Fisheries Data Collection in Lebanon: Contribution of FAO EastMed Project

Department of Fisheries & Wildlife
Ministry of Agriculture
Lebanon

Present System

- Vessel Census: 2004/5
- Fishing Ports Survey: 2004/5
- Manual fishing licensing system

Future ➡ EastMed

- Pilot Socio-Economic Survey
- Web based:
  - Fishing Licensing System
  - Vessel Register
  - Socio-Economic Survey
- Pilot Countrywide Catch Assessment

WHY

- Data will enable better Management Decisions.
- To have better understanding of the stakeholders to serve them better.
- To reliable info, reduce redundancies, and better utilization of MOA human resources
- Comply with local, regional, and international reporting requirements e.g. Task 1

Pilot Socio-economic Survey

■ Appraisal of the fisheries sector from the socio-economic perspective

■ One-off survey using a random stratified sampling approach

Pilot Socio-economic Survey

Data Collection Methodology

■ Stratify the population

■ Optimum sample allocation in each strata

■ Select the sample units of the population

■ Collect raw data from the sample;

■ Raise the sample data to the total population

Pilot Socio-economic Survey

Methodology: technical & dimensional variables

- Minor gear with engine < 6 m
- Minor gear with engine 6 - 12 m
- Purse seiner 6 - 12 m

Fishing gear classes in Lebanon:

Trammel net	Pots and traps
Set gillnet	Beach seine
Trammel nets	Boat seine
Longlines	Trolling lines
Purse seine	Pound and fyke nets
Lampara nets	Spear fishing

Pilot Socio-economic Survey

The methodology: the strata according with GFCM Task 1

Stratification of the population

Fleet segment	
North of Beirut	Minor gear with engine < 6 m
North of Beirut	Minor gear with engine 6 - 12 m
South of Beirut	Minor gear with engine < 6 m
South of Beirut	Minor gear with engine 6 - 12 m
Entire coast	Purse Seine 6 - 12 m

Pilot Socio-economic Survey

		Variables to be collected
CREW	Crew (average per day)	
EFFORT	Days at sea (total per year)	
LANDINGS	Total landing (Kg)	
	Total landing (Lp)	
COSTS	Fuel cost	
	Crew share	
	Commercial cost	
	Other running cost	
	Vessel cost	
	Fixed cost	
	Investment	
SALE OF FISH	Auction	
	Wholesaler	
	Direct	

Pilot Socio-economic Survey

Socio-economic indicators:

- Number of fishers
- Cost of labor
- Gross profit per vessel
- Added value per fisher

Pilot Socio-economic Survey

➡ Overview of the economic situation of the sector, to point out the main problems, and to propose any solutions

➡ Management advice in order to improve the economic conditions of people involved in fisheries.

➡ Knowledge and experience, could then be used in future socio-economic data collection.

Fishing licensing issuance and renewing procedures were examined by EastMed staff

Findings

- Present set-up license-related functions are performed manually
- No cross-linkages with other fleet-related data collections exist

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- Ineffective handling
- Duplication of effort
- Little use of data for statistical purposes

Is needed

A web supported database.
Data elements & information flow were identified

Web-Based Computerized Licensing System & Vessel Census

No computerized licensing system.➡system is needed.

System should be linked with a functional fleet vessel register :

❑ Reliable Data

❑ Avoid costly vessel census

❑ Use data for CAS sampling

Web-Based Computerized Licensing System & Vessel Census

❑Phase 1:

  ❑ an appraisal of the needs. ⬅ DONE

  ❑ preparation of a well-defined operational and methodological framework.
    ⬆TENDER

❑Phase 2: implementation of the recommendations from the appraisal, which might be included in a Letter of Agreement with the national Authorities.

Web-Based Computerized Licensing System & Vessel Census - TORs

OBJECTIVES

- Strengthening the technical capacity of MOA in the domain of web-based applications.
- Modernizing the issuance and monitoring of fishing licenses.
- Dynamic updating of fleet register and socio-economic indicators allowing MOA to meet its local, regional, and international data reporting requirements particularly GFCM Task 1.
- Facilitating the preparation of statistical reports needed for fleet, catch/effort, and socio-economic studies.
- Daily reporting of outposts activities.

