Independent Terminal Evaluation

Republic of Sudan

Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State

UNIDO Project No.: 130130

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO INDEPENDENT EVALUATION DIVISION

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Acronyms and abbreviations

Acronym	Meaning
AGR	Agrobusiness Unit
BRUVs	Baited Remote Underwater Video Systems
CPUE	Catch per Unit Effort
CDCF	Centre for Development Cooperation
CIDA	Canadian International Development Organization
CTD	Conductivity, temperature, density measuring device
DAC	Development Assistance Committee (OECD)
EEZ	Exclusive Economic Zone
EU	European Union
EVA	Evaluation Unit
FAO	Food and Agriculture Organization
MoLFR	Federal Ministry of Livestock, Fisheries and Rangelands
GEF	Global Environment Facility
ILS	Improved Landing Site
IMPS	Industrial Modernization Programme of the Republic of the Sudan
IMR	Institute of Marine Research
ISID	Inclusive Sustainable Industrial Development
LAI	Liginal Al Ishraf (oversight committee)
LSM	Landing site manager
MSY	Maximum Sustainable Yield
MDG	Millennium Development Goal
MFA	Marine Fishery Administration
MoI	Ministry of Industry
NOK	Norwegian Krone
NORAD	Norwegian Agency for Development Cooperation
OECD	Organization for Economic Development and Cooperation
OFID	OPEC Development Fund
OPEC	Organization of Petrol Exporting Countries
PSC	Project Steering Committee
RBM	Results Based Management
RSFRS	Red Sea Fisheries Research Station, Port Sudan

Acronym	Meaning
RSS	Red Sea State
SDG	Sudanese Pound
SDG's	Sustainable Development Goals
SMART	Specific, Measurable. Achievable, Relevant and Time-bound
SWOT	Strengths, Weaknesses, Opportunities, Threats
TA	Technical assistance
TE	Terminal Evaluation
TORs	Terms of Reference
TRTA	Trade Related Technical Assistance
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
URS-FMSF	University of the Red Sea State-Faculty of Marine Sciences & Fisheries
UVC	Underwater Visual Census

Glossary of evaluation terms

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved or are expected to be achieved.
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results-based
Outcome	The likely or achieved (short-term and/or medium-term) effects of an intervention's outputs.
Outputs	The products, capital goods and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of an intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed.
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.

Executive Summary

This report represents the main findings, conclusions, and recommendations from an Impendent Terminal Evaluation of the UNIDO implemented Project "*Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State*" (UNIDO Project No.: 130130). The development goal of the project is to contribute to sustainable management of marine fisheries in the Red Sea State with the outcome that relevant institutions have strengthened their capabilities to develop and maintain a data base on fish stocks and fish landings. Outputs include four surveys (150 days in total) undertaken in the Red Sea of Sudan and the creation of a web-based centralized database of fisheries data.

The objective of this Terminal Evaluation is to assess the performance of the project against the Organization for Economic Co-operation and Development - Development Assistance Committee (OECD–DAC) criteria and provide both short term and longer term strategic recommendations to the project as a further phase is anticipated.

The project evaluation was undertaken between October and November 2017 in Port Sudan in the Red Sea State, and in Khartoum and Vienna. The evaluation was a collaborative process involving UNIDO, the Norwegian Institute of Marine Research (IMR) and national stakeholders from both the State and Federal Government of the Republic of the Sudan. Main counterparts in the Red Sea State (RSS) were interviewed extensively and the evaluation observed the fourth annual fishery survey on board the Don Questo.

The independent Terminal Evaluation rates the project as ***satisfactory overall*** as the project is providing the capacity and information required for both specific fisheries management plans and for sustainable resource use in the event of further semi-industrial development in the marine fisheries sector.

The ***project design and intervention logic is rated as satisfactory***. The project was designed in a collaborative manner and built on previous projects implemented by UNIDO in Sudan enhancing both effectiveness and efficiency. The project structure is evaluated as correct with a focus of technical assistance at the State level where activities are/will be implemented though this has left the Federal Government with a desire for greater oversight. It is determined, the logical framework is moderately satisfactory with a lack of summarized activities clearly identified under outputs.

There is no doubt as to the relevance of the project which is determined as highly satisfactory with no shortcomings. The project is relevant to national strategies of the Ministries involved in the project with their focus on sustainable natural resource development. It is relevant to mandates of the selected national counterparts namely the Marine Fisheries Administration (MFA) by collecting data on fisheries for management purposes; and to the Red Sea Fisheries Research Station (RSFRS) and the University of the Red Sea State-Faculty of Marine Sciences (URS-FMSF) in Port Sudan with their mandate to collect and analyze fisheries data for scientific management purposes. The project is also broadly relevant to the wider goals of UNIDO Including Inclusive and Sustainable Industrial

Development (ISID) and to the IMR with its mandate to provide fisheries monitoring, research and advice.

The project is rated as satisfactory with respect to both efficiency and effectiveness with only minor shortcomings. The project is well managed by both UNIDO and the IMR, there are clear comparative advantages to both agencies and this has enabled the project to largely overcome some challenges such as the depreciation of the Norwegian Krone and slow procurement in Sudan. The project has achieved the great majority of its planned activities in a timely manner and counterparts reported their effectiveness. Advanced scientific methodologies for fisheries research are being introduced into Sudan by the IMR, and UNIDO is assisting the government to institutionalize the results. A Fishery Statistics System (FSS) has been developed and capacity building and small-scale technology transfer has been provided for counterparts.

With some financial risks particularly related to the low level of funding for the sector and a strongly identified need for continued support from UNIDO and the IMR, ***sustainability is rated as moderately satisfactory*** at this time. While the project is clearly relevant to both Federal and State level priorities in fisheries management it is assessed further capacity-building is needed especially for the development of specific management plans and to implement and better disseminate the data being collected. It is assessed there is a need for stronger national ownership and the need for better outreach to potential policy making bodies.

An impact on contributing to sustainable management of marine fisheries appears likely. With perhaps the most scientific and comprehensive stocktaking exercises being undertaken to date, the evident commitment of national partners and the ongoing interest from UNIDO and the IMR it is assessed the possibilities to enhance impact are also evident. Capacities toward best practice data collection and analysis methodologies have strengthened for three national counterpart organizations and impact is evident with greater working synergy between them. Also, some baseline information on the state of the Marine Fisheries in Sudan now exist

The project is ultimately intended to have wider impacts with the collection of marine resource data being essential for the sustainable development of semi-industrial artisanal fisheries. This is where the project potentially impacts Inclusive and Sustainable Industrial Development (ISID) with opportunities for economic diversification and value addition, job creation and food security. Data outputs of the project have already been incorporated into new fisheries regulations and the 5-year strategy of the Industrial Modernization Programme of the Republic of the Sudan. At this stage. however, there is no evidence the project is currently impacting job creation or food security and there is a need for further value chain and socio-economic analyses.

While Gender was not mainstreamed into the project, a positive ‘unintended’ impact of the project has been a greater potential role for women in fisheries management. There are no negative Environmental and Human Rights Issues associated with the project.

Recommendations

The following recommendations focus predominately on a need for greater outreach, a role for the Federal Government and to better realize the potential of the highly relevant and effective work done to date.

Short-term recommendations for UNIDO

1	Exit and sustainability strategies should be clearly articulated in the development of further phases.
2	Increase the number of PSC to two per year.
3	Consider expanding the number of representative bodies in the PSC for the purpose of expanded outreach and project visibility.

Strategic recommendations for UNIDO towards the development of a (semi-) industrial marine fishery in the RSS

4	Use the in country comparative advantage of UNIDO with the Federal Government to consider strategies for food security, use of the FSS and potential for upscaling
5	UNIDO should undertake a comprehensive value chain analysis of the marine fisheries sector to implement strategies of ISD

Recommendations for the Federal and State Government counterparts

6	The Ministry of Agriculture, Animal Resources and Fisheries of the Red Sea State must continue to include the costs for the data collection at Zigala market in the annual operational budget of the MFA for 2018
7	The MFA is recommended to develop a website
8	The MFA is recommended to produce an analytical report as an output of the database and to distribute this widely to ministries and donors
9	Federal and State-level Ministries should establish a ***technica***l inter-ministerial Committee to mobilize potential future financial and human resources
10	The URS-FMSF is recommended to continue investigating potential linkages between the IMR in the Faculty of Marine Science and the IMR of Norway.

Recommendations for the Donor/IMR

11	The Norwegian Embassy could develop an MoU with URS-FMSF and the RSFRS-MFA . The MoU could focus on joint research, training and exchange visits.
12	IMR could release a quality (color) publication based on the innovative work done to date. This would be useful for outreach, future replication and upscaling.

Lessons Learned

• While collaborative project design enhances relevance and national ownership during project implementation, exit strategies need to consider the financial capacity of national organizations to ensure activities can be sustained beyond the life of the project.
• Developing partnerships between UNIDO and leading research providers (such as IMR) provides mutual learning and synergies adding both value and potential to projects.
• A common risk across multiple UNIDO projects appears to variable exchange rates.

1. Terminal Evaluation Objectives and Methodology

The Independent Terminal Evaluation of the UNIDO Project "*Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State*" was undertaken in accordance with UNIDO technical cooperation (TC) Guidelines which mandates independent evaluations for all projects over a €1 million threshold. Terms of reference (ToR), provided by the Independent Evaluation Division and the Project Manager in UNIDO Vienna outlined the broad objectives, purpose and scope of the evaluation.

The Terminal Evaluation was undertaken between October and November 2017 by Mr. Andrew Young, the International Lead Evaluator and a National Evaluation Consultant, Mr. Salih Suliman. Invaluable in-country coordination was provided by the project, particularly the UNIDO Representative and the Logistics Officer in Khartoum and the National Project Coordinator in Port Sudan.

1.1 Scope and objective of the Terminal Evaluation

The Scope and objectives of the Terminal Evaluation were clearly articulated in the Evaluation ToR[1]. The scope of the evaluation was to cover the project implementation period from 2014 until October 2017 with a particular focus on the performance indicators achieved, including inputs and activities, impact and sustainability of the project implementation. The evaluation was intended to cover the following;

- Consider all the activities that are part of the project;
- Cover the entire results chain from inputs and activities to impact and sustainability and review processes as well as results;
- Produce recommendations for the next phase of this the project (e.g. what has worked and what has not and what are the lessons from implementation to date, which issues needs to be addressed in the phase of the project implementation period and what conditions should be in place);

The objectives of the evaluation were to evaluate project performance in terms of its design, relevance, effectiveness, efficiency and likelihood of sustainability and impact, and provide recommendations for the implementation of a potential next phase of this project. The evaluation report would include the following;

- Short-term recommendations for UNIDO for the next phase of this project.
- Strategic recommendations for UNIDO for the provision of additional TA in support of the realization of the socio-economic development potential of the transition towards a (semi-) industrial marine fishery in the Red Sea State;
- Recommendations and lessons for similar projects implemented by UNIDO.

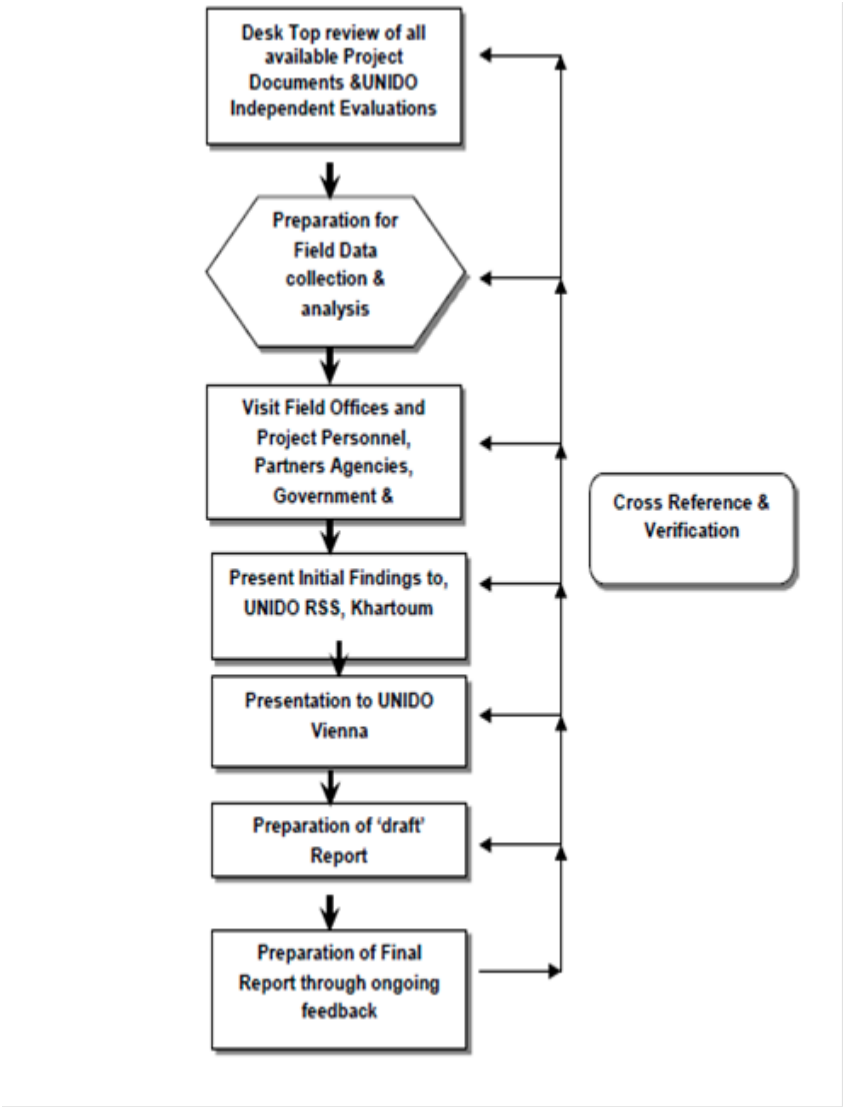
[1] See Annex 5.4

1.2 Terminal Evaluation Methodology

The independent Terminal Evaluation based its findings on an extensive review of written documents as well as qualitative data gathered from UNIDO headquarters, from the Federal Government Ministries and UNIDO in Khartoum and from the main project counterparts in the RSS.

A preliminary presentation of findings and recommendations was held on the 29 October 2017 in Port Sudan, on the 30 October in Khartoum and on the 3 November in Vienna. Key stakeholders, counterparts, UNIDO managers and beneficiaries were present at presentations, and findings and recommendations were further clarified or adjusted according to feedback. (See Figure 1, The Evaluation Process below).

Figure 1: The Evaluation Process



Document review

To better inform the field mission, a desktop review was undertaken on related project documents and other background publications prior to visiting the RSS. Of particular

relevance were the 2014 project document "*Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State"* and the 2016 UNIDO Independent Evaluation Divisions "*Independent Mid-Term Evaluation Report".* UNIDO also provided substantial information relating to the proposed next phase to fully inform the evaluation team. Other documents reviewed included all reports of the Annual Surveys undertaken in the Red Sea, the projects own progress reports to its PSC, national and international experts reports, project work plans, training reports, and financial and procurement reports. Information on the status of marine fisheries and the Red Sea State in general was obtained from a wide range of documents. Publications by the FAO and UNEP proved particularly useful. Annex 5.2 includes the full list of documents reviewed.

Coverage and development of themes in the qualitative questionnaire

The ToR for the Terminal Evaluation (see Annex 5.4) included a comprehensive list of qualitative best practice evaluation questions outlined by both the Independent Evaluation Division and project specific questions outlined by the UNIDO Project Manager. The Independent Mid-Term Evaluation (MTE) of the project also included a detailed evaluation matrix and interview guidelines. All these documents were used in conjunction with the August 2017 UNIDO Draft Evaluation Manual to prepare a detailed Inception report outlining the overall methodology, the rating criteria and evaluation questions to be included in the Evaluation. Annex 5.3 includes the Evaluation Matrix and Interview Questions.

Key Informant Interviews and Focus group discussions

The selection of interviewees was assisted by UNIDO in Vienna, the Office of the UNIDO Representative (UR) in Khartoum and the National Project Coordinator (NPC) in the Red Sea State (RSS). The list of people interviewed is included in Annex 5.1.

Interviews and focus group discussions (FGD) were held with a total of 54 participants. Extensive discussions were held with UNIDO management of the project in Vienna, the UR office in Khartoum and the Project Office in Port Sudan.

From the government side interviews were held primarily with the Federal and State Ministries of Industry and the Ministry of Animal Resources and Fisheries in both Khartoum and their respective Ministries in Port Sudan. The Marine Fisheries Administration, the Red Sea Fisheries Research Station in Port Sudan and the University of the Red Sea State-Faculty of Marine Sciences and Fisheries were met on multiple occasions during the evaluation both in Port Sudan and the Annual Fishery Survey. All played an active role during the presentations of findings in Port Sudan and Khartoum.

The Norwegian Embassy was interviewed in Khartoum and with the Ministry of Industry had a very active participation during the presentation of findings. The IMR made itself extensively available for discussions both in Port Sudan and on the Don Questo during the Annual Survey.

Rating Criteria Used in the Terminal Evaluation

A rating criteria of 6 for highly satisfactory to 1 for highly unsatisfactory was used during the evaluation (see Figure 1 below). Ratings were applied to overall project design and the Log frame, project performance including relevance, efficiency, effectiveness and sustainability, crosscutting performance criteria including gender, M&E and results based management and performance of partners.

Figure 2: Evaluation Rating

Score		Definition*	Category
6	Highly satisfactory	Level of achievement clearly exceeds targets and expectations and there is no shortcoming.	SATISFACTORY
5	Satisfactory	Level of achievement meets expectations (indicatively, over 80-95 per cent) and there is no or minor shortcoming.	
4	Moderately satisfactory	Level of achievement more or less meets expectations (indicatively, 60 to 80 per cent) and there are some shortcomings.	
3	Moderately unsatisfactory	Level of achievement is somewhat lower than expected (indicatively, less than 60 per cent) and there are significant shortcomings.	UNSATISFACTORY
2	Unsatisfactory	Level of achievement is substantially lower than expected and there are major shortcomings.	
1	Highly unsatisfactory	Level of achievement is negligible and there are severe shortcomings.	

It is too early to assess the long-term impacts of the project as activities are ongoing and much of the data being collected by the project still needs to be implemented through developments in marine fisheries management. To assess the progress toward long-term impacts a rating of likely to unlikely was applied as outlined in Figure 2 below. This rating uses the UNIDO formula applied to transform the results of UNIDO's six-point rating scale to GEF's four-point scale.

Figure 3: Impact Rating

UNIDO rating	
6	Likely (L)
5-4	Moderately Likely (ML)
3-2	Moderately Unlikely (MU)
1	Unlikely (U)

1.3 Limitations of the Evaluation

As beneficiaries of the project were organizations and not large numbers of individuals no quantitative analysis was carried out. However the evaluation team considers that data collected from extensive qualitative questioning and cross referencing provided sufficient validation and triangulation by comparing multiple verbal responses with progress reports, project documents and a broad range of project literature.

2. Country and project background

2.1 Brief country context

The Republic of the Sudan sits at the crossroads of Sub-Saharan Africa and the Middle East, Egypt borders it to the north, Libya and Chad to the west, and Eritrea and Ethiopia to the east Khartoum is the capital of Sudan, and its main port on the Red Sea is Port Sudan. The country covers an area of 1,880,000 Km^2, and has an estimated population of around 40 million.[2] Sudan has a federal system of Government of 18 states, with significant levels of autonomy over legislation, budget execution, development programming and service delivery.

Until the Sudanese independence in 1956, Sudan and Southern Sudan were part of Egypt and ruled by an Anglo-Egyptian condominium. Since independence Sudan has only experienced about a decade of peace. Parts of Western Sudan (Darfur) also continue to be affected by a low intensity conflict between the Eastern Front and the National Government in Khartoum. Comprehensive US sanctions on Sudan, levied in 1997 and expanded in 2006, were eased in January 2017.

Following the cessation of the second Sudanese civil war its southern states seceded under the terms of a peace agreement forming the Republic of South Sudan in 2011. The consequent loss of oil revenue was a considerable shock to the economy with a huge loss of revenue that accounted for over half of Sudan's government revenue and 95% of its exports[3]. As of 2015 Sudan ranked 165th out of 187 countries in the UNDP Global Human Development Index (HDI).

After two decades of neglect, agriculture, including livestock, forestry and fishes is back on the Sudan's growth agenda.[4] With potentially fertile natural resources Sudan now recognizes the need for greater attention to agriculture and livestock, as reflected in its Interim Poverty Reduction Strategy Paper (I-PRSP) and the Five-year Program for Economic Reforms approved by its parliament in December 2014. Growth strategies are now targeting support for the agricultural sector, including livestock, forestry and fisheries, to promote growth and productivity change; and support to the private sector to promote investments and innovation for productivity growth towards employment creation.

