



ENTRO  
**NILE BASIN INITIATIVE**  
INITIATIVE DU BASSIN DU NIL

**ENSAP Annual Report**  
**July 2022- June 2023**



ENTRO

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June 2023,  
Addis Ababa

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**Acronyms:**

CIWA	-	Cooperation in International Waters in Africa
DAS	-	Data Analytics Service
ENCOM	-	Eastern Nile Council of Ministers
ENSAP	-	Eastern Nile Subsidiary Action Program
ENSAPT	-	Eastern Nile Subsidiary Action Team
ENTRO	-	Eastern Nile Technical Regional Office
EO	-	Earth Observation
ESCP	-	Environment and Social Commitment Plan
ESCU	-	Environmental, Social and Communication Unit
FFEW	-	Flood Forecast and Early Warning
FRM	-	Flood Risk Mitigation
IKP	-	Integrated Knowledge Portal
ISM	-	Implementation Support Mission
MCA	-	Multi Criteria Analysis
MCDA	-	Multi Criteria Decision Analysis
NBD	-	Nile Basin Discourse
NCCR	-	Nile Cooperation for Climate Resilience
NELSAP-CU	-	Nile Equatorial Lakes Subsidiary Action Program Coordination Unit
NCRP	-	Regional Climate Resilient Project
SEP	-	Stakeholder Engagement Plan
TWG	-	Technical Working Group
WQ	-	Water Quality
WP	-	Work Package

## 1. Background Information

### 1.1 Program Background

#### 1.1.1. Program Standard Data

**i. Program Name:** Eastern Nile Subsidiary Action Program (ENSAP)

**ii. Ongoing Projects:**

- Nile Cooperation for Climate Resilience Project (NCCR-CIWA WB Funding support),
- NBI-Transboundary Water Resources Management Project (GIZ-EU Funding support)

**iii. Program Partners:**

- Owners:** The Governments of Egypt, Ethiopia, South Sudan and Sudan
- Development Partners:** CIWA, GIZ-EU.
- Key Stakeholders:** Communities in the EN Basin, Relevant government agencies, International Organizations, NGOs, Civil society, private sector, universities, media and others.

**iv. Duration of the program:** Continuous, however individual projects with varying start and closing dates (two to three-years duration on average)

**v. Total Current Year Program Budget:** July 2022 to June 2023 is USD 3.8 million

**vi. Program location:** ENTRO Headquarters in Addis Ababa, Ethiopia with ENSAP Project activities in the EN Countries: Egypt, Ethiopia, South Sudan and Sudan

#### 1.1.2. Program Goal and Objectives:

**Program Goal:** To develop the water resources of the Eastern Nile in sustainable and equitable way to contribute to poverty reduction and to ensure prosperity, security and peace for its entire people.

**Program Objectives:**

- Poverty reduction
- Reversal of environmental degradation
- Promotion of economic growth
- Increased regional cooperation and integration
- Enhanced regional peace and security



### **1.1.3 Key Milestones in the reporting period:**

- The 4<sup>th</sup> Strategic Plan of ENTRO (July 2022-June 2027) prepared and implementation started.
- Mid-Term Review and 5<sup>th</sup> Implementation Support Mission conducted for NCCR Project in May 2023.

### **1.2 Report Background :**

This Annual report covers the period July 2022-June 2023. It is prepared on the basis of the approved work plan and budget for July 2022-June 2023. The report includes the performance of ENSAP projects (NCCR and GIZ-EU), and overall management and coordination activities financed by Country Contribution. It consists of major activities accomplished, utilized budget, major challenges and measures taken.

The main purpose of the report is to communicate performance information on the progress of key accomplishments and budget utilization to ENTRO management, ENSAPT and other stakeholders. This report updates information about the ENSAP performance during the reporting period. It provides an overview of how the Eastern Nile Subsidiary Action Program is performing. This report is one of the key project management tools to lead the program in the right track by taking timely corrective action, if any.

## **2. Context as it affected Project implementation:**

### **2.1 External Context & effects on implementation:**

The World Bank Implementation Support Mission (ISM) in consultation with ENTRO technical staff reviews the performance of planned milestones every six months for CIWA Funding support project, NCCR. Accordingly, the 4<sup>th</sup> Implementation Support Mission was held on 31<sup>st</sup> October 2022 at ENTRO premises. ENTRO presented the status of the agreed action plans and the progress of the NCCR project activities and milestones for result indicators. This joint project review has pivotal role in creating common understanding between the financier and the client, and to take timely corrective action if any.

### **2.2 Internal Context & effects on implementation:**

The teamwork spirit which has been well developed at ENTRO has made significant contribution for efficient implementation process. It played crucial role to review consultant deliverables, developing and reviewing project TORs and project concept notes/proposals, representing ENTRO on various meetings, evaluating contract documents, reviewing technical reports and providing feedback such as (Terminal Evaluation of ENTRO Strategic Plan, 2018/22 and Preparation of new Strategic Plan, 2022/27, [Drought Gap and Need Assessment in the Nile Basin and Basin Wide Reference Dam Safety Regulatory Framework](#)), facilitating virtual meetings and providing technical and logistical support during technical meetings and workshops. The monthly meeting of ENTRO technical staff has also played crucial role in expediting the implementation process.



### 3. Actual Results:

ENTRO organized 15 trainings and consultation workshops and a total of 309 participants (14% women participants) took part.

