

1999-13

( )가

1999. 12

, , ,

---

,  
 . 1995 FAO  
 「 (The Code of Conduct for Responsible  
 Fisheries)」 가  
 .  
 ( , , , 가 ) 가  
 , OECD 가  
 OECD ( )  
 . ( )  
 가  
 .  
 가 OECD  
 가 , ,  
 , OECD  
 OECD  
 , , ,  
 가  
 . 84 OECD (1999. 10. 18  
 10. 20) 가

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,

,

,

.

,

가

1999 12

韓國海洋水產開發院  
院 長 李 廷 旭

---

< >

漁獲後 處理가 責任      漁業      影響      政策含意

· , 가 ,  
가가  
· , 가  
· ,  
· ,  
· , ( : , , ), ·  
· , 가 가 ·  
· ,  
가 , OECD  
· ,  
· , WTO  
· , WTO  
· ,  
가 .

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<ABSTRACT>

## **The Influence of Post-Harvesting Practices on Responsible Fishing Activity and the Policy Implication**

Responsible post-harvesting practices are closely related to the realization of responsible fishing activity. The reason is that not only does the fisheries resources undergo, after being caught, various transformations through procedures such as distribution, processing and storage, but also the added value constantly changes according to each stage. Therefore, changes of signals in the market and price which occurs in the post-harvesting field are directly connected to the decision-making of fishermen regarding their intention to exploit resources.

When the post-harvesting industry functions as an efficient market, the signal which the industry sends contributes to the efficient distribution of fisheries resources. However, the reality is that such industrial environment isn't being established. For instance, unscientific non-tariff measures—such as sanitary measures, quality certifications, origin markings, etc.—and government subsidies for the harvesting and post-harvesting of fisheries exist in reality.

That is why we need to develop and utilize elastic and adjustable tariff strategies concerning the tariff system, and establish a distribution plan in terms of transparency of distribution, stability of marine products and preservation of resources which can be shown by the examples of OECD members.

Moreover, in recent WTO negotiations, while turning the subsidies, which is a matter of primary concern to the fishing industry, into non-actionable subsidies such as harvesting and post-harvesting technology development, there is a need to convert the structure of the harvesting and post-harvesting industry into an elastic one where the market can function efficiently.

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. The Implications of Responsible Post-Harvesting Practices on  
Responsible Fisheries (AGR/FI/RD(99)3) / 63

. (OECD  
(AGR/FI(99)4/REV1) / 83



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< -1>	가 ( )	....	56
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< -1> MSY/	/	.....	6
< -2>	/	.....	10
< -1>		.....	25

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## 第 1 章 序 論

1.

1)

1970 FAO(Food and Agricultural Organization)  
(post-harvesting practices) 가  
(post harvest  
losses) 10 20% ,  
가  
.1)  
, 가 1980

1995 FAO 「 (The  
Code of Conduct for Responsible Fisheries)」  
가

1997 79 OECD (Organization for  
Economic Cooperation and Development) (Fisheries Committee)  
,2) 1988 81

---

1) Harris Kenton L. and Carl J. Lindbald, *Postharvest Grain Loss Assessment Methods*, 1976, pp.7 9; FAO, *Prevention of Post-Harvest Food Losses*, 1985, pp.1 7.

2) OECD ( 가 )

1998

.<sup>3)</sup>

(signals) ( : 가 , , , )가 ,

가

가

가

가

가

가 , , 가 , , 가 , ,

가

(post-harvest structure)

(未成魚 : juvenile)

가 (premium)

( : )

가 (sustainable use)

가

가

가

가 , 가 , , , ,

가가 ,

가

( : eco-labeling)

---

3) : , OECD : .

가 , , , , .4)

, 가 , 가 . OECD 가 (responsible fisheries) (responsible post-harvesting practices) , OECD 가 1997 ~ 99 (work agenda) .

2)

OECD  
가  
가  
/ , OECD  
1998 82  
「  
」  
1995 FAO 「 : The  
Code of Conduct for Responsible Fisheries」  
( )

4) Wessells, Cathy R., "Seafood Safety Regulations and Eco-labeling as Barriers to Trade: Implications for the Korea", *Korea Observer*, Vol XXX, No. 1, 1999, pp. 113-164.



2)

, 가 .

OECD “

” “ ” .

,

.

2 , /

/ 가 . 3

“ (The Code of Conduct for Responsible Fisheries),” , OECD

1997 99 ,

.

4 , /가 /

/

. 5 OECD

.

6 2 5

. 1999 3 OECD “The Implications of Responsible Post-Harvesting Practices and Responsible Fisheries(AGR/ FI(99)4/ REV 1)”

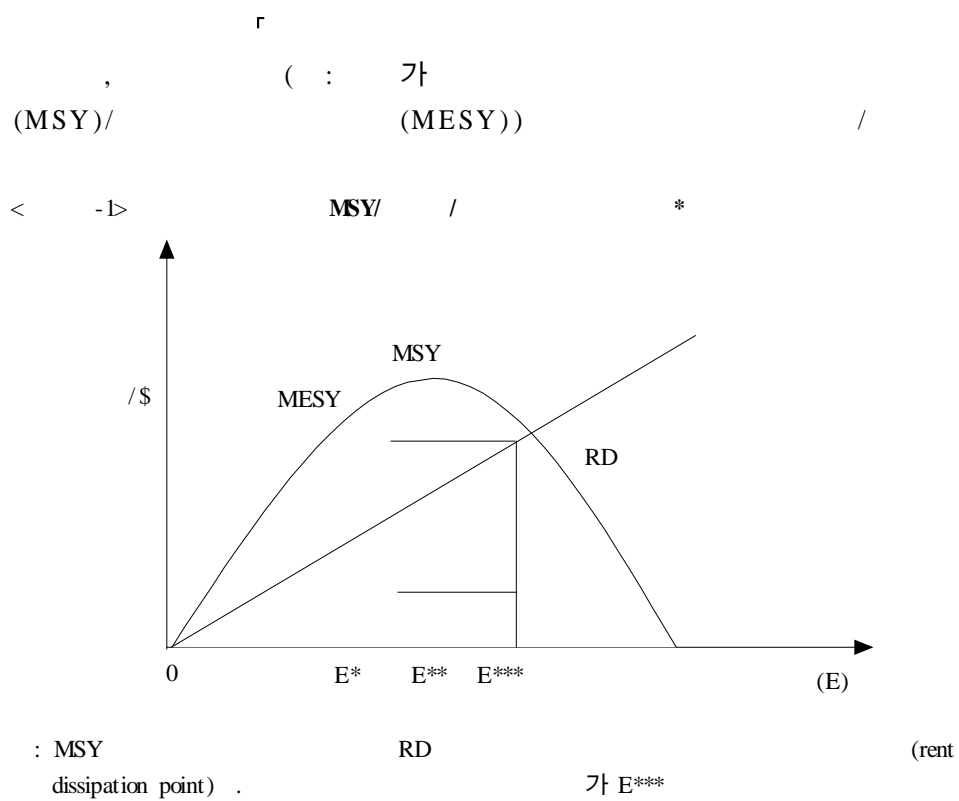
.<sup>6)</sup>

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6) OECD, *The Implications of Responsible Post-Harvesting Practices and Responsible Fisheries*, AGR/ FI(99)4/ REV1, 1999; OECD, *The Implications of Responsible Post-Harvesting Practices and Responsible Fisheries: The Case of Korea*, AGR/ FI/ RD(99)3, 1999.

## 第 2 章 責任 漁業 漁獲後處理 政策 關係

1.





( : /FAO )  
 」 .7)  
 , 「 가  
 , ,가  
 가가 가  
 /  
 」 .8)  
 . 1992 UNCED(The  
 United Nations Conference on Environment and Development) 가  
 / . 21 4 ( ) 5 가  
 가 .9)  
 “ 가  
 .”  
 가  
 가  
 ( )

.10)

7) OECD, *Towards Sustainable Fisheries: Economic Aspects of the Management of Living Marine Resources*, 1997; OECD, *The Economic Impact of Responsible Fisheries on Production and Management: Evaluation of Potential Costs and Gains Involved: Synthesis Report*, AGR/FI(99)6, 1999.

8) OECD, *Post-Harvesting Practices and Responsible Fisheries*, AGR/FI(98)15, 1998, p.2.  
 가 ,

9) , 「21 :  
 」, 1992.

10) OECD, *Towards Sustainable Fisheries: Economic Aspects of the Management of*

가 , 가  
 ,  
 .  
 .  
 . 가  
 ,  
 가  
 /  
 “FAO  
 (UNCLOS)  
 , 1982  
 1993  
 FAO 15/93, 3 “  
 ”  
 , 가  
 , FAO  
 , 가 ,  
 ,  
 ,  
 .  
 가 , , , ,  
 , 가 ,  
 가 .

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*Living Marine Fisheries*, Paris, 1997.

