



REPUBLIC OF GHANA



**WATER  
RESOURCES  
COMMISSION**

**2021**  
**ANNUAL  
REPORT**

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**ACRONYMS**

ABB	-	Ankobra Basin Board
AE	-	Accredited Entity
BPA	-	Bui Power Authority
BVBB	-	Black Volta Basin Board
CBO	-	Community Based Organisation
CONIWAS	-	Coalition of NGOs in the Water and Sanitation Sector
CREMA	-	Community Resources Management Area
CWP	-	Country Water Partnership
CWSA	-	Community Water and Sanitation Agency
DA	-	District Assembly
DHI	-	Danish Hydrological Institute
DBB	-	Densu Basin Board
ECOWAS	-	Economic Community of West African States
EPA	-	Environmental Protection Agency
EIA	-	Environmental Impact Assessment
FC	-	Forestry Commission
FEWS	-	Flood Early Warning System
GCF	-	Green Climate Fund
GAMA	-	Greater Accra Metropolitan Area
GIDA	-	Ghana Irrigation Development Authority
GMet	-	Ghana Meteorological Agency
GoG	-	Government of Ghana
GIADEC	-	Ghana Integrated Aluminium Development Corporation
GREL	-	Ghana Rubber Estates Limited
GWCL	-	Ghana Water Company Limited
GWMA	-	Ga West Municipal Assembly
GWP	-	Global Water Partnership
HSD	-	Hydrological Services Department
IGF	-	Internally Generated Funds
IUCN	-	International Union for the Conservation of Nature
IWRM	-	Integrated Water Resources Management
IWMI	-	International Water Management Institute
KMA	-	Kumasi Metropolitan Assembly

LG	-	Liaison Group
LI	-	Legislative Instrument
LiDAR	-	Light Detection and Ranging
LUSPA	-	Land Use and Spatial Planning Authority
MC	-	Minerals Commission
MDAs	-	Ministries, Departments and Agencies
MESTI	-	Ministry of Environment, Science, Technology and Innovation
MMDAs	-	Metropolitan, Municipal and District Assemblies
MOFA	-	Ministry of Food and Agriculture
MSWR	-	Ministry of Sanitation and Water Resources
NADMO	-	National Disaster Management Organisation
NDCs	-	Nationally Determined Contributions
NDSU	-	National Dam Safety Unit
NGOs	-	Non-Governmental Organisations
NWP	-	National Water Policy
PBB	-	Pra Basin Board
PREE	-	Regional Partnership on Water & Environment in Central & West Africa
SBC	-	Sub-Basin Committee
SEA	-	Strategic Environmental Assessment
SDG	-	Sustainable Development Goal
SIDA	-	Swedish International Development Agency
SLWMP	-	Sustainable land and Water Management Project
TBB	-	Tano Basin Board
TDS	-	Total Dissolved Solids
TSF	-	Tailings Storage Facility
TSS	-	Total Suspended Solids
UENR	-	University of Energy and Natural Resources
UNECA	-	United Nations Economic Commission for Africa
UNECE	-	United Nations Economic Commission for Europe
UNEP	-	United Nations Environmental Program
UNESCO	-	United Nations Educational Scientific and Cultural Organization
VBA	-	Volta Basin Authority
VRA	-	Volta River Authority
VFDM	-	Volta Flood and Drought Management

WASCAL	-	West African Science Service Centre on Climate Change & Adapted Land Use
WASH	-	Water, Sanitation and Hygiene
WQI	-	Water Quality Index
WRC	-	Water Resources Commission
WMO	-	World Meteorological Organisation
WRI	-	Water Research Institute
WSSWG	-	Water and Sanitation Sector Working Group
WVBB	-	White Volta Basin Board
WWD	-	World Water Day

## FOREWORD

2021 was the year when the country was coming out of the global COVID-19 pandemic that had affected the entire economy of the country, not excluding the management of water resources, especially in the administration of regulations and monitoring.

This 23<sup>rd</sup> Annual Report of the Water Resources Commission (WRC) therefore presents the noteworthy advances that were made in the administration of regulations; management of priority river basins; water resources planning and assessment; public awareness and education; water governance; transboundary cooperation and initiatives; administration and human resources; and financial management.

The Integrated Water Resources Management (IWRM) program continued to be the focus at the decentralized river basin level, with attention on collaboration and coordination, and the strategic development and implementation of river basin IWRM plans. The nationwide water quality monitoring exercise continued to serve as the key tracker and indicator of the progress otherwise made in the national effort to address the menace of illegal mining in the country.

On the international front, attention was focused on building on opportunities to enhance transboundary cooperation. An Implementation Plan was developed for executing the two ratified international water conventions i.e. the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992 Water Convention); and the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (1997 Watercourses Convention). The Volta Basin Authority also provided opportunities and assistance to promote the management of our transboundary waters.

However, despite these modest efforts, it should be recognized that the WRC faces some challenges that call for a renewed target and agenda for the WRC towards:

- strengthening capacity and water governance at all levels particularly at the decentralized basin level;
- sustained public awareness and education as well as enforcement;
- mobilizing financial resources; and
- scaling up good practices.

Fortunately, the WRC is charged to stay focused and develop concrete actions to address these issues.

On behalf of the Commission, I wish to extend sincere thanks to the Ministry of Sanitation and Water Resources for supporting the WRC. We also appreciate the continued support and encouragement of our Development Partners and collaborative institutions to the Commission in carrying out its mandate of regulating and managing the country's water resources.

Sincere appreciation also goes to the newly appointed 6<sup>th</sup> Commission, the Governing Board, for their support and strategic direction. Finally, I wish to congratulate the management and staff of the Commission for their enthusiasm and devotion to work despite the challenges.

**Ben Ampomah**  
(Executive Secretary)



## EXECUTIVE SUMMARY

The 23<sup>rd</sup> Annual Report of the WRC highlights activities related to the administration of regulations; management of priority river basins; public awareness and education; water governance; water resources assessment and planning; transboundary water management; administration and human resources; and financial management of the Commission during the year 2021.

### Administration of Regulations

A total of 76 water use permits were issued of which 47 were new permits and 29 were renewals. The total valid permits in the register were 285 compared to 310 in 2020. About 55 water users were monitored for compliance and the assessment of environmental reports showed 26 water users that complied with the submission of reports as required.

The total valid drilling licenses registered in 2021 was 85, a decrease of 25 license holders from the 110 in the 2020 register. The distribution of licensed drillers for categories A, B, and C licenses was 6%, 26%, and 68% respectively.

In the administration of the Dam Safety Regulations LI 2236, of 2016, no new dam safety licenses were issued or registered. A Dam Safety Engineer was recruited to assist in coordinating the operations of the Dam Safety Unit.

### Management of Priority River Basins

The program and activities undertaken in the river basins were the operations of Basin Boards, ecological monitoring, administration of regulations, collaboration, and the development and implementation of river basin Integrated Water Resources Management (IWRM) plans.

The revision of the Tano and Pra Basin IWRM Plans was near completion with the incorporation of the water availability analysis and demand projections. The development of plans for the Kpasenkpe sub-basin of the White Volta and the Lower Volta was advanced with the completion of the baseline studies, while the development of the Black Volta and Oti basin plans could not be completed.

In terms of implementation of the IWRM plans, actions were focused mainly on curbing water pollution, and ecosystem degradation, and creating awareness of the same.

### Public Awareness and Education

Public awareness, education, and training at the national and basin levels were implemented based on the WRC Communication Strategy. Public engagement events organized included the World Water Day celebration under the theme “Valuing Water”.

The celebration which climaxed on March 22, 2021, was limited to a Message to the general public and a Press Statement by the Hon. Minister for MSWR, radio and TV engagements, and publication of feature articles because of the Covid-19 restrictions. A Statement was made on the floor of Parliament The UN World Water Development Report 2021 on “Valuing Water” was officially launched by the Hon. Minister for MSWR as part of the climax of the Day.

Educational campaigns were also undertaken at the basin level and the provision of services continued to focus on making the WRC website and other social media platforms including the YouTube channel, the WRC Facebook, and Twitter pages more interactive.

### **Water Governance Initiatives**

WRC continued with the development of regulations. A roadmap was developed for the passage and implementation of a legislative Instrument on the National Buffer Zone Policy. WRC also developed Terms of Reference for the development and passage of a legislative instrument on Pollution Control and Effluent Discharge. However, EPA also has the responsibility for effluent discharge and pollution control and has indicated its intention of leading the process. The matter was to be resolved between the two institutions. The development of Technical Dredging Guidelines for rivers and streams in the country also continued.

The Lower Volta Basin Board under the Blue Deal program was constituted to be inaugurated. Three (3) Local Water Committees (LWCs) were formed in the Dapola sub-basin of the Black Volta basin. A seven (7) member Technical Committee was set up by the Kpasenkpe Sub-Basin Committee to support the implementation of further IWRM interventions.

The WRC is the new host of the Ghana Committee for UNESCO IHP which had been dormant for quite some time. Accordingly, the Ghana Committee for UNESCO IHP and its secretariat were reconstituted and formally established. A 15-member Ghana Committee for UNESCO IHP was established and inaugurated. The Statutes for the Ghana Committee were also adopted and produced.

### **Water Resources Assessment and Planning**

The nationwide monitoring of surface water quality and trends continued covering thirty-two (32) river stations and nine (9) reservoir/lakes stations. The Water Quality Index (WQI) was used to assess the status of the waters sampled. Generally, the quality of all the rivers improved in 2021.

The majority of the rivers and lakes (36 of the 41 sampling sites) were fairly good, that is between the WQI values of 50 to 80. None of the rivers were grossly polluted (Class IV) and two (2) were unpolluted (Class I) per the 2021 WQI indicators. The maximum WQI value of 82.11 was recorded in River Volta at Kpong, whilst the minimum of 35.46 was recorded at Ampansie (River Ankobra) and the mean WQI value was 58.2.

Other assessment and planning programs included the development and review of IWRM plans; flood mitigation measures in the White Volta; drought early warning within Ghana; and the Blue Deal program to support water governance in the lower Volta delta and improve water quality in the White Volta Basin.

### **Transboundary Water Management Initiatives**

The WRC continued with its role as the national focal institution responsible for coordinating international and transboundary cooperation and initiatives to improve water governance.

In 2021, WRC was engaged in activities of the Volta Basin Authority (VBA) including the implementation of the VFDM Project, which is to build the regional, national, and community capacities of the six (6) VBA Member States in terms of flood and drought management to minimize extreme hydro-climatic disaster risks.

WRC developed Ghana's Implementation Plan, which was formally launched on 21<sup>st</sup> March 2021, to ensure the successful implementation of the 1992 Water Convention. The Implementation Plan provides key strategic action plans and measures for the implementation of obligations.

Ghana was formally welcomed as a Party to the 1992 Water Convention at its 9<sup>th</sup> Session of the Meeting of Parties (MOP) on 28 September-1 October 2021. Ghana was also nominated and unanimously elected to serve on the Bureau for the next three years (2022-2024); affirmed to Co-Lead the sub-program of the Program of Work for 2022-2024 on Supporting National Processes towards Accession; and serving as the sub-Saharan Africa representative on the Joint Expert Group (JEG) of the Water Convention and the Industrial Accidents Convention.

#### **Administration and Human Resources**

The Commission had 52 staff members (35 male and 17 female) at the post. Senior staff was 44 with the remaining 8 as junior staff. 2 staff members resigned from the Commission.

Training programs were undertaken both at the national and international levels, focusing on competency building and acquisition of knowledge in water resources management and the development of human resources.

The library in the year 2021, continued to collect/receive materials/information both in soft copies and hard copies. A total of 51 books, consultancy reports, and gazetted materials were received and logged into the library database, which brought all items in the library to a total of 1,499.

#### **Financial Management**

The audited financial statements indicate that the total income for 2021 was GH¢5,357,263. On the other hand, details of expenditure show that expenditure for the period amounted to GH¢4,545,133 an increase of 11.2% from the GH¢4,088,964 recorded in 2020. This resulted in a positive net operating income of GH¢812,130 in 2021. The total accumulated balance as at 1 January 2021 was GH¢2,199,947 and the recorded total accumulated balance as at 31 December 2021 was GH¢3,017,193.

## CHAPTER 1 – COMMISSION PROFILE AND INFORMATION

### 1.1 Mandate

The Water Resources Commission (WRC) was established by an Act of Parliament (Act 522 of 1996) as the institution responsible for the management of Ghana’s freshwater resources. It is specifically mandated to regulate and manage water resources and to coordinate related government policies. Thus, the responsibilities of WRC, which are spelt out in Section 2 (2) of Act 522, can be categorized as:

- Developing and administering regulations on water utilization and management.
- Planning for water resources development and management at the local, national and transboundary levels.
- Collecting, collating, storing, and disseminating data and information on water resources.
- Monitoring and assessing activities and programs for the sustainable utilization and conservation of water resources.

### 1.2 Vision

The vision of the WRC is “Sustainable water management by all for all”.

### 1.3 Mission Statement

WRC has the mission to regulate and manage the sustainable utilization of water resources and to coordinate related policies by combining our core competencies and hard work through effective participation, monitoring, and awareness creation for socio-economic development of Ghana.

### 1.4 The Commission

The WRC is governed by a Commission, which represents a forum for the integration, cooperation, and coordination of diverse interests and comprises the major stakeholders in the water sector. The Commission consists of 15 members including the Chairman, the Executive Secretary, and a representative each for women, traditional authorities, and NGOs in the water sector. The major stakeholder institutions are the Hydrological Services Department (HSD), Ghana Meteorological Agency (GMet), CSIR-Water Research Institute (WRI), Ghana Water Company Limited (GWCL), Ghana Irrigation Development Authority (GIDA), Volta River Authority (VRA), Environmental Protection Agency (EPA), Forestry Commission (FC) and Minerals Commission (MC). Community Water and Sanitation Agency (CWSA) represents other organizations that produce potable water.

The 6<sup>th</sup> Commission was appointed on 23<sup>rd</sup> September 2021 and inaugurated on 12<sup>th</sup> October 2021. A list of the Commissioners is presented in Appendix 1.

## 1.5 Focus Areas for 2021

This 23<sup>rd</sup> Annual Report of the WRC underscores the following for the year 2021:

- Administration of regulations;
- Management of priority river basins;
- Public awareness and education;
- Water governance initiatives;
- Water resources assessment and planning programs;
- Transboundary water management initiatives;
- Administration and human resources; and
- Financial status of the Commission.

## CHAPTER 2 - ADMINISTRATION OF REGULATIONS

### 2.1 Administration of Water Use Regulations

In 2021, a total of 76 water use permits were issued of which 47 were new permits and 29 were renewals. The total valid permits in the register at the end of the year was 285.

These permits cover 10 categories of water uses namely; aquaculture, commercial, construction, domestic/municipal, dredging, industrial, irrigation, mining, navigation, and recreation. The majority of the permit holders were engaged in domestic/municipal water supply (43.9%), mining (22.5%), irrigation (9.8%), and industrial (8.8%). Table 1 shows the distribution of permits recorded in the water use register in 2021.

Analysis of the water users shows GWCL as the highest water user with 30.5% of the total permits and 69.6% of domestic/municipal water supply permits.

**Table 1: Distribution of Water Use Permit Holders in 2021**

No.	Water Use Activity	No. of Permits	Percentage of Total Permits
1	Aquaculture	15	5.3%
2	Commercial	12	4.2%
3	Construction	4	1.4%
4	Domestic and Municipal	125	43.9%
5	Dredging	7	2.5%
6	Industrial	25	8.8%
7	Irrigation	28	9.8%
8	Mining	64	22.5%
9	Navigation	4	1.4%
10	Recreation	1	0.4%
<b>Total</b>		<b>285</b>	<b>100%</b>

Figure 1 shows the trend of total permits registered from 2008 – 2021. An analysis of the total permits issued between 2020 and 2021 indicated a decrease of 25 (8%) in 2021.



Figure 1: Trend of total permits registered from 2008 - 2021

## 2.2 Compliance Monitoring

Compliance monitoring covered both water users and drilling companies that are either registered or non-registered. In 2021, 55 compliance field visits were made to permitted and non-permitted companies whose activities cover aquaculture, irrigation, mining, domestic/municipal water supply, and drilling companies.

Issues identified include improper waste management within some river catchments, low water yields from boreholes, non-submission of environmental reports stipulated in permits, water users without permits, operating with expired permits, cessation of permitted operations without notification to the Commission, and the non-payment of water use charges. These companies were formally notified and engaged by the Commission to rectify the identified issues.

In an effort to encourage compliance among water use permit and drilling license holders, the administrative fine framework was implemented to address offenses related to conditions of permit or license holders. Furthermore, a compliance exercise to enforce regulations on water well drilling was carried out in Greater Accra in collaboration with the Ghana Police Service. It was observed that most of the drilling companies were licensed.

An assessment of the environmental reports showed that 26 water users complied with the submission of reports in accordance with stipulated conditions in their permits. Table 2 shows that 17 (65%) complaint permit holders were engaged in mining while the rest were involved in irrigation, industrial, and aquaculture water use activities. The data submitted include:

- Surface and groundwater water quality;
- Effluent quality;
- Effluent discharge volumes into water bodies;
- Groundwater and surface water abstraction volumes;

- Groundwater levels; and
- Rainfall measurements and harvesting volumes.

**Table 2: List of Compliant Companies in 2021**

No.	Compliant companies	Water Use Activity
1	Abosso Goldfields Limited	Mining
2	Agdevco Ghana Limited	Irrigation
3	Akosombo Industrial Company Limited	Industrial
4	Anglogold Ashanti (Iduapriem)	Mining
5	Anglogold Ashanti Limited (Obuasi)	Mining
6	Anglogold Ashanti (Tarkwa)	Mining
7	Asanko Gold Ghana Limited	Mining
8	Babator Farming Company Limited	Irrigation
9	Benso Oil Palm Plantation	Industrial
10	Cardinal Namdini Mining Limited	Mining
11	Cargil Ghana Limited	Industrial
12	Chirano Gold Mines Limited	Mining
13	Form Ghana Limited	Irrigation
14	Future Global Resources (FGR Bogoso-Prestea Ltd.)	Mining
15	Ghana Manganese Company Limited	Mining
16	Gold Fields Ghana Limited-Tarkwa	Mining
17	Golden Exotics Limited	Irrigation
18	Golden Star (Prestea-Bogoso) Limited	Mining
19	Golden Star (Wassa) Limited	Mining
20	Kibi Goldfields limited	Mining
21	Mensin Gold Bibiani Limited	Mining
22	Newmont Ghana Gold Limited	Mining
23	Newmont Golden Ridge Limited	Mining
24	Perseus Mining (Ghana) Limited	Mining
25	West African Fish Limited	Aquaculture
26	Z & J 198 Ghana limited	Dredging

The main issues and challenges that were identified from the assessment of the environmental reports and compliance monitoring included the following;



- failure of permit holders to submit reports on time to the Commission.
- submission of inadequate data especially GPS locations of abstraction points and water quality sampling points.
- insufficient knowledge of permit conditions and its requirement by site officers.
- inadequate periodic water quality monitoring by the WRC of areas covered by the water use permits.
- inaccessibility of certain sites to monitoring officers.
- absence of water testing probes to determine on-spot water quality parameters.
- absence of drones for surveillance and investigations.
- inadequate staffing for consistent compliance monitoring.

### 2.3 Administration of Drillers License and Groundwater Development Regulations

A total of 39 drilling licenses consisting of 18 new and 21 renewals were issued in 2021, which was 15 more than that in 2020. The licenses issued were in the following categories:

Category A (a company with 5 or more water well drilling rigs)	3 (7.7%)
Category B (a company with 2 to 4 water well drilling rigs)	8 (20.5%)
Category C (a company with leased or 1 water well drilling rig)	28 (71.8%)

The total number of valid licenses registered in 2021 was 85, a decrease of 25 license holders from the 110 in the 2020 register. An analysis of the register indicates the percentage for category A, B, and C licenses as 6%, 26%, and 68% respectively. Figure 2 presents the trend of drilling license holders from 2013 to 2021.

