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Trade Related Technical Assistance (TRTA II) Programme
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UNITED NATION INDUSTRIAL DEVELOPMENT ORGANISATION

TRADE RELATED TECHNICAL ASSISTANCE (TRTA II) PROGRAMME

Final Report

Strategic Interventions In Fisheries
at
Agency Level

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List of Acronyms and Abbreviations

BFD	Department of Fisheries, Balochiostan
FAO	Food and Agriculture Organization of the United Nation
FCS	Fishermen Cooperative Society
FDB	Fisheries Development Board
GOP	Government of Pakistan
KFH	Karachi Fish Harbor
KFHA	Karachi Fish Harbour Authority
KoFH	Korangi Fish harbour
KoFHA	Korangi Fish harbour Authority
MFD	Marine Fisheries Department
MINFA	Ministry of Food and Agriculture
MoLDD	Ministry of Livestock and Dairy Development
SFD	Department of Fisheries, Sindh
SECP	Security Exchange Corporation of Pakistan
TRTA	Trade Related Technical Assistance
UNIDO	United Nation Industrial Development Program

1. Executive Summary

Trade Related Technical Assistance (TRTA)/UNIDO *interventions were aimed at re-listing of processing plants for resumption of export of fisheries products to EU.* Compliance in Fisheries sector and in doing so the institutional capacity of Marine Fisheries Department (MFD) was enhanced for resource management, inspection and certification of exports for compliance with international requirements. The MFD acts as the EU designated Competent Authority (CA) in Pakistan. The UNIDO's support to Institution under TRTA included;

- a comprehensive Inspection Manual in accordance with international practice for purposes and use of MFD as CA and upgrading and accreditation of their microbiology and chemical testing laboratories by providing technical advisory services and provision of equipment, training and participation in PT schemes.
- Trainings in Standard Operating Procedures (SOPs), Good Manufacturing Practices (GMP), Good Hygienic Practices (GHP) and Hazard Analysis Critical Control Points (HACCP) and Traceability methods to staff of MFD, KFHA, FCS and fish processing plants
- Training of fishermen, boat owners, mole holders and auction hall operators in SOPs (Urdu) and good operational management practices along the entire fisheries chain.
- Technical advice for improvement of fishing boats and landing sites as well as technical advice and designs for up-gradation of auction halls, K-1 and K-2, operating under Karachi Fisheries Harbor Authority (KFHA)/ Fishermen's Cooperative Society (FCS)
- Expert guidance in application of SOPs and Traceability methods along the fisheries supply chain to ensure good hygiene practices in handling of fisheries products and traceability from fishing at sea to processing for export as well as expert guidance in development of HACCP Plans for fish processing plants and application of HACCP practices by processors. Studies on value chain analysis and SPS mapping in the fisheries sector were also undertaken.
- Provision of hand-held PC compatible traceability instruments to fish processing plants to record traceability of fisheries products processed for export.

After successful completion of TRTA program, the UNIDO has embarked upon TRTA II program aiming at a more focused approach towards addressing stakeholders need based interventions which are envisaged to have a long lasting impact on building capacity to further realize the export potential in various sector particularly fisheries sector of Pakistan .

Trade Related Technical Assistance (TRTA II) is a follow up program Programme which is financed by European Commission at a cost of € 9,545,000 This program will be implemented in a joint management mode with UNIDO under the overall guidance of the EC Delegation to Pakistan. Monitoring, evaluation and audits will be implemented in centralized management mode by the EC Delegation to Pakistan.

The three components of TRTA II programme are:

- Component 1: Trade policy capacity building
- Component 2: Export development through improvement of quality infrastructure
- Component 3: Strengthening of intellectual property rights

Implementation of all these three components would require strong inter-agency relationships with government owned or managed counterpart entities. The programme is focused to achieve poverty alleviation through competitive exports.

1.1 Introduction

1.1.1 Back Ground Information

Pakistan's sea-coast measures 682 miles. Of this, 477 miles constitute the Balochistan and 205 miles the Sindh coast. Pakistan's marine resources have supported fishing communities for generations. Some 30 aggregations of fishing communities are to be found along this coastline. The few large aggregations are permanent; the smaller groups come together during the beginning of the fishing season and vacate their habitations at its end. The bulk of the fishing population resides in the Karachi division. The other concentrations are in Thatta, Sindh, and Gwadar and Pasni, Balochistan. The fishing sector employs 125,000 men and women with family dependants numbering close to one million. Boat and shore fishing is done in creeks and within the 12-mile territorial limit which falls under provincial jurisdiction. The larger launches go further off shore into deeper waters on extended fishing excursions, some reaching as far as the Somalian coast. Domestic fish consumption is small, with Pakistan having one of the world's lowest annual per capita consumption of fish. Most of the fish catch is exported to the USA, the Far East and the Middle East. Pakistan exports fish with little value addition. The bulk of the exports comprise a few fish species, mainly shrimp that constitute approximately 66 per cent of total fish exports. The other species exported are Indian mackerel, ribbon-fish, tuna, sole and crab. Over-fishing, including during the breeding season (June–August), has led to a steep decline in shrimp catches. Sardines are caught as trash fish and converted into chicken feed. While this is low as a percentage of total exports, in absolute terms fish exports generate an important share of Pakistan's foreign exchange earnings.

Four harbours and nine important landing sites and jetties are situated along the Sindh-Balochistan coast. The harbours are located in Karachi and Korangi in Sindh and Gwadar and Pasni in Balochistan. On the Sindh coast, the jetties and fish landing sites are located in the fishing villages of Keti Bandar, Ibrahim Hyderi, Shah Bandar, Kharo Chaan, Jhatti, Jhungi Sur and Badin. In Balochistan, the jetties and landing sites are located in Gaddani, Ormara, Sonmiani and Daam.