Table 1: Trainings and Workshops organized by ENTRO, July 2022-June 2023

S.N.	Event	Venue	Date	Gender		
				M	F	Total
1.	Hands on training to young professionals on FFEW Forecasting System and modeling	ENTRO	July-Sept 2022, Dec 2022-Feb 2023	6	4	10
2.	Consultation Workshop on Drought Gap and Need Assessment in the Nile Basin	Bishoftu, Ethiopia	25 <sup>th</sup> -26 <sup>th</sup> July 2022	19	4	23
3.	EN Governance meeting conducted (ENSAPT 35 <sup>th</sup> continuation meeting and ENCOM 34 <sup>th</sup> )	Dar es Salaam, Tanzania.	17 <sup>th</sup> 18 <sup>th</sup> Aug 2022	15	1	16
4.	Inception Report review workshop on Basin wide Reference Dam Safety Regulatory Framework and Implementation Strategy	Bishoftu, Ethiopia	31 <sup>st</sup> August-1 <sup>st</sup> Sept 2022	27	5	32
5.	The 4 <sup>th</sup> World Bank Implementation Support Mission (ISM) of NCCR project conducted (31 <sup>st</sup> October 2022)	Addis Ababa, Ethiopia	31 <sup>st</sup> October 2022	13	2	15
6.	Review workshop on ENTRO Strategic Plan (SP) Terminal Evaluation, 2018/22 and Preparation of new SP, 2022-2027	Bishoftu, Ethiopia	25 <sup>th</sup> November 2022	20	1	21
7.	The 2nd Consultation Workshop on Basin Wide Reference Dam Safety Regulatory Framework	Nairobi, Kenya	13 <sup>th</sup> -14 <sup>th</sup> Dec. 2022	25	4	29
8.	ENSAPT Meeting	Bishoftu, Ethiopia	20 <sup>th</sup> -21 <sup>st</sup> Dec 2022	17	1	18
9.	EN Media Training	Khartoum, Sudan	26-28 Dec 2022	17	7	24
10.	ENCOM Meeting	Virtual	5 <sup>th</sup> January 2023	3	-	3
11.	ENSAPT Extraordinary Meeting	Virtual	14 <sup>th</sup> February 2023	11	1	12
12.	ENCOM Extra-Ordinary Meeting	Nairobi, Kenya	21 <sup>st</sup> Feb 2023	11	1	12
13.	Regional Innovative Stakeholders Forum	Juba, South Sudan	2-3 March 2023	41	9	50



14	ENSAPT Extraordinary Meeting	Juba, South Sudan	4 <sup>th</sup> March 2023	12	1	13
15.	Consultation Workshop on Water Resources Planning Modeling Tools Gap and Need Assessment	13-15 March 2023	Bahir Dar, Ethiopia	28	3	31
	<b>Total</b>			<b>265</b>	<b>44</b>	<b>309</b>

### 3.1 Results for the period:

#### Output 1.1.1. EN Cascade coordination and regulatory Framework and implementation strategy/piloting developed.

The objective of dam safety is to establish institutionalized dam safety management and coordinated operation of cascade dams, while building capacity and expertise in the sub basin. It has two components: Dam safety capacity building; and coordinated operation of cascade dams.

**Development of Basin wide reference dam safety regulatory framework and implementation strategy:** The key accomplishments are the following.

- The study is in progress; The consultant submitted inception report and Regulatory Review and Institutional Assessment of Dam Safety Management in the Nile Basin.
- The 1<sup>st</sup> stakeholder consultation workshop to review the draft inception report was conducted from 31<sup>st</sup> August-1<sup>st</sup> September 2022 in Bishoftu, Ethiopia. A total of 33 participants attended the workshop.
- The 2<sup>nd</sup> Dam safety consultation workshop, to review the draft report on Regulatory Review and Institutional Assessment of Dam Safety Management in the Nile Basin was held from 13<sup>th</sup>-14<sup>th</sup> December 2022 in Nairobi, Kenya. A total of 35 Participants attended the workshop.

**Conducting Phase III- Study on Coordinated Operation of Existing and Planned Dams in Eastern and equatorial lakes regions:** Following the consensus reached between the project financier (GIZ) and the client (ENTRO) about the project implementation approach, the project commenced in November 2022. ENTRO signed a contract amendment on 28<sup>th</sup> November 2022 with the two individual consultants to resume the project work. Revised workplan has been submitted and approved by Governance.

#### Output 1.1.2. Dam Safety Training Center established.

**Dam Safety Training Center establishment study:** ENTRO advertised three individual consultant positions in the newspaper and ENTRO's website to undertake the dam safety training center establishment study. The selection (shortlisting) of consultants completed for Training center study. Currently, implementation is not going on due to the fact that the RDSC is not on board. Implementation will resume when the RDSC joins ENTRO.





### **Output 1.3.1 EN Water Quality Study completed.**

The overall objective is to support basin member countries in identifying and prioritizing potential water quality investments that can contribute to addressing the challenges facing the water quality of the basin water systems. The Water Quality thematic area is led by NELSAP-CU.

**Water Quality (WQ) Multi-Criteria Analysis (MCA):** The main objective of the water quality project is to support the basin member countries in identifying, discussing, and prioritizing potential water quality investments that can contribute to addressing the challenges facing the water quality of the Nile Basin water systems. The expected output of this project is to create a system and practice where WQ investments have been vetted well on multiple criteria that are priorities for stakeholders and governments in the selected hotspots of the Nile Basin.

