



E-MONITORING AND E-REPORTING WORKSHOP

Pacific Islands Forum Fisheries Agency Headquarters, 31 March – 1 April 2014
Honiara, SOLOMON ISLANDS

**Integrated Fisheries Information Management
System (iFIMS)**

31 Mar 2014

Mark Oates



integrated Fisheries
Information Management
System (**i**FIMS)

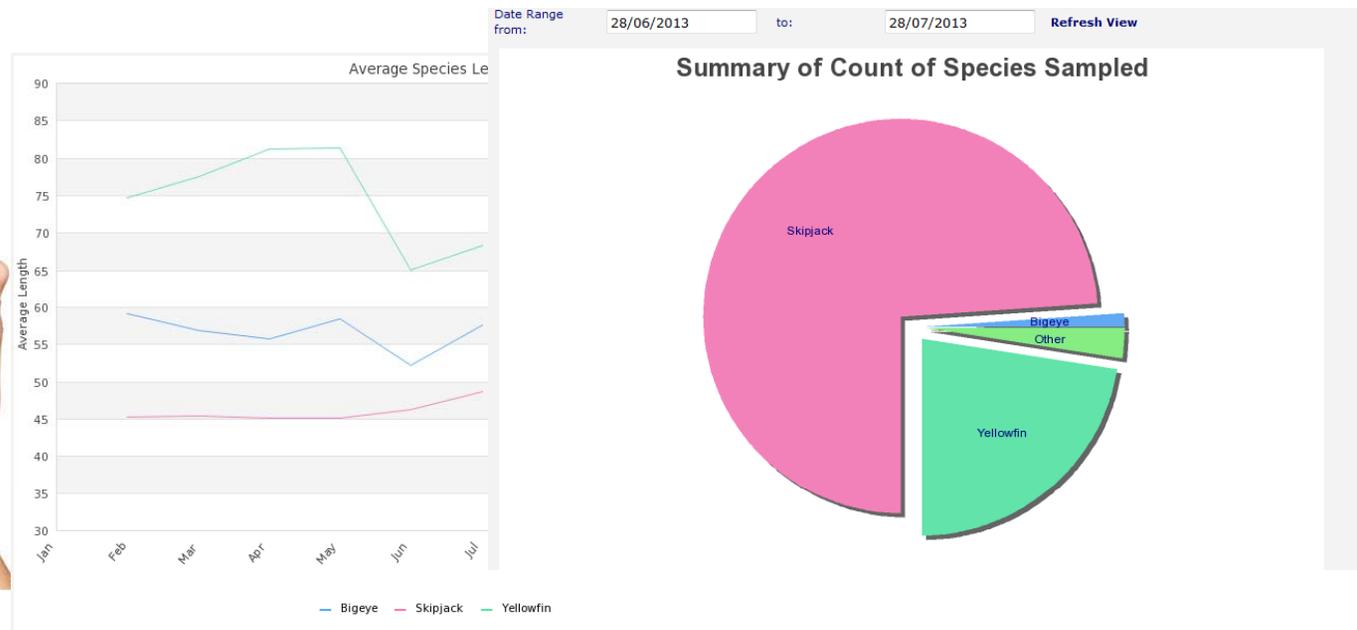


E-REPORTING SUMMARY

- ◉ Mark Oates - Quick Access Computing
- ◉ QAC has been working with Papua New Guinea - National Fisheries Authority(NFA) for over 8 years
- ◉ FIMS is a large system built 'Fit for Purpose'
- ◉ Parties to the Nauru Agreement(PNA) - PNA FIMS - VDS is an important component
- ◉ There are many other Modules
- ◉ One new Module recent released and rolled out is for Electronic Catch Reporting
- ◉ This new component of FIMS can be utilised by FIMS Users for:
 - VDS validation
 - Catch Documentation Scheme(CDS) verification
 - Marine Stewardship Council(MSC) verification
 - Fisheries Management and MCS Purposes
- ◉ Electronic Reporting data can flow from FIMS to SPC in NAF format to improve quality and timeliness of data

ANDROID - E-REPORTING

- PNG NFA have very successfully implemented the use of Android Tablets for their Tuna Port Sampling Unit
- Over 1,000,000 samples taken using eForms between March and November 2013



EXISTING TECHNOLOGY

- Near Real Time Reporting
- Error checking at the point of data entry
- Does NOT need connectivity during use. Eforms stored and send when Connection becomes available.
- Connection in order of
 - Wifi
 - 3G/4G
 - inReach (Satellite)