1.2 Objectives & Initiatives

Fisheries play a significant role in the national economy and towards the food security of the country and as such it is considered as the most important economic activity along the coastline of Sindh and Balochistan supporting livelihood of about 1.0 million fishermen and their families. The GOP, has been working in past to promote fisheries, both marine and inland but somehow the sector was unable to receive attention and matching resources thereof from the

government side due to which a vision could not be developed that should have provided a basis for the development of fisheries sector on strong footings in Pakistan , Although there has been increasing trend in total fish production (Table 1) , the overall marine fish production is almost stagnant for a couple of years and there is fear that these figures may not improve much as already Pakistani fishermen are getting best of their efforts from marine resources. The increase in production is an attribute of inland fisheries and there also to the increasing aquaculture production. The increase in fish production is envisaged from aquaculture which has immense potential for growth in the sector The Mariculture in offshore waters is yet to be initiated in Pakistan; the grounds are being placed for starting coastal, land-based shrimp aquaculture in Balochistan by acquisition of several hundred acres of state –owned land in Gawadar and Lasbella- The Fisheries Development Board is working on this project

Table 1. FISH PRODUCTION

ITEMS	2005-06	2006-07	2007-08	2008-09	2009-10 (Target)
Marine Fish Production in (in million M.Tons)	0.350	0.385	0.425	0.425	0.430
Inland Fish Production (in million M.Tons)	0.180	0.195	0.220	0.225	0.240
TOTAL (in million M.Tons)	0.530	0.580	0.645	0.650	0.670

Source . Ministry of Livestock and Dairy Development Year Book 2010

And if we look at the the break up of the total production figure we realize that Of the total About 50 % of the total production is consumed locally, 22% is exported whereas 28% is converted into fish meal for poultry industry. Statedly , there are about 200 fish processing plants in Pakistan of which about 60 are registered with Pakistan Seafood Exporters Association, with the capacity to process 586 metric tons of fish and shrimp daily. Out of these, about 37 are actively pursuing their business of which 27 plants are involved in production of frozen products, 2 in canning, and 8 for fishmeal processing. The export of sea food products increased from US\$ 213 in year 2007-08 to US\$ 240 in year 2008-09 (Table 2) thus registering a marked increase of 12% in term of values. The data for export of fish and fishery products are given in Table 2 below.

Table 2 . FISH EXPORT AND REVENUE EARNING

ITEMS	2005-06	2006-07	2007-08	2008-09	2009-10 (Target)
Export Earnings (Quantity) (In million Tons)	0.105	0.124	0.135	0.138	0.210
Export Earnings (Value) In million US\$	198	188	213	240	260

Source . Ministry of Livestock and Dairy Development Year Book 2010

Another interesting aspect of Pakistan's marine fisheries sector is its " Open access Fisheries " Any body can make a boat and land in water after paying a registration fee to either the KFHA or BFD . This is one single most important negative aspect which needs immediate attention of of policy makers . The reflection of this policy is evident from the increasing number of boats which are operating in waters of Arabian Sea both within as well as outside our territorial jurisdiction More than 15,000 fishing vessels of various sizes, ranging from small to medium-sized boats, large launches and trawlers, engage in fishing. Almost one-third are shrimp trawlers; the bulk of these are owned by investors outside the community. Boat and shore fishing is done in creeks and within the 12-mile territorial limit which falls under provincial jurisdiction. The larger launches go further off shore into deeper waters on extended fishing excursions, some reaching as far as the Somalian coast. Another aspect of marine fishing is deep sea fishing the details about thes are given in table 3 below along with the details of income to the various governmental bodies under various heads of account of the deep-sae basd vessel operations. (Table 4)

Table 3 . Details about the number of deep sea fishing operation during last five years

YEAR	ITEM	STREN TRAWLER	TUNA LONG LINERS	TOTAL
2004-05	Number of Vessel	12	11	23
2005-06	Number of Vessel	02	22	24
2006-07	Number of Vessel	0	22	22
2007-08	Number of Vessel	0	5	5
2008-09	Number of Vessel	0	5	5

Table 4 .INCOME FROM DEEP SEA FISHING VESSELS(in Rs. Million)

YEAR	Fee/Penalties	Royalty	KoFHA Cess	TOTAL
2004-05	19.720	35.160	13.305	68.185
2005-06	9.000	45.540	13.647	67.187
2006-07	2.210	0.350	15.955	18.515
2007-08	5.561	03.100	-	08.661
2008-09	1.100	-	-	01.100

Source . Ministry of Livestock and Dairy Development Year Book 2010

Pakistan fisheries has much more to offer to the consumers in both domestic and international market than what it is contributing today The sector outlook is not that bleak as it looks Export of fish has traditionally been an area of concern particularly after the imposition of ban after the listing of anomalies in the whole supply chain and compliance by FVO There is a systematic failure with management system in this regard. The issue was dealt with the TRTA I as well but a lot more has to be done at the agency level in the area of inspection if at all the opportunities are to be tapped on competitive basis One approach could be to reduce the concentration of fish handling at K2 auction Hall which is now managed by KFHA and used by the FCS as a major stake holder. To deal with problem an option could be to develop jetties and allied infrastructure at few more landing sites such as Baba and Bhit island lying about 4km from Karachi Fish Harbour ,opposite to Karachi harbour . These jetties will then be provided with full inspection protocols and management system to meet compliance issues.

The SFD has already submitted a PC1 to consider building three floating jetties at Sindh Coast at Thatta /Badin after site selections based on landing and number of boats operating there.. Similar steps have been initiated by the BFD through IFAD /UNIDO and Italian Debt Swap assistance. For competitive export yet another area of importance would be training ,with certification, of fishermen in post harvest handling (HACCP /good hygiene practices etc) for keeping quality and reduce losses and of processors for procedures in keeping standards in cool chain maintenances and certification prerequisites In brief the sector has opportunities and this is a matter of developing vision , and subsequent righteous efforts to achieve targets of competitive fish and fishery products export through value addition to optimize returns for fishermen and other stakeholders. Such steps will also help domestic consumers in obtaining quality supplement local protein intake. The proposed initiatives under the TRTA II are therefore very much in line with the overall objective of the developmental needs of fisheries exports insofar as the quality issues are concerned along the value chain.

The TRTA II envisages indicating micro-economic “drivers” for success which are necessary for competitiveness, job and wealth creation resulting in poverty alleviation through job creation, particularly for youth.

This report outlines a framework of cooperation between TRTA II and counterpart agencies in the Fisheries discipline with the same developmental objectives The actions outlined in the report have been developed by conducting a detailed stakeholder analysis and a capacity survey of the related agencies. Based on two way dialogue a final list of initiatives with each agency has been articulated to be implemented over a period of 4 years of TRTA implementation.