An increasing focus on agricultural (including marine) resource use is not yet being accompanied by a concurrent growth in sustainable resource management. Political commitment and understanding of the environmental dimensions of resource management remains under developed and major challenges to the marine ecosystem include potential overexploitation of fish resources and oil pollution.

2.1.1 The Red Sea State

The Red Sea State is one of the 18 *wilayat* or states of Sudan. It has an area of 212,800 km^2

[2] United Nations DESA / Population Division
[3] http://www.worldbank.org/en/country/sudan/overview
[4] Pp 59 IMF Country Report (2013) Sudan Interim poverty reduction strategy paper

and an estimated population of 1,396,000. It has a relatively higher urban population than other Northern states estimated by the Word Bank at around 55 per cent. Some 61.2 per cent of the State population is estimated to be living in Port Sudan.

The majority of the population remains involved in agricultural and herding activities, however, fishing is taking on an increasingly important role for income generation. Small scale trading and the provision of casual labor also provide sections of the population with an important means of economic sustenance. Analysis from the WFP (2010) found that 15 per cent of rural households were forced to engage in high risk coping strategies and that salaried labor was the main income source for households in both rural and urban areas.

2.2 Marine Fisheries in the Red Sea State

Until relatively recently utilization of agro-fisheries resources was not a priority in Sudan. Recently recurring droughts have undermined traditional agricultural livelihoods and encouraged people such as the nomadic Beja tribe to increasingly consider the benefits of agro-fishing.

Marine and freshwater fisheries resources provide opportunities for agricultural development as Sudan has immense fisheries resources, especially the marine subsector along the Red Sea coast and within its inland waters along the Blue and White Nile Rivers. According to the Industrial Modernization Programme of the Republic of The Sudan (pp35), fish and other marine products from the artisanal fisheries in the RRS account for a total production of around 600 tons per annum. However, it has a potential for a significant increase, up to 1,500 tons per annum. Much higher figures were provided to the MTE by the Ministry of Livestock, Fisheries and Rangelands indicating marine catches were already 5,600 tons per annum.

The project under review is not the first fish stocktaking assessment undertaken in Sudan. Between 1975 and 1990 the Overseas Development Assistance (ODA) undertook a project as did the FAO in 1979-1985. According to the Marine Fisheries Administration records, the potential of the marine fisheries is 35,000 per year based on the ODA Project and 10,000 tons per year based on the FAO Project.

While discrepancies in figures confirm the need for solid date analysis, the potential to develop the industry is clearly evident. The Sudanese Red Sea houses quite a great number of commercial finfish species. Available data indicates that at least 450 species are now recognized in the Red Sea. Of these 450 species about 93 fish species have been identified from commercial fish catch in Sudan, and of these, approximately 65 are considered of economic importance[5].

Despite a significant potential to contribute to food security and socio-economic development in Sudan, the fisheries sector is still dominated by small scale and subsistence production systems employing relatively traditional technology. Fishers are the poorest among the Sudanese and most of them lack alternative sources of livelihood making them

[5] Abu Gideiri, 1997

intimately tied to this resource[6]. According to the FAO, while techniques and vessels used in inland fisheries remain largely artisanal in nature some participants in the fisheries are becoming increasingly commercialized.

Under the Republic of Sudan's second Five-Year National Development Plan (2012-2016) within the overall objectives of the economic sector, the government specifies the need for;

> *"Rationalizing the use of and developing the natural fish resources, supporting fish stocks and stepping up the fishing industry using the modern methods and techniques".*[7]

UNEP reports poor fisheries management in Sudan and constraints to the fisheries industry resulting from a lack of investment in facilities to handle the catch, as well as a limited domestic market. The FAO has similarly assessed the management of fisheries as weak, predominately due to a lack of clear data on fish stocks.

Regarding fisheries management in the Red Sea State, the institutions directly involved are the Federal Ministry of Animal Resources and Fisheries, and its Fisheries Administration, the Fisheries Training Institute (Ministry of Animal Resources and Fisheries).

At the Red Sea State level are the Ministry of Agriculture, Animal Resources and Fisheries, Marine Fisheries Administration, the Red Sea Fisheries Research Station, and the Faculty of Marine Science.

A set of Laws and By-laws regulate and organize fishing activities[8], which are practiced by an estimated 7,000 fishers, of which 1,500 are involved in marine fisheries. Approximately 4,000 fishing boats are operated, of which 500 in the Red Sea area.[9] A large majority of these boats are currently equipped with out-board engines.

2.2.1 Marketing and Sale of fish

Except for local subsidiary consumption and the fish exported by the Egyptian trawler and purse seiners all fish landed is transported to the central Zigala fish market in Port Sudan, which is the sole fish market in the Red Sea State[10].

Currently, most fish in the country is consumed fresh and there is there is a small export market to Saudi Arabia and Egypt for fresh coral fish and shark. In the Red Sea state fish is predominately sold to immediate consumers (57 %), with 37 per cent being sold to middlemen and just under 6 per cent to whole traders. Only 0.4 per cent is currently retained for export or

[6] FAO (1999). Review of the state of world fishery resource: inland fisheries. FAO Fisheries Circular 942. FAO:58. Rome, Italy.
[7] Pp 48 The Republic of the Sudan Ministry of the Presidency Affairs The General Secretariat of the National Council for Strategic Planning (NCSP) 2nd Five-Year Plan (2012-2016)
[8] The overarching legal instrument governing the fisheries of the Sudan is the Constitution of the Republic of the Sudan, 1998. It is supported by the Freshwater & Marine Fishing Law of 1954, as amended first in 1960 and again in 1995.
[9] Arab Organization for Agricultural Development - 1996
[10] UNIDO (2017)

local processors. Ninety-nine per cent of all fish is sold in Port Sudan or Suakin[11].

The fish market is a free market and prices are set according to supply and demand. Market information is available and there are no barriers to get into the market or to pull out of it. Generally, fishermen try to sell their products independently in order to obtain a better rate of return. Trading of fish is conducted in a traditional manner by using primitive types of weighing and measuring ('Koam', Sack, basket)[12].

2.3 Project summary

UNIDO is the implementing agency for the project and the government coordinating agency is the Ministry of Agriculture, Animal Resources and Fisheries. The project counterparts are the Marine Fisheries Administration of the Red Sea State, Red Sea State University – Faculty of Marine Sciences and Fisheries, Red Sea Research Station, Port Sudan. The executing partner is the Institute of Marine Research of Norway (IMR).

2.3.1 Project Fact sheet

Project Title	Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State
UNIDO project Number	UNIDO PROJECT NO.:130130
Region / Country	Republic of Sudan, Red Sea State
Thematic area code	EC31 Programme Direction and RBM
Implementing agency	UNIDO
Executing partner	Institute of Marine Research, Norway
Project starting date	October 2014
Project duration	39 months
Expected implementation end date	January 2018
Norwegian contribution (including 13% support costs)	€ 4,239,054.67
UNIDO contribution	€ 323,078.76
Counterpart contribution	€ 255,100.89
Total project inputs	€ 4,817,234.32

[11] Pp 180 American Scientific Research Journal for Engineering, Technology, and Sciences Volume 31
[12] Pp 5 UNIDO (2017) Independent Mid-Term Evaluation

Mid-term Evaluation date	September 2016
Terminal Evaluation date	October - November 2017

2.3.2 Project description

As identified by the project document, main barriers to entry for the development of strategic, policy and regulatory instruments for the sustainable management of fisheries resources in the RSS is the absence of reliable data on fish stock and harvests. This is coupled with weak institutional capacities.

The Project is providing data for fisheries research and stock assessments so that artisanal and semi artisanal fisheries may be managed in a more sustainable way in the Red Sea State of the Republic of Sudan. Through the provision of technical assistance and small-scale technology transfer the project also works to strengthen institutional capacity of all main relevant organizations in the Red Sea State. These organizations include the Marine Fisheries Association, the Red Sea Fisheries Research Station and the Faculty of Marine Sciences and Fisheries of the Red Sea University in Port Sudan.

By strengthening institutional capacities of the local counterpart organizations to develop and maintain a data base on fish stocks and fish landings, the project is establishing the knowledge base for the sustainable management and further development of artisanal and semi-industrial fisheries.

Environmental sustainability (MDG7) is at the core of the project but the project also has the longer-term potential to contribute to MDG1, the eradication of extreme poverty and hunger by improving food security and the opportunities for diversifying local economies and livelihoods in areas such as processing or export.

Regarding Sustainable Development Goals the project strongly contributes to SDG 14, to conserve and sustainably use the oceans, seas and marine resources for sustainable development. With the intention to further develop strategies to add value by moving from artisanal fishery towards semi-industrial fisheries the project also provides the foundation for SDG 2: to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture. The project is also providing the necessary resource data to contribute to SDG 8 to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work.

While the project activities are implemented largely at the State level with the MFA, the project is also anchored at the Federal level with the Ministry of Agriculture, Animal Resources and Fisheries and the Ministry of Industry in Khartoum. It is of note that while both the Red Sea Fisheries Research Station and the Faculty of Marine Sciences and Fisheries of the Red Sea University are in Port Sudan they are both Federal Bodies.

As outlined by the Project Document the three main components of the project are:

a. The provision of technical assistance, building of capacities and facilitation of the implementation of one annual monitoring survey of the fisheries resources along the Red Sea State coast throughout the project implementation period.
b. The provision of technical assistance, building of capacities and facilitation of the

development of a database of fish delivered at the Zigala market and catch and effort data from fish landed at the three improved fish landing sites.

c. The continued provision of limited technical assistance and building of managerial capacities targeted towards enabling the three improved fish landing sites to become financially self-sustaining entities as a pre-condition for cost effective collection of data on catch per unit effort and other fisheries dependent data that cannot be obtained at the Zigala market.

3. Terminal Evaluation Project Assessment

The following section outlines the performance of the project with regard the OECD DAC criteria of relevance, efficiency effectiveness, sustainability and progress towards impact. Project design and intervention logic is also evaluated and crosscutting issues of project management, ownership and gender are considered throughout. A specific analysis of ownership is considered under sustainability rather than relevance as this will be an important factor in the long term for the project. The main specific activities and milestones of the project are considered in effectiveness under outputs 1 and 2. Ratings (see Figure 2 under section 2) are applied to all key evaluation criteria and summarized under section 3.9.

Overall the project is rated as satisfactory with the highest possible ratings applied to relevance and performance of UNIDO and IMR, and the lower being applied to the Log Frame and the performance of national counterparts. At this stage of implementation, sustainability also remains a challenge. With anticipated further phases, impact and sustainability achieve a more favorable rating than they would otherwise have achieved, due primarily to low levels of investment in the sector.

3.1 Project Design and Intervention Logic

Overall project design is rated as satisfactory while the log frame is assessed as moderately satisfactory

The project document was designed in a collaborative manner and this was confirmed by all stakeholders. Indeed the project basically originated as an output of the CIDA - TF/SUD/09/002 project which identified the counterparts need for more comprehensive marine fisheries date in order to better develop sustainable market opportunities.

Fiduciary, technical and political Risk management was included in project design and mitigation strategies were broadly outlined. One risk that directly affected the project was not anticipated and this was the changing exchange rates. This is not necessarily uncommon to many projects and is considered a lesson learned.

The project management structure is evaluated as correct with the focus of capacity building on the most relevant onsite counterpart organizations in the RSS with offsite (Khartoum-Federal Government) counterparts being involved in overall project management. UNIDO manages the overall project with its established presence in Sudan (at both the State and Federal level) but the technical expertise is provided by the IMR - a leading marine research institution globally. This builds on the comparative advantage of both organizations as UNIDO manages the political, administrative and structural aspects of the project leaving the IMR free to solely implement the technical components.

The project document made no specific mention of conflict sensitivity analysis or ‘do no harm’ principles. However, risks and mitigation measures were considered and the project was established in a conflict sensitive manner through extensive and participatory consultations with local government institutions and national organizations and individuals. It is also of note

that there was no comprehensive exit or handover strategy in the project document and it is assessed there was an assumption for further phases. This presents some potential risk.

The original Logical Framework (LF) was relatively well designed with performance measurements that were to some extent SMART[13]. The Objectively Verifiable Indicator (OVI) that Management plans are in line with Maximum Sustainable Yields (MSY) as a measurement of the impact goal of sustainable management of marine fisheries was discussed with IMR. There is some view that MSY can be misused and dangerous to total fish populations. It is suggested that for semi industrial development an alternative approach would be to add value to what is currently being landed.

A weakness in the Log frame was that activities were not overall summarized and linked directly to outputs, but rather summarized in the document itself. This makes reporting and evaluation against the LF more difficult. Otherwise there is both clarity and logic in the results-chain.

3.2 Relevance

There is no doubt as to the Projects relevance and it is assessed as ***highly relevant with no shortcomings.*** The projects objectives remain valid and pertinent to its target groups and it is evident to the evaluation that the strong claims of ownership from both key Ministries in Khartoum and all the counterparts in the RSS were indicative of the projects relevance. A lack of fisheries data is the main constraint to effective fisheries management. The project is providing capacity building to national counterparts in methodological data collection and analysis to inform fisheries management, potential policy development and opportunities for small scale sustainable industrial development opportunities.

The project spans the period of both the Millennium Development Goals (MDG) and the Sustainable Development Goals (SDG) and has broad relevance to a number of them. The project was most relevant to MDG 1: The eradication of extreme poverty and hunger (by providing information management to strengthen sustainable resource use supporting livelihoods) and MDG 7: ensuring environmental sustainability (by developing capacities to both collect and analyze necessary data).

Regarding SDGs the project is perhaps most relevant to SDG 12 (the sustainable management and efficient use of natural resources) and SDG 14 (to sustainably manage and protect marine and coastal ecosystems). It is ultimately relevant to SDG 1- No poverty and SDG 2 – No Hunger (the ultimate beneficiaries of the project are income vulnerable fishing communities). It is relevant to SDG 9 – Industry, Innovation and Infrastructure (value chains and markets for small scale industry). The project is also broadly relevant to SDG17 – Partnerships for the Goals (revitalizing the global partnerships for sustainable development). UNIDO has a comparative sectoral advantage due to its extensive experience both nationally and globally, and with a long term physical presence in Port Sudan can provide services at lower opportunity costs by using existing human resources and organizational structures. As

[13] Where key performance indicators used to evaluate a project, its objectives and activities are generally referred to as Specific, Measurable, Achievable, Relevant and Time-bound

outlined by the MTE[14]

UNIDO is involved in fishery and fisheries related projects in multiple countries and, with the technical backstopping from the IMR it is uniquely positioned to successfully deliver results.

The Project is relevant to the UNIDO ISID strategy in several key ways. By partnering with the IMR, UNIDO is using best practice data collection methodologies in an innovative way. There is a strong potential for value addition in further phases of the project, especially through processing and identification of species for export. Value chain development is also likely to be more inclusive as women have much greater opportunities for involvement in small scale industries and processing than fishing. Finally, the project is relevant to ISID as sustainable marine resources is a form of green industry.

At the global level UNIDOs comparative advantage is reflected by a range of activities and projects these include for example:

1. UNIDO is a member of UN-Oceans, an interagency collaboration mechanism on ocean and coastal issues within the UN system which looks to implement Agenda 21 - an international programme of action for global sustainable development. Chapter 17 of Agenda 21 specifically deals with the protection of the oceans and the protection and rational use and development of their living resources.
2. The GEF funded Large Marine Ecosystem projects in the Guinea Current and the Gulf of Mexico implemented by UNIDO's Water Management Unit
3. The establishment of a Fisheries and Marine Training Institute in Sierra Leone. funded by the Russian Federation and implemented by UNIDO's Agribusiness Development Branch
4. A technical assistance programme aiming to increase Indonesia's trade capacity in selected value chains within the fisheries sector launched in 2014 in Indonesia. With funding provided by Switzerland and implemented by UNIDO's Trade Capacity-Building Branch
5. The UNIDO Better Fishery Quality Project, funded by the EU and NORAD, which aims to contribute to economic growth and poverty reduction by helping Bangladesh take advantage of global market opportunities.
6. Trade Related Technical Assistance (TRTA) in Pakistan where UNIDO was engaged in the fisheries sector through Trade Related Technical Assistance (TRTA) interventions aimed at enhancing the Marine Fisheries Department's institutional capacities.
7. TRTA in Cambodia towards export expansion and diversification of marine fisheries products funded by the Enhanced Integrated Framework and implemented by the Cambodian Ministry of Commerce and Fisheries Administration with support from UNIDOs Agribusiness Development Branch.

The project is specifically relevant to a broad range of TA that UNIDO has previously provided in Sudan. It specifically builds on previous UNIDO and IMR experience in the RSS between 2012 and 2014 where the project "*Surveys of renewable marine resources in the Red Sea State*" (TE/SUD/12/004), was funded by the Norwegian Embassy in Khartoum (€ 1,053,358

[14] PP 11. Independent Mid-Term Evaluation (UNIDO 2017) Republic of Sudan Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State

Norwegian contribution) and jointly implemented by the Norwegian IMR and UNIDO's Water Management Unit. The project undertook surveys of renewable marine resources in the RSS.

The CIDA funded project "*Recovery of coastal livelihoods in the Red Sea State through the modernization of artisanal fisheries and creation of new market opportunities*" (under UNIDO's Agribusiness Development Branch) looked to improve the entire value chain from the inputs required for fishing to the sale of fish products to the customer. The project built three improved landing sites and these were specifically factored into the current project activities for data collection.

The project is relevant to Government strategies and priorities. The project is relevant to the *Ministry of Finance and National Economy Five-year Plan for Economic Reform, For the Period 2015 -2019* with respect to strategies for conservation of finite and renewable natural resources coupled with the desire to increase animal production including fish for food security. It is in line with the priorities of USD 10m. UNIDO/MoI Industrial Modernization Programme of the Republic of the Sudan (IMPS) where fisheries have been included as a priority sector.

The project reflects donor priorities and strategies. It is in line with Pillar one of the United Nations 2013-2016 Development Assistance Framework for the Republic of Sudan (UNDAF) whereby the UN wishes to promote poverty reduction, inclusive growth and sustainable livelihoods including value added fisheries resource development. The project is also in line with outcome five of pillar three (governance and rule of law) as it supports strengthening of government institutions at all levels to effectively plan, deliver and monitor their services. If future phases of the project are implemented UNIDO has already outlined how the project is in line with Focus Area 1: Economic Development and Poverty Reduction of the 2018-2021 UNDAF particularly regarding economic growth, food security, poverty reduction, and protection of natural resources.

The current (and potential future) project is relevant to FAOs plan of action (2015-2019) for support to the Ministry of Livestock, Fisheries and Rangelands particularly with respect to Strategic Objective 2 to Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. It is indicated by the FAO there is also a need for information systems for food security decision making and policy development.[15]

The project is relevant to the mandates of the selected national Counterparts. The MFA has the mandate to collect data on fish landings, develop regulatory and management instruments and to issue licenses for all fishing activities and to enforce laws and regulatory instruments. The RSFRS and the URS-FMSF have the mandate to collect and analyze a arrange of fisheries data and report to the State and Federal government. It is assessed these organizations have some of the leading researchers in relevant fields in the country (though there budgets are reportedly limited).

Ultimate beneficiaries of the project outputs will be the end users - fishermen. Long term and sustainable use of marine resources depends on monitoring fish stocks and captures and the

[15] PP vi FAO (2015) Country Programming Framework for Sudan

project data will support the sustainable use and management of species essential to their livelihoods.

Finally, the project is aligned to the mandate, goals and strategies of both the Norwegian Donor and the IMR. The Fish for Development programme was announced as a new initiative in October 2013 for the 2014 aid budget and the Norwegian Ministry of Foreign Affairs is now responsible for this. The Programme launched in 2015 initially lasting for a five-year period from 2016 onwards. The overall objective of the Fish for Development programme is to reduce poverty through food security, sustainable management and profitable business activities in line with Goal 2 of the SDGs to achieve food security, promote sustainable agriculture and Goal 14 to conserve and sustainably use marine environments.

For the IMR the project is particularly relevant with its mandate to provide marine monitoring, research and advice to collect data used as the basis for research and scientific advice.

3.3 Effectiveness: Attainment of objectives and results

The project is rated as ***Satisfactory*** regarding effectiveness with only minor shortcomings. The project has delivered a wide range of activities which clearly support anticipated outputs and the outputs should lead to the outcome of strengthened capacities to develop and maintain data on fish stocks and fish landings in the RSS. The project has delivered outputs as expected, in a timely manner, and cost effectively.

A range of activities were not implemented as anticipated in the project document but this was largely the result of a depreciation in the Krone which impacted the project budget and the project management responded proactively so that activities mainly continued to be implemented in a timely manner.

