GUIDELINE

NBI - OPERATIONAL GUIDELINES FOR IMPLEMENTATION OF THE NILE BASIN INTERIM PROCEDURES FOR DATA AND INFORMATION SHARING AND EXCHANGE

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Document Control Sheet

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NILE BASIN INITIATIVE
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1. Introduction

1.1 Background

The Nile Basin Initiative (NBI) is a cooperative arrangement initiated and led by the Nile riparian countries to promote joint development, protection and management of the shared Nile water resources. NBI has a shared vision, namely, 'to promote sustainable socio¬economic development through the equitable utilization and, benefit from, the common Nile Basin water resources'. Several programs and projects are currently under varying stages of implementation under NBI that contribute towards the realization of the NBI shared vision.

Sound information is vital for sustainable development and management of water and related resources. Recognizing this, the Nile riparian countries endorsed an Interim Procedures (the Procedures) for sharing and exchange of data and information. The Interim Procedures was endorsed by the Nile Council of Ministers (Nile-COM) in July 2009.

The primary objective of the Interim Procedures is 'to facilitate, through provision of necessary data and information, the successful implementation of NBI projects and programs'. Its scope covers readily available data and information ' … on existing measures and on the condition of water and other related resources of the Nile Basin, necessary to facilitate the successful preparation and implementation of NBI projects and programs..'. Where requested data is not readily available, the Interim Procedures stipulates that, the country that has been requested to provide the data '… shall employ its best efforts to comply with the request, within a reasonable time, but may condition its compliance upon payment, by the requesting entity, of the costs of collecting and, where appropriate, processing such data or information'.

1.2 Purpose of the document

This document presents the Operational Guidelines for implementing the data sharing Interim Procedures. It primarily focuses on the workflow for accessing data from NBI countries and also those data and information under the disposal of the various NBI programs and projects that have been archived in the Regional Knowledgebase. It also lays down the procedures for data access by third-party and responsibilities of key actors under the context of data and information sharing and exchange.

This Operational Guideline is intended for use by all individuals and institutions that shall access data and information as per the Interim Procedures. Specifically, the guideline is expected to be of use by the following entities:

2. Objective of the guideline

The primary objective of this Operational Guideline is to expedite the smooth and consistent implementation of the Nile Basin Interim Procedures for data and information sharing and exchange.

3. Acronyms and Definition of terms

3.1 Acronyms

ENTRO: the Eastern Nile Technical Regional Office;
NBI: Nile Basin Initiative;
NELSAP-CU: the Nile Equatorial Lake Subsidiary Action Program Coordination Unit;
NFPI: National Focal Point Institution;

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NFP :   National Focal Person;
NILE COM: NBI Council of Ministers;
NILE SEC: NBI Secretariat;
NILE TAC: NBI Technical Advisory Committee;

3.2 Definition of Terms

Data: representations of facts, in a formalized manner, suitable for communication, interpretation or processing.

Data and information quality: attribute of data and information that describes the completeness, usefulness, accuracy and integrity of data.

Data Provider: any institution that maintains NBI programs relevant data in some form Data Requesting Entity: any institution or individual that submits a request for data and information to the Nile-Sec in accordance with the Interim Procedures

Existing measures: interventions existing before or from an earlier time;
Format: refers to the specific layout the data has been organized for end users

Forms: of data transfer refers to the media (electronic or otherwise) with which the data requested is being transferred between entities. In the case of electronic transfer of data, form of data transfer also refers to the specific electronic data format the data shall be prepared and transferred.

Information: processed and interpreted data;

Metadata: is data about data. In the context of these guidelines, metadata is defined as to constitute those pieces of information that are required to describe the data and information being transferred. Examples of such metadata include source of data, time window, unit of measurement and data quality parameters.

National institutions: within the context of these guidelines, national institutions are those institutions in NBI countries that are directly involved in the preparation and implementation of NBI programs and projects.

NBI Institutions: for the purpose of these guidelines, NBI institutions are defined as those organs of the Nile Basin Initiative that implement NBI programs and projects

Readily available data: data and information that have already been collected and archived in various formats.

Regional Knowledge base: refers to the totality of data and information held in all NBI programs and projects irrespective of the forms and formats with which these data and information are kept;

Third-Party: within the scope of this guideline, 'third party' refers to academic and research institutions, individual researchers and academicians from NBI countries, UN agencies and international finance institutions within the NBI countries.

4. Guidelines on accessing data and information from NBI countries and the Nile Basin regional knowledgebase

4.1 General Guidelines

a) Overall Coordination of Data Sharing and Exchange
I. The Nile-Sec shall serve as the coordinating mechanism for all data exchange and sharing in accordance with the Interim Procedures. Therefore, all data requests shall be addressed to the Nile-Sec;
II. All data sent in response to any request shall be addressed to the Nile-Sec.
The Nile-Sec shall forward the data received to the requesting entity
III. The Nile-Sec shall designate a focal person to handle all data sharing and exchange transactions and avail the contact details of the focal person to interested parties
IV. The Nile-Sec shall develop and maintain metadata on all available data and information within the Regional Knowledgebase and avail the same to potential users through appropriate communication media (e.g. the Nile-Information System, Nile-IS)
V. The Nile-Sec shall maintain updated archive of data transfer transactions and provide annual report on data exchange activities to the Nile-TAC
VI. In each NBI country, the National Focal Point Institution shall designate a National Focal Person who shall be responsible for coordinating the transactions of data sharing and exchange
VII. In each NBI country, all requests for accessing data and information in the Nile Basin Regional Knowledgebase by National Institutions shall be addressed to the National Focal Person of the respective country
VIII. The scope of data covered by this guideline shall be the same as the one agreed upon by NBI countries as stipulated in the Interim Procedures. Accordingly, Appendix 2 presents a non-exhaustive list of data and information types covered by this guideline.