Key WQ accomplishments include the following.

- **Water Quality Information System:** Updating of the user needs including data needs, data management system needs and earth observation, and updating of the WQ design and specifications (previously prepared as part of regional Hydromet design project in 2015).
- **Development of NBI WQ Database:** in the development of the database, users need assessment was conducted to determine the needs of the potential data users. The data collection from national agencies, regional organizations, other players (academia, NGOs involved in handling WQ (including EO data), and finally established database system requirements for the database development.
- **Capacity-Building:** the preparation of capacity-building was involved in identification of beneficiaries carried out at national and regional levels. In this case, targeted knowledge exchange programs and processes were identified for implementation.
- **Fast-tracked pre-selected two hotspots for MCA (MCA Track 1):** In the fast-tracked hotspot selection processes, the procurement of two Individual Consultants was undertaken: (1) Water Quality Specialist and (2) Water Quality Modeler for carrying out Multi Criteria Analysis. In the fast-Tracked activity (Track 1), the baseline survey data collection and country consultations were conducted for the preparation of water quality baseline for the two selected water quality/pollution hotspot areas.
- **Procurement of Consultancy Services:** In the consultancy services, the Inception report was submitted, and consultation workshop conducted.
  - Preparation of WQ Baseline Report is in progress for the first fast track (Track one) selected WQ/Pollution hot spot.
  - Field Visit was conducted to the selected Water Quality Hotspot in Ethiopia (Gilgel Abbay) to collect data; Stakeholder consultations were undertaken at national level including visiting of laboratories. The data collection has been continued.

### **Output 4.2.2. Environmental and social safeguards awareness created at regional and national levels.**

Environment, Social and Communication Unit (ESCU) prepared concept notes on the assessment of Environmental and Social Impacts failure of small dams in the EN countries, and on Building the EN



Countries for Climate Financing which was submitted to the WB for approval. The unit also participated on community level stakeholder consultations in flood prone areas in Sudan. By and large, the unit has provided Social Development and Environmental inputs to ENSAPT studies (As an instance the unit contributed to preparation of Environmental and Social commitment plan (ESCP) and stakeholders' engagement plan (SEP). On top of that, ESCU participated in the preparation of Environment and Social commitment plan (ESCP), stakeholders Engagement plan (SEP) and labor management plan (LMP) of the Regional Climate Resilient Project (RCRP)

**Gender:** ENTRO organized training on gender sensitization for the 4<sup>th</sup> batch of the internship pregame. Out of the total 12 participants (3 interns and 9 ENTRO staff) were participated in gender sensitization training of whom 75% (9) were women. Gender training was also facilitated during the Innovative stakeholder's forum which was held from 2<sup>nd</sup>-3<sup>rd</sup> March 2023 in Juba, South Sudan. Out of the 50 participants, 18% (9) were women. In addition, five ENTRO staff members participated on gender training organized by NILE-SEC in Nairobi, Kenya in the third quarter if the budget year.

### **Output 5.1.1 EN Flood & Drought Protection Studies conducted (phase 2)**

The Flood and Drought Forecasting project was designed to enhance national capacity to cope with flood and drought risks by providing enhanced drought and flood forecast and early warning information services and conduct relevant capacity development for national governments leading to improved national / regional capacities to accommodate the impact of climate variability, which is the core element of climate-resilient water resources management.

**Flood Risk Mitigation:** The specific objective of the Flood Risk Mitigation sub-project is the enhancement of riverine **Flood Forecast** and Early Warning (FFEW) system for the EN region and make available the forecast and early warning information (*upon usability and monitored at community level and with relevant institutions consulted*) in public domain.

#### **Key Accomplishments - Flood Risk Mitigation:**

##### **(i) Work on "Data Status and Gap Analysis for the Eastern Nile Flood Risk Mitigation report**

ENTRO partially updated the Flood Forecasting models by expanding to the flood affected areas in the EN for South Sudan and Tekeze-Setit- Atbara (TSA) sub-basins where no prior work was done; *ENTRO produced a **Report** in April 2022 on the "Data Status and Gap Analysis for the Eastern Nile Flood Risk Mitigation (EN-FRM) Project "(Annex 2 of FRM) to be used in WP1- Flood Survey and data collection Firm consultancy work.*

The main purpose of this report is to assess data status and gap on: hydrometric, climatological, floodplain topographic and river cross-section, and socioeconomic characteristics of the communities in floodplains based on desktop study. The report identified flood prone areas (additional ones in the BAS And TSA), extent and type of datasets (e.g. terrain data) need to be collected to be used for flood forecast, and flood risk mapping; produced a guideline to assist the consultant to identify flood prone communities and their characteristics including vulnerable land use, and critical local flood protection infrastructure, such as levees and dikes, community vulnerability and preparedness; and defined flood prone survey areas and proposed method of



topographic, infrastructure survey to be used by the WP1 consultant. This report was used as an input to the Work Package I (WP1).

