



Ministry of Oceans
and Fisheries

Fisheries Monitoring Center

Republic of Korea



Aug 2016

Contents



Fisheries Monitoring Center



Fisheries Monitoring System



System Demonstration



Fisheries Monitoring Center

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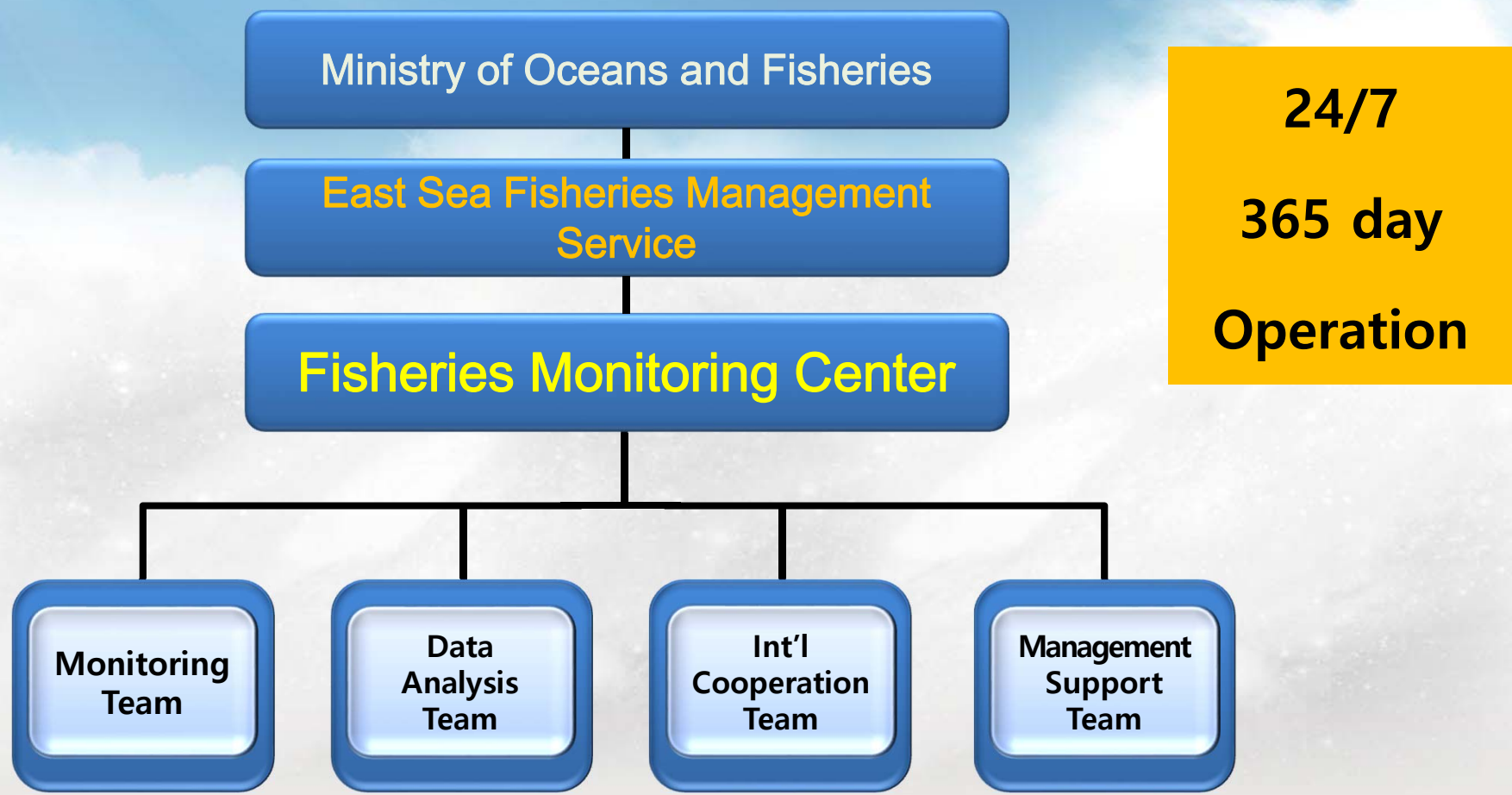


