

UGANDA WATER ACCOUNTS REPORT答


# UGANDA BUREAU OF STATISTICS 

System of Environmental Economic Accounting

2017 to 2020 Water accounts Report

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## FOREWORD

The Uganda water accounts are one of the environmental-economic accounts produced by Uganda Bureau of Statistics (UBOS). The accounts compiled in accordance with the System of Environmental Economic Accounting (SEEA) and the SEEA-Water which was elevated to an international statistical standard in 2012. These accounts extend the boundaries of the System of National Accounts (SNA) framework to include environmental resources, which occur outside the economic production and asset boundaries measured by the SNA.

The accounts integrate data from different sources into a consolidated information set making it possible to link physical data on water to economic data. It consists of supply and use tables for both physical and monetary volumes. Water supply and use tables provide a framework to link core components of the National Accounts to physical information.

The physical water supply and use tables present aggregates of all available physical data (cubic metres) in terms of the supply and use of water within the economy for the accounting period. The tables illustrate the economic use of water and include: flows from the environment, own abstraction, water distribution, use of water (intermediate consumption), reuse/return flows and flows to the rest of the world.

The monetary supply and use tables which present aggregates of all available quantitative monetary data in terms of the supply and use of water within the economy are not presented in this report. They illustrate the economic transactions associated with the supply and use of water and the provision of sewerage, drainage and waste services.

The scope of the water accounts is limited to distributed water, reuse water and waste water, sewerage and drainage services. Distributed water is subdivided into; urban distributed water; rural distributed water; and bulk water (both urban and rural) according to National Water and Sewerage Corporation.

Data for the water accounts is sourced from a range of UBOS surveys, water authorities, and industries.

We appeal to the policy makers and general public to put to good use these accounts for informed decision making.


## Table of Contents

FOREWORD ..... ii
List of Tables ..... iv
List of Figures ..... v
List of Acronyms ..... vi
Executive summary. ..... vii
1.0 INTRODUCTION ..... 1
1.1 Physical Supply and Use Tables ..... 1
1.2 Scope ..... 1
1.3 Coverage ..... 1
1.4 Monetary Supply and Use ..... 2
2.0 PHYSICAL WATER SUPPLY AND USE, 2017 to 2020 ..... 4
2.1 Water Abstraction by Water Source ..... 5
2.2 Water Abstraction by Purpose ..... 7
2.3 Water Abstraction by Economic Activity ..... 7
2.4 Water Supply by Economic Activity ..... 9
2.5 Water Use by Economic Activity ..... 10
2.6 Water Consumption ..... 12
3.0 ECONOMIC PROFILES FOR WATER ..... 14
3.1 Water Productivity ..... 14
3.2 Water Use Efficiency (WUE) ..... 15
4.0 THE DERIVED AGGREGATES AND INDICATORS ..... 18
4.1 Water Consumption and Water Productivity ..... 19
4.2 Water Use Efficiency (WUE) ..... 19
4.3 Water Consumption and Use Per Capita. ..... 20
4.4 Water Consumption and Use per Household per Day ..... 21
Glossary ..... 22
Appendix 1A: 2017 Physical Supply Table for Water Accounts, '000 cubic metres ..... 25
Appendix 1B: 2017 Physical Use Table for Water Accounts, "000 cubic metres ..... 26
Appendix 2A: 2018 Physical Supply Table for Water Accounts, '000 cubic metres ..... 27
Appendix 2B: 2018 Physical Use Table for Water Accounts, "000 cubic metres ..... 28
Appendix 3A: 2019 Physical Supply Table for Water Accounts, '000 cubic metres ..... 29
Appendix 3B: 2019 Physical Use Table for Water Accounts, "000 cubic metres ..... 30
Appendix 4A: 2020 Physical Supply Table for Water Accounts, '000 cubic metres ..... 31
Appendix 4B: 2020 Physical Use Table for Water Accounts, "000 cubic metres ..... 32

## List of Tables

Table 1: Summary of Physical Supply and Use of Water (thousand cubic metres)..................................... 5
Table 2: Summary of Water abstracted by water resource and purpose (thousand cubic metres).............. 6
Table 3: Water Abstraction by Economic Activity (thousand cubic metres)................................................. 8
Table 4: Water Supply by Economic Activity (thousand cubic metres)..................................................... 10
Table 5: Water Use by Economic Activity (thousand cubic metres) .......................................................... 11
Table 6: Water Consumption by Economic Activity (thousand cubic metres)........................................... 13
Table 7: Water productivity by Economic Activity - Uganda Shillings ....................................................... 15
Table 8: Water Use Efficiency (WUE) by Economic Activity - UGX.......................................................... 17

## List of Figures

Figure 1: Water Consumption and Water Productivity ..... 19
Figure 2: Water Use Efficiency ..... 20
Figure 3: Water Consumption and Use and Use Per Capita ..... 20
Figure 4: Water Consumption and Use per Household per Day ..... 21

## List of Acronyms

| DWD | Directorate for Water Development |
| :---: | :---: |
| DWRM | Directorate for Water Resource Management |
| GDP | Gross Domestic Product |
| HEP | Hydro Electricity Power |
| UBOS | Uganda Bureau of Statistics |
| MDA | Ministries, Departments and Agencies |
| MWE | Ministry of Water and Environment |
| NFA | National Forestry Authority |
| NPISH | Non Profit Institutions Serving Households |
| NWSC | National Water and Sewerage Corporation |
| SEEA | System of Environment-Economic Accounting |
| SNA | System of National Accounts |
| UNSD | United Nations Statistics Division |
| RWS | Rural Water Supply |
| WUE | Water Use Efficiency |
| UNSC | United Nations Statistical Commission |
| UEGCL | Uganda Electricity Generation Company Limited |

## Executive summary

Uganda's economy is to a great extent nature dependent driven mainly by agricultural production and agricultural related industrial activities. The primary agricultural production is mostly rain-fed dependent and any delay in the rain fall or drought spells doom for the country. In addition, many other economic activities are dependent on water availability. For instance, the energy sector is almost exclusively dependent on hydro power generation on river Nile. Therefore, when there is reduced precipitation in the country, the volumes of water in the hydro dams reduces and this mostly results in power shortages. All these justify the crucial priority that Uganda attaches to the water sector and this is the reason for prioritizing the water accounts among all accounts.

Compiling the priority water accounts for Uganda benefited from combined efforts of staff from a number of Ministries, Departments and Agencies. Of particular relevance, were the contributions of Uganda Bureau of Statistics, Directorate for Water Resource Management, Directorate for Water Development and National Water and Sewerage Corporation. These provided the data that were used to populate the different tables in the accounts. However, in other instances data were not readily available and other estimation procedures were used to fill the gaps. The compilation was proceeded by estimating and populating three important tables: i) the Water-data input, ii) the physical water supply table, and iii) the physical water use table.

Over the reporting period, the highest Gross Water Input of $261,209,916$ million cubic metres was estimated in 2020 while the lowest of 212,317,874 million cubic metres was estimated in 2018. Similarly, total water consumption rose by 2.2 percent from 32,241,396 million cubic metres in 2019 to $32,963,414$ million cubic metres in 2020.

Furthermore, water use efficiency (WUE) has been declining from the highest WUE of UGX 171,455 registered in 2018 to the lowest of UGX 110,463 was registered in 2020. The highest annual water use per capita of $6,417,932$ cubic metres was registered in 2019 while the lowest of 5,482 cubic metres was registered in 2018. Similarly, the highest annual water consumption per capita of 836,426 litres was registered in 2017 and the lowest annual water consumption per capita of 764,180 cubic metres was registered in 2018 . Over the period 2017 to 2020 , the average water use per household per day rose from 47.8 litres in 2017 to 48.5 litres in 2020. Also the average water consumption per household per day rose from 25.5 litres in 2017 to 28.5 litres in 2020.

### 1.0 INTRODUCTION

The Uganda Water Accounts are one of the environmental-economic accounts produced by Uganda Bureau of Statistics (UBOS) which is compiled in accordance with the System of Environmental Economic Accounting (SEEA). It consists of supply and use tables (collectively referred to as flow tables) for both physical and monetary volumes.

The Accounts integrates data from different sources into a consolidated information set making it possible to link physical data on water to economic data, such as those in National Accounts.

The Water Accounts have been developed using the central SEEA and the SEEA-Water. SEEA was first published by the United Nations in 1993 and was elevated to an international statistical standard in 2012. Environmental accounts extend the boundaries of the System of National Accounts (SNA) framework to include environmental resources, which occur outside the economic production and asset boundaries measured by the SNA.

Water supply and use tables provide a framework to link core components of the National Accounts to physical information. Physical data are presented in supply and use tables while some linkages to economic data are also made.

### 1.1 Physical Supply and Use Tables

The physical water supply and use tables present aggregates of all available physical data in cubic metres of water supplied and used within the economy for the accounting period. The tables illustrate the economic use of water and these include: flows from the environment, own abstraction, water distribution, intermediate consumption, reuse/return flows and flows to the rest of the world.

### 1.2 Scope

The Accounts present information on the supply and use of water in the economy in both physical and monetary terms and the entire geographical area of Uganda.

The water accounts include only the fresh (or inland) water.

### 1.3 Coverage

Tables compiled include supply and use tables for;
Individuals and companies that directly extract water from surface water and groundwater sources for their own use (e.g. domestic, industrial, agricultural etc.), Households, government and businesses that use water supplied by water providers for domestic, industrial, agricultural or other uses, Water providers that extract water from surface water and groundwater for supply it to customers for use (e.g. domestic, industrial, or other use), Water providers that provide reused water to their customers; other large organisations which treat water and make it available for
subsequent reuse; (e.g. NWSC), Other large organizations/industries discharging water directly to the environment (e.g. power stations, mines) and Major in-stream water users (e.g. aquaculture and hydro-electricity generation), where this information is available.

## Items not covered by the supply and use tables include:

The volume of rainwater used by agricultural crops/pastures that are directly rain fed, Volume of rainwater flows to and from the rest of the world (exports and imports), reuse/recycling of water by individual entities or household (i.e. on farm); and soil water use.

### 1.3.1 Data Sources

Data for this release are sourced from a range of UBOS surveys, water authorities, MDA's, and industry organisations. The main sources from UBOS include the 2016-17 Uganda National House Hold Survey (UNHS). 2018, 2019 and 2020 population projections and Annual Gross Domestic Product estimates

The main source from Government Ministries Departments and Agencies (MDA's) include; the Ministry of Water and Environment (MWE) annual reports, NWSC Water Supply and Sewerage data and reports, Urban and Rural Water Use Estimates (unpublished data) Directorate of Water Resource Management (DWRM) that provides Groundwater and Borehole Water Usage Data (unpublished data), Uganda National Metrological Authority (UNMA) for precipitation, temperature and relative humidity data for estimating evapotranspiration, UEGCL and MWE: Water and Environment Sector Performance Report 2019, 2020

Other data sources included; Food and Agriculture Organisations: 2016 National Aquaculture Sector Overview, Climate data development using FAO's-Climwat and Cropwat software applications and Annual/environmental/financial reports for the 2017 to 2020 financial year from major water providers and businesses.

The Water accounts estimates are prepared from a wide range of statistical sources. Some are closely related to the environmental accounting framework, but others are not. Most of the basic data are derived from statistical surveys or as a by-product of government administrative processes. Therefore, estimates were subject to modelling to fill some of the gaps from surveys or administrative collections.