The matrix below provides a summary of the initiatives recommended:

Table 5: Summary of Recommended Actions

Organisation	Summary Actions	Impact
MFD	<ol style="list-style-type: none"> 1. Technical assistance in Strengthening Training Centre for service deliver by developing curricula/course module providing sof MFD 2. Training of master trainers training centres for training for training of fish processors, inspectors and fishermen (GHP, fish handling on boat, during unloading in auction hall and along the entire supply. 3. Technical assistance and training in introducing protocols for further chemical and microbiological tests mandatory to 	<ol style="list-style-type: none"> 1. Improving quality, compliance, efficiency and value addition 2. skilled workers are declining in processing sector the project will increase workforce and incomes (pro-poor)

	<p>sustain accreditation status (PT participation, provision of CRMs, development of technical procedures for test methods.</p> <p>4. As part of the capacity building exercise the programme will assist in developing performance indicators and monitoring mechanisms of the institute .</p>	<p>3. These systems will improve service delivery and increase the accountability and governance of utilisation of public finances.</p>
KoFHA	<p>1. Development of Corporate Strategy and business plan, particularly for establishing Business Park for value added production</p> <p>2. Provide design lay out for landing site, auction hall and associated infrastructure at KoFHA in accordance with the international requirements.</p> <p>3. Training of relevant staff to help strengthen the inspection and management system at the harbour</p>	<p>1.Operationailzation of KoFHA .</p> <p>2. Compliance with vendor assurance program for establishing EU fish export corridor</p> <p>2.Productivity and value addition impact</p>
KFHA	<p>1. Training of inspectors at MFD training centre</p> <p>2. Design of model peeling shed and management plan</p> <p>3. Training and skill enhancement of women in shrimp peeling sub sector ,</p>	<p>1. Improving quality and compliance</p> <p>2. Better Compliance</p> <p>3. improve life of low paid female workers</p>
S FD	<p>1. Development of a Business plan for new jetties and landing site and for access to market (local/international) and cold chain development</p> <p>2. Training of staff in inspection and management at MFD , Karachi</p>	<p>Improving quality and compliance</p> <p>Productivity and value addition impact</p>
BFD	<p>1 Development of a Business plan for new jetties and landing site and access to market (local/international), cold chain development.</p>	<p>Improving quality and compliance</p> <p>Productivity and</p>

	<p>2. Training of staff in inspection (and management (capacity enhancement through capacity building) at MFD , Karachi.</p> <p>3. Training of fish processors and staff in fish handling</p>	value addition impact
FDB	<p>3. To assist FDB in developing programs /projects to address the sustainability of fish/shrimp catch by developing fish stock replenishing projects for offshore stocking and regulations on fishing licensing mechanism in for marine capture fisheries .</p>	<p>1.Improved /replenished fish stocks; results bring sustainability to the supply side .</p> <p>2. pro-poor</p>
FCS	<p>1. Enhance awareness and outreach of FCS</p> <p>2. Training of fishermen through MFD training centre in good hygiene practices.</p>	1. Increased exports from pro-poor sectors

2.0 Stakeholder analysis

TRTA II is a technical assistance programme funded by European Union and developed in coordination with the government of Pakistan. Pakistan has a federal system of government. Policy making is the subject of Federal Government and Provincial Governments are there to implement. In this study several Stakeholders have been identified as key counterparts for the successful implementation of the TRTA II programme. There are three categories of stakeholders; Policy; Coordination and Support and; Action oriented. The study has tried to categorize the stakeholders accordingly .Ministries of the Federal Government are at the first level and it should be providing a policy level support to the TRTA II and also for the overarching steering of the project. The impact of all such agencies is reported as positive as there is a strong ownership of the TRTA II programme by the government of Pakistan. As TRTA II has several policy interventions so strong coordination is required between this level and UNIDO. The second level (federal and provincial line department) and for successful interventions under TRTA II would not at all be possible through their cooperation and support. At level 3 are stakeholders which are categorized as the action agencies which supposedly will have a direct impact in successful implementation of TRTA II. In addition these agencies are direct beneficiaries of the technical assistance under TRTA II programme to enhance their services.

2.1 Methodology & Scope

In Fishery, there are multiple stakeholders with different and diverse interests that has lead to an overall system of management which can be grossly characterized as non-integrative. And if at all a sustainable development in the sector has to be achieved the role of these stake holders, which at times may be overlapping, will have to be realized for support . Therefore , recognising the importance of institutions as well as enterprises itself , one of the intent under TRTA II Program is to categorically assess the functions of the key institutions having a stake in fish exports and based on which various intervention options could be weighted for rational technical assistance . Given this context, the TRTA II is a support programme developed in coordination with the government of Pakistan, so several Stakeholders have been identified as key counterparts for the successful implementation of the TRTA II programme. In developing the stakeholder analysis, this report has analysed various types of stakeholders and identified their levels of interest and impact on the programme. Various stakeholders studied under this program included the agencies at government as well as autonomous and semi-autonomous level bodies involved in fisheries policy, planning, coordination and support as well as implementation leading to export of fish and shellfish commodities and/or their products. One common element among all these stake holders is that all of them will be providing policy/organizational level support to the TRTA II and also for the overarching steering of the project. And as the TRTA II program envisages a full and congenial support of the government of Pakistan it will be only possible through the cooperation of these agencies that the TRTA II programme of UNIDO, funded by EU, would be able to deliver.

The method adopted for assessing the needs and writing this analytical report was though a developed set of pre tested questionnaire for which a detailed response was obtained using interview /meeting method both at head of the organization(solitary) level or group discussion with the departmental head assisted by his follow through . Besides primary data collected through questionnaire/interview, secondary data was also used in compiling this report.

Following matrix of the report presents the stakeholder analysis for the TRTA II programme.

Table 6 : Comparison of Structure and Activities of Related Agencies

Matrix of the report on the Fisheries stakeholder analysis for the TRTA II programe								
Stakeholder	Interest	Likely Impact	Type of Stakeholder	Level of Interest	Level of Influence	Importance for TRTA II	Overarching Areas	Support
Ministry of Livestock and Dairy Development	A newly created Federal Ministry of Livestock and Dairy Development is the policy making body for Livestock, dairy development and fisheries at the federal level. It is the controlling Ministry of MFD and KoFHA and its own working arm is the office of FDC As the TRTA II has a strong focus of fisheries sector some overall guidance and policy support will be required by Ministry of Livestock and Dairy Development. The role becomes extremely important for the development fisheries sector.	Positive in the implementation of TRTA II activities	Policy Level	High	Highest	Extreme	TRTA II will closely work with Ministry of Livestock and Dairy Development in the development of fisheries sector in order to address the hygiene and compliance requirements across the supply chain to re enter the EU market. The support of the ministry will also be required in developing the coherent strategy for SPS compliance in livestock, fisheries and dairy sectors	