History

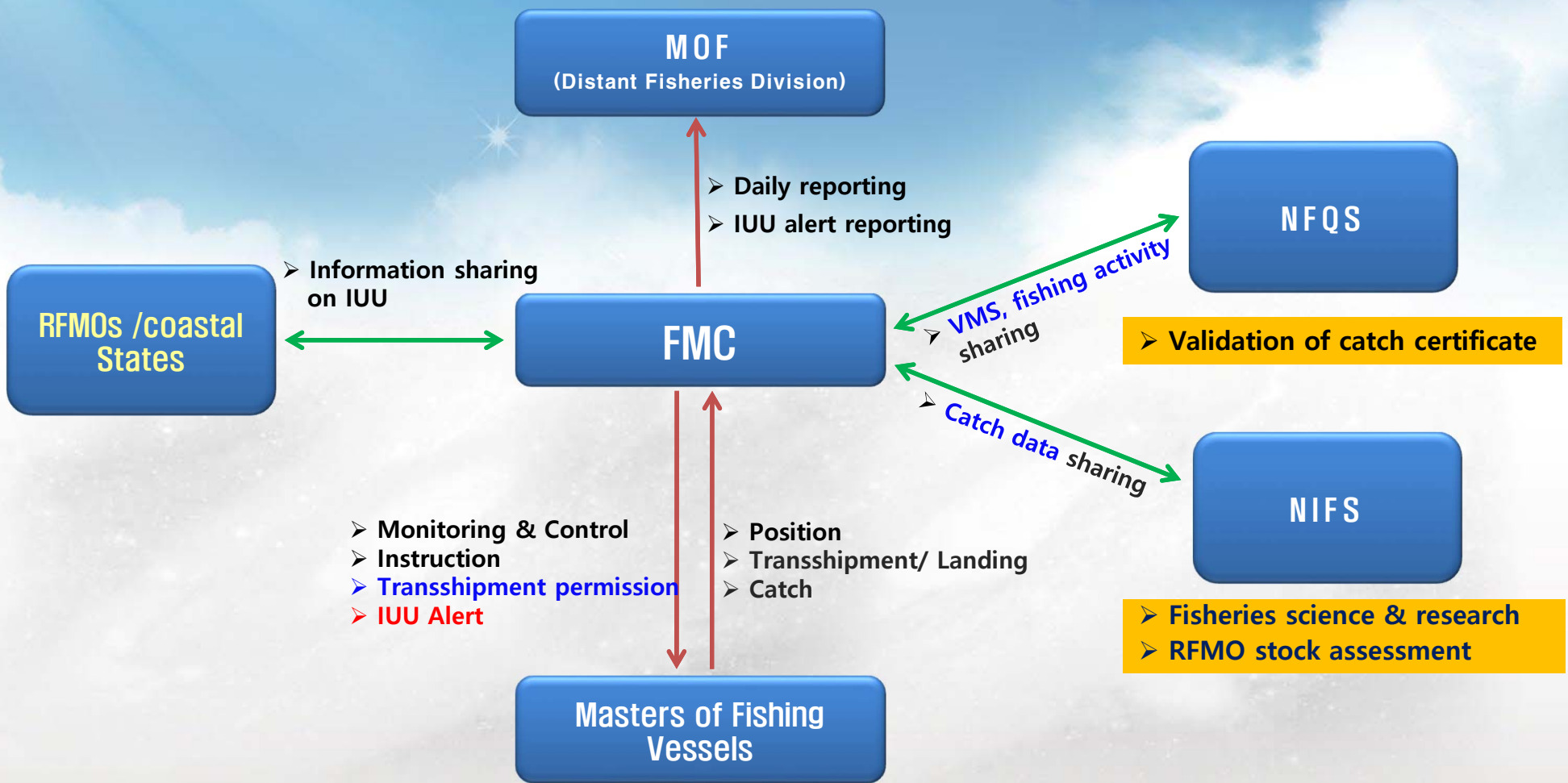




Organization



IUU Response System



II Fisheries Monitoring System

1. Schematic of FMS
2. System Overview
3. Korean Fisheries Information Management System (KFIMS)