가

TAC(total allowable catch), ITQ(individual transferable quota)  
 /

2. / /

,

가

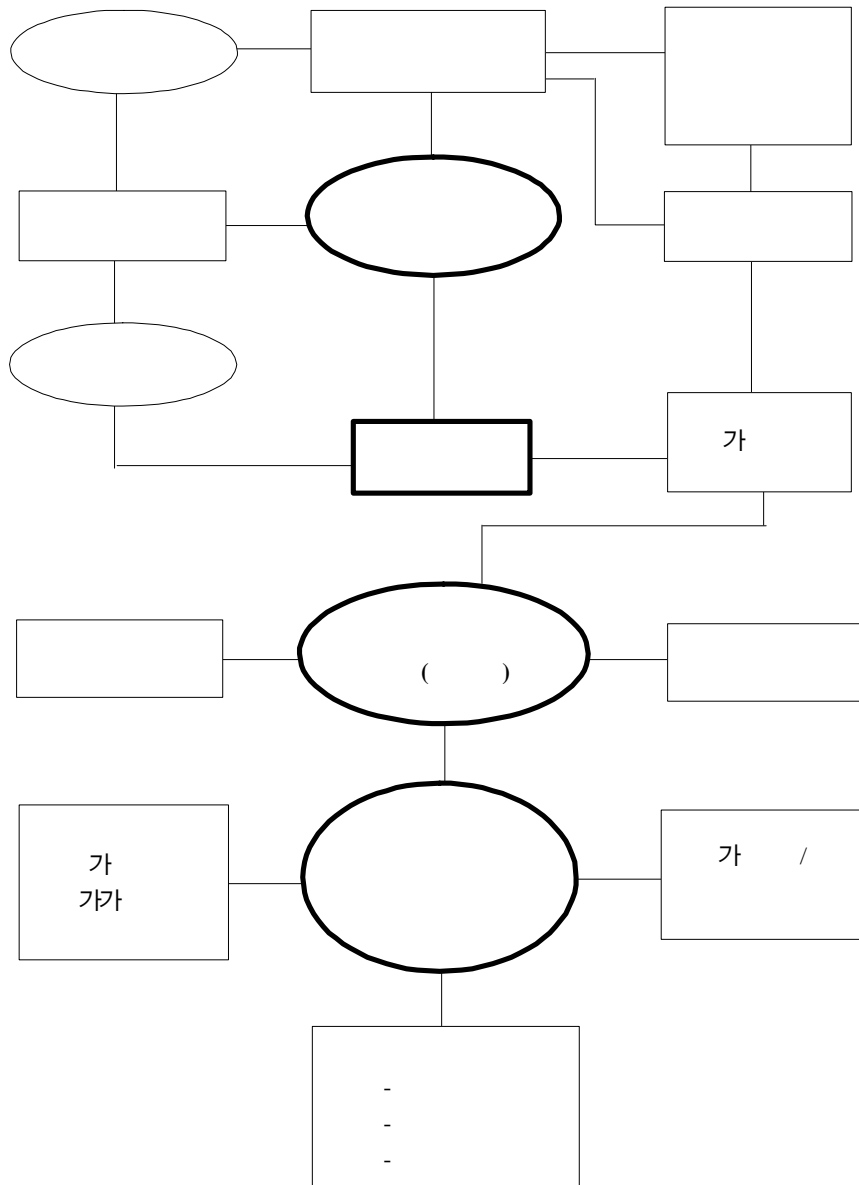
( ,가 , , / , / )

(economic performance)가

,

&lt; -2&gt;

/



### 第 3 章 漁獲後處理 政策 論議 背景

1. (CCRF)

(economic rents)

2

가 (self-renewability)

가

가

가

1970

200

1982

(EEZ)

(UNCLOS)

가

90%

EEZ

EEZ

가

EEZ

EEZ

(resource rents)

1960 1970 , . 1980 . . . . . , EEZ . FAO (COFI) 1991 3 19 가 1992 , FAO . , (United Nations Conference on Environment and Development) 21 . 가 , FAO가 1993 11 가 FAO 27 . FAO 1995 10 31 FAO / 가 .

2. CCRF

가  
3  
(by-catch) 가가  
가  
/  
WTO  
,  
( , , )가

< ->

11. 1. 1	가 .
11. 1. 2	가 , 가 .
11. 1. 8	가 가 , ( : ).
11. 1. 9	가 가 가 .
11. 1. 10	가 가가 .
11. 1. 11	가 , .

: , 「 , 1998, pp.50 52.

&lt; -2&gt;

11. 2. 1	WTO .
11. 2. 3	가 가 .
11. 2. 4	가 , , WTO , , .
11. 2. 13	가 WTO , , .
11. 3. 1	가 , , .
11. 3. 6	가 가 .

: , 「 , 1998, pp.52 53.

/ (活)  
.11)



### 3. OECD 1997 99

OECD 가 WTO 가 . , 가 , 가

1998 81 OECD (3 18 20 ) 가

가 1999 10 84 가 .

OECD

.<sup>12)</sup> 가 , 가 , ,

.

)

, 가 , , ,

,

)

.

가

, 가

.<sup>13)</sup>

### OECD

---

12) OECD Fisheries Committee. *Responsible Fisheries from an Integrated Approach : Outline for a Study* (AGR/ GI(96) 16).

13) .

14)

3

WTO

.

4.

가 . ( : ,  
가 , , , ) 가  
.

,  
(market failure) . (open  
access) (common property resource)  
가

(market distortion)

가 .

.15)

&lt; -3&gt;

(  
).

14)

3 85 1999 3 84 2000  
working group 85

15) "Responsible Fisheries from an Integrated Approach : Outline for a Study", *op. cit.*

(policy coherence)

· ,

,

.

< -3> ( )

○ . ○ ○ ○ (fraud)	- 가 가 - 가 , 가 - 가 ( ), 가 ( ) - , , 가 ,
○	- , , - : 가 , , 가 - : 가 , 가,
○	- , , , ,
○	- , 가 , , ,
○	- , 가 , , /
○ /	- ,

## 第 4 章

## 漁獲後處理/政策 分析

1.

( ) ( )

system) , 가 (license system) . (quota

가 , 가  
가 .  
가 가  
가 가 가  
가 가 가 가  
가 가 가 가  
( < -1, 2> ).  
가 가  
( ) .

< -1> 가 ,

	60
	20
	20
	8
	8
	40 ( )
	8
	8
	8
	8
	8 ,
	8
	20
	8
	110
	110
	350
	60
	110
	110
	60
	60
	70
	, 가

: 가 ,

1970 가 가 가  
가 (< -3> ).

< -2> 가 ,

	10
	8
	8
	8
	10
	8
	8
	10

: 가 ,

가 , , ,

가 가 .

/ , < -4, 5> .

&lt; -3&gt;

가

: , %

	가		
	260	230	13.0
	107	104	2.9
	103	125	17.6
	150	104	44.2
	249	236	5.5
	850	707	20.0
	2,200	1,378	59.7
	540	198	172.7
	35	104	66.3
	300	877	65.8
	4,794	4,063	18.0

: , 12 21.

&lt; -4&gt;

( 10 )

	20cm		9cm
	15cm		5cm ( )
	15cm		10cm( )
	15cm		7cm( 10cm)
	20cm		3.5cm( )
	20cm		5cm( 10cm)
	12cm		9cm
가	18cm		1.5cm
	18cm		5cm
	35cm		10cm
	12cm		10cm
	9cm		





가

, 가 가  
가 가  
20 30%  
(demand pull) 가  
.

2.

1)

(mechanism) . 가  
( )  
.

,  
1 가 .  
가 가 .  
가 가  
가 .  
( )  
가 가  
가 16)

. ( ) 1996 65.7%  
가 가 (< -6> ).  
가 가 가  
, 가 , E-  
가

. 가  
, 가  
( : , ) ,  
(moral hazards)가 .

< -6> (1998 )

: M/T, %

		(A)	(B)	B/ A(%)
	가	20,135	16,919	84.0
		27,454	27,220	99.1
		53,998	53,998	100.0
		74,851	73,795	98.6
		249,519	235,915	94.5
		172,925	172,024	99.9
		7,595	7,586	99.9
		22,132	21,672	97.9
		163,016	159,500	97.8
		9,905	2,918	29.5
		14,585	4,106	28.2
		635	527	83.0
		500	0	0.0
		784	0	0.0

: , 「 」, 1999.

,

,  
( )

2)

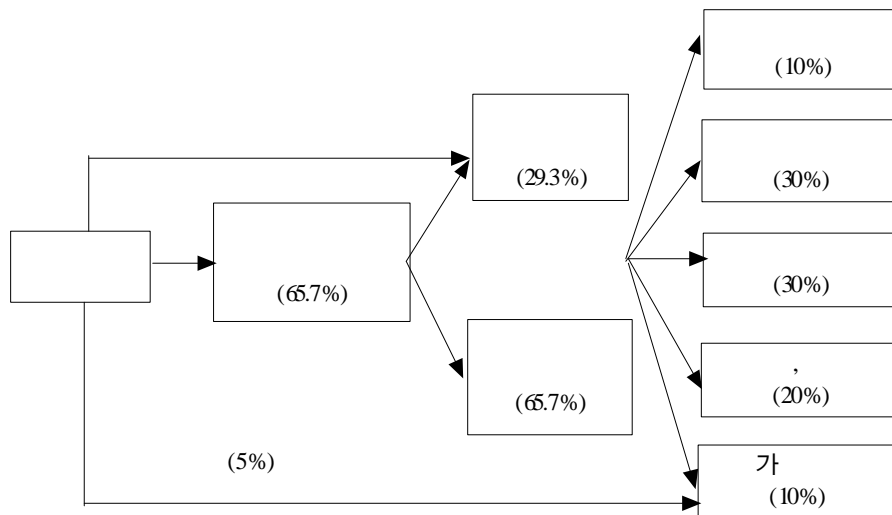
7

가

,17)

, 80% (30%)  
(20%)

< -1>



17)

, “  
, 「

”( 9  
」, 1999. 12. 18, ), p.31.