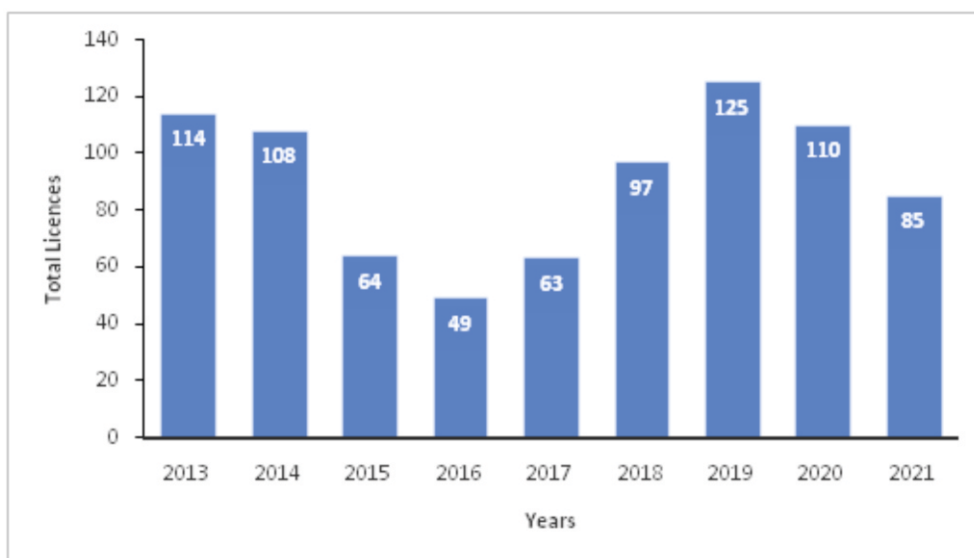


Figure 2: Trend of Drilling License Holders from 2013 to 2021

Drilling companies that applied for new and renewal faced the following challenges;

- a. The proliferation of 'borehole agents' without extensive knowledge of borehole drilling and data required to be collected.
- b. Non-specification of borehole drilling as a registered activity of the company under the Registrar General Department.
- c. Operating without a valid license before applying to the Commission.
- d. Failure to submit drilling reports of previous work(s) carried out.
- e. Records provided on boreholes drilled did not have vital information such as GPS coordinates, lithology, depth of water strike, estimated yield, pumping test, and water quality data of borehole. In most cases, the data was not collected by qualified hydrogeologists or geologists.
- f. Most companies failed to submit pumping tests and water quality data of wells drilled. This was because pumping tests and water quality analyses were not included in their job assignment as indicated by some drilling contractors.
- g. Some companies did not provide valid Tax Clearance Certificates as required as part of the application process.

#### **2.4 Administration of Dam Safety Regulations**

A Dam Safety Engineer was recruited to assist with the coordination and operation of the Dam Safety Unit and to administer the Dam Safety Regulations LI 2236, of 2016. Letters were sent to identified dam operators to start the process of registering their dams. Consequently, three (3) registration applications with the relevant design documents were received and reviewed for dam classification.

There was no issuance of new or renewal dam safety licenses and registration. The register with two (2) dam safety licenses (Akosombo and Kpong dams) and three (3) dam safety registrations (the aforementioned and Pwalugu dams) remained the same.

## CHAPTER 3 - MANAGEMENT OF PRIORITY RIVER BASINS

The management of priority river basins continued with planned programs and activities aimed at improving the state of water resources in the functional river basins of the Densu, White Volta, Ankobra, Pra (Offin), Tano, Dayi, and Black Volta.

The programs and activities undertaken in the river basins covered the operations of Basin Boards, ecological monitoring, administration of regulations, collaboration, and the development and strategic implementation of river basin Integrated Water Resources Management (IWRM) plans.

### 3.1 Operations of Basin Boards

No Basin Board meeting was held in all the basins in view of the absence of the Commission (reconstituted in September 2021 and had its first meeting in November 2021) to assign chairmen for the Boards.

### 3.2 Ecological Monitoring

Ecological and hotspot monitoring activities carried out in the operational basins were:

1. Three (3) locations ((Ntoboroso River Offin; Pipie No.2 – Lake Bosomtwe and the Kromoase – Kromoase stream) were monitored by the Pra Basin office to ascertain the impacts of uncontrolled anthropogenic activities. In addition, hotspot monitoring was carried out at Chirapatire, Buokrom, Gyinyase, Ahensan, and Kenyase to ascertain IWRM challenges and the suitability of sites for developmental projects (Figures 3-4) .
2. Monitoring in the White Basin involved the 18 groundwater monitoring wells that are intended to be rehabilitated and the identification of anthropogenic activities that impact negatively on groundwater resources in the area (Figure 5).
3. Ecological monitoring at the upstream, midstream, and downstream sections of the Black Volta River. Major issues identified included improper solid waste disposal, illegal mining, farming practices in the river, buffer encroachment, erosion, and siltation. Monitoring boreholes were also inspected in the basin.
4. Ecological monitoring within the Ankobra basin was aimed at developing a comprehensive sensitization program to curb pollution of domestic water sources emanating from river buffer encroachment activities, solid waste dumping, and open defecation.
5. Ecological monitoring of the upstream areas of the Tano Basin such as Tuobodom, Techiman, Tanoso in Techiman, Sunyani Tanoso, Acherensua, Dadiesoba Kukuom Tanoso, and Tanodumasi where buffer zone encroachment was rife with farming, building, waste dumping, and clay mining. Illegal mining activities were perpetuated within and close to the Tano River and its tributaries at Pantuso Enchi, Enchi-Jomoro, Sefwi Akura, Boinso, Samreboi, and Tanoso. The major issues identified included improper solid waste disposal, bad farming practices-farming in the river, buffer encroachment, erosion, and siltation. These resulted in increased turbidity levels of the Tano, Suraw, Boin, and Desue Rivers.

### 3.3 Regulatory Activities

The main regulatory activities undertaken in the basins included the following:

1. Processing of applications for water use permits and drilling licenses as well as compliance monitoring of those permitted. The overall results are presented in sections 2.1, 2.2, and 2.3 (Figures 6-9).
2. Identification of major water users and borehole drillers including follow-up visits to regularize their activities. Fourteen (14) newly and forty (24) already identified but non-compliant major water users were served with compliance letters to regularize their activities in the Tano and the Black Volta Basins of which only two (2) complied.
3. Field investigations and interventions dealt appreciably with encroachment and pollution issues in and around the Densu, Birim, and Ayensu basins at Akyem Hemang, Dome, Anum Apapam, Kuano, Gyampomani, Osino, Bunso, Kyebi, Potroase, Asiakwa, and Nsakina. The investigations also covered the Muni-Pomadzi Ramsar Site (Figures 10-11).
4. Concerted efforts with Ghana Highway Authority, Environmental Protection Agency, and the Ga South Municipal Assembly to regulate the activities of illegal developers and polluters at Tetegu which is within the Densu Delta Ramsar site, and to resolve the potential conflict from suspected pollution of Ablebo Community potable water source through the pit water discharge by a mining company.

### 3.4 Collaborative and Coordination Activities

Collaborative and coordination activities that were organized with District Assemblies, International NGOs, and Development Partners to deal with specific issues included:

1. The continued implementation of the Special Treat Project to construct and operate a wastewater treatment plant to serve the Nsawam Medium Security Prison; and Nsawam Adoagyiri, Ga West, and Central Municipal Assemblies under public-private partnership. A visit was paid to the office of the Management and Development Foundation to organize a tour of the completed toilet facilities and to provide relevant technical inputs.
2. Continuous support was provided to A Rocha Ghana (NGO) towards the implementation of the 4-year Green Livelihood Alliance Project aimed at assisting the Atewa, East Akyem, West Akyem, Denkyembuor, Kwaebibirim, and Fanteakwa District Assemblies to integrate the Sustainable Development Goals into their Medium-Term Development Plans to ensure sustainable ecosystems in selected areas. Community seminars were organized at Anum Apapam and Kyebi which resulted in the development of a one-pager on the mandate of the regulatory bodies to serve as an awareness campaign reference document for A Rocha Ghana.
3. Sustained the partnership with the Forest Services Division of the Forestry Commission to establish a 60-hectare buffer zone within the Acquisition area of the Weija Lake with a success rate of approximately 65%; and the same institution with other stakeholders notably; GWCL, Form Ghana Limited, NADMO, Berekum Traditional Council, and the Ghana Police Service under the Green Ghana Initiative to plant 10,000 seedlings on about 10 hectares of land at the Berekum Headworks of the GWCL to protect the catchment areas of River Koraa and the GWCL water treatment facility at Berekum.

4. Strengthened the collaboration with the Ga South Municipal Assembly and GWCL to execute a planned Flower City Ecotourism Project. It is to address encroachment and pollution-related activities within the Weija Acquisition area. The Project Management Unit has engaged 6 investors to implement the project.
5. There were complementary activities including follow-up consultations with the National Security Ministry and National Security Council for the provision of two boats, the extension of security services upstream of the Densu Basin, and regular patrols carried out to deal with matters of encroachment and pollution.
6. Jointly with Catholic Relief Services (CRS) established a Tamale “Water Fund” (TWF) under its Urban WASH and Resilience Project to address water security and sanitation challenges in greater Tamale and to protect buffer zones along the White Volta River spanning over 45 communities whose livelihoods affect the water resources. It is also to utilize nature-based solutions to improve both the quality and supply of water and mitigate the impact of natural disasters.
7. Under Urban Wash Project with CRS organized training programs for selected communities within Sevelugu, Tolon, and Kumbungu Districts on IWRM and Buffer Zone creation. This was part of the process toward the restoration of the Nawuni Sub-catchment of the White Volta Basin.
8. Collaboration on research and development was on the approved project “Participatory Assessment of flood-related disaster prevention and Development of an adapted coping System in Ghana” (PARADeS). The project is in collaboration with NADMO, WASCAL, and Bonn University and is supported by International Disaster and Risk Management (IKARIM) under the German Federal Ministry of Education and Research (BMBF). The project kick-off meeting was held virtually in November 2020. Two surveys in the selected basins, i.e. the Odaw in Accra, Aboabo in Kumasi, and selected communities in the White Volta Basin, and one workshop were completed. A peer-reviewed paper was also published as part of the outcome of the workshop and surveys.
9. Collaborative interventions were carried out with the multi-sectoral national Liaison Group (LG) to guide the environmentally safe exploitation of mineral deposits in productive forest reserves of Ghana. Activities completed included the review of environmental impact assessment reports; bi-annual technical site inspections of Newmont Golden Ridge, Akyem, and Chirano Gold Mines, Chirano; and development of technical specifications. Furthermore, the Environmental Guidelines for Mining in Production Forest Reserves in Ghana were completed and developed into a Legislative Instrument for Environmental Protection (Mining in Forest Reserves) Regulations, 2021. Completed baseline data together with the Ghana Integrated Aluminium Development Corporation (GIADeC) and other Environmental Working Group members for biodiversity and hydrology of the Afao Hills Forest Range and Atiwa Range Forest Reserves. It is to support and promote the sustainable development of a globally competitive integrated aluminium industry in the country. Furthermore, a Technical Paper on the water resources of the Atewa Range Forest Reserve to guide GIADeC in the development of the bauxite mine was also produced.
10. Continued the collaboration with the GARIDProject partners to complete and approve

the Concept of Operations (CONOPS) for NADMO, HSD, and GMet; reviewed the ToR of the service provider, and the technical specifications of the hydro-meteorological equipment which is awaiting acceptance and approval by the Consultant and the World Bank. Steady progress was achieved in respect of the production of orthophotos/ Light Detection and Ranging (LiDAR) for the Project area.

11. Together with MESTI and other relevant institutions commenced the Government of Ghana approved Landscape Restoration and Small-Scale Mining Project (GLRSSMP). The objective is to strengthen integrated natural resource management and increase benefits to communities in targeted savannah and cocoa forest landscapes. Activities completed included a road map to legislate the buffer zone policy into a buffer zone regulation, development of the technical specifications for the procurement of IT systems as well as the ToR for the engagement of a consultant to develop the water resources pollution prevention, control, and effluent discharge regulations.
12. Strengthened collaboration with EPA and the local steering committee of the Sustainable Land and Water Management project (SLWMP) to reduce land degradation and promote biodiversity in selected micro-watersheds in the northern savannah ecological zone of Ghana.
13. Participated in most of the public hearing meetings organized by the EPA as part of the Environmental Impact Assessment (EIA) processes and Land Use and Spatial Planning engagements within the basins.

### 3.5 Development and Implementation of River Basin IWRM Plans

- Development of an IWRM plan for the Kpasenkpe sub-basin of the White Volta was initiated.
- The review of the Tano and Pra Basin IWRM Plans in collaboration with GWP-Ghana was near completion with the incorporation of the water availability analysis and demand projections.
- Development of IWRM Plans for the Black Volta and Oti basins continued, but could not be completed.
- The baseline studies for the Lower Volta IWRM Plan were completed under the Blue Deal Project.
- A baseline study was commissioned for the Ayensu and Birim Basins toward the development of IWRM Plans for the two basins.
- In terms of implementation of the Densu Basin IWRM plan, actions were intensified to curtail conflicts, poor wastewater treatment, and uncontrolled anthropogenic activities such as indiscriminate dumping of solid and liquid wastes, ecosystem degradation, unauthorized siting of dams, encroachments, and illegal mining and other related activities.
- The activities carried out in the Ankobra basin focused mainly on curbing water pollution and creating awareness of the same. Key activities included streamlining small-scale mining activities within the basin especially the Prestea-Huni Valley, Wassa Amenfi East,

and Tarkwa-Nsuaem Municipalities; supporting the promotion of the Mercury-Free Mining Ghana Project; organizing a training workshop on Business Development in the ASM Sector; reviewed the Oil spill contingency plan and Integrated Oceans Management, and carried afforestation initiatives with EPA at Wassa Gyapa and Ghana Manganese Limited as part of small-scale mining site reclamation and the 5 million target tree planting exercise by the Government of Ghana respectively (Figures 12-13).

- Key activities undertaken in the White Volta basin were under the Bongo reforestation project being facilitated by Tree Aid and Blue Deal Project partners to restore 50km<sup>2</sup> riparian buffers around the Veia dam. A number of stakeholder engagements including sub-basin committee meetings were undertaken towards the preparation of the Kpasenkpe sub-basin IWRM plan, coordination, supervision, and monitoring of IWRM interventions. Major outputs comprised the completion of community entry and sensitization including silvicultural practices organized for about 400 lead farmers, the establishment of two nurseries in Gowrie Kunkua and Akalwaka communities to raise 60,000 tree seedlings, and the planting of about 55,555 tree seedlings for both enrichment planting and agroforestry purposes (Figures 14-20).
- The existing IWRM Plan continued to be routinely implemented focusing intently on catchment protection and water quality amelioration. Consequently, efforts were placed on safeguarding the Lake Bosomtwe Biosphere Reserve including the planting of about 1000 tree seedlings at Dase and Adjamam jointly with A Rocha Ghana, KNUST, Institute of Nature and Environmental Conservation (INEC), and Oheneba Poku Foundation to create a 2-hectare buffer within the catchment of the Lake. Similar initiatives were undertaken with relevant stakeholders and personalities notably, the United States ambassador to Ghana. Generally, activities focused on addressing issues of encroachment, pollution, and sensitization (Figures 21-22).
- The SIDA/IUCN 4-year Regional Partnership on Water and the Environment in Central and West Africa (PREE) supported project was continued in the Black Volta Basin to strengthen the resilience of natural ecosystems and local communities in the river basins. The major activities were scoping studies, stakeholder consultations, IWRM testing on improved seeds and seedlings in communities, and other forms of sensitization to pave way for the implementation of community activities. Additionally, 4 hydrometric gauge stations were installed and rehabilitated on the Ghana portion of the Black and White Volta Rivers. The exercise was funded by the International Union for Conservation of Nature (IUCN) through the Volta Basin Authority (VBA) (Figures 23-26).



Figure 3: Ecological Monitoring in the Offin Basin (1)



Figure 4: Ecological Monitoring in the Offin Basin (2)



Figure 5: Inspection of Monitoring Well at Tatunya



Figure 6: Borehole inspection at GOPD Ltd.



Figure 7: Inspection of Aquaculture farms on Volta Lake



Figure 8: Inspection of GHACEM Water Facilities





Figure 9: Site inspection of a Water Abstraction Point



Figure 10: Wastewater from Nixin Paper Mills into Pratu River (Muni-Pomadzi Ramsar Site)



Figure 11: Weir Blocking Flow of River Asobesew by Casa de Ropa (Muni-Pomadzi Ramsar Site)



Figure 12: Interaction with Small Scale Miners at Wassa Gyapa



Figure 13: Tree Planting Exercise at Ghana Manganese Co. -Tarkwa-Nsuaem Municipal



Figure 14: Inspection of Tree Seedlings using Mud Fence in Lungi



Figure 15: Nursery established Akalwaka community



Figure 16: Tree planting activities in Akalwaka



Figure 17: Vetiver Production in Gowrie Kunkua



Figure 18: Vetiver Planting in Gowrie Kunkua



Figure 19: Working to establish Riparian Vegetation along the Kulpawn River in Sakariba



Figure 20: Riparian Vegetation established along the Kulpawn River in Sakariba



Figure 21: Restoration of Buffers in the Lake Bosomtwe Catchment (1)



Figure 22: Restoration of Buffers in the Lake Bosomtwe Catchment (2)



Figure 23: Distribution of Seeds and Seedlings to Communities in the Black Volta Basin



Figure 24: Tree Planting by communities in the Black Volta Basin



**Figure 25: Installation and Rehabilitation of Hydrometric Gauges in Black and White Volta Rivers**



**Figure 26: The Hydrometric Gauges Installation and Rehabilitation Team**

## CHAPTER 4 – PUBLIC AWARENESS AND EDUCATION

Public awareness, education, and training at the national and basin levels were implemented based on the WRC Communication Strategy. These are aimed at delivering structured and professional communication interventions in the areas of print materials for awareness creation; public engagement; educational campaigns and media events; service provision; and networking.

### 4.1 Educational Materials and Publications

As part of promoting and increasing awareness 1,500 branded T-Shirts on World Water Day and about 1,000 and 2,000 copies of Diaries and Calendars, respectively, were printed for distribution.

### 4.2 Public Engagement

Public engagement activities involved stakeholder workshops and seminars at the national level and in the regions, district assemblies, basins, and communities. Specific events organized include:

- The 2021 World Water Day (WWD) celebration was under the theme “Valuing Water”. The celebration drew national attention to the environmental, social, economic, and cultural value people place on the water to safeguard this critical resource for the benefit of everyone. It was also to support the achievement of Sustainable Development Goal (SDG) 6: water and sanitation for all by 2030. The celebration which climaxed on March 22, 2021, was limited to a Message to the general public and a Press Statement by the Hon. Minister for MSWR, radio and TV engagements, and publication of feature articles because of the Covid-19 restrictions. A Statement was made on the floor of Parliament.
- The UN World Water Development Report 2021 on “Valuing Water” was officially launched by the Hon. Minister for MSWR as part of the climax of the WWD. The report assesses the current status and challenges to the valuation of water across different sectors and perspectives and identifies ways in which valuation can be promoted as a tool to help improve its management and achieve global sustainable development.
- Collaborated with selected interested Groups/Associations/Volunteers, NGOs, Media Houses, and educational institutions to sensitize groups such as local communities; Dapola and Kpasenkpe sub-basin committee; Tinga, Lambo, Penten, and other farming communities; regulatory institutions; environmental clubs; and students and the populace on the prudent utilization and management of water resources (Figures 27-28).
- Jointly with GWCL, EPA, CWSA, educational institutions, and other stakeholders in the Black Volta, Pra, and Tano basins sensitized and educated the people on sustainable water resources development, and protection in general (Figures 29-30).

### 4.3 Educational Campaigns and Media Events

Other media events were interviews and panel discussion programs that were national in context on various radio and TV stations such as GBC Unique FM, GBC Radio Ghana, Peace FM, and Starr FM; TV3, Adom TV, Metro TV, UTV, and GTV in Accra.

Educational campaigns to educate the public were also undertaken at the basin level. Programs were held on Sunsum FM, Wontumi Radio, and Hello FM on the prudent management of water resources in the Pra Basin; SkyFM, in Takoradi, Pure FM, Dynamite FM, and Space FM in Tarkwa in the Ankobra Basin; Ark FM and Storm FM in Sunyani in the Tano Basin; and Radio Upper West in Wa in the Black Volta Basin.