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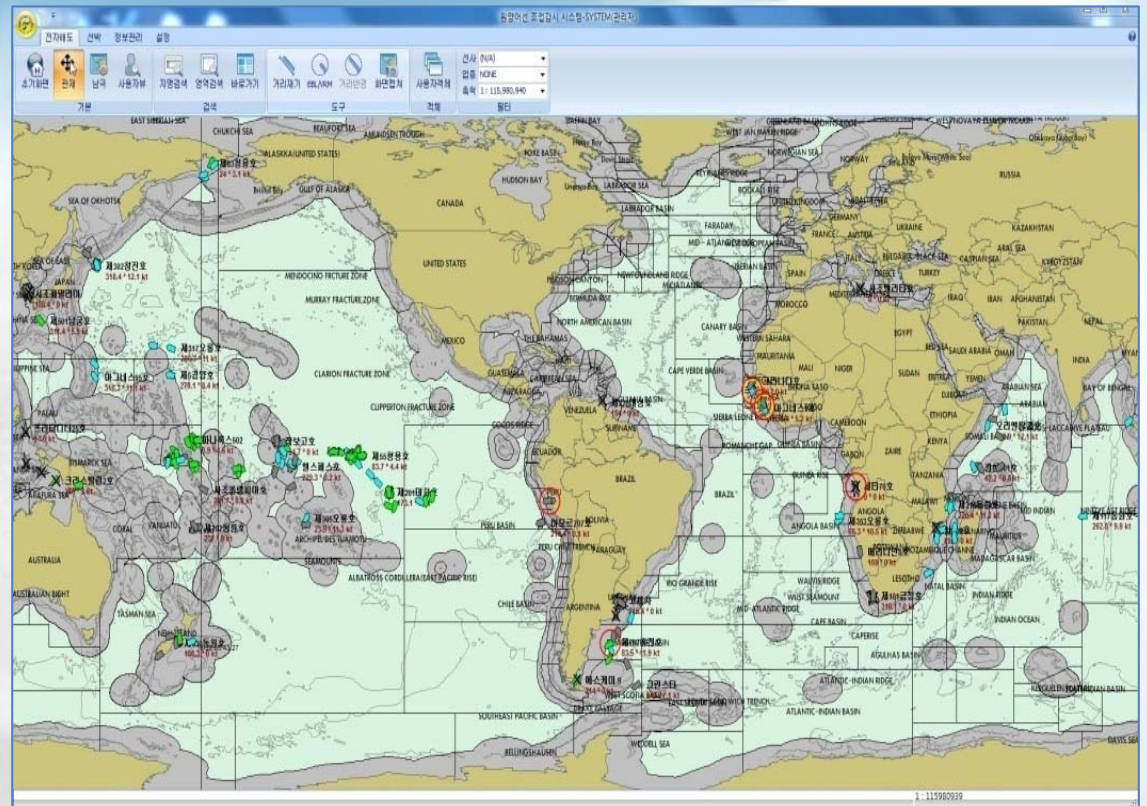
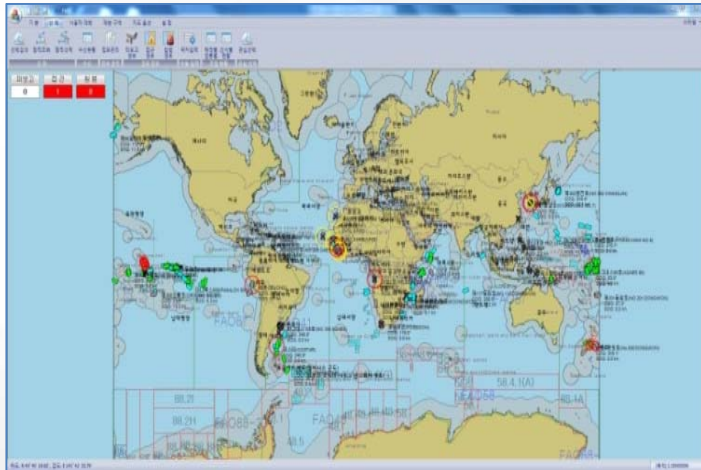




System Transition

Version 2 FMS = VMS + ERS (Sep 2015)

Version 1 VMS (May 2014)