가 10 가 , , , , 가 54.9% 45.1% .

 $\langle -7 \rangle$ 

: %

	A	B	C	D	E	F	G	H	I	J
	39.5	51.4	30.9	52.5	57.1	59.4	67.3	56.6	69.4	54.4
	60.5	48.6	69.1	47.5	42.9	40.6	32.7	43.4	30.6	35.6
< >										
	14.3	8.0	16.6	11.8	12.1	18.3	11.7	10.8	7.6	22.7
	11.8	9.4	16.9	7.1	8.7	7.0	7.9	12.6	5.5	3.8
	34.5	31.3	35.7	28.6	22.1	15.2	13.0	20.0	17.6	9.1
< >										
	13.8	11.8	19.1	8.9	10.6	11.9	11.0	14.5	10.4	6.3
	46.4	36.7	50.1	38.6	32.3	28.7	21.7	28.9	20.2	29.3
< >										
	19.8	11.8	25.4	14.5	16.3	24.1	13.7	12.9	17.2	16.9
	40.4	36.7	43.8	33.0	26.5	16.4	18.9	30.5	13.4	18.7

:  
: A: B: C: D: E: F: G:  
H: I: J:

가 가 ,  
/ 가  
가 “

” 45%

.

### 3. 가

가

.

, ,

가

가가 가

가

.

가

, ,

가

.

가

가

가

.

가

가

가

.

가

,

,

,

,

,

,

,

가

.

가

,

,

,

가

,

,

가

가

.

가

가

가

54%

,

가

(

,

가

,

,

)

가

65.5%

.

< -8> 가 (1998 )

: M/T, %

	2,084,967	100
	1,204,417	58.8
가	880,550	42.2
-	58,055	( 6.6 )
-	383,136	( 43.5 )
-	80,354	( 9.1 )
-	48,140	( 5.5 )
-	121,480	( 13.8 )
-	43,354	( 4.9 )
-	92,375	( 10.5 )
-	53,656	( 6.1 )

: < -6> .

: ( ) 가 100 .

가 ( , , )  
 가 ,  
 (Box 1).

### < Box 1 >

가  
 ( 0 20m ) 가  
 (海底岩盤) 2,299.2ha  
 가 (725.3ha,  
 31.5%) .  
 ( + ) 5,207.8mt  
 ,  
 1,486.4mt (28.5%) .  
 (生) (乾燥)  
 1995 ,  
 가  
 가가 가 .  
 가  
 誘發需要 200mt , 가  
 가 가 ,  
 10 가 ( : )  
 (1 / ) 가  
 .  
 (98%)  
 , ,  
 가  
 , ( TAC )  
 ,  
 .

가 가 ,  
 / . ,  
 가  
 50 .  
 /  
 , 10

(Box 2).

< Box 2 >

가 船上  
 , ( ) ( + ) 45 50  
 20 25% , 5 1  
 9 12 5  
 8 2 5 .  
 , (2 / )  
 가 ( + )  
 ( : 가가 , ,  
 , )  
 ,  
 i) ( )가  
 ( , )가  
 , ii)  
 가 . ( )  
 ) ( ,  
 )



## 4. 가

1) ( )

( ) 가

, 가 “ ” ( :  
가 ( 14 , 15 ) ).

2) 가

가 , 가 ,

( < -9, 10> ). 1998 가 4  
, 1 , ,

,  
/ 가 가  
가 , 가  
.

&lt; -9&gt; 가

:

	1995	1996	1997	1998( )
	1,484,887	1,565,800	1,880,000	1,868,628
-	299,338	308,670	351,257	377,918
-	59,613	53,255	62,888	79,400
- 가	140,256	151,365	165,648	165,940
-	99,469	104,050	122,721	132,578

: 가 .

가 (1999) 「 가  
가 가  
가 , 가 가  
가 .

3)

11 가 가  
가 , 가  
가 ,  
가 가  
가 .

< -10>

: ,

	1996		1997		1998( )	
	600	12,776	750	12,576	750	12,768
	100	877	100	889	40	352
	3,000	3,734	3,000	3,916	3,500	5,277
	-	-	-	-	100	883
	122	1,450	194	2,340	200	2,416
	4,042	6,298	27,418	32,223	12,000	23,400
	7,422	6,545	1,234	2,465	5,000	10,298
	171	1,368	-	-	1,000	7,634
	956	10,025	158	2,041	1,000	10,524
	8,000	6,562	8,000	6,438	8,000	6,200
	370	3,620	-	-	-	-
	24,783	53,255	40,854	62,888	31,550	79,400

: 가 .

가 가 ( ) 가 (variable costs) 가 , 가 가

5. : /

1) /

가 , 가 1940 60% , 19950 93% . 1988 20 .

< -11>

: , , %

/	(a)	(b)	(b/a, %)
1946	266,204	184,894	69.5
1947	4,111,110	2,360,854	57.4
1948	4,845,178	3,213,980	66.3
1949	8,774,127	8,187,538	93.3
1950	29,118,959	8,493,976	29.2
1950	24,004	3,683	15.3
1960	331,464	37,119	11.2
1070	7,998,888	460,598	5.8
1980	39,644,408	1,240,530	3.1
1990	106,250,152	1,564,240	1.5

: , 「 , 1998.  
: 1950 , 1951 .

, 1970 가 , 가  
가 1998 0.6% .  
1996 10 , 가  
. , , , , ,  
, 가  
. OECD, FAO, WTO EU, APEC,  
NAFO, FFA 가  
, (coherence) (integrity)  
. 가 , 가 가

< -12>

: , %

	가 (c)	(d)	(d/c, %)
1980	22,291,663	37,284	0.2
1985	31,135,655	38,229	0.3
1990	69,843,678	368,095	0.5
1991	81,524,858	576,479	0.7
1992	81,775,257	506,487	0.6
1993	83,800,142	542,489	0.6
1994	102,348,175	726,267	0.7
1995	135,119,933	842,808	0.6
1996	150,339,100	1,080,457	0.7
1997	144,616,374	1,045,474	0.7
1998	93,281,754	587,481	0.6

: < -11> .

2) 18)

가 395 ( , , , )  
 ) , 17.9%  
 8% .  
 395 (HS ) 2 50% 9  
 , 65.3% 258 8%  
 . 63.7% (HS 03 , 252  
 ) 4 (5%, 10%, 14%, 20%) ,  
 2 10% (94 ) , 20% (156 ) 2  
 . 가 16 20% 62 , 30% 3  
 , 가  
 , 2 가 (<  
 -13> ).<sup>19)</sup>

가 . , WTO

,  
 .  
 가 (10%), (20%),  
 (20%) . .  
 . 1994  
 ,

---

18) . , “WTO ”, WTO

19) 03 ( ) , , 1999 . , 9 ( , 4 IQ , 296 , 가 6 ) , 8 9 , 7 .

, 가 가 .

< -13>

HS	01	02	03	05	12	13	15	16	21	23	41	43	
2%	-	-	-	-	-	-	-	-	-	-	1	-	1
3%	-	-	-	-	-	-	5	-	-	-	-	2	7
5%	-	-	1	1	-	-	-	-	-	2	-	-	4
8%	2	-	-	16	-	3	2	-	2	-	-	-	25
10%	-	-	94	-	1	-	-	-	-	-	-	-	95
14%	-	-	1	-	-	-	-	-	-	-	-	-	1
20%	-	-	156	-	25	-	-	62	-	-	-	-	243
30%	-	2	-	-	-	-	-	3	1	-	-	-	6
50%	-	-	-	-	13	-	-	-	-	-	-	-	13
	2	2	252	17	39	3	7	65	3	2	1	2	395

: 「, 1999.

: 01: , 02: (肉類) 03: (魚類) 05: 12:

13: 15: 16: .  
21: 23: 41: . 가 43: ,

6.

1) ( )

가 ( )

. , EU /

가 가 .

) (HACCP : Hazard Analysis Critical Control Point)  
 : 32 2 1 ,  
 . 가

) EU 가 :  
 EU가 가 (가 ) ,

( ) / ( 16  
 11 ), ,  
 (HACCP) , EU 가

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1995	263,271	621,832	4,317	9,995
1996	376,486	846,561	6,300	15,654
1997	333,973	885,924	2,362	6,345
1998	249,033	436,608	584	1,299
1999. 10	387,974	744,175	1,712	3,609

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## 第 5 章 主要 OECD 會員國 漁獲後 處理 政策<sup>22)</sup>

OECD 29 , (Fisheries Committee)  
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(PO : Producer Organisations)

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PO

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22)

OECD

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II

“OECD, The Implications of Responsible Post-Harvesting  
Practices and Responsible Fisheries, AGR/FI(99)4/REV1, 1999,” .