Project Outputs and activities have been strongly supported by the institutional framework. UNIDO has a presence and relevant experience in Port Sudan and is backstopped through both Khartoum and Vienna. This enables it to use existing resources to manage the overall project. However very significant value is added by 'subcontracting' much of the TA to a relevant leading global institute. This was evidenced by the high quality technical reports produced by the IMR.

In all cases, stakeholders confirmed the activities were effective, though there were strongly expressed desires for greater involvement at the Federal Level. It is not independently assessed that for this stage of activities the Federal level in Khartoum could have added significant value to the implementation in the Red Sea (especially as the RSFRS and the URS-FMSF are both Federal bodies situated in the project location). However, to be fully effective in the longer term, especially when it comes to policy development, potential budget provision and national strategies for food security the Federal Government should have a stronger role to play.

The IMR has provided continuous backstopping and follow up training and this is evaluated as an effective solution until capacities are fully built and sustainable. The Evaluation would concur with the IMR that "Capacity building through training is therefore on track with clear

progress being made by the Sudanese counterparts at and between each training mission" (9th August 2016- IMR summary of training activities)

3.3.1 Output 1 - Surveys

Output 1 comprised four surveys (in total 150 days at sea) implemented as an applied scientific assessment of fish stocks. The final survey was underway at the time of the Terminal Evaluation and the evaluation team observed all activities for four days onboard the Don Questo. Ongoing training was being provided to all three main counterparts of the project and evaluation conversations with the participants independently validated the effectiveness of the training.

Assessment of project reports, especially the four comprehensive Coastal Marine Resource Survey, Red Sea State, prepared by IMR provided detailed information. These included the objectives, participants and methodologies of the surveys. Details were provided on techniques such as the Underwater Visual Census (UVC), Baited Remote Underwater Video systems (BRUV) and conductivity temperature and depth (CTD) sampling. Salinity, oxygen levels were being collected and traps and hand lines were also being used by the survey, and data collection importantly included local fishermen. Catch per unit effort (CPUE) was also analyzed. A positive addition to the reports were basic analysis of the counterpart's capacities and recommendations for future surveys.

Discussions with IMR indicated that virtually every activity had been completed according to plan with one exception. There was a view that the potential for further biological sampling had not been fully realized, that stomach contents analysis and contaminants (whereby tissue samples are collected and stored for future analysis) were not being undertaken. € 30.000 of equipment had been procured for the Faculty of Marine Science by the project to facilitate this, but not all of the equipment was yet being used. It is assessed this is entirely the responsibility of the national counterpart and will be resolved when advanced students are selected for further training by the project.

Project progress reports indicated some significant milestones of the project and these were validated with UNIDO in Port Sudan, extensively with IMR and with some counterparts. Some Significant milestones for Output 1 include the following.

- The pilot study of a catch monitoring program in the red sea state was completed.
- All four surveys have been completed as planned (150 days including the 15-day pilot survey)
- A Subcontract with Aqua Action Ltd for the provision of the Don Questo. The Don Questo was used as planned, accommodating international and national experts from all main stakeholder organizations during the four Annual Surveys. It is assessed the staff of the Don Questo are also adding value to the project with their knowledge of diving techniques and local fishing practices and marine environments.
- The MFA has used its own vessel (provided by the CIDA project) to put out and retrieve traps and to take environmental samples
- Two traditional fishing vessels with outboard engines have been used to catch fish along randomly identified locations by means of gill nets and hand lines

- Training has been provided on a range of relevant activities locally by bringing in international experts. These included fishing gear techniques, fish taxonomy and stereo video surveying and analyses.
- Three Counterpart trainings have been conducted in Bergen, Norway on age determination methods (31 August – 11 September 2015), Fishing Gear Technology and Methodology (12th – 23rd September 2016) and fishery management plans (4th -15th September 2017). Three of the six participants in the last training were women.
- Formal training on evaluation of data collected with UVC and BRUVS during the surveys.
- In total 47 Sudanese counterparts were trained in the preparation and implementation of surveys (3 were women).
- A side event to the Oceans Conference (5-9 June 2017) was jointly organized by UNIDO and IMR to showcase how the project contributes to the attainment of SDG 14 in data poor LDC.

3.3.2 Output 2 – Fishery Statistics System and other related activities

Output 2 comprised the operationalization of a web-based centralized data base of fisheries data, including total landings estimated for fish delivered to the Zigala market and catch and effort data sampled at the three improved landing sites. As with Output 1 it was confirmed the great majority of activities had completed as planned in a timely manner.

The Fishery Statistic System (FSS) database was examined in detail by the Evaluation and it is assessed the Db is robust, capable of analyzing data and predicting future trends. The Db is 'owned' by the MFA as they collect and input the data, however both the RSFRS and the URS-FMSF receive an open copy of the Db which provides them full access.

Regarding data collection there has been an adjustment since the time of the MTE where it was reported data sets has been collected at Zigala market and at the three Improved Landing Sites of Osief, Mohammed Quol and Suakin[16]. The depreciation of the Norwegian Krone required the project to make savings by employing one single Landing Site manager at the Suakin from February 2016 onwards. Consequently, data is now collected at Zigala market and Suakin only. While this is not ideal as according to the MFA the ILS "were a very important measuring station" the project has adjusted its approach realistically as virtually all catch ended at Zigala market and the development and maintenance of a slightly down-sized data base on fish stocks and fish landings was possible

According to all thee national counterparts, (MFA, RSFRS and the URS-FMSF) "the capacity to collect data has been built." It is however assessed that a more formal reporting arrangement including analysis would be useful. The MFA reported that, for example, a measurement of stock volumes and species was sent to the Federal Government on a monthly basis though it was agreed there was a need for more analysis. It is also of note that the Ministry of Animal Resources and Fisheries at the Federal level indicated they did not get information unless they requested it.

[16] The construction and development of the ILS were the main output for establishing and upgrading market infrastructure under Output 6 of the CIDA funded UNIDO TF/SUD/09/002 Project.

There have been some significant milestones for Output 2 and for the project more widely These include the following:

- UNIDO kept the core staff of the Port Sudan Project Office and this is now charged to the Norwegian contribution. It is independently assessed that with the experience gained from the CIDA TF/SUD/09/002 Project, the current project and the proposed future stages this is essential for continuity and retaining lessons learned through long term implementation.
- The position of the National Project Coordinator (NPC) was filled. It is independently assessed the incumbent has a high level of technical competence, commitment and adds significant value to management.
- A taxonomy of marine commercial and market fishes of Sudan has been compiled
- Procurement of hard and software for the FSS was completed and It was agreed to use PasGear open access software for data entering and processing and towards the design of a custom-built database. The FSS has now been developed, is operational and national capacities exist to both maintain and expand it.
- Technical backstopping and quality assurance services to Sudanese counterparts for the proper collection and storage of the data on fish landings collected at Zigala market has been continuously provided.
- A business development training course was delivered to management and operations staff of the three improved landing sites in the Red Sea State. It is noted however management trainings for 2016 and 2017 for the Improved Landing Sites were cancelled due the depreciation of the Krone
- All Project Steering Committees have met and the fourth steering committee is planned for December 2017. Any adjustments to work plans are approved by the steering committee
- All Work Packages whereby IMR provides technical assistance to the project have been implemented in a timely manner with the exception of one cancellation due the depreciation of the Norwegian Krone which was beyond the control of the project.

Arrangements are currently being made for the handover of equipment at the end of the project. to national stakeholders. The equipment mainly relates to computers, software and survey equipment.

3.4 Efficiency, Coordination and Project Management

Efficiency is rated as ***Satisfactory*** with only minor shortcomings related to timeliness. It is evident the project management worked proactively to overcome quite a few challenges regarding the depreciation of the Krone and the environment related to imports and security issues regarding visa requirements in Sudan. Obtaining visa for Norwegian experts remained a challenging issue throughout the life of the project. While many of the constraints to efficiency are outside the direct control of the project, and though proactive management largely solved these issues, there were nevertheless some minor impacts.

As with effectiveness, overall efficiency has been enhanced by UNIDOs continued presence in the RSS and through its implementation experience of previous and closely related projects. It was reported, for example, there had been a comprehensive handover

and usefulness of lessons learned from the previous CIDA project CTA.

Efficiency is also enhanced with UNIDO managing logistics, transportation and procurement and IMR delivering the implementation of training and technical transfer through work packages (WP) agreed and articulated under sub contract. It is evaluated this approach maximizes the input efficiency with which technical training can be implemented (IMR) while at the same time providing opportunities in country for permanent technical backstopping (UNIDO).

There were no indications from the government or counterparts to the evaluation that results were not cost effective. It is not independently assessed alternative project structures would have been more efficient. If UNIDO had directly implemented the project without IMR, there would have needed to be a significant technical capacity available to UNIDO including a fulltime chief technical advisor in Port Sudan. UNIDO would also had to have ensured it could match IMRs technical knowledge. Likewise, if IMR had directly implemented the project (perhaps through bilateral funding) it would almost certainly have needed to establish a permanent office in the RSS and develop the in country working relationships with local and national authorities that was already available to UNIDO.

With respect to the role of the Federal Government vis a vis the State government/ counterparts it is already discussed under section 3.1 that the structure is evaluated as correct. For this project which focused primarily on data collection methodologies and implementation, a greater role for the Federal Government would probably not have added efficiency as it would have added not insignificant costs regarding multiple travel between Khartoum and Port Sudan. Additionally, Federal Government officials were involved in some of the training in Norway and were involved in the PSC anyway. As discussed later in the report, if planned future phases are implemented, more Federal Level activity especially with regard to sustainability would add value.

The PSC has met as scheduled on 11 March and the 25 October 2015, the 21 September 2016 and the fourth and final PSC is planned for December 2017. The PSC were well documented and all substantive issues were reported to the PSC and Federal and State Ministries stated they were active in supporting any projects need for assistance.

It was a consensus from the Federal Ministries interviewed by the Evaluation that an annual steering committee was not sufficient and reflected their desire for a greater involvement in project oversight, harmonization and potential sustainability. This is a positive evaluation finding with regards to relevance and ownership. It is widely anticipated that this will be addressed in further phases of the project if implemented.

It is independently assessed that the great majority of activities and outputs have been delivered in a timely manner. When activities were not timely due to, for example equipment procurement, both UNIDO and IMR have managed the problem through “use of disproportional efforts to have equipment released in time[17]”. When a visa for the IMR experts could not be obtained in time for an FSS training planned for September and October 2016 project management responded to this by providing the first part of the two-

[17] UNIDO Progress Report 30 June 2016

week training towards the end of the year with the second part delivered early in 2017. It is noted positively by the evaluation that constraints and challenges in timeliness are clearly detailed in the progress reports with the solutions that were used, including to some extent the lessons learned.

It was reported by UNIDO in the RSS that all TA provided by the IMR and UNIDO has been of high quality and relevant to the project. It is independently assessed that this is a valid statement based on discussions with multiple stakeholders and from observation over the fourth Annual Survey.

It is evaluated that project M&E[18] and reporting is efficient (and effective). At the state level there are ad-hoc meetings that occur as needed and at least every month involving the main counterparts where activities may be revised and discussed. In addition, the UNIDO Representative (UR) has oversight through chairing a monthly coordination meeting addressing progress and constraints. The IMR is also involved either physically or over SKYPE. Quarterly Progress Reports are sent to the RSS and Biannual reports are sent to the Federal Government both prepared by the NPC. An annual Report is prepared by the PM from Vienna. It was reported by the UR that towards the end of the project monthly progress reports for the project were also sent to the Federal Government.

Additionally, there were detailed and quality reports including the Annual Survey reports by IMR and range of technical studies. These were all submitted to the PSC. The Donor stated that from their perspective the project was extremely well managed by UNIDO with respect to timeliness and reporting requirements at both the Sudan and Vienna level.

A major challenge which potentially impacted efficiency (and effectiveness) was the depreciation of the Norwegian Krone. As outlined in the third PSC meeting minutes the project received 11.2 per cent less funding than anticipated due to the depreciation of the Norwegian Krone (NOK) against the EURO. The Final Evaluation concurs with the findings from the Mid-term evaluation period that this did not affect the achievement of the main outputs (any changes to activities were specifically discussed in section 3.2 under effectiveness).

Inputs from the donor have been an important factor towards efficiency (and effectiveness). There were no reports that disbursements were late and the donor has played an active role in PSC and evaluations. As of 31 Jul7 2017 the disbursements were as stated in Table 1 below.

Table 1: Disbursements of 31 July 2017

Project No.	Total Allotment	Total Expenditure	% Implementation	Donor
UNIDO Project No.: 130130	EUR 2,888,201.34[19]	EUR 2,716,776.24	94%	Norway

[18] In this instance M&E relates to the overall project management rather than individual outputs some of which themselves are a form of M&E (such as the FSS)
[19] The 7th installment of NOK 4,946,864.52 is still outstanding

Project No.	Total Allotment	Total Expenditure	% Implementation	Donor
Grant No 2000002943				
UNIDO Project No.: 130130 Grant No 2000002790	EUR 35,000	EUR 34,969.83	100%	UNIDO

3.5 Sustainability and Ownership

Sustainability is rated as moderately satisfactory due principally to the fact that the intervention is clearly relevant to Government and Donor frameworks and that further project phases are planned and likely to be implemented. The project results are partly institutionalized and the majority of activities are a direct response to identified counterpart need and outputs are considered key for the achievement of national food security, poverty reduction and conservation targets.

National ownership has been enhanced both through the collaborative project design and the high national relevance of the project development impact. It was stated that overall ownership rests clearly with the PSC with ownership of the implementing activities at the RSS level, particularly the MFA.

There are some moderate shortcoming to potential sustainability and these should be articulated clearly in exit and sustainability strategies for planned future phases. There was a view expressed that there had been an initial disconnect between Federal and State level Ministries but that this has improved during the life of the project. There were specific requests from both Federal Ministries that for any future phases they have a greater level of involvement to provide the knowledge necessary for policy development. Regarding the FSS it appears to the evaluation that Federal Ministries anticipate a completed Db provided to them by the project end so they can analyze it. This indicates a slight misunderstanding of the ongoing nature of the FSS Db and a need for the MFA to provide data more proactively.

There remain **financial risks** in the immediate and longer term as the allocation of finances to the sector both at the State and Federal level remain low. The RSFRS indicated how fisheries research was a new area and not prioritized financially going on to explain that “we have the capacity but we don’t have the money”

While not an output of the current project, the ILS of Mohammed Quol is no longer in any functional state despite the RSS previously intervening at the federal level to secure the resources to rebuild the roof. The ILS was an output of the UNIDO CIDA - TF/SUD/09/002 which was a clear predecessor to the current project which planned both landing site management training and data collection activities there. The condition of the market at

Zigala has also deteriorated since the final evaluation of the CIDA project[20] and it was reported this was also true of the Suakin and Osief. This clearly indicates to the evaluation the problems regarding maintenance of physical infrastructure and the low level of state and feral resource allocation to the sector.

Positively, however, the country is currently financing project related staff in the MFA to collect data at Zigala market and reported it remains committed to continue this budget starting from 2018 onwards. MFA staff are also allocated to work specifically on the FSS Db and this is highly likely to continue.

Currently there do not appear to be significant **socio-political risks** in the RSS or at the Federal Level**.** Stakeholders at all levels are extremely interested to see the continuation of activities and this was highly relevant to the evaluation from conversations with all organizations in Sudan.

At a broader level, the United States permanently lifted a raft of sanctions on Sudan on October 6th 2017 as a part of normalizing relations with the country. This could provide the opportunities for private sector development including marine resources. Tensions between South Sudan and the Republic of Sudan remain and there are ongoing risks associated with this but they are continuously monitored by the UNDSS - and reflected in security clearances and project risk assessments.

From conversations with Federal Ministries and IMR it is found that **public/stakeholder awareness of the projects** immediate outputs could be enhanced to promote further ownership and potential sustainability.

The FSS has been designed but the MFA does not have a website or produce widely distributed monthly or quarterly reports reflecting the data that has been collected. It is assessed that to some extent they appeared very possessive of their data and an opportunity for greater outreach (to potential multiple agencies/donors) is being lost here.

It was also found by the evaluation that IMR has produced significant high quality publications which could be relatively easily consolidated into a single international (color) publication illustrating the methodological work being undertaken in the RSS. This would potentially be of benefit to the IMR, UNIDO and the donor and could provide information and interest for international replication or upscaling. It would also directly adhere to mandates of the RSFRS and the URS-FMSF and support sustainability.

Regarding environmental risks the project (and potential future phases) is designed with the specific intent of managing fisheries resources and it is evaluated there is no risk for negative environmental consequences. Date collection methodologies are environmentally sensitive and the project goes so far as to report, plot and recover any fishing traps that may be lost. Both the intention of the IMR and UNIDO is that even when marine resource use accelerates the data to conserve is also present with government monitoring and management systems in place.

[20] Direct observation from both evaluations

There was no indication to the evaluation that legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize the sustainability of project benefits.

3.6 Progress to Impact

Impact is evaluated as likely with both direct and indirect impacts already evident. The project development goal/impact was to "contribute to sustainable management of marine fisheries in the Red Sea State." With UNIDO being the only organisation in Sudan supporting the development of a FSS in the RSS and by undertaking the most comprehensive stock taking of marine fisheries resources to date the potential for further impact also remains high.

It is noted that, though not specifically articulated in the logical framework, the project intends to have wider impacts. These are summarised in the project document which discuss how improved management and harvesting of marine fisheries resources could increase the potential for value addition through developing artisanal and potentially semi-industrial fisheries that in turn may facilitate increased job creation, food security and poverty alleviation. Proper management of marine fisheries could lead to economic diversification through export.

As with sustainability, impact is enhanced by the identified relevance of the project outputs to national counterparts, the collaborative methods of project design and the fact the project was a clear follow on from previous UNIDO interventions. The collection of fishery sector data is critical to future fisheries management, the development of small scale industry and the development of strategies and policies. Training provided has contributed to environmental sustainability by developing the ability to carry out research and provide advice on fisheries management to reduce the impact on the marine environment of both current and future fishing activities.

Regarding direct beneficiaries, it is evaluated the national capacity for research and improved management and coordination of all key RSS institutions regarding fisheries management has been developed. National counterparts are now working together more collaboratively and are aware of best practice methodologies for data collection and recording. With the newly introduced FSS, data can be retrieved by authorized users and can be used systematically by the Marine Fisheries Administration. To a large extent, best practice collection methodologies, a knowledge base and a baseline now exist.

Importantly, the outputs of the data were already reported to be useful as inputs into the new fisheries regulations regarding species catch, season and sizes. The MoI also reported it would use the data as inputs in the Industrial Modernization Programme of the Republic of the Sudan 5-year strategy, specifically for agro industry and fisheries.

Regarding economic changes it is too early to determine impact as the project focusses primarily on data collection and management at this stage. Long term impacts will be dependent on successful monitoring and implementation of specific fisheries management plans. This will ensure contribution to support MDG 7: 'Ensuring environmental sustainability', especially now the potential to develop sustainable semi-industrial fisheries

in the RSS appears better understood as a result of the projects resource investigation and mapping.

The project has had some important unintended positive effects. While fishing is an exclusively male occupation in Sudan the project has enabled large numbers of women to become involved in fisheries management. Women are involved in overall management on the PSC and have a strong research presence in both the RSFRS and the URS-FMSF. In the Annual Survey observed by the evaluation, women also formed part of the survey team.

While the project is evaluated as having a positive contribution to behaviour change regarding traditions of gender, it is evident this is still in its earliest form. Additionally, It was reported that another important consequence of the project (coupled with predecessor projects) has been the change in mentality of fishermen in the RSS with more professional fishing practices.

With its involvement of women, fishermen and local landing site managers in the project, social inclusiveness is a positive intended activity of the project though project design could focus better on this as a specific impact.

There are challenges to the likelihood of impact which will need to be addressed in potential further phases. For impact to be fully realised, national organisations need to take more ownership even though local resource allocation is low. To be properly mainstreamed the outputs of data collection need to be incorporated into broader stakeholder mandates and initiatives such as laws, policies, regulations. Impact would also have been enhanced if data was collected at all three landing sites as planned.

While the project has the potential to positively impact ISID and food nutrition and security these are only indirect impacts of the project at this time and will require the development of strategies at the national level. The Federal Government clearly articulated the desire for small scale industrial development for value addition. The project also has the long-term potential to contribute to MDG 1 to ‘Eradicate extreme poverty and hunger’ through sustainable resource management.

With its best practice data collection methodologies and a growing emphasis on the analysis of data there is the possibility for replication. While aquaculture is not the same as marine fisheries it is a strong focus of the Federal Government and FAO. It is likely the scientific approach to data collection and the development of systems of analysis (towards sustainability) are something that could inform future projects in that sector. More research would need to be undertaken, however, before it could be asserted that there could be links between aquaculture and marine fisheries.