MFD	(MFD) is the executive fishery agency of the federal Government, with primary responsibilities for ensuring management and development of fishery resources in marine waters beyond territorial limits, ; It is declared CA for EU countries . and thus regulatory body for inspection/and certification of all fishery export products , Regulates fish processing plants.	Positive in the implementation of TRTA II activities	Partner Agency	High	Highest	Critical	<p>1. The role of MFD is important in developing the SPS management system across the country especially for the food safety and compliance in the country for subsequent export .The TRTA II will require support and involvement of MFD in the implementation of activities concerning the improvement in inspection services . capacity building of other line and allied departments for training of inspectors and fishermen in hygiene etc.</p> <p>2. TRTA II can help train trainers of MFD and also assist in upgrading their training manuals/modules</p>
KoFHA	An autonomous body under the umbrella of MoLDD.	Positive in the	Partner	High	Highest	Critical	Korangi Harbor needs technical assistance to come

	KoFHA Manages Korangi Fish Harbor and its allied facilities and regulates the value added processing plants operating at harbor	implementation of TRTA II activities	Agency				into full operation and needs a business plan for establishment of a business park at KoFH . TRTA II activities concerned with the strengthening of the effective inspection services across the country for promoting export of fishery products can provide full technical assistance to KoFHA which can help bring this facility approved as a EU corridor for fish export under vendor assurance program. Training in inspection services would also be required for its staff at MFD Training centre.
KFHA	An autonomous body under the Provincial Ministry of Sind Livestock and Fisheries which is responsible to Manage and Operate Karachi Fish Harbor and its allied facilities. Registration of boats. And maintenance of auction	Positive in the implementation of TRTA II activities	Action	low	modest	Modest	The support of KFHA will be required in implementation of TRTA II activities concerned with the strengthening of the effective inspection services across the country for export of fish. Training is proposed therefore.

SFD	SFD is established for the development of fisheries and aquaculture in Sindh and controls fisheries in territorial limits, within Sindh , Indirect control on Karachi Fish Harbor and responsible for its development and support to boat for upgradation and assistance to fish processors . /operation . on hygienic lines horticulture.	Positive in the implementation of TRTA II activities	Partner Agency	High	Highest	Extreme	<p>1 Technical assistance in designing model Peeling shed and subsequent training program for women in peeling for skill enhancement and good practices ,</p> <p>2.TRTA II can help develop management plan along with access to market approach for 3 new jetties for which PC1 is under consideration</p> <p>3. Further it is proposed to train trainers of SFD at MFD</p>
BFD	BFD is established for the development of fisheries and aquaculture in Balochistan and controls fisheries within territorial limits in Balochistan ; control landing sites , registers boats and regulates fisheries and has a mandate to inspect fish at landing sites/processing plant for	Positive in the implementation of TRTA II activities	Action	High	High	High	<p>1.The support of the BFD is important for supply side interventions such as training of inspectors in inspection norms, and fishermen in of TRTA II programme .</p> <p>2.TRTA II can help develop</p>

	hygiene and good practices .						management plan along with access to market approach for a series of new j floating jetties for which PC1 is under consideration by IFAD and Italian Debt Swap Fund . , 3. The TRTA II can help train trainers of BFD and also assist in manuals/modules development for Surbunder training institute of BFD
FCS	FCS is a welfare body of fishermen which sometimes back used to manage fully the auction halls of Karachi Fish Harbor , Now controls marketing of fish and shrimp in Auction halls through managing mole holders , Responsible agency for maintenance and operation of auction hall in accordance with approved EU quality standards . FCS is also	Positive in the implementation of TRTA II activities	Secondary	Moderate	Medium	High	The plat form of FCS will be utilized in training of fishermen in good practices/hygiene practicesat MFD training centre under interventions of TRTA II programme

	running projects for social welfare of its member community.						
FDB	Government established, private sector-led, a not for profit Company registered under section 42 of Company's Act. The FDB is chartered for promoting private and public partnership , initiating national programs for the sector with an objective of promoting private sector investment in fisheries and aquaculture sector , Currently it is running the PSDP funded aquaculture and shrimp farming project . Policy research and innovational programs directed towards fisheries production sustainability falls in its mandate as well .	High	Action	High	High	Extreme	Technical Support under TRTA II for (Stock Replenishment program; Project planning , development , and sub sector analysis and ; Project development process for studying /initiating program on fish/shrimp Licencing system /entry control system in open sea aimed at improving supply chain
Multan Mango Growers Association	Politically established, members always in conflict with each other and performance is poor due to lack of funds	High	Action	Medium	High	Critical	Farm/enterprise level interventions

Mango Growers Cooperative Society Limited	Politically established, members always in conflict with each other and performance is poor due to lack of funds	High	Action	Medium	High	Critical	Farm/enterprise level interventions
Donors	ASLP and USAID are running large portfolios focused on horticulture. DFID is also supporting various initiatives especially pro-poor initiatives in Southern Punjab.	Medium	Secondary	Medium	Medium	Low	Sharing of information and coordination of interventions to avoid duplication
Academic Institutions	Associated with donors to provide technical support for the improvement of fruit processing techniques	High	Secondary	Medium	Medium	Low	Support in R & D,

3.0 Comparison of Structure & Activities

3.1 Key Features

The fishery management system in Pakistan is non-integrative. The basic problem is the lack of effective cooperation between research, management, enforcement agencies and the other stakeholders. There are departmental barriers to the effective information exchange between these groups of organizations. These institutions also have inadequate capacity building and financial resources for effective management studies. Furthermore, the information on the status of stocks, fisheries and catch statistics is scarcely published and is hardly available for the experts outside the fisheries institutions, to the general public and the non-governmental organizations. The limitation of the information exchange complicates public control of the fishery management and development. To improve the feedback between the management authorities, fishing dependent communities and the general public much more information must be publicly available.