PO 가 ) 가 ) 가 . 가 가 . ( ) 가 가 70 90% , 가 . 가 : i) 7% 가 87.5%, ii) 7 14% 가 75%, iii) 14% . 가 ( , ) , 가 가 가 . , . 가 ( , 3 ) 가 ( ) . EU 1 , . EU , EU , ICCAT , Belize, Honduras, Panama .

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## 第 6 章 考察 政策含意

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23) / , 「 , 1999.  
24) OECD, *The Fishery Products Inspection System in Korea*, AGR/ FI(98) 10/ Final, 1998.  
25) . , 「UR , , 1991; . , 「 , , 1990.

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- ， “WTO ”， WTO  
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- ， 「 」， 1998.
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. The Implications of Responsible Post-Harvesting Practices on  
Responsible Fisheries AGR/FI/RD(99)3) / 63

(OECD

(AGR/FI(99)4/REV 1) / 82

## . The Implications of Responsible Post-Harvesting Practices on Responsible Fisheries (AGR/FI/RD(99)3)

### 1. Introduction

1. The growth in fisheries activities and the increasing share of processed products in total fisheries production have encouraged new and innovative post harvest activities. However, while increased production volumes have given rise to some economics of scale, profitable investment in new post-harvest technology requires cost-reducing technical innovation.
2. The volume of catch is determined in large by natural growth rate and fishing technology. Thus, unlike the changes in fishing methods, yield increases are not possible through post-harvest technical changes unless there are opportunities to increase output by reducing losses at post-harvest stage, consisting with the goal of minimizing depletion and preventing ocean pollution.
3. Post-harvest practices include many activities including landing, processing, marketing and trade, storage, and inspection. Raw fish is distributed and transformed in a variety of ways to maximize economic surplus. In the course of post-harvest practices, there is a constant flow of market information between fishing sector and post-harvest industries. Market signals are transmitted to fisherman, who in fact make decisions on how much and what species are to be caught and where/when to catch.
4. Korea has experienced substantial post-harvest losses every year, estimated at

around 10 percent of the total fish production. In particular, as imports increase over time, the rate of rejected foreign fishery products goes up. This often causes lost volume and value and associated pollution problems in the disposal process.

5. This paper reviews the Korean post-harvest sector and seeks to identify its links to harvesting activities and the impacts on responsible fisheries. It provides useful information about fishery management instruments, distribution and trade, inspection and consumer affairs.

## 2. Characteristics of Korean Fisheries

6. Korea is one of the world's major fishing countries or both production and trade: the tenth largest harvest as well as exporter. Korean fisheries sector has had, and continues to have, a dominant position and impact on the national supply of animal protein food although livestock meat and certain non-meat foods have, in recent years, claimed an increasing share of the diet.
7. In spite of stagnating production, per capita consumption of fish and fish products has continued to increase until the Foreign Exchange Crisis around the end of 1997. Allowing a certain percentage of waste in the course of distribution and marketing, 2 055 000 tons of supplies seem to be sufficient to maintain the current level of per capita consumption (44.25kg/year) for the Korean population of 46.4 million. In fact, current production is more than enough to meet the domestic demand. A substantial portion is exported. At the same time imports are rapidly increasing.
8. Korea fishing operations take place through the world's oceans. Adjacent waters are the most important. Capture fisheries in domestic waters account for 42 percent of the total production, mariculture for 31 percent and distant water



fishing for 27 percent. Some 75 000 vessels are engaged in a variety of fishing activities. Small-scale fishing households, operating engine-free boats less than 10 tons, makes up 88 per cent of fishery management units. During the last couple of decades, over-capacity, marine environmental degradation and international fishery regulations have severely constrained the entire Korean fisheries.

9. In particular, the Far Eastern ocean sphere, consisting of East Sea, Yellow Sea and East China Sea, forms a single vast marine ecosystem which requires co-operative fishery resource management among the coastal states(i.e., Korea, Japan and China). New Fisheries Agreements among the three coastal nations, which have been recently concluded, laid out an important legal basis to create new orders for the ocean of the East Asian region.
10. Even though the overall fishery environment has deteriorated, production value has continued to increase, albeit with a reduction in the relative contribution (some 0.5 percent in 1997) to the gross national product.

### 3. Post-Harvest Practices

#### 3.1 Main Commercial Species and Fisheries Management Instrument

11. Korean waters are located in monsoon climate area and there exists a great diversity of fish species that are regularly and widely consumed. Excluding seaweeds, more than 150 species are considered to be of commercial value including 60 fish, 10 crustaceans, 17 shellfish, 7 molluscs, and 56 other marine animals. Major species including Alaska Pollack, hair tail, redlip croaker, mackerels, anchovy, sardine, flounders, file fish, squid, and cuttle fish.

12. There are more than 30 different fisheries that exploit adjacent living resources. Four large-scale fisheries (large otter trawl, large purse seine, offshore stow nets and anchovy drag nets) produce more than 50 percent of the total domestic catches. Fishing gear and method are quite diversified among each individual fishery.
13. The management instruments used vary according to fisheries and place of harvest. The entire Korean fishing fleet is subject to a permit and license system. Permits are applied to all fishing vessels as well as to mariculture, while a license scheme is applied only to mariculture. Permits specify boat names, GRT, fishing gears and fishing areas. Licenses specify the place to farm, the species/acreage to be cultured and the period of farming.
14. Korea Maritime Police Agency, which was established upon the birth of the Ministry of Maritime Affairs and Fisheries(MOMAF) in 1996, is responsible for monitoring and surveillance all fishing vessels and control their "part-in and out activities." The central and provincial fishery extension boats complement surveillance of fishing activities.
15. The fisheries administration has long observed that the conventional in-out controls are no longer effective in restoring overexploited fish stocks. In 1998 the government introduced an output control instrument i.e. Total Allowable Catch scheme into the existing fishery management system. To implement this instrument, the Law of Fisheries and Fisheries Resource Protection Law were amended in December 1995 and in December 1996, respectively. The 1982 UNCLOS, which by 1994 had received 60 ratifications, and the bilateral fishery agreements among Korea, Japan and China provided a momentum to employ the new fisheries management system.

16. In 1998 the Korea government initiated a sort of TAC game for large purse seine fishery which mainly captures mackerel. A pilot program for 5 species (i.e., mackerel, sardine, jack mackerel, red large crab and spanning mackerel) is to be implemented from 1999 to 2000. Based on the results of the distribution sector. It is expected that there will be changes in way of fish utilization.

### 3.2 Distribution System

17. Korea fish and fish products are subjected to a complex distribution system, which can be largely divided into two categories: one takes place at landing ports and another in area of consumption. Distribution at landing ports takes place through fishery cooperative auction markets and the Pusan common fish market, which are always located at water fronts, while distribution to consumption areas is made through whole sale markets, inland joint sale and direction-sale markets and retailers.
18. With the exception of the traditional ( so called 'jaere' in Korean) market, there are 330 official fish markets in Korea: wholesale corporations(20), joint market(6), cooperative auction markets(232), common fishery market(1), and direct sale markets(71).

#### 3.2.1 Distribution Channels

19. Fish production is very susceptible to ocean climate changes, which causes a wide range of yearly and/or seasonal fluctuation. It is often different to predict correct catch volume and associated prices. Thus, it is much more different to make a production planning than for other commodities like agricultural crops. In addition, distribution mechanism is relatively complex and diverse because of the characteristics of fish i.e. perishability and one-time mass catch. Small-scale

distributions are prevailing with little transparency.

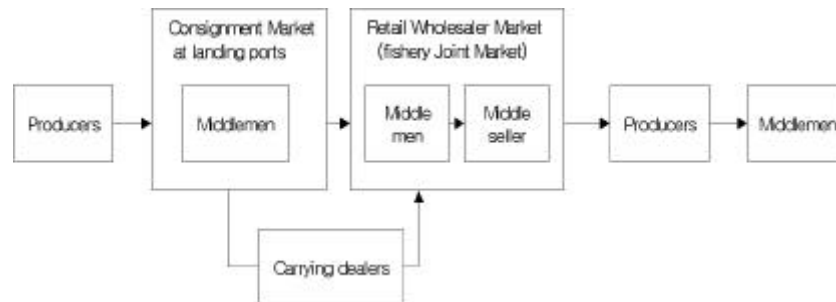
20. There are three distribution channels: two channels are associated with domestic fishery production and the rest with distant-water catch, see the following graphic presentation.

21. However, large portion of adjacent catch still goes to the traditional fishery markets, which embrace many problems such as a deficiency of information about product flow, statistics, taxes, the lack of transactional transparency and market information distortions.

