎根于当地的日常生活之中。

据覆盖全球85个城市的美食指南透露，在美国被评为高等级的餐馆中，有20%是日本料理店。在英国伦敦，经营日本饮食的饭店得到最高评价也成为了人们议论的话题。伦敦的寿司店已经有50多家，由此可以看出欧美也越来越重视日本饮食。与此同时，在奥运景气刺激下的中国北京，预计将要接待来自世界各地的游客及寻求新奇美味的国内游客，相继开设了一些寿司店。

像这样，日本饮食现在已经随着日本文化扩大到世界各地，除“保健”功能外，还由于“高质美味”、“美观”、“吃日本料理更时尚”而大受欢迎。

在许许多多的国家都可以看到寿司店了

## 全球水产品消费量的增加与日本水产品出口的增长

一提起日本饮食就离不开水产品。作为岛国，日本自古以来就积极摄食水产品，形成了独特的饮食文化。日本是世界第一长寿国家，营养专家的调查结果显示，那是因为日本人将水产品作为蛋白质来源，并从水产品中摄取了充足的维生素与矿物质。

另外，由于发生BSE及人们健康意识的提高，世界各地的水产品消费量在最近10年间急剧增长了50%。其中拥有13亿人口的中国在最近10年间的消费量增长约1倍。因此，多年来一直发展鱼食文化与独特水产业的日本的水产品成了当今最受人们关注的焦点。

日本渔业人员及渔业协同组合的生产人员此前一直把主要精力放在国内需求上，但现在也开始将目光转向世界市场。

热闹的筑地市场

## 通过提高水产技术，可实现高品质、稳定供应

为了在将来能向市场持续不断地供应高品质的日本水产品，日本方面正在积极采取各种各样的措施。

为我们提供健康水产品的美丽大海

### 保护水产资源

为保护水产资源，日本近年来设立了MEL（Marine Eco-Label Japan，日本海洋生态标签），主要对保护资源与海洋的可持续发展型渔业所提供的水产品提供认证，以及向消费者提供可持续发展型渔业的公共宣传。

MEL 日本的标志

另外，国家和地方公共团体通过许可制度，除对渔业进行管理外，还实施对渔获总量进行限制的TAC制度，渔业人员、地方公共团体、国家共同开展休渔、种苗投放等，努力恢复渔业资源。

### 养殖鱼的风险管理与最先进的养殖技术

在养殖鱼的生产过程中，从风险管理和向消费者进行食品安全公共宣传的角度出发，正在积极致力于鱼苗、饵食、投药等生产记录的透明化。另外，还成功实现了原来一直属于世界性难题的金枪鱼的完全养殖等，确立了世界顶级养殖技术。

养殖情况

### 保鲜与质量管理

在日本加工工厂里按照HACCP开展食品管理，基于‘SUSHI’等对鱼进行生食的文化而确立了从捕捞一直到消费的低温运输体系，致力于从生产到消费的可追踪性等，从而开展新鲜而稳定的水产品及水产加工品供应。

此外，近年来，日本一些具有代表性的鱼市场如筑地等也开始引进最先进的冷冻技术。这种在冷冻过程中不破坏细胞的最新冷冻技术几乎不影响新鲜度与风味，因此不仅在日本国内备受关注，甚至还吸引了来自海外的考察团。通过这项具有划时代意义的技术可以实现常年稳定供应，今后有可能给全球水产业造成深远影响。

HACCP 对应加工工厂的情况

近年来日本的水产品开始大量出口。日本水产品出口额在近几年里保持约20%的年增长率，呈现出稳步增长的局面。各种日本水产品不断出口到亚洲、欧美、中东、非洲等世界各地。

请抓住这个机会体验一下来自日本的水产品。这扇大门正朝向世界打开。

并不仅仅是寿司

# 用日本水产品创造新菜谱！

充分发挥日本海产品的原料优势，轻松制作健康食品。请务必体验一下味道与品质。

## 香烧鰤鱼

【主要原料】
鰤鱼（4片）、粗黑胡椒面（少许）、辣椒（红、黄各1个）、蒜（2片）、橄榄油（2大匙）、意大利芹（适量）、红胡椒（适量）、柠檬汁（适量）

【做法】
（1） 在鰤鱼上撒少许盐与粗黑胡椒面，放上5～6分钟，入味后涂上适量小麦淀粉。
（2） 用铁丝篦将柿子椒烤黑，剥去薄皮，竖着切成2半，撒上少许盐、胡椒。
（3） 将蒜切成薄片，去除里面的芯。
（4） 在煎锅内放入橄榄油与蒜，小火加热，蒜焦黄后取出。
（5） 将（1）的鰤鱼放入（4）的煎锅内，中火加热，使两面着色。
（6） 把鰤鱼和柿子椒一起盛到盘内，撒上蒜与意大利芹，根据个人喜好放红胡椒、柠檬汁。

## 醋腌扇贝与生火腿　拌葡萄柚

【主要原料】
扇贝柱（8个）、菜豆（10根）、葡萄柚（1个）、生火腿（120g）、橄榄油（3大匙）、盐（少许）、胡椒（少许）

【做法】
（1） 将扇贝柱切成一半厚，菜豆放盐煮5分钟左右，斜着切成3段。挤出相当于1/4个葡萄柚的汁，与橄榄油、盐、胡椒混合。剩下部分分成小瓣，剥去薄皮。
（2） 将（1）一同放入大碗内，稍放一下，用手把火腿掰成容易吃的小块，放进去搅拌。

## 真鲷拌意大利细面条

【主要原料】
意大利细面条（320g）、真鲷（鱼块4段）、绿橄榄（30粒）、小番茄（12个）、蒜（4片）、橄榄油（90ml）、白葡萄酒（80ml）、水（300ml）、盐（少许）、胡椒（少许）

【做法】
（1） 往真鲷上撒盐、胡椒。橄榄去掉种子后切成块，大蒜切碎。去掉小番茄的蒂。
（2） 烧上满满一锅的水，加1%左右的盐，开始煮意大利细面条。
（3） 在煎锅内放上橄榄油、蒜，小火加热，炒至香味出来。
（4） 将真鲷放入（3）中，煎出颜色后翻过来，浇上白葡萄酒，淋上白酒。
（5） 在（4）中加入橄榄、小番茄、水，小火炖至无汤，在煎锅内将真鲷切成便于食用的小块。
（6） 煮好的意大利细面条控除水分，加入（5）内搅拌，用盐、胡椒调味。

## 西红柿炖茄子秋刀鱼

【主要原料】
秋刀鱼（4条）、茄子（2只）、野生芦笋（6只）、蒜（2片）、西红柿酱（罐装 800g/罐）、橄榄油（3大匙）、盐（1小匙）

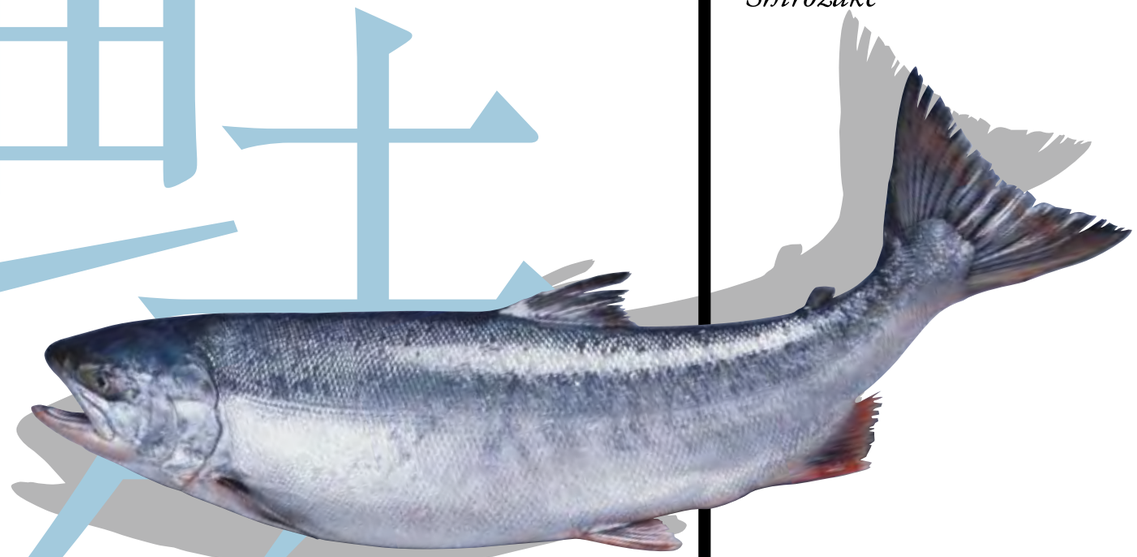
【做法】
（1） 茄子切成1.5cm见方，把野生芦笋根部的坚硬部分切除，切成3段左右。秋刀鱼去头、内脏，切成4段左右。
（2） 将蒜切碎，加入1小匙盐和橄榄油。
（3） 将（2）放入煎锅，把（1）加在上面，盖上盖子，中火炖10分钟左右。



# 鱼 鲑 鱼

# CHUM SALMON

*Shirozake*



烤鲑鱼是日本最常见的家庭料理

被称为“红色鱼子酱”的鱼子就是鲑鱼卵。在欧盟各国的需求有望达到鱼子酱的水平

## 以健康著称、被誉为天然鲑鱼的日本白鲑

以欧美为中心，随着人们健康意识的提高，对日本白鲑的需求也不断增长。日本白鲑是在野生环境下生长的鲑鱼，经过长达120年的孵化放养，目前已经拥有很高的资源保有量。

现在日本产白鲑正按照HACCP开展食品管理，在海外工厂进行一次或二次加工，将其中的30% ～ 40%出口到欧盟国家。欧盟国家的水产品批发商按照鱼块或鱼片的方式分类，将其加工成炸鱼或冷冻食品，受到人们广泛喜爱。

在这种情况下，开始强化盐渍白鲑鱼子的出口。最近对白鲑在日本国内加工，然后出口到美国。通过在日本国内加工白鲑，确立“一次性冷冻（不进行二次冷冻）”，可以使原料比以往更加新鲜，从而使日本产白鲑受到各方面的广泛关注。在日本捕捞加工、优质安全的日本产白鲑走上世界各地的饭桌，这一天将不再遥远。

### 主要渔场

### 渔获量

229,279 吨
（2005年／还包括白鲑以外的鲑类）

### 主要捕捞地

北海道、岩手

### 生产者的声音

有利于保护资源与新鲜度的定置网捕捞成为主流

与北美的红鲑及北欧的大西洋鲑不同，日本鲑鱼被称为白鲑，是一种脂肪含量少的野生鲑鱼。除健康外，人们对野生的放心感，以及从捕捞上来开始就实施严格的温度管理，因而保持了良好的新鲜度，这些均受到了欧美国家的好评。目前在北海道捕捞的白鲑冷冻后通过中国的加工场销往全世界，今后将改为在日本国内加工，这样更有利于降低成本和保鲜，并以日本品牌开发出口产品，努力获取生态标签等。

# 真鯛

## 在日本具有悠久历史的高级鱼<br>因此养殖业也非常发达

闪着红光的身姿、晶莹剔透的身体、甜而有嚼头的口感——真鲷在日本自古以来就被视为“吉祥鱼”，是喜庆典礼等不可或缺的高级食物原料。与其他鱼类相比，真鲷没有太多的腥味与脂肪等，新鲜度保留得时间更长，被人们制成生鱼片、烤鱼、鱼汤、干烧鱼、火锅、鲷饭等各种各样的料理。

由于真鲷喜欢单独活动，不聚集成群，因此野生真鲷的捕捞量非常少，在经营中被列为高级鱼。但以前被视为不可能实现的人工养殖技术，现在已经形成了从种鱼身上采卵、饲养的人工孵化技术，人工养殖真鲷的成熟年限短于野生真鲷，味道很好，可以常年供应，已经走上了家庭餐桌。作为主要出口对象的韩国、中国也作为生鱼片或寿司来食用真鲷，近年来这方面需要不断扩大。除韩国、中国外，日本各地的养殖经营者、加工经营者还开始面向全球，积极开发新产品，在生鱼片、寿司之外的领域里展现真鲷的魅力。

**主要产地**
爱媛、熊本、三重、
长崎、高知、和歌山

**养殖量**
76,082吨（2005年）


真鲷的生鱼片


西式白汁红肉

# RED SEA BREAM | 真鲷

*Madai*

### 生产者的声音


完整的真鲷。
一条鱼占满整个盘子的喜庆料理

真鲷以其美观、味道好而成为喜庆及日本料理的代表性鱼类。爱媛县的产量占整个人工养殖真鲷的约50%。真鲷养殖的兴起只是最近30年～40年的事，但是却取得了惊人的发展，成为日本水产养殖最成功的典范。目前养殖场、HACCP认证加工场遍及日本各地，人们已经可以常年品尝到新鲜美味的真鲷了。海外的朋友们肯定也想进一步了解日本养殖真鲷的品质吧。



# 鰤鱼

# YELLOWTAIL

*Hamachi · Buri*

**主要产地**
鹿儿岛、爱媛、大分、
长崎、香川、宫崎、熊本

**养殖量**
159,741吨（2005年）

## 日本产量第一的养殖鱼。<br>在世界各地深受人们喜爱的养殖鱼之王

在日本，人们把各个成长阶段有不同叫法的鱼称为“发迹鱼”。这表明日本人非常了解鱼的大小不同会影响到口味和食感。鰤鱼就是一种“发迹鱼”，在各个不同阶段分别被称为TSUBASU→HAMACHI→MEJIRO→BURI等，深受日本人的喜爱。

鰤鱼的个头大、体形也便于做成切片，因此在日本国内无论是鲜鱼店还是超市、餐馆、酒吧等，可以通过各种各样的场合得到或食用。

另外，鰤鱼在各种料理中都非常出名，无论是日本料理还是西餐，从意大利菜到中国菜，都能看到鰤鱼的身影。由于营养价值高、食品原料健康，现在已经深受全世界的喜爱。

鰤鱼能受到人们如此喜爱，还在于高水平的养殖技术，以及从产地加工到供货可以开展一揽子生产的体制。从鱼苗时期就对饲料等开展严格的质量管理，以此来实现高品质与稳定供应。我们正是通过这些措施，把更加安全、新鲜的鰤鱼不断提供给全世界。


红烧鰤鱼


在美丽的大海里开展严格管理

### 生产者的声音

还在积极推行鰤鱼养殖的地区品牌化

日本的养殖鰤鱼由于美味与安全而赢得了美国与欧洲等海外市场的好评。我们首先在国内按照出口对象国家的进口规定进行加工、供货。从鱼苗到供货采用一揽子生产，这样便于产品追踪，加工场自然都已经获得HACCP认证。鰤鱼主要用于生鱼片与寿司，在海外通过食品集市等介绍烹制方法，希望以此来开辟新市场。

# 扇贝
# SCALLOP
*Hotate*

## 生产者的声音

日本国内有2大扇贝生产基地，分别是北海道沿岸与青森县陆奥湾，近年来两处的产量分别稳定在35万吨以上与8万吨以上。北海道出产的扇贝以大个头为主，平均每千克约30个，而在陆奥湾出产的扇贝中，最近受欢迎的是名为“子扇贝”的小型贝柱，主要面向家庭。即使是L型，平均每千克也有80个～100个，容易烹调，可用于沙拉、海鲜饭、炖菜等受人欢迎的食谱，尽管价格便宜，但味道浓厚，深受好评。虽说扇贝一直被作为高级食品原料使用，但我们希望它也能成为家庭餐桌上的常客。