b) Eligibility
I. Access to data and information in NBI countries as well as in the Nile Basin Regional Knowledgebase shall be granted for purposes related to the implementation of NBI programs and projects
II. Within the context of the Interim Procedures, all NBI programs and projects can be granted access to data and information in NBI countries
III. Access to the Nile Basin Regional Knowledgebase can be requested by National Institutions in NBI countries as well as other entities described in this guideline as 'Third-Party"
IV. Third-party shall be granted access to the Regional Knowledgebase for undertakings (such as studies, research), which have direct benefits to NBI programs and projects

c) Preparation and Submittal of Data Requests
I. All data requests by eligible entities shall indicate the intended purpose for which the data is requested
II. Data requests shall contain minimum set of information describing the requested data (metadata) to enable timely processing of the requests. Examples of such set of metadata are described in section of 5 of this guideline.
III. All data requests shall indicate preferred forms and formats in which the data shall be delivered
IV. All data requests shall be cleared by the designated institution before they are further processed. Table 1 provides list of designated institutions responsible for clearing data requests

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Table 1: Institutions Responsible for Clearing Data Requests

	Data request from	Request Clearing Institution
1	NBI-Shared Vision Projects	Nile-Sec
2	Projects under the Eastern Nile Subsidiary Action Program (ENSAP)	ENTRO
3	Projects under the Nile Equatorial Lakes Subsidiary Action Program (NELSAP)	NELSAP-CU
4	NBI countries	National Focal Point Institution
5	Third-Party	Nile-Sec

V.   Clearance of data requests by designated institutions (see table 1) shall consider the following criteria at a minimum:

d) Processing of requests

I.   The Nile-Sec and/or National Focal Point Institutions, upon receipt of data requests, shall acknowledge receipt of such requests to requesting entities

II.   The Nile-Sec and/or National Focal Point Institutions, after review of the requests, shall provide feedback to requesting entities. Such feedbacks shall constitute, at a minimum, whether the data request is complete or some vital information is lacking, whether or not the requested data is available and estimated period of time required for processing request and availing data requested

III.   For data that are not readily available, the National Focal Person shall advise the Nile-Sec whether such data can be collected as per the requests made and also on the arrangements that need to be made to collect, process and avail the data requested.

VI.   The Nile-Sec and/or National Focal Point Institution shall avail the requested data in a form/format that facilitates its best utilization for the intended purpose. Guidelines on forms and formats for data transfer are given in section 4.3 of this guideline.

V.   Upon receipt of the data requested, before they are forwarded to requesting entities, the Nile-Sec and National Focal Point Institution shall update their database on data transfer transactions.

VI.   The data requesting entity, upon receipt of data requested, shall, though the Nile-Sec and/or NFPI, acknowledge receipt of data and information to data providing entity. Such acknowledgements may also include feedback on completeness of the data received and any other remarks on the data received

4.2 Guidelines for data access by third-party

I.   Academic or research institutions, UN agencies and International Finance Institutions from NBI countries or with branches/offices in NBI countries can have access to the Nile Basin regional knowledgebase

II.   Third-parties, upon preparation of data request, shall clearly describe the intended purposes for which the data has been requested

III.   Access to the regional knowledgebase shall be granted based on the relevance of the intended purpose to the overall NBI objectives

4.3 Forms and formats for data transfer

I. To the extent feasible, the data providing entity shall avail the data in a form and format indicated in the data request. If this is not feasible, the data providing entity shall avail the data to data requesting entity in a form and format commonly used to archive the data by the data providing entity.

4.4 Cost of data preparation

a) Readily available data shall be availed to data requesting entities free of charge
b) Where required, the cost for preparation of data shall be borne by the data requesting entity. Such costs include those incurred to prepare photo copies of data in hard copies and shipment costs

4.5 Data quality

I. The data provider makes reasonable efforts to ensure that the data provided are accurate.
II. Where required, the data provider shall include together with any data it avails to data requesters such information as would be needed to highlight the quality of the data or specific parts thereof

4.5 Workflow for accessing data and information

4.5.1 Accessing data and information in NBI countries

The key steps for accessing data within the NBI countries in accordance with the Interim Procedures are described below.

a) **Data requesting entity prepares and submits request:** the NBI program or project requesting data prepares a new request (or update previously lodged request) and submits the request to the request clearing institution. Table 1 presents designated entities for clearing data requests

b) **Designated institution clears data request:** the designated clearing institution, upon receipt of data request, shall review the request to assess:
Provided that the above conditions are met, the designated institution clears the data request and submits the same to the Nile-Sec for further processing. If the above conditions are not fulfilled, the designated institution returns the data request to the NBI program/project requesting the data with a feedback on why the data request cannot be further processed.

c) **Nile-Sec forwards the data request to National Focal Point Institution:** the Nile-Sec, upon receiving the data request, shall archive the same for future reference and sends the request to the National Focal Point Institutions of NBI countries from the data has been requested.

d) **National Focal Point Institution Reviews and Processes Request:** the National Focal Point Institution, upon receiving the request from the Nile-Sec, shall
   a. Acknowledge receipt of request and archive the same for future reference
   b. Review the request and determine the relevant department/unit within the Focal Point Institution or other national institutions who might have the data, i.e. relevant data provider
   c. Direct the request to the relevant department within the Focal Point Institution or the relevant national providers, and estimates the time duration required to avail the requested data.
   d. Provide feedback to the Nile-Sec on the time required to prepare and avail the data
   e. Follow up the data preparation and, when ready, avail the data to the Nile-Sec
   f. If the data request cannot be further processed due to lack of major information required for processing the request or some other reason, the National Focal Point Institution shall

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provide feedback to the Nile-Sec on the specific reason as to why the data request cannot be processed

g. If the data requested or part thereof is not readily available, the National Focal Point Institution shall:

   a) Clearly indicate which part of the requested data is not readily available

   b) Advise the Nile-Sec on the possible arrangements for collecting, processing and availing the requested data

e) Nile-Sec forwards response from National Focal Point Institution to requesting NBI program/project: upon receiving the data from the National Focal Point Institution, the Nile-Sec shall

   a. Acknowledge receipt of the data sent by the National Focal Point Institution

   b. Forward the data received to the data requesting NBI program/project

If the data requested (or parts thereof) is not readily available or cannot be processed further, the Nile-Sec shall provide the feedback received from the National Focal Point Institution to the data requesting entity.