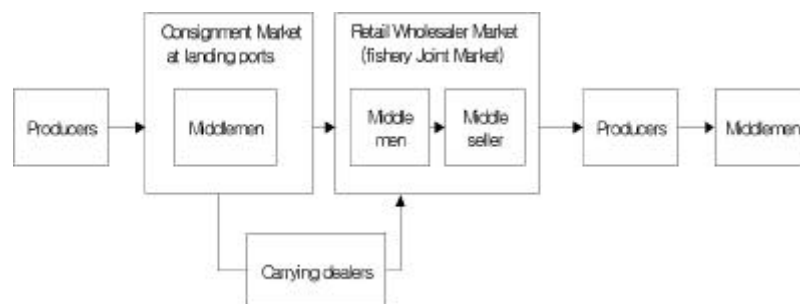
**Table 1. Fishery Markets**

	Total	Wholesale corporation	Joint market	Auction market	Common fishery market	Direct sale market
Total	330	20	6	232	1	71
Seoul	14	3	1	2	-	8
Pusan	10	-	-	7	1	2
Taegu	5	2	-	1	-	2
Incheon	9	-	-	4	-	5
Kwangju	8	1	-	-	-	7
Taejeon	2	2	-	-	-	-
Kyungki	18	4	3	8	-	3
Kangwon	38	-	-	25	-	13
Chungbuk	2	2	-	-	-	-
Chungnam	22	-	-	21	-	1
Cheonbuk	25	2	1	18	-	4
Cheonnam	66	-	-	60	-	6
Kyungbuk	32	2	-	22	-	8
Kyungnam	58	2	1	50	-	5
Cheju	21	-	-	14	-	7

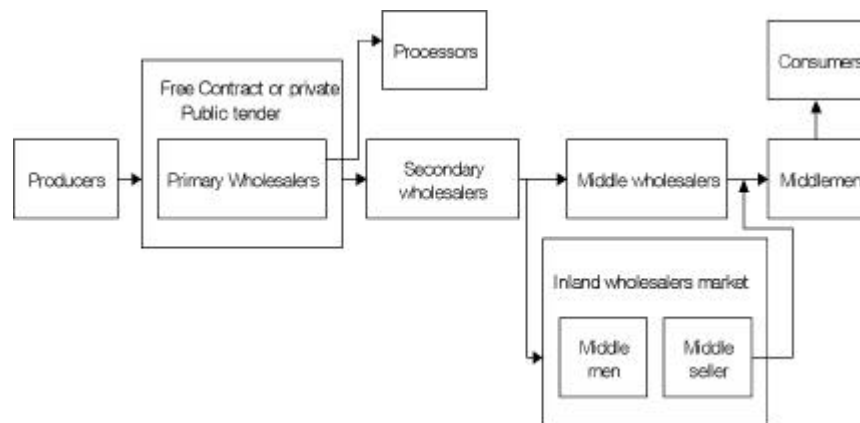
### Regular Marketing System



### Fisheries Cooperatives Distribution System



### Distant-Water Fisheries : 4 or 5 stages



### 3.2.2 Transaction between South and North Korea

22. The 1988 Special Presidential Declaration provided an important momentum to facilitate the trade between South and North Korea. Since then, the South-North fishery trade has rapidly expanded and it has been regarded as internal rather than international ones.
23. Fisheries trade between the two Koreas has been under the control of two laws: (i) Law about South-North Exchange and (ii) External Trade Law. At present imports of 7 out of 390 items of North Korean origin still requires government permission because the products compete with domestic species and the increasing import volume may lower domestic market prices which can result in reduced fishing household' income.
24. From 1989 to 1997 South Korea imported 31 721 tons(36.67 million US dollars) of fish products from the North. As seen in table 2, the import volume and value

are a rapidly increasing trend. However, it is not expected that North Korea can continue to meet such increasing South Korean demand for fish due to the serious lack of entire fishery production capability.

**Table 2. Fishery Products from North Korea**

(tons and '000 dollars)

Year	1989-93	1994	1995	1996	1997	Total
Volume	15,285	3,140	1,250	3,941	8,105	31,721
Value	8,582	2,723	2,692	9,101	14,572	36,670

Source: Ministry of Maritime Affairs and Fisheries

### 3.3 Processing

25. Korean people tend to maintain their traditional food consumption habits. In Korea there still exists a deeply rooted tradition of enjoying cooking raw fish. This has been one of the factors, regarding the advancement of fish processing technologies and, consequently, a large portion of raw product goes to very preliminary processing plants that simply transform fresh fish into frozen products.
26. About 87 percent of the total raw fish supplies are utilized for processing purposes. Low degree of processing accounts for much larger proportion than highly processed production. However, Korean consumers show a changing preference toward highly processed fish products. This phenomenon seems to be attributed to advanced processing and packing technologies related to convenience, safety and nutritional factors.
27. In 1996 total processed fish production reached 1 730 000 tons of which frozen fish accounted for 40 percent. Main species include tuna, croakers, sardine and the like. Fish paste-based products like Kamaboku are increasing in popularity. Canned fish (i.e., tuna, oyster, Bai top shell, etc) have also shown increasing market shares.

#### 4. Post-Harvest Policies

##### 4.1 Price Policies

28. Food pricing is an integral part of national food policy. It usually emerges in response to multiple objectives including:

- i. Overall economics growth, of which the efficient growth of fisheries is one component;
- ii. Distribution goals, which often encompass a desire to promote rural employment and welfare, while maintaining the income status of politically influential, usually urban, groups at the same time; and
- iii. Food security, that is, the provision of sufficient and stable food supplies.

**Table 3. Production Trends of Processed Fishery Products**

(Adjacent Fisheries)

Unit : thousand tons

	1993	1994	1995	1996	96/95(%)
Total	794 (100)	898 (100)	910 (100)	1,086 (100)	119.3
High degree of Processing	278 (35)	303 (34)	309 (34)	289 (27)	93.5
Frozen	73	75	74	55	74.3
Fish Paste	99	109	108	116	107.4
Canned	49	64	63	62	98.4
Fish Oil,meal	46	42	49	43	87.8
Seasoned	10	12	14	12	85.7
Agar	1	1	1	1	100
Low-processed	516 65	595 66	601 66	513 63	132.6
Frozen-Round	337	416	430	319	134.2
Seaweed	109	117	94	135	93.6
Dried	50	40	50	34	170.0
Salted pickled	13	10	17	17	123.5
Others	7	12	10	8	260.0



(Distant-Water Fisheries)

Unit : thousand tons

	1993	1994	1995	1996	96/95(%)
Total	691	816	882	641	82.0
Frozen, of which	686	810	71	633	82.1
---Round	671	788	733	600	81.9
---Processed	15	22	38	33	86.8
Fish Oil, Ground	5	6	11	8	72.7

29. The objectives of the fish price in Korea are price stabilization and income distribution. Income distribution objectives have played an important role in shaping the price policies. Distribution measures, however, have often been motivated by political factors rather than equity consideration. Especially, this is apparent in the case of squid price policy over the last several years.
30. In recent years adjacent squid have been facing a dilemma: more catch, lower market price. The government has participated in the market by purchasing a substantial amount of squid at higher price to support the landing price and fishermen's price of squid. The main purpose of this policy is to stabilize producer's price. However, instead of alleviating price uncertainty, government tends to get another burden, which is trapped in a sort of treadmill by providing producers with an incentive to increase squid capture.
31. It seems apparent that price uncertainty is lessened to some extent under the current price stabilization policy. However it is not much help to solve fishermen's price-induced income deficiency problem because most fishermen compensate income reduction by increasing production. This may be considered a kind of "poverty supply dilemma".
32. In general, standard economic theory postulates that supply price and quantity move in the same direction. But Korean fisheries, in general, tend not to respond

to market price changes as economics theory predicts. Thus, government price policy does not tend to have desirable downside effect on fishery resource management and hence does not help encourage responsible fishing practices. As a result, price policy of fishery products just transfers deficit burden to taxpayers, even though such government policies are, of course, implemented under a certain degree of national consensus.

#### 4.2 Measures Applying to Distribution and Trade

33. Securing food safety has long been considered one of the government responsibilities. That safe food is an important consumer's concern is hardly debatable. But it is also a producer's concern. In fact, whenever there is a consumer health threat, producers of live fish and processed fishery products should withdraw them from the market.
34. The perishability of fish products and their proclivity for carrying bacteria and transmitting diseases have been the central public policy concern with seafood safety. Perhaps the most hazardous health risk related to food safety is botulism (food poisoning). *Vibrio* problem occurs often in summer, which is an organism, usually found in marine environment.
35. As trade liberalization of fishery produces expands, the sanitary and phytosanitary (SPS) issues have drawn more public concerns. Demand for SPS inspection increases with the trade volume/value. In particular, the rate of imported seafood inspection has gone up rapidly as shown in table 4.
36. Ministry of Health and Welfare manages most of the sanitary and food safety regulations. MOMAF only provides supports for seafood safety issues like HACCP (Hazard Analysis Critical Control Point), EU factory registration, etc.

37. HACCP is adopted in order to meet the international sanitary standards. With the announcement of safety critical-control foods, MOMAF has designated fish and shellfish (excluding seaweed) as main target items for HACCP. Also, "Seafood Safety and Quality Promotion Plan" gives the NAPIS(National Fishery Products Inspection Station) and the NFRDI (National Fisheries Research and Development Institute) the rights to inspect "target items" from production stage to marketing level.