(ii) Flood Forecasting and Early Warning – EN-Flood Interns Engagements

ENTRO invited the Flood Management team from the Water Affair Ministries of Ethiopia, South Sudan and Sudan to conduct 2022 flood season forecast and early warning activity. Three professionals took part in the flood forecasting activity for three months, technically supported by ENTRO staff. The activities accomplished include the following:

- Rainfall Forecast for Eastern Nile Basin was conducted in three days lead time. It was conducted using numerical weather forecast model (WRF).
- The EN FFEW system is run or performed on the Cloud based forecasting to produce early warning information and disseminate in short time. Therefore, the FFEW system for Lake Tana, Blue Nile, BAS and TSA model sub-basins brings the WRF weather forecast results from the common platform to produce the flood forecasts to each model basin using MIKE models. In the forecast process, NAM hydrological model used to produce time series runoff, Mike 11 is used to route runoff along the river reach using hydrograph inputs from NAM, and Mike Operation is used to display interactive forecast results.
- Daily forecast bulletins were produced and disseminated to users in the EN region on a daily basis for the flood season of 2022. Capacity building hands-on trainings have been provided to interns on the FFEW forecast system, WRF climate model and Mike hydrological models, to the young professionals before joining from the National Flood Forecasting centers of Ethiopia, South Sudan and Sudan. The interns were giving practical daily forecasting activities.

(iii) Completing the consultancy of WP1:

WP1: Surveying and Data Collection: Procurement and contract award completed. The firms CMC in JV with MEEO launched the work on 1st February 2023 and will complete in June 2023. Inception workshop conducted virtually on 21<sup>st</sup> February 2023. The Firm continued its activities and is expected to submit draft deliverables by late June 2023. Due to the security situation in Sudan, delay occurred in the consultant activities. WP1 - Consultation and validation workshops at regional level on "Survey and data collection" will be conducted in July 2023.

(iv) Launching, follow up and completing the Consultancy of WP 2:

WP2-FFEW enhancement and Flood risk Mapping: Six firms shortlisted and invited to submit their technical and financial proposal by 13 March 2023. Five firms submitted their proposal; Evaluation of the proposals was completed and negotiation with the 1<sup>st</sup> ranked firm is done on 12 June 2023. The work is expected to start in 1<sup>st</sup> week of July 2023 to be completed in 10 months.

(v) Launching and follow up of WP 3:

WP3: Support in Establishing Flood Community Awareness and Preparedness: Six firms submitted their EOI on 8th March 2023. Contract is planned to be awarded in October 2023, waiting the WP2 major activities to advance. The consultancy work (19 months) will be finished in the next budget year (July 2024-June 2025).



#### (vi) Field Visit and Institutional Consultation

Conducting field visit to consult stakeholders at institution and community level: In the budget year (July 2022-June 2023), all planned three field visits to flood prone areas to consult communities and institutions completed namely at Ethiopia (6<sup>th</sup> –12<sup>th</sup> Nov 2022), Sudan (23<sup>rd</sup> -28<sup>th</sup> January 2023) and South Sudan (23<sup>rd</sup> -27<sup>th</sup> April 2023). Twelve institutions consulted to enhance the usability of flood information Communities also consulted in Ethiopia and South Sudan flood prone areas. The three field visit reports are at the final review stage to be distributed. The second round of the consultation will be done in this budget year (July 2023-June 2024).

**Drought Risk Mitigation:** The specific objective of the Drought Risk Mitigation sub-project is development and operationalization of a basin-wide seasonal **Drought Forecasting** / monitoring and make available the forecast and early warning information (*upon usability being monitored at community level and with relevant institutions consulted*) in public domain.

#### **Key Accomplishments - Drought Risk Mitigation:**

Concept Note (CN) developed and logistic preparation for the regional workshop is in progress on Drought Risk Mitigation which will be held from 18-19 July 2002 in Bishoftu-Addis Ababa; and seasonal (every three months) Nile drought forecasting bulletin were issued in cooperation with Nile SEC.

#### **Procurement of Firm Consultancy Service for Drought forecast upscaling Study:**

TOR finalized for firm Consultancy Service on Drought forecast upscaling Study by the Individual Consultant by 7 December 2022. The TOR was reviewed, cleared and advertised. Six firms submitted their EOI by 21 February 2023. ENTRO issued RFP for shortlisted consultants on 12 May 2023, and will receive Technical and Financial proposal by 14 July 2023. The Consultancy work is expected to start in August 2023.

#### **Output 6.2.1. Governance and Technical Meetings conducted.**

**Eastern Nile Governance meetings:** ENTRO organized EN Governance meetings (ENSAPT 35<sup>th</sup> continuation meeting and ENCOM 34<sup>th</sup>) from 17<sup>th</sup> -18<sup>th</sup> August 2022 in Dar es Salaam, Tanzania. Among others, the following issues were discussed: Resources mobilization, clearing of CC arrears, Replacement of ENTRO core positions, Recruitment of Procurement Officer, ENTRO to focus on its key mandate i.e Investment project identification and preparation, ENTRO performance report and ENTRO Annual Work Plan and Budget (2022-2023). ENCOM virtual meeting and ENCOM Extra-Ordinary Meeting were also held on 5<sup>th</sup> January 2023 and 21<sup>st</sup> February 2023 respectively. ENSAPT meetings were also held in Bishoftu, Ethiopia from 20-21 December 2022 and ENSAPT extraordinary virtual meeting on 14<sup>th</sup> February 2023.

#### **Output 6.1. 1. ENTRO WR planning/management and development capacity built.**

**ENTRO 3<sup>rd</sup> Strategic Plan Terminal Evaluation and 4<sup>th</sup> Strategic Plan (SP) Preparation:** ENTRO conducted the Terminal Evaluation of its 3<sup>rd</sup> Strategic Plan (2018/2022) and preparation of the 4<sup>th</sup> Strategic Plan (2022/2027) in consultation of key stakeholders.