The image displays three screenshots of the IFIMS mobile application interface. The top screenshot shows a data entry form for a vessel named 'TEST VESSEL' with fields for location (Madang), type (Purse Seiner), and various identification numbers. The middle screenshot shows a 'Well Location' selection screen with options like Starboard, Port, and Center, and a 'Well Capacity' field set to 50. The bottom screenshot shows a 'Landings' screen with a table of fish species and sizes, and a 'Lock in Sample' button. A dropdown menu is visible on the right side of the bottom screenshot, listing options like 'Unassociated', 'Feeding on Baitfish', and 'Live Whale'.

IFIMS - Integrated Fisheries Information & Management System

Vessel: TEST VESSEL

Well: S1

You are logged in as...MARK OATES

Date: 09/07/2013

Location: Latitude: -28.6705 Longitude: 153.4251

Port: Madang

Type of Vessel: Purse Seiner

Vessel Name: TEST VESSEL

IRCS: IRC5124

Registration: REG234

FFA Id: 35124

Date Start Trip: 09.04.2013

Date End Trip: 07.05.2013

Well Location: Starboard, Port, Center, Conveyor, Upper, Lower

Well Type: Blast, Freezer, Brine

Well Capacity(MT): 50

Well Number: 2

Unloading: Landings

Obs Trip Id: OBS1212

Comments: Demo

Vessel Total: 3 Well Total: 3 Net Total: 3

Skipjack: 1 Yellowfin: 2 Big Eye: 0 Other: 0

Species	Size Range	Count 1	Count 2
Skipjack Tuna	1cm - 30cm	61	76
Yellowfin Tuna	31cm - 60cm	62	77
Big Eye Tuna	61cm - 90cm	63	78
Other Species	91cm - 120cm	64	79
	121cm - 150cm	65	80
Bullet Tuna	151cm - 180cm	66	81
Frigate Tuna	181cm - 210cm	67	82
Mackeral Scad	211cm - 240cm	68	83
Trigger Fishes	241cm - 270cm	69	84
Rainbow Runner	271cm - 300cm	70	85
Kawakawa		71	86
Dolphin Fish		72	87
		73	88