在家庭料理中深受欢迎的幼扇贝

浓缩了各种香味的干贝柱

## 实行按计划生产，产量高居全球第二

扇贝自古以来就不仅被生食消费，作为水产加工品也非常受欢迎。由于外观好看，经常出现在宫庭晚宴等盛大的场合。另外扇贝柱含有大量美味成分，还被用于XO酱与高级牡蛎调味汁。

日本扇贝产量每年约50万吨，位居世界第二。单就鱼贝类来讲，则产量世界最高。冷冻扇贝、扇贝肉、扇贝丁等是法国菜、中国菜的原料及家庭食品原料，被出口到法国、美国、中国、香港等地。

以出口兴旺为背景，通过提高种苗的中间培育技术及生产技术，保证了常年稳定供应。从而实现了种苗的量产化与按计划生产。

在西餐中也深受欢迎的日本扇贝

**渔获量**
287,486吨（2005年）

**养殖量**
203,352吨（2005年）

**主要捕捞地**
北海道、青森

# 狭鳕
# ALASKA POLLOCK
*Suketoudara*

## 高蛋白低脂肪、适合各种烹饪法

狭鳕在日本不仅食用鱼身，就连卵巢也非常仔细地用盐腌起来，做成鳕鱼子或芥末鳕鱼子等，是日本人非常熟悉的鱼种。这种鱼不仅是日本，就连相邻的韩国也对它给予了很高评价。利用捕捞后直接用深层海水清洗来保持新鲜度等措施来进行鲜鱼出口，严格对每一条进行保鲜，赢得了用户好评。

现在已经被指定为TAC（允许捕捞量）对象鱼种，设定了可以捕捞的总量。水产试验场每年在捕捞期前及捕捞期后利用鱼群数量探测器开展调查，预测洄游资源量等，进行资源量的维持与管理。

由于狭鳕含高级蛋白质、脂肪非常少，因此非常适合油炸、裹上黄油烤等需要用油的烹调。因日本产的狭鳕口味好、品质好，因此在韩国作为传统料理“火锅”等的原料赢得了好评。

## 生产者的声音

韩国火锅料理在日本也深受欢迎

狭鳕出口在数年前还只是相邻的韩国，几乎完全在生鲜状态下流通。在韩国作为火锅（火锅料理）的材料，新鲜度好的日本产生鲜狭鳕非常受欢迎。尽管向韩国的出口量仍在不断增长，但最近向中国的出口量却已经超过了向韩国的出口。向中国出口是在日本国内冷冻后供货。狭鳕在中国经过加工出口到欧美，作为炸鱼等进行食用。

**主要渔场**

**渔获量**
194,049吨（2005年）

**主要捕捞地**
北海道

# 秋刀鱼
# PACIFIC SAURY
*Sanma*

## 日本人非常熟悉的大众鱼<br>还在开发高鲜度加工品

秋刀鱼广泛分布于北太平洋，随着季节的变化进行大规模洄游。在秋季来日本产卵。因此对于日本人来说，秋刀鱼代表着“秋天的口味”，内心一直在盼望着这种味道。日本原来只是将秋刀鱼作为烤鱼食用，但近年来又进行了生鱼片等商业用途的开发，作为生鱼片与寿司的食用方式也逐步为人们所接受。

北太平洋地区秋刀鱼渔业除日本政府根据许可证制度进行渔业管理外，还通过TAC制度进行总捕捞量控制。现在每年生产25万吨以上，与韩国、中国、泰国、俄罗斯等进行频繁交易。

此外，（德国）水产综合研究中心等有计划地充分利用丰富的资源量，正在开发可在保持鲜度不变的情况下，生产无皮鱼片、鱼块、碎鱼肉等方面的技术。

### 主要渔场



### 渔获量
234,451吨（2005年）

### 主要捕捞地
北海道、宫城、岩手



盐烧做法最为流行

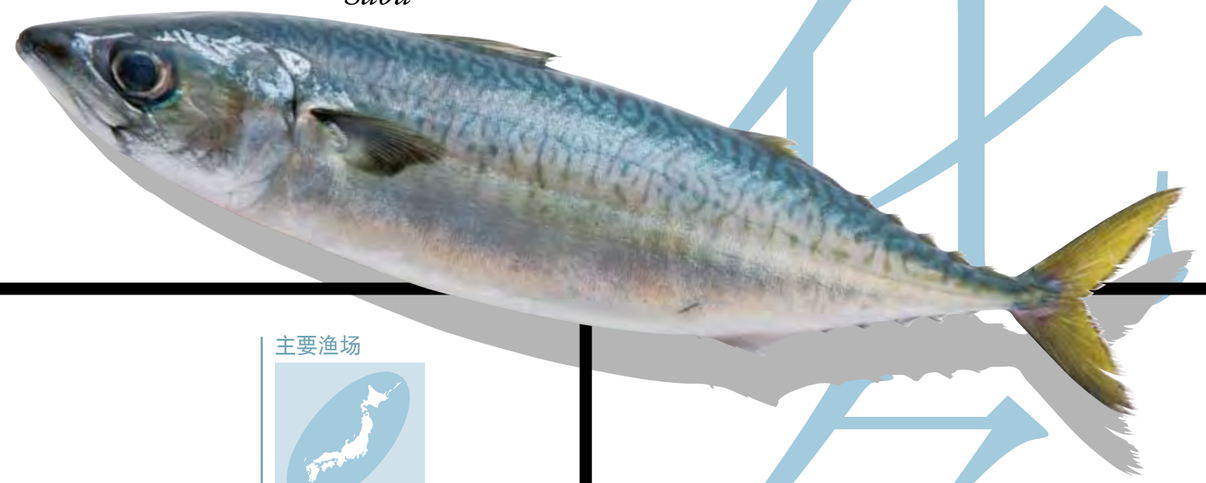
### 加工销售业界的声音

秋刀鱼的生鱼片

秋刀鱼出口到俄罗斯、泰国、中国等用于加工，出口到韩国、美国等用于销售。在人们的印象中这是一种日本（亚洲）鱼，但由于水产资源非常丰富，可供人们充分有效利用，在日本已经是最受欢迎的大众鱼，而在世界上也理应受到更多的关注。作为包含味道部分的纯日本原料，我们也在进行利用秋刀鱼的商品开发。



# 青花鱼
# MACKEREL
*Saba*



### 主要渔场

### 渔获量
602,393吨（2005年）

### 主要捕捞地
千叶、茨城、长崎、宫城、青森

### 冷藏、贸易业界的声音

青花鱼捕捞量在日本也是屈指可数的千叶、铫子渔港

也许会有人觉得不可思议，日本产青花鱼会大量出口到尼日利亚、埃及等非洲国家，以及泰国、越南、中国等亚洲地区。原本是作为北大西洋产青花鱼的替代品进行销售的，但最近由于人们对新鲜度的评价很高，价格也开始逐步提高。由于日本人自古以来就食用青花鱼，形成了特有的文化，大概是这方面的技术与精致提升了品质。

烤与裹黄油烤也很相配

青花鱼的生鱼片用醋腌着吃

## 正因为新鲜度降低得很快，<br>与青花鱼共存之国日本的技术才得以发扬光大

青花鱼是日本捕捞量最大的鱼种。属于自古以来就是与日本人生活深切相关的大众鱼，有生鱼片、寿司、烤鱼、煮、炸、罐头等各种食用方法。这种鱼原本味美，但很难进行保鲜，因此在日本国内形成了独特的贮存、运输、烹饪法等。例如有一种制作方法就叫做“醋腌青花鱼”。这是将新鲜的青花鱼切片用盐腌过后，再放在醋里泡制。由于盐的脱水效果与醋的杀菌效果，使它更容易保存，也能作为寿司或生鱼片食用了。由于日本对青花鱼积累了大量知识与经验，因此在进行青花鱼出口时新鲜度和品质方面自然就会加分。

日本青花鱼原来出口到中国、韩国、泰国等地，即使与当地产的青花鱼相比，其新鲜度也仍旧受到好评，因此越来越多的国家开始进口日本青花鱼。

由于这种水产资源对日本人来说非常重要，因此正在加紧进行资源管理。近年来已经确立了养殖技术，各地正在积极努力，以实现更加稳定的质量和供应。

# 鲣鱼
# SKIPJACK TUNA
*Katsuo*

不亚于金枪鱼的美味红肉

既环保又不消耗资源的垂钓捕鱼法

## 从加工原料改为直接生食 出口方针发生变化

鲣鱼沿着太平洋一侧的暖流，春季北上、秋季南下，进行季节性的洄游，在初夏时被称为“初鲣”，秋季时被称为“归鲣”，属于季节性食品原料，同时也是日本料理中不可或缺的“木鱼汤汁”的原料，自古以来就在日本饮食文化中扮演着举足轻重的角色。现在作为生鱼片与拍松鲣鱼肉仍是日本最受欢迎的鱼类之一。

日本捕获鲣鱼的方法之一就是名为“垂钓”的豪迈捕鱼法。先是撒下诱饵吸引成群的鲣鱼，然后用钓鱼钩一条条地钓上来，这是日本独特而又古老的捕鱼方法，不仅能保持鲜度，从资源管理和生态学的角度来看也值得赞赏。在日本国内，汇聚了渔民经验智慧的垂钓鲣鱼被视为高级食品原料，已经成为名牌产品。

鲣鱼原来大都作为罐头原料供应泰国与越南等国家。随着日本饮食在全世界的流行，加上鲣鱼供应量也在下降，近年来不再仅仅作为加工原料出口，作为代替金枪鱼的健康食品原料的需求也越来越大，日本加工经营者也在面向欧美开发用于生食的鲣鱼加工品，积极开拓新市场。

### 加工销售业界的声音

拍松鲣鱼肉

鲣鱼在世界上主要用于加工成罐头，但在日本用作生食时，销售价格甚至与金枪鱼不相上下。由于这种鱼的资源可以得到充分有效利用，因此作为仅次于金枪鱼的食物原料，本身味道鲜美，希望这种美味能够被全世界所了解。

**主要渔场**

**渔获量**
399,465吨
（2005年）

**主要捕捞地**
静冈、宫城、鹿儿岛



# Japanese Seafood Exports;
## The Secret Behind the Quality
## 日本水产品的出口　品质背后的秘密

日本为保护美丽的大海，正在开展渔业管理和渔业的可持续发展，积极致力于向消费者提供安全、高品质的水产品。

日本水产品近年来越来越多地进入到世界各国市场。今后通过继续努力，日本水产品一定会有一天像“SUSHI”一样受到全世界的关注。

采访协助／北海道渔业协同组合联合会、北海道水产林务部水产局水产经营课、青森县渔业协同组合联合会、阿部长商店株式会社（宫城县气仙沼市）、金山株式会社（千叶县旭市）、爱媛县渔业协同组合联合会、鹿儿岛县东町渔业协同组合

摄影协助／宫城县观光课、气仙沼市观光课

料理摄影协助／铃木正美

料理协助／田口成子

## Facilities

**1st Floor** - Haven of spiritual peace and comfort

Reception and lobby

Reception counter for visitors is located here.
If you present your membership card, we will direct you to the designated worship room.
Respects may be paid any time, 365 days a year, between 10 a.m. to 7 p.m.

Gallery

The gallery displays precious cultural assets for a limited time, such as Buddhist paintings and folding screens that have been entrusted to museums by Komyoji Temple.

Main Hall, Worship Hall

The Main Hall of Machiya Komyoji Temple.
In the inner chamber is enshrined the image of Amitabha Buddha, sculpted in the Genroku Period. It is the artwork of the great Buddhist sculptor Kouun, the 17th generation descendant of the great sculptor Unkei, renowned during the early Kamakura Period.
In addition, memorial services may be held in the outer chamber of the Worship Hall.

**2nd Floor** - Remembering the departed one with sanctity and solemnity

Special worship room

A spacious special worship room.
It is a private room separated by doors; therefore, without having to be self-conscious of others or being disturbed by surrounding noises, you can offer prayers unhurriedly and in tranquility.

Tombstone decorated by seasonal beauty

The mural painting by a rising female painter, depicting the beauty of the four seasons, gently embraces all viewers. The tombstones are made from the highest quality Swedish black granite. You can remember the departed one in dignity and tranquility, in a stately and noble atmosphere.

**3rd and 4th floors** - Eternal life filled with the joy of reunion

Worship room with an atmosphere full of grace and dignity

With regard to worship rooms, there are 2 booths on the 2nd floor, 3 booths on the 3rd floor,3 booths on the 4th floor, with a total of 8 booths. Each booth is separated by a glass partition, so prayers may be offered in solemnity without having to be self-conscious of others or being disturbed by surrounding noises.

Elegant tombstone and advanced technology

By putting the membership card on the touch panel located next to the booth, the mural painting depicting the beauty of nature and the elegant black granite tombstone containing the ashes appear. You may display a picture of the departed one on the front monitor and reunite with your loved one. You can even display an edited video or voice recording using the touch panel. This is truly a technologically-advanced grave.

## Various points of unprecedented appeal compared to traditional graves.

**1. Permanent commemoration even if the deceased has no relatives.**

The permanent rights to the grave may be past onto other relatives even if the deceased one has no children. Even if the deceased ones' relatives pass away, the ashes are laid to rest in the resting place of the principal Buddha image on the 1st floor of the main hall, where the sutra is read in the morning and in the evening At Machiya Komyoji Temple, we will guarantee a permanent commemoration out of a sense of commitment and responsibility.

**2. A noble black granite tombstone**

With an indoor facility, a Buddhist altar-type or a locker-type cinerarium is common. However, at Tokyo Gobyo, prayers may be offered to an elegant tombstone made from stately, distinguished and highest quality black granite, located in a bright and clean worship room in a refined 5-story cinerarium.

**3. A secure design including high earthquake resistance**

The design and construction has been managed by Toyota Industries Corporation, the core of the Toyota Group companies. In addition, a computerized automatic transfer-type cineration system has been newly developed. With high earthquake resistance, along with the sturdy steel structure, we will protect the ashes of the deceased for many years to come.

**4. 1 minute on foot from Machiya Station**

Located in a convenient area, visits to the grave may be made when shopping or running other errands. What could be better than being able to pay respects whenever you can?

**5. Affordable, low price**

In comparison to the conventional cemetery or Buddhist altar-type or locker-type cinerariums, we offer exceptionally low prices. Loan payments are also available.

**6. For all religions and denominations**

People of all religions and denominations, including those who have no religious affiliations are welcome.

**7. Granting of a posthumous Buddhist name free of charge**

On request, a Buddhist name according to the teachings of Shin-Buddhism, are given from Komyoji Temple.
Safety and security in a comfortable setting

**8. Fully maintained and managed**

Unlike outdoor tombstones which are exposed to the elements, there is no need for maintenance and management such as weeding or cleaning. It is always clean and fully secure. Even in the extreme heat of summer or in the bitter cold of winter, you can pay your respects in a pleasant environment.

**9. Can visit the departed one empty-handed**

Flowers, incense and other necessary items for visiting the grave are prepared, so you can visit your loved one anytime, empty-handed.

**10. Video system to recount precious memories**

The monitor set up next to the black granite tombstone displays the photo of the departed one. In addition, on request, by pressing the touch panel of the worship room, you can play the images and voice recordings as well as edited videos showing the memorabilia of the departed one.
*Separate data entry fee required.