ENTRO hired individual consultant, who has demonstrable experience in the Nile basin, to undertake the SP evaluation and preparation of the new SP. The terminal evaluation findings were inputted in the preparation of the new SP, 2022/27. A review workshop was organized to validate findings of the 3<sup>rd</sup> SP terminal evaluation and familiarize the critical elements of the new Strategic Plan with the key stakeholders of ENTRO. The workshop was held on 25<sup>th</sup> November 2022 at Bishoftu, Ethiopia. A total of 21 participants from the three EN countries took part.



*Group work- SP evaluation & preparation*

### **Key accomplishments of IT unit:**

- The IT team has worked with other NBI centres on information services and IKP activities to enhance NBI visibility and knowledge dissemination.
- IT services have been delivered, the Equipment and Software were procured during the reporting period. Second round of IT equipment procurement is in the process, contract signed.
- The capacity building of ENTRO IT team is progressing to ensure quality service delivery. The planned IT team capacity building training has been started. The training is being conducted in a phase-by-phase approach. IT staff have taken the first phase of the training and the second phase will start in the next budget year.

### **Output 6.1.2. EN National Office capacity built (institution: technical related)**

**EN Media Training:** The overall objective of the media training workshop is to enhance the understanding of EN journalists on existing NBI cooperation and benefits gained, information on challenges and opportunities related to Nile water resources management and development, and to communicate factual information with concerned stakeholders (NGOs, private sectors, politicians, government advisors, local communities, users of the Nile water resource etc.) so as to improve cooperation among the EN countries.

The Specific objectives of the training are to: facilitate an improved understanding by various media groups with more focus on the challenges and opportunities of water and water-related resources in the Eastern Nile sub-Basin and to convey the benefits from cooperative/development investments programs; replace perceptions with facts, while at the same time focusing on communicating technical information and knowledge to inform ongoing debates, policy dialogues, and decision making in managing and developing trans- boundary water resources and associated risks; and increase the visibility of ENTRO thru knowledge products, tools, and other resources to policymakers, different development entities and to the public.

As the upstream work for media training, Concept Note and TOR prepared and approved for the recruitment of individual consultant who facilitated the Media training. The training was conducted



from 26<sup>th</sup>-28<sup>th</sup> December 2022 in Khartoum, Sudan. A total of 24 participants took part. Of whom, 29% were women.

**Training on Information services:** Capacity-building training and overview briefing on ENTRO models and tools, knowledge products, and their applications in water resources planning and management were conducted for ENTRO interns and young professionals. The training was provided (July-September 2022) on ENPM models: Hydrological system model (ArcSWAT) and system simulation models (RiverWare, Ribasim, HEC suite, Mike Basin) and on Flood forecasting models developed at ENTRO. Detailed and focused training was facilitated for the eastern Nile flood forecasting and modeling.

### **Output 6.1.3. Participants enrolled in ENTRO Internship**

**ENTRO Internship and Young Professionals (I&YPs) Program Evaluation and Future Implementation Plan:** ENTRO hired individual consultant to carry out assessment, survey, and evaluation of the 10 years (I&YPs) program since 2011, develop future road map for the program and investigate the possibility of expanding it to other NBI centers and/or other Nile basin countries. The Internship Program Evaluation and Future Implementation Plan was completed successfully. It was undertaken from July-October 2023.

The consultant submitted the final evaluation report with the following results: High Relevance of the Program in the EN basin; program effectiveness in building capacity of more than 187 interns since 2011; improved knowledge base in the EN basin; increased visibility of ENTRO in the EN region; improved professional networking among young generation of the EN region; global experience on the Internship and Young professional program implementation; and roadmap and Recommended themes for future implementation and program sustainability.

During the reporting period, 3 Internship NCCR batches were working with ENTRO for three months each. The detail accomplishment is depicted below.

**The third batch of ENTRO Internship:** The 3<sup>rd</sup> NCCR/20<sup>th</sup> batch of Internship conducted the 2022 Flood Forecast and Early Warning Activity. It was completed as planned. A total of 3 interns from the three EN countries were working with ENTRO for three months (July-September 2022).

**The fourth batch of ENTRO Internship:** The 4<sup>th</sup> NCCR/21<sup>st</sup> batch of the Internship started as of December 2022 and completed in February 2023. Out of the four interns selected from the four EN countries, three of them were women. It was completed as per the plan. The theme that interns have been engaged was “institutional framework and State of water Governance” in the EN basin. This activity has been completed on 28<sup>th</sup> of February 2023 and interns have submitted their assessment report.

**The fifth batch of ENTRO Internship:** It was held from March-June 2023 for three months. Four interns were drawn from the four EN countries (Egypt, Ethiopia, South Sudan and Sudan). This batch of interns were engaged with the theme “**Socioeconomic and SDG6 indicators mapping**”. It was completed on 14<sup>th</sup> of June 2023.

### **Outstanding training/Field Visits/Dissemination Workshops/Conferences/support to the Interns' Project:**

Educational field visit was conducted in the Blue Nile (Abbay) Basin in Ethiopia for the 4<sup>th</sup> NCCR internship batch. During the field visit interns have gotten on-site experience with water resources infrastructure developments for hydropower, water supply and irrigation together with institutional



aspects. In addition, NBI Induction, gender sensitization and, MCDA training have been offered for this batch.