f) Data requesting program/project updates the Regional Knowledgebase: the data requesting NBI program/project, upon receipt of the response to its data request shall:

   a. If the data requested (or parts thereof) are received, inspect the data received, update its database with the data received and acknowledge receipt of data to the Nile-Sec

   b. If the data requested (or parts thereof) are not received, as per the feedback received, update its requests and resubmit the same or work on arrangements for the collection of non-readily available data

4.5.2 Accessing data and information in the Nile Basin Regional Knowledgebase by NBI countries

The Nile Basin Regional Knowledgebase can be accessed by eligible National Institutions and third-party as described earlier in this guideline. The key steps that shall be followed to access the Regional Knowledgebase by National Institutions are described below:

   a) **Data requesting entity prepares and submits request:** the eligible National Institution requesting data prepares a new request (or update previously lodged request) and submits the request to the National Focal Point Institution for clearance and further processing.

   b) **National Focal Point Institution clears data request:** upon receipt of data request, the NFPI shall review the request to assess:

   a. If the data request is relevant to intended purpose for which it is requested

   b. If the data request is complete and no vital information lacking that makes processing of the request no possible

Provided that the above conditions are met, the NFPI clears the data request and submits the same to the Nile-Sec for further processing. If the above conditions are not fulfilled, the NFPI returns the data request to the National Institution requesting the data with a feedback on why the data request cannot be further processed.

   c) **Nile-Sec forwards the data request to Relevant NBI Institution:** the Nile-Sec, upon receiving the data request, shall archive the same for future reference and sends the request to the relevant NBI Institution that holds the data requested.

   d) **NBI Institution Reviews and Processes Request:** the NBI Institution, upon receiving the request from the Nile-Sec, shall

   e) **Nile-Sec forwards response to National Focal Point Institution:** upon receiving the data from the NBI Institution, the Nile-Sec shall

a. Acknowledge receipt of the data sent by the NBI Institution

b. Forward the data received to the data requesting NFPI

If the data requested (or parts thereof) is not readily available or cannot be processed further, the Nile-Sec shall provide the feedback on the same to the National Focal Point Institution.

f) **Data and/or feedback received by data requesting National Focal Point Institution:** the NFPI, upon receipt of the response to its data request shall:

a. If the data requested (or parts thereof) are received, inspect the data received, update its database on the transactions of data transfer and acknowledge receipt of data to the Nile-Sec

b. Forward the data received to the requesting National Institution together with any feedback received from the Nile-Sec

c. If the data requested (or parts thereof) could not be availed due to incomplete request description, advise the data requesting National Institution to update its data request with the information required and resubmit the request

g) **Data/or feedback received by data requesting National Institution:** the data requesting National Institution, upon receipt of the data and/or feedback from the NFPI:

a. If the data requested (or parts thereof) are received, inspect the data received acknowledge receipt of data to the NFPI

b. If required, update the request as the per feedback from the NFPI and resubmit its request

4.5.3 Accessing data and information in the Nile Basin Regional Knowledgebase by Third-Party

The key steps that shall be followed to access the Regional Knowledgebase by Third-Party are described below:

a) **Data requesting entity prepares and submits request:** the eligible Third-Party requesting data prepares a new request (or update previously lodged request) and submits the request to the Nile-Sec for clearance and further processing.

b) **Nile-Sec clears data request:** upon receipt of data request, shall archive the same for future reference, and shall review the request to assess:

a. If the data request is relevant to intended purpose for which it is requested

b. If the data request is complete and no vital information lacking that makes processing of the request no possible

c. If the data s available within the Nile Basin Regional Knowledgebase

Provided that the above conditions are met, the Nile-Sec clears the data request and forwards the request relevant NBI Institution that holds the data requested. If the above conditions are not fulfilled, the Nile-Sec returns the data request to the requesting Third-Party with a feedback as to why the data request cannot be further processed.

c) **Nile-Sec forwards the data request to Relevant NBI Institution:** the Nile-Sec, upon clearing the data request, sends the request to the relevant NBI Institution that holds the data requested.

d) **NBI Institution Reviews and Processes Request:** the NBI Institution, upon receiving the request from the Nile-Sec, shall

a. Acknowledge receipt of request and archive the same for future reference

e) **Nile-Sec forwards response to data requesting Third-Party:** upon receiving the data from the NBI Institution, the Nile-Sec shall

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      a.   Acknowledge receipt of the data sent by the NBI Institution

      b.   Forward the data received to the data requesting Third-Party

If the data requested (or parts thereof) is not readily available or cannot be processed further, the Nile-Sec shall provide the feedback on the same to the data requesting Third-Party.

f) **Data/or feedback received by data requesting National Institution:** the data requesting Third-Party, upon receipt of the data and/or feedback from the Nile-Sec:

      a.   If the data requested (or parts thereof) are received, inspect the data received acknowledge receipt of data to the Nile-Sec

      b.   If required, update the request as the per feedback from the Nile-Sec and resubmit its request

4.6 Indicative Processing Times

Table 2 presents indicative processing times and relevant forms to be filled as part of the data transfer transaction.

Table 2: Relevant Forms and Indicative Processing Times for Key Steps

No. Key Steps in the process	Forms to be filled	Indicative Duration (Business Days)
1 Prepare request	**Form 1**: Data request **Form 2**: Details of data requested	**Variable**
2 Acknowledge receipt of request		**1**
3 Clear and approve request		**3**
4 Inspect data and provide feedback on completeness of request and estimated time for providing data		**2**
5 Process request and provide data/information		**10**
6 Acknowledge receipt of data and provide feed back on data received		**3**

5. Minimum metadata

For smooth and efficient processing of data requests, all data requests shall include minimum set of information about the data requested, i.e. metadata. Appendix 2 provides minimum set of metadata for different categories of data.