**11. Multiple cineration possible**

As a rule, with the personal type, one set of ashes is contained in one miniature shrine. However, if a married couple requests that their ashes be placed in one miniature shrine, it is possible to do so by storing both sets of ashes in smaller urns. Additionally, if a cineration for a family is desired, please use the family type.
*Separate fee required.

**12. Memorial service in remembrance of the beloved one**

Memorial service may be held on the 1st floor of the Machiya Komyoji Temple where the image of Amitabha Buddha, created by the great Buddhist sculptor Kouun, the 17th generation descendant of the renowned Buddhist sculptor Unkei of the Kamakura Period, is located.

**13. Managed and operated by Machiya Komyoji Temple**

The cinerarium is directly managed by the traditional Komyoji Temple. By just presenting your membership card, you may visit Rurikoin, Komyoji Temple's main temple in Kyoto, which is one of the top ten historical places of interest in Kyoto, as well as see the precious cultural assets owned by Komyoji Temple, free of charge.

**14. You may contribute to the global eco-project and the preservation of a world heritage**

Within the temple grounds (12,000 tsubo = approx. 40,000 ㎡) of Kyoto's main temple Rurikouin, a maple seedling will be planted in the name of the purchaser of Tokyo Gobyo, and that one will be able to participate in a global eco-project which spans over several hundred years. In addition, part of the purchase fee will be donated to Komyoji's restoration efforts for Dun Huang Mogao Caves in China; thus, the purchaser may also take part in the preservation of a world cultural heritage.
*No separate fee required.

## Price List

Personal type (for individuals)
Complete set 380,000 yen
(annual maintenance and management fee 8,000 yen)

Family type (for families)
Complete set 750,000 yen
(annual maintenance and management fee 10,000 yen)

Customized type
Complete set 100,000 yen
(annual maintenance fee 12,000 yen)

## Personal biography

### Ohora Ryutoku

Born in Komyoji (Gifu City), in 1969.
Entered the priesthood at 9 years of age, and thereafter studied Buddhism at the Department of Buddhist Studies in Ryukoku University.
At the time of graduation, he acquired qualifications as a teacher at the Higashi Hongan-ji Branch of Shin-Buddhism.
After graduation, Ohora Ryutoku became a priest at the Muryoujyusan Komyoji Temple.
He contributed to the establishment of the Fukui Ren-nyo-shonin Memorial, and was proactively involved in the construction of the Kyoto Amagase Memorial Park and Chiba Inage-anagawa Cemetery. He also made tremendous contributions to the construction of the cinerarium "Tokyo Gobyo."
In 2009, at the completion of the above, he was appointed as the chief priest of the Machiya Komyoji Temple, where he serves in the same capacity to the present day.

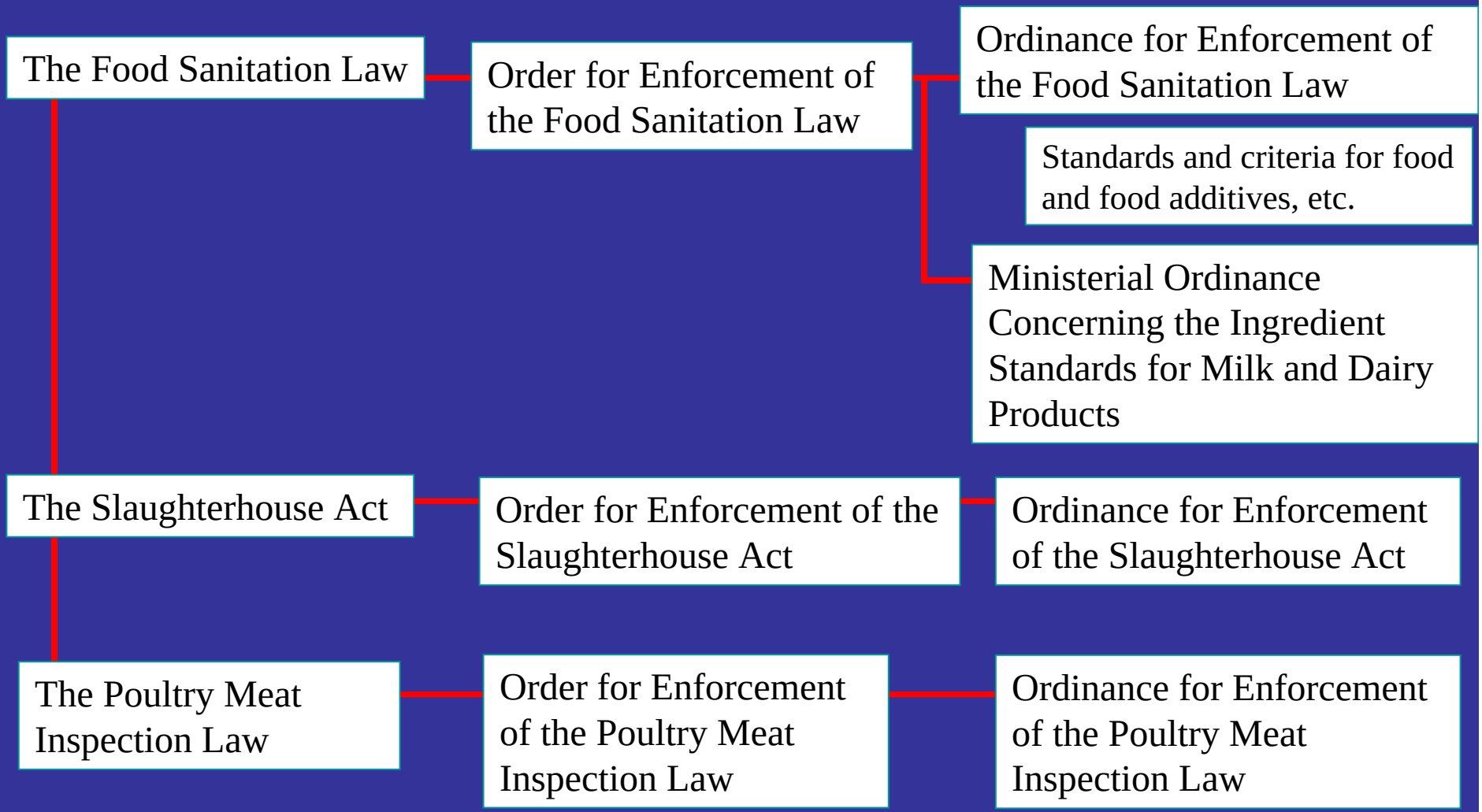
# Food Safety Surveillance System and Countermeasures against Food Poisoning

September 8th, 2010

Ryuusuke Matsuoka
Deputy Director
Inspection and Safety Division
Department of Food Safety
Pharmaceutical and Food Safety Bureau

The Ministry of Health, Labour and Welfare

# Food safety-related system of law



# Sharing roles among businesses, consumers and the government

## Food-related businesses

As providers of foods, etc., businesses are primarily responsible for securing food safety.

## Consumers

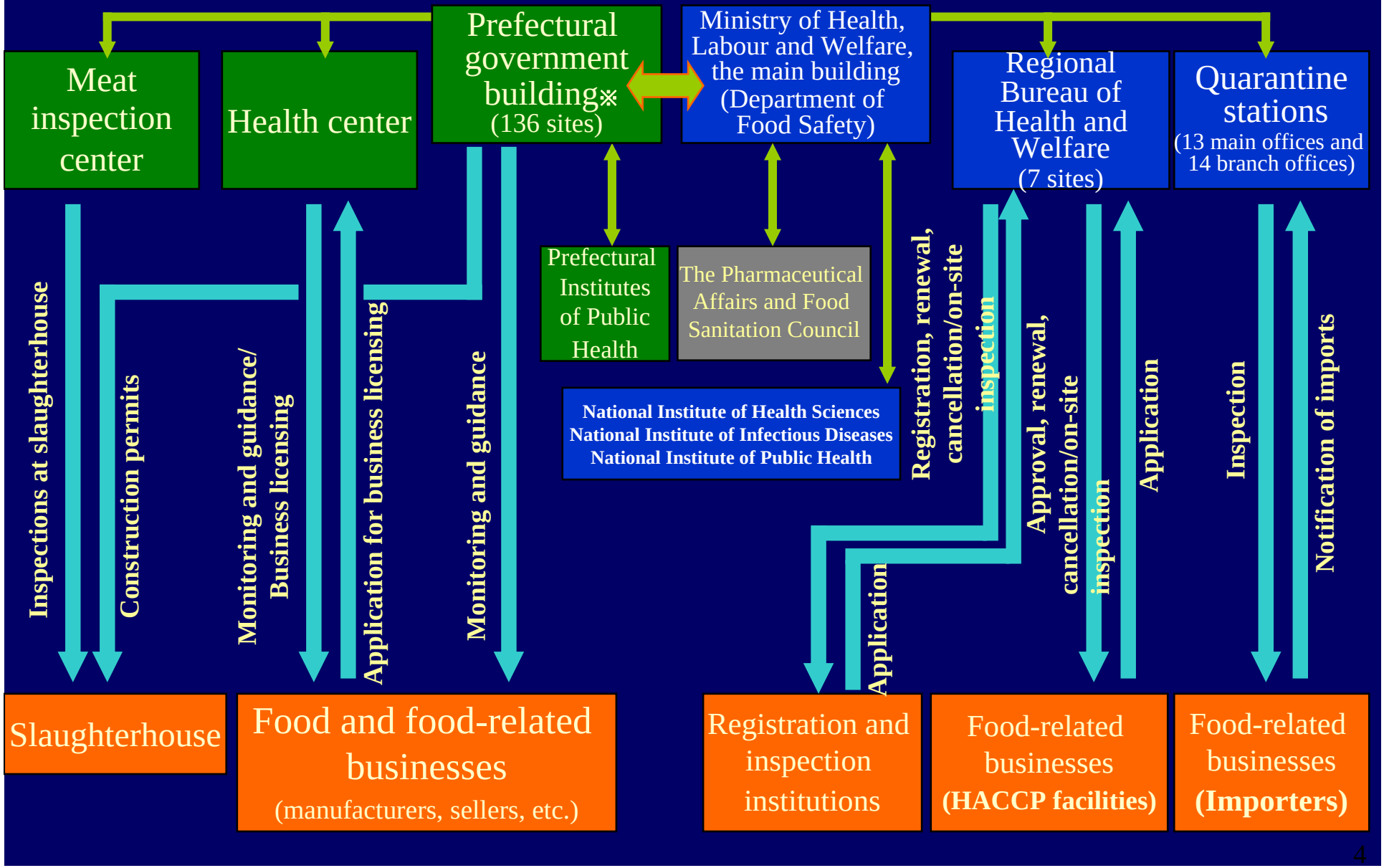
- **Deepening knowledge in securing food safety, etc.**
- **Striving to express opinions regarding policies to secure food safety**

## The government

**Conducting monitoring and guidance to make sure that food-related businesses are carrying out their responsibilities and providing safe foods.**

# Administrative System

※Prefectures, etc.: 47 prefectures, 66 cities with healthcare centers, and 23 wards



# Food Sanitation Law
# 【Purpose】

Article 1

The purpose of this Act is to prevent sanitation hazards that result from food consumption and drinks, by enforcing regulations and other measures necessary from the standpoint of public health, to ensure food safety and thereby to protect citizens' good health.

- Foods not permitted for marketing 1

  (Food Sanitation Law, Article 6)

- Deteriorated, rotten, or immature foods

  (But exclude those that are determined to generally pose no risk to human health and recognized as edible.)

- Foods that contain or are covered with toxic or harmful substances, or are suspected of containing or being covered with such substances

  (But exclude cases where the Minister of Health, Labour and Welfare specifies that such items involve no health risk to humans. )

- Foods which are contaminated with pathogenic organisms or are suspected to be so, and involve a risk to human health.
- Items which involve a risk to human health due to uncleanliness and contamination or addition of foreign substances or on other grounds.

- Foods not permitted for marketing 2

・Foods that are consumed in extraordinary ways, and thus prohibited from marketing. (Article 7)

(Foods that are served in a manner extraordinarily different from regular manners, or foods that have not been generally consumed, etc.)

・Foods that are banned from importing and marketing due to their repeated violation of regulations. (Article 8)

・Meat of livestock that is suspected to have contracted with or died from specific diseases, etc. (Article 9)

・Unapproved additives or foods containing unapproved additives, etc. (Article 10)

- Foods not permitted for marketing 3

・Foods that are produced by any method not conforming to the stated criteria and standards (*1), etc. (Article 11)

・Foods without labeling that conforms to criteria (*2) (Article 19)

・Foods with false or exaggerated labeling, which may cause harm to public health (Article 20)

*1 Ministerial Ordinance concerning the Ingredient Standards for Milk and Dairy Products, Standards and Criteria for Foods, etc.

*2 Ministerial Ordinance concerning the Ingredient Standards for Milk and Dairy Products, Ordinance for Enforcement of the Food Sanitation Law

# Standards and Criteria

Standards and criteria for food and food additives, etc.
(Ministry of Health and Welfare, Notification No. 370, 1959)

Ministerial Ordinance concerning the Ingredient Standards
for Milk and Dairy Products

## Standards and criteria for manufacturing, processing, use, cooking and preservation of food, etc.

Example Standards and criteria for carbonated drinks

○ Ingredient standards for carbonated drinks

- Arsenic, lead and cadmium should not be detected
- Negative for coliform bacterium, etc.

○Manufacture standards for carbonated drinks

- Original water should be drinking-quality
- Drinks of pH 4.0 or over should be sanitized by heating (85 degrees C, 30min or longer, or equivalent methods), etc.

○Preservation standards for carbonated drinks

- Frozen fruit drinks, etc. should be preserved at -15 degrees C, etc.

○Cooking standards for carbonated drinks served by cup vending machines

- The liquid should be kept 10 degrees C or below, or 63 degrees C or above, etc.

# Business approval

From the perspective of public health, prefectures, etc. shall establish an ordinance that set criteria for each type of business (*).

(Food Sanitation Law, Article 51)

*34 types of businesses including restaurants.
(Businesses with an extraordinary impact on public health, thus specified by the ordinance.

1 Restaurant businesses
2 Coffee shop businesses
3 Confectionery businesses (including bakery businesses)
4 Bean jam producing businesses
5 Ice cream producing businesses
6 Milk processing businesses
7 Special milking and processing businesses
8 Dairy product producing businesses
9 Milk collecting businesses
10 Milk sales businesses
11 Slaughtering businesses
12 Processed meat sales businesses
13 Processed meat product producing businesses (meaning businesses for producing ham, sausage, bacon and such like)
14 Fish and seafood sales businesses
15 Fish and seafood auction businesses
16 Fish jelly product producing businesses
17 Food freezer or cold storage businesses
18 Food irradiation businesses
19 Carbonated drink producing businesses
20 Lactic acid bacteria beverage producing businesses
21 Ice producing businesses
22 Ice sales businesses
23 Edible fat and oil producing businesses
24 Margarine or shortening producing businesses
25 Miso producing businesses
26 Soy sauce producing businesses
27 Sauce producing businesses
28 Alcoholic beverage producing businesses
29 Bean curd producing businesses
30 Fermented soybeans producing businesses
31 Noodles producing businesses
32 Daily dish producing businesses
33 Canned or bottled food producing businesses
34 Additive producing businesses

# Business approval

A person who intends to conduct business prescribed in the preceding Article, shall obtain approval from the prefectural governor pursuant to an ordinance of the Ministry of Health, Labour and Welfare. (Food Sanitation Law, Article 52)

# Slaughterhouse Act

**Purpose**

To protect national health by establishing necessary regulations and other measures, from the perspective of public health, to secure proper slaughterhouse operation and processing of livestock for human consumption

**Subject (＝Livestock)**

Cattle, horses, pigs, sheep and goats

**Approval for slaughterhouse**

**Approval from the prefectural governor, etc. is required to establish a slaughterhouse.**

**If necessary from the public health perspective, the prefectural governor, etc. shall limit the number and kind of animals processed per day, in proportion to the scale of the facility.**

**Restriction on refusal of slaughterhouse use, etc.**

Without justified grounds, slaughtering of livestock and use of slaughterhouse for slaughtering and dressing of livestock shall not be refused.