The MTE indicated the need for socio economic and environmental impact studies as a consequence of the re-opening of the trawl fisheries that could detrimentally impact the livelihood of artisanal fisheries. Many foreign trawlers (many Egyptian) are now harvesting the marine resources within the territorial waters of Sudan. The project has not responded to this in the current phase but it is anticipated this will be a specific focus in potential future phases with the identified need to develop a sampling scheme for trawling and purse seining with integration of this data into the FSS.

3.7 Gender

Gender mainstreaming is ***satisfactory*** though there are minor shortcomings relating to gender parity in the Annual Surveys and insufficient gender disaggregated reporting undertaken by the project. Also there were no gender-related project indicators. During project implementation, however, it is found there was a very good gender representation in training. This was articulated by female representatives at both the Federal Ministry Level and by the RSS counterparts.

Regarding project management and implementation, women are numerically superior in the MoI and researchers in both the RSFRS and the URS-FMSF in Port Sudan are also in the majority women. The MFA also reported it had employed nine women since 2017 though this was not directly attributed to the project.

Stakeholders in both Khartoum and Port Sudan emphasized the strong role that women are playing in the project and this was considered a very positive aspect in the Sudanese context. Additionally, increasing numbers of women are becoming involved in the Annual Surveys and it was evident to the evaluation that both UNIDO project management and the IMR are attempting to be proactive in this regard.

Conversations with IMR also indicated that there would be a specific effort to provide educational opportunities for female candidates in Bergen, Norway in the event of a next phase and UNIDO indicated future reporting will be gender disaggregated.

3.8 Environmental and Human Rights Issues

There are no negative environmental or human rights aspects to the project at this time. Environmental aspects are a core consideration of the project and are independently evaluated as a positive aspect of the activities. Survey methodologies do not damage the marine ecosystem and the collection of date is specifically intended to preserve biodiversity even in the event of small scale industrial development.

Civil and Political Rights, Collective Human Rights and Economic, Social and Cultural Rights are outside the scope of this project.

3.9 Overall project achievement rating

#	Evaluation criteria	Evaluation Summary	Rating
A	**Impact**		**Likely**
B	**Project design**	**Overall**	**5**
1	Overall design	Impact, sustainability and exit strategies could be better defined	5
2	Log frame	Activities were not specified in the LF but in the overall Project Document	4
C	**Project performance**		**5**
1	Relevance	Relevant to Government stakeholders & counterparts, development frameworks, UNIDO & IMR	6
2	Effectiveness	Quality outputs targeted & delivered for correct beneficiates	5
3	Efficiency	Timely, cost efficient structure and activities adapted when necessary	5
4	Sustainability of benefits	Somewhat dependant on further project funding and Federal and State budget allocation but further phase likely. Exit and sustainability strategies should be clearer in future phases.	4
D	**Cross-cutting performance criteria**		**5**
1	Gender mainstreaming	Strong implementation effort toward gender inclusiveness	5
2	M&E: M&E design M&E	Implementation of M&E was effective and efficient	5
3	Results-based Management (RBM).	Adaptive management evident and project activities well reported	5
E	**Performance of partners**		**5**
1	UNIDO	Strong Management Competence	6
2	National counterparts	Some disconnect between Federal Ministries and RSS organisations and strong dependence on UNIDO for planning and implementation	4
3	Donor (including IMR)	Strong Technical Competence	6
F	**Overall assessment**	**Satisfactory**	**5**

4. Conclusions and recommendations

The project has achieved the great majority of its planned activities in a timely and collaborative manner. Outputs are leading to outcomes and outcomes are contributing to meet the intended development impact. Development impacts are also likely to be broader then articulated in the project logical framework.

An effective collaborative partnership has developed not just between UNIDO and the IMR but also between national institutions in the RSS undertaking the project. The project is paving the way for the introduction of modern fisheries management through transfer of best practice data collection, and technology and knowledge transfer.

Importantly, the project is also building a strong potential for ISID by providing information on the quality and quantity of marine resources through the FSS. By providing the means to collect, manage and interpret data the project provides opportunity to both upscale resource use but to do it sustainably. This in turn provides the potential for value addition through the development of semi-industrial industries in the RSS creating jobs and income.

The project delivered anticipated outputs due principally to i) the demonstrated competence of both UNIDO and the IMR, ii) the fact the project responds to clearly identified national priorities and iii) the fact the project is working with competent and relevant technical bodies in the RSS. The project is creating a knowledge base through the provision of, capacity building, technical assistance and small-scale technology transfer.

There remains, however, a further need to put this best practice research to use and this remains the responsibility of Sudan. While the project has developed a knowledge base, the outputs of this need to be specific management plans which will require local implementation and enforcement. These may need to be supported by statutory and policy regulations. This is where the challenge could lie as national implementation and sustainability will be affected by the lack of financial and material resources allocated to the authorities responsible for fisheries management.

Additionally, new semi-industrial development in the RSS (for job and income potential) is not yet particularly apparent and the current impact on nutrition and food security is uncertain without increased provision and distribution of fish as food. These require national development strategies. In future phases, UNIDO and the MOI in Khartoum, for example, could leverage their comparative advantage to examine possibilities for small scale inclusive sustainable industrial development in the sector. It was also evident to the evaluation there was a need for greater project outreach to ensure the considerable potential impact of the project is better realized.

The following section outlines both short term and longer term strategic recommendations for UNIDO. Recommendations are also included for Government counterpart organizations, the donor and the IMR. All recommendations build on the main findings of the independent terminal evaluation including feedback from presentations to key stakeholders in Port Sudan, the Red Sea State and Vienna.

4.1 Short-term recommendations for UNIDO

Short term recommendations relate to Project management and the expressed desire by many government partners for greater involvement and oversight of the project. Recommendations are also intended to increase the visibility of the project and its important and innovative techniques.

1 Ensure that exit and sustainability strategies are clearly articulated in the development of further phases. This is necessary due to the low levels of resources available, some lack of national ownership, and the evident dependence on UNIDO during the current phase.
2 Increase the number of PSC to two per year. This could
   a) Encourage greater involvement and follow up from the Federal Government and a broader range of stakeholders
   b) Identify potential knowledge-based policy development as an output of the quality data collection
3 Consider expanding the number of representative bodies in the PSC for the purpose of expanded outreach and project visibility.
   a) Representative bodies could include, for example, PERSGA, the MoT due to the potential economic role of dive-tourism, the Supreme Council of Environment and the Sudanese Environment Conservation Society. All these organizations are already represented in the RSS to some extent.

4.2 Strategic recommendations to UNIDO

Strategic recommendations to UNIDO towards the development of a (semi-) industrial marine fishery in the RSS

4 UNIDO and the MoI are recommended to hold a series of consultations with key Federal Ministries to examine the long term strategic development of the sector within existing national strategies. This would provide several opportunities
   a) It would assist key stakeholders in identifying contextualized strategies for the use of the fishing industry as a tool for food security.
   b) Ensure that data from trawling vessels is integrated into the FSS. This Improved certification capacity for foreign trawlers should ensure finances are available to the MFA & Federal Government. This supports sustainability of both the project and marine resources.
   c) Consider whether applied methodologies of data collection and analysis in the proposed future phase could be of relevance to the identified Govt. priority of aquaculture. This could support eventual replication or upscaling
5 UNIDO should undertake a comprehensive value chain analysis for marine fisheries produce to include;
   a) Potential for modernization of the fishing sector
   b) Feasibility study for business development including processing and export (Public and private partnerships)
   c) A private sector and market development strategy
6 Consider a specific publications budget for counterparts. Publications must be project relevant, endorsed by UNIDO and paid following receipt of invoices from the publisher.

4.3 Recommendations to government counterpart organizations

7 The Ministry of Agriculture, Animal Resources and Fisheries of the Red Sea State must continue to include the costs for the data collection at Zigala market in the annual operational budget of the MFA for 2018 using the cost-effective camera sampling technique provided by IMR. While budgets are a constraint this low-cost support is essential for sustainability of key project activities.

8 The MFA is recommended to develop a website to include such data as the existing weighing systems for the FSS, to quantify overall fishing effort (breakdown by species, numbers, days at sea, size of boat, number of fishermen etc.) and updates on fishing regulations.

9 The MFA is recommended to produce an analytical report as an output of the Db which is based on relevant indicators agreed with key principal project stakeholders. This will provide trend-based analysis, test the Db capacity, and provide greater visibility of the project to different stakeholders. The report could be on a monthly or quarterly basis and would reveal changes over time. The MFA could also develop a simple operational manual for the existing database for ToT purposes or replication

10 Federal and State-level Ministries should establish a ***technica***l inter-ministerial Committee to mobilize potential financial and human resources to ensure project results are not lost. There is already a RSS pre PSC technical meeting but this is project specific.

11 The URS-FMSF is recommended to continue investigating potential linkages between the IMR in the Faculty of Marine Science and the IMR of Norway. This could ensure sustainability beyond the life of the project.

4.4 Recommendations to the donor and the IMR

12 As per recommendation 11, the Norwegian Embassy could support further institutional capacity building through supporting development of an MoU with URS-FMSF and the RSFRS-MFA. The MoU could include the possibilities of joint research, training and exchange visits.

13 The IMR already has significant information, data and analysis included in its Annual Survey Reports. This information could be developed into a high-quality publication to be issued as a joint Govt/UNIDO/IMR/Donor publication outlining the innovative methodologies being applied in the RSS. This would be useful for outreach as well as potential future replication and upscaling.

4.5 Lessons learned

- While collaborative project design enhances relevance and national ownership during project implementation, exit strategies need to consider the financial capacity of national organizations to ensure activities can be sustained beyond the life of the project.
- Developing partnerships between UNIDO and leading research providers (such as IMR) provides mutual learning and synergies adding both value and potential to projects
- A common risk across multiple UNIDO projects appears to variable exchange rates.

5. ANNEXES

5.1 List of persons interviewed

Implementing Agency

UNIDO-Vienna
Mr. Christian Susan. Programme Manager
Mr. Nilguen Tas, Chief, Industrial Resources Efficiency Division
Mr. Stephan Sicars, Director Department of Environment
Ms. Ulnivur Dolun, Office of the Director General, Independent Evaluation Division
UNIDO-Khartoum
Dr. Mohamed Sayed - UNIDO Representative
Mr. Haider Khamis, Logistic Officer
Ms. Aaza Badri Abdalla, Senior National Liaison Program Officer
Mr. Christian Grassini, Chief Technical Advisor, Vocational Training
UNIDO-Red Sea State
Mr. El Thair Hassan M. Salih, National Project Coordinator
Mr. Ahmed Mohamed Adam, Suakin landing site manager

Executing Partner

IMR (Red Sea State Mission)
Even MOLAND, Scientific Cruise Leader Don Questo
Ørjan SØRENSEN, Technical Cruise Leader, Don Questo
Tore Johannessen

Federal Level Stakeholders

Royal Norwegian Embassy, Khartoum,
Ms. Inga Dalin, Head of Development Cooperation and Humanitarian Affairs
Mr. Ahmed Abbas, Programme Manager
Ministry of Industry
Batoul Abbas Adlan, DG of Dep. Of External Relations
Limia Alnour Mohamed Saied, Director Regional, International Organizations & Technical Cooperation.
Huida Abdulbagy Ali, Assistant to the DG External Relations
Ministry of Agriculture Animal Resource and Fisheries
Dr. Hammad Shanto Salih, Director General of Ministry of Animal Resources and Fisheries,
Dr. Nafisa Mahjoub, Director of the Agricultural Department

Dr. Randa Altyeb, Technical Office Director
Dr. Fatima Yousif Mohamed, Technical Office
Dr Yassine Mubarak, Ali Agri-engineer

Red Sea State Stakeholders

Ministry Of Agriculture Animal Resources And Fisheries in Red sea state
Dr. Isam Eldin Abdel Rahim Sorkaty Director General
Marine Fisheries Administration
Mr. Saeed Jumaa Fadul- Director
Mr. Hamad Shkolia Ojan, Senior Inspector, MFA
Mr. Adam Idris Ahmed, Senior Inspector, MFA
Mr. Adam Idris Abdalrasoul, Senior Inspector, MFA
Mr. Adam Ahmed Babikr, Senior Inspector, MFA
Mr. Dia Aldin Abdulsalam, Senior Inspector, MFA
Mr. Hussain Mohammed Ibrahim, Senior Inspector, MFA
Mr. Husain Mohamed Ibrahim, Senior Inspector, MFA
Saied Altahir, Senior Inspector, MFA
Mahdi Abdallah
Marine Research Center
Dr. Mona Ibrahim – Director
Alamin Mohamed Alamin, Assistant Researcher
Hala Gindeel Abubacker, Assistant Research Professor
Hadeel Fadol Ali, Technician
Amani Hammad Tukolia, Assistant Researcher
Faculty of Marine Science
Dr. Moamer Etayeb Ali – Dean
Dr. Sheikheldin Mohamed Alamin
Husain Abdulmohsin Suliman, Technician
Mustafa Khalafallah
Hala Khidir Hassan, Teaching Assistant
Adil Mohamed Salih
Majda Mustafa Mahmoud, Technician
Ministry of Industry & Investment
Mr. Mohamed Alhassan Tahir Haayis – State Minister
Ms. Nadia Nasir Mohamed
Mr. Ahmed Mohamed Taher

Don Questo: Interviewees participating in the survey team
Ms. Majda Mustafa Mahmoud Ismaiel, URS-FMSF
Ms. Schema Omer Ali Omer, MFA
Mr. Bashir Haider Ali, URS-FMSF
Mr. Alfateh Bakry Ahmed Altyeb
Mr. Abdul Mohssin Suliman, URS-FMSF

5.2 Reference Documents

Primary Source material

Project Document (UNIDO 2014): Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State.

UNIDO (2017): Draft Project Document: Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State (Phase II).

UNIDO Independent Evaluation Division (2017): Mid-Term Evaluation Building Institutional Capacities For The Sustainable Management Of The Marine Fishery In The Red Sea State, (UNIDO PROJECT NO.: 130130).

UNIDO Evaluation Group (2014): Independent Final Evaluation Republic of the Sudan Surveys of Renewable Marine Resource in the Red Sea State, (TE/SUD/12/004).

UNIDO Project Biannual Progress reports 1,2 ,3 and 4. (Included attached survey, PSC, training and workshop reports).

Coastal Marine Resource Surveys, Red Sea State, Sudan (UNIDO and IMR).

Secondary Source Material

UNIDO Evaluation Group (2014): Terminal Evaluation, Recovery of Coastal Livelihoods in the Red Sea State of Sudan. (TF/SUD/09/002).

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The Republic of the Sudan Ministry of the Presidency Affairs The General Secretariat of the National Council for Strategic Planning (NCSP) 2nd Five-Year Plan (2012-2016).

UNIDO Independent Evaluation Division (2017): Draft Evaluation Manual.

The Republic of the Sudan Ministry of Finance and National Economy Five-year Plan for Economic Reform, For the Period 2015 -2019.

IMR, Norway, Red Sea Fisheries Research Station, Sudan, Faculty of Marine Science and Fisheries, Red Sea State University, Sudan, Marine Fisheries Administration, (November 2017) *Fish distribution and species diversity from the first fishery survey of the Sudanese Red Sea coast.*

Norwegian Ministry of Foreign Affairs Fish for Development (Undated Pamphlet).

OECD/DAC Working Party on Aid Evaluation, 2002: Evaluation and Aid Effectiveness.

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Mohamed Hamzaa, Imad Alhasseenb, Salah Mohamedc (2017) Contribution of Fishery Production and Marketing Sector in the Household Food Security in the Red Sea State, Sudan (American Scientific Research Journal for Engineering, Technology, and Sciences Volume 31).

FAO (2015) Country Programming Framework for Sudan: Plan Of Action (2015-2019): Resilient Livelihoods for Sustainable Agriculture, Food Security and Nutrition.

5.3 Evaluation Matrix and Interview Guidelines

Guiding evaluation questions	Means of Verification			
Note: Questions will be adapted as necessary during implementation. For example, discussions with the UR will not focus on every question for UNIDO	Counterpart	Donor	UNIDO	Beneficiaries
Project Design and Intervention Logic				
To what extent were previous projects/evaluations used in the project design	x	x	x	
How does the project align to national development priorities and policies, Fisheries Policies/UNDAF etc.	x	x	x	
Why were the particular counterparts selected to partner with UNIDO	x		x	
To what extent were government counterparts and key stakeholders involved in the project design	x	x	x	x
What were the particular strengths and weaknesses of the project	x	x	x	x
Were risk and mitigation strategies specifically factored into project design			x	
How was sustainability factored into Project Design	x		x	
Were outputs, outcomes, impacts and indicators SMART and did they generally prove correct during implementation			x	
Would you design, support and implement the project exactly the same. With hindsight what could have been done better	x	x	x	x
Relevance and Ownership				
How is the project relevant to intended target groups/beneficiaries	x	x	x	x
Are the main stakeholders taking overall leadership of the project implementation	x	x	x	x
What has been the type of involvement of donor/ government counterparts / private sector during implementation	x	x	x	x
To what extent outputs are/were sufficient to achieve the outcome			x	
Efficiency				
How was coordination/synergies among UNIDO activities at the national level? Was there for example coordination with other UN/NGO projects/agencies (Value Added)	x	x	x	x
Have resources/inputs converted into outputs in a timely and cost-effective way? Any problems faced?	x	x	x	

Guiding evaluation questions	Means of Verification			
Note: Questions will be adapted as necessary during implementation. For example, discussions with the UR will not focus on every question for UNIDO	Counterpart	Donor	UNIDO	Beneficiaries
To what extend overall were UNIDO services adequate (expertise, training, equipment, methodologies)	x	x	x	x
Were UNIDO procurement services provided as planned and were they adequate in terms of timing and value	x		x	
Project Coordination and Management				
What is the distribution of roles and responsibilities for the management of marine fisheries specifically as the i) federal level ii) the state level.	x		x	x
Could the federal Ministry contribute specifically to the project and what would that be	x		x	x
Does the federal Ministry have independent financial resources to contribute (sustainability)	x		x	x
To what extent has the management structure contributed to generate the planned outputs and achievement of outcome	x		x	x
Has the national management and overall field coordination mechanisms of the project been efficient and effective	x		x	x
Has monitoring and self-evaluation (based on indicators for outputs, outcomes and objectives) been used in PSC etc. Has this resulted in changes (adaptive management)	x		x	
Were any changes in implementation approved and documented? By who?	x		x	x
How was the project monitoring conducted and were resources sufficient	x		x	
What were the main barriers, if any, encountered during project implementation	x		x	
How has the project management addressed barriers and challenges	x		x	
To what extent is the UR involved in supervising and monitoring projects	x	x	x	
To what extent were project progress reports updated/recorded systematically	x	x	x	
Effectiveness				
How does the project contribute to inclusive and sustainable industrial development? (Industrial Modernization Programme of the Republic of the Sudan?)	x	x	x	
What are the main outputs of the project so far? (To what extent and how has the capacity of the RSS Institutions been strengthened)	x	x	x	x

Guiding evaluation questions	Means of Verification			
Note: Questions will be adapted as necessary during implementation. For example, discussions with the UR will not focus on every question for UNIDO	Counterpart	Donor	UNIDO	Beneficiaries
To what extent are outcomes established in the project document being achieved. Are outputs leading to outcomes and will outcomes lead to objectives			x	x
How do target beneficiaries use the outputs of the project (Capacity building for marine fisheries, surveys , databases) etc.	x		x	x
What could be improved (if anything) on UNIDO's model of intervention	x	x	x	x
Impact and Sustainability				
Specifically, how has the project impacted intended beneficiaries? Were any impacts youth or gender specific	x		x	x
How is the project contributing to national/international development priorities	x	x	x	x
Are results sustainable and what further Govt. or donor assistance is required	x	x	x	x
What are the key risks to sustainability and what are the plans to ensure continuity after project end	x	x	x	x
What is the level of local/national funding/financing	x	x	x	x
Crosscutting Issues				
Was gender mainstreamed, monitored and reported during implementation	x		x	
To what extent has the project contributed to empowerment of women and gender equality	x	x	x	x
To what extent has the project contributed (positively or negatively) to environmental sustainability	x	x	x	x
Are there opportunities for replication and upscaling	x	x	x	x

5.4 Terms of Reference for the Terminal Evaluation

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE
TERMINAL INDEPENDENT EVALUATION
OF UNIDO PROJECT:

Building institutional capacities for the sustainable management of the marine fishery in the Red Sea State

Project ID 130130

July 2017

BACKGROUND AND CONTEXT

BACKGROUND

The Red Sea State is located in the northeast of the Republic of the Sudan (latitude 16 to 22 North, longitude 35 to 37 East), with international borders to Egypt in the North, and Eritrea in the South. The Red Sea State (RSS) is the only state in Republic of the Sudan bordering the ocean (Red Sea). RSS has a coastline of 750 km and an Exclusive Economic Zone (EEZ) of 91.600 km^2 including a shelf area of 22.300 km².