For the 5<sup>th</sup> NCCR internship batch an educational field visit was organized in the Rift Valley Lake Basin of Ethiopia. During the field activities, interns were able to acquire practical knowledge related to water resources management such as: wastewater management (e.g Hawassa Industrial Park - Zero Liquid and Dry waste technologies), wet coffee processing wastewater management, water supply, ecosystem conservation, watershed management, storm water management, and irrigation water use in the basin. Moreover, the 5<sup>th</sup> NCCR batch has gotten hands on training at ENTRO such as: NBI Induction training, EUMETCast Service for Earth Data Observation, and Muli Criteria Decision Analysis (MCDA) techniques.

**The Six batch of ENTRO Internship:** ENTRO completed the procurement process (Advertising, evaluating, awarding and contracting). The young professionals will conduct the 2023 Flood Forecast and Early Warning activities. ENTRO selected three interns one from each member country.

### **Output 6.2.3 Communication materials prepared (Newsletters, Factsheets, calendars, posters etc.)**

Communication Materials: Communicating benefits for cooperation and risks of non-cooperation is one of the key activities of platform for cooperation thematic areas. Accordingly, progress has been made in communicating benefits of Nile cooperation and risks of non-cooperation by developing communication products. Some of the communication products are listed below.

- Communication materials: - flash, mouse pad, pen, notebooks, flyers, annual calendars, quarterly newsletters etc. prepared and disseminated to stakeholders.
- Corporate communication products: NBI Annual corporate report, ENTRO annual performance report, and Country Specific Benefits of Cooperation Booklets of the three EN countries have been published and disseminated to the EN countries.

### **Output 6.2.2. Consultation workshops organized for range of stakeholders:**

**Innovative Stakeholders' Forum:** It was conducted from 2<sup>nd</sup>-3<sup>rd</sup> March 2023 in Juba South Sudan. A total of 50 participants (18% women) from different stakeholder groups including ex-diplomats, religious groups, dam operators, member of parliament attended the forum. It was facilitated by three resources persons. The Innovative stakeholder forum video is under production which will be disseminated and posted on ENTRO Website. In addition, the synthesis report of the workshop was prepared, will be posted on ENTRO website and the hard copy will also be printed and disseminated to concerned stakeholders.

### **Dam Safety workshops:**

- Stakeholder Consultation workshop was conducted to review the Draft Inception Report on dam safety regulatory framework and implementation strategy. It was held from 31<sup>st</sup> August-01<sup>st</sup> September 2022 in Bishoftu, Ethiopia. A total of 33 participants attended the workshop.
- ENTRO Regional Dam Safety Coordinator Participated in the dam safety workshop which was organized by NELSAP-CU and shared ENTRO's experience to members of the Nile Basin Dam safety working group.



- The 2<sup>nd</sup> Nile Basin Dam safety Technical Working Group consultation meeting was conducted in Dar es Salaam, Tanzania.
- The 2<sup>nd</sup> Dam safety Consultation workshop, to review the draft report on Regulatory Review and Institutional Assessment of Dam Safety Management in the Nile Basin was held 13-14 December 2022 in Nairobi, Kenya. A total of 29 Participants attended the meeting.

**Consultation Workshop on Water Resources Planning Modeling Tools Gap and Need Assessment:** It was conducted in Bahir Dar, Ethiopia from 13<sup>th</sup>-15<sup>th</sup> March 2023. A total of 31 participants took part.

**Consultation Workshop on Drought Gap and Need Assessment:** The workshop was held from 25<sup>th</sup>-26<sup>th</sup> July 2022 in Bishoftu, Ethiopia. A total of 23 participants attended the workshop (17 % were women participants). They were drawn from the NBI member countries (from Ministry of Water affairs), NELSAP-CU, NBD and ENTRO. NCCR project TTL from World Bank attended virtually. The consultation workshop was facilitated jointly by the Regional Drought and Flood Coordinator of ENTRO and the individual consultant.



The **overall objective** of the workshop was to introduce the Nile-wide Drought Risk Mitigation sub-project to the Nile Basin Flood and Drought Technical Working Group (NB-F&D-TWG), the three centers of Nile-Sec, ENTRO, NELSAP-CU, and NBD.

### **Output 6.3.1 Knowledge products produced (Models, Analytic tools, toolkits, Satellite data receiver tool, etc.)**

**Integrated Knowledge Portal (IKP):** The Nile Basin Initiative (NBI) has generated a wealth of knowledge through implementation of its programs over the past two decades. The knowledge products support the organization in water resources planning and management issues in the Nile Basin. Currently, the knowledge resources of NBI are captured in different systems developed with specific needs and scope of the projects in which they are developed. The development of the IKP portal is a joint activity by the three centers with ENTRO taking lead on matters relating to contractual implementation. The three centers set up a task team that is responsible for overseeing IKP technical and contractual obligations on behalf of NBI. In this case, users can access the IKP system which links center-specific and classified documents of interest. Each NBI center works on continuous improvements of IKP to enhance accessing the data and information packages and other knowledge products (the flood bulletins to and from the ENTRO website for instance).

**ENTRO Space Services:** ENTRO is publishing ENTRO products in the IKP system and implementation of the Electronic Archives Management system, and detail reporting plug-in to the ENTRO-Space ([Eastern Nile Technical Regional Office\(ENTRO\) \(nilebasin.org\)](http://Eastern Nile Technical Regional Office(ENTRO) (nilebasin.org))) document repository system is in progress in addition to creating awareness on use the IKP platform and upgrading of the ENTRO E-Library.