**Slaughtering and dressing of livestock**

No person shall slaughter livestock for the purpose of human consumption at a place other than a slaughterhouse.

Exceptions

- Instant slaughtering required due to the lethal injury of livestock by an accidental disaster.
- Instant slaughtering required in livestock due to dystocia, parturient paresis, acute bloat or other diseases that are stipulated by ordinance of the Ministry of Health, Labour and Welfare, etc.

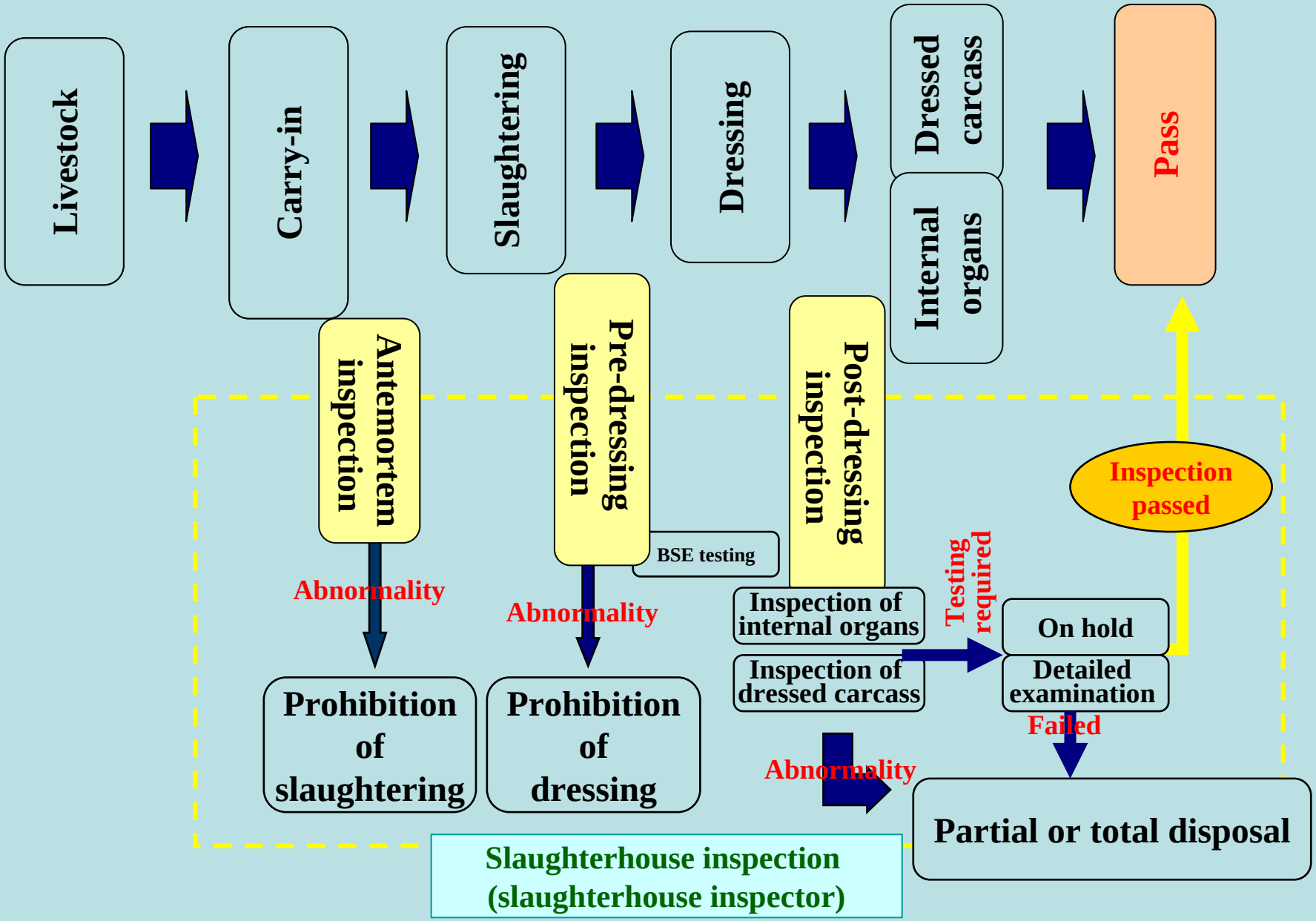
**Slaughtering and dressing inspection of livestock**

- Livestock, other than those inspected by the prefectural governor, shall not be slaughtered.
- Livestock, other than those inspected by the prefectural governor, shall not be dressed.
- Meat, internal organs, blood, bones, and skin shall not be taken outside of the slaughterhouse without inspection by the prefectural governor. (There are exceptions.)

**Slaughterhouse inspectors**

The prefectural governor shall appoint slaughterhouse inspectors (veterinarians) from the staff of the prefecture, in order to implement slaughtering and dressing inspections of livestock, or to take measures such as the prohibition of slaughtering and dressing.

# Flow of slaughterhouse inspection



# Diseases subject to slaughterhouse inspection

- Animal infectious diseases under provision of the Domestic Animal Infectious Diseases Control Act, Article 2, Paragraph 1, and notifiable infectious diseases under provision of the said act, Article4, Paragraph 1

Example: BSE, foot-and-mouth disease, anthrax, rabies, etc.

- Additional diseases designated by the Ministry of Health, Labour and Welfare

Example: Q-fever, malignant edema, leukemia, Listeriosis, etc.

- Abnormal conditions, such as those covered with lubricating oils, designated by the Ministry of Health, Labour and Welfare

Example: Trauma, inflammation, degeneration, contraction, deformation, etc.

# Countermeasures against BSE at the slaughterhouse

**Removal and incineration of Specific Risk Material (SRM) from all cattle**

## Removal based on the management method for slaughtering business

- Stored in designated containers
- Confirmation by slaughterhouse inspectors
- Washing and sanitizing of machinery and equipment, etc.
- Complete incineration (800 °C or above)

## Head(includingtonsils)

- Tongue and cheek meat are used for human consumption
- Tongue should be removed with care not to touch tonsils

## Spinal cord

- Removal of spinal cord before splitting
  Decontamination by high-pressure washing

## Distal ileum

- The distal 2m from the cecum, including the part for the sake of safety, is removed.

## Vertebral column

- Prevention of contamination from dorsal root ganglion during vertebral column removal

# Regulation for poultry slaughtering business and law for poultry slaughtering inspection

**Purpose**

To protect the national health in regard to the poultry slaughtering business, by preventing the occurrence of sanitary hazards due to poultry meat with measures such as setting regulations and other methods necessary from the perspective of public health and establishing the poultry slaughtering inspection system.

**Subject (= poultry)**

Chickens, ducks, turkeys or other commonly consumed poultry that are designated by Cabinet Order*)

*** Currently, no other poultry is designated by Cabinet Order.**

- Permission for poultry slaughtering business

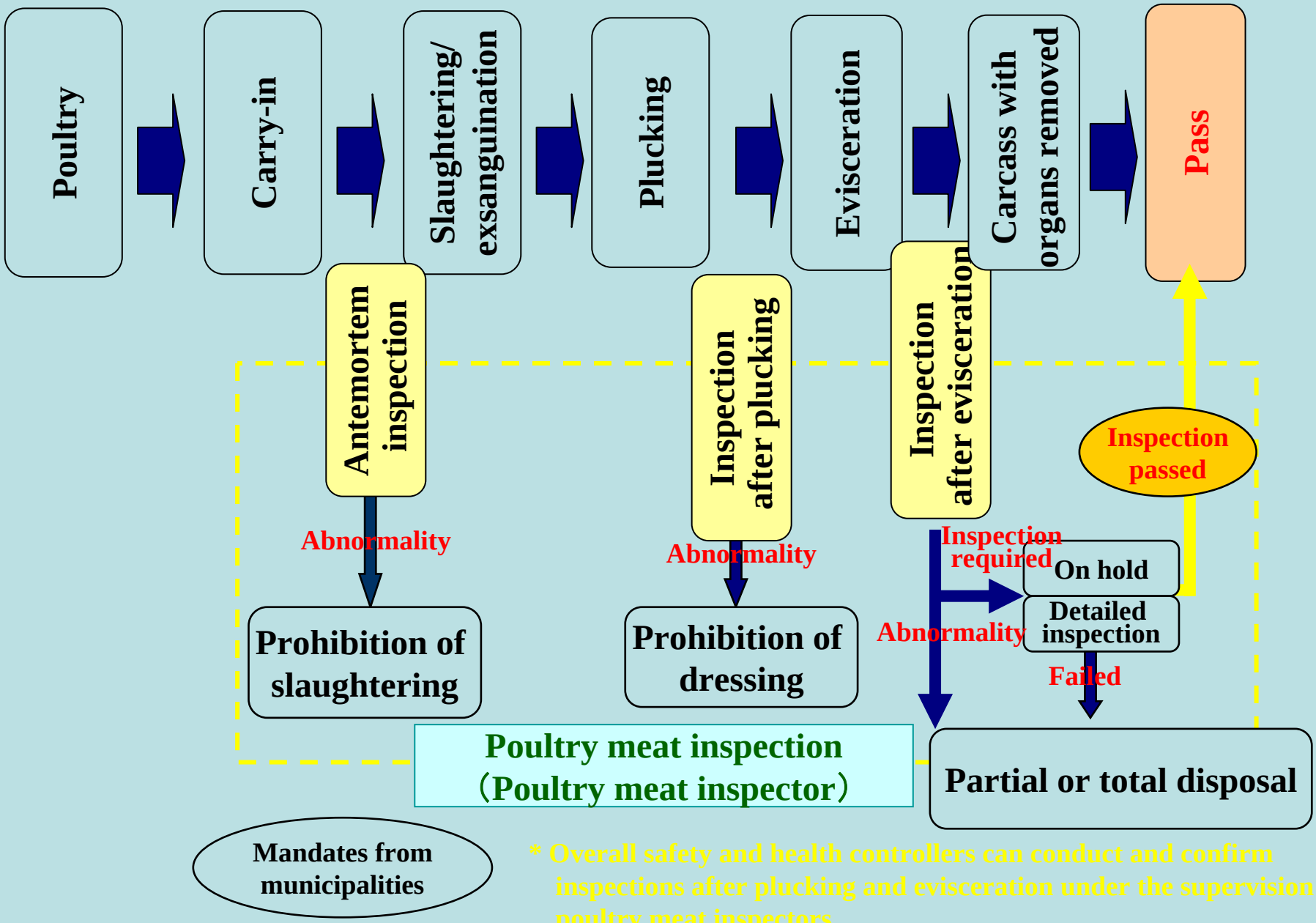
  Those who intend to conduct poultry slaughtering business need to acquire permission from their respective prefectural governor.

- Poultry Slaughtering inspection

  In order to conduct poultry slaughtering business, the poultry meat should be inspected as follows:

  1) Antemortem inspection, 2) Inspections after plucking, 3) Inspections after evisceration

# Flow of poultry slaughtering inspection



# Diseases subject to poultry meat inspection

- Animal infectious diseases under provision of the Domestic Animal Infectious Diseases Control Act, Article 2, Paragraph 1, and notifiable infectious diseases under provision of the said act, Article 4, Paragraph 1

Examples: highly-pathogenic avian influenza, New Castle disease, etc.

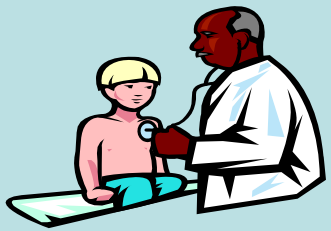
- Additional diseases designated by the Ministry of Health, Labour, and Welfare

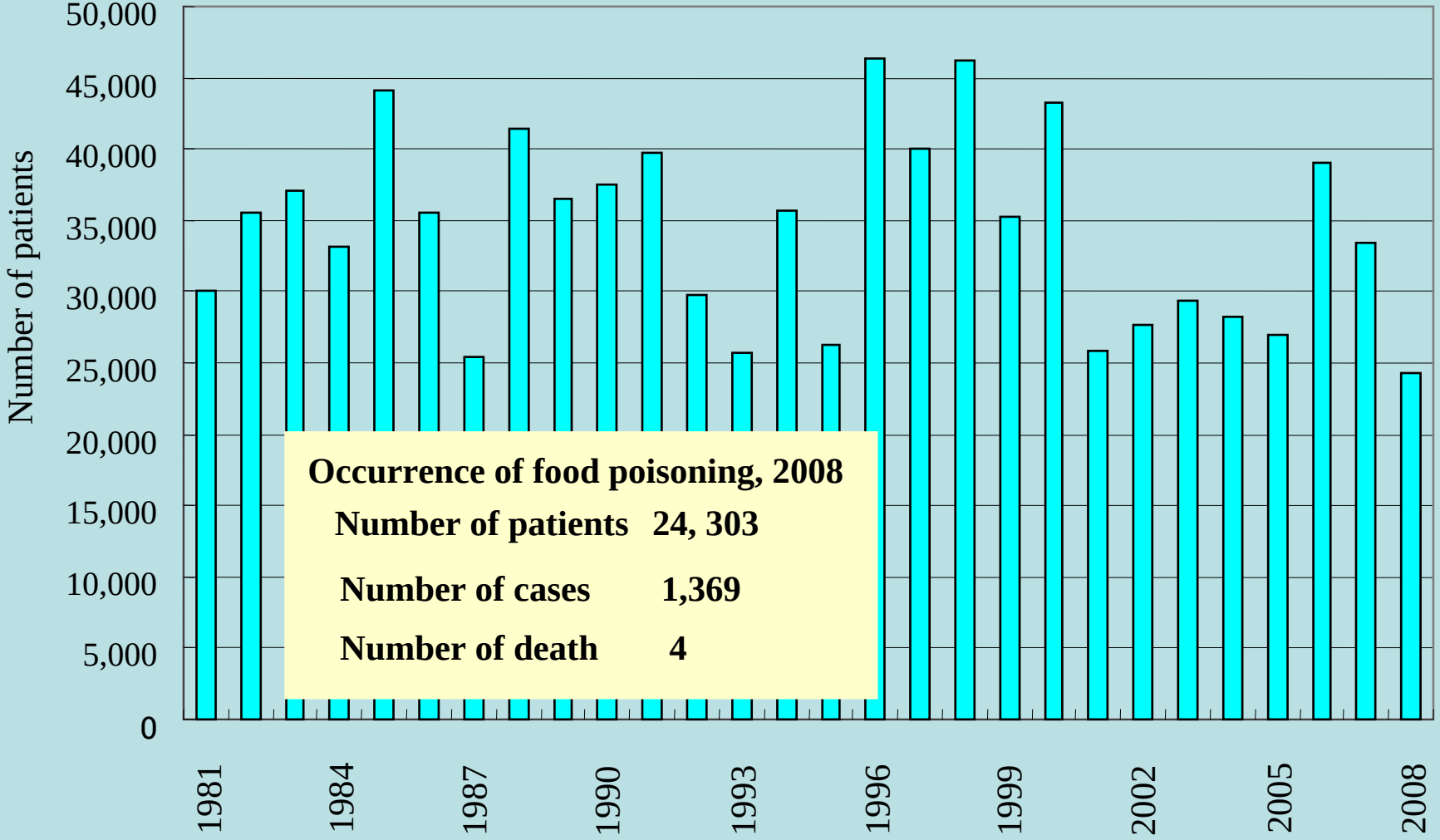
Examples: infectious coryza, salmonellosis, inclusion body hepatitis, etc.