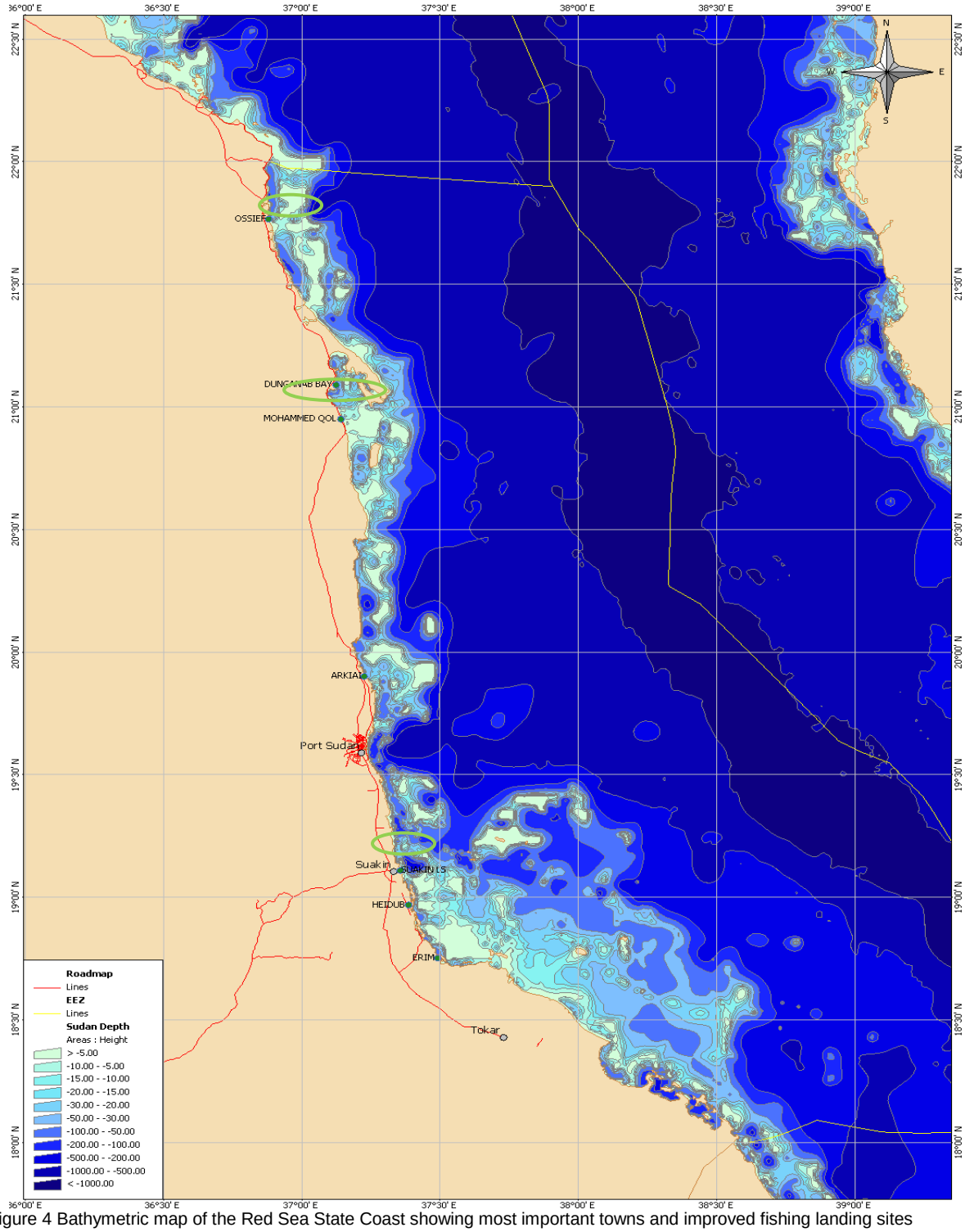

Figure 4 Bathymetric map of the Red Sea State Coast showing most important towns and improved fishing landing sites

The total population of the State is officially estimated at 846,113 people although other sources put it at between 728,000 and 800,000 people (UNDP, 2005) with an annual growth rate of 2.9%, slightly above the national rate. The area is primarily inhabited by Beja pastoralists and agro-pastoralists, although a wide variety of ethnic groups from across the Sudan can be found in the state capital Port Sudan, especially Hausa, Fallata, Nubaand other northern and southern Sudanese. Some 61.2% of the State population are estimated to be living in Port Sudan.

The rural economy is predominantly land-based with core activities being primarily pastoral and agro-pastoral. Petty trading, the provision of casual labour also provide sections of the population with an important means of economic sustenance. According to several sources, the RSS has one of the lowest socio-economic indicators in the entire country.

While fishery has the potential to contribute to food security as well as to the diversification of the economy in the RSS, the marine fishery is still considered to be underdeveloped, while there are some indications that certain key commercial species might be over utilized. The finfish potential is estimated at 10.000 tons/year, while the reported yield amounts to 5.000 tons/year[21]. Average price of the three commercial fish groups that are presently distinguished on Suakin market in mid-2014 was SGP 80 (€ 10,4) per kilo for Najl Najil (Roving Coral Grouper, *Plectropomus pessuliferus)*, SGP 50 (€ 6,5 per kilo for Rishal (Lyretail Grouper, *Variola louti*) and SGP 20 (€ 2.6) per kilo for Kedaban (others, including a number of species). Using some short time series on catch distribution reported from the three Improved Landing Sites Najil constituted some 27%, Rishal some 7% and Kedaban 66% of the total catch. With these figures the value of the reported yield of 5.000 tons/year can be estimate to be in the range of € 24,7 mio and the value of the so far unrealized finfish potential would constitute between € 13 mio (assuming the unrealized finfish potential is entirely made up of Kedaban only or up to € 24,7 mio if the species composition in the landings reported is representative for the unrealized finfish potential. Notwithstanding this economic potential Sudanese marine fisheries are small-scale and artisanal in nature. The artisanal fishery is defined as a labour intensive conducted by artisanal craftsmen whose level of income, mechanical sophistication, quantity of production, fishing range, political influence, market outlets, employment and social mobility and financial dependence keep them subservient to the economic decisions and operating constraints placed upon them by those who buy their production. Artisanal fishermen mainly target fish species living on coral reefs using hand lines and to some extent gill nets. The fisheries in the Red Sea State are characterized by a near absence of semi-industrial and industrial fishing activities.

PROJECT CONTEXT

Over the last years the government of the Red Sea State has become increasingly aware of the marine fishery's potential to contribute to livelihoods and food security and has started to seek assistance and advice for the sustainable development of this potential. In order to raise public awareness, the Government of the Red Sea State has invested Sudanese Pounds 500.000 (€ 86.500) in early 2014 for the establishment of an aquarium in which tropical fish is exposed and the importance of sustainable fisheries for livelihoods and food security is conveyed to the public. In parallel the government has sought support for the sustainable development of the marine fishery in the Red Sea State. The absence of reliable data on the status of fish stocks and the quantity of fish harvested and weak institutional capacities have been identified as the main barriers for the development of strategic plans, policy recommendations and/or regulatory instruments for the sustainable use and management of living marine resources in the Red Sea State. For the development of strategic plans, the estimation of the economic potential of the marine fishery and the development of policy recommendations, management plans and regulatory instruments require monitoring of both the state of stocks by means of fisheries independent surveys and of the quantity of fish landed be collected, stored and analysed.

As in most other Red Sea riparian countries applied fisheries research and stock assessments have been neglected in the past two decades in the RSS. No stock assessments have been undertaken since the cessation of collaborative research programmes under-taken during the 1970s and 1980s by the former Soviet Union. The 3 surveys undertaken in 2012 and 2013 under the project "Surveys of renewable marine resources in the Red Sea State" funded by the Norwegian Embassy Khartoum and

[21] FAO Fishery Country Profile

jointly implemented by the Norwegian Institute for Marine Research and UNIDO constituted the first consolidated effort to collect fisheries independent data on the status of coral fish stocks in the coastal waters of the Red Sea State since the 1980. These surveys have provided a valuable data- and experience basis for this follow-up project in terms of establishing more comprehensive time series on the state of the marine fish resources required for fisheries management. The main weakness of the pilot was the lack of an holistic approach, with all focus on the survey activities. Long periods without hands-on collaboration and direct contact between the international experts and the national counterparts between surveys, and technical training being restricted to the survey activities considerably limited support, guidance and competence building that could be provided to the Sudanese counterparts. The interlinked work packages, comprehensive training and continued backstopping for activities to be undertaken by Sudanese counterparts under the follow-up project will allow more holistic framework, underpinned by a much closer and uninterrupted collaboration.

The ongoing cooperation between the RSS/federal Universities and the University of Bergen/ Bjerknes Centre in Norway on physical oceanography and climate may be useful in providing supporting data. The continuation of both projects also offers considerable potential synergy in terms of data collection/-sharing, training and supervision of students (the ongoing cooperation commenced in 2006 and has produced 13 Sudanese MSc candidates in physical and chemical oceanography and has started the training of one PhD. They have also established a time series on physical hydrography and inorganic carbon between Port Sudan and Sanganeb. There are also many biological studies in existence on e.g. distribution and growth of important species at the federal University in cooperation with the University of Bergen that represent vital input parameters in e.g. stock assessment models. These will no doubt be valuable assets for the overall goal of the project. There are some regional data in existence from previous surveys that may be explored further, but none that may be linked directly to the near-coast reef communities in the RSS. Regional data may, however, still represent valuable additional information. Trawl survey data are not relevant for the project outputs.

In the Red Sea State fish is landed at several artisanal landing sites along the coast and since 2011 also at three improved landing sites in Osief, Mohammed Qol (North of Port Sudan) and Suakin (South of Port Sudan). The three improved fish landing sites (ILS) were constructed in 2011 by UNIDO with support provided by the Canadian International Development Agency (CIDA). Each site is monitored by an oversight committee, known locally as a *Liginal Al Ishraf* (LAI). The LAI is composed of both private and public actors, including state government officials, municipal officials, and representatives from the fishery cooperatives and the fish traders (total of 8 members). A Landing Site Manager (LSM) is responsible for the daily management of the site and reports regularly to the LAI. The LSM is currently training a local official on management duties. While all operational costs of the ILS are covered by the LAI from revenues generated for the services provided by the ILS the revenues of the ILS are not yet sufficient to cover the costs of the LSMs' salaries (€ 1.300 per month). These costs are budgeted under outcome 2 position 2.4 national staff.

The ILSs are a considerable advance for the RSS fishery sector. At the ILSs, fish is sorted, washed, stored and (sometimes) filleted. This service is provided at a standard fee defined by the amount of fish, the service required and the duration of storage. The infrastructure is basic, but designed to meet common standards of fish handling, storage and processing for safe seafood. A fish inspector from the RSS Marine Fishery Administration (MFA) is now stationed at each of the ILS. This is a new, positive development as MFA officials have not been regularly present at a fish landing site in the RSS in the past. An important aspect of the ILSs is the consolidation of the harvest at the sites. Fish were previously only landed at a number of small artisanal landing sites without any infrastructure and delivered directly to fish traders there. With the introduction of the three improved landing sites, fish landings are now increasingly being consolidated to the ILSs. In addition to improving the quality of fish harvested and reducing post-harvest losses, this consolidation will facilitate far more efficient collection of fishery sector data that are critical to future fisheries management.

Except for local consumption all fish landed is transported to the central Zigala fish market in Port Sudan, which is the sole fish market in the Red Sea State. While no fisheries data are currently collected at the artisanal landing sites, commercial fisheries data are collected at the three ILSs and by the Marine Fisheries Administration (MFA) at the Zigala market for commercial and fiscal purposes, respectively. However, in this data collection only three, commercial fish categories are distinguished: Najil (Roving Coral Grouper, *Plectropomus pessuliferus)*, Rishal (Lyretail Grouper, *Variola louti*) and Kedaban (others, including a number of species). At Zigala market the MFA therefore determines the

quantity of each species on basis of an estimation of the relative proportion in the given commercial group. The data are noted on paper and subsequently entered into excel sheets on individual computers and laptops. These data are, however, of highly limited value for stock assessment purposes. The sampling by MFA at the Zigala marked has not systematically covered all fish entering into the marked and can therefore not be trusted as index of total landings. Identifying landings on the species level is also prerequisite for assessing the biological impact of fishing on the given species type. The data from the ILSs do not contain information at the species level, and the practice of estimation of quantity by species by means of visual assessment of their relative proportion in shipments to the Zigala marked will, inevitably, introduce considerable uncertainty. Further, the transfer of data via record sheets and various computers, before being copied into a master spreadsheet at the MFA office involves a considerable risk for typing- and data transfer errors.

The MFA also have at their disposal a 10 years' time series from 2001-2011 on fish caught by trawl vessels in the Red Sea State before the coastal waters were closed for trawling in 2012. The decision of closing the trawl fishery was taken by the Government of the Red Sea State in accordance with the precautionary principle and taking into consideration that trawling was predominantly undertaken by foreign vessels with limited economic benefits for the Red Sea State. In its endeavours to revitalize a potential trawl fishery, the Government of the Red Sea State is presently undertaking efforts to acquire at trawler. Re-introduction of a trawl fishery should, however, be preceded by an assessment of the living demersal resources in the designated trawl areas as well as by an assessment of the socio-economic impacts re-introduction of a trawl fishery may have on the livelihood of artisanal fisheries, the fishermen and the fishing communities, for which there may be a need for future technical assistance to the Red Sea State.

Presently the different locations of data storage are not interlinked and thus data cannot be retrieved centrally and are not used systematically by the Marine Fisheries Administration. National institutional structures lack the administrative and technical capacities as well as the hard- and software required to monitor fluctuations in the living marine resources, and to formulate and implement realistic and effective fisheries management policies and strategies. The lack of financial and material resources allocated to the authorities responsible for fisheries research, management and development represents a major obstacle in this regard.

The Republic of the Sudan's marine fisheries are still underdeveloped and if managed well and harvested within sustainable limits there may be potential for increased harvesting and value creation through developing artisanal and potentially semi-industrial fisheries that in turn may facilitate increased job creation, food security and poverty alleviation. Development of the fisheries sector may thus also increase the supply of fish to the national market – and possibly also increase export of some seafood products. Realizing this potential will also contribute to the Republic of the Sudan's Economic Diversification Strategy, which was launched in order to compensate for the loss of revenue from oil exports resulting from the establishment of South Republic of the Sudan as an independent state. These developments may, however, only be realized in a sustainable manner if the required knowledge base is in place

Consequently, in order to realize the potential of the marine fishery in the Red Sea State in a sustainable way, there is evidently need to establish a longer time series of fisheries independent data through the implementation of additional fish stock surveys as well as for the provision of technical assistance to strengthen institutional capacities so that the Marine Fisheries Administration can be enabled to develop reliable catch statistics. Only with this information at hands MFA will be in position to ascertain the resource base, discover underutilized resources and thereby scale the development of the fishery effort to sustainable levels. In addition, the resource mapping of fish stocks will contribute significant information for the Fishery Development Strategy for the Republic of the Sudan by providing information on the potential to develop sustainable semi-industrial fisheries in the Red Sea State. This will also provide the data relevant for semi-industrial or industrial fisheries. Yet to fully unveil these potentials further surveys will be required and data on actual fish landings need to be collected in a systematic way with assured quality so that they can jointly be analysed and used for the development of policy recommendations and management instruments. Surveys would not only have to cover coral fish species but also cover the deeper waters (deeper than 200m) as well as comprise trawling surveys in the area of the Red Sea States coastal waters that were previously designated for trawling fisheries.

The project aims at establishing the knowledge base for the sustainable management of the marine fisheries in the Republic of Sudan. Marine fish stocks are considered as a natural resource with critical significance for food security and livelihoods. Marine fish stocks are furthermore considered to be an underutilized resource with the potential to up-scale the predominantly artisanal fishery to a semi-industrial or industrial fishery. Thus the proposed project is in line with outcome two under pillar one (poverty reduction, inclusive growth, sustainable livelihoods) of the UNDAF 2013-2016 for the Republic of the Sudan which aims at making relevant institutions more effective in the sustainable management of natural resources as well as with outcome five under pillar three (governance and rule of law), which aims at strengthening government institutions at all levels to effectively plan, deliver and monitor their services. The project is also in line with the Government of National Unity's Five Year National Development Plan 2012-2016 which aims at promoting sustainable economic development by encouraging a competitive private sector, supporting key infrastructure and agriculture projects, and building a knowledge-based economy.

Furthermore the project - by providing the knowledge base that will be required for the modernisation of the artisanal marine fisheries and for the development of a sustainable semi-industrial marine fishery sector - is aligned with the strategy of the Norwegian Embassy in Khartoum to support the sustainable management of natural resources and economic diversification in the Republic of the Sudan, which has become one of the major challenges for Republic of the Sudan following the severe economic effects of South Sudan's secession.

The project is also aligned with the goals of the overall Norwegian Development policy; Fish for Development was announced as a new initiative in October 2013 for the 2014 aid budget. The Fish for Development Initiative is intended to support sustainable resource management and institutional development.

The project will contribute to achieve the MDG 1: Eradicate extreme poverty and hunger and MDG 7: Ensure environmental sustainability

The three main components of the project are:

1) The provision of technical assistance, building of capacities and facilitation of the implementation of one annual monitoring survey of the fisheries resources along the Red Sea State coast throughout the project implementation period.

2) The provision of technical assistance, building of capacities and facilitation of the development of a database of fish delivered at the Zigala market and catch and effort data from fish landed at the three improved fish landing sites.

3) The continued provision of limited technical assistance and building of managerial capacities targeted towards enabling the three improved fish landing sites to become financially self-sustaining entities as a pre-condition for cost effective collection of data on catch per unit effort and other fisheries dependent data that cannot be obtained at the Zigala market.

Training, capacity building and catalytic support will be provided for the implementation of the annual monitoring surveys (45 days at sea). Since neither the Republic of the Sudan nor any of the neighbouring states has any suitable research vessels, it is suggested to use a recreational scuba diving vessel, as for the project TESUD12004 "Surveys of renewable marine resources in the Red Sea State, Republic of the Sudan". The M/S Don Questo used in this project is the only vessel currently operating in the EEZ of the Republic of the Sudan that is suitable for the implementation of these surveys. The M/S Don Questo was built in Selby (England) in 1964 as a trawling vessel, transformed into an oceanographic research vessel in 1984. In 1998 it was refitted into a diving vessel and was identified as the only vessel meeting the technical requirements of the trap survey[22]. The M/S Don Questo is also the only vessel currently operating all the way south to the Eritrean boarder. For the establishment of the fisheries data base, training, capacity building and catalytic support will be provided in order for the information of actual fish landings to be collected in a systematic and standardized manner. The total landings will be estimated from the fish delivered to the Zigala market,

[22] M/S Don Questo is the only live aboard vessel with a hydraulic platform as required for the implementation of the surveys.

while vessel, catch and effort data will be sampled from landings at the three improved fish landing sites.

Hard and soft-ware required for the central collection, storage and processing of fishery dependent and independent data will be identified through an interactive and participatory planning process and required equipment will be provided at the location of the individual data collection points. Counterpart staff will be trained at regular intervals in the collection, processing and analysis of the data, as well as in the introduction of a quality assurance and quality control systems. There will also be carried out formal training courses in related topics such as sampling theory, fisheries dynamics, fish biology, applied statistics and IT. In between training sessions, local counterpart staff will be coached by IMR experts by means of low-cost electronic communication platforms such as skype and e-mail, and remote PC interface enabling IMR experts to access local computers in real time. The IMR database experts will also have online access to the database via internet.

Data on total fish catches will be collected at Zigala market. Zigala market is the one and single central fish market in the Red Sea State. The bulk majority of commercial fish catches are delivered to Zigala market; regardless whether the fish was landed at an artisanal or at one of the 3 improved landing sites. Therefore Zigala market constitutes the ideal location for the collection of data on the total of commercial landings in the Red Sea State.

For the collection of data on specific fishery dependent data, like information of catch per unit effort, and biological characteristics of the catches that are representative for the total catch, the improved landing sites have been identified to constitute the location where representative data can be collected with minimal effort.