3.2 Inspection ; Capacity and Management

The survey of competent authorities and related departments shows an element of disparity and it is obvious that the departmental level competency in administrative management is dependent on the leadership and clarity of its staff on departmental role in execution of important functions such as inspection. The inspection at times is a luring job and there are ample chances for abuse of power by the incumbent inspector. Lack of interest and motivation are still other important underlying factor which adds towards incompetence /poor competency while performing sensitive job of inspection. In most of the agencies, inspectors are relatively speaking low-income group employees, with less professional knowledge, less clarity about their jobs, and under-trained. . the survey findings elaborated that hardly any organizations possess properly qualified inspection and management staff. Most of these departments lacked proper HR department so the employees seemed lethargic. Current level of staffing, in most cases, is insufficient to provide proper inspection services. The competent authority seems overburdened with multiple tasks which it performs, The CA can consider off loading some of its inspection burdens by delegating its power of inspection to other organization say for instance, Balochistan Fisheries Department can be partially entrusted with the job of inspection by delegating some of its powers by the MFD. In case of MFD , which is CA, there are no permanent Inspectors posted at the airport, for instance. Likewise the signing and issuance of certificate is an important but tedious job and in MFD this job has been centralized with the controlling officer sitting in the headquarters at West wharf, Karachi . No permanent staff has been posted for inspection at the airport. Moreover, it has been found that no inspection feedback system is in place. The agencies try to follow proper inspection procedures including sampling, laboratory testing, inspection of equipment and premises when they are performing.

The major short coming among all these agencies is lack of a business plan, annual plan and/or publishing of annual report. In case of CA , there is no

performance auditing mechanism to monitor and evaluate the efficiency of MFD in terms of its effectiveness as a competent body viz, CA.

3.3 Legislation and legal Framework

Typically all the agencies surveyed follow a set of legislation in the form of acts/ordinances developed at the time of their establishment and barring a few, mostly these acts/ordinances have not been revised according to the emergent market needs. Further, most of these legislations are weak and at times, not supportive to inspection by the inspection agencies

According to the constitution, the management of marine fisheries is a federal responsibility outside the limit of territorial waters (12 nautical miles) while inside territorial waters the responsibility lies with the respective departments of Fisheries of Sind nad Balochistan. The MoLDD is the Federal Agency responsible for fisheries (. The constitution of Pakistan, Fourth Schedule, Article 70(6): Gazette of Pakistan, Extra, April 12, 1973).

Pakistan has special Federal and Provincial laws which regulate marine fisheries which are ;

- The Presidential Proclamation of March 20, 1973; Gazette of Pakistan, March 20, 1971.
- The Exclusive Fishery Zone (Regulation of Fishing) Act; Act No.XXXII of 1975 as amended in 1993.
- The Territorial waters and Maritime Zone Act, 1976; Act No.LXXXII of 1976.
- The Exclusive Fishing Zone (Regulation of Fishing) Rules 1976, promulgated under section 16 of the Exclusive Fishing Zone (Regulation of Fishing) Act 1975
- Pakistan also adheres to the guidelines and Code of Conduct for Responsible Fisheries as laid down by the FAO of the United Nations ;Codex's "Recommended International Code of Practice for Shrimps and Prawns" (CAC/RCP 17-1978)
- In order to comply with EC Regulations and to control the quality of seafood, Government of Pakistan promulgated Pakistan Fish Inspection and Quality Control Act, 1997 and Rules, 1998 there-under.
- On the provincial level, the Government of Sindh have framed and promulgated the Sindh Fisheries Rules of 1983 in exercise of the powers conferred by Section 27 of the Sindh Fisheries Ordinance, 1980.
- The Baluchistan Fisheries Ordinance of 1970 was passed by the Government of Baluchistan
- The Baluchistan Sea Fisheries Act No. IX 1971 (amended 2009)

- There is no regulation on limitation of the number of fishing boats in small-scale fishery sector as access to fisheries resources is free in Pakistan.

Insofar as international standards are concerned the EU has developed its own standards, and updates them periodically, its standards are similar to HACCP. The certification process is thorough and the Société Générale de Surveillance (SGS) which is one of the accredited certifying agency for marine products in Pakistan. It started its activities in 1997, concurrently when the U.S. Food and Drug Administration (FDA) made the adoption of HACCP standards mandatory for all fish imports into the U.S. Over time a visible change in the management culture has emerged. Resultantly some processing plants have made large investments in the requisite of safety equipment and procedures, and some are started to have also installed in-house laboratories to check fish toxicity. The drivers of compliance at the processing stage are markets and the underlying unpredictability of the business. The first is self-evident; if exporters fail to comply with standards they lose export markets. Second, processing is both high-risk and costly. Contamination in a single container means the entire consignment has to be destroyed. Finally, catches fluctuate daily. The high risks, high capital and processing costs tends to have some owners in close their plants.

4.0 Food Safety

Food is federal subject and the items come under the MINFA but interestingly this ministry and for that matter any ministry at the state level is not responsible for the safety of food entering in the domestic markets For export market , only health aspects are covered in relation to food items One fish processor at KofHA who is exporting cooked ready to eat fish in cans to USA , The Factory and its product is FDA approved . The processor opined that his products fall under the food safety act and they can not be covered under the existing state laws which are applicable to fresh /live or frozen fish products. So this brings us to a existing vacuum in our inspection system which needs to be addressed

5.0 Comparison of structure and activities

Marine Fisheries Department is under the administrative control of the Ministry of Livestock and Dairy Development . The Karachi Fish Harbour Authority and Korangi Fish Harbour Authority are autonomous bodies with their own Board of Directors , however they are attached to the provincial Ministry of Livestock and Fisheries and Federal Ministry of Livestock and Dairy Development respectively. The Sind Fisheries Department is the line department of provincial Ministry of Livestock and Fisheries , Government of Sindh while Balochistan Fisheries Department is under the Ministry of Coastal Development and Fisheries , Government of Balochistan . Fishermen Cooperative Society a a NGO established under Cooperative Act and its affairs are also run by the Board of Directors elect The Fisheries Development Board (FDB), is a not for profit company established by the Government of Pakistan under section 42 and is

registered with Security exchange corporation Of Pakistan . The FDB is a private sector led Board established to promote fisheries development in Pakistan by bridging gap between the private and public sector and creating enabling environment for private sector investment. All these departments and agencies are , in one way or other, involved with fisheries development in the country through a series of different functions such as pursuance of productivity enhancement programs , impart trainings and to establish best practices to address supply chain issues. The matrix below provides the comparison of structure and activities of the agencies surveyed.