### 1.4 Monetary Supply and Use

The monetary supply and use section present aggregates of all available quantitative monetary data in terms of the supply and use of water within the economy. The tables illustrate the economic
transactions associated with the use of water and the provision of sewerage, drainage and waste services (also referred to as water related services). The monetary section covers:

- supply of distributed water and water related services in the economy by the following industries: Water Supply, Sewerage and Drainage Services, Mining, Manufacturing, Electricity and Gas Supply and Other Industries;
- expenditure on water and water related services by industries, households and governments; and
- Value added to the economy by the major water-using industries.

The scope is limited to distributed water, reuse water, waste water and sewerage and drainage services. Distributed water is categorized by urban, rural and bulk water (both urban and rural) according to NWSC.

### 2.0 PHYSICAL WATER SUPPLY AND USE, 2017 to 2020

Water supply is the amount of water leaving/flowing out from an economic unit. It is the sum of water supply to other economic units and the environment. Water supply within the economy is the Water which is supplied by one economic unit to another.

Water use is the amount of water intake of an economic unit. It is the sum of water use within the economy and the environment. Water use within the economy is the water intake of one economic unit, which is distributed by another economic unit. Water use from the environment is the water abstracted from water resources, seas and oceans, and precipitation collected by an economic unit, including rain fed agriculture.

Water abstraction is the amount of water that is removed from any source, either permanently or temporarily, in a given period of time for final consumption and production activities. Water used for hydroelectric power generation is also considered to be abstraction. Total water abstraction can be broken down according to the type of source, such as water resources and other sources, and the type of use.

Water consumption is that part of water use which is not distributed to other economic units and does not return to the environment (to water resources, sea and ocean) because during use it has been incorporated into products, or consumed by households or livestock. It is calculated as the difference between total use and total supply; thus, it may include losses due to evaporation occurring in distribution and apparent losses due to illegal tapping as well as malfunctioning metering.

In 2020, the amount of water abstracted from the environment rose to an estimated 261,209,916 million cubic metres from $255,463,815$ million cubic metres that was abstracted in 2019. This represented a slight increase of 2.2 percent. Similarly, the amount of water supplied increased by 2.3 percent, from $223,222,443$ million cubic metres in 2019 to $228,246,511$ million cubic metres in 2020. Furthermore, the total amount of water used in the economy rose to $261,209,925$ million cubic metres in 2020 from the estimated amount of 255,463,839 million cubic metres in 2019.

On the other hand, Total water consumption also rose by 2.2 percent from 32,241,396 million cubic metres in 2019 to $32,963,414$ million cubic metres in 2020 . Total water return flows to the environment also rose to 195,283,097 million cubic metres in 2020 from 190,981,047 million cubic metres in 2019, See Table 1 below.

Table 1: Physical Supply and Use of Water (thousand cubic metres), 2017 to 2020

|  | 2017 | 2018 | 2019 | 2020 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Total abstraction | $226,067,193,112$ | $212,317,874,963$ | $255,463,815,992$ | $261,209,916,032$ |
| Total supply | $194,550,017,697$ | $182,718,806,445$ | $223,222,443,920$ | $228,246,511,174$ |
| Total use of water | $226,067,197,810$ | $212,317,883,198$ | $255,463,839,998$ | $261,209,925,328$ |
| Total Water Consumption | $31,517,180,112$ | $29,599,076,753$ | $32,241,396,078$ | $32,963,414,154$ |
| All return flows to <br> environment | $\mathbf{1 6 3 , 0 3 2 , 8 3 7 , 5 8 5}$ | $\mathbf{1 5 3 , 1 1 9 , 7 2 9 , 6 9 1}$ | $\mathbf{1 9 0 , 9 8 1 , 0 4 7 , 8 4 1}$ | $\mathbf{1 9 5 , 2 8 3 , 0 9 7 , 0 2 0}$ |

Source: Uganda Bureau of Statistics
The annual average amount of water returned to the environment constituted 74.8 percent of the total water abstracted. It is important to note that, between 2017 and 2020, on average, about 99.9 percent of the total water abstracted by economic agents from the environment, is re-supplied for economic activity within the economic agents themselves. Also 99.9 percent of water abstracted for hydro electricity generation is returned to the environment. However, the water that is abstracted and returned to the environment is usually returned at a higher temperature, which can have important implications for the environment.

### 2.1 Water Abstraction by Water Source

During the period 2017 to 2020, precipitation has remained the main source of water abstracted with an annual average share of 99.95 percent. Precipitation has been increasing during the period under review with the exception of 2018 where a decline of 6.09 percent was registered leading to increases of 20.33 percent in 2019 and 2.24 percent in 2020.

Water abstracted from surface water bodies increased by 25.4 percent in 2020 to 138,702 million cubic metres from 110,605 million cubic metres in 2019. It is important to note that most of the surface water bodies from which the water is abstracted lie along River Nile, thus investment in alternative strategies must be exploited in case the allocations from such shared resources become more restricted in the future. In particular, Hydro-Electricity Generation (HEP) activity is the dominant source of pressure on river Nile and its catchment basins/lakes in Uganda. However, with the abundant other natural resources for energy, other options for electricity could be exploited.

Water abstracted from ground water resources increased by 1.3 percent in 2020 from an increase of 19.5 percent in 2019. The reducing growth can be attributed to reduced industrial activities during a year that was dominated by the pandemic adversaries. However, as the economy recovers from the pandemic shocks, levels of industrial activities and urban settlement are bound to increase as
well as increased pressure coupled with pollution of surface water bodies (increases costs of treating the water before its distribution and supply). Thus, exploitation of ground water sources could be an alternative, however, the stock and rate of recharge of the ground water resources should be established and monitored. Probably, investment should shift to ground water sources because of the low costs of treatment that is required, See Table 2 below.

Table 2: Water abstracted by water resource and purpose (thousand cubic metres), 2017 to 2020

| Water Resource and purpose | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ | 2020 |
| :---: | ---: | ---: | ---: | ---: |
| Surface Water (a) | $\mathbf{9 7 , 7 3 8 , 0 6 4}$ | $\mathbf{1 0 0 , 7 2 7 , 2 8 2}$ | $\mathbf{1 1 0 , 6 0 5 , 2 5 2}$ | $\mathbf{1 3 8 , 7 0 1 , 7 1 9}$ |
| Supply and distribution | 116,303 | 118,354 | 143,577 | 164,536 |
| Own Use | $97,621,761$ | $100,608,928$ | $110,461,676$ | $138,537,183$ |
| Groundwater (b) | $\mathbf{1 8 5 , 5 7 6}$ | $\mathbf{1 8 3 , 9 4 3}$ | $\mathbf{2 1 9 , 8 6 2}$ | $\mathbf{2 2 2 , 7 7 1}$ |
| Supply and distribution | 6,134 | 9,025 | 10,587 | 10,996 |
| Own Use | 179,442 | 174,918 | 209,275 | 211,775 |
| DWRM | 4,762 | 5,675 | 7,008 | 6,802 |
| Other ground | 17,838 | 17,998 | 18,955 | 19,214 |
| Other Valley dams \& water | 33,775 | 33,775 | 38,699 | 40,989 |
| Other springs, fountains \& | 123,066 | 117,469 | 144,613 | 144,771 |
| wells |  |  |  |  |
| Precipitation (c) | $225,969,269,472$ | $212,216,963,738$ | $\mathbf{2 5 5 , 3 5 2 , 9 9 0 , 8 7 7}$ | $\mathbf{2 6 1 , 0 7 0 , 9 9 1 , 5 4 2}$ |
| Supply and distribution |  |  |  |  |
| Own Use | $225,969,269,472$ | $212,216,963,738$ | $255,352,990,877$ | $261,070,991,542$ |
| Total Abstracted Water (a+b+c) | $226,067,193,112$ | $212,317,874,963$ | $\mathbf{2 5 5 , 4 6 3 , 8 1 5 , 9 9 2}$ | $\mathbf{2 6 1 , 2 0 9 , 9 1 6 , 0 3 2}$ |
| Supply and distribution | 122,437 | 127,379 | 154,164 | 175,531 |
| Own Use |  |  |  |  |
| Source: Uganda Bureau of Statistics | $226,067,070,674$ | $212,317,747,583$ | $255,463,661,828$ | $261,209,740,500$ |

### 2.2 Water Abstraction by Purpose

This section describes abstraction of water for two purposes, namely; own end use and supply \& distribution. As indicated in Table 2 above nearly all ( 99.9 percent) water abstraction is directly by own-users while less than one percent is abstracted for supply and distribution purposes. Estimates further indicate that total water abstracted for supply and distribution purposes grew by 13.9 percent in 2020 following a 21.0 percent increase that was registered in 2019. Water abstracted for own use increased by 2.2 percent in 2020, from 20.3 percent increase that was registered in 2019. The increase in the abstraction for own use could be attributed to the pandemic where water was the only natural resource within the required Standard Operating Procedures (S.O. P's) to curb the spread of the pandemic. The trends have shown a positive correlation between the amount of water abstracted for own use and the levels of precipitation which is the dominant source of this water for rain-fed agriculture activities. Hence excluding precipitation from the discussion below.

Over the reporting period (2017 to 2020), an annual average of 111,943 million cubic metres of water representing an annual average share of 99.8 percent was abstracted from surface water bodies. Hydro-Electricity Power (HEP) generators abstracted the largest volumes with an annual average of 99.5 percent of water from surface water bodies. However, for better understanding of the composition of own-use abstractors, HEP generators were excluded, thereby allowing for the study of the composition of the other own-use abstractors. The results from this analysis indicated that water abstracted by own-users averaged 99.9 percent; implying that the volume of water abstracted for supply and distribution purpose is less than one percent for the period under review. Furthermore, the amount of water abstracted by households is not captured since households are not registered. Other major own-use abstractors are activities of manufacturing of food and beverages, mining \& quarrying and construction.

### 2.3 Water Abstraction by Economic Activity

The agriculture sector has continuously recorded the largest volumes of water abstracted averaging 99.38 percent of the total water abstracted annually since 2017. The amount of water abstracted for agricultural activities in 2020 increased by 2.24 compared to an increase of 20.25 in 2019. The main driver for the movements of water abstraction in the sector during this period was agriculture rain-fed crop growing, Livestock and Forestry activities with a growth of 2.24 percent. However, water abstracted for Agriculture irrigation activities has continued to decline since 2017 with an exception of 2019 where it increased by 69.10 percent recovering from the strong decline of 16.63 percent in 2018 and in 2020 a decline of 27.41 percent was registered, See Table 3.

The industry sector averaged at 0.62 percent of the total share of annual abstraction in the period 2017 to 2020. Similarly, 2020 showed an increase of 3.81 percent in the amount of water abstracted by the sector, there were increases in the annual abstractions in the sector of 11.94 percent in 2017 and 31.96 percent 2019, however in 2018 there was a decline of 5.40 percent. Water supply, Sewerage and management activities abstract the largest share of 91.88 percent of the amount of water abstracted for industrial activities and grew by 2.24 percent in 2020. The manufacturing of Food and Beverage activities had the strongest growth followed by Construction activities in 2020.

Table 3 below indicates that the services sector, continued to have a negligible share of the total water abstracted annually for the period under review. However, water abstraction by this sector grew by 4.24 from 4.14 million cubic metres in 2019 to 4.31 million cubic metres in 2020. Accommodation services was the main driver in the services sector with an increase of 26.85 percent in 2020, See Table 3 below.