- Abnormal conditions, such as covered with lubricating oils, designated by the Ministry of Health, Labour, and Welfare

Examples: trauma, inflammation, degeneration, contraction, deformation, etc.

# Occurrence of food poisoning

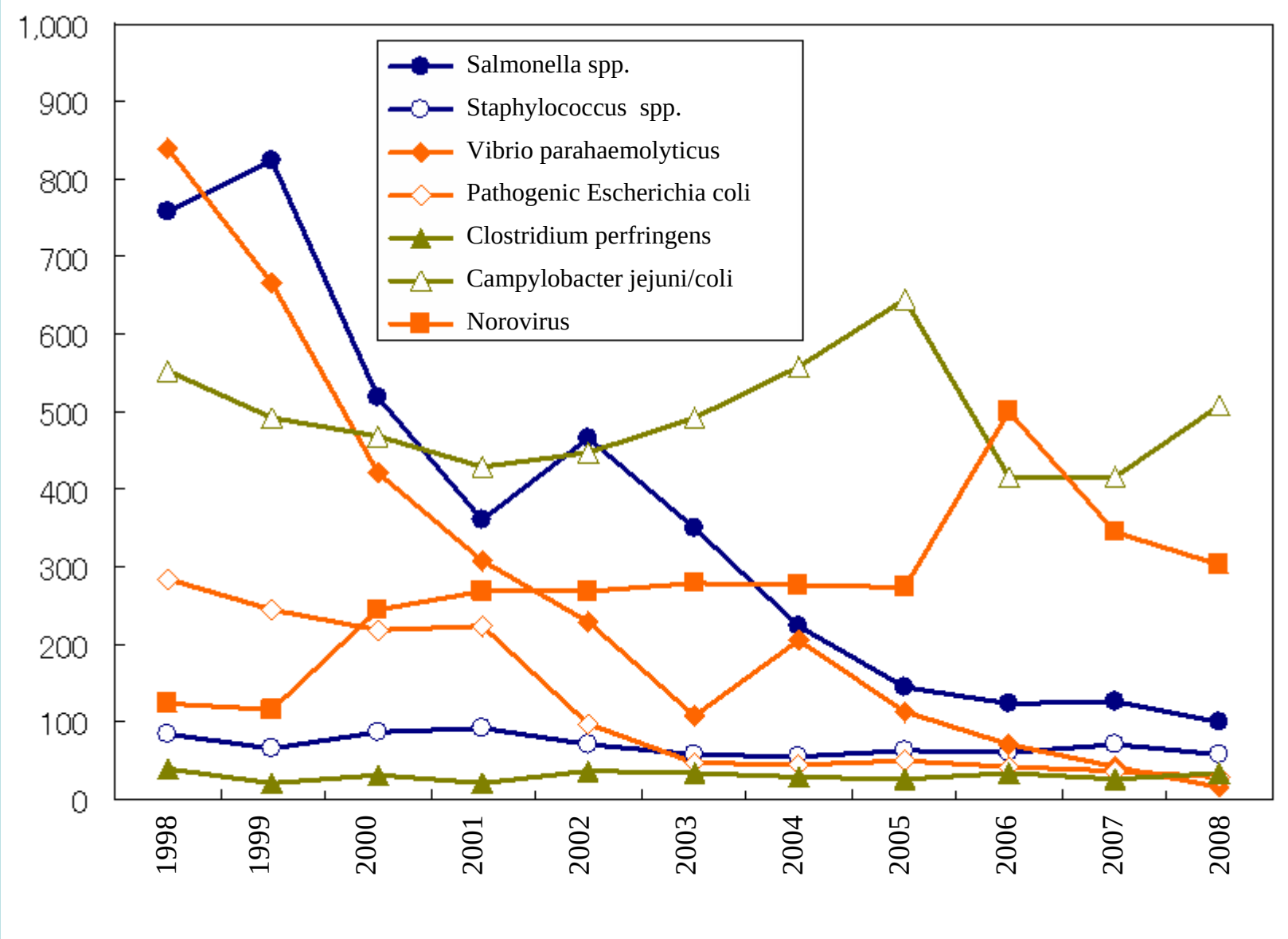




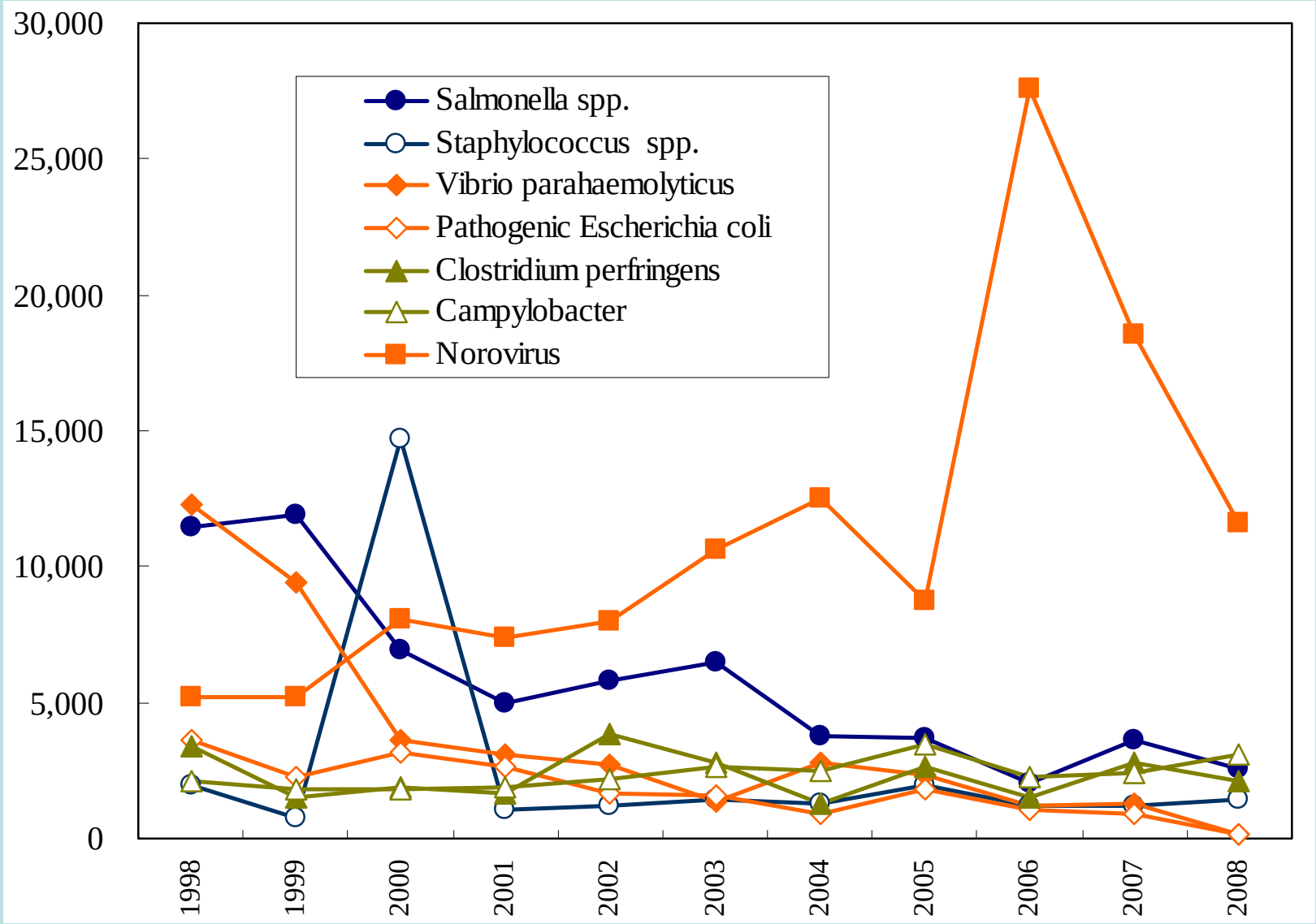
# Occurrence of food poisoning by cause

| Food type | 2006 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|
| | Cases | Rate (%) | Cases | Rate (%) | Cases | Rate (%) |
| Total | 1,491 | 100 | 1,289 | 100 | 1,369 | 100 |
| Fish and seafood | 80 | 5.4 | 68 | 5.3 | 106 | 7.7 |
| Processed fish and seafood | 8 | 0.5 | 22 | 1.7 | 15 | 1.1 |
| Raw and processed meat, etc. | 71 | 4.8 | 83 | 6.4 | 96 | 7.0 |
| Raw and processed eggs | 7 | 0.5 | 8 | 0.6 | 10 | 0.7 |
| Milk and processed milk | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 |
| Cereal and processed cereal | 26 | 1.7 | 22 | 1.7 | 23 | 1.7 |
| Raw and processed vegetables | 97 | 6.5 | 78 | 6.1 | 87 | 6.4 |
| Confectionary | 11 | 0.7 | 12 | 0.9 | 9 | 0.7 |
| Composite cooked food | 141 | 9.5 | 95 | 7.4 | 103 | 7.5 |
| Others | 582 | 39.0 | 547 | 42.4 | 531 | 38.8 |
| Unknown | 467 | 31.3 | 353 | 27.4 | 389 | 28.4 |

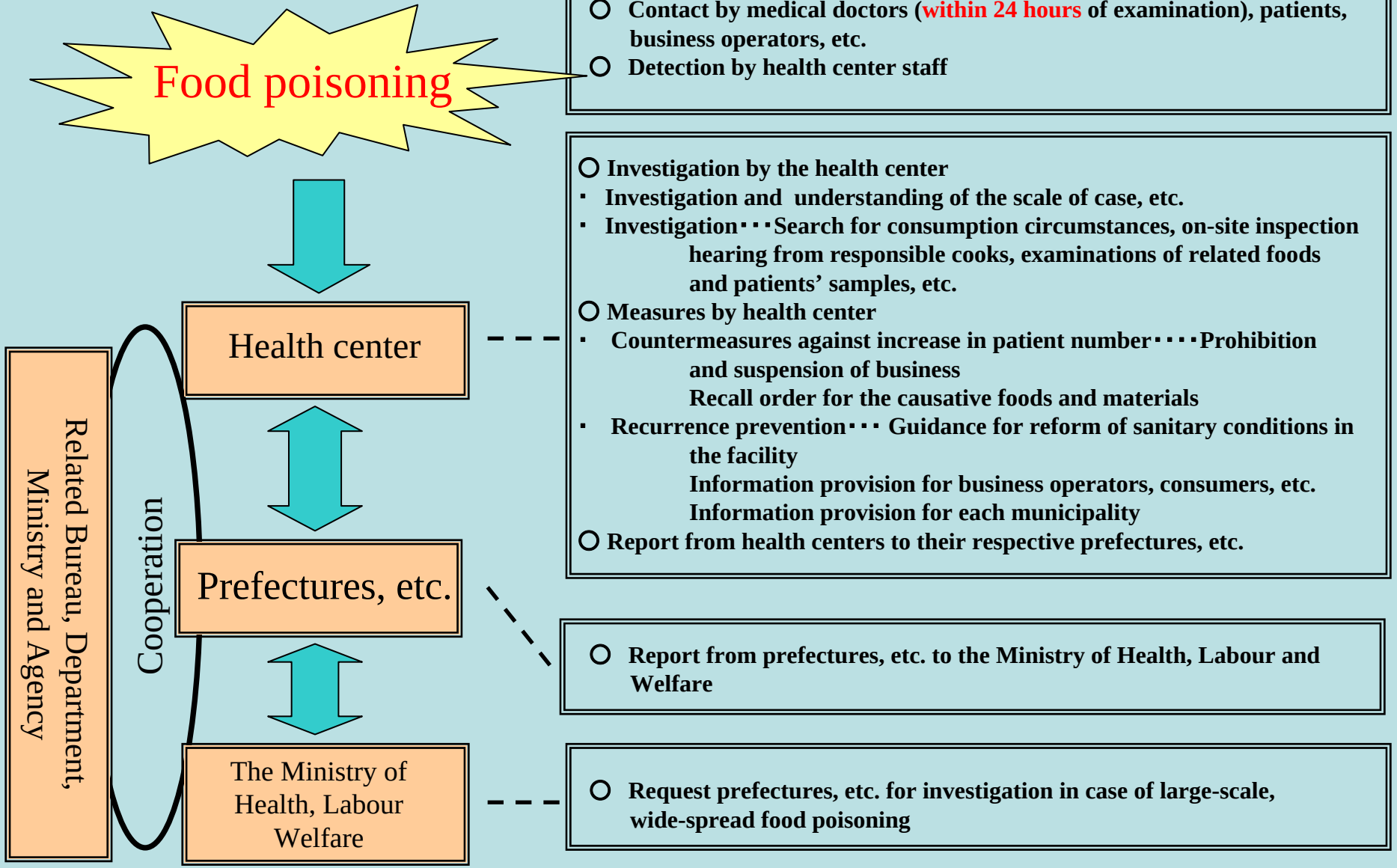
# Year by year transition of case numbers by pathogens (mainly micro-organisms)



# Year by year transition of patient numbers by pathogens (mainly microorganisms)



# Government responses to food poisoning



# Preventative measures against food poisoning by *Vibrio parahaemolyticus* 1

**Year 2001**

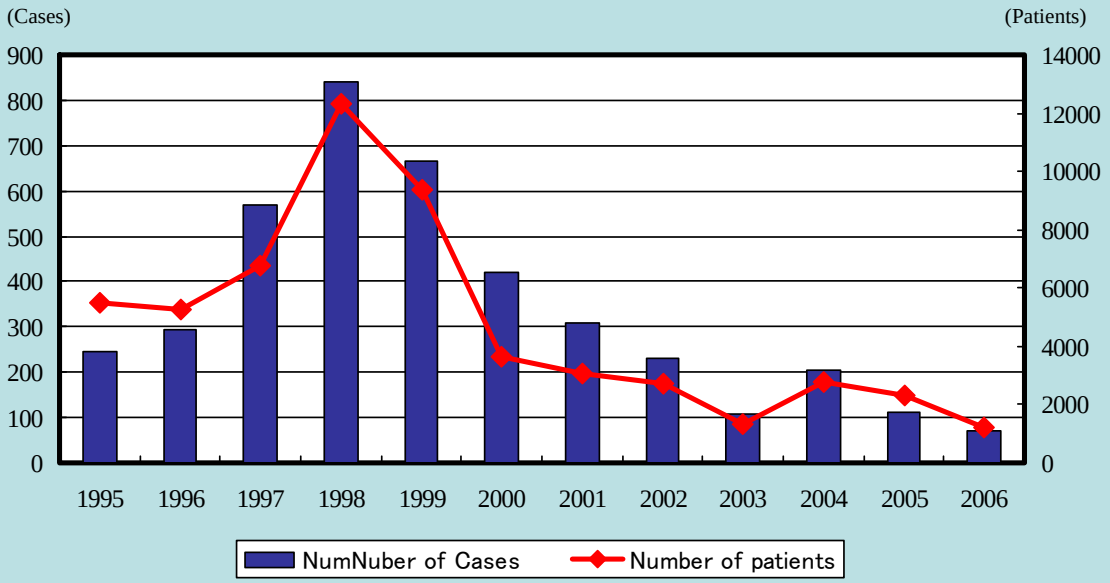
- **Labeling criteria established for fresh fish and seafood, etc. to be eaten raw.**

  **Addition of fresh fish and seafood, etc. to the list of foods that require labeling.**

- **Standards and criteria established for fresh fish and seafood, etc. to be eaten raw.**

  **Establishment of ingredient standard, processing criteria, and preservation criteria for fresh fish and seafood, etc. to be eaten raw.**

- **Ingredient standard:**
  ***Vibrio parahaemolyticus***
  **Boiled octopus and crabs: Negative**
  **Fresh fish and seafood to be eaten raw: 100g or less**
- **Processing criteria:**
  **Used for processing Water should be drinking-quality, etc.**
- **Preservation criteria:**
  **10 degrees C or below**



# Preventative measures against food poisoning by *Vibrio parahaemolyticus* 2

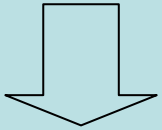
Food poisoning by *Vibrio parahaemolyticus* especially occurs in the summer season, mainly due to consumption of fresh fish and seafood.