Other public awareness campaigns included community durbars and out outreaches on protecting water resources in the Ankobra and Pra Basins; education of students of Wassa Agona Primary School, and Fiaseman and Tarkwa Senior High Scholls; interaction with small-scale miners at Wassa Gyapa; and sensitization meetings with ceramic miners on the acquisition of water use permits. (Figures 31-32)

#### **4.4 Service Provision**

The provision of services continued to focus on making the WRC website and other social media platforms including the YouTube channel, the WRC Facebook, and Twitter pages more interactive. In addition, the sector and other stakeholders such as the Water Sector Working Group were kept updated on water resources management and developments through the sector review programs.

#### **4.5 Networking**

The networking actions were building partnerships with MMDAs, MDAs, NGOs, and academic and research institutions; and participation in national and international conferences/forums and meetings. These are elaborated on in Chapter 8.



Figure 27 Sensitization at Lambo Community in the Lambusie District



Figure 28: Participants in Project Inception Workshop



Figure 29: Community Outreach in the Lake Bosomtwe Catchment (1)



Figure 30: Community Outreach in the Lake Bosomtwe Catchment (2)



Figure 31: Education at Tarkwa Senior High School (Ankobra Basin)



Figure 32: Education at Wassaga Agona D/A Primary School (Ankobra Basin)

## CHAPTER 5 - WATER GOVERNANCE ACTIVITIES

### 5.1 Policy Development and Implementation

The Commission was a key stakeholder in the review of the National Water Policy (2007) initiated and led by the Ministry of Sanitation and Water Resources (MSWR). The review of the policy, which is divided into phases, namely an inception and policy revision phase, is with the view to reflect the current discourse in the water sector.

A series of stakeholder consultations were completed and the revised draft National Water Policy (NWP) document was produced and comments were received from the relevant stakeholders. However, the draft NWP document was to be presented to the Parliamentary Select Committee to seek their input before its finalization.

Another key policy document is the Riparian Buffer Zone Policy (2013), which is to ensure that land strips/areas along open water bodies (rivers, streams, lakes) are designated and managed as conservation areas to restore, conserve and maintain the ecological integrity and provide optimal socio-economic benefits of such designated areas.

The specifics of the Buffer Zone policy implementation within the year are detailed in section 3.5 of this report.

### 5.2 Development of Legislative Instruments

During the year under review, WRC continued with the development of regulations to enforce provisions of the National Buffer Zone Policy. A roadmap has been developed for the passage and implementation of a legislative Instrument on the National Buffer Zone Policy. The roadmap contains the following tasks:

- Finalization of the Stakeholder Consultations;
- Drafting of the Legislative Instructions;
- Consultations with sector Parliamentary Select Committee, Ministry of Sanitation and Water Resources, and Office of the Attorney General;
- Finalizing and forwarding the Legislative Instructions to the Office of the Attorney General;
- Consultations with the Parliamentary Select Committee on Subsidiary Legislation;
- Laying of draft L.I. before Parliament; and
- Publicity and public education of the Buffer Zone LI.

Guidelines and standards on effluent discharge exist but there are no regulations. WRC developed Terms of Reference for the development and passage of a legislative instrument on Pollution Control and Effluent Discharge. However, EPA also has the responsibility for effluent discharge and pollution control and has indicated its intention of leading the process. The matter was to be resolved between the two institutions.

The Commission continued with the development of Technical Dredging Guidelines for rivers and streams in the country. The guidelines are to:



- serve as a guide for carrying out dredging in an environmentally friendly manner to prevent raw water resources degradation and the destruction of adjoining ecosystems;
- provide administrative procedures for proponents in the acquisition of the required permits and approvals; and
- identify the negative effects of dredging and recommend actions to reduce the effects.

### 5.3 Establishment of Governance Institutions

As part of efforts to improve water resources governance at the national level and in the river basins, WRC continued with its collaboration with parastatal institutions, NGOs, and Development Partners to establish new governance platforms/committees. The established new governance institutions/platforms at the national level are in the form of units and committees, and at the basin and sub-basin levels in the form of river basin secretariats and their functional Boards as well as Sub-Basin Committees (SBCs) to facilitate IWRM interventions.

The following were accomplished at the end of the year:

- The National Dam Safety Unit (NDSU) was set up as the main implementing body for Dam Safety Regulations. As noted in section 2.4, a Dam Safety Engineer was recruited to assist with the coordination and operation of the Dam Safety Unit.
- The Lower Volta Basin Board under the Blue Deal program was constituted to be inaugurated.
- Three (3) Local Water Committees (LWCs) were formed in the Dapola sub-basin of the Black Volta basin through a dynamic partnership between the Basin Secretariat and the Technical and Financial Partners including the IUCN, FC, MoFA, and the MMDAs (Figures 33-34).
- A seven (7) member Technical Committee was set up by the Kpasenkpe Sub-Basin Committee to support the implementation of further IWRM interventions and to develop a comprehensive IWRM plan for the Kpasenkpe Sub-Basin.

### 5.4 Establishment of UNESCO Intergovernmental Hydrological Programme National Committee (Ghana Committee)

The WRC is the new host of the Ghana Committee for UNESCO IHP which had been dormant for quite some time. WRC received sponsorship from the UNESCO Participation Programme to support the reconstitution and formal establishment of the Ghana Committee for UNESCO IHP and its secretariat as well as sensitize appropriate target stakeholders including relevant decision-makers on its programs.

The support program started in August 2021 and was completed in November 2021. The following key outputs were delivered:

- A 15-member Ghana Committee for UNESCO IHP has been established and inaugurated by the sector Minister. Members of the Committee with diverse expertise are from relevant research, academia, water user and data management institutions, Gender and

Water ministries, NGOs in water and sanitation, and the Ghana Commission for UNESCO (Figure 35).

- The Statutes for the Ghana Committee were adopted and produced. It provides the framework for the constitution and functioning of the Ghana Committee, improves partnership among the member institutions, and enhances efficiency in program implementation in the hydrological sector in Ghana.
- The 9<sup>th</sup> UNESCO-IHP Strategic Plan (IHP-IX) covering 2022-2029 was adapted for Ghana and the 2022 annual work plan was also developed.
- About thirty-five chiefs and queen mothers from 24 traditional areas and Houses of Chiefs were sensitized to the UNESCO IHP. This was done in collaboration with the Otumfuo Centre for Traditional Leadership, University of Professional Studies, Accra, under its training program for Chiefs, Staff of Traditional Councils, and regional Houses of Chiefs (Figure 36).
- The secretariat for the Ghana Committee with sustainability safeguards was also put in place to ensure continuity and commitment to the Ghana Committee.

As part of the 41<sup>st</sup> General Conference held from 9-24 November 2021, in Paris, France the sector Minister and her delegation had a side meeting with the Natural Science Commission, represented by the Assistant Director-General for Natural Science and the Director for Division of Water Science. The outcome of the side meeting was the express desire of the UNESCO Division of Water Science to support the Ghana Committee in the following areas:

- a. Assist in innovative satellite-based and in-situ water quality monitoring to address water quality issues. This support will be piloted at the transboundary level within the Volta Basin Authority with Ghana as the lead riparian country.
- b. Extension of the UNESCO Hydrogeological Mapping and Assessment Programme to provide groundwater maps including aspects of groundwater assessment to estimate values of groundwater productivity, dependency on groundwater, groundwater risks, etc.
- c. Make available the toolkit and provide training on water assessment on gender responsiveness. The toolkit is to assist in the collection of disaggregated water data towards improving gender equality in water resources management and governance.

Assist in capacity development on hydrological modeling, water quality, groundwater, ecohydrology, urban water, and water harvesting. This will be through the development and dissemination of tools and training materials.



Figure 33: The Kamba Community Local Water Committee (Black Volta Basin)



Figure 34: The Sentu/Buli Community Local Water Committee (Black Volta Basin)



Figure 35: Members of the Reconstituted Ghana Committee of the UNESCO IHP



Figure 36: Traditional Authorities at Sensitization Workshop on the UNESCO IHP

## CHAPTER 6 – WATER RESOURCES ASSESSMENT AND PLANNING

### 6.1 Water Quality Assessment

The Commission has been monitoring the quality of surface waters since 2005 (except 2009) with the view to collect and analyze the water quality data to determine the status of water quality, pollution, and trends.

The monitoring program covers 41 monitoring stations including thirty-two (32) river stations and nine (9) reservoir/lakes stations, distributed as follows:

South-western System	19 stations
Coastal System	8 stations
Volta System	14 stations

The sampling of the rivers and lakes was undertaken in the months of February and July 2021. Assessments were on physio-chemical water quality parameters including Temperature, pH, Conductivity, Total Suspended Solids, Transparency, Nutrients, and Major Ions.

The Water Quality Index (WQI), which indicates the status of water pollution, was used to assess the status of the waters sampled. The general description of the classification system for the WQI is presented in Table 3.

**Table 3: WQI Classification System**

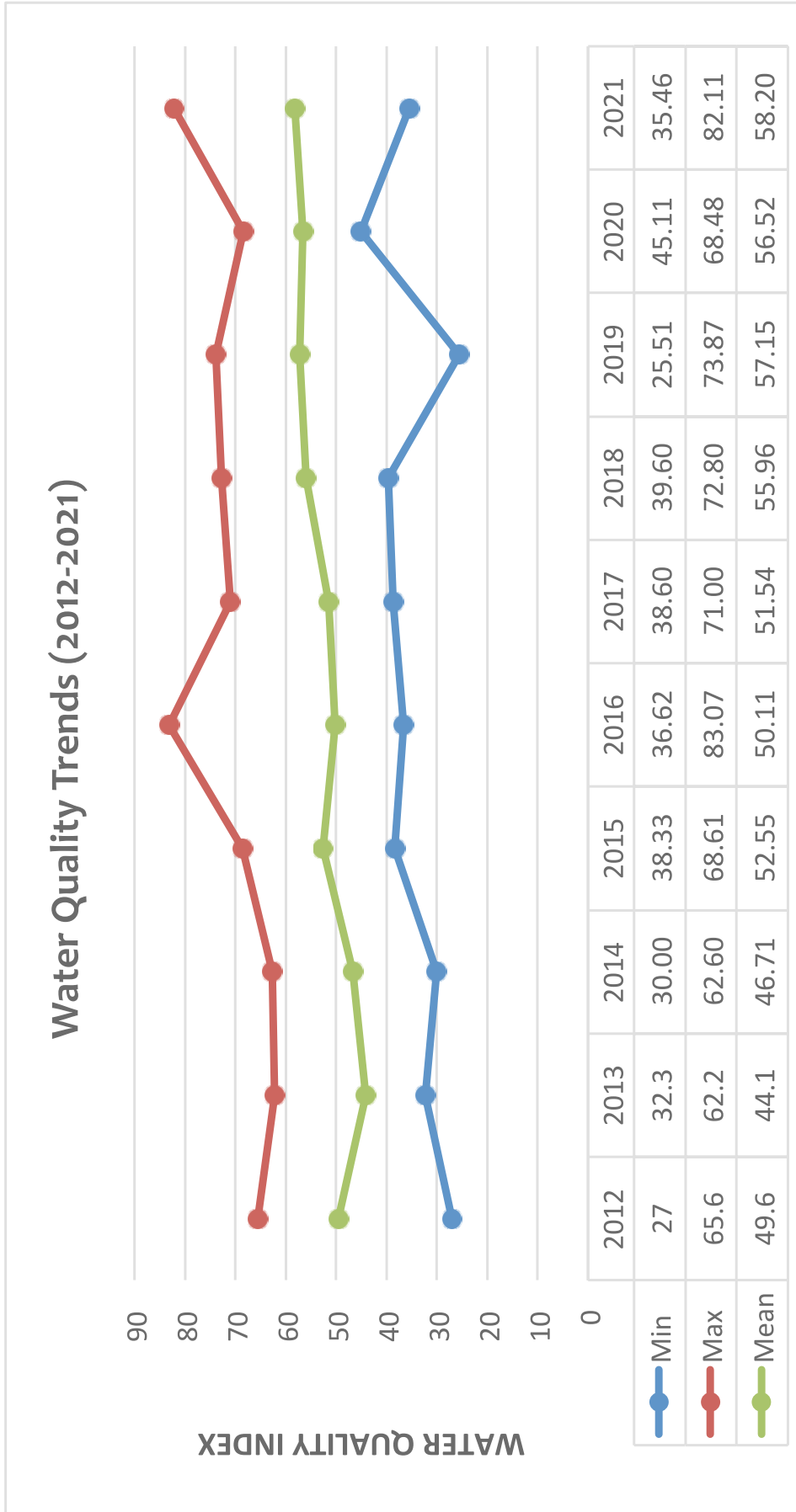
Class	Range	Description
I	>80	Good – Unpolluted
II	50 – 80	Fairly Good
III	25 – 50	Poor Quality
IV	< 25	Grossly Polluted

Figure 37 and Table 4 present the analyses of water quality trends of the major rivers from 2012 to 2021. Figure 37 depicts the statistical description of the annual trend of water quality from 2012 to 2021, while Table 4 shows the WQI of the major rivers in the country for the same period.

Generally, the mean, minimum, and maximum WQI increased steadily from 2013, with the exceptional maximum value of 83.07 recorded in 2016 at Sogakope in the Lower Volta Basin. In 2019, the minimum WQI value of 25.1 was recorded at Ampansie because, during the rainy season, the sampling site was inaccessible, therefore, making it impossible to compute an average score.

In 2021, the majority of the sampling sites (36) out of 41 had WQI above 50 and were within Class II (fairly good). Three (3) sampling stations, Akim Brenase (River Pra), Dinkwa (River Offin), and Ampansie (River Ankobra) were of poor quality (Class III) with WQI values of 46.64, 45.83, and 35.46 respectively.

None of the rivers were grossly polluted (Class IV) and two (2) were unpolluted (Class I) per the 2021 WQI indicators. Additionally, the maximum WQI value of 82.11 was recorded for River Volta at Kpong, while the minimum of 35.46 was recorded at Ampansie in the Western region.



**Figure 37: Trends of Water Quality from 2012 to 2021**

Table 4: Water Quality Index of Major Rivers in Ghana from 2012 to 2021

Sampling Sites	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Adiembra - R. Offin	46.2	35	32.8	38.86	49.68	39.9	56.1	54.20	56.51	52.80
Aframso - R. Afram	54.3	42.2	53.5	48.47	45.89	42.5	54.9	70.03	66.57	52.80
Ajena - Main Volta	65.6	62.2	57.3	66.63	50.06	64.9	71	73.87	66.56	75.82
Akim Brenase-R. Pra	46.2	32.4	41.5	50.07	69.42	52.1	65	59.01	57.33	46.64
Akim Oda-River Birim	44.9	38.4	40	38.91	43.97	56.6	58.3	48.98	51.42	50.60
Ampansie R. Ankobra	40.9	42.8	30	42.33	38.23	45.1	55.7	25.51	51.01	35.46
Baafikrom Reservoir	56.3	42.1	38.2	56.33	50.32	47.5	58.7	62.33	57.28	64.02
Bamboi - Black Volta	54.8	53.2	45.2	53.71	62.41	61.6	63.1	56.51	60.74	67.48
Bonsaso - R. Bonsa	47.6	45.1	41.3	38.33	44.41	51.1	65	64.78	55.86	52.12
Buipe - Black Volta	50.4	51.7	52.2	59.85	68.28	55.7	60.7	59.32	58.16	62.95
Daboase – River Pra	46.2	35.7	45	43.04	41.48	61.4	55	60.21	49.91	54.83
Daboya - White Volta	44.9	40.6	45	56.29	52.73	50.3	44.4	62.23	48.78	67.48
Dadieso-River Bia	47.6	38.4	47.5	56.90	45.83	40.6	48.8	50.73	54.91	51.28
Damanko – Oti	47.6	44.9	42.8	48.59	53.66	58.2	52.3	52.56	50.28	60.66
Dominase- R. Ankobra	51.8	40.6	41.4	42.41	47.51	48.1	55.7	57.28	48.11	56.24
Dunkwa- River Offin	39.7	33.6	37.7	45.31	43.78	44.1	42.3	54.11	54.89	45.83
Ekosi-River Ochi-Nakwa	39.7	46	46.8	57.57	46.59	46.6	57.8	54.66	55.78	52.12
Elubo- River Tano	38.4	54.1	45.9	49.03	40.92	43.7	52.6	53.32	52.12	53.46
Ewusijo-River Butre	46.2	54.9	54.5	56.34	51.91	51.1	54.4	57.47	51.11	56.62
Hohoe - R. Dayi	62.4	49	51.1	68.61	63.55	40.5	55.8	56.41	64.02	66.98
Kpong - Main Volta	64	51.1	62.6	68.11	63.30	71	72.8	56.09	52.01	82.11
Lake Barekese –River Offin	60.8	49.8	57.8	58.33	53.10	46.8	53.3	60.84	56.71	63.41
Lake Bosomtwe	43.6	32.3	46.8	47.30	39.03	38.6	41.7	52.73	45.11	51.28
Lake Brimso-River Kakum	54.8	44.6	46.1	50.50	45.85	53.3	66.8	48.78	60.21	67.42
Lawra - Black Volta		45.6	44.5	58.91	52.93	60.8	52	55.97	55.97	64.80
Mangoase- R. Densu	27	36.3	43.5	52.47	43.78	49.6	39.6	64.85	58.12	50.23
Mankesim-River Ochi-Amisa	56.8	49.9	50.6	54.15	43.01	40.9	65.9	63.92	62.24	52.65
Mankrong J R. Ayensu	50.4	51.4	51.6	48.10	48.74	59.8	66.5	50.32	51.11	61.73
Nabogo - White Volta	39.7	41.9	52.7	62.47	54.82	52.5	58.7	54.39	54.39	52.01
Nsawam- River Densu	47.6	37.5	52.1	45.66	41.01	47.3	43	56.55	54.11	51.28
Osino- R. Birim	51.8	35	38.4	42.69	46.65	53.6	53.5	56.55	57.39	55.78
Potroase- River Densu	50.4	51.2	51.7	68.51	55.24	63.1	61.5	66.53	66.53	59.19
Prestea –River Ankobra	49	38.1	34.9	44.61	36.62	56.5	52.6	58.16	52.56	53.32
Pwalugu -White Volta	62.4	46.7	46.5	52.56	46.59	45.9	48.8	45.11	54.66	67.42
Sabari - R. Oti	42.3	36	55.8	51.01	49.15	48.1	55.5	57.39	58.16	63.97
Saboba -R. Oti	46.2	43.8	42.8	59.86	48.30	42.3	48	48.02	58.44	61.73
Sefwi-Wiawso – River Tano	54.8	41.6	52.3	52.53	57.30	53.5	53.3	65.64	65.64	57.62
Sogakope - Lower Volta	60.8	50.7	55.6	67.38	83.07	69.2	62.3	71.10	62.41	81.14
Tanosu -R. Tano	51.9	45.1	52.5	53.12	45.39	55.7	57	68.48	68.48	56.96
Twifo-Praso - R. Pra	49	37	41.9	38.89	41.19	51	58.1	51.74	50.06	51.91
Weija Lake	49	58.2	44.7	59.75	48.89	51.9	55.7	56.55	61.73	54.20

## 6.2 IWRM Plans

The development and implementation of IWRM plans are elaborated under section 3.5 of this report.

## 6.3 Flood Mitigation Measures in the White Volta Basin

The plan to mitigate the impact of the perennial flooding exacerbated by the spillage of the Bagre Dam in Burkina Faso was executed by a Cabinet-constituted Committee consisting of the Ministers for Food and Agriculture (Chairman); Works and Housing; Sanitation and Water Resources; and Environment, Science, Technology and Innovation. The Committee worked through technical experts including the WRC – (the lead institution), HSD, GIDA, and WRI-CSIR. The 48 Field Engineers Regiment of the Ghana Armed Forces was also engaged in the assignment.

The project started in 2019 with the dredging of the confluences of the four major tributaries of the White Volta (Sissili, Kulpawn, Nasia, and Nabogo) and farmers provided with early maturing crops to enable cropping and harvesting produce before the annual flooding.