Table 3: Water Abstraction by Economic Activity (thousand cubic metres), 2017 to 2020

|  | 2017 | 2018 | 2019 | 2020 |
| :---: | :---: | :---: | :---: | :---: |
| Agriculture | 224,753,290,157 | 211,074,963,831 | 253,823,708,281 | 259,507,380,043 |
| Agriculture (Irrigation) | 186,263 | 155,288 | 262,585 | 190,610 |
| Agriculture (Rain fed crop) | 134,555,524,293 | 126,366,584,630 | 169,768,210,667 | 173,569,751,667 |
| Agriculture (Livestock) | 65,224,613,859 | 61,255,099,092 | 52,592,140,631 | 53,769,813,508 |
| Agriculture (Forestry) | 24,958,721,198 | 23,439,753,953 | 31,462,907,977 | 32,167,442,983 |
| Agriculture (Fishing) | 14,244,544 | 13,370,868 | 186,421 | 181,275 |
| Industry | 1,313,900,169 | 1,242,907,579 | 1,640,103,574 | 1,702,531,677 |
| Crude oil and Mining | 4,990 | 15,719 | 37,304 | 8,578 |
| Manufacturing (Food \& Beverages) | 8,469 | 8,167 | 40,076 | 107,244 |
| Manufacturing (Other) | 9,894 | 10,655 | 7,414 | 7,443 |
| Electricity | 97,363,550 | 100,381,976 | 109,858,929 | 137,902,440 |
| Water Supply; Sewerage \& Waste Management Activities | 1,216,498,125 | 1,142,476,634 | 1,529,935,581 | 1,564,212,055 |
| Construction | 15,142 | 14,428 | 224,270 | 293,918 |
| Services | 2,785 | 3,553 | 4,136 | 4,312 |
| Accommodation | 161 | 146 | 367 | 466 |
| Public Administration | 15 | 15 | 78 | 71 |
| Education | 166 | 176 | 270 | 260 |
| Health | 254 | 1,063 | 1,066 | 1,141 |
| Other | 2,189 | 2,153 | 2,356 | 2,375 |
| Households | - | - | - |  |
| Total | 226,067,193,112 | 212,317,874,963 | 255,463,815,992 | 261,209,916,032 |

Source: Uganda Bureau of Statistics

### 2.4 Water Supply by Economic Activity

In 2020 water supply like water abstraction across economic activities was dominated by agriculture activities with an annual average of 99.30 percent supply followed by the industrial activities with 0.70 percent. Similar to the abstraction pattern, agriculture rain-fed crop growing activities dominated the water supply category with an average share of 65.34 percent of the total water supplied annually over the period 2017 to 2020. Agricultural activities registered an increase in the amount of water supplied from $221,613,293$ million cubic metres in 2019 to $226,575,737$ million cubic metres in 2020 resulting in a 2.24 percent increase. However, there was a decline of 27.41 percent in irrigation activities, See Table 4 below.

Water supply within the industrial sector grew by 3.83 percent in 2020 and was continuously dominated by Water Supply, Sewerage and Waste Management activities representing 91.75 percent of the water supplied to industrial activities and grew by 2.24 percent in 2020.
Water supplied to service activities grew by 17.91 percent in 2020.
Consequently, the total amount of water supplied increased by 2.91 percent in 2020, a continued increase from 10.09 percent in 2019 and a decline of 5.08 percent in 2018 , See Table 4 below.

Table 4: Water Supply by Economic Activity (thousand cubic metres), 2017 to 2020

|  | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ | $\mathbf{2 0 2 0}$ |
| :--- | ---: | ---: | ---: | ---: |
| Agriculture | $\mathbf{1 9 3 , 2 6 0 , 6 4 0 , 4 8 7}$ | $\mathbf{1 8 1 , 4 9 8 , 9 4 1 , 6 5 9}$ | $\mathbf{2 2 1 , 6 1 3 , 2 9 2 , 7 3 2}$ | $\mathbf{2 2 6 , 5 7 5 , 7 3 7 , 7 7 8}$ |
| Agriculture (Irrigation) | 93,132 | 77,644 | 131,293 | 95,305 |
| Agriculture (Rain fed crop) | $121,099,971,864$ | $113,729,926,167$ | $152,791,389,601$ | $156,212,776,500$ |
| Agriculture (Livestock) | $52,179,663,835$ | $49,004,053,433$ | $43,651,447,247$ | $44,628,913,946$ |
| Agriculture (Forestry) | $19,966,974,315$ | $18,751,800,514$ | $25,170,324,592$ | $25,733,952,026$ |
| Agriculture (Fishing) | $13,937,341$ | $13,083,901$ | - | - |
| Industry | $\mathbf{1 , 2 8 9 , 3 1 0 , 1 5 2}$ | $\mathbf{1 , 2 1 9 , 8 0 1 , 1 3 2}$ | $\mathbf{1 , 6 0 9 , 0 8 1 , 1 1 0}$ | $\mathbf{1 , 6 7 0 , 7 0 1 , 2 8 0}$ |
| Crude oil and Mining | 3,493 | 11,004 | 26,113 | 6,004 |
| Manufacturing (Food and | 8,043 | 7,816 | 26,949 | 60,775 |
| Beverages) |  |  |  | 8,510 |
| Manufacturing (Other) | 8,175 | 8,541 | 8,670 |  |
| Electricity | $97,266,312$ | $100,281,709$ | $109,749,299$ | $137,764,774$ |
| Water Supply; Sewerage and | $1,192,020,801$ | $1,119,488,842$ | $1,499,224,842$ | $1,532,801,710$ |
| Waste Management Activities |  |  |  | 45,398 |
| Construction | 3,328 | 3,221 | 59,347 |  |
| Services | $\mathbf{6 7 , 0 5 8}$ | $\mathbf{6 3 , 6 5 4}$ | $\mathbf{7 0 , 0 7 7}$ | $\mathbf{7 2 , 1 1 6}$ |
| Accommodation | 484 | 766 | 895 | 946 |
| Public Administration | 6,407 | 5,851 | 6,474 | 6,701 |
| Education | 305 | 340 | 549 | 570 |
| Health | 571 | 796 | 1,159 | 1,212 |
| Other | 1,862 | 2,033 | 3,056 | 3,154 |
| Households | 57,428 | 53,868 | 57,944 | 59,533 |
| Total |  |  |  |  |

Source: Uganda Bureau of Statistics

### 2.5 Water Use by Economic Activity

Total water use just like abstraction and supply, was greatly dominated by agriculture sector activities accounting for a 99.38 percent annual average share between 2017 and 2020 . Within the agriculture sector, water use by irrigation activities declined by 27.41 percent in 2020. In agriculture sector water used corresponds with the water abstracted.

The total share of water used by the industry sector averaged 0.62 percent annually for the period under review. Water used by this sector increased by 3.81 percent in 2020 after an increase of 31.96 in 2019 and a decline of 5.40 percent in 2018. Water Supply, Sewerage and Waste Management Activities dominated the use of water in this sector with a share of 91.87 percent share of the total water use within the industrial sector in 2020.

For the service sector, water use share is negligible, however it increased by 2.98 percent in 2020 following an increase of 15.95 in 2019 and a decline of 5.23 percent for 2018. Notably, within the
service activities, Household's activities dominated water use accounting for an average of 75.67 percent share within the sector, followed by public administration activities with 12.57 percent share within the sector in 2020 , See Table 5 below.

Table 5: Water Use by Economic Activity (thousand cubic metres), 2017 to 2020

|  | 2017 | 2018 | 2019 | 2020 |
| :---: | :---: | :---: | :---: | :---: |
| Agriculture | 224,753,290,195 | 211,074,978,408 | 253,823,737,239 | 259,507,410,016 |
| Agriculture (Irrigation) | 186,263 | 155,288 | 262,585 | 190,610 |
| Agriculture (Rain fed crop) | 134,555,524,293 | 126,366,584,630 | 169,768,210,667 | 173,569,751,667 |
| Agriculture (Livestock) | 65,224,613,896 | 61,255,113,669 | 52,592,169,589 | 53,769,843,481 |
| Agriculture (Forestry) | 24,958,721,198 | 23,439,753,953 | 31,462,907,977 | 32,167,442,983 |
| Agriculture (Fishing) | 14,244,544 | 13,370,868 | 186,421 | 181,275 |
| Industry | 1,313,739,036 | 1,242,745,034 | 1,639,917,529 | 1,702,324,572 |
| Crude oil and Mining | 5,742 | 16,406 | 38,668 | 9,989 |
| Manufacturing (Food and Beverages) | 15,395 | 14,495 | 52,643 | 120,251 |
| Manufacturing (Other) | 13,393 | 13,851 | 13,762 | 14,013 |
| Electricity | 97,363,676 | 100,382,091 | 109,859,158 | 137,902,677 |
| Water Supply; Sewerage and Waste Management Activities | 1,216,324,614 | 1,142,302,778 | 1,529,727,077 | 1,563,981,698 |
| Construction | 16,217 | 15,413 | 226,223 | 295,944 |
| Services | 168,579 | 159,756 | 185,230 | 190,741 |
| Accommodation | 1,792 | 2,796 | 3,332 | 3,550 |
| Public Administration | 22,899 | 20,913 | 23,164 | 23,975 |
| Education | 1,164 | 1,104 | 2,090 | 2,169 |
| Health | 2,139 | 2,802 | 4,495 | 4,715 |
| Other | 7,298 | 6,859 | 11,632 | 11,996 |
| Households | 133,287 | 125,283 | 140,516 | 144,336 |
| Total | 226,067,197,810 | 212,317,883,198 | 255,463,839,998 | 261,209,925,328 |

[^0]
### 2.6 Water Consumption

Water consumption is that part of water which is not distributed to other economic units and does not return to the environment, because it is either incorporated in products, or consumed by households and livestock. Total water consumption excluding households in 2020 was 32,963,329 million cubic metres from $32,241,313$ million cubic metres in 2019, representing an increase of 2.24 percent following an increase of 8.93 percent in 2019 and a decline of 6.09 percent in 2018, See Table 6 below.

Over the period 2017 to 2020, water consumption in agriculture activities is directly proportional to water use in the same sector. Similar to water use, supply and abstraction, agriculture rain-fed crop and livestock activities drive water consumption in the economy.

Water consumption by industrial activities had an annual average share of 0.09 percent that was dominated by activities of Water supply; Sewerage and Water Management activities accounting for 99.60 percent share of the industry, over the period 2017 to 2020. Water consumption by industrial activities grew by 2.55 percent in 2020 after a 34.40 percent increase in 2019 and a decline of 6.08 percent in 2018.

Water consumption by service activities continues to be negligible compared to water consumption by agriculture and industrial activities. However, it grew by 3.02 percent in 2020 following an increase of 19.82 percent in 2019 and 5.34 percent decline in 2018. Household activities dominated (71.49 percentage share). Household water consumption increased by 2.70 percent in 2020 following a growth of 15.62 percent in 2019 and a decline 5.86 percent in 2018, See Table 6 below.