Table 7; Comparison of structure and activities

S No	Name	Status	Overarching Responsibility	Sector Responsibility	Total Staff	Source of Funding	KPIs	Project Planning & Funding
1	MFD	Line Department	Fisheries Management in waters beyond territorial limits and fisheries CA , management of processing plants , export ,etc	Fisheries and	200	Government Fund	Not Developed	Through Regular Budget of MoLDD
2	KoFHA	Autonomous Body under MoLDD	Manage Korangi Fish harbour	Fisheries	99	Government Fund plus income generation .	Not Developed	Through Regular Budget of MoLDD
3	KFHA	Autonomous Body under Provincial Livestock and Fisheries Ministry	1. Manage Karachi Fish harbour	Fisheries	213	Government Fund plus income generation	Not Developed	Through Regular Budget of GOP and its own funds

4	SFD	Line Department under Sindh Provincial Ministry of Livestock and Fisheries	1. Policy Formulation 2. Management of fisheries across the province both in inland waters and within marine territorial limits	Fisheries and Aquaculture	740	Government Fund	Not Developed	Through Regular Budget of GOP
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6.1.1 Marine Fisheries Department

6.1.1 Issues and Strategies

Marine Fisheries Department is central to almost all the marine fisheries related issues. Over the years it has developed its capacity for monitoring and evaluation as CA. The Department has been the beneficiary of several donor assisted programs, Under TRTA I as well the major beneficiary of the project was MFD. The inspection capabilities of MFD has improved in the past years, however it is not yet in a position to administer inspection as a function in entirety. Perhaps one of the major reason for this is the diversity in their job and their overall multifaceted job related responsibilities, Its Central laboratory is now accredited but there is still need to get its accreditation revalidated which is mandatory, Likewise the Training Centre of MFD is in poor condition, they are pursuing a PCI for complete revamping of this Training Centre, Once completed the capacity of the training centre will need support in terms of technical assistance to cater to the needs of inspectors, processors and fishermen training nationwide.

A two pronged strategy can help improve the situation; one by providing technical assistance in Strengthening Training Centre for service delivery by developing curricula/course module. And two by providing Technical assistance and training in introducing protocols for further chemical and microbiological tests mandatory to sustain accreditation status (PT participation, provision of CRMs, development of technical procedures for test methods).

6.1.2 Recommendation for TRTA II Support Programme

- Technical assistance in Strengthening Training Centre for service delivery by developing curricula/course module providing support for MFD
- Training of master trainers training centres for training for training of fish processors, inspectors and fishermen (GHP, fish handling on boat, during unloading in auction hall and along the entire supply.
- Technical assistance and training in introducing protocols for further chemical and microbiological tests mandatory to sustain accreditation status (PT participation, provision of CRMs, development of technical procedures for test methods.
- As part of the capacity building exercise the programme will assist in developing performance indicators and monitoring mechanisms of the

7.1 Korangi Fish Harbor authority

7.1.1 Issues and Strategies

The Korangi Fish harbour was built with a loan from ADB and since its creation it has been not able to operate for a variety of reasons, These facilities are good enough for use as a full fledged fish harbour provided there is a plan to develop it on rational lines, The ban of EU for fish exports from Pakistan also warrants the need of another functional harbour in Karachi,

The strategy to address this issue is to develop a comprehensive business plan and a corporate strategy for KoFHA so as to bring the Korangi Fish harbour in

operation and it may be subsequently opened as a EU corridor for export under vendor assurance program . The mission will identify the key staff and their qualifications and skills requirement, identify as well as fulfil some of these needs at MFD training centre training needs, develop partnership strategy and business models for key areas

7.1.2 Recommendation for TRTA II Support Programme

- Development of Corporate Strategy and business plan, particularly for establishing Business Park for value added production
- • Provide design lay out for landing site, auction hall and associated infrastructure at KofHA in accordance with the international requirements.
- • Training of relevant staff to help strengthen the inspection and management system at the harbour

8.1 Karachi Fish Harbor authority

8.1.1 Issues and Strategies

KFH is in fact the main place where most of the trading activities of fish and shrimp is carried out, KFHA is responsible for KFHA management and for all its standards. The auction halls have been revamped to meet the requirements of EU, But still these halls are not functioning to the mark , There are hygiene problems quite visible in handling process . There is a need to change the attitudes at both the level of service providers as well as the end users. Strict compliance is only answer to the problem, A Already several hundred of fisherman has been trained in hygiene and maintenances of cool chain throughout post harvest handling mode. However it is a never ending process, consistently the work has to done with KFHA to improve upon the situation.

The KFHA is in the process of revamping the KFHA facility and is in the process of developing a master plan for the KFHA. One of the biggest needs is the peeling yard where women can peel the shrimp under standard hygienic conditions,

Strategically therefore, this is high time that a modern model peeling should be designed so as the mandatory SPS and human hygiene and other standards could be met . More over the women in peeling also needs training not only for their skill enhancement/development but also in how to take care of personal hygiene and the other sanitation issues They could be departed training in good handling practices at MFD facility . A design is needed for the peeling shed and there are needs of training at the level of women in peeling business. , Ancillary to this fishermen, mostly new entrants can also be trained to maintain the continuum .

8.1.2 Recommendation for TRTA II Support Programme

- Training of inspectors at MFD training centre
- Design of model peeling shed and management plan
- Training and skill enhancement of women in shrimp peeling sub sector ,
Training of inspectors at MFD training centre

9.1 Department of Fisheries SINDH

9.1.1 Issues and Strategies

SDF is also responsible for KFH and other export related issues . It has improved its functioning towards achieving the goal of providing services and resources for up gradation of boats to maintain cool chain. The facilities at auction halls have also improved. They, in conjunction with KFHA are in the process of developing the master plan of Karachi Fish harbour . Moreover they are perusing a PC1 vigorously under which three floating jetties are to be made at Thatta and Badin . This will improve the landing conditions for shrimp. And will also help ease the burden on Karachi Fish harbour The jetties , once established will need a management plan and a matching strategy for market accessibility

The strategy could be to technically facilitate the SFD in developing a management plan for the new jetties and working on the same time on market issues that may arise thereof , particularly in terms of access to the markets ,

9.1.2 Recommendation for TRTA II Support Programme

- Development of a Business plan for new jetties and landing site and for access to market (local/international) and cold chain development
- Training of staff in inspection and management at MFD , Karachi

10.1 Balochistan Fisheries Department

10.1.1 Issues and Strategies

Like SFD the BFD is also in the process of negotiation with IFAD, UNIDO and Italian Debt Swap fund for infrastructure development along the coast of Balochistan . These structures will include establishment of 4-6 jetties at Balochistan coast. This will improve the post harvest handling conditions and for sure improve the quality of landing, As discussed abpve in case of Sindh , it is high time that their capacity to manage these jetties be built by providing them technical assistance in the area of developing a management plan for these jetties to be used in accordance with international standards of hygiene and sanitation, (SPS) The TRTA II program can provide technical assistance in this regard , Moreover BFD is in the process of completing its Fisheries Training Centre at Sur Bunder with the financial assistance of federal government , Once completed , this centre can effectively play a role in providing standardized training to processors , fishermen and departmental inspectors , So strategically, at this point in time , provision of technical assistance to develop course module/ and curriculum along with training facility for master trainers can produce far reaching effects ,