**Table 4. Fishery Product Inspection**

	Total			Export			Import			Domestic consumption		
	Number of cases	Quantity	Value	Number of cases	Quantity	Value	Number of cases	Quantity	Value	Number of cases	Quantity	Value
1985	9,295	203,937	404,497	9,295	203,937	404,497	-	-	-	-	-	-
1986	12,484	274,937	688,742	12,484	274,805	688,742	-	-	-	-	-	-
1987	13,508	322,628	857,952	13,508	322,628	857,952	-	-	-	-	-	-
1988	13,171	301,607	915,318	13,171	301,607	915,318	-	-	-	-	-	-
1989	10,749	256,275	730,894	10,749	256,275	730,894	-	-	-	-	-	-
1990	10,304	246,760	698,551	10,304	246,760	698,551	-	-	-	-	-	-
1991	11,097	356,703	915,700	10,032	240,991	795,580	1,065	115,712	120,120	-	-	-
1992	13,575	437,447	1,032,411	9,097	222,843	782,720	4,478	214,604	249,751	-	-	-
1993	13,217	378,462	797,371	5,932	119,617	479,213	6,916	248,126	290,290	369	10,719	27,868
1994	17,286	374,261	825,628	3,837	84,638	318,744	12,950	262,202	443,635	490	27,421	63,249
1995	17,448	355,980	741,898	1,890	64,982	200,694	15,088	263,271	479,432	470	27,127	61,772
1996	23,448	473,570	927,653	2,604	69,436	191,051	20,771	376,486	680,635	214	27,648	55,967

Note: 1. Annual average of won/dollar exchange rate is follows: ('92) 789 won/\$. ('93) 802 won/\$, ('94) 803 won/\$, ('95) 771 won/\$ and ('96) 804 won/\$

2. Exports Inspection: In 1993, by an alleviating measure, obligatory items are reduced to 31 items.

3. Imports Inspection: In 1991, Imported Fisheries Inspection is committed by National Quarantine Station.

4. Domestic Consumption Inspection: In 1993, by improvement of Fisheries Inspection system, this item has been separately accounted.

38. National Fisheries Products Inspection Station (NFPIS) has the authority to control seafood safety. KFDA(Korean Food and Drug Administration) is a principal government agency whose mission is to ensure that food are safe, sound, wholesome and well labeled and that medicines used for mariculture are safe and effective with little side effects.
39. Korea Food and Drug Administration (KFDA) and local Food and Drug Offices are also responsible for regulating cosmetics, vaccines, blood products, medical devices and radiation-emitting products. Regarding fisheries trade, NFPIS is a unique government authority in charge of inspection and government-sponsored institute take charge of research and surveys food specification. Through recent regulatory reforms a number of standards and regulations are to be harmonized with the international standards like Codex Alimentarius.
40. In 1997 NFPIS inspected 721 items. Inspected volume of importation were 333 973 M/T, which accounted for 0.7 percent of the total. The rejected fishery products were 2 362 M/T (0.7 percent of inspected volume). Most of them were frozen products. Recently, HACCP has been introduced. The EU registered factories of exporting products to the EU region should be in compliance with HACCP. Also manufactures, processor and sanitary managers are annually educated with manuals on the basis of the article 27 of the Food Sanitation Law by the sanitary agency concerned.
41. In addition, in order to export fishery products to U.S. markets, the seafood company or factory should get a verification that they operates under HACCP system and sanitary programs that are in accordance with the U.S. FDA's seafood HACCP regulation 21 CFR 123.

**Table 5. Results of Inspection(1997)**

tons and 1,000 US\$

	Total Inspection			Rejections		
	No.of cases	Quantity	Vaues	No.of cases	Quantity	Vaues
Total	23,532	333,973	885,924	258 (100)	2,362 (100)	6,345 (100)
Live Fish,Shellfish	3,997	15,750	54,443	22 (8.5)	121 (5.1)	178 (2.8)
Fresh Chilled	7,515	8,561	45,204	24 (9.3)	21 (0.9)	134 (2.1)
Frozen	10,303	286,174	738,852	142 (55.0)	1,742 (73.8)	4,595 (72.4)
Dried	596	2,300	17,170	56 (21.7)	232 (9.8)	1,251 (19.7)
Salted	1,101	20,959	29,783	14 (5.4)	246 (10.4)	187 (3.0)
Seaweeds	16	221	359	-	-	-
Agar	4	8	113	-	-	-

Source: National Fisheries Products Inspection Station, Annual Report of Fisheries Products Inspections, 1998

42. Fishery products to be exported to EU should meet the health requirements in compliance with the directive (91/493/EEC). Also processing plants, factory vessels, and freezing vessels shall be registered to EU. EU certifies that provisions of the Republic of Korea on health inspection and monitoring of fishery products may be considered equivalent to those laid down in Directive 91/493/EEC and that the NFPIS and its laboratories are capable of effectively verifying the application of the regulations in Korea. So, Korea belongs to country list 1, which nominates Korea as one of the countries or territories covered by a specific decision under Council Directive 91/493/EEC. Up until now Korea has registered 30 processing plants and 34 factory vessels to EU.

#### 4.3 Quality Certification System

43. The quality Certification System started in 1993. It has been applied to the traditional and geography-specific fishery products. NFPIS carries out qualification tests and give the producers the right to use mark "Pum(Qualifies)" or their own trademarks. Until 1997 nineteen geography-specific fishery products obtained the Quality Certification. They include dried, salted, and seasoned products.

#### 4.4 Labeling the Origin of Products

44. The purpose of labeling product origin are to provide consumers with accurate information about where products originate and to mitigate the information asymmetry problem between buyers and sellers. In general it ti applied to tariff policies. But in Korea it is used to prevent transaction frauds. There are many cases where sellers or importers deceive origins of goods as domestic ones to gain unfair windfall gains. In addition, Quality Certification on traditional seafood is authorized by MONAF. This is aimed to cherish inherited traditional seafood processing technologies and to standardize them.
45. With respect to eco-labeling policy on seafood Korea does not have such schemes at present. But consumers are gradually recognizing the value of non-polluted foods and eco-friendly produced fishery products. Some mariculture products (e.g.,laver, oyster, etc.)are marketed under the name of "Products Cultured in the Clean Seas." Korean consumers tend to show preference to eco-like-labeled products.
46. To prevent label fraud practices, Food Sanitary Law (FSL) and its regulations define that the false of label in product name, manufacturing date, distribution period, weight

of raw material and content, and warning tip for storage is regulated by law.

## 5. International Trade Flows

47. In 1997, fish products were exported to more than 80 countries. Export volume was about 509 090 tons (\$ 1 493 million). Major export targets were Japan (68.2%), the people Republic of China (7.7%), U.S.A. (4.7%), Thailand (3.1%) and Spain (3.0%). On the other hand, Korea imported 522 381 tons (\$1 045 million). Over 70 percent of imports of fishery products came from the People's Republic of China (26.0%), Russia ( 16.8%), and U.S.A.(12.5%). Korean fisheries sector realized the substantial trade surplus of 448 million dollars.

**Trade 6. Trade Balance of Fish Products (1997)**

million US dollars

	Export(A)	Import(B)	Balance(A-B)
Fisheries products	1,493	1,045	448
Adjacent fisheries products	998	1,025	-27
Live, Fresh, or Chilled	299	108	191
Frozen	167	694	-527
Seaweed Salted & Pickled	199	38	81
Canned, prepared	100	29	71
Others	313	156	157
Deep-Sea Fish	495	20	475

Source: MOMAF, Annual report of Fisheries Product Trade, 1998.

48. On July, 1, 1997, Korea liberalized imports of fish products so that all fish products can be imported subject only to some necessary safety inspection. Since, however, some structural adjustment problems of small-scale fisheries have emerged and given rise to very sensitive political implications, Korea was therefore allowed another 8-year delay before the full market liberalization plan came into force.

**Table 7. Imported Liberalization Trend**

Total Items	Until 1994	1995	1996	July 1997
390	334 (86%)	6 (87%)	19 (92%)	31 (100%)

Note: parenthesis contains cumulative rate of liberalization by each year.

49. From the trade perspective, Korea has paid much attention to the fact that the dramatic increase in the exploitation of living marine resources threatens the sustainability of these resources throughout the world. In response to this threat, Korea, as one of the CITES members that impose restrictions on trade, directly or indirectly. Such measures include prohibition of, or restrictions on, trade in endangered or threatened species; restrictions on incidental impacts on protected species; restrictions on commercially harvested species to ensure compliance with conservation and management measures relating to that species; and protection of ecosystems.

#### 6. Consumer Information

50. Concerns for consumer welfare in Korean society have grown considerable, particularly, at the beginning in the 1990's. Consumers expect the government to provide more protection and guidance for food safety. When it comes to consumer rights, four rights seem reasonable enough to address food safety problems: the right to safety, the right to choose, the right to be informed, and the right to be heard.

51. Food safety and health risk issues are becoming a more important social concern. In 1998 the Ministry of Maritime Affairs and Fisheries made an official announcement 1998-1 regarding "labeling Origin of Fish and Fish Products." This official document mandates all fishery economics entities to label origin of products on almost all fishery products including domestic and imported seafood.