Table 6: Water Consumption by Economic Activity (thousand cubic metres), 2017 to 2020

|  | 2017 | 2018 | 2019 | 2020 |
| :---: | :---: | :---: | :---: | :---: |
| Agriculture | 31,492,649,708 | 29,576,036,749 | 32,210,444,507 | 32,931,672,238 |
| Agriculture (Irrigation) | 93,132 | 77,644 | 131,293 | 95,305 |
| Agriculture (Rain fed crop) | 13,455,552,429 | 12,636,658,463 | 16,976,821,067 | 17,356,975,167 |
| Agriculture (Livestock) | 13,044,950,061 | 12,251,060,236 | 8,940,722,342 | 9,140,929,534 |
| Agriculture (Forestry) | 4,991,746,883 | 4,687,953,439 | 6,292,583,384 | 6,433,490,957 |
| Agriculture (Fishing) | 307,203 | 286,967 | 186,421 | 181,275 |
| Industry | 24,428,883 | 22,943,902 | 30,836,419 | 31,623,292 |
| Crude oil and Mining | 2,249 | 5,402 | 12,555 | 3,985 |
| Manufacturing (Food and Beverages) | 7,352 | 6,679 | 25,694 | 59,476 |
| Manufacturing (Other) | 5,217 | 5,311 | 5,251 | 5,343 |
| Electricity | 97,364 | 100,382 | 109,859 | 137,903 |
| Water Supply; Sewerage and Waste Management Activities | 24,303,813 | 22,813,936 | 30,502,235 | 31,179,988 |
| Construction | 12,889 | 12,192 | 180,825 | 236,597 |
| Services | 101,521 | 96,102 | 115,152 | 118,625 |
| Accommodation | 1,308 | 2,030 | 2,437 | 2,603 |
| Public Administration | 16,491 | 15,062 | 16,690 | 17,275 |
| Education | 859 | 764 | 1,541 | 1,599 |
| Health | 1,568 | 2,006 | 3,336 | 3,503 |
| Other | 5,436 | 4,826 | 8,576 | 8,841 |
| Households | 75,859 | 71,415 | 82,572 | 84,803 |
| Total excl. households | 31,517,104,253 | 29,599,005,338 | 32,241,313,506 | 32,963,329,351 |

[^1]
### 3.0 ECONOMIC PROFILES FOR WATER

It is important to compare the environmental performance of industries among each other overtime. This is achieved through use of environmental-economic profiles which compare direct economic benefits (share of value added) and environmental burden/costs (share of water use). The economic water profiles may be used for benchmarking industrial performance in order to promote water use efficiency and water conservation. They can also be used to guide the country on which industrial activities to expand. However, considerations about the natural resource availability, sustainability and the secondary contributions of the activity to the other activities must be considered. Economic profiles of water productivity and Water Use Efficiency for the water accounts are as presented below.

### 3.1 Water Productivity

Water productivity is an indicator that combines two elements, that is economic contribution and environmental burden into a single indicator. Water productivity furnishes the potential gains and losses from a reallocation of water. It is interpreted as a rough approximation of the socio-economic benefits generated by allocating water to a particular industry. It is, therefore, calculated by dividing the value added for a particular industry by the volume of water consumed by that industry; giving the value added per cubic metre of water consumed.

Over the period 2017 to 2020, water productivity ranged between UGX/m3 4.30 in 2020 to UGX/m 33.59 in 2017 representing an annual average growth of 4.27 percent. Water productivity for 2019 was UGX/m ${ }^{3} 4.27$ compared to UGX/ m ${ }^{3} 4.24$ in 2018. The activities with greater burden on water resources are, Livestock rearing with the lowest value (UGX/ m ${ }^{3} 0.59$ ), forestry (UGX/m30.83), agriculture Rain fed (UGX/m ${ }^{3} 1.11$ ) and Water Supply, Sewerage and Waste Management Activities (UGX/m³99.96).

Activities with greater economic contribution and less environmental burden were mainly services activities that registered UGX/m 3595,357 in 2020 and an annual average water productivity of UGX/m3 610,504 over the period under review. Apart from other service activities (not classified), education activities had the greatest economic benefit and less environmental burden with water productivity of UGX/m3 3,732,835 of value added per cubic metre of water consumed, See Table 7 below.

Table 7: Water productivity by Economic Activity in Uganda Shillings per cubic metre, 2017 to 2020

|  | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ | 2020 |
| :--- | ---: | ---: | ---: | ---: |
| Agriculture | $\mathbf{0 . 8 3}$ | $\mathbf{0 . 9 8}$ | $\mathbf{1 . 0 2}$ | $\mathbf{1 . 0 4}$ |
| Agriculture (Irrigation) | $8,882.90$ | $11,393.69$ | $7,240.76$ | $10,619.40$ |
| Agriculture (Rain fed crop) | 1.17 | 1.33 | 1.06 | 1.11 |
| Agriculture (Livestock) | 0.27 | 0.34 | 0.56 | 0.59 |
| Agriculture Support Services |  |  |  |  |
| Agriculture (Forestry) | 0.84 | 1.01 | 0.87 | 0.83 |
| Agriculture (Fishing) | $6,514.20$ | $8,479.62$ | $18,252.38$ | $17,590.10$ |
| Industry | $\mathbf{1 , 2 1 5 . 5 0}$ | $\mathbf{1 , 4 5 7 . 6 2}$ | $\mathbf{1 , 1 6 7 . 5 7}$ | $\mathbf{1 , 1 9 9 . 8 5}$ |
| Crude oil and Mining | $595,887.12$ | $286,638.45$ | $138,296.25$ | $518,669.01$ |
| Manufacturing (Food and | $1,181,308.14$ | $1,455,595.22$ | $408,968.81$ | $190,798.39$ |
| Beverages) |  |  |  |  |
| Manufacturing (Other) | $1,753,407.97$ | $1,928,263.85$ | $2,107,943.44$ | $2,237,352.68$ |
| Electricity | $14,962.52$ | $16,614.63$ | $16,222.94$ | $13,446.63$ |
| Water Supply; Sewerage and | 111.97 | 130.53 | 101.68 | 99.96 |
| Waste Management Activities | $492,098.66$ | $597,692.70$ | $43,171.09$ | $32,136.57$ |
| Construction | $571,870.32$ | $\mathbf{6 6 7 , 5 1 4 . 4 8}$ | $\mathbf{6 0 7 , 2 7 2 . 5 8}$ | $595,357.03$ |
| Services | $2,636,028.90$ | $1,820,325.58$ | $1,545,285.34$ | $1,175,590.15$ |
| Accommodation | $174,084.21$ | $209,655.89$ | $219,623.09$ | $238,242.41$ |
| Public Administration | $5,873,106.57$ | $7,289,114.86$ | $3,881,576.20$ | $3,732,834.50$ |
| Education | $2,335,668.67$ | $2,080,451.38$ | $1,370,748.80$ | $1,306,121.61$ |
| Health | $7,746,188.08$ | $9,650,170.76$ | $5,932,332.16$ | $5,860,716.54$ |
| Other | $12,175.44$ | $13,766.49$ | $12,929.77$ | $12,811.91$ |
| Households | $\mathbf{3 . 5 9}$ | $\mathbf{4 . 2 4}$ |  | 4.27 |
| Total |  |  |  | 4.30 |
| Source: Uganda Bureau of Statistics |  |  |  |  |

### 3.2 Water Use Efficiency (WUE)

According to the SDG Target 6.4, by 2030, it requires to substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity. This is to be monitored using SDG indicator 6.4.1 that defines Water Use Efficiency (WUE) as the value added divided by the volume of water used for a given industrial activity. It is important to note that only run-off water and groundwater (so called blue water) are considered when computing this indicator, (FAO, 2018). Therefore, the amount of water of agricultural production carried out in rain-fed conditions and the amount of water abstracted for hydro-power generation (except evaporation at the dam) are excluded.

In 2017, WUE was estimated at UGX/m ${ }^{3} 155,010$ of value added per cubic metre of water used, equivalent to US $\$ / m^{3}$ 42.9. Service activities emerged as the most water use efficient activities with an estimate of UGX 546,285 of value added per cubic metre of water used. Under services, Education activities is the most efficient water use activity, and this was followed by accommodation, health then manufacturing activity. WUE activities of households emerged as the least efficient water use activities.

In 2018, WUE was estimated at UGX/m ${ }^{3} 171,455$, equivalent to $\mathrm{US} \$ / \mathrm{m}^{3} 46.0$, the highest in the period under review. Service activities emerged as the most water use efficient activities with an estimate of UGX/m ${ }^{3} 641,214$ as well contributing a value-added share of 50.7 percent to Gross Domestic Product (GDP 2018). Excluding other activities, Education services emerged as the most efficient water use activity, this was followed by health, accommodation then manufacturing activity.

In 2019, WUE was estimated at UGX $/ m^{3} 116,444$, equivalent to $U S \$ / m^{3} 31.4$ registering a decline of 32.08 percent in comparison to 2018. Again, service activities emerged as the most water use efficient activities with an estimated value addition of UGX/m ${ }^{3} 587,606$ per cubic metre of water used and claiming 50.1 percent share of the total GDP 2019. Education services (excluding other unclassified activities) emerged as the most efficient water use activity, this was followed by, accommodation, health then other manufacturing.

The lowest WUE was registered in 2020 estimated at UGX 110,463 of value added per cubic metre of water used, equivalent to US\$29.5 per cubic metre. Similar to the previous years, the service sector activities emerged as the most water use efficient activities estimated at UGX / m ${ }^{3}$ 571,315. The drivers have remained the same; Education services followed by accommodation, health then manufacturing. Irrigated crop growing activities has had the least WUE in the entire period under review, See Table 8 below.

Table 8: Water Use Efficiency (WUE) by Economic Activity - UGX

| Industry | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ | $\mathbf{2 0 2 0}$ |
| :--- | ---: | ---: | ---: | ---: |
| Agriculture | $\mathbf{7 1 , 0 4 4}$ | $\mathbf{8 5 , 9 6 2}$ | $\mathbf{6 5 , 7 8 5}$ | $\mathbf{7 9 , 9 3 7}$ |
| Agriculture (Irrigated crop) | 4,441 | 5,697 | 3,620 | 5,310 |
| Agriculture (Livestock) | 103,564 | 85,512 | 74,281 | 75,296 |
| Agriculture (Fishing) | 13,371 | 18,188 | 19,962 | 19,289 |
| Industry | $\mathbf{9 1 , 5 3 1}$ | $\mathbf{9 2 , 7 5 2}$ | $\mathbf{5 6 , 4 4 2}$ | $\mathbf{4 6 , 9 2 7}$ |
| Crude oil and Mining | 233,393 | 94,387 | 44,903 | 206,901 |
| Manufacturing (Food and Beverages) | 564,111 | 670,707 | 199,611 | 94,369 |
| Manufacturing (Other) | 683,063 | 739,326 | 804,350 | 853,050 |
| Electricity | 9,330 | 9,594 | 11,302 | 9,370 |
| Water Supply; Sewerage and Waste | 23,157 | 23,528 | 20,830 | 18,286 |
| Management Activities |  |  |  |  |
| Construction | 391,116 | 472,772 | 34,508 | 25,692 |
| Services | 546,285 | $\mathbf{6 4 1 , 2 1 4}$ | 587,606 | 571,315 |
| Accommodation | $1,923,589$ | $1,321,503$ | $1,130,319$ | 862,182 |
| Public Administration | 125,372 | 150,997 | 158,241 | 171,656 |
| Education | $4,333,078$ | $5,045,214$ | $2,861,328$ | $2,752,327$ |
| Health | $1,712,066$ | $1,489,483$ | $1,017,355$ | 970,390 |
| Other | $5,769,905$ | $6,789,850$ | $4,373,755$ | $4,319,592$ |
| Activities of Households | 13,012 | 14,993 | 14,371 | 14,072 |
| Total, excluding households | $\mathbf{1 5 5 , 0 1 0}$ | $\mathbf{1 7 1 , 4 5 5}$ | $\mathbf{1 1 6 , 4 4 4}$ | $\mathbf{1 1 0 , 4 6 3}$ |
| Total, excluding households, US\$ | $\mathbf{4 2 . 9}$ | $\mathbf{4 6 . 0}$ | $\mathbf{3 1 . 4}$ | $\mathbf{2 9 . 5}$ |
| Source: Uganda Bureau of Statistics |  |  |  |  |

### 4.0 THE DERIVED AGGREGATES AND INDICATORS

This section presents the social and economic aspects of water with discussions on some implications of the state of the water sector. The purpose is to provide an insight into the outcomes of the current water management and regulation in order to improve water management for sustainability.