6. Templates for data request

Data requesting and providing entities shall fill out specific sections of appropriate forms provided in Appendix 2 to provide information that shall facilitate the processing of requests and utilization of the data availed.

7. Appendices

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Appendix 1: Flow charts of data request processing

Figure A1: Flow chart for accessing data in NBI countries by NBI programs and projects
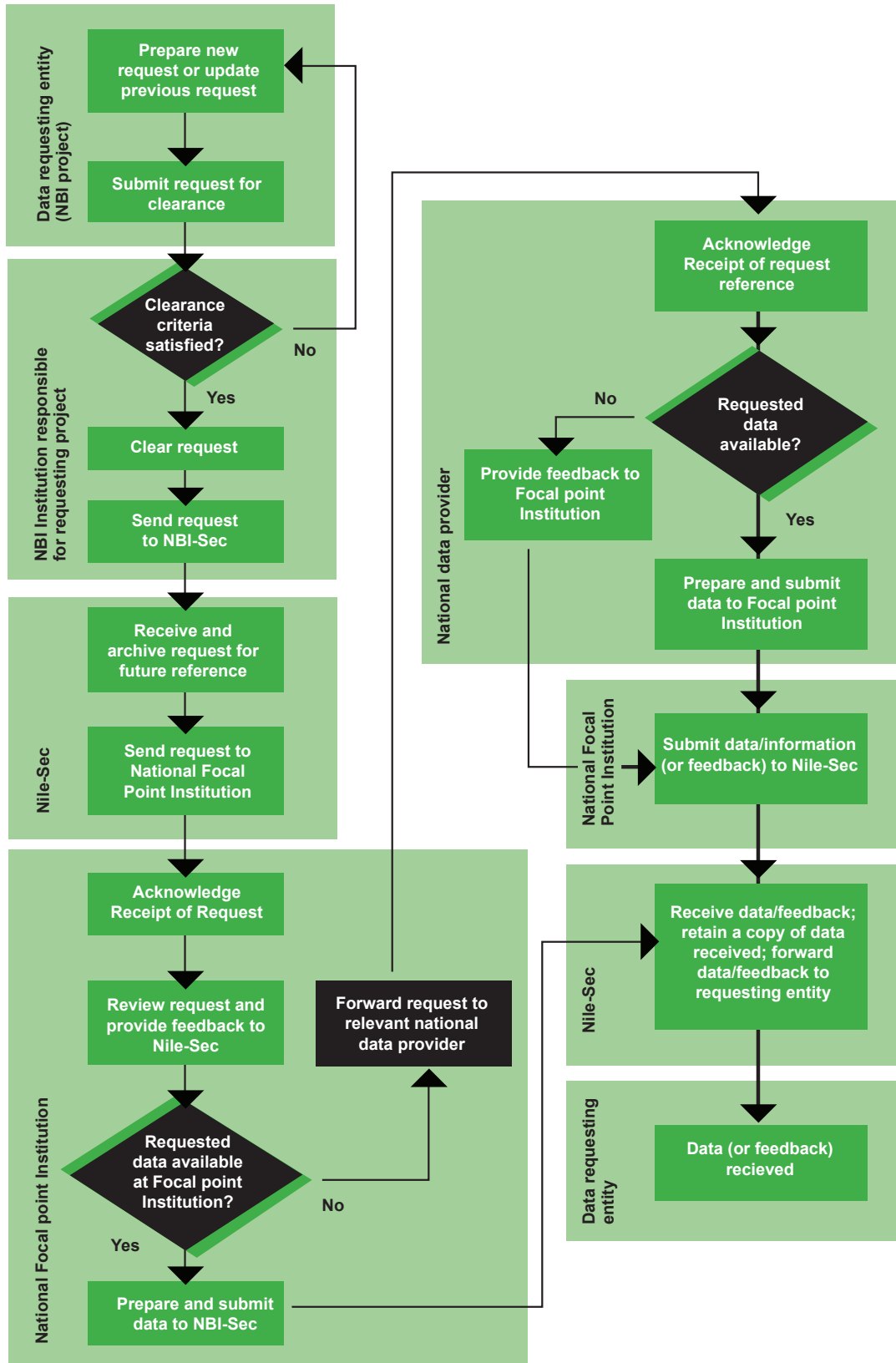
Figure A2: Flow chart for accessing data in the Nile Basin Regional Knowledge base by NBI countries

Data requesting entity
- Prepare new request or update previous request
- Submit request for clearance

National Focal Point Institution
- Clearance criteria satisfied?
  - No
  - Yes
- Clear request
- Send request to NBI-Sec

Nile-Sec
- Acknowledge receipt; archive request for future reference
- Send request to Relevant NBI Institution

NBI Institution maintaining requested data
- Acknowledge Receipt of request
- Clear request
- Requested data available?
  - No
  - Yes
- Provide feedback to Nile-Sec
- Prepare and submit data to Nile - Sec

Nile-Sec
- Receive data/feedback; retain a copy of data received; forward data/feedback to requesting entity