Given that the three improved fish landing sites were established as recent as in 2012, some technical assistance will be required in order to consolidate the commercially viable operation of these three sites. Provision of technical assistance will thus be facilitated in order to ensure their commercially viable operation. In the Red Sea State the three improved landing sites constitute the only location where specific fishery dependent data can be collected efficiently, and therefore their sustainable operation is of pivotal significance for cost effective collection of fisheries data required for fisheries management in the future. The project will provide limited and targeted technical assistance until more comprehensive technical assistance may be provided under the second phase of the project (TFSUD09002 “Recovery of coastal livelihoods in the Red Sea State through the modernization of artisanal fisheries and creation of new market opportunities”) as proposed by UNIDO to the OPEC Fund for International Development (OFID). For the provision of the limited trainings an annual budget of € 40.000 has been allocated for the years 2015-2017 (see output 2 activity 2.8 in para E 1 budget). Upon approval of funding of the second phase of the project “Recovery of coastal livelihoods in the Red Sea State through the modernization of artisanal fisheries and creation of new market opportunities” all costs related to the ILS (the salaries for the LS managers and the training costs will be borne by this project. Further economies of scale will be achievable by sharing the costs for the staff and operations of the Port Sudan project office. UNIDO will immediately inform the Norwegian Embassy on any developments in this regard so that any unutilized funds budgeted for these activities can be either returned to the embassy or it can be proposed to use them to support additional activities.

The proposed project will create the knowledge based foundation required the development of a sustainable artisanal and semi-industrial marine fishery in the Republic of Sudan through building the institutional capacities for the implementation of fish stock surveys, and providing technical assistance to build the institutional capacities for the development and maintenance of fisheries data base, as well as for the analysis and use of data collected. .

While the Marine Fisheries Administration in the Ministry of Agriculture, Animal Resources and Fisheries, the Faculty of Marine Sciences and Fisheries in the Red Sea University and Red Sea Fisheries Research Centre, Port Sudan will be the direct beneficiaries of the TA for the strengthening of institutional and individual capacities, coastal communities, artisanal fishermen associations and the private sector engaged in fish trade and commercialization will be the indirect beneficiaries since only a sustainable management of the marine fishery can guarantee their mid-term livelihood, food security and secure their income generating activities. The project will involve and address direct and indirect beneficiaries.

KEY STAKEHOLDERS AND THEIR RESPECTIVE ROLES

The key institutions in charge of managing the marine fishery sector in the Red Sea State are:

- the Marine Fisheries Administration in the Ministry of Agriculture, Animal Resources and Fisheries,
- the Faculty of Marine Sciences and Fisheries in the Red Sea University and
- the Red Sea Fisheries Research Centre, Port Sudan

The Marine Fisheries Administration (MFA) has the mandate to collect data on fish landings, develop regulatory instruments (quota, areas and seasons), to issue licences for all fishing activities (artisanal, semi-industrial, industrial) and to enforce laws and regulatory instruments.

The Faculty of Marine Sciences and Fisheries in the Red Sea University and the Red Sea Fisheries Research Centre, Port Sudan are tasked with the implementation of scientific fishery related research, the control of hygienic standards, to create awareness on marine issues amongst stakeholders and to provide the MFA with advice and scientific data for the development of regulatory instruments.

These three institutions lack the institutional capacities to plan and manage the infrastructure required to implement fisheries independent surveys, and to obtain catch statistics from the fisheries, through collection, storage and data analyses. They are the direct beneficiaries of the trainings to be provided under the project.

As for the pilot project TESUD12004 “Surveys of renewable marine resources in the Red Sea State, Republic of the Sudan” it was agreed that the project should be implemented by UNIDO with the Norwegian Institute of Marine Research as the sole provider of substance matter expertise. This will allow the project to benefit from the subject matter expertise of the Institute of Marine Research (IMR) as well as to make full use of the UNIDO structures already established in the Republic of the Sudan. All the training sessions (except for the strengthening of the managerial capacities of the Improved Landing sites) will thus be provided by IMR experts under a subcontract with UNIDO, whereas UNIDO will provide the logistical support, procure, transport and import into the Republic of the Sudan equipment identified by IMR as a requirement for project implementation, facilitate the process to obtain visa for the IMR experts and maintain a Project Office in Port Sudan as required for the continuous and on-going support, technical backstopping and contact keeping with the key counterpart institutions.

CURRENT STATUS OF IMPLEMENTATION

The following activities were carried out from September 2014 until 30 June 2015:

a) From September 2014 until end January 2015 UNIDO kept the core staff of the Port Sudan Project Office (Administrative/Financial Officer, Liaison Officer, Driver and Security) and the Landing Site Managers under contract. Costs were covered from the UNIDO contribution (€ 35.000). From 1st February onwards the costs for the recruitment of this staff were charged to the Norwegian contribution.
   The position of the National Project Coordinator (NPC) was advertised in February 2015 and during the Inception Mission (28th February – 14th March) the three short listed candidates were invited to Port Sudan and interviewed by IMR experts and the UNIDO project manager. Mr. Salih Hassan Mohamed EL THAIR was unanimously retained as the best candidate and offered the position. He accepted the offer and reported to duty on 5 May 2015.
   In line with the requirements of the project, the position of the logistics officer was advertised in March 2015. Shortlisted candidates were interviewed by the UNIDO representative to Sudan Mr. Khaled EL MEKWAD. Mr. Haider MOHAMMED ABDELRAHMAN KHAMIS was retained as the best candidate. He took-up his assignment on the 1st May 2015.
b) The repair of the MFA vessel was contracted in October 2014 using the UNIDO bridging funds. Repair works were completed in June 2015 so that the vessel will be fully functional for the method verification survey (28 July -11 August).
c) An offer has been solicited by UNIDO from IMR for the provision of subject matter expertise. In this offer the entirety of the services to be provided over the whole project implementation period was broken down into 34 work packages. In line with funds availability (UNIDO can only establish contracts up to the amount of funding actually received) a subcontract for the

provision of the services related to the work packages set-out below was established. The subcontracts with IMR for the provision of scientific subject matter expertise was established in January 2015 and a first amendment to this contract was made in March 2015.

Work packages contracted so far:

- WP 1 Provision of technical assistance during the 2 weeks inception mission by three IMR experts (team leader, fisheries statistics expert, database expert) (€ 92,091.43)
- WP 2 Design and provision of 12 collapsible stainless-steel pots/traps and 12 BRUVS (Baited Remote Underwater Video Stations) (€ 50.000)
- WP 3 International expertise for the preparation of the survey plan for the 2015 pilot/method verification survey (€ 12,299.82)
- WP 4 Provision of technical assistance for the first 12 day data base/fisheries statistics training session in Port Sudan by three IMR experts (team leader, fisheries statistics expert, database expert) (€ 73,774.23)
- WP 5 Provision of technical assistance for the first formal training (2 weeks in Port Sudan) by an IMR senior scientist with the required subject matter expertise (€ 25,574.75)
- WP 6 Technical assistance, backstopping and coaching of Sudanese counterparts by IMR experts by three IMR experts (team leader, fisheries statistics expert, database expert) (March-June 2015) (€ 79,566.74)
- WP 7 Summary reporting on the training activities provided between March and end June 2015 (€ 6,149.91)
- WP 8 International Expertise for the 2015 pilot survey (28 July – 11 August) (€ 79,394.81) IMR will provide a scientific cruise leader and a technical cruise leader.
- WP 9 International Expertise for the preparation of 2015 winter survey (20 October – 05 December) (€ 23,236.08)

The total value of the subcontract established with IMR during the reporting period amounted to € 442,087.76.

d) The establishment of the subcontract with Aqua Action for Water Sports Ltd. for the provision of the vessel M.V. Don Questo for the implementation of the four surveys was completed. An offer has been solicited for the provision of the vessel and its crew for the 4 surveys. In line with fund availability a subcontract for the provision of the Don Questo for the 15 days pilot/method verification survey and for the 45 days at sea 2015 winter trap survey were established.

- Subcontract for the 15 days at sea pilot/method verification survey (€ 23,572.50)
- Subcontract for the 45 days at sea 2015 winter trap survey (€ 74,253.38)

The total value of the subcontract established with Aqua Action for Water Sports amounted to € 97,825.88

e) Priority equipment for the implementation of the pilot/method verification survey (fishing gear, Baited Underwater Remote Video Stations) as well as priority equipment for the establishment of the fisheries statistics system and priority laboratory equipment was identified during the Inception Mission and procurement/transport was launched in April 2015.

f) The Inception Mission was carried out by the IMR team leader, the IMR fisheries statistics expert, the IMR data base expert and the UNIDO project manager from 28 February until 14 March 2015. During this mission the first Project Steering Committee Meeting was organized by UNIDO on 11th March 2015. Annex I of the first progress report contains a detailed report on the items discussed and the issues agreed upon including the detailed workplan and budget for 2015 approved by the Project Steering Committee. The workplan and budget for 2016 will be agreed upon during the 2nd Project Steering Committee meeting that will be organized in the second semester 2015.

g) Due to delayed launch of the project and due to limited vessel availability (the M.S. Don Questo was fully booked from December 2014 until July 2015, the pilot survey/method verification survey can only be implemented from 28 July until 11 August 2015).

h) During the inception mission (28 February – 14 March) the IMR fisheries statistic expert and the IMR data base expert had intensive consultations with Sudanese counterparts on the development of the fisheries statistics system. A data sheet template and a statistically well-founded sampling scheme (see Annex 2 first progress report) were developed to allow

collecting representative samples with minimal effort in Zigala market and at the three improved landing sites (detailed report in Annex 3 first progress report). In order to prepare the MFA for the use of a more complex data base it was agreed that in a first step all data collected should be processed in a high end standalone desk top with the standard MS office software and a strong anti-virus software. These items were provided to MFA by the project. This computer also allowed the Sudanese counterparts to have a cost-efficient communication possibility with the IMR experts which provided regular backstopping services by using modern and cost-effective communication technologies e.g. skype.

i) Initial works on the design of the database architecture were carried out by IMR and it was decided to use the open source database/ analysis software package PasGear jointly between the IMR and the University of Bergen in the first phase to store data collected at Zigala market and the three improved landing sites as well as during the surveys. From PasGear the data will be exported to the custom-built database to be used in the project, as the sampling program in Sudan requires that you have a centralized database that can be updated from several sources and back-up centrally. Initial steps towards the design of this custom-built data base have been undertaken and will be completed during the second half of 2015.
j) During the reporting period one state of the art PC equipped with MS office and antivirus software was procured for MFA. Further working stations will be procured in the second half of 2015 in line with the specifications to be provided by IMR.
k) The first two weeks training session on the establishment of the fishery statistics system/database was conducted by IMR from 8th-19th June 2015 (see Annex 5 first progress report).
l) During the inception mission it was agreed between the national stakeholders that the first formal training should be on fish taxonomy in order to strengthen institutional capacities in the identification of fish families and species as required for the proper data collection in Zigala market and the three ILS. Due to the availability of the IMR international expert for fish taxonomy this training mission had to be deferred to 5th – 16th October 2015 with a preparatory mission that will take place from 07th -12th September.
m) Immediately after the inception mission the IMR team started to provide backstopping and quality assurance services to the Sudanese counterparts for the proper collection and storage of the data on fish landings collected at Zigala market and at the three improved landing sites. (see Annex 6 first progress report).
n) Over the period 1st- 31st May 2015 a business development consultant provided 21 days inputs for the development and implementation of tailor made business development training course for management and operations staff of the three improved landing sites.
During his mission to Port Sudan the consultant undertook a business practice assessment of the operations at each of the three fish landing sites in order to identify specific business practice subjects that require improvement. Based on the business practices assessment, a three day course to amend basic business operations to best reflect identified subjects for improvement was conducted for the management of the landing sites. The course focussed on marketing and pricing, the market mix, and the marketing plan. The second main aspect was pricing of the services and products (ice) provided by the improved landing sites in order to achieve full cost recovery. In each landing site 12 individuals received a training course on business administration (detailed report in Annex 4 first progress report)

The following activities were carried out from 1st July until 31 December 2015:

a) The Individual Service Agreement with Mohamed Abdalla Mohamed SALIH to pilot the MFA vessel and train MFA staff during 15 days at sea pilot/method verification survey was concluded on 14 July 2015.
b) The 15 days at sea pilot/method verification survey was implemented from 28 July-11 August (see annex 1 second progress report for the detailed report).
c) 6 Sudanese counterparts were trained on age determination methods by IMR/Bergen University/Bjerkness Centre in Bergen/Norway from 31 August – 11 September (see annex 2 second progress report for detailed report).
d) Due to budgetary constraints resulting from the exchange rate losses (see annex 3 detailed report on 2nd Steering Committee Meeting) it was decided in consultation with the Institute for Marine Research that the second two weeks fisheries statistics training workshop (planned for September 2015) will have to be cancelled. To compensate for this the efforts provided by IMR for backstopping Sudanese counterparts in the development of the fishery statistics system have been ramped up and the date of the next 2 weeks training session to be conducted by

IMR experts in Port Sudan (which was planned for April or May 2016) has been moved forwards to early January 2016.

e) From 7-12 September Dr. Franz Ueblein an internationally recognized fish taxonomy expert from IMR was on mission to Port Sudan to prepare the 2015 formal training on fish taxonomy. The training session was delivered from 5-16 October 2015 (see annex 4 second progress report for detailed report).
f) The survey plan was developed by IMR, submitted and endorsed by UNIDO on 15 October 2015 (see annex 5 second progress report)
g) The Individual Service Agreement with Mohamed Abdalla Mohamed SALIH to pilot the MFA vessel and train MFA staff during 45 days at sea 2015 survey was concluded on 9 October 2015.
h) The 2015 45 days at sea survey was implemented as planned from 20 October until 3 December 2015 (see annex 6 second progress report for preliminary report). During the survey Sudanese participants have expressed their interest to contribute to a higher degree to the substance of the survey report. While this is a very positive development, which confirms the impact the IMR capacity building had and which also confirms that Sudanese scientists start to take stronger ownership of the project, this requires some back and fro between the Sudanese scientists and the Norwegian experts in order to assure quality and consistency. It is expected that this process will last until the end of March 2016. Therefore, at this point in time, only an interim report will be submitted. The complete report on the 2015 survey providing the scientific information collected by Sudanese experts will be provided as an annex to the half yearly report for the first semester 2016.
i) The Second Project Steering Committee Meeting was organized on 25 October 2015 in the UNIDO port Sudan Project Office (see annex 3 second progress report for detailed report).
j) IMR provided backstopping to Sudanese counterparts for the establishment of the fishery statistics system throughout the reporting period (see annex 7 second progress report for detailed report).
k) Subcontracts:

   During the previous reporting period a financial and technical offer was solicited from the Norwegian Institute of Marine Research (IMR) for the provision of subject matter expertise as stipulated in the project document. In line with funds availability (UNIDO can only establish contracts up to the amount of funding actually received) an initial subcontract for the provision of the services related to the work packages as per IMR's offer was established. Whenever instalments are received from the Norwegian Embassy this subcontract is amended.

   To reflect the cancellation of the second two weeks fisheries statistics training workshop (planned for September 2015) an amendment was made to the IMR subcontract on 5 July.

   Following receipt of the third instalment of NOK 5,000,000 form the Norwegian Embassy on 28 August 2015 the subcontract with IMR was amended and the following work packages of IMR's financial and technical offer were contracted:

   - WP 10 Provisions of International Expertise for the 2015 winter survey (20 October – 05 December) (€186,684.37)
   - WP 12 Technical assistance, backstopping and coaching of Sudanese counterparts by IMR experts (July-December 2015) (58,757.11)
   - WP 13 Tuition for Sudanese experts during their 2 weeks training in Norway (€ 17907.52)
   - WP 14 Participation by the IMR team leader in the 2nd Project Steering Committee and summary reporting on the training activities provided between July and end December 2015 (€ 20,809.62)
   - WP 15 Provision of technical assistance for the third 12 day data base training session in Port Sudan (€ 51,292.63)

The total increase in the value of the subcontract established with IMR during the reporting period amounted to € 335,451.25. With this increase effected during the implementation period the overall value of the IMR sub-contract was increased to € 777,539.01.

As summary on the trainings provided by IMR during the reporting period is provided in Annex 8 second progress report)

The following activities were carried out from 1st January 2016 until 30 June 2016:

a) The second fishery statistics training was implemented from 11th -18th January 2016. IMR initially proposed to send 4 experts for this training. After consultation it was agreed that it would make more sense to have one training by 2 experts in January and second training by two experts in May (see Annex 1 for detailed report)
b) The second formal training on setting up underwater video surveys, processing and analysing the data collected by BRUVS and transects during the method verification and during the 2015 45 days at sea survey was carried out from 1st-15th April. (see Annex 2 for detailed report)
c) The third fishery statistics training was implemented from 19th -30th May (see Annex 3 for detailed report).
d) Throughout the reporting period the UNIDO National Project Coordinator maintained intensive contacts with the Ministry of Agriculture Animal Resources and Fisheries, Red Sea State to assure that the Ministry honoured the pledges made during the second steering committee meeting to facilitate the work of the fish inspectors at Sigala market.
e) The final selection of the 8 Sudanese counterparts to be trained in September in Norway on fishing gear technology was confirmed and efforts to obtain a visa for their training in Norway were launched.
f) IMR experts continued to provide backstopping to Sudanese counterparts for the development of the fishery statistics system (see Annex 4 for detailed report) .
g) Procurement of equipment (6 fish traps lost during the 2015 45 days at sea survey, additional fishing gear, additional go-pro cameras, scales) and of hard and software (3 high performance lap tops and additional licences for the SeaGis software) as per the material/equipment needs list prepared by IMR was carried out. Equipment was transported to Sudan and import procedures were launched.
h) Subcontracts:

   During the initial phase of this project a financial and technical offer was solicited from the Norwegian Institute of Marine Research (IMR) for the provision of subject matter expertise as stipulated in the project document. In line with funds availability (UNIDO can only establish contracts up to the amount of funding actually received) an initial subcontract for the provision of the services related to the work packages as per IMR's offer was established. Whenever instalments are received from the Norwegian Embassy this subcontract is amended.

   Following receipt of the fourth instalment of NOK 6,000,000 form the Norwegian Embassy on 16 March 2016 the subcontract with IMR was amended to and the following work packages of IMR's financial and technical offer were contracted:

   - WP 16 Provision of technical assistance for the second formal training session (12 days) (€ 23.295,43)
   - WP 17 Technical assistance, backstopping and coaching of Sudanese counterparts by IMR experts (January to June 2016) (€ 49.582,94)
   - WP 18 Summary reporting on the training activities provided between January and end June 2016) (€ 18.859,82
   - WP 19 International Expertise for the preparation of 2016 winter survey (€ 21.257,16)
   - WP 21 Provision of technical assistance for the fourth 12 day data base training session in Port Sudan (€ 45.472,35)
   - WP 22 Technical Technical assistance, backstopping and coaching of Sudanese counterparts by IMR experts (July-December 2016)
   - WP 23 Tuition for Sudanese experts during their 2 weeks training in Norway (€ 16.228,67)

The total increase in the value of the subcontract established with IMR during the reporting period amounted to € 224,279.61. With this increase effected during the implementation period the overall value of the IMR sub-contract was increased to € 1,001,818.68.

In line with the decisions taken in the second Steering Committee Meeting the actual exchange rate of Norwegian Crowns to Euro at the point in time when the 4th instalment was received, has been applied for the services to be provided by IMR for this contract amendment.

The subcontract with Aqua Action for Water Sports Ltd. for the charter of the MS Don Questo for the 2016 45 days at sea survey (20th Oct- 3rd December) over Euro 77,966.04 was established in April 2016.

The following activities were carried out from 1st July 2016 until 31 December 2016:

a) The 2 weeks training of 8 Sudanese counterparts on fishing gear technology and methodology was implemented from 12th -23rd September 2017. (see Annex 1 for detailed report)
b) The mid-term evaluation was carried out from 8th to 24th August 2016, in Sudan (Khartoum, Port Sudan, Marsa Osief, Mohamad Q'ol) and Austria (Vienna). The Evaluation Team (ET) was comprised of 2 Senior Evaluators, Mr. Cristóbal Vignal (International Evaluation Consultant and Team Leader) and Mr. Salih Suliman (National Evaluation Consultant). Presentation of preliminary conclusions and recommendations took place in Sudan (Port Sudan – 18th August, and Khartoum – 21st August) and at UNIDO HQ (Vienna – 23rd August) (see Annex 2 for detailed report)
c) The third Project Steering Committee Meeting was conducted on 21st September 2016 (see Annex 3 for detailed report)
d) The preparatory pre-survey mission by the IMR Team Leader and the UNIDO Project Manager was carried out from 18th – 24th September.
e) The 2016 45 days at sea survey was carried out from 20th October – 03rd December 2016 (see Annex 4 for detailed report)
f) Throughout the reporting period the UNIDO National Project Coordinator maintained intensive contacts with the Ministry of Agriculture Animal Resources and Fisheries, Red Sea State to assure that the Ministry honoured the pledges made during the second steering committee meeting to facilitate the work of the fish inspectors at Sigala market.
g) Throughout the reporting period IMR experts continued to provide backstopping to Sudanese counterparts for the development of the fishery statistics system (see Annex 5 for detailed report) .
h) Subcontracts:

   During the initial phase of this project a financial and technical offer was solicited from the Norwegian Institute of Marine Research (IMR) for the provision of subject matter expertise as stipulated in the project document. In line with funds availability (UNIDO can only establish contracts up to the amount of funding actually received) an initial subcontract for the provision of the services related to the work packages as per IMR's offer was established. Whenever instalments are received from the Norwegian Embassy this subcontract is amended.