On 10<sup>th</sup> November 2021, Cabinet approved the continuation of the dredging. The 2<sup>nd</sup> phase was to cover the shallow upstream and downstream sections of the basin. A roadmap was drawn up at the end of the year for the assignment. The tasks include preparatory/progress meetings of the Technical Taskforce and Ministerial Committee, engagement of the dredging contractors, mobilization for the fieldwork, the dredging works/operations, planting of early maturing crops, restoration/ stabilization of dredged river banks, and production of a documentary.

## 6.4 Drought Early Warning

Support continued to be sought from the Green Climate Fund (GCF) to facilitate transfer and capacity building for climate change adaptation focusing on dry season farming and water management in the northern region.

Accordingly, a revised funding proposal titled “Building climate resilience of the agriculture sector in Ghana through improved climate information and early warning services” was resubmitted to the GCF through the National Determined Agency (Ministry of Finance) for approval.

## 6.5 Blue Deal Program

The Blue Deal program, which is a Dutch Water Authorities initiative, is to help 20 million people in 40 catchments around the world have access to clean, sufficient, and safe water by the year 2030 through supporting partnerships. The Ghana program is to:

- Establish a governance structure and develop a delta management plan for flood protection and management of the Volta delta resources.
- Build the capacity of the White Volta Basin and develop a financing strategy for the management of water resources and sanitation towards improving water quality for various uses.

Specific activities undertaken in 2021 included:

- Field visits to the Bongo reforestation project area and sanitation sites in White Volta Basin and the Songor Delta in the Lower Volta Basin.
- Completion of baseline studies by the Technical Working Group working on the Lower Volta Basin IWRM Plan.
- Meetings of the Kpesenkpe Sub-basin Committee and with the technical working group.
- Initiated the development of IWRM plans for the Kpesenkpe sub-basin and the Lower Volta Basin.
- Constituted the membership of the Lower Volta Basin Board.
- A proposal was finalized for funding to address open defecation in the White Volta Basin.
- A workshop was organized for NGOs to coordinate water resources management activities in the White Volta Basin
- Initiated the development of a Concept Note for the Songor Pilot Project toward the introduction of a Delta program.
- Initiated action on cooperation among Waterworx, GWCL, WRC, and the Dutch Water Authority (DWA) to pilot feasibility studies on the safety of selected dams and reservoirs in the country.



## CHAPTER 7 - TRANSBOUNDARY WATER MANAGEMENT

The WRC is the national focal institution with the responsibility to coordinate and facilitate all international and transboundary cooperation and initiatives on water resources. In 2021, WRC was engaged in activities of the Volta Basin Authority (VBA), and as a party to the two international water conventions.

### 7.1 The Volta Basin Authority

The Volta Basin Authority (VBA) was established in August 2009 to ensure international cooperation for the rational and sustainable management of the water resources of the Volta Basin. The basin covers an area of approximately 400,000 km<sup>2</sup> and is shared by six (6) countries: Benin (3.4%), Burkina Faso (43%), Côte d'Ivoire (2.5%), Ghana (41.6%), Mali (3.1%), and Togo (6.4%).

According to Article 6 of the VBA Convention, the VBA is mandated to:

- promote permanent consultation tools among parties for the development of the Volta Basin;
- promote the implementation of IWRM and the equitable distribution of the benefits resulting from their various utilization;
- authorize the development of infrastructure and projects planned by the stakeholders, which could have a substantial impact on the water resources of the Basin;
- develop joint projects and works; and
- contribute to poverty alleviation and the sustainable development of the Parties in the Volta Basin for better socio-economic integration in the sub-region

WRC was involved in the following VBA activities during the year under review:

#### 1. The Volta Basin Water Charter

The Water Charter for the Volta Basin comprises eight (8) sections, twenty-five (25) chapters, and one hundred and seventy (170) articles. It establishes the principles and modalities for the equitable, and sustainable use of the shared water resources of the Volta Basin. The Annexes except for the Annex on the Minimum Flows and Extractable Volumes have been validated.

In 2021, the national panel of experts set up to propose an agreed national methodology for the Volta Charter and to develop guidelines on the extractable volumes and environmental flows for Ghana held discussions but was yet to complete the assignment.

#### 2. Volta Basin Authority Projects

Two projects that are being implemented under the VBA:

**2.1 Blue Deal Project:** The Blue Deal Project is being implemented in the Sourou part of the Volta Basin. It is to help local communities make better use of water in their activities to improve their living conditions in the long term. The experience and lessons learned will be replicated throughout the Volta basin.

**2.2 Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin (VFDM):** The VFDM Project is a sub-regional project being

supported by the Adaptation Fund. Implemented from June 2019 to mid-2023 by the World Meteorological Organization (WMO), VBA, and Global Water Partnership - West Africa (GWP-WA) with technical support from CIMA Research Foundation, CERFE, IUCN, and national institutions in charge of meteorology, hydrology, water resources management, risk and disaster management, environment and civil society. The aim is to build the regional, national, and community capacities of the six (6) VBA Member States in terms of flood and drought management to minimize extreme hydro-climatic disaster risks.

During the year under review the following activities were undertaken:

- A national technical dissemination workshop was held in Accra, Ghana in January 2021 for the dissemination of findings and recommendations from the capacities and needs assessment for flood and drought forecasting and the Early Warning System in the Volta Basin. The workshop produced a preliminary action plan to develop risk maps and an early warning system.
- Another national technical workshop was organized in January 2021 by the WMO, VBA, and GWP. The workshop discussed and reviewed reports of a study on the collection and analysis of data and information on ecosystems and environmental indicators in the Volta Basin. The two reports produced from the study and reviewed at the workshop are:
  - o “Integrating Flood And Drought Management in Early Warning for Climate Change Adaptation In The Volta Basin: Identifying the State of Data and Knowledge on Ecosystem Status Based on the IUCN Red List of Ecosystems”, and
  - o "Integrated Basin Wide Wetland Guidelines to Promote Ecosystem Services Sustainability.”
- A mini national workshop was organized in June to finalize the study reports.
- The Black Volta Basin Secretariat jointly organized and facilitated 2 National training workshops with VBA, GWP-WA, and WMO on Mainstreaming Gender into End-to-End Early Warning System for Flood Forecasting (E2E-EWS-FF) and Integrated Flood Risk Management (IFRM).
- In May 2021, technicians were recruited from 27 national ministries and agencies to provide relevant socio-economic, infrastructural, health, environmental, and climate data that would be used, along with data from satellite and geospatial sources, for the development of flood and drought risk maps for the Volta Basin.
- A regional workshop was held in June 2021 in Ouagadougou, Burkina Faso, to inform and promote nature-based solutions (NbS) for climate change adaptation and disaster risk reduction at the scale of the Volta Basin. A follow-up to the regional workshop was the development of national action plans for each of the six Volta Basin countries, which will form the basis for the development of project proposals for financing future water-related projects.
- In September 2021, a consultant conducted baseline studies on climate change inventory and its effects on the development of an Investment Plan for Climate (IPC) IPC for strengthening climate resilience in the Volta Basin. The consultant produced an inception report and a report on the current state of water resources management, climate change

issues, their impacts in the Volta Basin, as well as the issues and challenges that need to be dealt with to ensure water security and resilience climate in the basin. The consultant's work and reports were validated by VBA, the IPC-Volta Working Group, and resource persons EPA, CSIR-WRI, GIDA, WRC, and Fisheries Commission in December 2021.

## 7.2 Implementation of the International Water Conventions

Ghana is a Party to the two international water conventions:

- The Convention on the Protection and Use of Transboundary Watercourses and International Lakes, serviced by the United Nations Economic Commission for Europe (1992 Water Convention); and
- The United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (1997 Watercourses Convention).

WRC developed Ghana's Implementation Plan, which was formally launched on 21<sup>st</sup> May 2021, to ensure the successful implementation of the 1992 Water Convention. The Implementation Plan provides a step-by-step process for implementation considering the technical, economic, financial, and other capacities of the country. It then provides key strategic action plans and measures for the implementation of obligations including the following.

- strengthening of the policy, regulatory and institutional frameworks for managing and protecting water resources;
- strengthening financing of water resources management to enhance transboundary cooperation.
- improving the knowledge base to facilitate water resources planning and decision-making;
- enhancing the participation of all stakeholders, public awareness, and education in water resources management; and
- improving IWRM at the river basin level for water security and enhancing resilience to climate change.

Ghana was formally welcomed as a Party to the 1992 Water Convention at its 9<sup>th</sup> Session of the Meeting of Parties (MOP) on 28 September-1 October 2021. Ghana was also:

- consulted to serve on the Bureau, the highest organ that oversees operations of the MOP of the Convention. Accordingly, Dr. Bernadette Adjei, the Chief Legal Officer of the WRC, was nominated and unanimously elected as Ghana's representative to the Bureau for the next three years (2022-2024);
- affirmed to Co-Lead the sub-program of the Programme of Work for 2022-2024 on Increasing Capacity for Implementation of the Convention and Supporting National Processes towards Accession;
- invited to serve as the sub-Saharan Africa representative on the Joint Expert Group (JEG) of the Water Convention and the Industrial Accidents Convention; and

- to benefit from the commitments made by some international organizations including the UNECE and the International Office for Water to facilitate funding of priority transboundary interventions; and to support execution of the national Implementation Plan, capacity building in the critical area of groundwater monitoring, and assessment, set up of joint bodies for transboundary basins such as Tano and Bia, and the assessment of progress on the SDG 6 targets on water resources management (Figures 38-39).



**Figure 38: Ghana welcomed as Party to the UN Water Conventions**



**Figure 39: Participants at a National Technical Workshop under the Sub-Regional VFDM Project**

## CHAPTER 8 - ADMINISTRATIVE AND HUMAN RESOURCES

### 8.1 Training Courses

Training programs were undertaken both at the national and international levels. The main focus was on competency building and acquisition of knowledge in water resources management and the development of human resources. The staff of the Commission benefited from the following training program and courses:

1. Ghana Electronic Procurement System (GHANEPS), Public Procurement Authority, March 2021
2. The Pan African Water and Sanitation Sector Monitoring and Reporting System (WASSMO), AMCOW, June 2021
3. MyDewetra VOLTALARM Early Warning System (EWS), CIMA Research Foundation, September 2021
4. Strengthening Ecohydrological Approach as a Tool for Enhancing Water Quality in West Africa, UNESCO, July 2021

### 8.2 Academic Courses

Three staff and staff are pursuing Ph.D and Masters Programs respectively:

1. Joachim A. Abungba, Ph.D., KNUST, Kumasi
2. Dufie Wiredu Bremang, Ph.D., KNUST, Kumasi
3. Solomon Danso Ankomah, Ph.D., UENR, Sunyani
4. Berlinda Prah, Masters in Environmental Science, UENR, Sunyani

### 8.3 Workshops, Meetings and Conferences

During the period of 2021, WRC either organized or was represented at several meetings, workshops, and conferences including the following:

1. 24th Annual General Meeting - Ghana Institute of Foresters, Nov. 24, 2021.
2. 2<sup>nd</sup> Project Steering Committee, IUCN, Ouagadougou, Burkina Faso, June 10, 2021
3. 5<sup>th</sup> and 6<sup>th</sup> Stakeholder Meeting of the Asante Kingdom Land Restoration Project (AKLRP), Kumasi, Feb and March 2021
4. Capacity Building Workshop: District WASH Staff - WASH Service Delivery, Kumasi, Nov. 2021
5. Consultative Meetings with Ga North, Ga West, Ga South, Ga Central, and Weija-Gbawe Municipal Assemblies on Encroachments and Pollution of the Weija Lake and Acquisition, Amamole. Ngleshie Amanfrom, Sowutuom, Nsakina, Weija, April 6 and 14, June 9, June 14, June 28, June 29, August 26, 2021
6. Consultative Forum - ESIA Study on The Kumasi Thermal Plant Project, Kumasi, Nov. 2021.

7. Consultative Meetings on the Flower City Ecotourism Facility Project, Weija Acquisition, Weija, and Ngleshie Amanfrom, January 22, Sept. 14, Nov 16, Nov. 23, December 16, 2021
8. Consultative Meeting with Complainant and Field Inspection in Connection with the Diversion of the Nsaki River at Adusa, near Mayera within the Ga West Municipality, WRC May 24, 2021
9. Consultative Meeting with Consultants from the CSIR-WRI on Watershed Management, WRC, December 13, 2021
10. Consultative Meeting with some Representatives of the Geography Department of the University of Ghana for the Development of Land Use/ Land Cover Maps of the Densu Basin, Legon. May 7, 2021
11. Consultative Meeting with the Ga East Municipal Assembly, Abokobi, March 31, 2021
12. Consultative Meeting with the Ghana Water Company Limited on Pollution of the Weija Lake from Wastewater by the Weija Water Works, Weija-Accra August 12, 2021
13. Consultative Meetings with the Forest Services Division of the Forestry Commission on Destruction of Newly Established Plantations at the Weija Acquisition, Achimota. Jan 15, April 28, August 9, 2021
14. Consultative Meeting with the Management and Development Foundation-West Africa (MDF-WA) on Development and Management of Waste Management Facilities at the Ga West, Ga Central, and Nsawam Adoagyiri Municipal Assemblies, Accra, November 24, 2021
15. Consultative Meeting with the Management of the Nsawam Adoagyiri Municipal Assembly on Pollution of the Densu River, Nsawam, August 13, 2021.
16. Consultative Meeting with the Management of the Original Farm Limited and Dam Site Inspection, Adiembra, Asamankese. May 5, 2021.
17. Consultative Meeting with the Weija Water Works and the Oasis Camp at Weija on Destruction of Tree Plantations at Joma, Weija-Accra, November 15, 2021
18. Consultative Meetings with Adom TV, Management of GSMA and the Greater Accra Regional Office of the Land Use and Spatial Planning, Ngleshie Amanfrom and Accra Central, September 15, 2021
19. Consultative Meetings with Managements of Casa de Ropa and Nixin Paper Mill Companies on the Cessation of Pollution of the Pratu River and Regularization of their Raw Water Use, Apam, and Winneba, Jan 27, Feb. 26, and April 13, 2021.
20. Joined Up Actions on Northern Floods, Star Ghana Foundation, Wa, June 22, 2021
21. Diagnostic Workshop on Local Water Committee, IUCN, Ouagadougou, Burkina Faso, May 7, 2021
22. District Security Council Meeting of the Fanteakwa South District Assembly and Study Tours at Some Reported Areas in the District, Osino, September 29, 2021
23. Emergency Consultative Meeting, Ghana Commission for UNESCO, Accra, March 29, 2021

24. Emergency Project Steering Committee, IUCN, Ouagadougou, Burkina Faso, July 27-28, 2021
25. Environmental Compliance Monitoring of Bui Hydroelectric Power plant, Energy Commission, Bui October 25-29, 2021
26. European Development Days (EDD) - Transboundary Cooperation Session, UNECE, June 16, 2021
27. Evaluation of Water Aid Ghana Country Program Strategy Six (CPS6), 2021
28. Field Meeting at Kristo Asafo Farm on Destruction of Newly Established Plantation at the Kristo Asafo Farm and the Weija Acquisition, Danchira, August 27, 2021
29. Field Meeting with Investor on Eco-tourism Development Initiatives and the Way Forward, Tomefa, September 10, 2021
30. Geospatial Information Technology for Flood and Drought Management Training, Virtual, VBA-WMO-UNOSAT, November 15 December 15, 2021
31. Hosting of African Development Bank/VBA Mission on Nounbiel Dam, WRC, Sept. 29, 2021
32. Implementation Meeting, Ghana Committee for UNESCO IHP, Accra, April 6, 2021
33. Inception Meeting of the PREE Project, Black Volta Basin, Virtual, February 11, 2021
34. Launch of the Implementation Plan for the UNECE Water Convention, Accra, May 2021
35. MAB Meeting – Financing Ghana Action Plan for 2018 – 2025, EPA, Accra, April 29, 2021
36. Meeting at the Greater Accra Regional Office of the Ghana Highway Authority on Encroachments at the Densu Delta Ramsar Site, Cantonments-Accra, August 11, 2021
37. Meetings of the Greater Accra Land Use and Spatial Planning Committee, Greater Accra Regional Co-ordinating Council (GARCC), Accra, May 27, November 1, 2021
38. Meeting of the Natural Sciences and Intergovernmental Oceanographic Commission under the 41<sup>st</sup> General Conference of UNESCO, Paris, France, November 15-17, 2021
39. Meeting of the Parties, UNECE Water Convention, Geneva, September 29 – October 1, 2021
40. Meeting on Database and Information Technology. Data Collection in Ghana, VFDMP, Virtual, April 21, 2021.
41. Meeting with Chief and Council of Elders of the Nsuapemso Community on Pollution of the Birim River by the Narawa Gold Mining Company, Nsuapemso, August 20, 2021
42. Meetings with Management of A Rocha Ghana on Project Proposal on the Conservation of the Atewa Forest Reserve as a Critical Ecosystem, North Legon, August 10, 2021
43. Meeting with Management of the Fanteakwa South District Assembly, Osino, March 4, 2021

44. Meetings with Ministry of Foreign Affairs and Chinese Team on Birim River; MMIP/SMP Team -Visit to WRC; IKUSASA Holdings on Water Treatment; IWMI on potential projects; and IRC on New Strategy, WRC, May 25, June 7, June 24, 2021.
45. Meteorological Virtual Seminar Series-Ghana 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Meteorological Virtual Seminar Series, April 22, 2021
46. Ministerial Meeting on Funding Greening Ghana Initiative, MESTI, Accra, July 5, 2021
47. National Flood and Drought Management Workshop, VBA-VFDM, Accra, September 2021
48. Orientation Meeting with Newly Recruited Water Quality Assurance Staff of the Ghana Water Company Limited, ATMA, Accra, September 13, 2021
49. Orientation Workshop for Ministerial Advisory Board, MSWR, Accra, July 30, 2021
50. Orientation Workshop for Parliamentary Select Committee, MSWR, Ada, July 3, 2021
51. Orientation Workshop for WRC Commissioners, Miklin Hotel, Accra, October 28, 2021
52. Performance Review of the 2018-2021 Medium Term Development Plan, Nandom Municipal Assembly, Nandom, March 4, 2021
53. PREE Communication Strategy Action Plan Meeting, Virtual, IUCN, May 5, 2021
54. Regional Consultative Dialogues on Small Scale Mining and Deforestation, Kumasi and Tamale, May and July 19, 2021
55. Sensitization Workshop for Management of Ministries, Departments, and Agencies on the Operationalization of the Public Private Partnership, Accra. June 1, 2021
56. Stakeholder Consultative Workshop - Ghana Sustainable WASH Development Program, Kumasi, May 2021
57. Stakeholder Engagements for Iguana Resources Exploration Work, Riguana Resources, Sawla, June 18, 2021
58. Stakeholder's Dialogue on the Sanitation in the Country, Kumasi, May 2021
59. Stakeholders Consultative Meeting on Disputes concerning Salt Production at the Songor Ramsar Site, Ada, March 1, 2021
60. Stakeholders' Consultation: ESIA Study- Goaso Water Supply Project, Kumasi, July 2021
61. Validation Workshop on Ecosystems Report, Ouagadougou, Burkina Faso, August 2021
62. Workshops on Conservation of the Atewa Range Forest Reserve, A Rocha Ghana, Kyebi, March 30 and May 26, 2021
63. Workshop on National Learning Exchange on District-wide Approaches to Water and Sanitation Security, NDPC, Accra, October 27, 2021
64. Workshop on Noise Pollution and Buffer Zone Encroachment, Kumasi Sept. 2021
65. Workshop on Plastic Waste in Coastal Watersheds, UNEP, Roman-Ridge-Accra, December 14-15, 2021



66. Workshop on the Development of Management Plans and Formation of Management Committees for the Anum Apapam and Kyebi Community Resource Management Areas, A Rocha Ghana, Anum Apapam and Kyebi, September 21-24, 2021
67. Workshop on the Establishment of Functional Ghana Committee of UNESCO IHP, Aburi, August 17, 2021.
68. Workshop on the Ghana Hydrological Authority Bill, Accra, November 27, 2021
69. Workshop on the Review of the Draft National Biodiversity Policy, Kumasi, Oct. 2021
70. Workshop on the Review of the National Water Policy with Parliamentary Select Committee on Water and Sanitation, MSWR, Accra, November 12, 2021
71. Workshop on Water Transport and Water Treatment and Supply Project by the LMI Holdings, Accra, December 6, 2021
72. Workshop on WRC Scheme of Service, Miklin Hotel, East Legon-Accra, October 6-7, 2021
73. Meeting of the Ghana Commission for UNESCO, Accra, December 15, 2021
74. Conference on Water and Beyond, EU, Virtual, January 19-21, 2021
75. SIGA-WRC Contract Negotiations, Accra, January 20, 2021
76. Project Technical Development Meeting, IWMI, September 3, 2021
77. Dubai Expo 2020, Dubai, UAE, October 16 -21, 2021.
78. 2<sup>nd</sup> Sector Advisory Board Meeting, RWESCK, KNUST, Accra, May 11, 2021
79. Blue Deal Steering Committee Meetings, Accra, August 6 and November 26, 2021.
80. Regional Coordinating Council Meeting, Upper West, Wa, December 30, 2021