Through domestic distribution･･･monitoring by each prefecture, etc.
(Summer-time overall check-up, etc. )

Upon importation･･･monitoring imported foods at quarantine stations
(Strengthening summer-time monitoring and inspections, etc.)

# *Vibrio vulnificus*

Every year, cases of *Vibrio vulnificus* infection occur in summer time (June-October). This bacterium adheres to fish and seafood, especially crustaceans (shrimps, etc.) captured in brackish water area (where fresh and salt water intermingle with each other) and salt water fish and seafood captured at river mouths. When eaten raw or not cooked thoroughly, consumption of these foods can cause oral infection.



Recently, results were compiled from studies that were aided by grants for scientific research, financed by the Ministry of Health, Labour and Welfare. Consequently, the Ministry developed on May 31, 2006 'Q&A for *Vibrio Vulnificus*', aiming at providing correct information and deepening the understanding of preventative measures among the public.

**Web Site of the Ministry of Health, Labour and Welfare**
**http://www.mhlw.go.jp/topics/bukyoku/iyaku/syoku-anzen/qa/060531-1.html**

# Measures to secure sanitation of raw oysters for consumption 1

- Partial amendment of Ordinance for Enforcement of the Food Sanitation Law,

  Released in December 28th, 1998, Sei-ei No. 1825

  In addition to establishing a system to enable emergency investigation through to the area of oyster fishing, names of the fished sea area should appear on the label in order to prevent further spreading of damage by food poisoning. (Applied on October 1st, 1999)

- 'Q&A for preventing norovirus food poisoning',

  Released in February 4th, 2004,

  by the Ministry of Health, Labour and Welfare

  (The final version was released on March 1st, 2005)

# Year by year transition of norovirus food poisoning cases numbers by causative food types (Cases)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| **Total** | 269 | 268 | 278 | 277 | 274 | 499 |
| **Fish and seafood** | 98 | 83 | 73 | 39 | 45 | 26 |
| **(Bivalves only)** | 94 | 81 | 70 | 38 | 42 | 22 |
| **Processed fish and seafood** | 1 | 3 | 0 | 1 | 3 | 0 |
| **Raw and processed meat, etc.** | 0 | 1 | 1 | 1 | 1 | 1 |
| **Raw and processed eggs** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Milk and processed milk** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cereal and processed cereal** | 0 | 3 | 3 | 2 | 3 | 3 |
| **Raw and processed vegetables** | 0 | 2 | 1 | 1 | 1 | 2 |
| **Confectionary** | 1 | 0 | 2 | 2 | 3 | 3 |
| **Composite cooked food** | 9 | 11 | 15 | 21 | 19 | 77 |
| **Others** | 106 | 131 | 145 | 162 | 172 | 310 |
| **Food identified** | 6 | 3 | 6 | 4 | 5 | 11 |
| **Food unidentified** | 100 | 128 | 139 | 158 | 167 | 299 |
| **Unknown** | 54 | 34 | 38 | 48 | 27 | 77 |

# Measures to secure sanitation of raw oysters for consumption 2

Safety management of oyster aquafarming, production and shipment

Web Site by Fisheries Agency

During production and shipment, oysters should be sufficiently washed with sanitary water at processing stages such as the removing of shells and packaging, or submerged in pasteurized salt water for a certain period of time.


http://www.jfa.maff.go.jp/norovirus/index.htm

# Measures to secure sanitation of raw oysters for consumption

- Importation of raw oysters for consumption

  Importation of raw oysters is permitted after confirming that the condition of the raw oysters is equivalent or superior to the sanitary management standards stated by the processing standards, etc. of the Food Sanitation Law, provided that the mandatory sanitary certification, etc. attachment is fulfilled .

Currently permitted exporters

Total of 6 countries: Australia, New Zealand, US, Canada, Korea, and Ireland

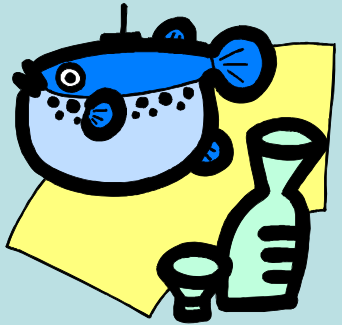
# Measures against natural toxins

1) Countermeasures to prevent puffer toxin (tetrodotoxin) poisoning

December 2nd, 1983

Notification to secure sanitation of Fugu puffer fish

This notification established the types, parts and the sea area of captured puffer fish eligible for distribution. Operators, facilities, and methods of Fugu puffer fish processing were also stated.



# Measures against natural toxins

2) Importation of Fugu puffer fish

March 3rd, 1984

Notification about imported Fugu puffer fish

- Limiting types and sea areas for capturing eligible Fugu puffer fish to be imported
- Fish should be either unprocessed or only eviscerated to make visual identification of fish types easy at the time of import
- Certificate issued by the exporting country's government should be attached

# Year-by-year transition of food poisoning cases caused by Fugu puffer fish

| | Total number of food poisoning | | | Number of food poisoning attributed to only Fugu puffer fish | | |
|---|---|---|---|---|---|---|
| | Cases | Patients | Deaths | Cases | Patients | Deaths |
| **1965** | 1,208 | 29,018 | 139 | 106 | 152 | 88 |
| **1970** | 1,133 | 32,516 | 63 | 46 | 73 | 33 |
| **1975** | 1,783 | 45,277 | 52 | 52 | 75 | 30 |
| **1980** | 1,001 | 32,737 | 23 | 46 | 90 | 15 |
| **1985** | 1,177 | 44,102 | 12 | 30 | 41 | 9 |
| **1990** | 926 | 37,561 | 5 | 32 | 52 | 1 |
| **1995** | 699 | 26,325 | 5 | 30 | 42 | 2 |
| **2001** | 1,928 | 25,862 | 4 | 31 | 52 | 3 |
| **2002** | 1,850 | 27,629 | 18 | 37 | 56 | 6 |
| **2003** | 1,585 | 29,355 | 6 | 38 | 50 | 3 |
| **2004** | 1,666 | 28,175 | 5 | 44 | 61 | 2 |
| **2005** | 1,545 | 27,019 | 7 | 40 | 49 | 2 |
| **2006** | 1,491 | 39,026 | 6 | 26 | 33 | 1 |
| **2007** | 1,289 | 33,477 | 7 | 29 | 44 | 3 |
| **2008** | 1,369 | 24,303 | 4 | **40** | **56** | **3** |

# Measures against natural toxins

3) Shellfish poison

July 1st, 1980: Notification about handling of shellfish that became poisonous due to accumulation of paralytic shellfish toxins, etc.

Shellfish containing higher levels of toxins than the following concentrations will be handled as a violation against the Food Sanitation Law, Article 6

Paralytic shellfish toxin: 4MU

Diarrhetic shellfish toxin: 0.05MU

# Food origins of Campylobacter food poisoning (including presumed cases)

**Consumption of raw chicken meat and liver**
**48 cases, 438 patients**

**Consumption of raw beef liver**
**15 cases, 96 patients**

**Consumption of other types of raw meat (including cases with unknown animal species)**
**7 cases, 71 patients**

**Dishes of chicken meat that were not designated for raw consumption**
**18 cases, 230 patients**

**Secondary contamination**
**11 cases, 321 patients**

Excerpt from Food Poisoning Status, 2005

## In order to prevent Campylobacter food poisoning

○Countermeasures at farms

○ Countermeasure at poultry slaughterhouse

**Sanitary management with HACCP method at poultry slaughterhouses**

○ Countermeasures at trimming factory, during distribution and sales

**Temperature management, sanitary handling of food**

**(Regarding guidelines about management and administration standards that food businesses, etc. have to implement – Guidelines)**

○ Disseminating and raising awareness among food-related business persons and consumers

**How to prevent Campylobacter food poisoning (Q&A)**

**6 points for preventing food poisoning, etc. at home**

# Measures against parasites

Investigation on amberjack imported from China since the fall of 2004 and chicken grunt originally captured wild in China and then aquafarmed in Japan, turned out to have anisakis larva at a high rate.

1) In addition to the high rate of parasitism, larva was even found in some fish meat.
2) Those meats are sold for human consumption.
3) The public was not generally aware of the high rate of anisakis infestation in those types of fish.

In conjunction with the Ministry of Agriculture, Forestry and Fisheries, our ministry has issued guidance for direct measures such as freezing (-20 degrees C or below for 24 hours or longer) for those fish originally captured wild and imported from China, then domestically aquafarmed. In addition, another guidance was issued for aquafarming businesses to halt importing amberjack and chicken grunt that were originally captured wild and raised in China.

# Introduction of positive list system to the regulation of pesticide residues in food, etc. 1

Before the regulation

Pesticide, feed additives, and veterinary medicinal products

**Items with criteria already established for their residual levels in foods (residual standards)**

**Residual standards stated for 250 pesticides and 33 veterinary medicinal products, etc.**

**When residual pesticide levels, etc. are found to be above residual standards, the food is banned from marketing.**

**Foods with no defined standards (residual standards) for their ingredients**

Even with pesticide residues, etc. detected, there is basically no regulation to indicate prohibition of sales, etc.

# Introduction of positive list system to the regulation of pesticide residues in food, etc. 2

After introduction of positive list system (Executed on May 29th, 2006)

Pesticide, feed additives, and veterinary medicinal products

**Pesticides with already established standards (residual standard) as food ingredient**

**Based on Article 1, Section 1 of the current law, the ministry aimed to establish a harmonized standard with the Agricultural Chemicals Control Act, international standards, and American and European standards before the implementation of the positive list system**

**Promotion to establish residual standards, such as establishing residual standards coupled with a registration system of pesticide based on the Agricultural Chemicals Control Act, etc.**

**Prohibition of selling foods that contain pesticides above their residual standards, etc.**

**Pesticides with no established standards (residual standards)**

**The Minister of Health, Labour and Welfare publicly announces certain levels of pesticides as they are not likely to harm people's health.**

**(Across-the-board recommendation)**

**Prohibition of selling foods that contain pesticides above a certain level (0.01 ppm).**

**Substances designated by the Minister of Health, Labour and Welfare**

**Public announcement of chemicals that are clearly unlikely to harm people's health**

**(substances not subjected)**

**Outside the scope of the positive list system**

# Contamination of fish meat, the raw material for feed, with malachite green and leuco-malachite green

Past circumstances

(1) A survey was conducted on the actual contents of MG and LMG in corf aquafarming and aquafarming feed. The survey was initiated by “basic research on harmful chemicals’ risk management 2006” by the Ministry of Agriculture, Forestry and Fisheries.

(2) LMG was detected in a portion of corf-aquafarmed fish.

(3) Pursuit of the LMG positive cases of fish revealed that MG and LMG were also detected in their fed feed produced by certain feed manufacturers.

(4) The Fertilizer and Feed Inspection Station (an independent administrative agency) has confirmed the presence of MG/LMG contamination in fish meat that was imported from China as a raw material for feed by manufacturers (3).

Measures

(The Ministry of Agriculture, Forestry and Fisheries)

Handling of the aquafarmed fish that were fed feed possibly contaminated with malachite green and leuco-malachite green

(December 8th, 2006)

(The Ministry of Health, Labour and Welfare)

Handling of aquafarmed aquatic animals for human consumption that were fed feed possibly contaminated with malachite green and leuco-malachite green

(December 8th, 2006)

# Guidelines and Plans for Monitoring and Guidance

**(Related to Food Sanitation Law, Article 22-24)**

## Guidelines for Food Sanitation Monitoring and Guidance (Compiled by the government)

A) Basic direction such as roles related to monitoring and guidance by the government and prefectures, etc.

B) Basic items for monitoring and guidance, such as those that should be intensively monitored based on past violation record and hazard information, etc.

C) Basic items related to implementation system for monitoring and guidance, such as inspection facilities.

D) Others; the key items related to public disclosure of the outcomes, implementation of monitoring and guidance based on surveillance and research.

## Plan for Imported Food Monitoring and Guidance (Compiled by the government)

A) Sanitary regulation of food in exporting countries, occurrence of food sanitary problems, items that require highly prioritized monitoring and guidance that are drawn up based on the past circumstances of violation.

B) Promotion of self-initiated sanitary management by importers, etc. through convening workshops.

C) Others; Necessary items for implementation of monitoring and guidance, such as public disclosure of monitoring/guidance outcomes

**Call for public opinion from citizens and residents in regard to formulation and changes**

**Publicly disclose how the plan has been implemented**

## Plans for Food Sanitation Monitoring and Guidance by prefectures, etc. (Compiled by prefectures, etc.)

A) Items that require highly prioritized monitoring and guidance, drawn up based on the food production, distribution, circumstances of manufacturing and processing, occurrence of sanitary problem of food in the region.

B) Hosting workshops, etc. to promote education, in order to disseminate the concept of HACCP among businesses, etc., and to promote self-initiated sanitary management based on the mass cooking facility manual.

C) Items related to communication and adjustment with neighboring communities, and with national institutions for tests and inspections to accommodate investigations, on occasions of food poisoning.

D) Others: items necessary to implement monitoring guidance, such as public disclosure of monitoring/guidance outcomes.

# Responsibilities of food business operators

**(Related to Food Sanitation Law, Article 3)**

## 1. Measures in ordinary times

- Gain knowledge and techniques
- Secure safety of raw materials
- Proactively exercise self-inspection, etc.

## 2. Making and keeping records

To the necessary extent, endeavor to make and keep records of suppliers names.