Data requesting entity
- Data (and / or feedback) recieved

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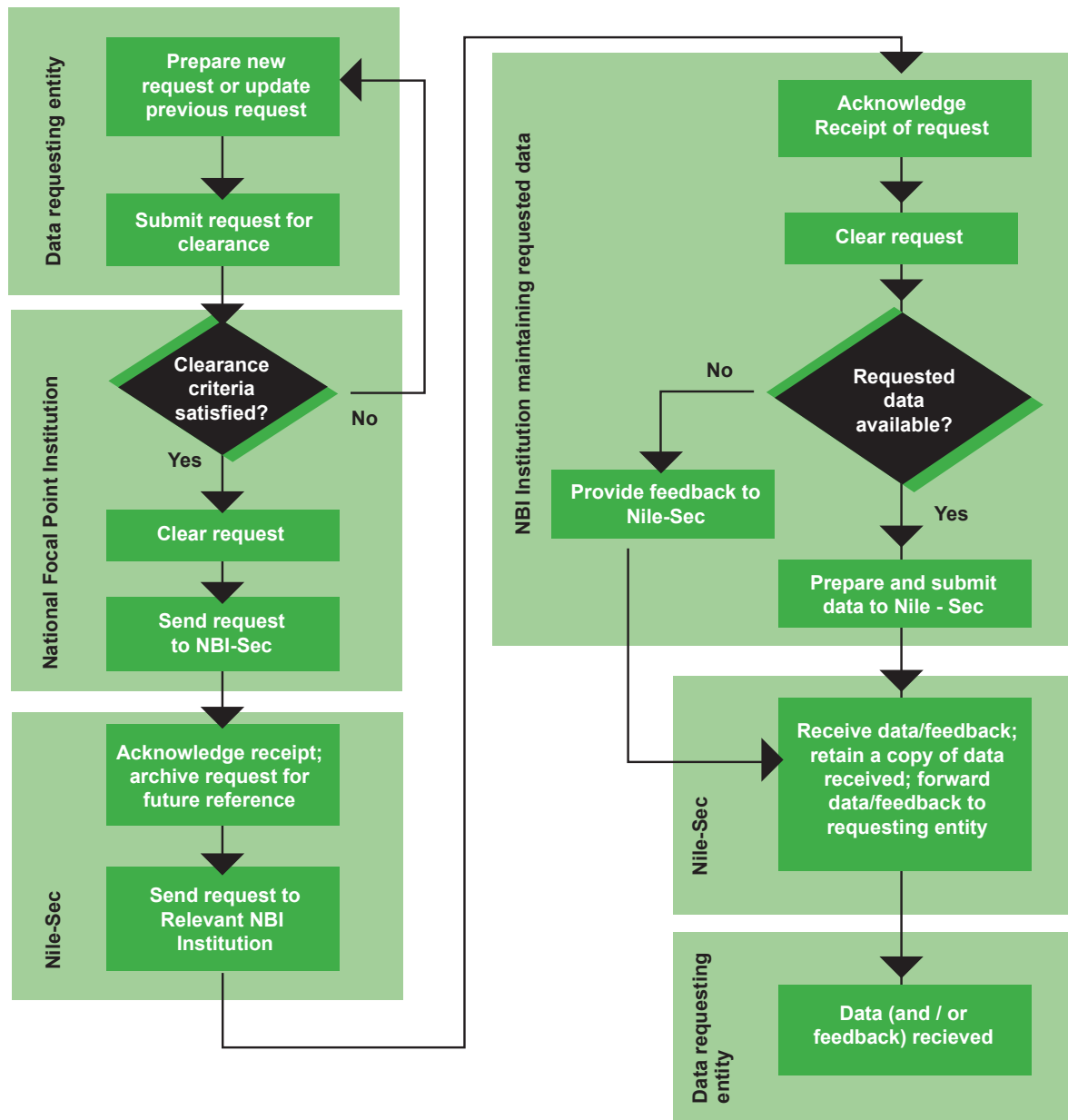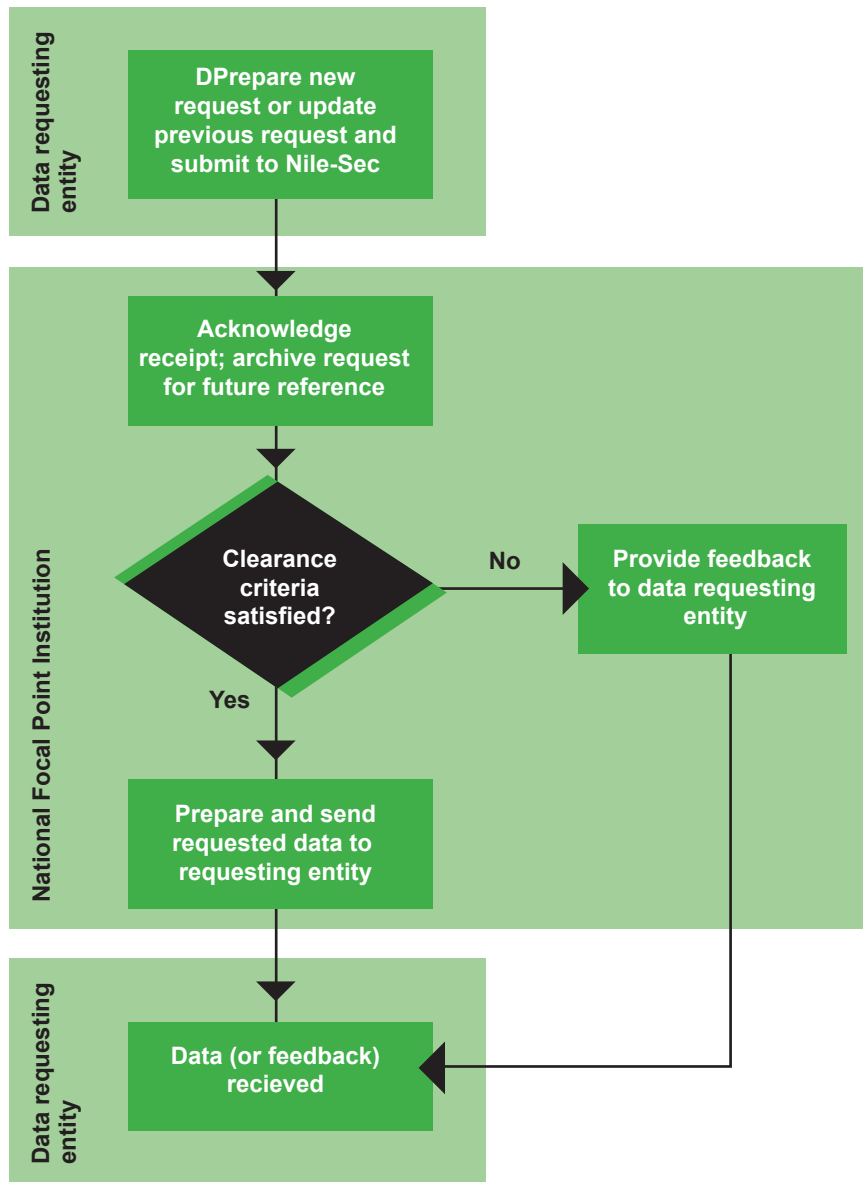**Figure A3:** Flow chart for accessing data in the Nile Basin Regional Knowledge base by Third-Party