**EUMETSAT-GEONETCast Earth Observation (EO) services:** one of the important of the Group on Earth observations (GEO) tasks is to promote sharing of Earth Observation (EO) data and products

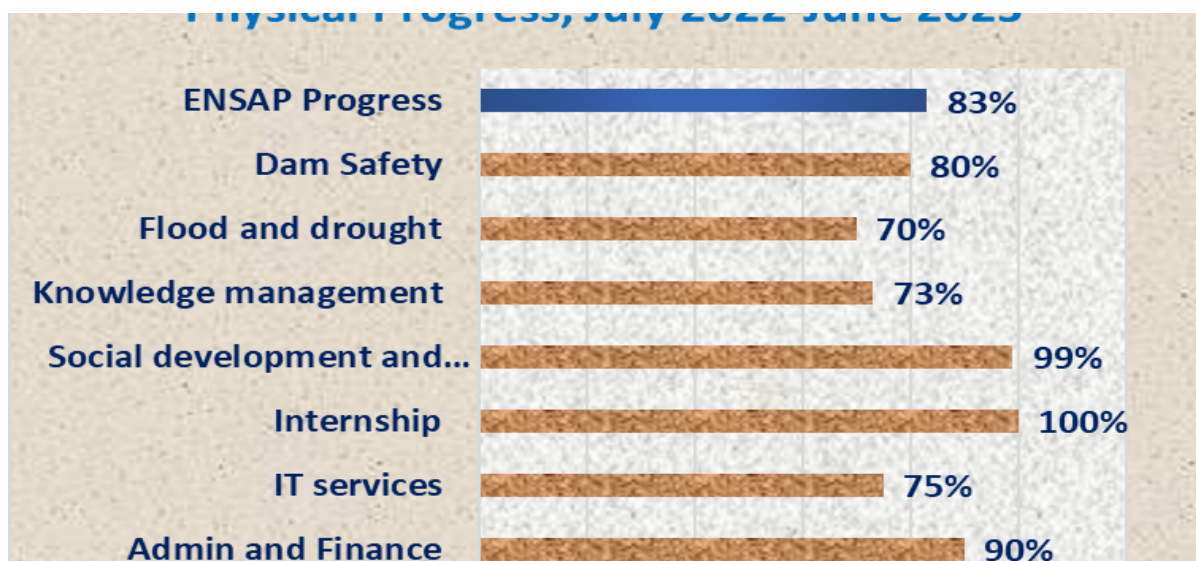




which have remarkable developments. GEONETCast delivers a wide range of EO satellite data and derived information products to a world-wide user community in near real-time with limited access to the internet. The range of products covers applications relating with weather forecasting, atmospheric composition, water resources, and land management. Based on these benefits, ENTRO installed EUMETCast services for satellite Earth Observation (EO) ground receiving station at ENTRO premises for different uses in the water resources management and development activities. These data and products will support to expand its data and analytics services (NB-DAS) for climate-resilient water resources management in the Nile Basin. Training provided to interns and ENTRO experts in the mid of April 2023).

**Needs and Gaps Assessment of Water Resource Modeling Tools:** The water resources modeling tools and knowledge products are key resources in water resource planning, management and development services. ENTRO has developed and archived the ENPM Modeling and Analytical Tools, Toolkits, Geodatabase, and knowledge products. ENTRO hired an individual consultant to conduct a need assessment and gap analysis on the existing ENPM system and develop a comprehensive Firm level TOR for the proposed development of New WRP Models, Analytical Tools, Toolkits, Geodatabase systems. Thus, Inception Report was developed, and consultation workshop was conducted (Mid of March 2023). Briefing training was also conducted on the models (such as RiverWare, RIBASIM, MikeBasin (Mike River and Mike Basin) and NB-DSS, HEC-ResSim, and SWAT models), analytical tools (simulation and scenario analysis tools (such as ENMOS, ENMCTM, etc.).

Regarding the overall ENSAP accomplishment, the Physical performance was 83% against the planned activities for the reporting period, July 2022-June 2023. The physical performance is depicted in the bar chart below by thematic area.



### **3.2 Sustainability of Results:**

The sustainability of program results is crucial. The target groups of the ENSAP should enjoy the benefits on long term basis. Enhancing the capacity of key stakeholders and creating common understanding and ownership of the program are the driving factors to sustain the program achievements/gains. To this end, a number of capacity building training workshops were facilitated at national level to strengthen the planning and implementation capacity of experts in the EN which has utmost importance to sustain the program gains/achievements. Also, the active involvement of stakeholders during consultation workshops and project study reviews has created common understanding and ownership which will impact positively the sustainability of the deliverables into the next steps.

Regarding Dam Safety, the Road Map for Coordinated Operation of Cascade Dams in EN outlined clear path in moving forward to implement standard dam safety practices and setting up coordinated operation of dams\_in EN countries. The Road Map presented a recommended plan to implement comprehensive regional program which is currently under implementation at Regional and National level. Implementing this Road Map and strengthening the National and Regional dam safety units are a key driving factor to sustain the successful achievements so far.