Save Vessel Changes

Enter Sampling

Lock in Sample

Unassociated

Feeding on Baitfish

Drifting Log,Debris or Dead Animal

Drifting Raft, FAD or Payao

Anchored Raft, FAD or Payao

Live Whale

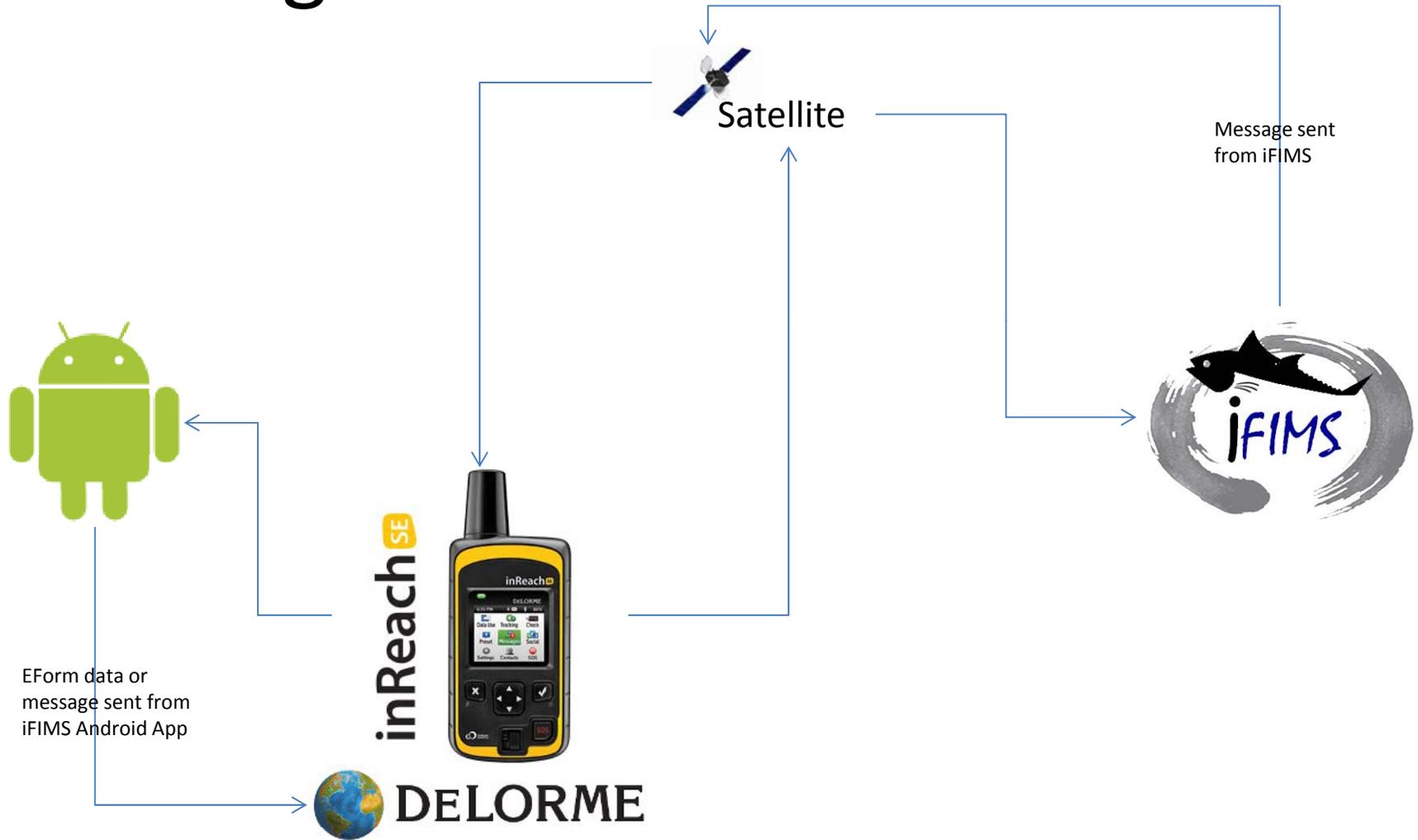
Live Whale Shark

Other

18:40

18:39

Sending eForm





Electronic Data

Enter Data Using iFIMS Web Portal

Or Enter Data Using iFIMS Android App



Company databases

Other Govt Bodies

PNA/FFA e.g. Manual Positions

Industry Processors

Company can use iFIMS to eLodge data to Other Entities for traceability or compliance.

eLodge Non-Fishing to PNA FIMS
- PG,FM,NR,SB,MH,TV

eLodge PG Catch data for CDS and other eforms

Electronic Catch Reporting

NFA FIMS VMS - PG

iFIMS Feedback Loop
- Confirm ACCEPTED/REJECTED Non-Fishing

PNA FIMS Login for full Transparency
- VDS View - PG,NR,SB,TV Waters

PNA FIMS Data Centres - VDS

eLodge Catch data to SPC and National System in NAF Format

SPC

National Systems

- Non-PNA (UST)
- NR
- MH
- KI
- TV
- SB
- PW
- FM

IFIMS - EFORMS

- iFIMS Electronic Catch Reporting has been rolled out to all PNG Bi-lateral Partners in November 2013
- Demonstrated in the Margin of the WCPFC meeting in Cairns in December 2013
- Discussions held with SPC in Cairns regarding FIMS Electronic transfer of this data to SPC in North Atlantic Format(NAF)
- Since 1st January vessels fishing in PNG Waters have lodged catch and activity data to FIMS. Many now working through their second or third trip.

IFIMS - integrated Fisheries Information & Management System

eForms Waiting to be Sent: 0

Vessel Name: BIG PS
IRCS: BD234
Authorised User: MARK OATES

CHECK FOR UPDATE	TRIP SETTINGS	REVIEW eFORMS	inReach
VDS Non-Fishing	Manual Positions	Report Sighting	eCDS
Tranship Activity	Unloading Activity	Zone Entry & Exit	Bunkering Notice
Tranship Notice	Port Call Notice	Observer Request	Bunkering Activity
Fuel Report			

Name: BIG PS
Type: Single Purse Seiner
IRCS: BD234

Latest Position:
21/02/2014 12:00 Lat: -3.925 Lng: 149.897
Papua New Guinea (AZ)

Observer on Board: Mark Oates Days at Sea: 8

Catch on Board:
Skipjack : 40
Yellowfin - Large (> 9kg) : 30

[View Vessel detail](#)
[View Observer detail](#)