   Following receipt of the fifth instalment of NOK 4,000,000 form the Norwegian Embassy on 03 November 2016 the subcontract with IMR was amended to and the following work packages of IMR's financial and technical offer were contracted:

   - WP 20 International expertise for the 2016 45 days at sea survey (€ 178,904.41)
   - WP 25 Provision of technical assistance for the fifth now fourth 12 day data base training session in Port Sudan (1st training in 2017) (€ 49,243.15)
   - WP 26 Technical assistance, backstopping and coaching of Sudanese counterparts by IMR experts (January to June 2017) (€ 53,538.90)
   - WP 27 Provision of technical assistance for the third formal training session (12 days) (€ 25,190.50)

The total increase in the value of the subcontract established with IMR during the reporting period amounted to € 306,876.96. With this increase effected during the implementation period the overall value of the IMR sub-contract was increased to € 1,308,695.58.

In line with the decisions taken in the second Steering Committee Meeting the actual exchange rate of Norwegian Crowns to Euro at the point in time when the 5th instalment was received, has been applied for the services to be provided by IMR for this contract amendment.

The following activities were carried out from 1st January 2017 until 30 June 2017:

a) The first part of the 4th fishery statistics training was implemented from 28th January-2nd February 2017. This training was originally foreseen to take place from 26th Sept-3rd October 2016 but due to the fact that one of the Norwegian experts could not obtain their visa in time, this had to be deferred to 2017 (see Annex 1 5th progress report for detailed report)
b) The third formal training on setting up underwater video surveys, processing and analysing the data collected by BRUVS and transects during the method verification and during the 2015 and 2016 45 days at sea survey was carried out from 24th March-3rd April 2017. (see Annex 2 5th progress report for detailed report)
c) The fifth fishery statistics training was implemented from 1st-12th May (see Annex 3 5th progress report for detailed report).
d) Throughout the reporting period the UNIDO National Project Coordinator maintained intensive contacts with the Ministry of Agriculture Animal Resources and Fisheries, Red Sea State to assure that the Ministry honoured the pledges made during the second steering committee meeting to facilitate the work of the fish inspectors at Sigala market.
e) The final selection of the 10 Sudanese counterparts to be trained in from 4th – 15th September in Norway on fishery management plans was confirmed and visa for their training in Norway were obtained.
f) IMR experts continued to provide backstopping to Sudanese counterparts for the development of the fishery statistics system (see Annex 4 5th progress report for detailed report) .
g) Procurement of equipment (replacements for the go-pro cameras lost/destroyed in the 2016 survey, replacement batteries for all go-pro cameras, bait bags for the BRUVs, O-rings for SeaGis housings, hand held depth sounder, cooling boxes for UVC camera kits, memory cards, external hard drives, USB card readers, multiple USB chargers, fishing gear) as per the material/equipment needs list prepared by IMR was carried out. Equipment was transported to Sudan and import procedures were launched
h) During a side event to the Oceans Conference (5-9 June 2017) a side event was jointly organized by UNIDO and IMR to showcase how the project contributes to the attainment of SDG 14 in data poor LDC with low institutional capacities and to demonstrate what benefits other LDCs/SIDS could derive from a replication and what are the requirements for a successful replication would be. The event featured many distinguished speakers including Ms. Fekitamoeloa Katoa 'Utoikamanu, United Nations High Representative for the Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS) , H.E. Ms. Tone Skogen, State Secretary of the Ministry of Foreign Affairs of Norway, H.E. Mr. Magdi Ahmed Mofadal Elnour, Ambassador and Deputy Permanent Representative of the Republic of the Sudan to the United Nations, Mr. Philippe Scholtès, Managing Director, Programme Development and Technical Cooperation of UNIDO, and Mr. Åsmund Bjordal Director of the Center for Development Cooperation in Fisheries (CDCF) at the Institute of Marine Research (IMR) in Norway as well as Mr. Erik Olsen, IMR Team Leader, and Mr. Christian Susan, UNIDO Project Manager. (a summary on this side event is provided in Annex 5 to the 5th progress report)
i) Subcontracts:

   During the initial phase of this project a financial and technical offer was solicited from the Norwegian Institute of Marine Research (IMR) for the provision of subject matter expertise as stipulated in the project document. In line with funds availability (UNIDO can only establish contracts up to the amount of funding actually received) an initial subcontract for the provision of the services related to the work packages as per IMR's offer was established. Whenever instalments are received from the Norwegian Embassy this subcontract is amended.

   Following receipt of the sixth instalment of NOK 6,000,000 form the Norwegian Embassy on 05th May 2017 the subcontract with IMR was amended to and the following work packages of IMR's financial and technical offer were contracted:

   - WP 24 Participation by the IMR team leader in the 3rd Project Steering Committee and summary reporting on the training activities provided between July and end December 2016 (€ 19,016.63)
   - WP 28 Summary reporting on the training activities provided between January and end June 2017 (€ 19,589.06)
   - WP 29 International Expertise for the preparation of the 2017 winter survey (€ 21,369.84)

- WP 31 Provision of technical assistance for the sixth 12 day fishery statistics system training in Port Sudan (€ 47,997.23)
- WP 32 Technical assistance, backstopping and coaching of Sudanese counterparts by IMR experts (June-December 2017) (€ 51,501.44)
- WP 33 Tuition for Sudanese experts during their 2 weeks training in Norway (€ 16,856.41)
- WP 34 Participation by the IMR team leader in the 4th and Final Project Steering Committee and summary reporting on the training activities provided between July and end December 2017 and Final Report (€ 19,589.06)

The total increase in the value of the subcontract established with IMR during the reporting period amounted to € 195,919.68. With this increase effected during the implementation period the overall value of the IMR sub-contract was increased to € 1,504,615.26.

In line with the decisions taken in the second Steering Committee Meeting the actual exchange rate of Norwegian Crowns to Euro at the point in time when the 6th instalment was received, has been applied for the services to be provided by IMR for this contract amendment.

The subcontract with Aqua Action for Water Sports Ltd. for the charter of the MS Don Questo for the 2017 45 days at sea survey (12th October – 25th November 2017) over Euro 81,864.35 was established in June 2017.

WAY FORWARD

Further project activities in 2017 will be implemented as per the provisions of the project document and as per the workplan approved in the 3rd SCM.

- 4th -15th September training of 10 Sudanese counterparts by IMR in Bergen, Norway on fishery management plans
- 13th -20th September: pre-survey planning mission
- 5th – 19 Oct Terminal Evaluation
- 12th Oct – 25th Nov 2017 45 days at sea survey
- Dec 2017 4th Project Steering Committee Meeting
- Throughout the year: backstopping of Sudanese counterparts by the IMR experts on fisheries statistics system and ILS managerial training and monitoring of the data collection process by the UNIDO National Project Coordinator

BUDGET INFORMATION (as per 13 July 2017)

Project No.	Total Allotment	Total Expenditure	% Implementation	Donor
UNIDO PROJECT NO.: 130130 Grant No 2000002943	EUR 2,888,201.34[23]	EUR 2,716,776.24	94%	Norway
UNIDO PROJECT NO.: 130130 Grant No 2000002790	EUR 35,000	EUR 34,969.83	100%	UNIDO

[23] 7th installment of NOK 4,946,864.52 is still outstanding

PURPOSE OF THE EVALUATION

The purpose of this independent evaluation is to assess the project performance in terms of it design, relevance, effectiveness, efficiency and likelihood of sustainability and impact, and provide recommendations for the implementation of a potential next phase of this project. A proposal is presently under preparation by UNIDO and IMR. .

The evaluation will also address to the extent meaningful other standing evaluation criteria singled out in UNIDO's evaluation policy, such as management, gender mainstreaming, environmental sustainability, alignment with the UNIDO's Inclusive and Sustainable Industrial Development (ISID) agenda, and potential to promote ISID.

The evaluation will be thus a backward and forward-looking exercise and seek to identify the best practices and areas for improvement in order to draw lessons that can be used in the implementation of next phase of this project and for similar projects to be implemented by UNIDO in other countries and the region.

Short-term interest is that the current terminal evaluation will provide the basis for the development of the project document for the next phase of this project. Therefore, the recommendations of this evaluation should be available in time to be taken into account for the development of the project document for the next phase of this project.

The long-term interest comes from the strategic potential the transition from an artisanal to a sustainable (semi-) industrial fishery has for the socio-economic development and food security in the Red Sea State. In this connection, the evaluation will produce lessons learned and recommendations on how UNIDO TA can contribute to support the Red Sea State in the realization of this potential.

The evaluation aims to produce:

- Short-term recommendations for UNIDO for the next phase of this project.
- Strategic recommendations for UNIDO for the provision of additional TA in support of the realization of the socio-economic development potential of the transition towards a (semi-) industrial marine fishery in the Red Sea State;
- Recommendations and lessons for similar projects implemented by UNIDO.

The evaluation will assess the achievement of results, as stated in the project document and the contributors to success or lack thereof. Moreover, the evaluation will assess the interventions design, level of national ownership, relevance to various stakeholders and the exploration of synergies with other UNIDO projects and with initiatives of the Government. It will follow a consultative process and seek inputs from a broad range of stakeholders.

The Evaluation will be undertaken as per UNIDO Evaluation Policy, the Guidelines for Technical Cooperation Programmes and Projects and the project document. The Project Manager will provide information, contacts and logistical support for this evaluation.

SCOPE OF THE EVALUATION

The terminal project evaluation will cover the project implementation period from 2014 till October 2017 covering all the activities that are part of the project, with particular focus on the

performance indicators achieved, including inputs and activities, impact and sustainability of the project implementation.

- Consider all the activities that are part of the project;
- Cover the entire results chain from inputs and activities to impact and sustainability and review processes as well as results;
- Produce recommendations for the next phase of this the project (e.g. what has worked and what has not and what are the lessons from implementation to date, which issues needs to be addressed in the phase of the project implementation period and what conditions should be in place);

EVALUTION ISSUES AND KEY EVALUATION QUESTIONS

The evaluation consultant(s) will be expected to prepare a more targeted and specific set of questions and to design related evaluation tools (survey questionnaires) in line with the above evaluation purpose and focus descriptions.

However, the following issues and questions are expected to be included in the assessment:

Project Design

The extent to which:

- The project design (logframe) is clear, consistent and logic
- The project design has SMART objectives and indicators

Ownership and relevance

The extent to which:

- The project objectives, outcomes and outputs are relevant to the different target groups of the intervention;
- The counterpart(s) has (have) been appropriately involved and were participating in the identification of their critical problem areas and in the development of technical cooperation strategies and are actively supporting the implementation of the project approach;
- The outputs as formulated in the project document are relevant and sufficient to achieve the expected outcomes and objectives.

Efficiency of implementation

The extent to which:

- UNIDO and counterpart inputs have been provided as planned and were adequate to meet requirements.
- The quality of UNIDO inputs and services (expertise, training, methodologies, etc.) was as planned and led to the production of outputs.
- UNIDO procurement services are provided as planned and were adequate in terms of timing, value, process issues, responsibilities, etc.

Project coordination and management

The extent to which:

- The national management and overall field coordination mechanisms of the project have been efficient and effective;
- The UNIDO management, coordination, quality control and technical inputs have been efficient and effective;
- Monitoring and self-evaluation was based on indicators for outputs, outcomes and objectives and using that information for project steering and adaptive management;
- Changes in planning documents during implementation have been approved and documented;
- Synergy benefits can be found in relation to other UNIDO activities in the country or elsewhere.

Effectiveness

The extent to which:

- Outputs have been produced and how the target beneficiaries use the outputs;
- Outcomes have been or are likely to be achieved through utilization of outputs;
- The project/programme contributes to inclusive and sustainable industrial development.

Impact and sustainability

- To what extent developmental changes (economic, environmental, social, inclusiveness have occurred or are likely to occur as a result of the intervention and are these sustainable;
- Was sustainability correctly factored in the project strategy (risks analyzed and assumptions identified at design stage and appropriately monitored during implementation);
- What is the prospect for technical, organizational and financial sustainability.
- The likelihood of sustainability of the project results after the project completion. The assessment will identify key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and explain how these risks may affect the continuation of results after the project ends.

The following gender mainstreaming and environment related questions shall be also covered by the evaluation.

Gender and youth

- To what extent have women and youth benefited from the project/can be expected to benefit?
- Has gender been mainstreamed in the implementation of the project?
- Have gender analyses been included in baseline studies, monitoring and reporting?
- Has there been gender balance in the contracting of experts and consultants?

Environment

- Has the project promoted environmental sustainability?
- Are any positive environmental benefits likely, even if they may be indirect?

Evaluation Ratings.
The evaluation team should also summarize their assessment using the rating table and criteria below. The details questions to assess each evaluation criterion are in annex 2.

#	Evaluation criteria	Mandatory rating
A	**Impact**	**Yes**
B	**Project design**	**Yes**
1	• Overall design	Yes
2	• Logframe	Yes
C	**Project performance**	**Yes**
1	• Relevance	Yes
2	• Effectiveness	Yes
3	• Efficiency	Yes
4	• Sustainability of benefits	Yes
D	**Cross-cutting performance criteria**	
1	• Gender mainstreaming	Yes
2	• M&E: ✓ M&E design ✓ M&E implementation	Yes
3	• Results-based Management (RBM)	Yes
E	**Performance of partners**	
1	• UNIDO	Yes
2	• National counterparts	Yes
3	• Donor	Yes
F	**Overall assessment**	Yes

Rating system. In line with the practice adopted by many development agencies, the UNIDO Independent Evaluation Division uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory).

Score		Definition*	Category
6	Highly satisfactory	Level of achievement clearly exceeds targets and expectations and there is no shortcoming.	SATISFACTORY
5	Satisfactory	Level of achievement meets expectations (indicatively, over 80-95 per cent) and there is no or minor shortcoming.	
4	Moderately satisfactory	Level of achievement more or less meets expectations (indicatively, 60 to 80 per cent) and there are some shortcomings.	
3	Moderately unsatisfactory	Level of achievement is somewhat lower than expected (indicatively, less than 60 per cent) and there are significant shortcomings.	UNSATISFACTORY
2	Unsatisfactory	Level of achievement is substantially lower than expected and there are major shortcomings.	

1	Highly unsatisfactory	Level of achievement is negligible and there are severe shortcomings.	

Note: * For impact, the assessment will be based on the level of *likely* achievement, as it is often too early to assess the long-term impacts of the project at the project completion point.

EVALUATION APPROACH AND METHODOLOGY

This evaluation will be carried out in accordance with UNIDO Evaluation Policy and the Guidelines for the Technical Cooperation Programme and Project Cycle. While maintaining independence, the evaluation will adopt a participatory approach and will seek the views and feedback of all parties. The lead evaluation consultant will liaise with the Project Manager on the conduct of the evaluation and methodological issues.

The lead evaluation consultant will be required to use different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources (including literature reviews, field visits, surveys and interviews with counterparts, beneficiaries, donor representatives and program managers). The lead evaluation consultant will develop interview guidelines.

The evaluation will apply the standard for assessing the relevance of criteria of effectiveness, efficiency, impact and sustainability of programs to assess achievements against objectives and indicators outlined in the Logical Framework.

The methodology will be based on the following:

- Desk review of project document including, but not limited to:
  - (a) project / programme policy documents;
  - (b) The original project document, monitoring reports (such as half yearly progress and financial reports, output reports (case studies, action plans, sub-regional strategies, etc.) and relevant correspondence;
  - (c) Notes from the meetings of committees involved in the project (e.g. approval and steering committees);
  - (d) Other project-related material produced by the project.
  - Interviews with project management and technical support including staff and management at UNIDO HQ and in the field (UNIDO country office and Port Sudan Project Office) and – if necessary - staff associated with the project's financial administration and procurement.
  - Interviews with project partners including Government counterparts, counterpart institutions and representatives of the Institute for Marine Research (IMR) as the sole provider of substance matter expertise for this project.
  - Interviews with intended users for the project outputs and other stakeholders involved with this project e.g. representatives of the Norwegian Embassy as the main donor for this project.
  - Other interviews, surveys or document reviews as deemed necessary by the lead evaluator and/or UNIDO EVA.

TIME SCHEDULE AND DELIVERABLES

The Terminal Independent Evaluation is scheduled to take place in October 2017.

This section contains a timetable for the evaluation process with tentative deadlines for key events, tasks, deliverables and milestones.

Task	Description/ Deliverables	Timeframe
Contract signed with evaluators		**September 2017**
Desk review and development of interview guidelines, telephone interviews with IMR experts	Background materials provided by Project Manager	**September 2017**
Evaluation mission (briefing of evaluators in the field, , field visits, field research, interviews, observation, questionnaires, etc.)	Mission report and information collected	**October 2017**
Interviews at HQ and presentation of preliminary findings	Presentation in English to Project Manager and project team	**October 2017**
Additional data collection and analyses of information collected, preparation of the draft evaluation report and circulation, within UNIDO for comments	Draft report	**November 2017**
Incorporation of comments and preparation of final draft report	Final draft report	**November 2017**
Sharing of draft report with main stakeholders. Collection of comments and finalization of report	Final report	**December 2017**
Presentation and submission to UNIDO, Government of Sudan and donors	Final Report and Management Response Sheet	**December 2017**

EVALUATION TEAM COMPOSITION

The evaluation will be conducted by one international lead evaluation consultant with one national consultant who will be working under the guidance of the UNIDO Evaluation Manager in IEV in coordination with the Project Manager and with the project team in Sudan and in Vienna.

QUALITY ASSURANCE

All UNIDO evaluations are subject to quality assurance by the UNIDO Independent Evaluation Division. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process by the UNIDO, ODG/EVQ/IEV, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review and clearance of inception report and evaluation report by UNIDO, ODG/EVQ/IEV).

The quality of the evaluation report will be assessed and rated by IEV against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 3. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO, ODG/EVQ/IEV should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by the UNIDO Independent Evaluation Division, who will circulate it within UNIDO and relevant stakeholders together with a management response sheet.

ANNEXES

- Job Description for team member(s)
- TOC for the Evaluation Report
- Detailed questions to rate the evaluation criteria
- Checklist on evaluation report quality
- Project Logframe

Annex 1. Job Description for team member(s)

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	Lead evaluator
Main Duty Station and Location:	Home based
Mission/s to:	Khartoum, Port Sudan, Vienna
Start of Contract (EOD):	10 September 2017
End of Contract (COB):	20 December 2017
Number of Working Days:	30 days

ORGANIZATIONAL CONTEXT

The consultant will evaluate the projects according to the Terms of Reference. S/he will act as leader of the evaluation team and will be responsible for preparing the draft and final evaluation report, according to the standards of the UNIDO Independent Evaluation Division.

PROJECT CONTEXT

As described in the TE ToR.

MAIN DUTIES

The Lead Evaluator is expected to conduct the following duties:

Main Duties	Concrete/ measurable Outputs to be achieved	Expected duration (days)	Location
Conduct desk study of project document and relevant reports and conduct telephone interviews with IMR experts	Interview plan completed and validated by UNIDO	5	Home based
Briefing to UNIDO HQ. Interview to Project manager and project stakeholders at HQ. Briefing with UNIDO IEV. Preparation of the inception report	Inception report	3	Vienna, Austria
Undertake field mission to Khartoum and Port Sudan to interview the main stakeholders, including beneficiaries and donor representatives) presentation of preliminary findings to field stakeholders	Mission report and information collected	12	Khartoum, Port Sudan
Debriefing of the evaluation (Presentation of preliminary findings)	Presentation in English to Project Manager and project team	2	Vienna, Austria

Main Duties	Concrete/ measurable Outputs to be achieved	Expected duration (days)	Location
Preparation of first draft evaluation report and submission for UNIDO feedback	Draft report	6	Home based
Finalization of report upon receipt of stakeholders' feedback	Final report	2	

REQUIRED COMPETENCIES

- Long-term experience in project evaluation
- Experience from working with skills development/vocational training from an industry perspective
- Experience from working with organizational development, capacity and institutional building
- Knowledge of international institutions/organizations working on skills development
- Experience from the Sudan context/ or the Horn of Africa region/the Red Sea region

MINIMUM ORGANIZATIONAL REQUIREMENTS

- Advanced university degree in social science related disciplines including development studies, development economics, political science, international relations, and peace studies, with training in social research methodologies;
- Minimum 10 years of professional experience in project evaluation;
- Proven track record in evaluation of UN projects.