Over the reporting period, the highest Gross Water Input of $261,209,916$ million cubic metres was estimated in 2020 while the lowest 212,317,874 million cubic metres was estimated in 2018. Similarly, the highest Net Domestic Water use of 261,209,903 million cubic metres was reported in 2020 while the lowest $212,317,861$ was reported in 2018. Due to lack of estimates of imported water, Gross Water Input is equal to Net Domestic Water.

Table 9: Summary of derived Aggregates and Indicators

|  | 20172018 |  | 2019202 |  |
| :---: | :---: | :---: | :---: | :---: |
| Gross Water Input '000 cubic metres | 226,067,193,112 | 212,317,874,963 | 255,463,815,992 | 261,209,916,032 |
| Net Domestic Water use '000 cubic metres | 226,067,181,883 | 212,317,861,727 | 255,463,804,109 | 261,209,903,733 |
| Water Consumption '000 cubic metres | 31,517,180,112 | 29,599,076,753 | 32,241,396,078 | 32,963,414,154 |
| Water productivity, Shs | 3.59 | 4.24 | 4.27 | 4.30 |
| Water Use Efficiency Shs/cubic meters of value added | 155,010 | 171,455 | 116,444 | 110,463 |
| Annual Water use per capita, Litres | 5,999,537 | 5,481,558 | 6,417,932 | 6,387,257 |
| Annual Water consumption per capita, Litres |  |  |  |  |
|  | 836,426 | 764,180 | 809,990 | 806,041 |
| Water use per HH per day, Litres | 44.77 | 42.08 | 47.20 | 48.48 |
| Water Consumption per HH per day, Litres | 25.48 | 23.99 | 27.74 | 28.49 |
| \% of losses in the supply and distribution chain | 38.67 | 29.38 | 25.27 | 27.19 |

Note 1: Volume of imported water is not included.
Source: Uganda Bureau of Statistics

### 4.1 Water Consumption and Water Productivity

Water consumption increased to $32,963,414$ million cubic metres, leading to water productivity of UGX $/ m^{3} 4.30$. As indicated in Figure 1 below, water consumption and productivity has continued to grow. Agriculture and household activities which are composed of majorly own-use abstractors, outside the regulated and managed water system registered the highest amount of water consumption with corresponding lowest water productivity. Thus, in order to increase on water productivity for these economic units, the opportunities for improving water productivity should be identified and implemented. In addition, the extent of the water losses for these economic units should be assessed with the aim of reducing these losses. Such opportunities include investing in additional drip irrigation schemes in order to reduce irrigation run-off and evaporation. Consequently, irrigation will recharge the underground sources.

Figure 1: Water Consumption and Water Productivity


### 4.2 Water Use Efficiency (WUE)

The highest overall WUE of UGX 1571,455 was registered in 2018 while the lowest, UGX 110,463 was registered in 2020 implying that more water is used without a corresponding increase in GDP. Service activities registered the highest WUE while agriculture activities registered the lowest WUE as shown in the Figure 2 below.

Figure 2: Water Use Efficiency


### 4.3 Water Consumption and Use Per Capita

The highest annual water use per capita of $6,417,932$ litres was registered in 2019 while the lowest, $5,481,558$ litres was registered in 2017. The highest annual water consumption per capita of 836,426 litres was registered in 2017 and the lowest annual water consumption per capita of 806,041 litres was registered in 2020 as shown in the Figure 3 below.

Figure 3: Water Consumption and Use and Use Per Capita


### 4.4 Water Consumption and Use per Household per Day

Over the period 2017 to 2020, the average water use per household per day was 45.63 litres while the average water consumption per household per day was 26.42 litres as shown in the Figure below. It should be noted that a number of households in rural areas carry out their bathing and washing of clothes at open water resources. However, this amount of water was not included in these estimates due to absence of adequate information. Furthermore, water for livestock rearing has been deducted from household activities and added to livestock rearing activities. See Figure 4 below.

Figure 4: Water Consumption and Use per Household per Day


## Glossary

Abstraction: The amount of water that is removed from any source, either permanently or temporarily, in a given period of time for final consumption and production activities. Water used for hydroelectric power generation is also considered to be abstraction. Total water abstraction can be broken down according to the type of source, such as water resources and other sources, and the type of use.


#### Abstract

Water abstracted for the purpose of its distribution. Abstraction for own use: Water abstracted for own use. However, once water is used, it can be delivered to another user for reuse or for treatment.


Actual evapotranspiration: The amount of water that evaporates from the land surface and is transpired by the existing vegetation/plants when the ground is at its natural level of moisture content, which is determined by precipitation.

Economic unit: A unit that engages in production and/or consumption activities.
Emission to water: Direct release of a pollutant into water, as well as its indirect release by transfer to an off-site wastewater treatment plant.

Evapotranspiration: The quantity of water transferred from the soil to the atmosphere by evaporation and plant transpiration.

Exports: Water that exits the territory of reference through mains or other forms of infrastructure.
Fresh water resources: Naturally occurring water having a low concentration of salt.
Hydrological cycle (synonym: water cycle): The succession of stages through which water passes from the atmosphere to the Earth and returns to the atmosphere: evaporation from the land, sea or inland water, condensation to form clouds, precipitation, accumulation in the soil or in bodies of water, and re-evaporation. (UNESCO/WMO International Glossary of Hydrology, 2nd ed., 1992)

Hydroelectric power generation, water use for: Water used in generating electricity at plants where the turbine generators are driven by falling water. (USGS, available from http://pubs. usgs.gov/chapter11/chapter11M.html)

Imports: Water that enters the territory of reference through mains or other forms of infrastructure.
Inflow: Water that flows into a stream, lake, reservoir, container, basin, aquifer system, etc. It includes inflows from other territories/countries and inflows from other resources within the territory.

Irrigation water: Water artificially applied to land for agricultural purposes. (UNESCO/ WMO International Glossary of Hydrology, 2nd ed., 1992)

Lake: A generally large body of standing water occupying a depression in the Earth's surface.
Outflow: Flow of water out of a stream, lake, reservoir, container, basin, aquifer system, etc. It includes outflows to other territories/countries, to the sea and to other resources within the territory.

Precipitation: The total volume of atmospheric wet precipitation, such as rain, snow and hail, on a territory in a given period of time.

Recycled water: The reuse of water within the same industry or establishment (on site).

Reused water: Wastewater delivered to a user for further use with or without prior treatment. Recycling within industrial sites is excluded. Rivers and streams: Bodies of water flowing continuously or periodically in a channel.

Run-off: The part of precipitation in a given country/territory and period of time that appears as stream flow.

Soil water: Water suspended in the uppermost belt of soil, or in the zone of aeration near the ground surface that can be discharged into the atmosphere by evapotranspiration.

Supply of water to other economic units: The amount of water that is supplied by one economic unit to another and recorded net of losses in distribution.

Surface water: Water which flows over, or is stored on, the ground surface. It includes artificial reservoirs, lakes, rivers and streams, glaciers, snow and ice.

Urban run-off: That portion of precipitation on urban areas that does not naturally percolate into the ground or evaporate, but flows via overland flow, underflow or channels, or is piped into a defined surface water channel or a constructed infiltration facility.

Wastewater: Water which is of no further immediate value to the purpose for which it was used or in the pursuit of which it was produced because of its quality, quantity or time of occurrence. However, wastewater from one user can be a potential supply of water to a user elsewhere. It includes discharges of cooling water.

Water consumption: That part of water use which is not distributed to other economic units and does not return to the environment (to water resources, sea and ocean) because during use it has been incorporated into products, or consumed by households or livestock. It is calculated as the difference between total use and total supply; thus, it may include losses due to evaporation occurring in distribution and apparent losses due to illegal tapping as well as malfunctioning metering.

Water losses in distribution: The volume of water lost during transport through leakages and evaporation between a point of abstraction and a point of use, and between points of use and reuse. Water lost due to leakages is recorded as a return flow as it percolates to an aquifer and is available for further abstraction; water lost due to evaporation is recorded as water consumption. When computed as the difference between the supply and use of an economic unit, it may also include illegal tapping.

Water returns: Water that is returned into the environment by an economic unit during a given period of time after use. Returns can be classified according to the receiving media (water resources and sea water) and to the type of water, such as treated water and cooling water). Glossary 197

Water supply: Water leaving/flowing out from an economic unit. Water supply is the sum of water supply to other economic units and water supply to the environment. Water supply to the environment: see water returns. Water supply within the economy: Water which is supplied by one economic unit to another. Water supply within the economy is net of losses in distribution.

Water use: Water intake of an economic unit. Water use is the sum of water use within the economy and water use from the environment. Water use within the economy: Water intake of one economic unit, which is distributed by another economic unit. Water use from the environment:

Water abstracted from water resources, seas and oceans, and precipitation collected by an economic unit, including rain fed agriculture.