Data Flow Diagram



ver.2015



M2M Satellite Communication Unit



Vessel Operator

SMS

Position Catch

Sending SOS

Position data

Catch data



Data Sharing with Relevant Authorities



System Overview



FMC Database

Position data
ver.2014
 inmarsat

Catch Data
ver.2015

Requirements (RFMO, Coastal States)
 IUU

- IUU fishing Monitoring
- Vessel Management
- Area Management

Monitoring fishing activities

↑ **Monitoring**

Track records and fishing activity data

↓ **Analysis**

IUU fishing activity analysis/statistics

↓ **Alert**

IUU fishing Alert/Instruction

Relevant Authorities

- Policy-Making
- Intl. affairs

National Network

NIFS
 National Fisheries Service

- Catch Reports
- Relevant Statistics

FiQ

- Port State Inspection
- CC validation
- Statistics

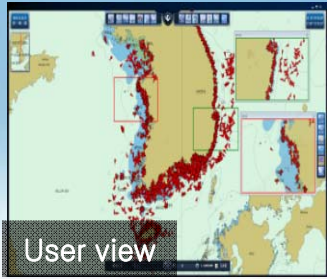
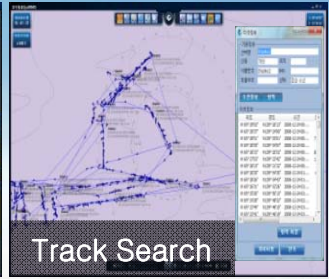

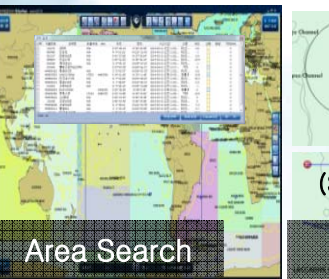
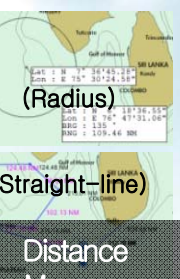
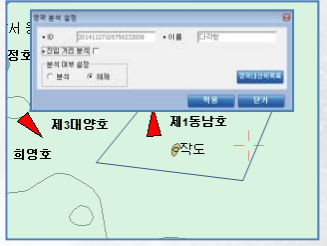
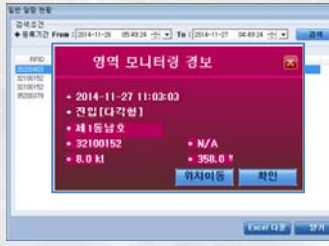


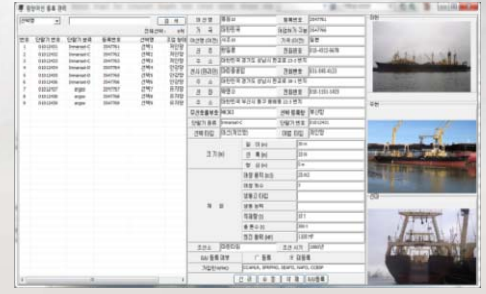


Vessel Operator

- Catch data
- Transshipment/Landing
- Vessel/Operator Details

Web Service



System Functions

Category	Functions	Improved Functions			
<p>Electronic Chart & Control</p>	<p>Zoom in/out User view Area Search Measurement, EBL/VRM Screen shot User Vessel Overview Track Search</p>	<p>Basic Software Functions</p>  <p>User view</p>  <p>Track Search</p>  <p>Area Editing</p>  <p>Area Search</p>  <p>Distance Measure (Radius) (Straight-line)</p>			
<p>Monitoring</p>	<p>Restricted area Non-Reporting IUU vessel IUU vessel list</p>	<p>Area setting & Approach/Violation Alarm</p>  <p>Area setting</p>  <p>Automatic alarm</p> <p>Non-reporting Vessel</p>  <p>IUU Vessel List Management</p> 			
<p>Catch Data</p>	<p>Vessel Details Fishing Permit Catch Transshipment Landing</p>	<p>Vessel Database Management</p>  <p>Cross Checking (Monitoring/Catch Data)</p> <p>Fishing Operation Catch Transshipment Landing</p>  <p>E-Logbook Data Base</p> 			