Appendix 2: Detailed thematic categories of data and minimum metadata requirements Table A2-1: Water Resources Data

	Category No Data Category	Minimum set of Metadata required to describe data for data transfer
1	**Hydrological Data:**	• Location of measurement point (preferably as geographic coordinates); • Time of measurement -Unit -Whether measurement is instantaneous or average over a period -Explanation of any of symbols (such as those used to flag missing records)
	Specific types of data under category	**Additional Metadata**
1.01	Water level in a watercourse, relative to specified datum	
1.02	Discharge in a watercourse	
1.03	Ground water level of a bore, relative to specified datum	
1.04	The electrical conductivity of a water sample collected above the tidal limit of the watercourse	
1.05	The electrical conductivity of a ground water sample collected above the tidal limit of the watercourse	
1.06	The total suspended solids concentration of a water sample collected above the tidal limit of a watercourse	
1.07	The turbidity of a water sample collected above the tidal limit of a watercourse	
1.08	The total phosphorus concentration of a water sample collected above the tidal limit of a watercourse	
1.09	The total nitrogen concentration of a water sample collected above the tidal limit of a watercourse	
1.10	The pH of a water sample collected above the tidal limit of a watercourse	
1.11	The temperature of a water sample collected above the tidal limit of a watercourse	
1.12	Tables that enable the derivation of volumetric flow from water level or stage height	

	Category No Data Category	Minimum set of Metadata required to describe data for data transfer
2	**Meteorological data:**	• Location of measurement point (preferably as geographic coordinates); -Date and Time of measurement -Unit -Whether measurement is instantaneous or average over a period -Explanation of any of symbols (such as those used to flag missing records)
	Specific types of data under category	**Additional Metadata**
2.01	Accumulated precipitation depth for a specified time interval	
2.02	Wind speed , wind direction, and wind run	
2.03	Total daily evaporation	• Type of evaporimeter used -Start and finish times of observation
2.04	Sunshine duration	
2.05	Global solar irradiance	
2.06	Instantaneous dry-bulb air temperature	
2.07	Instantaneous wet-bulb air temperature	
2.08	The instantaneous relative humidity	
2.09	The instantaneous vapour pressure deficit	

	Category No Data Category	Minimum set of Metadata required to describe data for data transfer
3	**Water Demand and Use**	• Unit of measurement -Start and Finish times of observation -Dates of observations
	Specific types of data under category	**Additional Metadata**
3.01	The total monthly volume of water supplied to individual irrigators in an irrigation network	• Name and location of irrigation network ;
3.02	The total daily volume of water returned to a watercourse from an irrigation network	• Name and location of irrigation network -Location of return flow into watercourse;
3.03	The total daily volume of water supplied to all irrigators in an irrigation network	• Name and location of irrigation network ;
3.04	The total weekly volume of water taken from surface water	• Name of river -Location of withdrawal point(s):
3.05	The total weekly volume of water taken from ground water	• Name (or identification) of ground water well -Location of withdrawal point(s):
3.06	The total weekly volume of residential water supplied	• Name and location of the residential demand center
3.07	The total weekly volume of commercial, municipal and industrial water supplied	• Name and location of the urban demand center
3.08	The total weekly volume of urban water supplied	• Name and location of the urban demand center

	Category No Data Category	Minimum set of Metadata required to describe data for data transfer
4	**Water infrastructure: minimum Minimum information required to be included in any data transfer:**	• Name and location of storage -Unit of measurement -Start and finish times of observation
4.01	Rating tables for the surface area and storage volume derivation of major storages	
4.02	Level of water held in a storage, reletive to a specified datum	
4.03	Volume of water held in a storage	
4.04	Total daily volume of water released from a storage to a watercourse	

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Table A2-2: Socio-economic Data

B. Socio¬economic Data

	Category No Data Category	Minimum set of Metadata required to describe data for data transfer
1	**Socio-Economic Profile**	● Country and specific georgaphic region for which data applies; -Date stamp of information -Method of data acquistion: from Primary data or from Seconday sources
	Specific types of data under category	**Additional Metadata**
1.01	Basic Demographic Characteristics	
1.011	Population Size and Structure	
1.012	Sex Ratio	
1.013	Dependency Ratio	
1.014	Place of Residence	
1.015	Population Density	
1.016	Mortality	
1.017	Ethnic and Religious Composition	
1.018	Marital Status	
1.02	Gender related	
1.021	Female Literacy	
1.022	Female Enrollment Rates	
1.023	Age at First Marriage and Birth	
1.024	Female Employment Status	
1.03	Education	
1.031	Adult literacy rate	
1.032	Enrolment ratio: primary education	
1.033	Enrolment ratio: secondary education	
1.034	Student¬Teacher Ratio	
1.035	Enrollment Rates	
1.036	School drop our rate :primary education	
1.037	Gender Parity index: primary education	
1.038	Town or Cities with University/College	
1.04	Health	
1.041	Life expectancy	
1.042	Infant mortality rate	
1.043	Maternal mortality rate	
1.044	Child malnutrition: severely wasted	
1.045	Child malnutrition: severely Stunted	
1.046	Birth attended by skilled personnel	
1.047	HIV/AIDS	
1.048	Livestock Diseases	
1.05	Administrative States/Settlement Pattern /Accessibility	
2	**Economy/Poverty**	● **Country and specific georgaphic region for which data applies;** **-Date stamp of information -Method of data acquistion:** **from Primary data or from Seconday sources**
	Specific types of data under category	**Additional Metadata**
2.01	Basic economic Indicators	
2.011	Poverty head count index	
2.012	Access to safe water	
2.013	Access to improved sanitation	
2.014	Unemployment Rate	
2.015	Underemployment	
2.016	Secondary Employment	
2.017	Welfare and Poverty Situation	
2.018	Vulnerability indicators	
2.019	Indicator of Poverty	
2.02	Food Security and the Demand for Food	
2.021	Human Development Index	
2.022	Restriction and Access to Resources	
3	**Social Infrastructures**	● **Country and specific georgaphic region for which data applies;** **-Date stamp of information -Method of data acquistion:** **from Primary data or from Seconday sources**
	Specific types of data under category	**Additional Metadata**
3.01	Public Use Infrastructures	
3.011	School Services	
3.012	Health Services hospitals/Clinics	
3.013	Communications	
3.014	Roads and Transport facilities	
3.015	Access Road Conditions	
3.016	Access to Health Facilities	
3.017	Water Supply and Sanitation	
3.018	Drinking Water Supply Services	
3.019	Wastewater Treatment Systems	
3.02	Institutions /Programs/Projects	
3.021	Government Sponsored Programs/Projects	