Appendix 1A: 2017 Physical Supply Table for Water Accounts, ‘000 cubic metres

| Industries by SIC | Agricultu re (Irrigatio n) $\qquad$ | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude <br> oil <br> and <br> Minin <br> g | Manufa <br> cturing <br> (Food <br> and <br> Bevera <br> ges) | Manuf acturin ${ }^{\text {g Other) }}$ | Electricity | Water Supply; <br> Sewerage and Waste <br> Management <br> Activities | Constru ction | Accom <br> modatio <br> n | Public Adminis tration | Educa tion | Health | Other | Househol ds | Ac cu $m$ ul uti ati on | $\begin{aligned} & \text { R } \\ & \text { es } \\ & \text { t } \\ & \text { of } \\ & \text { th } \\ & \text { e } \\ & \text { wrl } \\ & \text { or } \\ & \hline \end{aligned}$ | Flows from the environment | Total Supply |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 97,738,064 | 97,738,064 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 185,576 | 185,576 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 97,923,640 | 97,923,640 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Precipitation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 225,969,269,472 | 225,969,269,472 |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 225,969,269,472 | 225,969,269,472 |
| Total Supply Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 226,067, 193,112 | 226,067,193,112 |
| (II) Abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For distributionNWSC |  |  |  |  |  |  |  |  |  | 113,061 |  |  |  |  |  |  |  |  |  |  | 113,061 |
| For distributionOther distributors |  |  |  |  |  |  |  |  |  | 2,845 |  |  |  |  |  |  |  |  |  |  | 2,845 |
| For own use | 186,263 | 134,555,524,293 | 65,224,613,859 | 24,958,721,198 | 14,244,544 | 4,990 | 8,469 | 9,894 | 97,363,550 | 1,216,375,688 | 15,142 | 161 | 15 | 166 | 254 | 2,189 |  |  |  |  | 226,067,070,674 |
| Total | 186,263 | 134,555,524,293 | 65,224,613,859 | 24,958,721,198 | 14,244,544 | 4,990 | 8,469 | 9,894 | 97,363,550 | 1,216,491,594 | 15,142 | 161 | 15 | 166 | 254 | 2,189 |  |  |  |  | 226,067,186,580 |
| (III) Supply of water to other economic units of which: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater to treatment |  |  |  |  |  |  | 692 | 349 | 13 |  | 106 | 157 | 2,285 | 91 | 179 | 503 | 6,855 |  |  |  | 11,229 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  | 692 | 349 | 13 |  | 106 | 157 | 2,285 | 91 | 179 | 503 | 6,855 |  |  |  | 11,229 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  | 40,366,657,288 | 9,783,686,969 | 2,495,871,789 | 13,937,341 |  | 4,411 | 3,913 | 97,266,300 | 1,191,998,346 |  |  |  |  |  |  |  |  |  |  | 53,949,426,357 |
| Groundwater | 93,132 | 26,911,104,859 | 16,306,144,949 | 4,991,743,579 |  |  | 1,470 |  |  | 22,455 |  |  |  |  |  |  |  |  |  |  | 48,209,110,443 |
| Other sources |  | 53,822,209,717 | 26,089,831,918 | 12,479,358,947 |  | 3,493 | 1,470 | 3,913 |  |  | 3,222 | 327 | 4,123 | 215 | 392 | 1,359 | 50,573 |  |  |  | 92,391,469,668 |
| Total returns flows | 93,132 | 121,099,971,864 | 52,179,663,835 | 19,966,974,315 | 13,937,341 | 3,493 | 7,352 | 7,826 | 97,266,300 | 1,192,020,801 | 3,222 | 327 | 4,123 | 215 | 392 | 1,359 | 50,573 |  |  |  | 194,550,006,468 |
| of which: Losses in distribution |  |  |  |  |  |  |  |  |  | 22,455 |  |  |  |  |  |  |  |  |  |  | 22,455 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products | 93,132 | 13,455,552,429 | 13,044,950,061 | 4,991,746,883 | 307,203 | 2,249 | 7,352 | 5,217 | 97,364 | 24,310,345 | 12,889 | 1,308 | 16,491 | 859 | 1,568 | 5,436 | 75,859 |  |  |  | 31,517,186,643 |
| Evapotranspiration of abstracted water | 299 | 215,791,823 | 104,603,199 | 40,027,252 | 45,368 | 8 | 14 | 16 | 156,146 | 1,950,844 | 24 | 0 | 0 | 0 | 0 | 4 | 100 |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total supply | 372,527 | 269,111,048,587 | 130,449,227,755 | 49,917,442,395 | 28,489,088 | $\begin{array}{\|l\|} \hline 10,73 \\ \hline \end{array}$ | 23,863 | 23,287 | 194,727,226 | 2,432,822,739 | 31,359 | 1,953 | 22,914 | 1,330 | 2,393 | 9,487 | 133,287 |  |  | 226,067,193,112 | 678,201,584,033 |

Appendix 1B: 2017 Physical Use Table for Water Accounts, "000 cubic metres

|  | Agriculture (Irrigation) | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude oil and Mining | Manufa <br> cturing <br> (Food <br> and <br> Beverag <br> es) $\qquad$ | Manufa cturing (Other) | Electricity | Water <br> Supply; <br> Sewerage and Waste Management Activities | Constr uction | Acco mmod ation | Public Adminis tration | Educa <br> tion | Health | Other | Households | A c c u m ul at io n n | Rest of the World | Flows to the environment | Total Use |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water | 185,939 |  | 67 | 3,296 | 37,422 | 2,515 | 7,175 | 8,067 | 97,363,426 | 122,123 | 7,073 | 20 |  | 66 | 168 | 709 |  |  |  |  | 97,738,064 |
| Groundwater | 324 |  | 33,998 | 8 | 112,243 | 2,475 | 1,293 | 1,827 | 124 | 23,391 | 8,069 | 141 | 15 | 100 | 86 | 1,481 |  |  |  |  | 185,576 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 186,263 |  | 34,065 | 3,304 | 149,665 | 4,990 | 8,469 | 9,894 | 97,363,550 | 145,514 | 15,142 | 161 | 15 | 166 | 254 | 2,189 |  |  |  |  | 97,923,640 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Collection of Precipitation |  | 134,555,524,293 | 65,224,579,794 | 24,958,717,894 | 14,094,879 |  |  |  |  | 1,216,352,612 |  |  |  |  |  |  |  |  |  |  | 225,969,269,472 |
| Total |  | 134,555,524,293 | 65,224,579,794 | 24,958,717,894 | 14,094,879 |  |  |  |  | 1,216,352,612 |  |  |  |  |  |  |  |  |  |  | 225,969,269,472 |
| Total Use of Abstracted Water | 186,263 | 134,555,524,293 | 65,224,613,859 | 24,958,721,198 | 14,244,544 | 4,990 | 8,469 | 9,894 | 97,363,550 | 1,216,498,125 | 15,142 | 161 | 15 | 166 | 254 | 2,189 |  |  |  |  | 226,067,193,112 |
| Distributed WaterNWSC |  |  | 19 |  |  | 752 | 6,918 | 3,494 | 126 |  | 1,056 | 1,574 | 22,847 | 905 | 1,791 | 5,029 | 68,550 |  |  |  | 113,061 |
| Distributed Waterother Water supply industry |  |  | 19 |  |  |  | 8 | 4 | 0 |  | 20 | 57 | 37 | 93 | 94 | 79 | 2,434 |  |  |  | 2,845 |
| For own use | 186,263 | 134,555,524,293 | 65,224,613,859 | 24,958,721,198 | 14,244,544 | 4,990 | 8,469 | 9,894 | 97,363,550 | 1,216,313,385 | 15,142 | 161 | 15 | 166 | 254 | 2,189 | 62,303 |  |  |  | 226,067,070,674 |
| Total | 186,263 | 134,555,524,293 | 65,224,613,896 | 24,958,721,198 | 14,244,544 | 5,742 | 15,395 | 13,393 | 97,363,676 | 1,216,313,385 | 16,217 | 1,792 | 22,899 | 1,164 | 2,139 | 7,298 | 133,287 |  |  |  | 226,067,186,580 |
| (III) Wastewater and reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater received from other units |  |  |  |  |  |  |  |  |  | 11,229 |  |  |  |  |  |  |  |  |  |  | 11,229 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distributed reused |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  | 11,229 |  |  |  |  |  |  |  |  |  |  | 11,229 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Return flows of water to the environment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | . |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 53,949,426,357 | 53,949,426,357 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 48,209,110,443 | 48,209,110,443 |
| To other sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 92,391,469,668 | 92,391,469,668 |
| Total returns flows |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 194,550,006,468 | 194,550,006,468 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 31,517,186,643 | 31,517,186,643 |
| Evapotranspiration of abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |  |
| Total use | 372,527 | 269,111,048,587 | 130,449,227,755 | 49,917,442,395 | 28,489,088 | 10,731 | 23,863 | 23,287 | 194,727,226 | 2,432,822,739 | 31,359 | 1,953 | 22,914 | 1,330 | 2,393 | 9,487 | 133,287 |  |  | 226,067,193,112 | 678,201,584,033 |

Appendix 2A: 2018 Physical Supply Table for Water Accounts, ‘000 cubic metres

| Industries by SIC | Agricult ure (Irrigatio <br> n) | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude oil and Mining | Manufa <br> cturing <br> (Food and <br> Beverag <br> es) | Manufa cturing (Other) | Electricity | Water Supply; <br> Sewerage and Waste <br> Management Activities | Constru ction | Acco mmod ation | Public Adminis tration | $\begin{aligned} & \text { Educa } \\ & \text { tion } \end{aligned}$ | Health | Other | Househol ds | A $c$ $c$ $c$ $u$ $u$ $m$ $u$ 1 1 $a$ ti ti $o$ $n$ $n$ | $R$ es $t$ of th e W orl d | Flows from the environment | Total Supply |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 100,727,282 | 100,727,282 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 183,943 | 183,943 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 100,911,225 | 100,911,225 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Precipitation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 212,216,963,738 | 212,216,963,738 |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 212,216,963,738 | 212,216,963,738 |
| Total Supply Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 212,317,874,963 | 212,317,874,963 |
| (II) Abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For distributionNWSC |  |  |  |  |  |  |  |  |  | 118,927 |  |  |  |  |  |  |  |  |  |  | 118,927 |
| For distributionOther distributors |  |  |  |  |  |  |  |  |  | 3,452 |  |  |  |  |  |  |  |  |  |  | 3,452 |
| For own use | 155,288 | 126,366,584,630 | 61,255,099,092 | 23,439,753,953 | 13,370,868 | 15,719 | 8,167 | 10,655 | 100,381,976 | 1,142,349,254 | 14,428 | 146 | 15 | 176 | 1,063 | 2,153 |  |  |  |  | 212,317,747,583 |
| Total | 155,288 | 126,366,584,630 | 61,255,099,092 | 23,439,753,953 | 13,370,868 | 15,719 | 8,167 | 10,655 | 100,381,976 | 1,142,471,633 | 14,428 | 146 | 15 | 176 | 1,063 | 2,153 |  |  |  |  | 212,317,869,962 |
| (III) Supply of water to other economic units of which: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater to treatment |  |  | 1,458 |  |  |  | 1,137 | 574 | 21 |  | 173 | 259 | 2,086 | 149 | 294 | 827 | 6,258 |  |  |  | 13,235 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  | 1,458 |  |  |  | 1,137 | 574 | 21 |  | 173 | 259 | 2,086 | 149 | 294 | 827 | 6,258 |  |  |  | 13,235 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  | 37,909,975,389 | 9,188,259,745 | 2,343,975,064 | 13,083,901 |  | 4,007 | 3,983 | 100,281,688 | 1,119,455,529 |  |  |  |  |  |  |  |  |  |  | 50,675,039,308 |
| Groundwater | 77,644 | 25,273,316,926 | 15,313,766,242 | 4,687,950,128 |  |  | 1,336 |  |  | 33,312 |  |  |  |  |  |  |  |  |  |  | 45,275,145,589 |
| Other sources |  | 50,546,633,852 | 24,502,025,988 | 11,719,875,321 |  | 11,004 | 1,336 | 3,983 |  |  | 3,048 | 507 | 3,765 | 191 | 501 | 1,207 | 47,610 |  |  |  | 86,768,608,312 |
| Total returns flows | 77,644 | 113,729,926,167 | 49,004,051,975 | 18,751,800,514 | 13,083,901 | 11,004 | 6,679 | 7,966 | 100,281,688 | 1,119,488,842 | 3,048 | 507 | 3,765 | 191 | 501 | 1,207 | 47,610 |  |  |  | 182,718,793,209 |
| of which: Losses in distribution |  |  |  |  |  |  |  |  |  | 33,312 |  |  |  |  |  |  |  |  |  |  | 33,312 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products | 77,644 | 12,636,658,463 | 12,251,060,236 | 4,687,953,439 | 286,967 | 5,402 | 6,679 | 5,311 | 100,382 | 22,818,937 | 12,192 | 2,030 | 15,062 | 764 | 2,006 | 4,826 | 71,415 |  |  |  | 29,599,081,754 |
| Evapotranspiration of abstracted water | 269 | 218,833,790 | 106,077,770 | 40,591,508 | 45,950 | 27 | 14 | 18 | 173,835 | 1,978,367 | 25 | 0 | 0 | 0 | 2 | 4 | 103 |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total supply | 310,577 | 252,733,169,260 | 122,510,212,761 | 46,879,507,905 | 26,741,737 | 32,125 | 22,662 | 24,507 | 200,764,067 | 2,284,779,412 | 29,841 | 2,942 | 20,928 | 1,279 | 3,865 | 9,012 | 125,283 |  |  | 212,317,874,963 | 636,953,633,123 |