#### 8.4 Committees

The Commission hosted and served on a number of committees during the year under review. These include:

1. Advisory Board, Regional Centre for Energy and Environmental Sustainability, University of Energy and Natural Resources, Sunyani
2. Advisory Board, Regional Water and Environmental Sanitation Centre, Kumasi, KNUST
3. Advisory Council, MSWR
4. Annual Progress Reporting and Reviewing of Sectorial Development Agenda/Goals under the auspices of the National Development Planning Commission
5. Bureau of the 1992 United Nations Water Convention (elected in 2021)
6. Chairman of the Country Water Partnership of the Global Water Partnership
7. Committee on Annual Progress Reporting and Reviewing of Sectorial Development Plans, MSWR
8. Environmental Working Group, GIADEC (2020-date)

9. Ghana – Steering Committee, Ghana - Togo water supply scheme, Ghana Water Company Limited (2016 – date)
10. Ghana Commission for UNESCO
11. Ghana Committee for UNESCO-IHP (Host Institution)
12. Governing Board – Ghana Geological Survey Authority (2019 – date)
13. Governing Board –Ghana Meteorological Agency (2021 –date)
14. Institutional Technical Committee (ITC) on Mineral Titles, Mineral Commission (2017 – date)
15. IWMI Project Technical Development Committee
16. Joint Expert Group (JEG) of the Water Convention and the Industrial Accidents Convention (2021 -)
17. Kumasi Metropolitan Assembly Adhoc Committee on Flood Control (Nov. 2021)
18. Man and Biosphere Committee, Environmental Protection Agency. 2010 – Present
19. Monitoring & Evaluation Technical Working Group at the Ministry of Sanitation and Water Resources, MSWR
20. National Biodiversity Steering Committee to provide strategic direction and efficient coordination of biodiversity activities, MESTI. 2019 – Present
21. National Coordinating Committee on Drinking Water Quality Management, MSWR (2015-date)
22. National Focal Point to the 1992 United Nations Water Convention
23. National Focal Point, for the Technical Advisory Committee of the Permanent Framework for Coordination and Monitoring of IWRM in West Africa, Water Resources Management Centre, ECOWAS.
24. National Focal Point, to the Technical Experts Committee of Volta Basin Authority.
25. National Steering Committee for the “Connect Project: Mainstreaming Biodiversity into The Heart of Government Decision Making”. National Biosafety Authority. 2019 – Present
26. National Technical Working Group on Water. 2020 – Present
27. National World Water Day Celebration Committee, WRC (Host)
28. Nature Reserve Committee, Environmental Protection Agency (Nov. – Dec. 2021)
29. Regional Environmental Management Committee, Upper West
30. Research and Statistics Working Group, MSWR
31. Sector Medium-Term Development Plan Technical Working Group, MSWR
32. Siting Committee for the development of Energy infrastructure, Energy Commission (Jan. 2010 – date)
33. Spatial and Big Data Work Stream/Steering Committee, Ghana Statistical Services
34. Steering Committee on the Implementation of the National Determined Contribution (NDCs) –MESTI (2019 – date)

35. Steering committee: Implementation of the Environmental Management Plan (EMP) for Akosombo and Kpong Hydroelectric Plants, VRA (Jan 2013 - date)
36. Steering Committee: Pwalugu Multipurpose Dam project, VRA (May 2013 –present)
37. Steering Committee: Tamale Water Fund (2021 - date)
38. Steering Committee - Regional Partnership for Water and Environment (PREE)
39. Suntu/Buli Local Water Committee – Black Volta Basin
40. Sustainable Development Goal Work Stream, MSWR, and Ghana Statistical Services
41. Technical Evaluation Committee for the Review of the National Water Policy, MSWR. 2019 – 2021
42. Technical Review Committee – GAMA project – MSWR (2019 – date)
43. Technical Review Committee on Natural Resources, Environmental Protection Agency. 2010 – Present
44. Technical Review Committee on Nuclear Power Programme Development, Nuclear Regulatory Authority, and Environmental Protection Agency
45. Technical Working Group on Ghana Datacube Project, Ghana Statistical Services
46. Upper West Regional Spatial Planning Committee
47. Water and Sanitation Working Group. 2020 – Present
48. Water Quality Technical Committee, WRC (2013-date)

## 8.5 Human Resources

The Commission had 52 staff members (35 male and 17 female) at the post. The number of senior staff was 44 with the remaining 8 as junior staff. The staff members at post at the end of the year were:

### Permanent Appointments

- |                                     |  |
|-------------------------------------|--|
| 1. Mr. Ben Y. Ampomah               | Executive Secretary (post-retirement contract) |
| 2. Ms. Adwoa D. Paintsil            | Director, Environmental Quality                |
| 3. Dr. Bernadette Adjei             | Chief Legal Officer, Accra                     |
| 4. Ms. Linda G. Ennison             | Chief Admin. Officer, Accra                    |
| 5. Dr. Ronald K. Abrahams           | Chief Officer, Densu Basin, Koforidua          |
| 6. Dr. Bob Alfa                     | Chief Engineer – Surface Water, Accra          |
| 7. Dr. Mawuli Lumor                 | Chief Officer, Ankobra Basin, Tarkwa           |
| 8. Ms. Esi Biney                    | Chief Ecologist, Accra                         |
| 9. Mr. S Acheampong-Boateng         | Principal Accountant, Accra                    |
| 10. Mr. George Baah                 | Principal Information Tech. Specialist, Accra  |
| 11. Mrs. Dufie Abena Wiredu Bremang | Principal Officer, Pra Basin, Kumasi           |
| 12. Mr. Solomon Danso-Ankamah       | Principal Officer, Tano Basin, Sunyani         |
| 13. Mr. Eric Muala                  | Principal Monitoring Officer, Accra            |

14. Mr. Edwin Afosah-Anim	Principal Engineer – Surface Water, Accra
15. Mr. Joachim Ayiiwe Abungba	Principal, Black Volta Basin, Wa
16. Mr. Jesse Kazapoe	Principal Officer, White Volta Basin, Bolga.
17. Mr. Joseph Otchere Darko	Senior Internal Auditor, Accra
18. Mr. Daniel A. Y. Avafia	Senior Dam Safety Officer, Accra
19. Mr. Kwesi Yirenkyi Boateng	Senior Public Relations Officer, Accra
20. Mrs. Belinda Baah	Senior Admin. Officer, Accra
21. Mr. Kwadwo Twum Karikari	Senior Accountant, Accra
22. Ms. Grace Quaicoe	Senior Admin. Officer, Ankobra Basin, Tarkwa
23. Mr. Fred Wiredu Bremang	Information Tech. Specialist, Accra
24. Ms. Afran Anti Adwoa Fosua	Monitoring Officer, Accra
25. Mr. James Aggrey	Water Resources Engineer (SW), Accra
26. Ms. Portia Yeboah Amoah	Admin. Officer / Procurement, Accra
27. Mr. Francis Acquah-Swanzy	Officer, Ankobra Basin, Tarkwa
28. Mr. Yaw Boateng Opoku	Officer, Pra Basin, Kumasi
29. Ms. Berlinda Prah	Officer, Tano Basin, Sunyani
30. Ms. Pricilla Gyamfi Boateng	Ecologist, Head Office, Accra
31. Mr. Godfred Asamoah	Officer, Environmental Quality, Accra
32. Mrs. Florence M. Dagbanu	Admin. Officer, Accra
33. Ms. Abigail Adziakpor	Admin. Officer, Accra
34. Ms. Liaza Sulley	Admin. Officer, White Volta Basin, Bolga.
35. Mr. Yaw Konadu Yiadom	Assistant Officer, Tano Basin, Sunyani
36. Mr. Andrew Asaviansa	Assist. Officer, White Volta Basin, Bolga.
37. Mr. Joseph Kugbeadjo	Assistant Officer, Accounts
38. Mr. Emmanuel M. Mensah	Administrative Assistant, Accra
39. Ms. Agbenu Delight	Assist. Admin. Officer, Accra
40. Mr. Owusu-Ansah Romeo	Assist. Auditor, Accra
41. Mr. Kruh Junior Kwadwo	Assist. Officer (Groundwater), Accra
42. Mr. Raymond Djangma	Assistant Officer, Pra Basin, Kumasi
43. Ms. Sarah Addison	Assistant Librarian, Accra
44. Ms. Christiana Ahiator	Assistant Officer, Accounts, Accra
45. Mr. Edward K. Toah	Chief Driver, Accra
46. Mr. Samuel Quaye	Chief Driver, Accra
47. Mr. Joseph Baba Abongo	Driver, White Volta Basin, Bolga.
48. Mr. Kofi Anane	Driver, Accra
49. Mr. Salawura Sumani	Driver, Black Volta Basin, Wa

50. Mr. Shadrack Tweneboah	Driver, Pra Basin, Kumasi
51. Mr. Bismark Williams Osei	Driver, Tano Basin, Sunyani
52. Mr. Papa Salifu	Labourer, Accra

### Secondment

The following is on Secondment to the Commission:

1. Ms. Lawrencia Sena Ziwu	Senior Public Relations Officer, Accra
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### Contract Staff

1. Mr. Kaba Abakeh	Assistant Officer, Black Volta Basin, Wa.
2. Mr. David Yabana Pichire	Assistant Officer, Black Volta Basin, Wa
3. Ms. Cynthia Boafo Agyiri	Assistant Officer, Monitoring, Accra
4. Mr. Johnson Quaquo	Assistant Officer, Planning, Accra
5. Ms. Carly Joe-Louis	Assistant Officer, Public Relations, Accra
6. Ms. Stella Awusi	Cleaner, Tano Basin, Sunyani
7. Mad. Juliana Adomako	Cleaner, Pra Basin, Kumasi
8. Mrs. Joyce Annor	Cleaner, Accra, Annexe.
9. Ms. Cecilia Abaane	Cleaner, Densu Basin, Koforidua
10. Ms. Hawa Fuseine	Cleaner, Black Volta Basin, Wa
11. Ms. Pascalina Nsoh	Cleaner, White Volta Basin, Bolga
12. Ms. Sylvia Amena	Cleaner, Ankobra Basin, Tarkwa
13. Mr. BabaSalifu Kantinka	Security Officer, Ankobra Basin, Tarkwa
14. Mr. Solomon Owusu Bossman	Security Officer, Tano Basin, Sunyani
15. Mr. Mohammed Nsah	Security Officer, White Volta Basin, Bolga

### Attachment/Internship/Nation Builders Corps (NABCO)

1. Eric Amenyio Amenyaglo (NABCO)	Densu Basin , K'dua
2. Hakeem Abdul Kareem (NABCO)	Head Office
3. Agyemang Ernest Okertchiri (NABCO)	Head Office
4. Hlorbu Patricia Etonam (NABCO)	Head Office

## 8.6 Library

The library in the year 2021, continued to collect/receive materials/information both in soft copies (flash disks, emails, etc.) and hard copies (printed paper documents).

A total number of 51 books, reports, newsletters, and journals were received and logged into the library database, which brought all items in the library to a total of 1,499.

The items received were 4 water resources management books and 9 consultancy reports. The library also received 38 subscriptions from the Ghana Publishing Corporation and Ghana Gazette,

Commercial and Industrial, Land and Concessions Bulletin, Local Government Bulletins, Acts, and Statutory Instruments from the Assembly Press.

External visitors to the library to the library were mainly students and researchers. The library database was fully operational and able to address activities such as, capturing data (items being received into the library) and querying/searching for specific information as may be required.

## **8.7 Information Technology**

Database developers reinstalled the WRC web-based application ([wrc-app.org/app](http://wrc-app.org/app)). Unfortunately, the database server PowerEdge R730 server (2016) was lost due to a power upsurge which hampered staff training on the newly developed WRC database application.

The new version of the WRC web-based database ([wrc-app.org/app](http://wrc-app.org/app)) application was received in December 2020. As part of the use of the new application, database application users will be required to use their official WRC email as the required email for the database application.

In terms of website maintenance, the WRC website was redesigned to improve the background, interactive page, and user friendliness and improve the security features of the website to ward off intruders and hackers. The work has however yet to be completed and delivered. In addition, the preventive maintenance plan for all IT equipment for the year was completed.

Finally, five (5) laptops and (1) desktop computer, four (4) drones, and one (1) printer were received from the Liaison Group on Mining in Forest Reserves.

## CHAPTER 9 - FINANCIAL STATUS

### 9.1 Audited Financial Statements

The audited financial statements indicate that the total income for 2021 was GH¢5,357,263. On the other hand, details of expenditure show that expenditure for the period amounted to GH¢4,545,133 an increase of 11.2% from the GH¢4,088,964 recorded in 2020. This resulted in a negative net operating income of GH¢812,130 in 2021. The total accumulated balance as at 1 January 2021 was GH¢2,199,947 and the recorded total accumulated balance as at 31 December 2021 was GH¢3,017,193.

The detailed Audited Financial Statements for the year ended 31 December 2020 are presented in Annex 4

**Appendix 1: Members of the Water Resources Commission**

- |     |                                 |   |                                     |
|-----|---------------------------------|---|-------------------------------------|
| 1.  | Mr. Minta Afosa Aboagye         | - | Chairman                            |
| 2.  | Tobge Gbogbolulu V.             | - | National House of Chiefs            |
| 3.  | Mr. Jacob Zieme Yendor          | - | Ghana Water Company Ltd             |
| 4.  | Prof. Mike Yaw Osei-Atweneboana | - | CSIR – Water Research Inst.         |
| 5.  | Mr. Sylvester Darko             | - | Hydrological Services Dept.         |
| 6.  | Mr. Eric Asuman                 | - | Ghana Meteorological Agency         |
| 7.  | Mr. Ransford Sekyi              | - | Environmental Protection Agency     |
| 8.  | Ing. Abdul Noor Wahab           | - | Volta River Authority               |
| 9.  | Mad. Afua Gyamfua Owusu-Akyaw   | - | Women’s Representative              |
| 10. | Hon. Adelaide Ntim              | - | Government Appointee                |
| 11. | Mr. Collins Anim-Sackey         | - | Minerals Commission                 |
| 12. | Ing. Richard Oppong-Boateng     | - | Ghana Irrigation Authority          |
| 13. | Ing. (Dr.) Worlanyo Siabi       | - | Community Water & Sanitation Agency |
| 14. | Mr. Ben Ampomah                 | - | Executive Secretary, WRC            |
| 15. | Mr. John Macdonald Allotey      | - | Forestry Commission                 |



Appendix 2: Water Use Register – 2021

No	User Name	District/Municipal/Metro	Point of Use	Type of Source	Water Use Activity	Primary Purpose	Expiry date
1	A & O Way Limited	Shama	Supomu-Dunkwa	Pra River	sand winning	Dredging	30-Jun-24
2	A & O Way Limited	Shama	Atwereboanda	Pra River	sand winning	Dredging	31-Dec-22
3	Abosso Goldfields Limited	Prestea Huni Valley	Damang	Huni and Tamang rivers	Abstraction	Mining	30-Nov-22
4	Abu Mechanic and Trading Enterprise	Asunafo North Municipal	Goaso	Groundwater	Abstraction	Commercial	22-Jul-24
5	Adamus Resources Limited	Ellembelle	Salman	Nsuengene (Nzondele) stream	Diversion	Diversion	11-Mar-22
6	Adamus Resources Limited	Ellembelle	Salman	Groundwater (dewatering)	Abstraction	Mining	31-Jun-23
7	Africa Plantation for Sustainable Development	Sene West District Assembly	Lailai-Bantama	River Sokopi	Abstraction	Irrigation	31-Dec-24
8	Africa Plantation for Sustainable Development	Sene West District Assembly	Lailai-Bantama	Sene River	Abstraction	Irrigation	31-Dec-23
9	Africa Plantation for Sustainable Dev't	Sene West District Assembly	Lailai-Bantama	Unnamed stream	Abstraction	Irrigation	31-Dec-23
10	Agenda Concrete Ghana Limited	Ahanta West	Tumentu	Nyane River	Dredging	Dredging	31-May-22
11	Aksa Energy Company Ghana Limited	Kpone-Katamanso	Tema	Groundwater	Abstraction	Industrial	11-Apr-23
12	AngloGold Ashanti (Iduapriem)	Tarkwa Nsuaem	Tarkwa	Wetlands	Abstraction	Mining	7-Sep-24
13	AngloGold Ashanti (Iduapriem)	Tarkwa Nsuaem	Tarkwa	Angonabeng stream	Diversion	Mining	7-Sep-22
14	Anglogold Ashanti Iduapriem Limited	Tarkwa-Nsuaem Municipal	Tarkwa	Awonabeng stream	Abstraction	Mining	31-Dec-22
15	Anglogold Ashanti Iduapriem Mine	Tarkwa Nsuaem	Tarkwa	Ajopa Pit	Pit Dewatering	Mining	17-Aug-23
16	Anglogold Ashanti Iduapriem Mine (Re-Issued)	Tarkwa Nsuaem	Tarkwa Nsuaem	Awonabeng stream	Dewatering	Mining	31-Dec-22
17	Anglogold Ashanti Limited - Obuasi Mine	Obuasi	Obuasi	Jimi River	Abstraction	Domestic	31-Dec-22
18	Anglogold Ashanti Limited - Obuasi Mine	Obuasi Municipal	Obuasi	Nyam River	Abstraction	Mining	31-Mar-23
19	Antika Company Limited	Wa West	Siriyiri	Groundwater	Abstraction	Irrigation	12-May-23
20	Antika Company Limited	Wa West	Chiatanga	Black Volta River	Abstraction	Irrigation	12-May-23
21	Asafari Company Limited (Union Oil)	Sunyani East	Sunyani	Groundwater	Abstraction	Domestic	30-Sep-22
22	Asanko Gold Gh Ltd	Amansie West	Esaase	Groundwater (dewatering)	Abstraction	Mining	11-Mar-24
23	Asanko Gold Gh Ltd	Amansie West	Esaase	Groundwater	Abstraction	Mining	5-Jul-23
24	ATK Mining Company Limited	Atiwa West	Asamama	Birim River	Abstraction	Mining	14-Dec-23
25	Babator Farming Company Limited	Bole District	Babator	Black Volta River	Abstraction	Irrigation	31-May-22
26	Bakar and Baluri Fish Farming Ltd	Sissala West	Sibelle	Sibelle Dam	Cage activity	Aquaculture (cage)	7-Sep-24