10.1.2 Recommendation for TRTA II Support Programme

- Development of a Business plan for new jetties and landing site and access to market (local/international), cold chain development.
- Training of staff in inspection (and management (capacity enhancement through capacity building) at MFD , Karachi.
- Training of fish processors and staff in fish handling

11.1 Fisheries Development Board

11.1.1 Issues and Strategies

FDB is new, not for profit Company, which has been created by the Federal government with a private sector led Board of Directors to rationally steer the development process in this sector. Being a company it gives them more leverage to work without facing the bureaucratic attitudes and a tendency of resolving the issues at very slow speed. The Board is now running the federally funded aquaculture and shrimp project to set model for investment in this sector,

Board has the vision to go into fisheries sector and they also have resources under which they are revamping the MFD hatchery at Hawks Bay , Karachi , The Hatchery is designed to cater to the need of future stock replenishment program for depleting marine stocks , particularly shrimps , The hatchery is in final stages of development . The restocking is a highly technical issue and there are experiences from many part of the world on the successfulness of such a program. However this is going to be an innovative program from Pakistan's stand point and there are risks both biological and social. How communities will react to this? And how much the sea needs at one time of say shrimp and of what type This is going to be highly technical project which will need extensive expert consultation prior to its development,. The Restocking program in Pakistan will be an intervention to sustain the supply chain so TRTA II can provide technical expertise to address one of the most important issue of fisheries in Pakistan,. Any such study will be of less importance if the open access fisheries (as it is now in Pakistan) is not studied in conjunction.

11.1.2 Recommendation for TRTA II Support Programme

- To assist FDB in developing programs /projects to address the sustainability of fish/shrimp catch by developing fish stock replenishing projects for offshore stocking and regulations on fishing licensing mechanism in for marine capture fisheries .

12.1 Fishermen Cooperative Society

12.1.1 Issues and Strategies

The Role of this body has been changing and slowly. It started as a welfare body for fishermen , and slowly it took over the whole management of Karachi Fish harbour and particularly its auction halls and its total functions, Subsequently , KFHA slowly overpowered them and now their role is limited to marketing of fish in auction hall , They are no more managing the auction halls , . They are important; however, still they are a powerful body. And they have a vast membership. They control. Officially or unofficially many stakes in the fish export e. They were provided technical assistance in past under several programs including TRTA I. Their role in keeping quality is obvious and they have plans to improve upon compliance issue , They indicated that some training slots for their specific employees in inspection and maintenances of hygiene conditions at fish handling places can improve their efficiency . So the strategy proposed under TRTA II is to provide training in inspection as well as that of fishermen in cool chain maintenances can be recommended .for capacity building . The Training can be departed at MFD training facility

12.1.2 Recommendation for TRTA II Support Programme

- • Enhance awareness and outreach of FCS

- • Training of fishermen through MFD training centre in good hygiene practices.

13.0 Monitoring Indicators Fisheries

Level *	Monitoring variable	Definition	Unit	Base line	Tar-get	Source
1	EU equivalence (fishery product controls)	Access to EU market for Pakistani fishery products	Nil	No	Nil	DG SANC O
1	Competency of inspections	Average training score x 100/5 as rated by CA managers	nil	nil	nil	PACE CA survey
1	Capacity of inspection system	Nos. of inspectors/1000 consignments of exports annually	Average 50 consignments / day inspected by about 20 MFD on daily basis	Nil But acute shortage reported	20 inspectors to be provided under Fisheries Dev Board Project	PACE CA survey and PIFFA
1	Control activity coverage rate	Av. No of different control activities per competent authority/6	100 % (all six stated activities by one CA)	nil	nil	PACE CA survey
1	Annual CA planning rate	No.of CAs with annual plans/no. of CAS	100 % have annual plan (one CA)	100%	100%	PACE CA survey
1	Annual CA reporting rate	No.of CAs with annual reports/no. of CAS	No yearly report or any peroidic report is published	nil	nil	PACE CA survey
1	% of CAs with compliance rate data	No. of CAs able to report a compliance rate/.CAs	100 % (by only one CA)	no	nil	PACE CA survey

1	Inspection capacity	No. of inspectors/100 enterprises under control	24/200 (200 is the number of Processing plants controlled by The CA) reported	no	Nil	PACE CA survey
1	Use of accredited tests	% of tests required for control which are accredited to ISO17025	Microbiological = About 100% Chemical about 20%	nil	All chemical tests	PACE CA survey
2	Quality system rate	No. of firms with internationally recognised certification/no. of firms in sector	HACCP approved 7,5% ; FDA approved= 7% ISO certified = 1.5% (Total firms=200)	All at least who export to Europe	At least 50 % by the year 2015	PACE Enterprise and CA surveys

14.0 Conclusion

Fisheries sector has many stake holders including several agencies functional at federal or provincial level as well as some working as autonomous /semiautonomous bodies. The survey of these agencies showed that most of these have a management system for regulating fish exports in accordance with the approved standards of hygiene. The Marine Fisheries Department which has been declared the CA by the EU for regulating fish exports to EU. And MFD, despite having the legal mandate, possess an inspection system which is well below the standards required to satisfy the demands of international market. All other agencies studied also have a poor stake in inspection so across the board, all institutions/agencies need additional staff and UNIDO support for the capacity building of their staff and inspection and subsequent management system.

KFHA manages the auction halls at Karachi Fish Harbor (KFH) which virtually is used as a gateway for fish export. Other unauthorized landing stations /jetties are working at other spots along both Balochistan and Sindh Coast but all the catches make their way to the to auction halls of K FH which therefore crowded and lack capacity for handling the bulk of fish as a per quality standards . One alternative to the problem is to immediately bring KoFHA under operation, so that the boats can off load their catches at the KoFHA auction hall, But auction halls of KoFHA needs revamping and upgrading in accordance with the acceptable international standards. And there is need for development of rational management plan to make use of this harbor, Burdon on KFH can also be released by developing modern small jetties at several active/feasible landing sites along Sindh and Balochistan coast, Both SFD and BFD are working on this option. UNIDO support under TRTA II program to facilitate these agencies in fulfilment of their tasks will help ease the situation on the KFH and thereby add towards achieving potential gains through enhanced competitive export.