Languages: Fluency in written and spoken English is required. Knowledge of Arabic would be an asset.

Absence of Conflict of Interest:
According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract for this evaluation.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National Evaluation Consultant
Main Duty Station and Location:	Home-based
Mission/s to:	Khartoum, Port Sudan
Start of Contract (EOD):	September 2017
End of Contract (COB):	December 2017
Number of Working Days:	26

ORGANIZATIONAL CONTEXT

The consultant will be part of the evaluation team, led by the International Evaluation consultant, to evaluate the project according to the Terms of Reference. S/he will work in close cooperation with the Lead Evaluator and will be responsible for preparing the draft and final evaluation report, according to the standards of the UNIDO Independent Evaluation Division.

PROJECT CONTEXT

As described in the TE ToR.

Under the leadership of the Team Leader (lead international Evaluation Consultant).. S/he will perform the following tasks:

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data…); Assess the adequacy of legislative and regulatory framework in Sudan Inputs to the inception report	Consultant familiarized with project relevant documentation Brief assessment of the adequacy of the country's legislative and regulatory framework	3 days 3 days	Home-based
Support the preparation of the field mission and conduct evaluation field mission	Presentations of the evaluation's initial findings, draft conclusions and recommendations to stakeholders in the country at the end of the mission. Agreement with the International Consultant and Team	14 days	Khartoum, Port Sudan

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
	Leader on the structure and content of the evaluation report and the distribution of writing tasks		
Prepare inputs to the evaluation report according to TOR and as agreed with Team Leader	Draft evaluation report	6 days	Home-based
Total		26 days	

REQUIRED COMPETENCIES

Core values:
1. Integrity
2. Professionalism
3. Respect for diversity

Core competencies:
1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in science, engineering or other relevant discipline like developmental studies or business administration.

Technical and Functional Experience:
A minimum of five years professional experience, including evaluation experience at the international level involving technical cooperation in developing countries. Exposure to the needs, conditions and problems in developing countries. Familiarity with the institutional context of the project is desirable.

Languages: Fluency in written and spoken English and Arabic is required.

Absence of Conflict of Interest:
According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract for this evaluation.

Annex 2: TOC for the Evaluation Report

Table of Contents

Executive summary

- Must provide a synopsis of the storyline which includes the main evaluation findings and recommendations
- Must present strengths and weaknesses of the project
- Must be self-explanatory and should be 3-4 pages in length

I. Evaluation objectives, methodology and process

- Information on the evaluation: why, when, by whom, etc.
- Scope and objectives of the evaluation, main questions to be addressed
- Information sources and availability of information
- Methodological remarks, limitations encountered and validity of the findings

II. Countries and project background

- Brief countries context: an overview of the economy, the environment, institutional development, demographic and other data of relevance to the project
- Sector-specific issues of concern to the project and important developments during the project implementation period
- Project summary:
    - Fact sheet of the project: including project objectives and structure, donors and counterparts, project timing and duration, project costs and co-financing
    - Brief description including history and previous cooperation
    - Project implementation arrangements and implementation modalities, institutions involved, major changes to project implementation
    - Positioning of the UNIDO project (other initiatives of government, other donors, private sector, etc.)
    - Counterpart organization(s)

III. Project assessment

This is the key chapter of the report and should address all evaluation criteria and questions outlined in the TOR. Assessment must be based on factual evidence collected and analyzed from different sources. The evaluators' assessment can be broken into the following sections:

- Design (adequacy and quality of project design)
- Relevance (on the relevance of project towards countries and beneficiaries)
- Effectiveness (The extent to which the development intervention's objectives and deliverables were achieved, or are expected to be achieved, taking into account their relative importance)
- Sustainability of Project Outcomes and Impact (the risks and vulnerability of the project, considering the likely effects of sociopolitical and institutional changes in partner countries, and its impact on continuation of benefits after the project ends, specifically the financial, sociopolitical, institutional framework and governance, and environmental risks)
- Project coordination and management (Report project management conditions and achievements, and partner countries commitment, M&E system adequacy)

In addition, the rating table with the evaluation criteria should be provided.

IV. Conclusions, Recommendations and Lessons Learned

This chapter can be divided into three sections:

A. Conclusions

This section should include a storyline of the main evaluation conclusions related to the project's achievements and shortfalls. It is important to avoid providing a summary based on each and every evaluation criterion. The main conclusions should be cross-referenced to relevant sections of the evaluation report.

B. Recommendations

This section should be succinct and contain few key recommendations. They should:

- be based on evaluation findings
- realistic and feasible within a project context
- indicate institution(s) responsible for implementation (addressed to a specific officer, group or entity who can act on it) and have a proposed timeline for implementation if possible
- be commensurate with the available capacities of project team and partners
- take resource requirements into account.

Recommendations should be structured by addressees:

- UNIDO
- Government and/or Counterpart Organizations
- Donor

C. Lessons Learned

- Lessons learned must be of wider applicability beyond the evaluated project but must be based on findings and conclusions of the evaluation
- For each lesson the context from which they are derived should be briefly stated

Annexes should include the evaluation TOR, list of interviewees, documents reviewed, a summary of project identification and financial data, and other detailed quantitative information. Dissident views or management responses to the evaluation findings may later be appended in an annex.

Annex 3: Detailed questions for rating evaluation criteria

The evaluation team will rate the project performance guided by the questions below.

#	Evaluation criteria
A	**Progress to impact** ✓ Mainstreaming: To what extent information, lessons or specific results of the project are incorporated into broader stakeholder mandates and initiatives such as laws, policies, regulations and project? ✓ Replication: To what extent the project's specific results (e.g. methodology, technology, lessons and etc) are reproduced or adopted ✓ Scaling-up: To what extent the project's initiatives and results are implemented at larger geographical scale? ✓ What difference has the project made to the beneficiaries? ✓ What is the change attributable to the project? To what extent? ✓ What are the social, economic, environmental and other effects, either short-, medium- or long-term, on a micro- or macro-level? ✓ What effects are intended or unintended, positive or negative? The three UNIDO impact dimensions are: ✓ Safeguarding environment: To what extent the project contributes to changes in the status of environment? ✓ Economic performance: To what extent the project contributes to changes in the economic performance (finances, income, costs saving, expenditure and etc) of individuals, groups and entities? ✓ Social inclusiveness: To what extent the project contributes to changes in capacity and capability of individuals, groups and entities in society, including vulnerable groups, and hence generating employment and access to education and training?
B	**Project design**
1	• Overall design ✓ The problem, need or gap to be addressed by the project is clearly identified, with clear target beneficiaries? ✓ The project design was adequate to address the problems at hand? ✓ Is the project consistent with the Country's priorities, in the work plan of the lead national counterpart? Does it meet the needs of the target group? Is it consistent with UNIDO's Inclusive and Sustainable Industrial Development? Does it adequately reflect lessons learnt from past projects? Is it in line with the donor's priorities and policies? ✓ Is the applied project approach sound and appropriate? Is the design technically feasible and beased on best practices? Does UNIDO have in-house technical expertise and experience for this type of intervention? ✓ To what extent the project design (in terms of funding, institutional arrangement, implementation arrangements…) as foreseen in the project document still valid and relevant? ✓ Does it include M&E plan and adequate budget for M&E activities? ✓ Risk managment: Are critical risks related to financial, social-political, institutional, environmental and implementation aspects identified with specific risk ratings? Are their mitigation measures identified? Where possible, are the mitigation measures included in project activities/outputs and monitored under the M&E plan?
2	• Logframe ✓ Expected results: Is the expected result-chain (impact, outcomes and outputs) clear and logical? Does impact describe a desired long-term change or benefit to a society or community (not as a mean or process), do outcomes describe change in target group's behaviour/performance or system/institutional performance, do outputs describe deliverables

#	Evaluation criteria
	that project will produce to achieve outcomes? Are the expected results realistic, measurable and not a reformulation or summary of lower level results? Do outputs plus assumptions lead to outcomes, do outcomes plus assumptions lead to impact? Can all outputs be delivered by the project, are outcomes outside UNIDO's control but within its influence? ✓ Indicators: Do indicators describe and specify expected results (impact, outcomes and outputs) in terms of quantity, quality and time? Do indicators change at each level of results and independent from indicators at higher and lower levels? Do indicators not restate expected results and not cause them? Are indicators necessary and sufficient and do they provide enough triangulation (cross-checking)? Are they indicators sex-diaggregated, if applicable? Are the indicator SMART? ✓ Sources of verification: Are the sources of verification/data able to verify status of indicators, are they cost-effective and reliable? Are the sources of verification/data able to verify status of output and outcome indicators before project completion? ✓ Are key assumptions properly summarized and reflecting the proper level in the results chain in the logframe?
C	**Project performance**
1	• <u>Relevance</u> ✓ How does the project fulfil the urgent target group needs? ✓ To what extent is the project aligned with the development priorities of the country (national poverty reduction strategy, sector development strategy)? ✓ How does project reflect donor policies and priorities? ✓ Is the project a technically adequate solution to the development problem? Does it eliminate the cause of the problem? ✓ To what extent does the project correspond to UNIDO's comparative advantages? ✓ Are the original project objectives (expected results) still valid and pertinent to the target groups? If not, have they been revised? Are the revised objectives still valid in today's context?
2	• <u>Effectiveness</u> ✓ What are the main results (mainly outputs and outcomes) of the project? What have been the quantifiable results of the project? ✓ To what extent did the project achieve their objectives (outputs and outcomes), against the original/revised target(s)? ✓ What are the reasons for the achievement/non-achievement of the project objectives? ✓ What is the quality of the results? How do the stakeholders perceive them? What is the feedback of the beneficiaries and the stakeholders on the project effectiveness? ✓ To what extent is the identified progress result of the project attributable to the intervention rather than to external factors? ✓ What can be done to make the project more effective? ✓ Were the right target groups reached?
3	• <u>Efficiency</u> ✓ How economically are the project resources/inputs (concerning funding, expertise, time…) being used to produce results? ✓ To what extent were expected results achieved within the original budget and timeframe? If no, please explain why. ✓ Are the results being achieved at an acceptable cost? Would alternative approaches accomplish the same results at less cost? ✓ What measures have been taken during planning and implementation to ensure that resources are efficiently used? Were the project expenditures in line with budgets? ✓ Could more have been achieved with the same input? ✓ Could the same have been achieved with less input? ✓ How timely was the project in producing outputs and outcomes? Comment on the delay or

#	Evaluation criteria
	acceleration of the project's implementation period. ✓ To what extent were the project's activities in line with the schedule of activities as defined by the Project Team and annual Work Plans? ✓ Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet the requirements?
4	• Sustainability of benefits ✓ Will the project results and benefits be sustained after the end of donor funding? ✓ Does the project have an exit strategy? ✓ To what extent the outputs and results have been institutionalized? *Financial risks:* ✓ What is the likelihood of financial and economic resources not being available once the project ends? *Socio-political risks:* ✓ Are there any social or political risks that may jeopardize the sustainability of project outcomes? ✓ What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? ✓ Do the various key stakeholders see that it is in their interest that project benefits continue to flow? ✓ Is there sufficient public/stakeholder awareness in support of the project's long-term objectives? *Institutional framework and governance risks:* ✓ Do the legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize the sustainability of project benefits? ✓ Are requisite systems for accountability and transparency and required technical know-how in place? *Environmental risks:* ✓ Are there any environmental risks that may jeopardize the sustainability of project outcomes? ✓ Are there any project outputs or higher level results that are likely to have adverse environmental impacts, which, in turn, might affect the sustainability of project benefits?
D	**Cross-cutting performance criteria**
1	• Gender mainstreaming ✓ Did the project design adequately consider the gender dimensions in its interventions? Was the gender marker assigned correctly at entry? ✓ Was a gender analysis included in a baseline study or needs assessment (if any)? Were there gender-related project indicators? ✓ Are women/gender-focused groups, associations or gender units in partner organizations consulted/ included in the project? ✓ How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries? ✓ Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision-making authority)? ✓ To what extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?

#	Evaluation criteria
2	o M&E: o ***M&E design*** o Was the M&E plan included in the project document? Was it practical and sufficient at the point of project approval? o Did it include baseline data and specify clear targets and appropriate indicators to track environmental, gender, and socio-economic results? o Did it include a proper M&E methodological approach; specify practical organization and logistics of the M&E activities including schedule and responsibilities for data collection; o Does the M&E plan specify what, who and how frequent monitoring, review, evaluations and data collection will take place? Is the M&E plan consistent with the logframe (especially indicators and sources of verification)? o Does it allocate adequate budget for M&E activities? o ***M&E implementation*** o How was the information from M&E system used during the project implementation? Was an M&E system in place and did it facilitate timely tracking of progress toward project results by collecting information on selected indicators continually throughout the project implementation period? Did project team and manager make decisions and corrective actions based on analysis from M&E system and based on results achieved? o Are annual/progress project reports complete, accurate and timely? o Was the information provided by the M&E system used to improve performance and adapt to changing needs? Was information on project performance and results achievement being presented to the Project Steering Committee to make decisions and corrective actions? Do the Project team and managers and PSC regularly ask for performance and results information? o Are monitoring and self-evaluation carried out effectively, based on indicators for outputs, outcomes and impact in the logframe? Do performance monitoring and reviews take place regularly? o Were resources for M&E sufficient? o How has the logframe been used for Monitoring and Evaluation purposes (developing M&E plan, setting M&E system, determining baseline and targets, annual implementation review by the Project Steering Committee…) to monitor progress towards expected outputs and outcomes? o How well have risks outlined the project document and in the logframe been monitored and managed? How often have risks been reviewed and updated? Has a risk management mechanism been put in place?
3	o Results-based management (RBM) *Results-Based work planning* o Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved. o Are there any annual work plans? Are work-planning processes results-based? Has the logframe been used to determine the annual work plan (including key activities and milestone)? o Examine the use of the project's results framework/ logframe as a management tool and review any changes made to it since project start. *Results-based monitoring and evaluation* o Verify whether an M&E system is in place and facilitated timely tracking of progress toward project objectives by collecting information on selected indicators continually throughout the project implementation period; o Review the monitoring tool currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?

#	Evaluation criteria
	o Do project team and manager make decisions and corrective actions based on analysis from M&E system and based on results achieved? Is information on project performance and results achievement being presented to the Project Steering Committee to make decisions and corrective actions? Do the Project team and managers and PSC regularly ask for performance and results information? *Results-based reporting* o Assess how adaptive management changes have been reported by the project management and shared with the PSC. o Assess how well the Project Team and partners undertake and fulfil donor and UNIDO reporting requirements (i.e. how have they addressed delays or poor performance, if applicable?) o Assess how results and lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.
E	**Performance of partners**
1	o UNIDO o Mobilization of adequate technical expertise for project design o Inclusiveness of project design (with national counterparts) o Previous evaluative evidence shaping project design o Planning for M&E and ensuring sufficient M&E budget o Timely recruitment of project staff o Project modifications following changes in context or after the Mid-Term Review o Follow-up to address implementation bottlenecks o Role of UNIDO country presence (if applicable) supporting the project o Engagement in policy dialogue to ensure up-scaling of innovations o Coordination function o Exit strategy, planned together with the government o Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement. o To what extent the project has a proper and operational governance system (e.g. PSC with clear roles and responsibilities)? o Review whether the national management and overall coordination mechanisms have been efficient and effective? Did each partner have assigned roles and responsibilities from the beginning? Did each partner fulfil its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions)? o The UNIDO HQ-based management, coordination, monitoring, quality control and technical inputs have been efficient, timely and effective (e.g. problems identified timely and accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits)?
2	• National counterparts ✓ ***Design*** o Responsiveness to UNIDO's invitation for engagement in designing the project ✓ ***Implementation*** o Ownership of the project o Provide financial contribution as planned (cash or in-kind) o Support to the project, based on actions and policies o Counterpart funding o Internal government coordination o Exit strategy, planned together with UNIDO, or arrangements for continued funding of certain activities

#	Evaluation criteria
	o Facilitation of the participation of Non-Governmental Organizations(NGOs), civil society and the private sector where appropriate o Suitable procurement procedures for timely project implementation o Engagement with UNIDO in policy dialogue to promote the up-scaling or replication of innovations
3	• Donor ✓ Timely disbursement of project funds ✓ Feedback to progress reports, including Mid-Term Evaluation, if applicable ✓ Support by the donor's country presence (if applicable) supporting the project for example through engagement in policy dialogue
F	**Overall assessment** ✓ Overarching assessment of the project, drawing upon the analysis made under Project performance and Progress to Impact criteria above but not an average of ratings.

Annex 4: Checklist on evaluation report quality

Independent terminal evaluation of project:
Project Title: **UNIDO Project NO:**
Evaluation team leader:
Quality review done by: **Date:**

Checklist on evaluation report quality

Report quality criteria	UNIDO ODG/EVQ/IEV assessment notes	Rating
A. Was the report well-structured and properly written? (Clear language, correct grammar, clear and logical structure)		
B. Was the evaluation objective clearly stated and the methodology appropriately defined?		
C. Did the report present an assessment of relevant outcomes and achievement of project objectives?		
D. Was the report consistent with the ToR and was the evidence complete and convincing?		
E. Did the report present a sound assessment of sustainability of outcomes or did it explain why this is not (yet) possible? (Including assessment of assumptions, risks and impact drivers)		
F. Did the evidence presented support the lessons and recommendations? Are these directly based on findings?		
G. Did the report include the actual project costs (total, per activity, per source)?		
H. Did the report include an assessment of the quality of both the M&E plan at entry and the system used during the implementation? Was the M&E sufficiently budgeted for during preparation and properly funded during implementation?		
I. Quality of the lessons: were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
J. Quality of the recommendations: did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can these be immediately implemented with current resources?		
K. Are the main cross-cutting issues, such as gender, human rights and environment, appropriately covered?		
L. Was the report delivered in a timely manner? (Observance of deadlines)		

Rating system for quality of evaluation reports

A number rating 1-6 is used for each criterion: Highly satisfactory = 6, Satisfactory = 5, Moderately satisfactory = 4, Moderately unsatisfactory = 3, Unsatisfactory = 2, Highly unsatisfactory = 1, and unable to assess = 0.

Annex 5. Logical Framework

	Intervention logic	Objectively verifiable indicators	Sources of verification	Assumptions
Development goal/impact	Contribute to sustainable management of marine fisheries in the Red Sea State	Management plans in line with Maximum Sustainable Yields[24] enacted by the Red Sea State Government Fish stocks and catches monitored by the Marine Fisheries Administration and management plans adjusted according to observed changes in stocks and catches	Depository of fishery regulations issued by the Red Sea State. Annual Reports on fish stocks and landings and knowledge-based policy advice issued by the Marine Fisheries Administration.	
Outcome(s)/immediate objective(s)/	Key institutions in the Red Sea State have strengthened their capabilities (in terms of hardware, software and institutional capacities) to develop and maintain a data base on fish stocks and fish landings in the Red SeFa State	Up to date information on fish stocks and catches available in a centralized data base with the Marine Fisheries Administration 75% of staff trained report that they have been enabled to use the data base to pick-up signals about stock changes 75% of staff trained report that they have been enabled to plan surveys	Assessments by external experts. Feed-back, interviews with staff trained. Surveys/questionnaires filled in by participants after the completion of trainings.	Government of the Red Sea State provides MFA with an commensurate budget after completion of project implementation to continue the collection of data on fish stocks and catches

[24] **maximum sustainable yield** or **MSY** is theoretically, the largest yield (or catch) that can be taken from a species' stock over an indefinite period. The concept of MSY aims to maintain the population size at the point of maximum growth rate by harvesting the individuals that would normally be added to the population, allowing the population to continue to be productive indefinitely.

	Intervention logic	Objectively verifiable indicators	Sources of verification	Assumptions
Outputs	1) 4 surveys (in total 150 days at sea) implemented as an applied scientific assessment of fish stocks	30 national counterpart experts trained every year in survey techniques (planning and implementation) and in at sea/on board analysis while at sea for the collection of fishery independent data	Survey reports. Possibility to retrieve data from the web-based data base Reports on training sessions Half yearly project progress reports	Project has free access to coastal waters in the Red Sea State and can use the MFA vessel for surveys MFA will be granted the required human and financial resources to staff and operate a data management structure
	2) A web-based centralized data base of fisheries data, including total landings estimated for fish delivered to the Zigala marked and catch and effort data sampled at the three improved landing sites is operational	Physical existence and functionality of a web based centralized data base 30 national counter-parts trained in data collection, processing, analysing and interpreting	N.A	
Activities	What the project does	N.A		