27	Blue Grey Aqua Technology	Ga West	Afuaman	Densu River	Abstraction	Domestic	28-Feb-22
28	Cardinal Namdini Mining Ltd	Talensi	Buing	White Volta	Abstraction	Mining	31-Dec-22
29	Cardinal Namdini Mining Ltd	Talensi	Buing	Groundwater	Abstraction	Mining	31-Dec-22
30	Cargill Ghana Limited	Tema Metropolitan	Tema	Groundwater	Abstraction	Industrial	31-Dec-22
31	China Fujian Fishing Ghana Limited	Shai-Osudoku	Asutuare-Aviolorm	Volta River	Fish Pond	Aquaculture	3-Oct-23
32	China Fujian Fishing Ghana Limited	Shai-Osudoku	Asutuare-Aviolorm	Volta River	Fish Cage	Aquaculture	3-Oct-23
33	Chirano Gold Mines Ltd	Bibiani/Anhwia/Bekwai	Chirano	Groundwater	Abstraction	Domestic	31-Dec-22
34	Chirano Gold Mines Ltd	Bibiani/Anhwia/Bekwai	Chirano	Suraw River and Groundwater	Abstraction	Mining	31-Dec-22
35	Chirano Gold Mines Ltd	Bibiani/Anhwia/Bekwai	Chirano	Obra/Akwaaba/Tano/Paboase	Abstraction	Mining	31-Dec-22
36	Clean 7 Company Limited	Ga North	Odumase	Groundwater	Abstraction	Commercial	31-Aug-24
37	Crescent Metals and Minerals Ghana Limited	Ahafo Ano North	Anyinasuso	Anyinasu & Supon Rivers and Groundwater	Abstraction	Mining	31-Mar-22
38	Crystal Lake Fish Ltd	Asuogyaman	Dodi-Asantekrom	Volta Lake	Fish Cage	Aquaculture	30-Jun-23
39	Crystal Lake Fish Ltd	Asuogyaman	Dodi-Asantekrom	Volta Lake	Pond and Hatchery	Aquaculture	30-Jun-23
40	Dagan Farms Ghana Ltd	Asuogyaman	Kudikope	Volta Lake	Cage activity	Aquaculture	31-Oct-23
41	Dagan Farms Ghana Ltd	Asuogyaman	Kudikope	Groundwater	Abstraction	Domestic	9-Jun-24
42	Delico Achimota Ghana Limited	Ga East	Achimota	Groundwater	Abstraction	Domestic	31-Dec-22
43	Dignity DTRT Limited	Osu Clotley	Adabraka	Groundwater	Abstraction	Domestic	31-Dec-22
44	Ecobank Ghana Limited	Accra Metropolitan	Ridge	Groundwater	Abstraction	Domestic	31-Mar-22
45	Eni (Gh) Exploration and Production Ltd	Dormaa East	Kyeremasu	Groundwater	Abstraction	Domestic	30-Sep-22
46	Essipong Beach Resort Limited	Sekondi-Takoradi	Essipong	Groundwater	Abstraction	Domestic	20-Jun-24
47	Excellent Water Production	Ga East	Abokobi	Groundwater	Abstraction	Commercial	31-Dec-22
48	Floating Foodstuffs Company Ltd	Asuogyaman	Akosombo	Volta River & Volta Lake	Navigation	Navigation	22-Jul-23
49	Floating Foodstuffs Company Ltd	Asuogyaman	Akosombo	Volta River & Volta Lake	Navigation	Navigation	22-Jul-23
50	Floating Foodstuffs Company Ltd	Asuogyaman	Akosombo	Volta River & Volta Lake	Navigation	Navigation	22-Jul-23
51	Floating Foodstuffs Company Ltd	Asuogyaman	Akosombo	Volta River & Volta Lake	Navigation	Navigation	22-Jul-23
52	Form Ghana Limited	Berekum Municipal	Berekum	Groundwater (BH4)	Abstraction	Industrial	31-Dec-24
53	Form Ghana Limited	Offinso North	Akumadan	Groundwater (BH1) and earth Dam	Abstraction	Irrigation	31-Dec-24
54	Genser Energy Ghana Limited	Wassa District	Akyempim	Groundwater	Abstraction	Domestic	31-Dec-22
55	Ghacem Limited	Tema Metropolitan	Tema	Groundwater	Abstraction	Industrial	31-Dec-22
56	Ghana Integrated Aluminium Development Corporation	Ahafo Ano South West District Assembly	Mpasaaso	Disire Stream	Abstraction	Mining	31-Oct-24
57	Ghana Manganese Company Limited	Tarkwa-Nsuaem Municipal	Nsuta	Groundwater	Abstraction	Domestic	31-Dec-22

58	Ghana Manganese Company Limited	Tarkwa-Nsuaem Municipal	Nsuta	Kawere stream	Abstraction	Industrial	31-Dec-22
59	Ghana Manganese Company Limited	Tarkwa-Nsuaem Municipal	Nsuta	Pit C	Abstraction	Mining	31-Dec-22
60	Ghana Nuts Company Ltd	Techiman Municipal	Techiman	Groundwater	Abstraction	Industrial / Domestic	28-Feb-24
61	Ghana Oil Palm Development Co. Ltd	Kwaebibirem	Kwae	Groundwater	Abstraction	Domestic	17-Jan-22
62	Ghana Oil Palm Development Co. Ltd	Kwaebibirem	Kwae	Groundwater	Abstraction	Industrial	17-Jan-22
63	Ghana Oil Palm Development Co. Ltd	Kwaebibirem	Kwae	Groundwater	Abstraction	Irrigation	17-Jan-22
64	Ghana Rubber Estates Limited	Ahanta West	Apimanim	Groundwater	Abstraction	Domestic	31-Dec-22
65	Ghana Rubber Estates Limited	Ahanta West	Apimanim	Suoni stream/Huni River	Abstraction	Industrial	31-Dec-22
66	Ghana Rubber Estates Limited	Ahanta West	Apimanim	Tsibu Rivers	Abstraction	Industrial	31-Dec-22
67	Ghana Rubber Estates Limited	Ahanta West	Abura	Surface Water (Earth Dam)	Abstraction	Irrigation	31-Dec-22
68	Ghana Water Company Ltd	Asuogyaman	Kpong New	Volta Lake	Abstraction	Domestic/Muni cipa	31-Jan-17
69	Ghana Water Company Ltd	Asuogyaman	Kpong Old	Volta Lake	Abstraction	Domestic/Muni cipa	31-Jan-17
70	Ghana Water Company Ltd	Ga South	Weija -Adam Clark	Densu	Abstraction	Domestic/Muni cipa	31-Jan-17
71	Ghana Water Company Ltd	Ga South	Weija Candy	Densu	Abstraction	Domestic/Muni cipa	31-Jan-17
72	Ghana Water Company Ltd	Ga South	Weija -Bamag	Densu	Abstraction	Domestic/Muni cipa	31-Jan-17
73	Ghana Water Company Ltd	Dangme East	Keseve/Adafoah	Volta Lake	Abstraction	Domestic/Muni cipa	31-Jan-17
74	Ghana Water Company Ltd	Atwima Nwabiagya	Barekese	River Offin	Abstraction	Domestic/Muni cipa	31-Jan-17
75	Ghana Water Company Ltd	Atwima Nwabiagya	Owabi	Owabi	Abstraction	Domestic/Muni cipa	31-Jan-17
76	Ghana Water Company Ltd	Sekyere West	Mampong	Kyeremea	Abstraction	Domestic/Muni cipa	31-Jan-17
77	Ghana Water Company Ltd	Ashanti-Akim North	Konongo	Anunu	Abstraction	Domestic/Muni cipa	31-Jan-17
78	Ghana Water Company Ltd	Sekyere East	Effiduase / Asokore	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
79	Ghana Water Company Ltd	Obuasi Municipality	Obuasi / Obuasi	Odaso	Abstraction	Domestic/Muni cipa	31-Jan-17
80	Ghana Water Company Ltd	Adansi	New Edubiase	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
81	Ghana Water Company Ltd	Ahafo Ano North	Tepa	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
82	Ghana Water Company Ltd	Agona West	Agona	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17

83	Ghana Water Company Ltd	Mpohor Wassa East	Dabase	Pra	Abstraction	Domestic/Muni cipa	31-Jan-17
84	Ghana Water Company Ltd	Shama Ahanta East	Inchaban	Anakwari	Abstraction	Domestic/Muni cipa	31-Jan-17
85	Ghana Water Company Ltd	Tarkwa Nsuaem	Bonsa / Tarkwa	Bonsa	Abstraction	Domestic/Muni cipa	31-Jan-17
86	Ghana Water Company Ltd	Wassa West	Prestea	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
87	Ghana Water Company Ltd	Wassa West	Bogoso	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
88	Ghana Water Company Ltd	Wassa West	Aboso	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
89	Ghana Water Company Ltd	Nzema East	Axim	Denkyemsule	Abstraction	Domestic/Muni cipa	31-Jan-17
90	Ghana Water Company Ltd	Nzema East	Axim	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
91	Ghana Water Company Ltd	Jomoro	Elubo	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
92	Ghana Water Company Ltd	Cape Coast Municipality	Brimsu	River Kakum	Abstraction	Domestic/Muni cipa	31-Jan-17
93	Ghana Water Company Ltd	Twifo Hemang Lower Denkyira	Twifo Praso	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
94	Ghana Water Company Ltd	Mfantseman	Baifikrom	Ochi Amissa	Abstraction	Domestic/Muni cipa	31-Jan-17
95	Ghana Water Company Ltd	Awutu Effutu Senya	Winneba	Ayensu	Abstraction	Domestic/Muni cipa	31-Jan-17
96	Ghana Water Company Ltd	Agona	Kwayanku	Ayensu	Abstraction	Domestic/Muni cipa	31-Jan-17
97	Ghana Water Company Ltd	Asikum-Odoben-Brakwa	Breman - Asikuma	Ochi Nacho	Abstraction	Domestic/Muni cipa	31-Jan-17
98	Ghana Water Company Ltd	Upper Denkyira East	Dunkwa-Offin	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
99	Ghana Water Company Ltd	Shama	Sekyere - Heman	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
100	Ghana Water Company Ltd	West Akyem	Akim Aboabo	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
101	Ghana Water Company Ltd	Birim South	Akim Oda	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
102	Ghana Water Company Ltd	Birim South	Akim Asene	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
103	Ghana Water Company Ltd	Birim South	Akim Swedru	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
104	Ghana Water Company Ltd	Kwaebibirim	Asuom	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17

105	Ghana Water Company Ltd	Kwaebibirim	Kade	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
106	Ghana Water Company Ltd	New Juaben Municipality	Koforidua	Ayensu	Abstraction	Domestic/Municipal	31-Jan-17
107	Ghana Water Company Ltd	New Juaben Municipality	Koforidua	Volta Lake	Abstraction	Domestic/Municipal	31-Jan-17
108	Ghana Water Company Ltd	New Juaben Municipality	Koforidua	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
109	Ghana Water Company Ltd	New Juaben Municipality	Suhyen	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
110	Ghana Water Company Ltd	Asuogyaman	Anum Boso	Volta Lake	Abstraction	Domestic/Municipal	31-Jan-17
111	Ghana Water Company Ltd	Kwahu South	Kotoso	Volta Lake	Abstraction	Domestic/Municipal	31-Jan-17
112	Ghana Water Company Ltd	Kwahu West	Nkwakaw	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
113	Ghana Water Company Ltd	West Akim	Asamankese	Abuchem	Abstraction	Domestic/Municipal	31-Jan-17
114	Ghana Water Company Ltd	Akwapim South	Nswam	Densu	Abstraction	Domestic/Municipal	31-Jan-17
115	Ghana Water Company Ltd	East Akim	Apedwa – Asafo	Densu	Abstraction	Domestic/Municipal	31-Jan-17
116	Ghana Water Company Ltd	East Akim	Kibi	Birim	Abstraction	Domestic/Municipal	31-Jan-17
117	Ghana Water Company Ltd	East Akim	Kibi	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
118	Ghana Water Company Ltd	Suhum Kraboa-Coaltar	Suhum	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
119	Ghana Water Company Ltd	Atiwa	Anyinam	Birim	Abstraction	Domestic/Municipal	31-Jan-17
120	Ghana Water Company Ltd	Fanteakwa	Begoro	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
121	Ghana Water Company Ltd	East Akim	Bunso	Birim	Abstraction	Domestic/Municipal	31-Jan-17
122	Ghana Water Company Ltd	Atiwa	Kwabeng	Awusu	Abstraction	Domestic/Municipal	31-Jan-17
123	Ghana Water Company Ltd	East Akim	New Tafo	River Bayira	Abstraction	Domestic/Municipal	31-Jan-17
124	Ghana Water Company Ltd	Fanteakwa	Osino	Birim	Abstraction	Domestic/Municipal	31-Jan-17
125	Ghana Water Company Ltd	Tamale Metropolitan	Dalun / Nawuni	White Volta	Abstraction	Domestic/Municipal	31-Jan-17
126	Ghana Water Company Ltd	Yendi	Yendi	Daka	Abstraction	Domestic/Municipal	31-Jan-17

127	Ghana Water Company Ltd	South Dayi	Kpeve	Volta Lake	Abstraction	Domestic/Muni cipa	31-Jan-17
128	Ghana Water Company Ltd	Ho Municipality	Tsito	Wuve	Abstraction	Domestic/Muni cipa	31-Jan-17
129	Ghana Water Company Ltd	Keta	Kpando & Keta	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
130	Ghana Water Company Ltd	Kpandu	Sovie	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
131	Ghana Water Company Ltd	Kpandu	Anfoega	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
132	Ghana Water Company Ltd	Kpandu	Nkonya - Ahenkro	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
133	Ghana Water Company Ltd	Hohoe	Hohoe	Dayi	Abstraction	Domestic/Muni cipa	31-Jan-17
134	Ghana Water Company Ltd	Ketu	Agordome / Sega	Volta Lake	Abstraction	Domestic/Muni cipa	31-Jan-17
135	Ghana Water Company Ltd	Ketu	Aflao	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
136	Ghana Water Company Ltd	Ketu	Denu	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
137	Ghana Water Company Ltd	Ketu	Agbozume	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
138	Ghana Water Company Ltd	Akatsi	Abor	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
139	Ghana Water Company Ltd	Keta	Avenopeme/ Anyako	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
140	Ghana Water Company Ltd	Jasikan	Jasikan	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
141	Ghana Water Company Ltd	Jasikan	Worawora	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
142	Ghana Water Company Ltd	Kadjebi	Kadjebi / Juapong	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
143	Ghana Water Company Ltd	Sunyani Municipality	Abesim	Tano	Abstraction	Domestic/Muni cipa	31-Jan-17
144	Ghana Water Company Ltd	Berekum	Berekum	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
145	Ghana Water Company Ltd	Asutifi	Biaso	Biaso	Abstraction	Domestic/Muni cipa	31-Jan-17
146	Ghana Water Company Ltd	Tano North	Dwomo	Groundwater	Abstraction	Domestic/Muni cipa	31-Jan-17
147	Ghana Water Company Ltd	Asutifi	Acherensua	Tano	Abstraction	Domestic/Muni cipa	31-Jan-17
148	Ghana Water Company Ltd	Techiman Municipal	Techiman / Tonoso	Tano	Abstraction	Domestic/Muni cipa	31-Jan-17

149	Ghana Water Company Ltd	Techiman Municipal	Techiman Boreholes	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
150	Ghana Water Company Ltd	Bolgatanga Municipality	Bolgatanga	Vea Dam	Abstraction	Domestic/Municipal	31-Jan-17
151	Ghana Water Company Ltd	Bawku-East Municipality	Bawku	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
152	Ghana Water Company Ltd	Kasena-Nankana	Navrongo	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
153	Ghana Water Company Ltd	Bolgatanga Municipality	Zuarungu	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
154	Ghana Water Company Ltd	Wa Municipality	Wa	Groundwater	Abstraction	Domestic/Municipal	31-Jan-17
155	GHS Housing Limited	Ga West Municipal	Pokuase	Groundwater	Abstraction	Domestic	30-Jun-23
156	Global Agri-Development Co.(Ghana) Ltd	South Tongu	Fieve (Sokakope)	Volta River/Gede stream	Abstraction	Irrigation	31-Dec-23
157	Golden Exotics Limited	Ga South	Aghazo-Obom	Groundwater	Abstraction	Industrial	31-Dec-22
158	Golden Exotics Limited	Ga South	Aghazo-Obom	Dam	Abstraction	Irrigation	31-Dec-22
159	Golden Star (Prestea-Bogoso) Ltd	Prestea Huni Valley	Bogoso	Groundwater	Abstraction	Domestic	31-Dec-22
160	Golden Star (Prestea-Bogoso) Ltd	Prestea Huni Valley	Bogoso	Groundwater & Runoffs	Abstraction	Mining	31-Dec-22
161	Golden Star (Wassa) Limited	Mpohor-Wassa	Akyempim	Groundwater	Abstraction	Domestic	31-Dec-22
162	Golden Star (Wassa) Limited	Mpohor-Wassa East	Mpohor	Dewatering Father Brown Pit & Adokrom Pit into Whanawhana stream	Pit Dewatering	Mining	31-Mar-22
163	Golden Star (Wassa) Limited	Mpohor-Wassa	Akyempim	Groundwater (underground)	Abstraction	Mining	31-Dec-22
164	Golden Star (Wassa) Limited	Mpohor-Wassa	Akyempim	Groundwater & 242 pit	Abstraction	Mining	31-Dec-22
165	Golden Team Mining Co Ltd	Asutifi South	Hwidiem	Groundwater (pit)	Dewatering	mining	31-Jul-23
166	Golden Team Mining Co Ltd	Asutifi South	Hwidiem	Groundwater (BH4)	Abstraction	mining	31-Jul-23
167	Goldfields Ghana Limited (Tarkwa Gold Mines)	Tarkwa Nsuaem Municipal	Tarkwa	Surface Water (Earth Dam)	Treated Water Discharge	Mining	31-Dec-22
168	Goldfields Ghana Limited (Tarkwa Gold Mines)	Tarkwa Nsuaem Municipal	Tarkwa	Groundwater and surface runoff	Dewatering	Mining	31-Dec-22
169	Goldfields Ghana Limited (Tarkwa Gold Mines)	Tarkwa Nsuaem Municipal	Tarkwa	Groundwater	Abstraction	Domestic	31-Dec-22
170	Goldline Mining Ghana Limited	Amanse South District	Manso-Adubia	Groundwater	Abstraction	Mining	31-Dec-22
171	Goldstone Akrokeri Ltd	Adansi North	Homase	Ago stream	Diversions	Diversions	31-Jan-22
172	Goldstone Akrokeri Ltd	Adansi North	Homase	Groundwater (pit)	Dewatering	Mining & dust suppression	31-Jan-24
173	Hope Gold Limited	Atiwa	Adasawase	Tini stream	Diversions	Diversions	6-Apr-22
174	Hope Gold Limited	Atiwa	Adasawase	Groundwater	Abstraction	Domestic	9-Mar-24
175	Hope Gold Limited	Atiwa	Adasawase	Tini stream	Abstraction	Mining	9-Mar-24

176	Hope Gold Limited	Atiwa	Adasawase	Groundwater (pit dewatering)	Abstraction	Mining	9-Mar-24
177	Ice Joy Ghana Limited	Ga West	Adjem Kotoku	Groundwater	Abstraction	Commercial	30-Apr-22
178	International Oils & Fats Limited	Techiman Municipal	Hansua	Groundwater	Abstraction	Industrial	31-Mar-22
179	IWAD Ghana	Mamprugu Moagduri	Yabaga	Kulpawn River	Abstraction	Irrigation	31-Mar-24
180	Jaldhaara Foundation	Ellembelle	Sanzule	Groundwater	Abstraction	Municipal	7-Jan-22
181	John Bitar and Co Ltd	Sefwi Wiawso	Dwenase	Groundwater (BH1) & Kuzin stream	Abstraction	Industrial	31-Oct-23
182	Kibi Goldfields Limited	Fanteakwa	Osino	Groundwater	Abstraction	Domestic	31-Dec-22
183	Kibi Goldfields Limited	Fanteakwa South	Juaso	Akusua stream	Diversion	Mining	9-Nov-22
184	Kibi Goldfields Limited	Fanteakwa South	Juaso	Akusua stream	Diversion	Mining	9-Nov-22
185	Kibi Goldfields Limited	Fanteakwa	Saamang-Akyem Juaso	Akusua	Abstraction	Mining	31-Dec-22
186	Kibi Goldfields Limited (BSD Mining Services)	Fanteakwa	Osino	Groundwater	Abstraction	Domestic	31-Dec-22
187	Kibi Goldfields Limited (CG Minerals Ghana Ltd)	Fanteakwa	Nsutam	Groundwater	Abstraction	Domestic	31-Dec-22
188	Kibi Goldfields Ltd (Kolak Mining Ltd)	Fanteakwa	Osino	Groundwater	Abstraction	Domestic	31-Dec-22
189	Kibi Goldfields Ltd	Fanteakwa	Osino	Pusupusu/pond	Abstraction	Mining	31-Dec-22
190	Kibi Goldfields Ltd	Fanteakwa South	Saamang	Groundwater	Abstraction	Domestic	6-Apr-24
191	Kibi Goldfields Ltd	Fanteakwa	Saamang-Akyem Juaso	Groundwater	Abstraction	Domestic	31-Dec-22
192	Kibi Goldfields Ltd (BSD Mining Services)	Fanteakwa	Osino	Pusupusu/pond	Abstraction	Mining	31-Dec-22
193	Kibi Goldfields Ltd (BSD Mining Services)	Fanteakwa	Osino	Fagu stream	Diversion	Mining	31-Dec-22
194	Kibi Goldfields Ltd (C.G Minerals Gh. Ltd)	Fanteakwa South	Nsutam	Groundwater	Abstraction	Domestic	6-Apr-24
195	Kibi Goldfields Ltd (CG Minerals Gh. Ltd)	Fanteakwa	Nsutam	Birim river	Abstraction	Mining	31-Dec-22
196	Kibi Goldfields Ltd (Christal Mining Consult Ltd)	Fanteakwa	Asiakwa	Akoosi	Abstraction	Mining	31-Dec-22
197	Kibi Goldfields Ltd (Christal Mining Consult)	Fanteakwa South	Pusupusu	Groundwater	Abstraction	Domestic	6-Apr-24
198	Kibi Goldfields Ltd (Kolak Mining Ltd)	Fanteakwa	Osino	Apatrapa & Akusua streams	Abstraction	Mining	31-Dec-22
199	Kingsperp Mining Limited	Amanzie Central	Aboaboso	Groundwater	Abstraction	Domestic	25-Aug-24
200	Kingsperp Mining Limited	Amanzie Central	Aboaboso	Oda River	Abstraction	Mining	25-Aug-24
201	KOP Farms & Consultancy Services Ltd	North Tongu	Moplikpo, Horme-Battor	Volta River	Abstraction	Irrigation	20-Jan-23
202	Kwamoka Energy Ghana Limited	Asokwa	Oti	Groundwater	Abstraction	Industrial	9-Dec-23
203	Longlife Mining Limited	Nzema East Municipal	Gwira Esuowa	Ankobra river	Abstraction	Small Scale mining	17-Jun-22
204	Mank BBH Hope Ventures	Ga East	Taifa	Groundwater	Abstraction	Commercial	30-Mar-24
205	Maxam Ghana Limited	Tarkwa-Nsuaem Municipal	Tarkwa	Groundwater	Abstraction	Industrial	31-Dec-22