⇨ This can be used, during the occurrence of food poisoning, to expedite the investigation of causes and prevention of further expansion of damage

## 3. Measures during an emergency

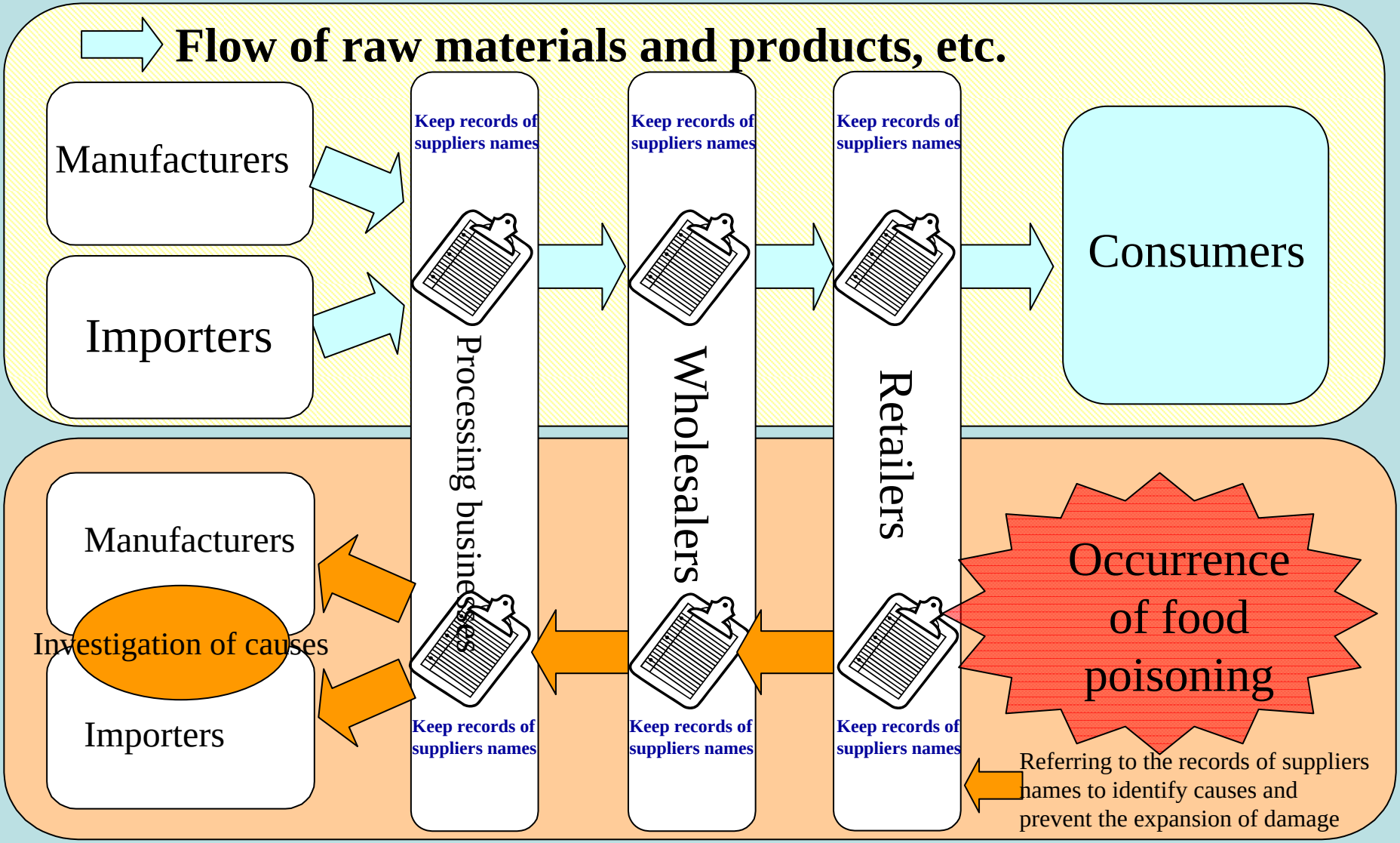
Endeavor to accurately and expediently,

- Provide government and municipalities with records mentioned in ‘2’ and
- Implement measures such as disposal, etc.

***”Food business operators” refers to businesses and mass food services that carry out collection, manufacturing, importation, processing, marketing, etc. of foods.**

# Obligatory effort to keep records by food business operators

**(Related to Food Sanitation Law, Article 3, Section 2 and Section 3)**



# Approval System for Comprehensive Sanitary Management and Manufacturing Process

## HACCP method

**Raw materials**

Inspection and recording at acceptance

**Mixing**

Confirmation and recording of mixing ratio

**Filling**

Confirmation and recording of temperature and filling volume

**Sealing**

Confirmation and recording of sealing tightness

**Heat treatment** — **Critical control point (CCP)**

**Continuous monitoring of pasteurizing temperature/time**

**Chilling**

Confirmation and recording of water quality and temperature

**Packaging**

Confirmation and recording of impact and temperature

**Shipment**

HACCP is a sanitary management method to secure the safety of products by analyzing hazards such as contamination with microorganisms, which might occur at any stage of food manufacturing/processing (Hazard Analysis), establishing the CCP (critical control point) that indicates at which stage of processing and by what measures the safety of products can be more secured based on the hazard analysis and continuously monitoring the described points.

The Comprehensive Sanitary Management and Manufacturing Process is a manufacturing process that incorporates the concept of HACCP. It was established, after the amendment to the Food Sanitation Law, as an approval system by the Minister of Health, Labour and Welfare for the voluntary application of business operators.

### Approval status of Comprehensive Sanitary Management for Manufacturing Process (End of December, 2006)

| | |
|---|---|
| Milk | 161 facilities (238 cases) |
| Milk products | 178 facilities (258 cases) |
| Meat products | 79 facilities (137 cases) |
| Fish jelly products | 25 facilities (34 cases) |
| Retort pouch food | 35 facilities (41 cases) |
| Carbonated drinks | 107 facilities (155 cases) |

### Others

- Instructions to improve sanitary management by establishing ‘the mass cooking facility sanitary management manual’ for mass cooking facilities, etc.
- Offering financial and tax privileges, in order to promote the introduction of HACCP.
- Introduced in February 2004 and renewed in every 3 years, to ensure safety

# The Ministry of Health, Labour and Welfare
# Food Safety Information


- ◆ Emergency information
- ◆ Food Safety Qs & As
- ◆ Risk Communication in Food Safety
- ◆ Implemented policies by types of area
  - ➢ Food poisoning
  - ➢ Food additives
  - ➢ Residual pesticides, veterinary medical products, and feed additives in food
  - ➢ bovine spongiform encephalopathy（BSE）
  - ➢ Genetically modified foods
  - ➢ Health food products
  - ➢ Imported foods

***http://www.mhlw.go.jp/topics/bukyoku/iyaku/syoku-anzen/index.html***

# 札幌市中央卸売市場

札幌市中央批發市場

삿포로시 중앙도매시장

Sapporo Central Wholesale Market

Центральный оптовый рынок г.Саппоро



# 中央卸売市場の役割

中央批發市場的功能
중앙도매시장의 역할
The Role of the Central Wholesale Market
Центральный оптовый рынок и его функции

水産棟仲卸売場
水產棟中間批發市場
수산동 중도매장
Fisheries Building Wholesale Market
Оптовые посредники в отделе морской продукции

◀ 水産棟鮪売場
水產棟金槍魚市場
수산동 참치매장
Fisheries Building Tuna Market
Продажа тунца в отделе морской продукции

Fishery

中央卸売市場は、地方公共団体が開設し、生産者と消費者の間にあって、卸売業者、仲卸業者の業務を通じて生鮮食料品などの円滑な流通を推進しています。

その具体的な役割としては、次のようなものがあります。①「集荷」国内外の各地から大量の産物を集め品ぞろえすること。②「価格形成」せり取引を基本に需給を反映した迅速で公正な価格をつくること。③「分荷」多数の小売業者などへ迅速に荷をさばくこと。④「取引の決済」販売代金の迅速で確実な支払いを行うこと。⑤「流通経費の節減」大量の荷を扱うことにより、流通にかかる運賃、その他の経費が節減できること。⑥「情報の提供」このような生鮮食料品などの流通の確実な情報を収集し伝達すること。⑦「衛生面のチェック」衛生検査所の随時の検査により衛生面のチェックが行われること。

本市では卸売市場法に基づき昭和34年12月5日に全国17番目の市場として開設の認可を受けて、同年12月10日青果部、35年4月4日に水産物部がそれぞれ業務を開始し、現在、北海道の生鮮食料品流通の拠点市場として重要な役割を担っています。

中央批發市場的功能
中央批發市場由地方公共團體開設，透過批發商、中間商順利推進生鮮食品在生產者和消費者之間的流通。

其具體功能如下：
①「集貨」從國內外各地集聚各式商品。
②「決定價格」以拍賣交易為基礎，反應供需狀況，迅速決定公正的價格。
③「分貨」將貨物迅速地出貨給眾多的零售商。
④「交易結帳」迅速確實地支付銷售貨款。
⑤「節省流通經費」因為是大量的貨物集散，可節省貨物流通中所需的運費和其他費用。
⑥「情報提供」收集並傳達確實的生鮮食品流通情報。
⑦「衛生檢查」由衛生檢查所隨時進行檢查，以確保生鮮食品的衛生。

本市場依據批發市場法，於1959年12月5日得到許可而設立，是日本全國第17個市場。同年12月10日青果部，1960年4月4日水產品部各自開始其營業。目前作為北海道生鮮食品流通的主要據點市場，擔負著重要的任務。

중앙도매시장은 지방공공단체가 개설하여 생산자와 소비자 사이에 도매업자와 중도매인 업무를 통해서 신선한 식품의 원활한 유통을 추진하고 있습니다.
구체적인 역할로는 다음과 같은 것이 있습니다. ①「집하」국내외의 각지로부터 대량의 농수산물을 모아 둡니다. ②「가격형성」경매 거래를 기본으로 하여, 수급을 반영한 신속하고 공정한 가격을 만듭니다. ③「분하」많은 소매상들에게 신속히 상품을 나누어 줍니다. ④「거래결제」 판매 대금을 신속하고 정확하게 지불합니다. ⑤「유통경비 절감」대량의 상품을 취급하기 때문에 유통에 쓰이는 운임 및 그외의 경비를 절감 할 수 있습니다. ⑥「정보 제공」신선한 식품의 유통에 대하여 정확한 정보를 수집하여 전달합니다. ⑦「위생 체크」위생 검사기관에서 수시로 위생을 체크합니다.
삿포로시에서는 도매 시장법에 의거하여 1959년12월5일에 전국에서 17번째의 시장으로서 개설허가를 받아, 그 해 12월 10일에 청과물, 1960년4월4일에 수산물에 대하여 각각 업무를 시작하였습니다. 그리하여 현재 홋카이도의 신선한 식품유통의 거점 시장으로서 중요한 역할을 담당하고 있습니다.

▲食品衛生検査
食品衛生檢查
식품위생검사
Food hygiene inspection
Санитарная инспекция пищевых продуктов

Vegetables

▲青果移動せり
青果移動拍賣
청과이동경매
Mobile fruit and vegetable auction
Передвижной овощефруктовый аукцион

Fruits

◀ 青果卸売場
青果批發場
청과 도매장
Fruits and Vegetable Wholesale Market
Секция оптовой торговли овощами ифруктами

The Central Wholesale Market was established by local public organizations. Standing between the producer and the consumer, it promotes the smooth distribution of perishable foods through wholesalers and brokers.

The market plays a concrete role in the following ways: ①Concentration - A wide variety of produce is brought together in one place in vast quantities from all over the country and from abroad. ②Price formation - Fair prices reflecting supply and demand are set quickly on the basis of auction transactions. ③Distribution - Goods are speedily distributed to many retailers. ④Settlement of transactions - Payment of charges are made quickly and accurately. ⑤ Reduced distribution costs - Freight charges and other costs incurred in distribution can be reduced by handling goods in large quantities. ⑥Supply of information - Accurate information concerning distribution of perishable foods is collected and transmitted. ⑦Hygiene inspection - Hygiene checks are carried out from time to time by the Health Inspection Office.

The City of Sapporo obtained the authorization to open the 17th wholesale market of Japan, based on the Wholesale Market Law, on December 5, 1959. The Fruits and Vegetable Section started operation on December 10 of the same year, and the Marine Products Section on April 4, 1960. The Central Wholesale Market plays an important role as a leading market for distribution of perishable goods in Hokkaido.

Центральный оптовый рынок был создан местными общественными организациями. Занимая место между производителями и потребителями, он способствует нормальному товарообороту свежих продуктов питания через операции оптовиков и посредников.

Выполняет следующие конкретные функции:

①«Сбор товаров»-собирается большое количество продукции с богатым ассортиментом со всех концов страны и из-за рубежа. ②«Формирование цен» - на основании аукционных сделок оперативно устанавливаются справедливые цены, отражающие спрос. ③«Дифференциация товаров» - товары оперативно распределяются среди многочисленных розничных торговцев. ④«Расчет по сделкам» - ведется своевременный и надежный расчет за реализованные товары. ⑤«Сокращение издержек товарооборота» - крупномасштабный товарооборот позволяет сократить расходы на перевозки и другие виды операций, связанные с ним. ⑥«Обеспечение информацией» - ведется сбор и распространение достоверной информации об обороте свежих продуктов питания. ⑦«Санитарный контроль»-наличие пункта санитарного контроля позволяет вести соответствующую проверку в любое время.

Наше предприятие, на основании Закона об оптовом рынке, 5 декабря 1959 года получило разрешение на учреждение как 17-ый по счету рынок в стране. 10 декабря того же года и 4 апреля 1960 года соответственно были пущены в эксплуатацию овоще-фруктовая секция и морепродуктовая секция. Рынок и ныне выполняет важную функцию как центр сбора и перераспределения свежих продуктов на Хоккайдо.