### **4. Program Management:**

ENTRO has continued exerting effort in coordination and management of ENSAP projects with strong teamwork culture and collaboration. Both the project holders, functional units such as Procurement, IT, M&E and Finance, and ENTRO management were closely following the implementation process of each ENSAP project. Periodic reports were prepared and reviewed to measure the program performance and take timely action. As an example, ENTRO management including with the technical staff have reviewed the performance of ENSAP projects on monthly basis. ENTRO has continued exerting effort in coordination and management of ENSAP projects with strong teamwork culture and collaboration.

Both the project holders, functional units such as IT, M&E, Procurement and Finance, and ENTRO management were closely following the implementation process of each ENSAP project thru its monthly status report meeting and reviewing periodic reports such as quarterly, mid-year and annual progress reports. On top of that, at project level, Implementation Support Mission (ISM) of WB team reviewed NCCR project status jointly with ENTRO technical staff every six months. During the reporting period, the 4<sup>th</sup> Implementation Support Mission was held on 31<sup>st</sup> October 2022, and the 5<sup>th</sup> ISM and NCCR Mid-Term Review was conducted in May 2023.

On the other hand, The Technical Working Group of each Thematic area (Flood and Drought, Water Quality, Dam Safety, etc.) has crucial role in the management of ENSAP projects. The working group acts as an advisory body and provides links to relevant national institutions, ensures counterpart support, facilitates joint agreements, and provides technical support and advice regarding implementation of each thematic area. In particular, the TWG plays key role in reviewing consultant deliverables.



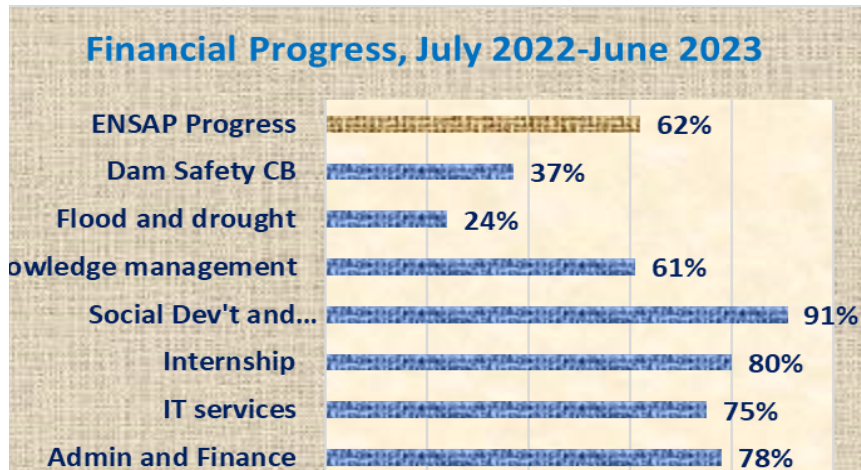
## 5. Financial Expenditure:

This budget utilization report is prepared on the basis of the approved annual work plan & budget for July 2022-June 2023. Out of the total US\$ 3.8 million annual budget, US\$ 2.35 million (62%) was utilized over the last twelve months ending 30<sup>th</sup> June 2021. The reasons for the variance between the planned and actual expenditure are described in the table below.

**Table 1 Planned Budget vis-à-vis Actual Utilization, July 2022-June 2023**

S.N.	Thematic areas	ENSAP July 2022-June 2023			Reasons for variance
		Planned Budget	Budget Utilized	% Utilized	
1	Dam Safety	669,546	247,352	37%	Delay in the recruitment of Dam Safety Coordinator
2	Flood and drought	599,500	146,655	24%	Delay in hiring the flood & Drought Consultant due to re-scheduling of WP1, 2 & WP3.
3	Knowledge management	122,000	74,851	61%	
4	IT services	677,700	510,472	75%	
5	Internship	116,300	92,633	80%	
6	Social development and communication	144,368	131,742	91%	
7	Admin and Finance	1,475,461	1,147,322	78%	
	<b>TOTAL</b>	<b>3,804,875</b>	<b>2,351,027</b>	<b>62%</b>	





## 6. Major

### Challenges and Mitigation Strategies Applied:

- Even though the IKP portal was launched, it hasn't been implemented as planned due to the shortcomings of the system. For instance, there is a limitation on dissemination of the flood forecast products (FFEW system is on Cloud server) since it is not well presented in the IKP platform. ENTRO is working closely with Nile-SEC TWG teams to fix the gaps and improve the portal for use.
- Budget was not allocated for gender, and Environmental and Social safeguards which hinders its mainstreaming to different project activities. Budget proposed in the NCCR project.
- The absence of the Regional Dam Safety Coordinator (RDSC) to properly lead and coordinate the Dam Safety Activities. In consultation with ENSAPT, it was 1<sup>st</sup> scheduled to interview candidates from 17<sup>th</sup>-18<sup>th</sup> April 2023 however due to the situation in Sudan it was not possible to conduct the interview. Finally, the interview was rescheduled and conducted from 24<sup>th</sup> -25<sup>th</sup> June 2023
- Security issues constrained to conduct field survey work in flood prone areas. Alternative survey approach has been under investigation.





ENTRO  
**NILE BASIN INITIATIVE**  
INITIATIVE DU BASSIN DU NIL

## VISION

“A credible, adaptive regional institution fostering sustainable transboundary cooperation”.

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## MISSION

“We Work to realize shared benefits of cooperative Water Resources Development and Management in the Eastern Nile”.

### ONE RIVER



### ONE PEOPLE



### ONE VISION



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