Appendix 2B: 2018 Physical Use Table for Water Accounts, "000 cubic metres

|  | Agriculture (Irrigation) | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude oil and Mining | Manufa <br> cturing <br> (Food <br> and <br> Bevera <br> ges) | Manufa cturing (Other) | Electricity | Water <br> Supply; <br> Sewerage and Waste Management Activities | Constr uction | Acco mmod ation | Public Adminis tration | Educa tion | Health | Other | Households | A <br> c <br> c <br> u <br> m <br> ul <br> at <br> at <br> io <br> n | $R$ es $t$ of of th $e$ W wrl orl $d$ | Flows to the environment | Total Use |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water | 154,876 |  | 110 | 3,296 | 26,545 | 13,216 | 6,536 | 8,684 | 100,381,799 | 124,226 | 6,223 | 8 |  | 66 | 989 | 708 |  |  |  |  | 100,727,282 |
| Groundwater | 413 |  | 34,013 | 15 | 107,247 | 2,504 | 1,631 | 1,971 | 177 | 25,987 | 8,204 | 138 | 15 | 110 | 74 | 1,445 |  |  |  |  | 183,943 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 155,288 |  | 34,123 | 3,311 | 133,792 | 15,719 | 8,167 | 10,655 | 100,381,976 | 150,213 | 14,428 | 146 | 15 | 176 | 1,063 | 2,153 |  |  |  |  | 100,911,225 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Collection of Precipitation |  | 126,366,584,630 | 61,255,064,969 | 23,439,750,642 | 13,237,076 |  |  |  |  | 1,142,326,421 |  |  |  |  |  |  |  |  |  |  | 212,216,963,738 |
| Total |  | 126,366,584,630 | 61,255,064,969 | 23,439,750,642 | 13,237,076 |  |  |  |  | 1,142,326,421 |  |  |  |  |  |  |  |  |  |  | 212,216,963,738 |
| Total Use of Abstracted Water | 155,288 | 126,366,584,630 | 61,255,099,092 | 23,439,753,953 | 13,370,868 | 15,719 | 8,167 | 10,655 | 100,381,976 | 1,142,476,634 | 14,428 | 146 | 15 | 176 | 1,063 | 2,153 |  |  |  |  | 212,317,874,963 |
| (II) Abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distributed WaterNWSC |  |  | 14,578 |  |  | 686 | 6,316 | 3,190 | 115 |  | 964 | 2,587 | 20,857 | 826 | 1,635 | 4,591 | 62,581 |  |  |  | 118,927 |
| Distributed Waterother Water supply industry |  |  |  |  |  |  | 12 | 6 | 0 |  | 22 | 63 | 40 | 102 | 103 | 115 | 2,990 |  |  |  | 3,452 |
| For own use | 155,288 | 126,366,584,630 | 61,255,099,092 | 23,439,753,953 | 13,370,868 | 15,719 | 8,167 | 10,655 | 100,381,976 | 1,142,289,542 | 14,428 | 146 | 15 | 176 | 1,063 | 2,153 | 59,712 |  |  |  | 212,317,747,583 |
| Total | 155,288 | 126,366,584,630 | 61,255,113,669 | 23,439,753,953 | 13,370,868 | 16,406 | 14,495 | 13,851 | 100,382,091 | 1,142,289,542 | 15,413 | 2,796 | 20,913 | 1,104 | 2,802 | 6,859 | 125,283 |  |  |  | 212,317,869,962 |
| (III) Wastewater and reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater received from other units |  |  |  |  |  |  |  |  |  | 13,235 |  |  |  |  |  |  |  |  |  |  | 13,235 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distributed reused |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  | 13,235 |  |  |  |  |  |  |  |  |  |  | 13,235 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Return flows of water to the environment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 50,675,039,308 | 50,675,039,308 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 45,275,145,589 | 45,275,145,589 |
| To other sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 86,768,608,312 | 86,768,608,312 |
| Total returns flows |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 182,718,793,209 | 182,718,793,209 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 29,599,081,754 | 29,599,081,754 |
| Evapotranspiration of abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total use | 310,577 | 252,733,169,260 | 122,510,212,761 | 46,879,507,905 | 26,741,737 | 32,125 | 22,662 | 24,507 | 200,764,067 | 2,284,779,412 | 29,841 | 2,942 | 20,928 | 1,279 | 3,865 | 9,012 | 125,283 |  |  | 212,317,874,963 | 636,953,633,123 |

Appendix 3A: 2019 Physical Supply Table for Water Accounts, ‘000 cubic metres

| Industries by SIC | Agricult ure (Irrigatio <br> n) | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude oil and Mining | Manufa cturing (Food and Bevera ges) | Manufa cturing (Other) | Electricity | Water <br> Supply; <br> Sewerage <br> and Waste <br> Management <br> Activities | Construc tion | Acco mmod ation | Public Adminis tration | Educa tion | Health | Other | Househol ds | Accu mulati on | Rest of the Worl d | Flows from the environment | Total Supply |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 110,605,252 | 110,605,252 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 219,862 | 219,862 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 110,825,114 | 110,825,114 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Precipitation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 255,352,990,877 | 255,352,990,877 |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 255,352,990,877 | 255,352,990,877 |
| Total Supply |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 255,463,815,992 | 255,463,815,992 |
| For distribution-NWSC |  |  |  |  |  |  |  |  |  | 160,284 |  |  |  |  |  |  |  |  |  |  | 160,284 |
| For distribution- Other distributors |  |  |  |  |  |  |  |  |  | 6,004 |  |  |  |  |  |  |  |  |  |  | 6,004 |
| For own use | 262,585 | 169,768,210,667 | 52,592,140,631 | 31,462,907,977 | 186,421 | 37,304 | 40,076 | 7,414 | 109,858,929 | 1,529,781,418 | 224,270 | 367 | 78 | 270 | 1,066 | 2,356 |  |  |  |  | 255,463,661,828 |
| Total | 262,585 | 169,768,210,667 | 52,592, 140,631 | 31,462,907,977 | 186,421 | 37,304 | 40,076 | 7,414 | 109,858,929 | 1,529,947,705 | 224,270 | 367 | 78 | 270 | 1,066 | 2,356 |  |  |  |  | 255,463,828,116 |
| (III) Supply of water to other economic units of which: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater to treatment |  |  | 2,896 |  |  |  | 1,255 | 634 | 23 |  | 191 | 285 | 2,302 | 164 | 325 | 912 | 2,896 |  |  |  | 11,882 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  | 2,896 |  |  |  | 1,255 | 634 | 23 |  | 191 | 285 | 2,302 | 164 | 325 | 912 | 2,896 |  |  |  | 11,882 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  | 50,930,463,200 | 13,148,025,407 | 3,146,290,574 |  |  | 15,416 | 3,938 | 109,749,276 | 1,499,129,877 |  |  |  |  |  |  |  |  |  |  | 68,833,677,689 |
| Groundwater | 131,293 | 33,953,642,133 | 7,888,815,244 | 6,292,581,148 |  |  | 5,139 |  |  | 94,965 |  |  |  |  |  |  |  |  |  |  | 48,135,269,922 |
| Other sources |  | 67,907,284,267 | 22,614,603,700 | 15,731,452,870 |  | 26,113 | 5,139 | 3,938 |  |  | 45,206 | 609 | 4,172 | 385 | 834 | 2,144 | 55,048 |  |  |  | 106,253,484,427 |
| Total returns flows | 131,293 | 152,791,389,601 | 43,651,444,351 | 25,170,324,592 |  | 26,113 | 25,694 | 7,877 | 109,749,276 | 1,499,224,842 | 45,206 | 609 | 4,172 | 385 | 834 | 2,144 | 55,048 |  |  |  | 223,222,432,037 |
| of which: Losses in distribution |  |  |  |  |  |  |  |  |  | 94,965 |  |  |  |  |  |  |  |  |  |  | 94,965 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products | 131,293 | 16,976,821,067 | 8,940,722,342 | 6,292,583,384 | 186,421 | 12,555 | 25,694 | 5,251 | 109,859 | 30,490,111 | 180,825 | 2,437 | 16,690 | 1,541 | 3,336 | 8,576 | 82,572 |  |  |  | 32,241,383,954 |
| Evapotranspiration of abstracted water |  | 243,678,648 | 75,488,701 | 45,160,627 | 201,947 | 54 | 58 | 11 | 157,687 | 2,195,915 | 322 | 1 | 0 | 0 | 2 | 3 | 95 |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total supply | 525,171 | 339,536,421,335 | 105,184,310,219 | 62,925,815,953 | 372,842 | 75,972 | 92,718 | 21,175 | 219,718,087 | 3,059,662,658 | 450,493 | 3,699 | 23,242 | 2,359 | 5,561 | 13,988 | 140,516 |  |  | 255,463,815,992 | 766,391,471,981 |