(Screen Shot) System Database Display



FMS
스타일

기본
선택
사용자 관리
제한 구역
지도 옵션
설정

선택 검색

선사

선사	선명	머선번호	호출번호
서해수산(주)	암사리3호	9512219-6260007	DTAA
(주)해정	해정3호	9512301-6260006	HLBA
창진교역(주)	재307창진호	0906002-6261403	DTBW5
(주)해정	해정1호	9512204-6260004	6MHG

VMS 수신 현황

머가 현황	가	연말셋-C	연말셋-D	머고스	머라듬	머보고	장지선정	휴업(배지)
340	300	88	30	48	92	5	37	40

선사	머선번호	호출번호	위도	경도	수신시간(UTC)	머보고
서해수산(주)	9512219-6260007	DTAA	N 9° 28' 3.18"	W 13° 42' 36.12"	2014-06-24 23:56:48	
(주)해정	9512301-6260006	HLBA	N 12° 5' 24.96"	W 16° 56' 33.78"	2014-06-24 23:48:36	
창진교역(주)	0906002-6261403	DTBW5	N 14° 7' 45.90"	W 16° 55' 21.42"	2014-06-24 23:48:32	

선박 상세 정보

머선번호	1004001-6261101
선명	세종
선사	동원산업(주)
총대구역	남방양
선박항	부산
업종	원양어선
IMO 번호	8607385
호출번호	DTBXX8
원양어선 허가번호	원양어선 2010-94호
선체재질	강철
기관종류	디젤
기관마력	8144
중량수(톤)	7765
머획종류	간경이등
선장명	조원준
머선 연락처	001-870-773-110-103
머선 Email주소	sejong@dreamport.to
선사 담당자	김영준
선사 연락처	02-589-3753
선사 Email주소	bruce2891@dongwon.com
선사 FAX	02-589-4397

lic_temp.pdf - Adobe Reader

FISHERIES DEPARTMENT
STANLEY FALKLAND ISLANDS
FISHING LICENCE

THE FISHERIES (CONSERVATION AND MANAGEMENT) ORDINANCE 2009
LICENCE NUMBER: KR015014

GRANT OF LICENCE:
in accordance with section 41 of the Fisheries (Conservation and Management) Ordinance 2009

I license is hereby granted to: **KWUNG YAE CO LTD**

In respect of the fishing vessel: **77 OCEAN**

Which has the call sign: **AMCV**

I license for the following fishing areas: **90**

To fish in each part of the fishing waters (as defined in section 5 of the Fisheries (Conservation and Management) Ordinance 2009) as may be specified in part 2 of this license (excluding to those parts of the territorial waters which the vessel is entitled to fish from the territorial and surrounding waters, from which the vessel is to be removed and (iv) the adjacent waters of the Falkland Islands. This licence authorises the use of the fishing vessel only in accordance with the particulars of Licence Conditions of Licence set out below.

PARTICULARS OF LICENCE

Licence category: **SEE PART 2 OF THIS LICENCE**

Permitted fishing area: **CIRCUIT MYONG**

Name of master at time of issue: **MR JAE MYONG**

Permitted species: **MRJ argentine, mackerel, herring**

Method of fishing: **gill-trawl**

선박항	IMO NO	선명	건조년도	CallSign	선체재질	연장종류	연장파워	중량수
부산	8619388	27	1987-06-19	HLWD	강철	디젤	1000	384
부산	7237250	42	1972-12-15	BLSU	강철	디젤	2400	2866
부산	8717843	26	1980-08-02	HLJB	강철	디젤	1000	385
부산	8102321	32	1982-12-15	6LCU	강철	디젤	3600	701
부산	7206639	43	1971-11-15	6MHO	강철	디젤	2200HP	912
부산	7419816	35	1979-01-01	8KCC9	강철	디젤	8032	1070

선택항:

선박항:

IMO NO:

머획종류:

건조년도:

중량수:

연장파워:

사용위성 2:

SAT ID 2:

MEMBER NO:

선박건화번호:

담당자 HP:

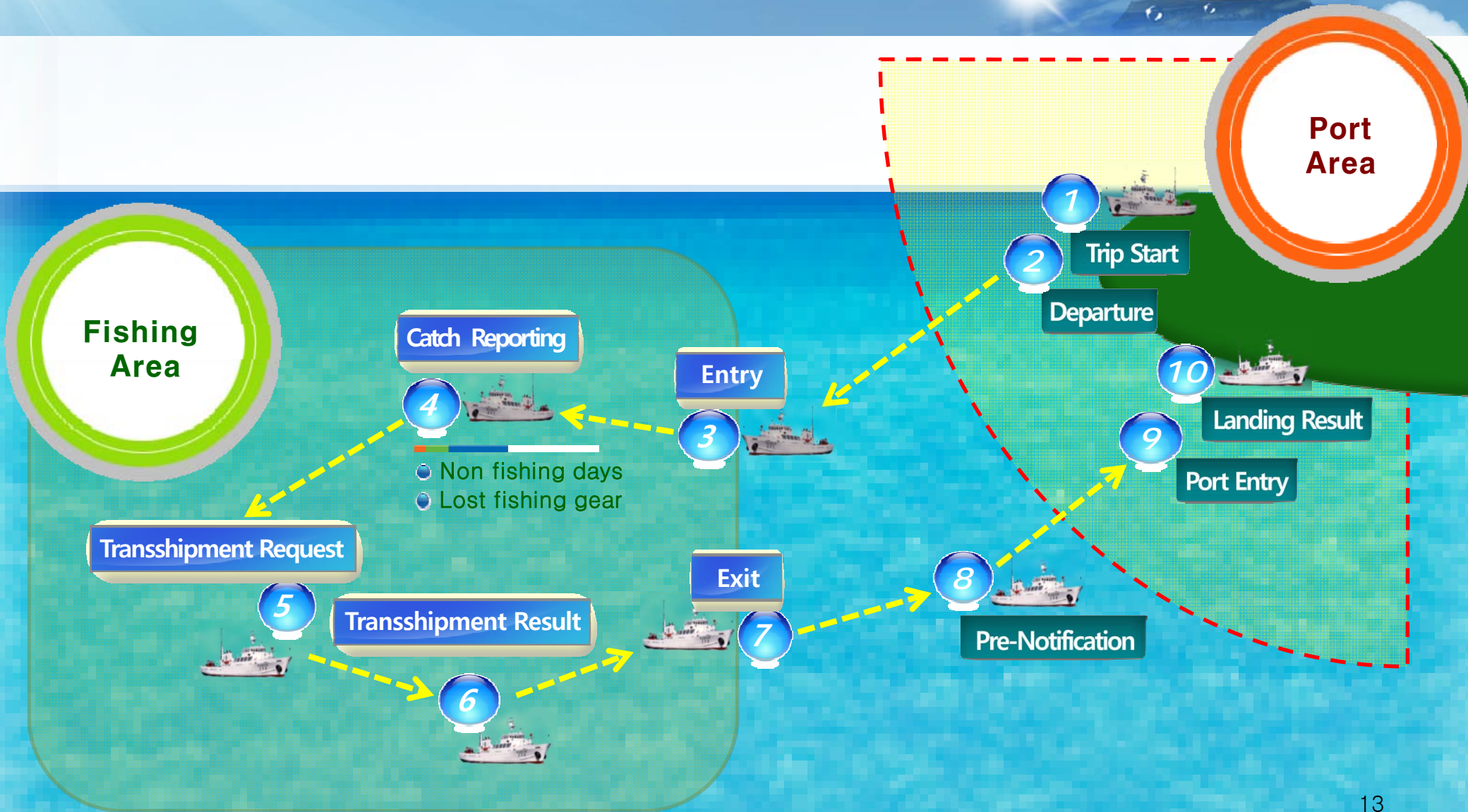
기타 정보:

사진유무

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E-Reporting Procedure





ERS Unit Main Screen

VOYAGE	DEPARTURE	PRE-ARRIVAL NOTI.	ARRIVAL	ENTRY/EXIT
FISHING [Tuna purse seine fishery]	REQUEST TRANSHIP	TRANSHIP	LANDING	MEASUREMENT
FISHERIES MONITORING SYSTEM		COMM. STATUS	CONFIG.	MESSAGE
You are using an Internet network in the terminal.		UTC : 2016-02-24 07:06:03	LMT : 2016-02-24 16:06:03	