206	Microstar Mines & Minerals Limited	Ahafo Ano North	Tepa	River Abu	Abstraction	Mining	3-May-23
207	Microstar Mines & Minerals Limited	Ahafo Ano North	Tepa	River Supon	Abstraction	Mining	3-May-23
208	Mim Cashew Agricultural Products Ltd.	Asunafo North Municipal	Mim	Groundwater (BH3)	Abstraction	Industrial	31-Dec-23
209	Miro Forestry Ghana Limited	Asante Akim North	Nhyiaeso	Groundwater & Ongwam River	Abstraction	Irrigation	31-Oct-22
210	Miro Forestry Ghana Limited	Sekyere Afram Plains	Dagomba Line	Dam	Abstraction	Irrigation	31-Dec-22
211	Miro Forestry Ghana Limited	Asante Akim North	Ananekrom	Agyaan stream	Abstraction	Irrigation	31-Dec-22
212	Miro Forestry Ghana Limited	Asante Akim North	Agogo	Kokode	Abstraction	Irrigation	31-Dec-22
213	Miro Forestry Ghana Limited	Asante Akim North	Agogo	Buomfuom river	Abstraction	Irrigation	31-Dec-22
214	Miro Forestry Ghana Limited	Sekyere Central	Nkugua Nsuta	Chirffa river	Abstraction	Irrigation	31-Jan-23
215	Newmont Ghana Gold Limited	Asutifi North	Kenyasi II	Subri River	Abstraction	Mining	31-Dec-22
216	Newmont Ghana Gold Limited	Asutifi North	Kenyasi II	Asundua Stream	River Diversion	Mining	28-Apr-23
217	Newmont Ghana Gold Ltd	Tano North Municipal	Afrisipakrom	Grownwater (BH1)	Abstraction	mining	31-Dec-23
218	Newmont Ghana Gold Ltd	Asutifi North	Kenyasi II	Asundua stream	Abstraction	mining	10-Oct-23
219	Newmont Ghana Gold Ltd	Asutifi North	Kenyasi II	Subri	Abstraction	mining	12-Jul-22
220	Newmont Ghana Gold Ltd	Asutifi North	Kenyasi II	Groundwater (BH7)	Abstraction	mining	31-Dec-23
221	Newmont Ghana Gold Ltd	Kenyasi Asutifi	Kenyasi II	Harvesting of rainfall-runoff	Abstraction	Mining	31-Oct-23
222	Newmont Ghana Gold Ltd	Kenyasi Asutifi	Kenyasi II	Groundwater	Pit Dewatering	Mining	31-Dec-23
223	Newmont Golden Ridge Limited	Birem North	Hweakae	Maman catchment ( Pra Basin)	Groundwater	Domestic	31-Dec-22
224	Newmont Golden Ridge Limited	Birem North	New Abirem	Abstraction from SCS	Abstraction	Mining	31-Mar-22
225	Newmont Golden Ridge Limited	Birem North	New Abirem	Harvest rainfall-runoff into water storage facility	Abstraction	Mining	31-Mar-22
226	Newmont Golden Ridge Limited	Birem North	New Abirem	Mamang River	Mine processing	Mining	30-Sep-22
227	Newmont Golden Ridge Limited	Birem North	Hweakae	Pra Basin	Pit Dewatering	Mining	31-Dec-22
228	Newmont Golden Ridge Limited	Birem North	New Abirem	Mamang River, SCS 1	Mine processing	Mining	31-Dec-22
229	Newmont Golden Ridge Limited	Birem North District	New Abirem	Groundwater	Abstraction	Mining	31-Dec-23
230	Newmont Golden Ridge Ltd	Birem North	New Abirem	Groundwater	Abstraction	Domestic	31-Dec-23
231	Niche Cocoa Industry Limited	Kpone-Katamanso	Tema Freezone	Groundwater	Abstraction	Industrial	31-Jul-23
232	Nordeau International Limited	Jirapa	Gong Tang	Groundwater	Abstraction	Commercial	31-Dec-22
233	Norpalm Ghana Limited	Ahanta-West	Ewusiejoe	Groundwater (BH3)	Abstraction	Domestic	31-Dec-23
234	Norpalm Ghana Limited	Ahanta-West	Ewusiejoe	River Butre	Abstraction	Industrial/Irrigation	31-Dec-23
235	Oba pack Company Limited	Techiman Municipal	Techiman	Groundwater (t)	Abstraction	Industrial	30-Jun-24
236	Ocean Wood Ghana Limited	Asunafo North Municipal	Nyamebeyere	Groundwater (BH1)	Abstraction	Domestic	13-Dec-24

237	Olam Cocoa Processing Ghana Limited	Asokwa Municipal	Kaase	Groundwater	Abstraction	Industrial	30-Apr-24
238	Omni Veg Limited	Central Tongu	Agbenyokope	Volta River	Abstraction	Irrigation	7-Dec-24
239	Peelco Limited	Awutu Senya East Dist.	Bawjase	Groundwater	Abstraction	Industrial	31-Dec-22
240	Pele-Sam Enterprise	Prestea-Huni-Valley	Prestea	Groundwater (BH1) & Suchen creek	Abstraction	Aquaculture (pond)	21-Sep-24
241	Pinora Limited	West Akyem	Asamankese	Groundwater and Gezley stream	Abstraction	Irrigation	31-Dec-23
242	Plantation Socfinaf Ghana Limited	Wassa East	Daboase	Groundwater (BH1)	Abstraction	Domestic	31-Aug-24
243	Plantation Socfinaf Ghana Limited	Wassa East	Daboase	Groundwater (BH2) and Anikoko stream	Abstraction	Irrigation	31-Aug-24
244	Plantations Socfinaf Ghana Limited	Wassa East	Daboase	Wiaffi Stream	Abstraction	Industrial	31-May-22
245	Processed Water Company Limited	Ga South	Ngleshie-Amanfro	Densu River	Abstraction	Commercial	31-Aug-22
246	QG Construction UK Limited	Tamale	Savelugu-Nanton	White Volta	Abstraction	Construction	31-Dec-22
247	QG Construction UK Limited	Binduru	Bazua	Groundwater	Abstraction	Construction	18-Jul-23
248	QG Construction UK Limited	Binduru	Bazua & Tilli	White Volta & Red Volta	Abstraction	Construction	18-Jul-23
249	R & B Farms Limited	Goma Central	Gomoa Nsuuem	Ayensu river & Groundwater	Abstraction	Aquaculture (pond)	30-Mar-24
250	Radikal Ghana Limited	South Tongu	Tefle-Dove-Todze	Volta River	Abstraction	Irrigation	28-Feb-22
251	Reap Aqua Solar Hybrid Limited	Central Tongu	Adidome	Volta River	Abstraction	Commercial	30-Apr-22
252	Royal Cosy Hotel Limited	Jirapa	Konzokala	Dam	Abstraction	Irrigation	31-Dec-22
253	Royal Cosy Hotel Limited	Jirapa	Konzokala	Dam	Abstraction	Recreational	31-Dec-22
254	Samartex Timber and Plywood Company	Wasa Amenfi West	Samreboi	Tano River	Abstraction	Industrial	31-Dec-22
255	Samartex Timber and Plywood Company	Wasa Amenfi West	Samreboi	Groundwater	Abstraction	Industrial	31-Dec-22
256	Sarra Ghana Limited	Zabzugu	Sabari	Oti River	Abstraction	Irrigation	31-Dec-22
257	Sentuo Oil Refinery Ltd	Tema East District	Tema	Ozoku Drain	Diversio	Diversio	30-Sep-22
258	Smart Oil Limited	Pru East District	Yeji	Groundwater	Abstraction	Irrigation	31-Dec-22
259	Southern Water Company Limited	Ningo-Prampam	Dawa	Volta River	Abstraction	Commercial	10-Nov-24
260	Sparkling Shovel Limited	North Tongu	Drakofe-Aveyime	Volta River	Abstraction	Dredging	30-Sep-22
261	Special Ice Company Limited	La Nkwatanang	Ayi Mensah	Groundwater (BH)	Abstraction	Commercial	31-Dec-22
262	SPV Andrade Gutierrez Odebrecht Ltd	Yendi	Oti Damanko-Obintiri	Oti River/Nakpachei dam/BH(19)	Abstraction	Construction/Domestic	30-Apr-24
263	Star Steel Limited	Ningo-Prampam	Prampam	Laluie stream (Kpledor)	Abstraction	Industrial	6-Apr-24
264	Takoradi Gold Ghana Limited	Prestea-Huni-Valley & Nzema East	Kutukrom	Groundwater (dewatering)	Abstraction	Mining	11-Mar-24
265	Takoradi Gold Ghana Limited	Prestea-Huni-Valley & Nzema East	Kutukrom	Groundwater (pit dewatering)	Abstraction	Mining	11-Mar-24
266	Takoradi Gold Ghana Limited	Prestea-Huni-Valley &	Kutukrom	Groundwater	Abstraction	Mining	11-Mar-24

267	Triton Aquaculture Africa Limited	Nzema East	Dodi Asantekrom	Volta Lake	Fish Cage	Aquaculture	31-May-23
268	Triton Aquaculture Africa Limited	Asuogyaman	Dodi Asantekrom	Volta Lake	Fish Pond	Aquaculture	31-Dec-23
269	Tropigha Farms Limited	Kpandu District	Gbefi	Dayi River	Abstraction	Irrigation	31-Dec-23
270	Tropo Farms Limited	Shai-Osudoku	Asutuare	Volta Lake Canal & Groundwater	Pond and hatchery	Aquaculture	31-Dec-22
271	Tropo Farms Limited	Asuogyaman	Anyaae	Volta Lake & Groundwater	Abstraction	Domestic	30-Jun-22
272	Twellium Industrial Company Limited	Adjen Kotoku	Kotoku	Groundwater	Abstraction	Domestic	21-Jan-23
273	Twifo Oil Palm Plantations Limited	Twifo Atti Morkwa	TOPP Estates	Groundwater	Abstraction	Domestic	31-Dec-22
274	Twifo Oil Palm Plantations Limited	Lowee Denkyira	Twifo Heman	River Obuo	Abstraction	Industrial	31-Dec-22
275	Twifo Oil Palm Plantations Limited	Lowee Denkyira	Twifo Heman	River Obuo	Abstraction	Irrigation	31-Dec-22
276	Unique Sankofa Limited	Shama	Supomu-Dunkwa	Pra River	Dredging	Dredging	6-Apr-24
277	Unique Sankofa Limited	Shama	Borkokope	Pra River	sand winning	Dredging	31-Dec-22
278	UTSA Ltd	Shama	Daboase	Whin River and Borehole	Abstraction	Aquaculture	19-Aug-22
279	William Allubulu and Sons Company Ltd	Aowin Municipal	Enchi	Groundwater	Abstraction	Commercial	31-Dec-22
280	Xu Zhou Industrial Gh. Co. Ltd	Dangbe East	Abuvienu	Volta River	Cage activity	Aquaculture (cage)	7-Sep-24
281	Xu Zhou Industrial Gh. Co. Ltd	Dangbe East	Abuvienu	Volta River	Abstraction	Aquaculture (pond)	7-Sep-24
282	Xu Zhou Industrial Gh. Co. Ltd	Dangbe East	Abuvienu	Volta River	Cage activity	Domestic	7-Sep-24
283	Yantai Aquaculture Products Co. Ltd	Anloga	Srogbe-Whuti	River Bakar, Keta Lagoon	Abstraction	Aquaculture	19-Jan-23
284	Z & J 198 Ghana Limited	Shai-Osudoku	Asutuare	Lower Volta River	Dredging	Dredging	30-Jun-22
285	Zoomlion Ghana Limited	Sunyani	Sunyani	Groundwater	Abstraction	Commercial	31-May-22

## Appendix 3: Drilling License Register – 2021

No	License Holder	Address	Telephone Numbers	Company Registration No.	License No.	Category	Expiry Date
1	Accra Drill Tech Limited	P.O. Box GP 17395, Accra	0506424646, 0241499022 02421226096/0558589052 /02444638027	CS230722013	WRC/WDL/290/21	B	14-Apr-22
2	Adoliba Ghana Limited	P.O. Box TL 507, Tamale		CS221532016	WRC/WDL/330/21	C	28-Jun-24
3	Africa Drilling and Exploration Ghana Limited	P.O. Box AN 10673, Accra-North	0506661314, 0553399366	CS212722013	WRC/WDL/159/19	B	8-Aug-22
4	Alios Company Limited	P.O. Box OC 414, Odorkor, Accra	0208247209/0262226770	CS751142015	WRC/WDL/308/20	C	3-Feb-23
5	Almuscom Company Ltd	Box CT 1342, Cantonments, Accra	0244732877/02444497720	CS015202018	WRC/WDL/323/21	C	27-Apr-24
6	Angbebe Drilling Services	P.O. Box 708, Tarkwa	0243919705/0574765210	BN00KD12015	WRC/WDL/186/19	C	3-Dec-22
7	Angbegbe Drilling Services	P.O. Box CT 708, Tarkwa,	0243919705/0574765210	BN00KD12015	WRC/WDL/186/21	C	9-Jun-24
8	Araco Construction Ltd	P.O. Box AD 261, Adabraka	0302964094/0246381012	C0005203333	WRC/WDL/020/20	B	27-Feb-23
9	Awaina Engineering Services Limited	P. O. Box 695, PIWC-Bolgatanga	0200396668, 0241136004	CS342802018	WRC/WDL/287/19	C	8-Apr-22
10	Aziida Company Limited	P.O. Box 657, Bolgatanga	0245278042, 0209022599	CS141142016	WRC/WDL/195/21	C	11-Mar-24
11	Bizgeo Company Limited	PMB MD 127, Madina-Accra	0545521222, 0208114303	CA-22,859	WRC/WDL/057/19	C	12-Aug-22
12	Cape Drilling Company Ltd.	P.O. Box KS 1933, Kumasi,	0501386408,	CS156672013	WRC/WDL/304/19	B	17-Oct-22
13	Champion Man Company Limited	P.O. Box KW 302, Kwadaso, Kumasi,	0244811272, 0233353777	CS010242018	WRC/WDL/052/21	C	16-Mar-24
14	De-Balos Company Limited	P.O. Box SK 421, Sakumono, Tema	0208240722/0302811575	CS073682016	WRC/WDL/300/19	C	18-Sep-22
15	Diamond Borehole Drilling Limited	P. O. Box 51, Osu, Accra	0203140717,	CS163290821	WRC/WDL/336/21	C	9-Nov-24
16	E E & E Construct Ltd	P.O. Box AN 1163, Accra	0208153708/ 0244436479	CA-18,392	WRC/WDL/014/19	B	19-Aug-22
17	Enacent Agency Limited	P. O. Box MD 438, Madina-Accra	0208115239, 0303969351	75,913	WRC/WDL/054/19	B	1-Jan-22
18	Gemrock Drill Ghana Limited	P. O. Box KS16456, Kumasi,	0560004999,	CS032732012	WRC/WDL/121/21	B	14-Nov-22
19	Geocoast Engineering Services Ltd	P.O. Box CT 8903, Cantonments, Accra	0503008892/0246725863	CS355632014	WRC/WDL/260/21	C	27-Apr-24
20	Geogroup Limited	P. O. Box WY 1652, Kwabenya, Accra	0244704444,	CS019602016	WRC/WDL/171/19	C	24-Jun-22
21	Gincal Ventures Limited		0244413187, 303547893	CS209752017	WRC/WDL/276/19	C	14-Feb-22

22	Global Tech Boreholes Ltd	P.O. Box 304, Tema	0544907624/0505256761	CS224532013	WRC/WDL/288/21	B	27-Apr-22
23	Globex Supplies & Logistics Enterprise Limited	P. O. Box 187, Accra	0208364571, 0544575013	CS173892017	WRC/WDL/282/19	C	24-Mar-22
24	God is One Enterprise	P.O. Box 52, Nkwanta,	0244941297/0246334675	BN719782014	WRC/WDL/315/20	C	30-Jun-23
25	Golivil Company Limited	P.O. Box 122, Wa	0244928866,	CS023252019	WRC/WDL/321/21	C	5-Jan-24
26	GS Nile Drilling Ghana Ltd	P.O. Box 448, Sunyani	0560004999,	CS530642014	WRC/WDL/305/19	B	17-Oct-22
27	Heisa Engineering Company Ltd.	P. O. Box JT 223, James Town, Accra	0244228454,	C-65,305	WRC/WDL/105/19	B	1-Jan-22
28	Hu Bei Geology & Engineering Co. Limited	P.O. Box 282 Education Ridge, Tamale.	0555704797/037023718	C-78,734	WRC/WDL/048/19	B	12-Aug-22
29	Hydronomics Limited	P.O. Box LG 924, Legon, Accra	0244733966, 0202028791	CS396252014	WRC/WDL/114/21	B	23-Nov-24
30	Ideas and Shapes Ltd	P.O. Box TL 2311, Tamale	0548960034,	CS328672018	WRC/WDL/267/21	C	31-Aug-24
31	Jagan T. Ghana Company Limited	P. O. Box CS 19, Community 7, Tema	0240240673/0322064566	CS418312014	WRC/WDL/182/19	A	19-Sep-22
32	Joissam Ghana Limited	P.O. Box AD 1188, Adabraka, Accra	0208134988/0246479689	CS357642014	WRC/WDL/049/20	B	26-Mar-23
33	Kari Boreholes and Building Construction and Civil Engineering works	P.O. Box ML 617, Mallam, Accra	0243814009/ 0277711451	BN647892014	WRC/WDL/302/19	C	29-Aug-22
34	KBR Drilltech Limited	P.O. Box OS 51, Accra	0209878091	CS121532019	WRC/WDL/309/20	B	16-Mar-23
35	Keldem Engineering Company Limited	P.O. Box AF 1815, Adenta, Accra	0208128443/0548077789	CS162642013	WRC/WDL/135/20	C	14-Dec-23
36	Kesta Construction Limited	P. O. Box ST 516 STC Yard	0208231799,	CS317682020	WRC/WDL/325/21	C	26-May-24
37	Keys Construction & Engineering Ltd	P. O. Box 327, Nkawkaw	0205285156, 0265976348	CS021742016	WRC/WDL/280/19	C	4-Mar-22
38	KM-Doky Ventures	P.O. Box CH 15, Kyirapatre Kumasi	0 244235793	BN00HUS2015	WRC/WDL/180/19	C	17-Sep-22
39	Kontraata Limited	P.O. Box CT 6135, Accra	0508556393/0243713406	CS742722015	WRC/WDL/230/21	C	30-Mar-24
40	Landneeds Ghana Limited	P.O. Box CT 6473, Accra	0281001111, 0244361535	CS089852016	WRC/WDL/332/21	C	17-Aug-24
41	Lilgeo Enterprise imited	P. O. Box CT 4273, Cantonments	0574363840, 0504363840	CS538482014	WRC/WDL/286/19	C	4-Apr-22
42	Links Drilling &Construction Limited	P.O. Box 819, Nkawkaw	0246189903/020918131	CA-67,879	WRC/WDL/190/20	B	7-Sep-23
43	Maasim Construction Works Ltd	P.O. Box 55 Abuakwa-Kumasi	0244852161,	CS132122016	WRC/WDL/317/20	C	7-Sep-23
44	Maataf Limited	P.O. Box 1706, Tamale	0200874868,	CS252582019	WRC/WDL/312/20	C	11-May-23
45	Magtran Company Limited	P.O. Box KF 2306, Koforidua	0241481854,	CS297082017	WRC/WDL/318/20	C	7-Sep-23
46	Maranatha Borehole Drilling	P. O. Box MP 32, Mamprobi	0244243990,	BN96280221	WRC/WDL/326/21	C	26-May-24