Appendix 3B: 2019 Physical Use Table for Water Accounts, "000 cubic metres

|  | Agriculture (Irrigation) | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude oil and Mining | Manufa cturing (Food and Beverag es) | Manufact uring (Other) | Electricity | Water <br> Supply; <br> Sewerage and Waste Management Activities | Construc tion | Accom modati on | Public Admini stration | Educa tion | Health | Other | Households | Acc umu latio n | Rest of the World | Flows to the environment | Total Use |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water | 261,899 |  | 110 | 2,222 | 37,315 | 34,539 | 37,869 | 5,357 | 109,858,797 | 149,775 | 215,296 | 229 | 2 | 68 | 989 | 787 |  |  |  |  | 110,605,252 |
| Groundwater | 686 |  | 38,894 | 15 | 133,142 | 2,765 | 2,207 | 2,057 | 131 | 28,929 | 8,974 | 138 | 76 | 201 | 76 | 1,569 |  |  |  |  | 219,862 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  | 39,003 | 2,236 | 170,457 | 37,304 | 40,076 | 7,414 | 109,858,929 | 178,704 | 224,270 | 367 | 78 | 270 | 1,066 | 2,356 |  |  |  |  | 110,825,114 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Precipitation |  | 169,768,210,667 | 52,592,101,628 | 31,462,905,741 | 15,964 |  |  |  |  | 1,529,756,878 |  |  |  |  |  |  |  |  |  |  | 255,352,990,877 |
| Total |  | 169,768,210,667 | 52,592,101,628 | 31,462,905,741 | 15,964 |  |  |  |  | 1,529,756,878 |  |  |  |  |  |  |  |  |  |  | 255,352,990,877 |
| Total Use of Abstracted Water | 262,585 | 169,768,210,667 | 52,592,140,631 | 31,462,907,977 | 186,421 | 37,304 | 40,076 | 7,414 | 109,858,929 | 1,529,935,581 | 224,270 | 367 | 78 | 270 | 1,066 | 2,356 |  |  |  |  | 255,463,815,992 |
| (II) Abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distributed WaterNWSC |  |  | 28,958 |  |  | 1,364 | 12,546 | 6,337 | 229 |  | 1,914 | 2,855 | 23,015 | 1,642 | 3,248 | 9,120 | 69,056 |  |  |  | 160,284 |
| Distributed Waterother Water supply industry |  |  |  |  |  |  | 21 | 10 | 0 |  | 38 | 110 | 70 | 179 | 181 | 156 | 5,238 |  |  |  | 6,004 |
| For own use | 262,585 | 169,768,210,667 | 52,592,140,631 | 31,462,907,977 | 186,421 | 37,304 | 40,076 | 7,414 | 109,858,929 | 1,529,715,195 | 224,270 | 367 | 78 | 270 | 1,066 | 2,356 | 66,223 |  |  |  | 255,463,661,828 |
| Total | 262,585 | 169,768,210,667 | 52,592,169,589 | 31,462,907,977 | 186,421 | 38,668 | 52,643 | 13,762 | 109,859,158 | 1,529,715,195 | 226,223 | 3,332 | 23,164 | 2,090 | 4,495 | 11,632 | 140,516 |  |  |  | 255,463,828,116 |
| (III) Wastewater and reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater received from other units |  |  |  |  |  |  |  |  |  | 11,882 |  |  |  |  |  |  |  |  |  |  | 11,882 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distributed reused |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  | 11,882 |  |  |  |  |  |  |  |  |  |  | 11,882 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Return flows of water to the environment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 68,833,677,689 | 68,833,677,689 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 48,135,269,922 | 48,135,269,922 |
| To other sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 106,253,484,427 | 106,253,484,427 |
| Total returns flows |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 223,222,432,037 | 223,222,432,037 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 32,241,383,954 | 32,241,383,954 |
| Evapotranspiration of abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total use | 525,171 | 339,536,421,335 | 105,184,310,219 | 62,925,815,953 | 372,842 | 75,972 | 92,718 | 21,175 | 219,718,087 | 3,059,662,658 | 450,493 | 3,699 | 23,242 | 2,359 | 5,561 | 13,988 | 140,516 |  |  | 255,463,815,992 | 766,391,471,981 |

Appendix 4A: 2020 Physical Supply Table for Water Accounts, $\mathbf{~} 000$ cubic metres

| Industries by SIC | Agriculture (Irrigation) | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude oil and Mining | Manufact uring <br> (Food and Beverage <br> s) | Manufa cturing (Other) | Electricity | Water Supply; Sewerage and Waste Management Activities | Construction | Accom modati on | Public Adminis tration | Educa tion | Health | Other | Househol ds | Acc umu latio n | Rest <br> of <br> the <br> Worl <br> d | Flows from the environment | Total Supply |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 138,701,719 | 138,701,719 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 222,771 | 222,771 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 138,924,489 | 138,924,489 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Precipitation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 261,070,991,542 | 261,070,991,542 |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 261,070,991,542 | 261,070,991,542 |
| Total Supply Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 261,209,916,032 | 261,209,916,032 |
| (II) Abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For distribution NWSC |  |  |  |  |  |  |  |  |  | 165,904 |  |  |  |  |  |  |  |  |  |  | 165,904 |
| For distribution Other distributors |  |  |  |  |  |  |  |  |  | 6,626 |  |  |  |  |  |  |  |  |  |  | 6,626 |
| For own use | 190,610 | 173,569,751,667 | 53,769,813,508 | 32,167,442,983 | 181,275 | 8,578 | 107,244 | 7,443 | 137,902,440 | 1,564,036,523 | 293,918 | 466 | 71 | 260 | 1,141 | 2,375 |  |  |  |  | 261,209,740,500 |
| Total | 190,610 | 173,569,751,667 | 53,769,813,508 | 32,167,442,983 | 181,275 | 8,578 | 107,244 | 7,443 | 137,902,440 | 1,564,209,053 | 293,918 | 466 | 71 | 260 | 1,141 | 2,375 |  |  |  |  | 261,209,913,030 |
| (III) Supply of water to other economic units of which: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater to treatment |  |  | 2,997 |  |  |  | 1,299 | 656 | 24 |  | 198 | 295 | 2,382 | 170 | 336 | 944 | 2,997 |  |  |  | 12,299 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  | 2,997 |  |  |  | 1,299 | 656 | 24 |  | 198 | 295 | 2,382 | 170 | 336 | 944 | 2,997 |  |  |  | 12,299 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  | 52,070,925,500 | 13,442,443,057 | 3,216,744,003 |  |  | 35,686 | 4,007 | 137,764,750 | 1,532,699,313 |  |  |  |  |  |  |  |  |  |  | 70,400,616,316 |
| Groundwater | 95,305 | 34,713,950,333 | 8,065,465,834 | 6,433,488,007 |  |  | 11,895 |  |  | 102,397 |  |  |  |  |  |  |  |  |  |  | 49,213,113,771 |
| Other sources |  | 69,427,900,667 | 23,121,002,058 | 16,083,720,016 |  | 6,004 | 11,895 | 4,007 |  |  | 59,149 | 651 | 4,319 | 400 | 876 | 2,210 | 56,535 |  |  |  | 108,632,768,788 |
| Total returns flows | 95,305 | 156,212,776,500 | 44,628,910,949 | 25,733,952,026 |  | 6,004 | 59,476 | 8,014 | 137,764,750 | 1,532,801,710 | 59,149 | 651 | 4,319 | 400 | 876 | 2,210 | 56,535 |  |  |  | 228,246,498,875 |
| of which: Losses in distribution |  |  |  |  |  |  |  |  |  | 102,397 |  |  |  |  |  |  |  |  |  |  | 102,397 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products | 95,305 | 17,356,975,167 | 9,140,929,534 | 6,433,490,957 | 181,275 | 3,985 | 59,476 | 5,343 | 137,903 | 31,182,991 | 236,597 | 2,603 | 17,275 | 1,599 | 3,503 | 8,841 | 84,803 |  |  |  | 32,963,417,156 |
| Evapotranspiration of abstracted water |  | 249,084,242 | 77,163,291 | 46,162,439 | 206,447 | 12 | 154 | 11 | 197,899 | 2,244,653 | 422 | 1 | 0 | 0 | 2 | 3 | 96 |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total supply | 381,221 | 347,139,503,333 | 107,539,656,989 | 64,334,885,967 | 362,549 | 18,567 | 227,495 | 21,456 | 275,805,116 | 3,128,193,753 | 589,862 | 4,015 | 24,046 | 2,429 | 5,856 | 14,370 | 144,336 |  |  | 261,209,916,032 | 783,629,757,392 |

Appendix 4B: 2020 Physical Use Table for Water Accounts, "000 cubic metres

|  | Agriculture (Irrigation) | Agriculture (Rain fed crop) | Agriculture (Livestock) | Agriculture (Forestry) | Agriculture (Fishing) | Crude oil and Mining | Manufact uring (Food and Beverage s) | Manufa cturing (Other) | Electricity | Water <br> Supply; Sewerage and Waste Management Activities | Construc tion | Accom modati on | Public Adminis tration | Education | Health | Other | Households | $\begin{array}{\|l} \text { Ac } \\ \text { cu } \\ \mathrm{m} \\ \mathrm{ul} \\ \text { ati } \\ \text { on } \\ \hline \end{array}$ | Rest of the Worl d | Flows to the environment | Total Use |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) Sources of Abstracted Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inland Water Resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water | 190,092 |  | 110 | 2,941 | 32,274 | 5,798 | 105,174 | 5,101 | 137,902,313 | 170,819 | 284,804 | 358 | 2 | 74 | 1,093 | 766 |  |  |  |  | 138,701,719 |
| Groundwater | 518 |  | 41,170 | 10 | 133,036 | 2,780 | 2,070 | 2,342 | 127 | 29,585 | 9,114 | 108 | 69 | 186 | 48 | 1,608 |  |  |  |  | 222,771 |
| Soil Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 190,610 |  | 41,280 | 2,951 | 165,310 | 8,578 | 107,244 | 7,443 | 137,902,440 | 200,404 | 293,918 | 466 | 71 | 260 | 1,141 | 2,375 |  |  |  |  | 138,924,489 |
| Other water sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Collection of Precipitation |  | 173,569,751,667 | 53,769,772,228 | 32,167,440,033 | 15,964 |  |  |  |  | 1,564,011,651 |  |  |  |  |  |  |  |  |  |  | 261,070,991,542 |
| Total |  | 173,569,751,667 | 53,769,772,228 | 32,167,440,033 | 15,964 |  |  |  |  | 1,564,011,651 |  |  |  |  |  |  |  |  |  |  | 261,070,991,542 |
| Total Use of Abstracted Water | 190,610 | 173,569,751,667 | 53,769,813,508 | 32,167,442,983 | 181,275 | 8,578 | 107,244 | 7,443 | 137,902,440 | 1,564,212,055 | 293,918 | 466 | 71 | 260 | 1,141 | 2,375 |  |  |  |  | 261,209,916,032 |
| (II) Abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distributed WaterNWSC |  |  | 29,973 |  |  | 1,411 | 12,986 | 6,559 | 237 |  | 1,982 | 2,955 | 23,822 | 1,699 | 3,362 | 9,440 | 71,477 |  |  |  | 165,904 |
| Distributed Waterother Water supply industry |  |  |  |  |  |  | 21 | 10 | 0 |  | 45 | 129 | 83 | 210 | 212 | 181 | 5,735 |  |  |  | 6,626 |
| For own use | 190,610 | 173,569,751,667 | 53,769,813,508 | 32,167,442,983 | 181,275 | 8,578 | 107,244 | 7,443 | 137,902,440 | 1,563,969,399 | 293,918 | 466 | 71 | 260 | 1,141 | 2,375 | 67,124 |  |  |  | 261,209,740,500 |
| Total | 190,610 | 173,569,751,667 | 53,769,843,481 | 32,167,442,983 | 181,275 | 9,989 | 120,251 | 14,013 | 137,902,677 | 1,563,969,399 | 295,944 | 3,550 | 23,975 | 2,169 | 4,715 | 11,996 | 144,336 |  |  |  | 261,209,913,030 |
| (III) Wastewater and reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wastewater received from other units |  |  |  |  |  |  |  |  |  | 12,299 |  |  |  |  |  |  |  |  |  |  | 12,299 |
| Own treatment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reused water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Distributed reused |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Own use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  | 12,299 |  |  |  |  |  |  |  |  |  |  | 12,299 |
| (IV) Return flows of water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Return flows of water to the environment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To inland water resources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surface Water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 70,400,616,316 | 70,400,616,316 |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $49,213,113,771$ | 49,213,113,771 |
| To other sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 108,632,768,788 | 108,632,768,788 |
| Total returns flows |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 228,246,498,875 | 228,246,498,875 |
| (V) Evaporation of abstracted water, transpiration and water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 32,963,417,156 | 32,963,417,156 |
| Evapotranspiration of abstracted water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transpiration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water incorporated into products |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total use | 381,221 | 347,139,503,333 | 107,539,656,989 | 64,334,885,967 | 362,549 | 18,567 | 227,495 | 21,456 | 275,805,116 | 3,128,193,753 | 589,862 | 4,015 | 24,046 | 2,429 | 5,856 | 14,370 | 144,336 |  |  | 261,209,916,032 | 783,629,757,392 |


[^0]:    Source: Uganda Bureau of Statistics

[^1]:    Source: Uganda Bureau of Statistics