52. It is believed that most Korean consumers prefer domestic seafood to foreign. The monitoring authorities often report deceiving origin of products. For any deceptive activity, government imposes severe punishment-like fine or imprisonment. To monitor commercial fraud related to origin of products, civil monitors, consumers' organizations and NFPIS to undertake spot checks.
53. Eco-Labeling has been launched in 1992 for industrial products in Korea. An Eco-Labeling Committee is composed of consumer group, environmental movement group, and academic specialists. Eco-labeling helps allow price and quality differentiation in the market.
54. There are some keys to successful implementation; fairness of verifying quality, consumer's keen awareness, consumer's willingness to pay usually higher prices for Eco-labeled products and eagerness of producers to follow. The third party like non-governmental organizations may verify the eco-friendly produced seafood. If consumers are aware of and prefer them in spite of being a bit more expensive, it may stimulate producers to get verification on their products.
55. Korea Consumer Protection Board (KCPB) carries out a variety of activities to protect consumers' interests. Its major function is to settle consumer disputes. And it reviews unfair transactions, contracts, and exaggerated labeling and illegal advertisement.

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(OECD (AGR/ FI(99)4/ REV1)

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the Future of the Market for Fisheries Products in the EU :  
 Responsibility, Partnership and Competitiveness) . 가  
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 “Challenges ahead for the Nordic Fisheries Sector”, The Nordic Council of  
 Ministers ).

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13. OECD 가 “  
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**Box 1**

ENV/ EPOC(98)18  
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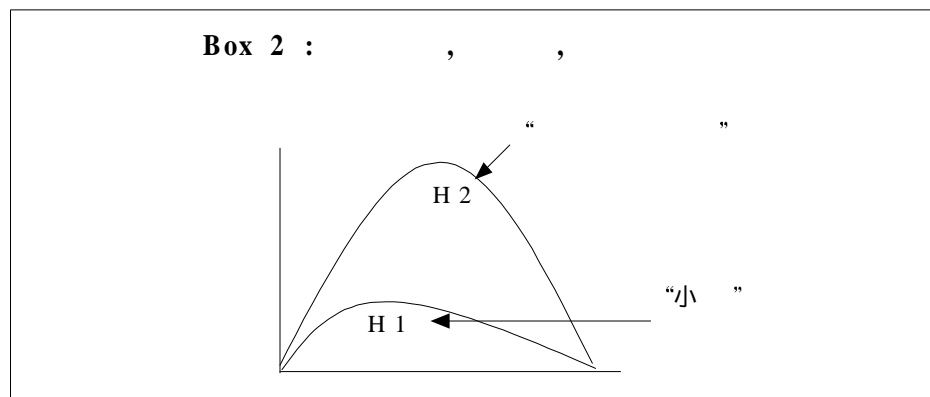
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(Hazard Analysis and Critical Control Point)

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Proclamation Act 가 ,  
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38. Eco-labelling 가 FAO EU  
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( 가 )
39. Eco-labelling ,  
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40. FAO Eco-labelling ( )  
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41. WTO CTE (Committee on Trade and Environment) 가 Eco-labelling  
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WTO Eco-labelling vis-a-vis  
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49. 가  
MEA ( -가 WTO  
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50. 2

. CCAMLR (Conservation Commission of Antarctic Marine Living Resources) CCAMLR

가

ICCAT (International Convention for the Conservation of Atlantic Tunas)

blue-fin tuna swordfish

가

ICCAT 가

ICCAT 가

51.

ICCAT

EU 1998

Belize, Honduras,

Panama

blue-fin tuna

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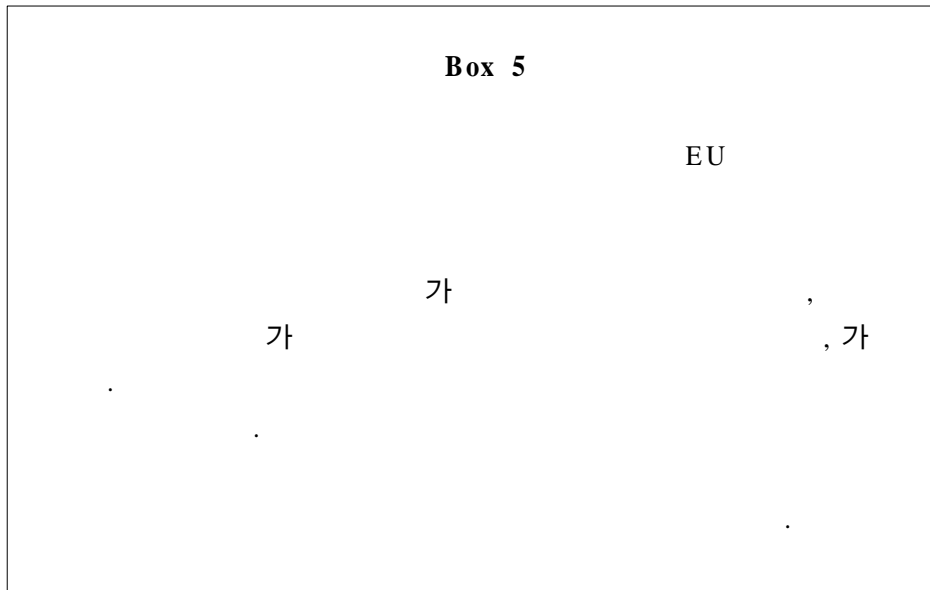
81. 가 ( )  
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82. 가 EU  
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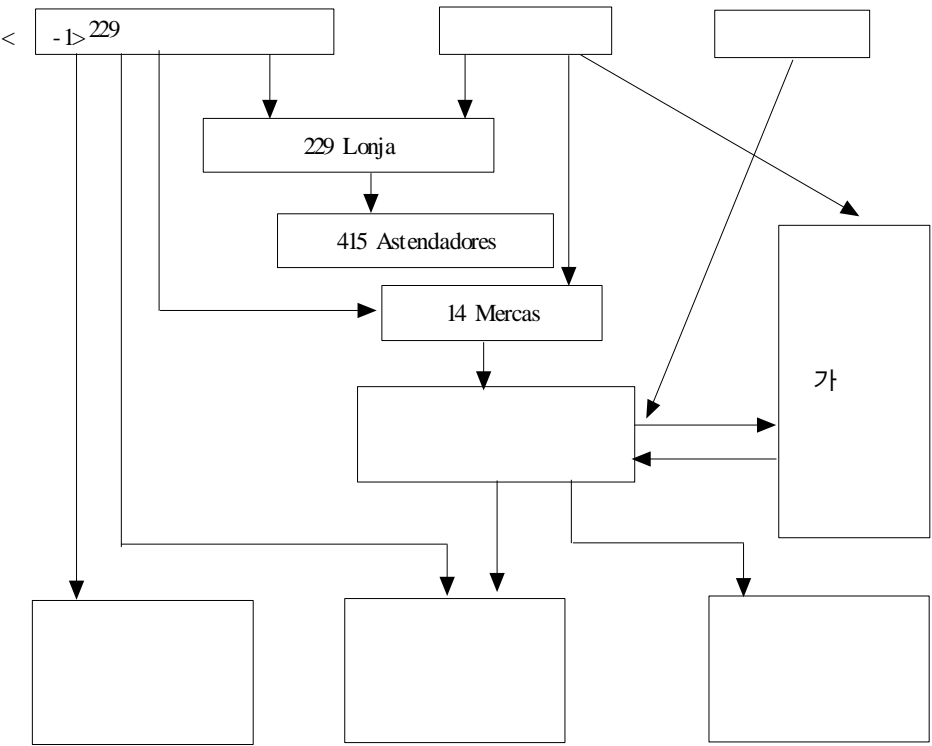
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89. < -1>



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40%

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91. 가 77%

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98. 가 가 (Product Liability Act) HACCP

. HACCP

“Law of Temporary Measures for Loans of Improvement Funds  
 for Fishery Processing Facilities in line with changes Occuring with Supply of  
 Fishery Products and Fisheries Processing Trade” 가

99. HACCP 가  
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OECD). 1985 가 1 900 1995 7,600  
30% 가 .  
가  
1985 170 1995 67 3  
가 high seas  
1985 420 1995 320

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가

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	1985	1991	1992	1993	1994	1995
	899	909	840	844	806	831
	37	44	42	44	46	40
	278	259	254	247	227	233
	110	111	94	91	92	90
	15	18	14	13	12	14
Fushi	121	134	135	130	125	127
	339	343	300	319	304	327
Surmi-based	984	874	845	830	823	801
	242	365	382	377	370	359
Oil and fats Feed	1678	1310	1007	947	786	673
Oil and fats	404	315	146	107	71	47
Feed	1275	995	861	840	715	626
	4173	3999	3925	3878	3608	3227
	322	194	198	189	176	158

: FAO, 「」

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3) 가

4) Fushi , , moulded fish fillet .