ERS Unit Catch Report Screen

☰
Catch Report Condition ✍

List of Fishing Report | Weight per Haul | Catch Summary

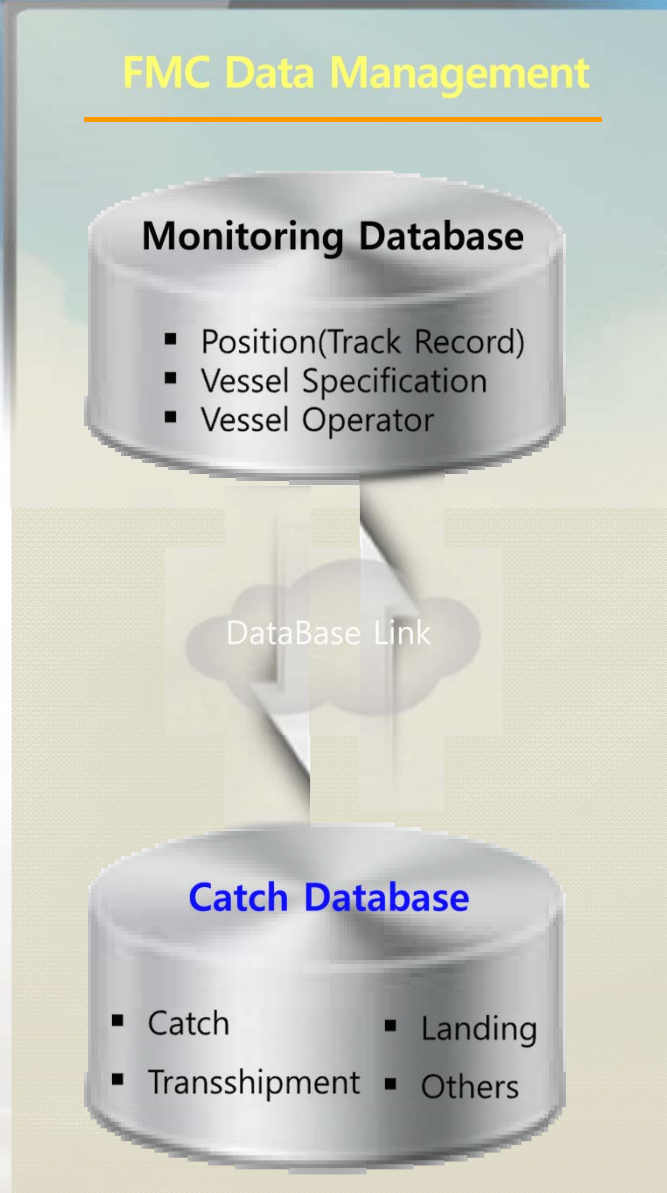
No	Report Date-Time	Report Cnt	Fishery Zone	Report Pos.(Lati.)	Report Pos.(Longi.)	Haul Numbers	Comm. Stat
1	2016-02-24 07:24:43	1	ICCAT	35° 13,256' N	129° 13,880' E	1	Transmit Comp

No	Shoot				Retrieve		Species	Catch		Release		Discard	
	Start Time	Start Pos.	End Time	End Pos.	Start Time	End Time		Qty	Weight(Kg)	Qty	Weight(Kg)	Qty	Weight(Kg)
1	2016-02-24 07:22:56	35° 13,256' N 129° 13,880' E	2016-02-24 07:22:57	35° 13,256' N 129° 13,880' E	2016-02-24 07:23:05	2016-02-24 07:23:06	기타다랑어	100	5000.0	2	50.0	1	10.0

✎ MODIFY
✕ DELETE

🌐 You are using an Internet network in the terminal.
🕒 UTC : 2016-02-24 07:30:59
🕒 LMT : 2016-02-24 16:30:59

KFIMS (Korea Fisheries Information Management System)



Data-link Solution

Web Service

NIFS

Overseas Resources Information System

- Position Report
- Catch Report
- Transshipment/Landing
- Vessel (Operator) specification

FiQ

MOF

Vessel Operator

Catch Data

Quota

E-Logbook Web service

Transshipment/Landing

Vessel/Operator Details

KFIMS Main Screen



선박명 검색

FMC 님 방문을 환영합니다!