# 市場の機構

市場的組織結構
시장의 기구
Organization of the Market
Структура рынка


**市場開設者＝札幌市**
市場の整備および維持管理と業務の許可および取り引きが公正に行われるように見守っている。

**1 卸売業者＝集荷販売代行機関**
生産者から委託及び貸付した品物をセリ等で仲卸業者、売買参加者に販売し、一定のきめられた委託手数料等をもらう。

**2 仲卸業者＝評価分荷機関**
入荷品をセリ等で買取り、市場内の店舗にて適正な価格で、買出人（小売商）に分けて販売する。

**3 売買参加者＝評価配給機関**
仲卸業者と一緒にセリに参加して、卸売業者から品物を買えるよう札幌市から承認を受けている人。

**4 関連事業者＝市場利用者のサービス機関**
市場出入者が仕事をしやすいように、買受代金精算、運送、食堂、その他必需品販売の業務をする人。

**5 買出人＝配給機関**
一般の魚屋、八百屋、果実店などで、仲卸業者の店から仕入れる人。

**市場開設者=札幌市**
負責設施的整備及維持管理，業務准許和監督交易的公正進行。

**1 批發商=代理收購銷售的部門**
受生產者委託，將有價出售的貨物以拍賣等方式賣給中間商、交易商，並收取一定的委託手續費。

**2 中間商=估價分售部門**
以競標等方式買進貨物，並在市場內的店舖以合適的價格分售給零售商。

**3 交易商=估價供給部門**
經札幌市批准許可，可與中間商一起參加競標，從批發商處購得貨物的人員。

**4 關聯業務者=市場服務部門**
為使出入市場的人員工作方便，代辦諸如貨款結算、運輸、餐飲提供及從事其他必需品銷售的人員。

**5 採購者=供應部門**
一般的魚店、蔬菜店、水果店等從中間商處採購貨物的人員。

**시장개설자＝삿포로시**
시설의 정비 및 유지 관리, 업무허가 및 거래 등이 공정하게 이루어지도록 관리하고 있습니다.

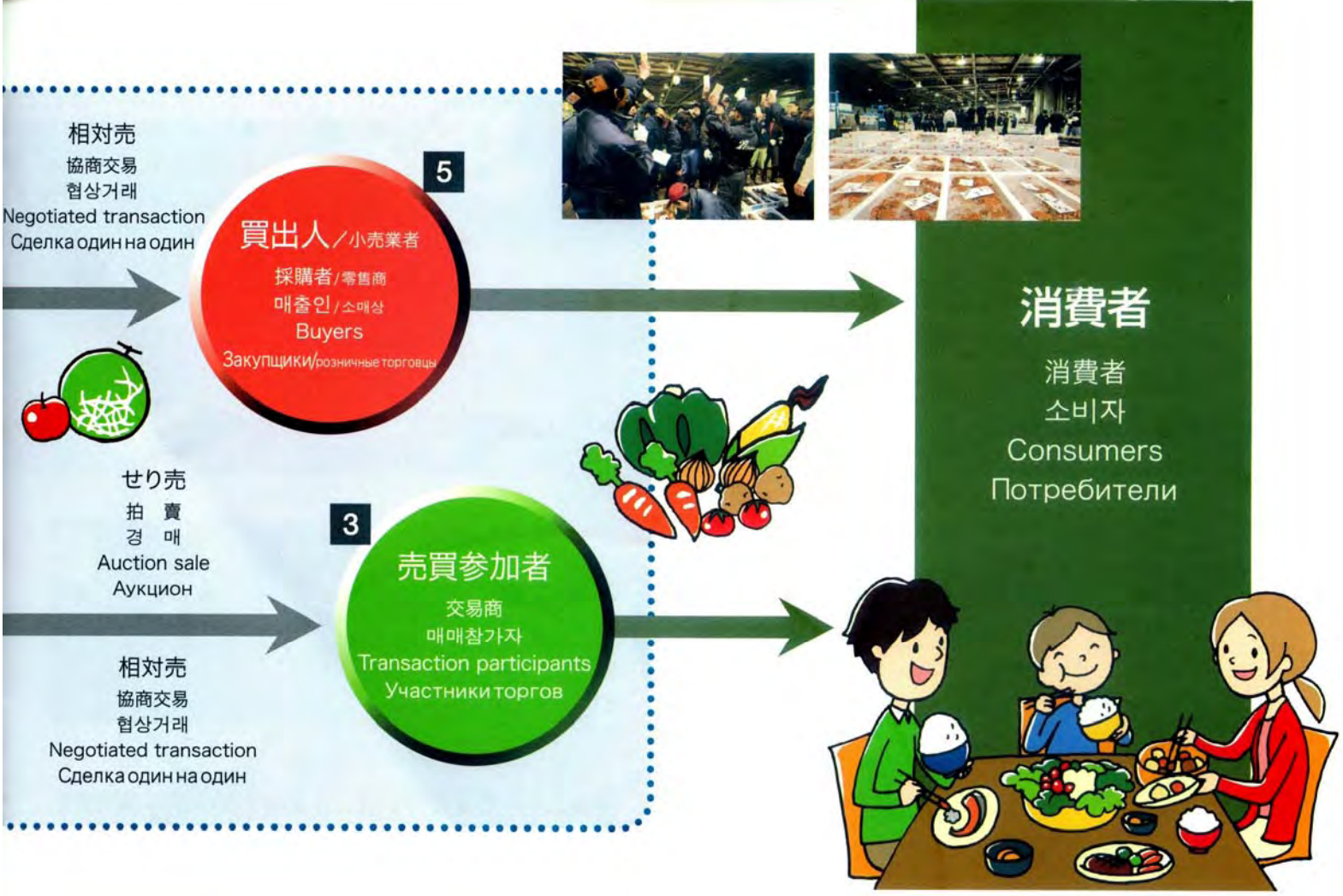
**1 도매업자＝집하 판매 대행기관**
생산자로부터 위탁 또는 대부 받은 물건을 경매로 중도매인과 매매 참가자에게 판매하여 일정의 수수료를 받습니다.

**2 중도매인＝평가 분하기관**
입하품을 경매 등으로 매입하여 시장내의 점포에서 적정가격으로 매출인(소매상)에게 나누어 판매합니다.

**3 매매 참가자＝평가 배급기관**
중도매인과 함께 경매에 참가하여 도매업자로부터 물건을 살 수 있도록 삿포로시로부터 승인을 받은 사람입니다.

**4 관련상인＝시장 이용자의 서비스 기관**
시장을 이용하는 사람들에게 편의를 제공하기 위해 매수대금 정산, 운송, 식당, 그 외 필수품을 판매하는 사람입니다.

**5 매출인(소매상)＝배급 기관**
일반 생선가게, 야채가게, 과일가게 등을 말하며, 중도매인으로부터 매입하는 사람입니다.




**Market Organizer = City of Sapporo**

The City of Sapporo administers the market in order to improve and maintain facilities,authorize business,and ensure fair trade.

**1 Wholesales = Agencies which collect and sell goods.**

Wholesalers sell products on consignment and purchased from producers to brokers (transaction participants) at auction and obtain a certain commission from the producers.

**2 Brokers = Individuals who evaluate and dispense goods.**

Brokers buy transported goods at auction.They sell them to individual buyers (retailers) at reasonable prices reached through negotiation at their shops in the market.

**3 Transaction Participants = Individuals who evaluate and distribute goods.**

Transaction participants are those who are authorized by Sapporo to participate in auction along with brokers to buy goods from wholesalers.

**4 Traders = Individuals who offer various services to those who utilize the market.**

Traders are those who offer services such as settlement of payment for purchases,transportation of goods,management of dining facilities,and sale of necessities,in order to offer better working conditions for transaction participants.

**5 Buyers = Individuals who distribute goods.**

Buyers are those who buy goods from brokers, including fishmongers,grocers,and fruit sellers.

**Муниципалитет города Саппоро-создатель рынка.**

Муниципалитет контролирует, в каком состоянии находятся оборудование и помещения рынка, а также осуществляет надзор за правильным ведением работы по выдаче лицензий и проведением торговых сделок.

**1 Оптовик-агент по сбору и реализации товаров.**

За установленные комиссионные оптовики на аукционе и в другой форме продают посредникам и участникам торгов товары, закупленные у производителей или полученные на консигнацию.

**2 Брокеры-орган оценки и дифференциации товаров.**

Посредники покупают на аукционе и в другой форме товары, доставленные на рынок, и по приемлемым ценам продают их через магазины на рынке,распределяя между несколькими покупателями (розничными торговцами).

**3 Участник торгов-орган оценки и сбыта**

Участники торгов, имея лицензию, выданную муниципалитетом города Саппоро, могут участвовать вместе с посредниками в общем аукционе и покупать товары у оптовщиков.

**4 Взаимосвязанные предприниматели-орган обслуживания клиентов рынка**

Для удобства клиентов и посетителей рынка сервисные (обслуживающие) предприятия организуют работу по клиринговым расчётам, транспортировку, работу столовых, а также продажу товаров,необходимых для функционирования рынка.

**5 Общие закупщики-дистрибьюторы.**

Владельцы рыбных, овощных, фруктовых магазинов (розничные торговцы) закупают товары в магазинах посредников.

# 札幌市中央卸売市場
# 一日の流れ

札幌市中央批發市場的一天
삿포로시 중앙도매시장 하루의 일과
Sapporo Central Wholesale Market-Daily Schedule
Центральный оптовый рынок г.Саппоро Распорядок дня рынка

**午後2時**
下午2點
오후2시
2:00 p.m.
2:00 дня

**買出人（小売業者）は、買った品物を消費者に売ります。**
零售商將購入的貨物轉售給消費者。
매출인(소매상)은 매입한 상품을 소비자에게 판매합니다.
Buyers (retailers) sell goods to customers.
Розничные торговцы продают товары покупателям-потребителям.

**午前5時～**
清晨5點～
오전5시～
5:00 a.m.
5 утра-

水　産
水產品
수산물
Marine Products
Морская продукция

**午前7時～**
上午7點～
오전7시～
7:00 a.m.
7 утра-

青　果
青　果
청과물
Fruits and Vegetable
Овощи и фрукты

**買出人（小売業者）が仲卸業者から品物を買います。**
零售商從中間商處買入貨物。
매출인(소매상)이 중도매인으로부터 상품을 매입합니다.
Buyers (retailers) buy goods from brokers.
Розничные торговцы покупают у посредников товары.

## 午前2時
凌晨2點
오전2시
2:00 a.m.
2 часа ночи

**生産地・出荷地から品物が市場に運ばれます。**
從生產地、出貨地將貨物運到市場。
생산지·출하지에서 상품이 시장에 운송됩니다.
Goods are transported to market from producing districts and shipment places.
Товары доставляются с мест производства на рынок

## 午前3時30分～5時
水 産 水產品 수산물 Marine Products Морская продукция с
凌晨3點30分～5點
오전3시30분～5시
3:30 - 5:00 a.m.
3:30 до 5 утра

## 午前4時30分～5時
青 果 青 果 청과물 Fruits and Vegetable Овощи и фрукты с
凌晨4點30分～5點
오전4시30분～5시
4:30 - 5:00 a.m.
4:30 до 5 утра

**品物が並べられ、セリの前に仲卸業者が品物を見て値段を考えます。**
在進行拍賣前, 將貨物陳列於市場內, 讓中間商視貨並考慮價格。
상품이 진열됩니다. 중도매인은 경매하기 전에 상품을 보면서 가격을 검토합니다.
Before being auctioned,goods are inspected and evaluated by brokers.
Товары выставляются на обозрение.До начала аукциона посредники оптовой торговли знакомятся с ассортиментом и определяют для себя цены товаров.

## 午前5時～7時20分
水 産 水產品 수산물 Marine Products Морская продукция с
清晨5點～7點20分
오전5시～7시20분
5:00 - 7:20 a.m.
5 до 7:20 утра


## 午前7時～8時30分
青 果 青 果 청과물 Fruits and Vegetable Овощи и фрукты с
上午7點～8點30分
오전7시～8시30분
7:00 - 8:30 a.m.
7 до 8:30 утра

**仲卸業者が競争で値段を決め、卸売業者から品物を買います。**
中間商互相競價, 從批發商處標下貨物。
중도매인이 경매로 가격을 결정하여 도매업자로부터 물건을 매입합니다.
Brokers bid against each other for those goods they want to buy from wholesalers.
Посредники,соперничая друг с другом,определяют цены и покупают товары у оптовых торговцев.

# 札幌市中央卸売市場の環境問題への取組み

札幌市中央批發市場對於環境問題所作的努力
삿포로시 중앙도매시장의 환경문제 대처
Approach of Sapporo Central Wholesale Market to the Matter of the Environment
Подходы Центрального оптового рынка г.Саппоро к проблемам окружающей среды

### 衛生管理
商品の鮮度維持のための低温売場や、殺菌効果のあるオゾン水による洗浄施設を設けています。

### クリーンエネルギーの使用
場内で使用する構内運搬車輌「ターレット」や「フォークリフト」を、天然ガス車輌へ転換しました。これにより、排気ガスのクリーン化や、$CO_2$の排出量の削減が図られました。

### アイドリングストップ給電スタンドの導入
駐車・待機中のトラックの運転室の冷暖房や、荷室の冷蔵のための電源を、外部から供給して、アイドリングをストップするシステムを導入しました。

### 衛生管理
設有可保持商品新鮮度的低溫賣場，及具有殺菌效果的臭氧水洗淨設施。

### 使用綠色能源
為了減少排氣污染及二氧化碳產生，將場內所使用之貨物搬運車輛換成天然瓦斯燃料車。

### 導入待機熄火充電站
導入待機熄火系統，可由外部供給待機暫停時，貨車駕駛座內的冷暖氣，及儲藏室所需的冷藏電源等。

### 위생관리
상품의 신선도 유지를 위한 저온매장이나, 살균효과가 있는 오존수를 사용한 세정시설을 갖추고 있습니다.

### 클린에너지의 사용
장내에서 사용하는 구내운반차량 「터릿」이나 「포크리프트」를, 천연가스차량으로 전환하였습니다. 이에 따라, 배기가스의 클린화와, $CO_2$, 의 배출량의 절감을 도모했습니다.

### 아이들링스톱 급전 스탠드의 도입
주차·대기중인 트럭운전실의 냉난방이나, 짐칸의 냉방을 위한 전원을, 외부로부터 공급하여, 아이들링을 스톱하는 시스템을 도입하였습니다.

### Hygiene control
The counters with low temperature where arranged at the market to retain the freshness of the products. Also the facilities to wash products were set up. This facilities use ozone water which has disinfection effect.

### Using of Clean Energy
Turret trucks and forklifts which are used inside the market to carry the products were changed to the natural-gas vehicles. In such a way the making exhaust gas more clean and reducing of $CO_2$ was planned.

### Introduction of Electricity Supplying Stands to Stop Idling
The idling stop system was introduced. Due to this system the electricity for the air-conditioning and heating of the rooms for drivers of the standby trucks and for the refrigerating of the storages is supplied from the outside.

### Санитарный контроль
На рынке оборудованы торговые места с низкой температурой для сохранения свежести продукции, а также сооружения для промывания, где используется озонированная вода,имеющая свойства дезинфектора.

### Использование чистой энергии
Тележки и вилочные погрузчики, которые используются для перевозок на территории рынка, были заменены на работающие на природном газу.Таким способом планировалось сделать выхлопные газы более чистыми и сократить выбросы углекислого газа.

### Внедрение электроснабжающих станций,которые предотвращают айдлинг
Была введена система, недопускающая айдлинг, когда электричество для кондиционирования и отопления комнат водителей грузовиков, находящихся на отстое, а также для охлаждения складов поставляется извне.


| | |
|---|---|
| 交通機関 | ■JRバス 北11西20 徒歩1分<br>■地下鉄 二十四軒駅から 徒歩10分<br>■JR桑園駅から 徒歩15分 |
| 交通方式 | ■從JR巴士北11西20站 徒步1分<br>■從地鐵二十四軒站 徒步10分<br>■從JR桑園站 徒步15分 |
| 교통기관 | ■JR버스 北11西20 도보 1분<br>■지하철 니쥬용캔(二十四軒)역에서 도보 10분<br>■JR 서엔(桑園)역에서 도보 15분 |
| Means of transportation | ■1 minute walk from JR Bus Kita 11 Nishi 20 Bus stop<br>■10 minute walk from Nijyuyonken Subway Station<br>■15 minute walk from JR Soen Station |
| Виды транспорта | ■Автобус«JRБасу»,ост.«Кита11Ниси20»,1мин.пешком<br>■Метро«Нидзюён кен»,10мин.пешком<br>■Ж/д станция«Соэн»,15мин.пешком |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|---|---|
| **札幌市中央卸売市場 管理事務所** | 札幌市中央区北12条西20丁目2-1（水産棟4階）<br>TEL.（011）611-3111　FAX.（011）611-3138 |
| 札幌市中央批發市場 管理事務所 | 札幌市中央區北12条西20丁目2-1(水產棟4樓)<br>TEL 011-611-3111　FAX011-611-3138 |
| 삿포로시중앙도매시장 관리사무소 | 札幌市中央区北12条西20丁目2-1（수산동4층）<br>전화(011)611-3111　팩스(011)611-3138 |
| Sapporo Central Wholesale Market Administration Office | Suisan-To 4F, Kita 12 Nishi 20-2-1,Chuo-ku, Sapporo<br>Telephone : (011)611-3111　Facsimile : (011)611-3138 |
| Центральный оптовый рынок г.Саппоро Администрация: | г.Саппоро,Тюо-ку,Кита12дзё,Ниси20чёмэ,2-1(Суйсан-то,4-й этаж)<br>Телефон:(011) 611-3111　Факс:(011) 611-3138 |



さっぽろ市
02-T02-08-1274
20-2-230