Table A2-3: Natural Resources

	Category No Data Category	Minimum set of Metadata required to describe data for data transfer	
		Digital	**Printed**
1	**Geospatial Data -Thematic**	-Spatial coverage/extent; -Date; coordinate system	-location; -name or map code; -date; map scale
		Additional Metadata	
	Specific types of data under category	**Digital**	**Printed**
1.1	Land Use/Land Cover (LULC)	original acquisition date of primary input data, legend, resolutions (spatial and temporal), classification methodology (FAO, national or other), accuracy and validation statement, data release version, copy right	legend, accuracy statement, map serious number
1.1.1	Cultivation -Irrigation		
1.1.2	Cultivation -Rainfed		
1.1.3	Vegetation -annual		
1.1.4	Vegetation -perennial		
1.1.5	Bare lands Artificial surface		
1.1.6			
1.1.7	Water bodies		
1.2	Biodiversity	original acquisition date of primary input data, ground survey date, coordinate system, data release version	Scale, legend, Map production date, data survey date, update history
1.2.1	Wildlife distribution	Wild animals count date	Wild animals count date
1.2.2	Wild animal habitat	type, classification type	type, classification type
1.2.3	Wetlands	seasonal history	seasonal history
1.2.4	Parks and protected areas	type of protected area, name, legal status, designation date	type of protected area, name, legal status,
1.2.5	Natural Fauna	protection status (if relevant)	designation date
1.3	Soil	spatial coverage/location & extent, map scale, full legend, acquisition date of primary input data	protection status (if relevant) Scale of map, scale of the input/primary source map
1.3.1	Class	classification method (FAO/USAD)	classification method (FAO/USAD)
1.3.2	Unit	classification method (FAO/USAD)	classification method (FAO/USAD)
1.3.3	texture	class description	class description
1.4	Atmosphere	spatial coverage/location & extent, acquisition date of primary input data, duration of phenomena, coordinate system	
1.4.1	cloud cover		
1.4.2			
1.5	Climate	spatial coverage/location & extent, spatial and temporal resoultion, legend, acquisition date of primary input data, duration of phenomena coordinate system, interpolation methodology used if it is relevant	mapping methods, interpolation techniques used, description of iso-lines
1.5.1	Precipitation		
1.5.2	Temperature		
1.6	Topography		
1.6.1	Elevation		
1.6.2	Slope		contour interval
1.6.3	Slope length		slope class description
1.6.4	Bathymetry		

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Table A2-3: Natural Resources(Continued

Category Number	Data Category	Minimum set of Metadata required to describe data for data transfer	
1.7	Environment		
1.7.1	Climate change		mapping method, time interval.
1.7.2	Erosion	Type of erosion	
1.7.3	Land degradation	Start and end period for the change detection	
1.7.4	Land slide		
1.7.5	Pullution	Survey date, interpolation technique used	
1.7.6	Waste disposal and treatment		
1.7.7	Pollution		
1.7.8	Eco-regions		
1.8	Geology and Mineral resources	Spatial coverage/location & extent, map scale, full legend, acquisition date of primary input data, ground survey date, data release version	
1.8.1	Geology		
1.8.2	Mineral resources		
1.8.3	Oil and Gas		
1.8.4	Ores		
1.8.5	Oil wells		
1.8.6	Mineral or Oil exploration		
1.8.7	Mineral or Oil concessin areas		
1.9	Administrative and Political boundary	Spatial coverage/location & extent, map scale, administrative hierachy, Legal status, spatial data distribution right.	
1.9.1	National		
1.9.2	Regional		
1.9.3	Local		
1.9.4	Settlement		
1.10	Socio-economy	Spatial coverage of mapping unit / administration unit, survey year/month,map scale for printed atlases, coordinate system for georeferenced digital data, full legend, data distribution right.	
1.10.1	Economic activities		
1.10.2	Employment		
1.10.3	Tourism		
1.11	Health	Location of services, category/hierach of services, status of facilities,exact survey period, update history.	
1.11.1	Health care facilities		
1.11.2	Hygiene		
1.11.3	Health gap		
1.12	Infrastructure		
1.12.1	Transport network		
1.12.2	Telecommunication networks		
2.	Geospatial Data - Primary Data	Location; Spatial coverage/extent; - date	
2.1	Satelite Imagery	Row/path, resolution, rectification methodology when applicable, sensor name and type, number of bands and banmd interval	
2.2	Aerial photography	Lat/lon coordinates of the four corner, rectification history, flight history	
2.3	GPS or Surveying data	Exact surveying date, description of data	

Appendix 3: data request forms

Nile Basin Initiative

Form 1: Data Request Form

1. Date and Reference

Date of Request		Request Reference No.	
Date of request received by Nile-Sec		Request Approval: data approval and signature	

2. Information on Data Requester

Name and Address of Organization:	Name:	
	Physical Address:	
Name and Address of Contact person:	Name:	
	Tel:	Fax:
	Email:	Physical Address:

3. Details on Data Requested

Purpose for which data is requested (use attachments if needed).	
For requests from NBI institutions, provide the title of NBI program/project for which the data is requested	

Operational Guidelines for Implementation of
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Information Sharing and Exchange