The MFD laboratory setup is accredited for microbiological and chemical tests; however there is need for strengthening it further for conducting other mandatory tests by developing procedures for method of testing. The revalidation of accreditation of this laboratory also needs assistance of UNIDO under TRTA II,

In addition, the inspection bodies and standard setting bodies , such as BFD are best advised, not to setup new laboratories because it offer requires huge resources for the sustainability, but should out source there testing to the already established and accredited laboratories available in there respective fields.

The one acute problem which the fish processors and for that matter all those who are interested in sustainable fish/shrimp production, are facing is consistently depleting fish, particularly, shrimp stocks. A survey of fish/shellfish stocks is underway with the assistance of FAO under the aegis of MoLDD (MFD) which will hopefully provide a basis for devising accordingly a management plan for MSY. Nevertheless, the illegal fishing, use of illegal nets, trawling and other allied harmful practices continue, largely unabated. There are conflicting opinions on close season by different stake holders, the fishermen oppose it to nail. Stock replenishment program and creation of reserve sanctuary are the approaches which have been successfully applied to arrest the depleting stocks particularly that of shrimps. In the greater interest of the sector , FDB has shown interest in devising such a program based on international experiences . UNIDO can potentially provide technical expertise and know how to the FDB for thrashing out a rational restocking program through open sea stocking and with concurrent plan development for reviewing overall licensing system for boats and catching in an open access fisheries management system

This report provides recommendations for TRTA II programme which are in line with the identified needs of various agencies surveyed These recommendations also takes into account those interventions that could help achieve the broader objective of poverty alleviation through competitive exports.

ACTION MATRIX

Organisation	Description of Actions	Output	Impact
MFD	<p>Training of master trainers training centres for training for fish processors, inspectors and fishermen (GHP, fish handling on boat, during unloading in auction hall and along the entire supply.</p> <p>Technical assistance and training in introducing protocols for further chemical and microbiological tests mandatory to sustain accreditation status (PT participation, provision of CRMs, development of technical procedures for test methods.</p>	<p>Curricula/module developed</p> <p>Technical assistance in Strengthening Training Centre for service delivery by developing curricula/course module providing of MFD</p> <p>Master trainers trained for training of processors, inspectors and fishermen (GHP, fish handling on boat, during unloading in auction hall and along the entire supply.</p> <p>And training completed in introducing protocols for further chemical and microbiological tests mandatory to sustain accreditation status (PT participation, provision of CRMs, development of technical</p>	<p>Improving quality, compliance, efficiency and value addition</p> <p>skilled workers are declining in processing sector the project will increase workforce and incomes (pro-poor)</p> <p>These systems will improve service delivery and increase the accountability and governance of utilisation of public finances.</p>

	<p>As part of the capacity building exercise the programme will assist in developing performance indicators and monitoring mechanisms of the institute .</p>	<p>procedures for test methods.</p> <p>performance indicators and monitoring mechanisms of the institute .</p>	
KoFHA	<p>Development of Corporate Strategy and business plan, particularly for establishing Business Park for value added production</p> <p>Provide design lay out for landing site, auction hall and associated infrastructure at KoFHA in accordance with the international requirements.</p> <p>Training of relevant staff to help strengthen the inspection and management system at the harbour</p>	<p>Corporate Strategy and business plan, developed</p> <p>design lay out for landing site, auction hall and associated infrastructure prepared at KoFHA in accordance with the international requirements.</p> <p>Training of relevant staff to help strengthen the inspection and management system at the harbour provided</p>	<p>Operationalization of KoFHA .</p> <p>Compliance with vendor assurance program for establishing EU fish export corridor</p> <p>Productivity and value addition impact</p>
KFHA	<p>Training of inspectors at MFD training centre</p> <p>Design of model</p>	<p>Training of inspectors at MFD training centre completed</p>	<p>Improving quality and compliance</p> <p>Better Compliance improve life of low</p>

	<p>peeling shed and management plan</p> <p>Training and skill enhancement of women in shrimp peeling sub sector ,</p>	<p>Design of model peeling shed and management plan prepared</p> <p>Training and skill enhancement of women in shrimp peeling achieved</p>	<p>paid female workers</p>
S FD	<p>Development of a Business plan for new jetties and landing site and for access to market (local/international) and cold chain development</p> <p>Training of staff in inspection and management at MFD , Karachi</p>	<p>Business plan developed for new jetties and landing site and for access to market (local/international) and cold chain development</p> <p>Training of staff in inspection and management at MFD , Karachi completed</p>	<p>Improving quality and compliance</p> <p>Productivity and value addition impact</p>
BFD	<p>Development of a Business plan for new jetties and landing site and access to market (local/international), cold chain development</p> <p>Training of master trainers training centres for training for fish processors, inspectors and fishermen (GHP, fish handling on boat, during unloading in auction hall and along the entire supply</p>	<p>Business plan developed for new jetties and landing site and for access to market (local/international) and cold chain development</p> <p>Training of staff in inspection and management at MFD , Karachi completed</p> <p>Training of fish processors and staff in fish handling completed</p>	<p>Improving quality and compliance</p> <p>Productivity and value addition impact</p>

	<p>Training of master trainers training centres for training for fish processors, inspectors and fishermen (GHP, fish handling on boat, during unloading in auction hall and along the entire supply.</p>	<p>Curricula/module developed</p> <p>Technical assistance in Strengthening Training Centre for service delivery by developing curricula/course module providing sof MFD</p>	
FDB	<p>To assist FDB in developing programs /projects to address the sustainability of fish/shrimp catch by developing fish stock replenishing projects for offshore stocking and regulations on fishing licensing mechanism in for marine capture fisheries .</p>	<p>A comprehensive project document prepared addressing sustainability of fish/shrimp catch by developing fish stock replenishing projects for offshore stocking</p> <p>Technical regulations on fishing licensing mechanism in for marine capture fisheries prepared</p>	<p>.Improved /replenished fish stocks; results bring sustainability to the supply side .</p> <p>pro-poor- decrease in poverty</p>
FCS	<p>Enhance awareness and outreach of FCS</p> <p>Training of fishermen through MFD training centre in good hygiene practices.</p>	<p>Increased awareness and outreach of FCS</p> <p>Fishermen trained through MFD training centre in good hygiene</p>	<p>Increased exports from pro-poor sectors</p>

		practices.	
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