Web-Based Computerized Licensing System & Vessel Census - TOR

Reporting

- Fishing license cards containing selected data.
- License receipts.
- Full profiles of fishing units.
- Monitoring lists facilitating identification of licensed/unlicensed fishing units.
- Basic statistical reports for fleet register and socio-economic data.
- Log for each outpost daily reports.

Web-Based Computerized Licensing System & Vessel Census - TOR

Application End Users

The users of the application are not expected to be IT specialists; therefore the application should be simple to follow. It should be intuitive and incorporate the use of uniform function key commands throughout.

Users:

- MOA
- Security Forces
- MPWT
- Universities
- Other concerned ministries/stakeholders

Web-Based Computerized Licensing System & Vessel Census - TOR

DELIVERABLES

- Fully operational interfaces (whether online or batch) for the electronic exchange of data between the MOA LSDB and the Register of fishing vessels developed by the MedFisis project and the socio-economic survey.
- Vision / scope document.
- Project plan.
- Database Design.
- Prototype of application.
- Technical specifications .
- Technical specifications for the required hardware to operate the application.
- Deployment plan, application test plan and implementation plan.
- Users' manual.
- User-friendly and step-by-step descriptions of procedures.
- Detailed validation rules, with examples if any, error messages prompt for all screens.
- Source code with detailed documentation.
- Regular monthly progress reports and technical notes.
- Project completion report.

CAS – Training – Pilot Sampling

University of Balamand (UoB):
- Has CAS since 2005 in North Lebanon only
- Has operational utility, FLOUKA.
- Will expand the data collection of catch and effort data on a pilot basis for one year in the entire Lebanese coastline (LoA)
- UoB :
  - Train MOA staff on fish identification & sample data collection.
  - Data entry
  - Technical supervision of survey

CAS – Training – Pilot Sampling

- The procedures will be formulated by EastMed
- A LoA will be prepared between the UoB and FAO, where the services provided by the University will be described
- MOA will be also involved in field & office operations
- In the field 8-10 rangers from MOA will act as data collectors (in Akkar, North Lebanon, Mount Lebanon, Greater Beirut, South Lebanon). EastMed will finance the overtime
- In the office the input data will be transmitted to the UoB University database for analysis

Collaboration EastMed/Italian Cooperation

- Research surveys to be conducted in collaboration.
- Initially, surveys at sea will be done by CNRS. EastMed Project will provide technical assistance.
- Biological sampling may start in the next years by CNRS staff who will be trained by the EastMed Project.
- The CNRS staff may be in charge of the analysis of the biological data for stock assessment purposes.
- Trials with different fishing gears mesh sizes and alternative gears.

Flow Chart Data Collection System in Lebanon
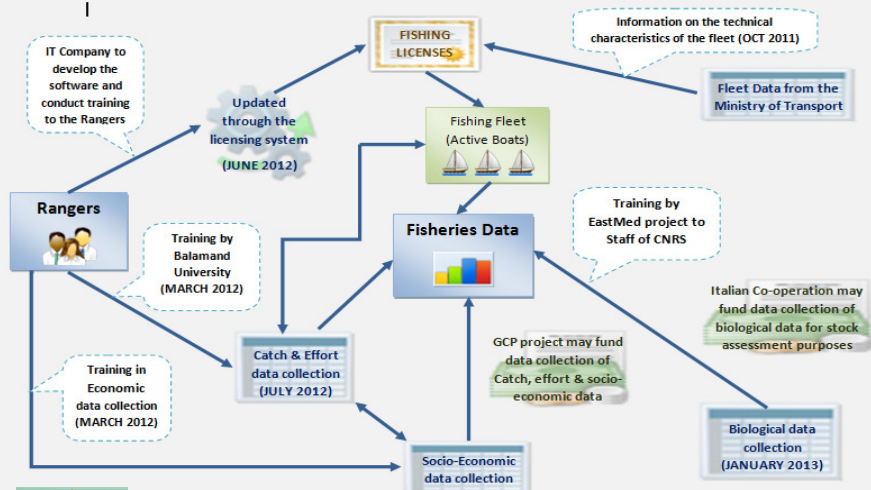
Outcomes & Future

- Real-time Fishing Licensing System
- Real-time Vessel Register
- Pilot Socio-economic data
- Countrywide pilot CAS
- Some Biological data
- Adapted fishing gear
- Daily reporting of outposts activities
- Better Monitoring & Control
- DFW improved capacity

Thank you