IFIMS

Home | Port Sampling | Trip Alerts | Notifications | Subscription | "NFA FIMS" "PNA FIMS" | User Access | Group Mgmt | VDS Group | Web Security | Change Password | Logout

You are logged in as: [User Name]

Page last Refreshed: 20/02/2014 16:37 (UTC+11:30)

21/02/2014
View RPL | MCS RPL
Email RPL | MCS RPL
View in Google Maps

Name: BIG PS
Type: Single Purse Seiner
IRCS: BD234

Latest Position:
21/02/2014 12:00 Lat: -3.925 Lng: 149.897
Papua New Guinea (AZ)

Observer on Board: Mark Oates Days at Sea: 8

Catch on Board:
Skipjack : 40
Yellowfin - Large (> 9kg) : 30

[View Vessel detail](#)
[View Observer detail](#)

Google earth

IFIMS



- ◉ 3 FIMS - NFA, PNA, iFIMS
- ◉ Separate Databases
- ◉ iFIMS - Only for Industry
- ◉ 215 Vessels currently registered on iFIMS including many FSMA
- ◉ Customised at Industry Request
- ◉ Catch Reporting and other functions available for any country
- ◉ Outputs in North Atlantic Format(NAF)

OBSERVER AND CDS - EFORMS

- CDS Android App eForms currently in Field Trials
- Observer Android App for Electronic Reporting is in Final Stages of Development with Sea Trials expected during May.
- Discussions with SPC on Error Checking Business Rules at the point of data entry and data transmission from FIMS in North Atlantic Format(NAF) to improve quality and timeliness of data

The screenshot displays the FIMS (Integrated Fisheries Information & Management System) eForm interface. The top section shows the vessel name 'BIG PS', IRCS 'IRCS123', and Observer 'MARK OATES'. It also includes a 'Send eForms Now' button and a notification for 'eForms Waiting to be Sent: 1'. The middle section contains a grid of buttons for selecting gear types (PS-1 to PS-5, GEN-1 to GEN-6, CDS 1 Transhipment, CDS 2 Landing) and a 'CHECK FOR UPDATE' button. To the right, there are fields for 'Ship Time: 04:33', 'Latitude: 0123.40S', 'Longitude: 15424.12E', 'EEZ Country: Papua New Guinea', 'Wind: 5 (kts) to 60 (*)', 'Sea: C-Calm', 'Activity: Fishing Set', 'School Association: Unassociated', 'How Detected: 1-Seen from vessel', and 'CoC Code: E-Eligible'. The bottom section shows trip details: 'TRIP END DATE (SHIP'S DATE AND TIME) 10.03.2014 00:00', 'VESSEL NAME BIG PS', 'VESSEL DEPARTURE PORT', 'VESSEL DEPARTURE DATE 10.03.2014', and 'MSC TRIP?'. There are 'Save', 'Save and Finish', 'Enter PS-3', and 'Enter PS-4' buttons. A 'Save Changes' button is also present. A checklist on the right side shows the following items: 'Fishing Permit or Licence Number(s)', 'Vessel Characteristics' (marked with a red X), 'Fishing Gear' (marked with a red X), 'Electronics' (marked with a red X), 'Well Contents', 'Crew', and 'Waste/Safety' (marked with a green checkmark). A 'Send Completed PS-1 and Finish Trip' button is located at the bottom right.

Considerations

- Develop Industry platform (multiple country availability)
- Software updates
- Work with Industry for Roll Out and Training
- Work with Fisheries Authority and PNA for
 - National/Regional Vessel Data requirements -Logbook
 - National/Regional Observer Data requirements
 - CDS requirements
 - MSC requirements
 - Other Considerations (Safety at sea)
- Data format (NAF)
- Develop Tools for Validation – VDS/CDS/MSC