- 조업정보
- 쿼터량정보
- 입출항정보
- 결재정보
- 기본정보
- 기타관리

선사별 쿼터량 + 더보기

선사명	쿼터량		
	현재 / 전체	백분율	그래프
사조산업(주)	6,933,983 / 11,868,593	58.4 %	
사조씨푸드(주)	90,783 / 887,065	10.2 %	
(주)사조대림	383,929 / 5,246,952	7.3 %	
(주)쓰리티오션	104,631 / 1,719,589	6.1 %	
동원산업(주)	311,693 / 7,034,639	4.4 %	

수역별 쿼터량 + 더보기

수역명	쿼터량		
	현재 / 전체	백분율	그래프
전미열대다랑어위원회	6,946,812 / 13,946,687	49.8 %	
중서부태평양수산위원회	785,512 / 26,805,666	2.9 %	
러시아연방	302,160 / 31,950,000	0.9 %	
남방참다랑어보존위원회	0 / 1,095,370	0.0 %	
대서양참치보존위원회	0 / 1,539,264	0.0 %	

정보수정신청 + 더보기

전체	신청	승인	반려			
신청일시	선사명	선박명	수정정보	사유	요청내용	상태
2015-10-27 00:09:34.173	신라교역(주)	신라하비스터	입출항정보 > 출역보고	오기	출역수역 WCPFC→KI로 변경 요청	승인
2015-10-26 07:52:31.5	신라교역(주)	신라하비스터	입출항정보 > 출역보고	오기	출역수역 WCPFC→KI로 변경 요청	반려
2015-10-26 07:49:38.373	신라교역(주)	신라하비스터	입출항정보 > 입역보고	오기	입역수역 WCPFC→KI로 변경 요청	승인
2015-10-26 05:43:31.423	동원산업(주)	블루오션호	조업정보 > 양륙결과정보	오기	가다랑어 양륙중량 240,000kg > 240,735kg 수정신고드립니다.	승인
2015-10-23 03:00:11.73	코삭교역(주)	에스티디1호	조업정보 > 양륙결과정보	오기	조업수역 : '중서태평양 ' (FAO 71해구) 로 수정 요청. WCPFC 아님.	승인

기타 보고정보 + 더보기

입출항보고	입출역보고	전재결과보고	양륙결과보고		
보고일시	선사명	선박명	형태	입/출항일	입/출항항구
2015-11-01 01:02:51.0	(주)지오엠	지오엠 379	입항	2015-11-02 00:00:00.0	뉴질랜드 BLUFF HARBOUR
2015-11-01 01:00:31.0	(주)지오엠	지오엠 379	입항	2015-11-02 00:00:00.0	뉴질랜드 BLUFF HARBOUR
2015-11-01 00:14:24.0	(주)지오엠	지오엠 379	입항	2015-11-02 00:00:00.0	뉴질랜드 BLUFF HARBOUR
2015-11-01 00:02:11.0	(주)지오엠	지오엠 379	입항	2015-11-02 00:00:00.0	뉴질랜드 BLUFF HARBOUR



Building a Comprehensive MCS System

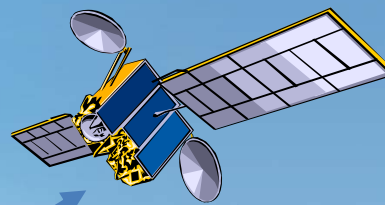
Improved Monitoring and control functions in FMS

- Advanced IUU risk assessment → Strengthening of MCS capacity
- Big data management and statistics → Contribution to global fish stock management

Introducing Video Monitoring System in line with International MCS standards

- EMS trial operation to be initiated in 2016 to verify IUU fishing activities in real time
- Ensuring deterrence and credibility of Korean FMC

Schematic of EM



VMS Satellite Unit
(Position)

Satellite
Communication
(MVSAT)

Video Cameras



Fire Detection
Sensor

Internet

Gear Sensor



Vessel VMS

Satellite MVSAT

- Real-time video monitoring
- Detection of gear usage

- Safety management (Fire detection)

III System Demonstration

1. FMS = VMS + ERS



Thank you