&lt; -2&gt;

	1985	1991	1992	1993	1994	1995
	8,416 (7,268)	8,277 (5,857)	8,256 (5,779)	8,464 (5,417)	8,874 (5,232)	8,904 (5,231)
,	3,342 (2,100)	3,098 (1,182)	3,154 (1,159)	3,320 (1,106)	4,033 (1,123)	4,143 (1,181)
, 가	2,734 (2,620)	3,100 (2,901)	3,147 (2,883)	3,218 (2,913)	3,203 (2,819)	3,250 (2,813)
Surmi-based Product	1,983 (1,793)	1,634 (1,324)	1,535 (1,283)	1,507 (968)	1,260 (893)	1,179 (869)
	357 (755)	445 (450)	429 (454)	419 (430)	378 (397)	332 (368)
	3,847 (4,196)	3,925 (3,411)	3,512 (2,698)	3,566 (2,596)	3,449 (2,093)	3,031 (1,491)
( )	2,017 (2,372)	2,026 (1,494)	1,783 (964)	1,848 (888)	1,845 (513)	1,967 (453)
	1,830 (1,824)	1,899 (1,917)	1,729 (1,734)	1,718 (1,708)	1,604 (1,580)	1,064 (1,038)

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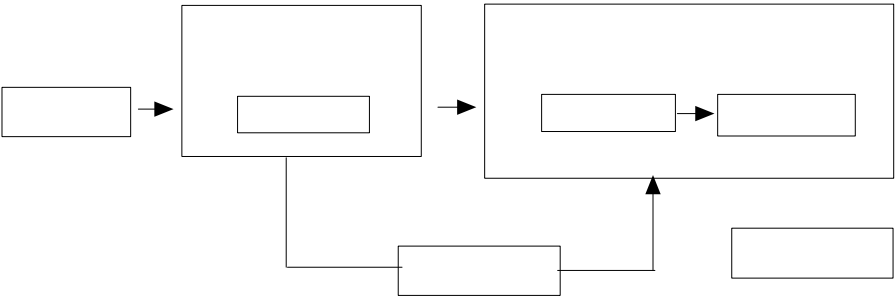
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106. , , croaker, . "kamaboku"  
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107. 가 .  
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108. 가 가 . 가  
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109. , .

Quality") , HACCP ("Pum  
23,000 가 47 3 . 1996

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112. 가  
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10% (12,520 )가

5,840

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114. ITQ . 1997

98%가( ) ITQ . TAC

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	(1,000MT)	가 (US\$M)
	-	-
Cod	208.1	217.6
Haddock	51.8	59.7
Saithe	55.7	37.1
Redfish	117.9	114.0
Other	60.4	106.6
Total	493.9	535.1
Pelagic species	-	-
Capelin	947.4	77.9
Herring	204.0	26.8
Total	1,151.4	104.7
Crustaceans	-	-
Shrimp	65.5	101.7
Lobster	1.8	5.9
Total	67.3	107.6
Shellfish	-	-
Scallop	8.0	3.8
Grand Total	1,720.7	751.3

115. 가 ( 90 93% ). ,  
가 가 10 13% 가  
1/3 가

116. (가) ) 가  
 . 81% ( 44% )  
 . 15% .
117. . 가  
 . (Icelandic Freezing Corporation),  
 (Iceland Seafood International plc.),  
 가 (Icelandic Fish Processors) .  
 ( )  
 가 .
118. ITQ 가  
 (+) .  
 가 가  
 . ( ITQ  
 ) 가 .  
 ITQ 가  
 .  
 , TAC ITQ  
 . TAC ITQ  
 .
119. 1991 .  
 가 가 .  
 가 가 .  
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 . 1987 가 가 .

, 가 , 가  
.  
.  
가 .

120.

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, 가  
.

( ) “ ” . “ ”  
가 .

121. 가 ( , , eco-labels)  
가

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122. OECD

1997 140  
, 가 3/4 . 1997  
58 4 , 41 2 .

123. 1 8.5kg . OECD

.  
1997 69 ( , , ),  
15 ( ).





122

126. 가  
가 가 .

127. 1996 172 가 가 .  
가 가 .

128. 가  
.

< -4>  
. 1970 90%  
10% .  
1990 56% , 5  
1995 63%  
33.6% 가 ,  
59.2% .

129. , , ,  
.  
.  
.  
.

130. 가  
가 .

131. , Mercosur  
 . Mercosur

Mercosur

132. . 가

가 SENASA HACCP

-3

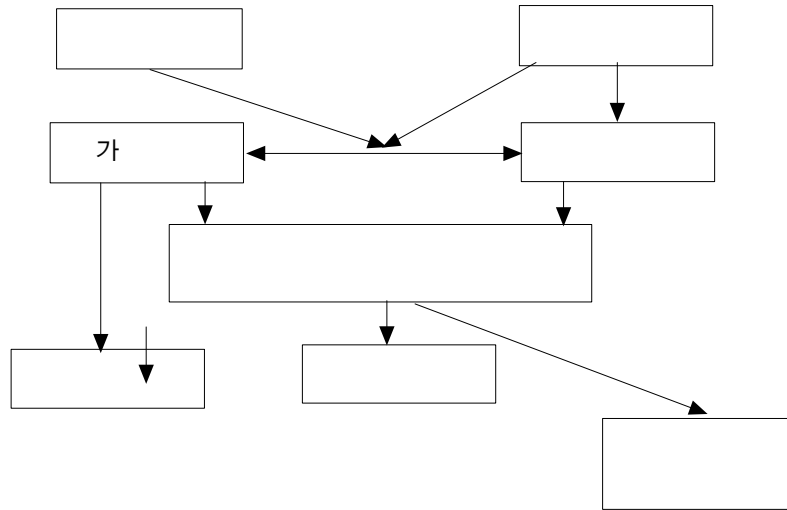
< >

133. 10 . 6  
 , , 가 , 1 7,500 ,  
 1 4 . 1995 1 1 19kg  
 , ( 가 ) 110 .

134. IAA (AGRESTE annual survey) 1997 173 가  
 (10 ). 가 1  
 1,900 가가 2 1,600 ,  
 149 .

135. OFIMER (Office  
 National Interprofessionnel des Produits de la Mer et de l' Aquaculture) .  
 OFIMER ,  
 ( , ) . OFIMER  
 가가 .

< -5>



136. OFIMER (EU )

가

OFIMER

137. 가 1998 130 .

가 54 가 .

( : Les Marches No. 4, 1999 7 ).

< >

138. 1996 44 가 . 가  
 30 SEK (3 3,600 ) , 가가 6  
 1,700 SEK (6,900 ) .  
 EU 1990 2218  
 1995 1,573 . , 1997  
 2,011 .

139. 가 55% .  
 가 40% EU 가 .

140. 1997 94 SEK  
 . 5.6% . Svensk Fisk (Swedish  
 Fish)  
 . EU (PESCA) 가  
 . Svensk Fisk 5 1 2  
 .

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141. 1997 ABARE 18  
 . 90  
 .

142. (The Australian Seafood Industry Council)

, , .  
 , , 가  
 . 가 .

## SeaQual

143. SeaQual

1 .

SeaQual

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144. SeaQual

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가

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145.

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146.

41

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27

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10

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4

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80%

7 5 가 . 1996 6 7 .

147. “  
”  
가  
가 .

148. 가

가 가 .

#### <Nordic Council>

149. Nordic Council 가 ( )  
가  
가  
1998 가 .

150. MandaMorgen ,  
“ 가 ” .  
○ 가 , ,  
가 가 . 가 가  
○ 가 가 .

128

151. 가

< >

152. 1996 5 5 가 1,316 가  
3,472 2 9,760  
. 1997 1 가 113 .

153. 1997 465 .  
244 가가 .

154. . ,  
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155. , ,  
.

156. , ,

○ . 가 . ,

○

○

157. Magnuson Fishery Conservation and Management Act

가

가 가 3¼

가

가

158.

가

159.

, ( )

( , , )

가

CJD BSE ).

가

160.

, 20  
( / )

가

가



161. , 가 .  
가  
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) 가 가  
. 가가 가  
가 가 . Surimi Surimi  
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162. 가  
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○ : , , ,  
○ :  
○ :  
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163.  
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164. 가 가 .  
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○ 가  
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165.

가 , 가  
가 .  
가가  
가 OECD 가  
, 가  
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166.

가  
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167. 가

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168. 가

,  
.  
OECD 가  
CWP (Co-ordinated Working Party  
on Fisheries Statistics)

<FAO >

169. 가

FAO

11

가

∴

가

가

1

2가

FAO

11

170. 가

FAO

11

가

가

가

가

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171.

가

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172. EU

(GSP)

1999 7 1 (GSP)  
 . 1999 7 1  
 3 가

173. RFOs (MEA : Multilateral  
 Environmental Agreements)

ICCAT CCAMLR ,  
 가

MEA (Multilateral Environmental Agreements) MEA가

174. CITES CITES ,  
 ,

175. FAO 11.2.11 “  
 ”  
 “ ” 가

) 가

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176. 가 . . EU  
가 ,  
가  
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177. ( ),  
, 가  
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( 가 ) . EU가

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178. ,

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179. 가  
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가 가 가  
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, 가 가

가 ( , , ).  
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180. 가  
가 .  
가 가  
가 가  
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181. 가 가 11.3.2  
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가  
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182. “ 가 ”  
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183. 가  
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가  
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가

가 ( )  
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가 .

가

가

184.

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185.

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186. 가 가  
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187. 가  
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가 가  
가 가  
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188. Eco-labelling Eco-labelling  
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189. ,  
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138

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190.

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191.

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192.

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193.

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holistic  
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194. .

가  
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가

195.  
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가 .  
가 가  
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漁獲後處理가 責任      漁業      影響      政策含意

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$\langle \quad \cdot \quad \cdot \quad \cdot \quad \rangle$ 

(                    가                    )

$$\left( \begin{array}{c} \vdots \\ \vdots \\ \vdots \end{array} \right)$$