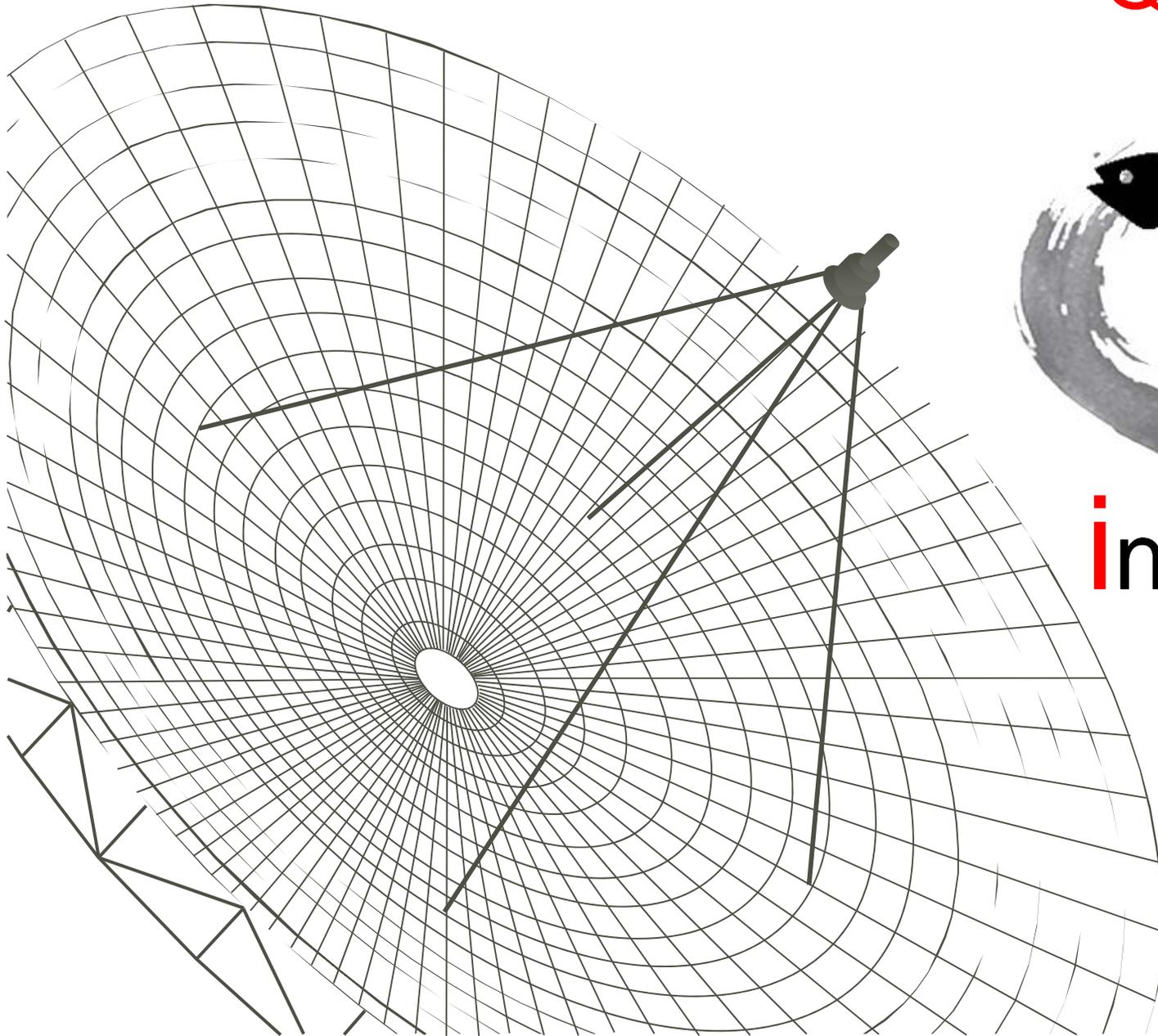
Overcoming Challenges

- Efficient use of Limited Resources in Pacific
- Security
- Hardware and Software Availability
- Data Sharing
 - Completeness of Data
 - Automated linking to VMS for missing catch reporting
 - Alerts
 - Timeliness of Data
 - MSC and CDS Rely on Timely data
 - Hardcopy Workbooks don't meet the need
 - What if there is not an Electronic Based Observer onboard?
- Industry Resistance
- Time to Deployment

Summary

- There is an Electronic Catch Reporting system already in place and being used by Purse Seine Vessels fishing in the Pacific
- This System is well adopted by Industry and is called iFIMS
- PNA FIMS is already receiving Electronic Non-Fishing from iFIMS
- PNA FIMS is system ready to receive Electronic Catch Reporting for Purse Seine Vessels from iFIMS and have this data displayed under the Trip Menu
- The Trip Menu forms an integrated part of FIMS, and there are no extra costs to PNA Office, PNA or Non-PNA parties to use this feature
- Electronic Catch Reporting data can flow from PNA FIMS to SPC and National Systems in NAF format to improve quality and timeliness of data

Questions



integrated
FIMS