Appendix 3: data request forms

Nile Basin Initiative

Form 1: Details of Requested data

1.   **Reference**

Name of Data Requester		Request reference No.	
Date of request			

2.   **Types of data requested**

2.1   **Hydro meteorological data**

No	Type of data requested	Location			Time step (daily, monthly, instantaneous, etc)	Time Window		For use by data provider
		Lat	Long	Sub-basin or watershed name		Start date	End date	Data availability (Indicate the availability of data)
1	**Hydrological**							
	-List specific data requested here,							
2	**Meteorological**							
	-List specific data requested here,							
3	**Water Demand & Use Pattern**							
	-List specific data requested here,							
4	**Data on water infrastructure**							
	-List specific data requested here,							
5	**Any other water resources data requested**							
	-List specific data requested here,							

Appendix 3: data request forms

Nile Basin Initiative

Form 1: Details of Requested data

1. **Reference**

Name of Data Requester		Request reference No.	
Date of request			

2.2 **Socio-economic data**

No	Data Category	Sub-basin and/or geographic region	Date of publication or observation	For use by data provider. Data availability (Indicate the availability of data)
1	**Socio-economic Profile and related**			
	-List specific data requested here,			
2	**Economy/Poverty and related**			
	-List specific data requested here,			
3	**Social Infrastructures and related**			
	-List specific data requested here,			

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Appendix 3: data request forms

Nile Basin Initiative

Form 1: Details of Requested data

1. **Reference**

Name of Data Requester		Request reference No.	
Date of request			

2.3 **Natural Resources**

No	Data Category	Sub-basin and/or geographic region; or geographic coordinates	Date of publication or observation	For use by data provider. Data availability (Indicate the availability of data)
1	**Biology and Ecology**			
	-List specific data requested here,			
2	**Agriculture related**			
	-List specific data requested here,			
3	**Topography**			
	-List specific data requested here,			
4	**Other data**			

Photo: Shutterstock

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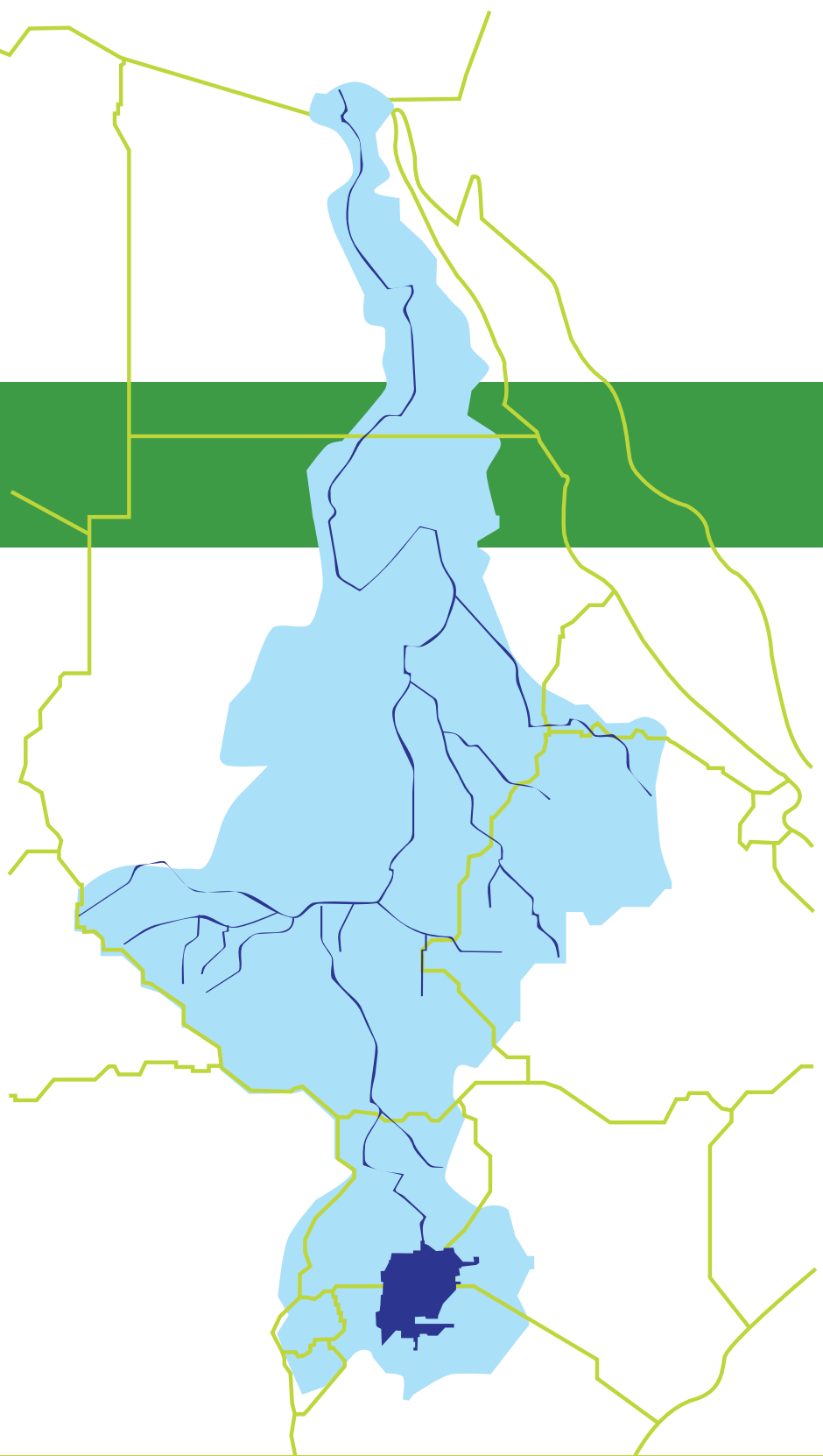
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NBI MEMBER STATES

Burundi   DR Congo   Egypt   Ethiopia   Kenya   Rwanda   South Sudan   The Sudan   Tanzania   Uganda

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