47	Martad Enterprise Limited	P. O. Box 265, Bolgatanga	0244828304,	CS713512015	WRC/WDL/320/20	C	15-Dec-23
48	Mcstar Limited	P. O. Box AM 106, Amasaman, Accra	0552836876, 0244787598	CS294862013	WRC/WDL/281/19	C	4-Mar-22
49	Mega Resources Limited	P.O. Box TF 171, Teshie-Accra	0245424359/0243287420	CS108492016	WRC/WDL/299/19	B	10-Sep-22
50	Meridian Water Well Drilling Ltd	P.O. Box CT 5263, Cantonments, Accra	0207707847, 0501319190	CS234072017	WRC/WDL/072/21	B	19-Jan-22
51	Miracle City Engineering Company Limited	P.O. Box 1, Sankore, Ahafo Region	0542030401/0551340000	CS020342017	WRC/WDL/310/20	C	23-Mar-23
52	Mohammed Dollar Power Enterprise	P. O. Box BL 14, Boale	0541417070, 0542617313	BN231462017	WRC/WDL/292/19	C	23-Apr-22
53	MTL Boreholes Limited	P.O. Box AT 2264, Achimota, Accra	0266704646,	CS102212016	WRC/WDL/103/21	B	12-Aug-22
54	Namoo & Sons Ltd	P.O. Box 391, Wa	0543826224/0208238659	CS194802013	WRC/WDL/154/20	C	7-Sep-23
55	NISIS Engineering Designs Co Ltd	P.O. Box AT 1070, Achimota, Accra	0246463501,	CS363202014	WRC/WDL/254/21	C	12-Jul-24
56	Osei Brobby Company Limited	P. O. Box SN 945, Santasi-Kumasi	0268030410, 0246122130	CS129712017	WRC/WDL/285/19	C	3-Apr-22
57	Patma Prestige Company Limited	P.O. Box 5647, Accra North	0244712048,	CS215082017	WRC/WDL/301/19	C	12-Aug-22
58	Perfectly Clean Ghana Ltd	P.O. Box KS 9706, Kumasi, Ashanti Region	0242041060,	CS227422017	WRC/WDL/316/20	C	17-Aug-23
59	Pergasus Investment Gh. Ltd	P.O. Box KN 262, Kaneshie	0209990211,	CS184812017	WRC/WDL/313/20	C	3-Jun-23
60	Plate and Plume Limited	P.O. Box LG 58, Legon, Accra	0547552513/0205633227	CS230332016	WRC/WDL/303/19	C	6-Oct-22
61	Premko Construction and Waste Management Limited	P.O. Box BR 126, Aburi	0571145803/0506815057	CS044502012	WRC/WDL/329/21	C	28-Jun-24
62	Rocann Company Limited	P.O. Box LG 236, Legon	0201872400/0267006055	CS229992013	WRC/WDL/311/20	C	23-Mar-23
63	RR Drilling Ghana Limited	P.O. Box MP 1994, Accra	0554778273,	CS011670121	WRC/WDL/324/21	C	27-Apr-24
64	S. A. Drilling Company Ltd	Plot 20, Block G, Daban New Site, Kumasi	0559661806, 0203486059	CS138502020	WRC/WDL/333/21	C	5-Sep-24
65	Saidmo Realities Limited	P. O. Box 118, Wa	0244782364, 0203079797	CS147172013	WRC/WDL/294/19	C	26-May-22
66	Sancrest Construction Limited	P.O. Box CT 11351, Cantonments, Accra	0209289288, 0244782896	CS527822014	WRC/WDL/191/21	C	4-Mar-24
67	SED Investments International Limited	P.O. Box KT 617, Kotobabi, Accra	0274358012/0209061757	CS719892015	WRC/WDL/198/21	C	3-May-24
68	SMRS Ghana Limited	P.O. Box 11965, Adum-Kumasi	0547552513, 0205633227	CS172082013	WRC/WDL/306/20	C	26-Nov-22
69	Sneham Indo Gh. Drilling Ltd	P.O. Box 223, Kumasi	0555051295, 057415555	CS0119900521	WRC/WDL/338/21	A	1-Dec-24
70	So-Blessed Company	P. O. Box KS 4952, Adum-	0246950854, 0246950854	CS564332015	WRC/WDL/295/19	C	11-Jun-22

Limited	Kumasi						
71	Sons and Daughters Engineering Services	P.O. Box YD 179, Yendi	0208797312/024621169	BN06602017	WRC/WDL/327/21	C	6-Jun-24
72	SRI Harsha Ghana Limited	P. O. Box WY 329, Kwabenya	051557586, 0207166115	CS13482018	WRC/WDL/293/19	B	29-Jul-22
73	Sri Sai Drill Tech Limited	GE-252-2644 (Digital address), Kwabenya – Accra	0547868647, 0502208787, 0547867684	CS147212017	WRC/WDL/296/19	B	16-Jun-22
74	SRI Venkat Laxmi Borehole Limited	P. O. Box 24, Ashongman Estates	0206000034, 0504444948	CS078512012	WRC/WDL/170/19	A	16-May-22
75	SS Drilling Ghana Limited	P. O. Box TF 199, Taifa-Accra	027503295, 0246025993	CS234792013	WRC/WDL/283/19	B	25-Mar-22
76	SV Drill Tech Limited	P. O. Box 2264, Achimota, Accra	0244227674, 0205868998	CS142122013	WRC/WDL/284/21	A	31-Mar-22
77	Sykes and Partners Limited	P.O. Box CT 4616, Cantonments, Accra	020208884, 0302733459	CS046832017	WRC/WDL/237/21	C	14-Oct-24
78	T. A Tanko Company Limited	P. O. Box 380, Wa	0209257070, 0244721640	CS151192013	WRC/WDL/275/19	C	1-Jan-22
79	Tech-2 Resources Limited	P. O. Box 882, Tamale	0244454252, 0209743055	CA-39,729	WRC/WDL/075/19	C	13-Feb-22
80	Teresil Company Limited	P.O. Box DT 1433, Adenta, Accra	020963277/0245798700	CS073252017	WRC/WDL/221/21	A	27-Apr-24
81	Urban Kraft Enterprise	P.O. Box 410, Wa	0244451205/0500006255	BN157862017	WRC/WDL/328/21	C	6-Jun-24
82	Volta Drill Limited	P. O. Box 14485, Kumasi	0244299520, 0594700742	CS059320321	WRC/WDL/335/21	B	9-Nov-24
83	Waterside Ghana Limited	P.O. Box 1099, Madina, Greater Accra Region	0208181018,	CS328432013	WRC/WDL/021/20	C	27-Feb-23
84	Willifaat Limited	P.O. Box 487, Wa	0208558761, 0244410918	CA-49,371	WRC/WDRDL/146/21	C	22-Sep-24
85	Zayoka Constructions Limited	P.O. Box B 81, Bolgatanga,	0246688486/0249629375/ 0246445348	CS060712017	WRC/WDL/314/20	C	21-Jun-23

## **Appendix 4: Audited Financial Statement for 2021**

**WATER RESOURCES COMMISSION**

**REPORTS AND FINANCIAL STATEMENTS FOR  
THE YEAR ENDED 31ST DECEMBER, 2021**

**KISSI CONSULT,  
(CHARTERED ACCOUNTANTS)  
NO. 13TH ASAFOATSE DJATENG LANE  
P.O. BOX CT 10270,  
CANTONMENTS - ACCRA**



**WATER RESOURCES COMMISSION**  
**REPORTS AND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31ST DECEMBER, 2021**

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**WATER RESOURCES COMMISSION  
COMMISSIONERS, OFFICIALS AND REGISTERED OFFICE, ETC**

<b>COMMISSIONERS</b>	<p>Mr. Mintah A Aboagye                  Mr. Ben Y Ampomah                  Tobue Gbogbolulu V                  Mr. Jacob Ziemah Yendor                  Prof. Mike Yaw Osei - Atwenebona                  Mr. Sylvester Darko                  Mr. Eric Asuman                  Mr. Ransford Sekyi                  Ing. Abdul Noor Wahab                  Mad. Afua Gyamfua Owusu - Akyaw                  Hon. Adelaide Ntim                  Mr. Collins Anim - Sackey                  Ing. Richard Oppong - Boateng                  Ing. Dr. Worlanyo Siabi                  Mr. John Macdonald Allotey</p>	<p>Chairman                  Executive Secretary                  Member                  Member                  Member                  Member                  Member                  Member                  Member                  Member                  Member                  Member                  Member                  Member                  Member</p>
<b>SECRETARY</b>	<p>Mr. Ben Y Amponah</p>	
<b>REGISTERED OFFICE</b>	<p>No. E 4 Leshie Crescent                  Labone Estates Accra</p>	
<b>AUDITORS</b>	<p>Kissi Consult                  Chartered Accountants, Tax &amp;                  Management Consultants                  No 13 asafoatse Djanteng Lane                  Osu - Accra                  P.O Box CT 10270                  Cantonments - Accra</p>	
<b>BANKERS</b>	<p>Bank Of Ghana                  Ecobank Ghana Limited</p>	

## REPORT OF THE COMMISSIONERS TO MEMBERS OF WATER RESOURCES COMMISSION

The commissioners present their report and the audited financial statements of WATER RESOURCES COMMISSION for the year ended 31st December 2021.

### STATEMENT OF COMMISSIONERS' RESPONSIBILITIES

The WATER RESOURCES COMMISSION Act, 1996 (Act 522) requires the Commissioners'

- to prepare Financial Statements for each Financial year, which give a true and fair view of its state of affairs.
- select suitable accounting policies in accordance with International Public Sector Accounting Standards (IPSASs) and to apply them consistently and
- make judgement and estimates that are reasonable and prudent
- the commissioners are responsible for ensuring that the Commission keeps proper accounting records that disclose with reasonable accuracy at any time, the financial position of the commission.
- the Commissioners are also accuracy at any time, the financial position of the commission.
- the Commissioners are also responsible for safeguarding the assets of the Commission and taking reasonable steps for the prevention and detection of fraud and other irregularities.

### FINANCIAL STATEMENTS

The results for the year are as set out in the attached Financial Statements and show an accumulated fund carried forward of GHs 2,952,232 (2020: GHs 2,140,102) made up as follows:

	<b>2021 GH¢</b>	<b>2020 GH¢</b>
Accumulated fund at 1st January	2,140,102	2,319,489
Accumulated fund at 31st December	812,130	(176,387)
<b>Restated Retained Earnings</b>	<b>2,952,232</b>	<b>2,140,102</b>
 <b>Total Assets</b>	 <b>3,120,232</b>	 <b>2,590,262</b>

The Commissioners consider the state of the Commission's affairs to be satisfactory.

**NATURE OF BUSINESS**

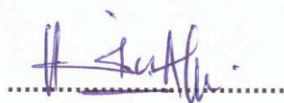
The objects of the Commission are:

To regulate and manage utilisation of water resources and policies in relation to them.

**REPORT OF THE COMMISSIONERS**

**AUDITORS**

The Auditors, KISSI CONSULT was appointed for the 2021 Financial year end audit. They will therefore vacate office after the audit.



**Commissioners**



ACCRA .....08.09. .... 2022



**Kissi Consult**  
Chartered Accountants/Tax & Management Consultants

CERTIFICATE OF REGISTRATION No. : P15416  
PRACTICING LICENCE No. : ICAG/F/077

**REPORT OF THE INDEPENDENT AUDITORS  
TO THE MEMBERS OF  
WATER RESOURCES COMMISSION**

**Opinion**

We have audited the Financial Statements of WATER RESOURCES COMMISSION (the commission) which comprise the Statement of Financial Position as at 31<sup>st</sup> December 2021 and the Statement of Income and expenditure, Statement of Changes in Equity and Statement of Cash Flows for the year then ended, and a summary of significant accounting policies and other explanatory notes.

In our opinion, the Financial Statements present, in all material respects, a true and fair view of the financial position of the Commission as at 31<sup>st</sup> December 2021, and of its financial performance and its cash flows for the year then ended in accordance with International Public Sector Accounting Standard (IPSASs).

**Basis for Opinion**

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

We are independent of the Company in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

**Commissioners' Responsibility for the Financial Statements**

The Commissioners are responsible for the preparation and fair presentation of the financial statements in accordance with International Public Sector Accounting Standards (IPSAS) and in the manner required by the Financial Management Regulation, 2019 (LI 2378), Financial Administration Act 2016 (Act 921), Financial Regulation, 2004 (LI 1802) and for such internal control as the Commissioners determine is necessary to enable the preparation of Financial statements that are free from material misstatement, whether due to fraud or error.

In preparation of Financial statements, the commissioners are responsible for assessing the Commission's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and basis of accounting unless the commissioners either intend to liquidate the commission or to cease operations, or have no realistic alternative but to do so.

The Commissioners are responsible for overseeing the Commission's financial reporting process.

## REPORT OF THE INDEPENDENT AUDITORS

### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- ❖ Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- ❖ Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Commissioner's internal control.
- ❖ Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Commissioners.
- ❖ Conclude on the appropriateness of The Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Commissioner's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Commission to cease to continue as a going concern.
- ❖ Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Commissioners regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

**REPORT OF THE INDEPENDENT AUDITORS**

**Report on other legal and Regulatory Requirements**

Furthermore we confirm that:

1. We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit.
2. Proper books of accounts have been kept by the Commission, so far as appears from our examination of those books; and
3. Statement of Financial Position, the income and expenditure account, Statement of Changes in Equity, and the statement of cash flows are in agreement with the books of account.

The engagement partner on the audit resulting in this independent auditor's report is **KWASI AMPADU - KISSI** (Practicing Certificate Number: **ICAG/P/1005**).

**PARTICULARS OF THE AUDITOR**

Signature: .....

Name: Kissi Consult  
Chartered Accountants

License Number: ICAG/F/2022/077

Address: No 13 Asafoatse Djanteng Lane, Osu - Accra  
P.O. CT 10270 Cantonments-Accra, Ghana

.....13.09.....2022

Accra, Ghana

**KISSI CONSULT**  
CHARTERED ACCOUNTANTS

**WATER RESOURCES COMMISSION  
STATEMENT OF COMPREHENSIVE INCOME FOR THE  
YEAR ENDED 31 DECEMBER 2021**

<b>INCOME</b>	<b>NOTES</b>	<b>2021 GH¢</b>	<b>2020 GH¢</b>
Revenue-GoG Subvention	4a	2,447,549	1,703,885
Revenue-IGF	4b	1,951,090	1,813,818
Revenue - Other	5	<u>958,624</u>	<u>394,874</u>
Total Revenue		<b><u>5,357,263</u></b>	<b><u>3,912,577</u></b>
<b>LESS EXPENDITURE</b>			
Staff Cost	6	2,229,441	2,197,403
Administrative Expenses	7	<u>2,315,692</u>	<u>1,891,561</u>
		<b><u>4,545,133</u></b>	<b><u>4,088,964</u></b>
<b>Net Operating Income</b>		<b><u>812,130</u></b>	<b><u>(176,387)</u></b>

**STATEMENT OF CHANGES IN NET ASSETS /EQUITY FOR THE YEAR ENDED 31 DECEMBER, 2021**

	<b>Development Fund GH¢</b>	<b>Accumulated Fund GH¢</b>	<b>Total GH¢</b>
<b>Balance at 1st January 2021</b>	59,845	2,140,102	2,199,947
Surplus (Deficit) for year	<u>-</u>	<u>812,130</u>	<u>812,130</u>
<b>Balance at 31st December 2021</b>	<b><u>59,845</u></b>	<b><u>2,952,232</u></b>	<b><u>3,012,077</u></b>
	<b>Development Fund GH¢</b>	<b>Accumulated Fund GH¢</b>	<b>Total GH¢</b>
<b>Balance at 1st January 2020</b>	59,845	2,316,489	2,376,334
Surplus (Deficit) for year	<u>-</u>	<u>(176,387)</u>	<u>(176,387)</u>
<b>Balance at 31st December 2020</b>	<b><u>59,845</u></b>	<b><u>2,140,102</u></b>	<b><u>2,199,947</u></b>


Water Resources Commission Annual Report and Financial Statements for the year ended 31st December, 2021

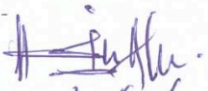


**WATER RESOURCES COMMISSION**  
**STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER, 2021**

Assets	NOTES	2021	2020
<b>Non - Current Assets</b>		GH¢	GH¢
Plant, Property and Equipment	<b>8</b>	832,437	915,335
Capital expenditure	<b>9</b>	309,734	68,413
		<b>1,142,171</b>	<b>983,748</b>
<b>Current Assets</b>			
Receivables	<b>10</b>	1,920,260	1,542,702
Cash and cash equivalents	<b>11</b>	57,801	63,812
		1,978,061	1,606,514
<b>Total assets</b>		<b>3,120,232</b>	<b>2,590,262</b>
<b>Liability</b>			
<b>Current Liabilities</b>			
Payables	<b>12</b>	108,155	390,315
		<b>108,155</b>	<b>390,315</b>
<b>Accumulated fund</b>		2,952,232	2,140,102
<b>Development fund</b>		59,845	59,845
		<b>3,012,077</b>	<b>2,199,947</b>
		<b>3,120,232</b>	<b>2,590,262</b>

The financial statements were approved by the Commissioners on 8th September 2022 and are signed on their behalf by:

  
 Name.....Adroa Paintsil  
 Executive Secretary

  
 Name.....Minka A. ABOAGYE  
 Chairman

Water Resources Commission Annual Report and Financial Statements for the year ended 31st December, 2021

**WATER RESOURCES COMMISSION**  
**CASHFLOW STATEMENTS FOR THE YEAR ENDED 31<sup>ST</sup> DECEMBER, 2021**

	2021	2020
	GH¢	GH¢
<b>Operating Activities</b>		
Surplus for the year	812,130	(176,387)
Depreciation charge	133,547	166,961
Amortization	-	6,781
Tano capital expenditure write off	7,294	8,059
Black Volta capital expenditure write off	6,282	5,974
White Volta capital expenditure write off	19,876	
<b>Operating cash flow before changes in working capital</b>	<b>979,129</b>	<b>11,388</b>
<b>Changes in working capital</b>		
Increase in receivables	(377,558)	(342,318)
Decrease in payables	(282,160)	30,766
<b>Net changes in working capital</b>	<b>(659,718)</b>	<b>(311,552)</b>
<b>Net cash generated from operating activities</b>	<b>319,410</b>	<b>(300,164)</b>
<b>Investing activities</b>		
Additions to property and equipment	(50,649)	(39,093)
Additions to capital expenditure	(274,772)	(28,995)
<b>Net cash flow from investing activities</b>	<b>(325,421)</b>	<b>(68,088)</b>
<b>Net increase in cash and cash equivalent</b>	<b>(6,011)</b>	<b>(368,252)</b>
<b>Cash and cash equivalents at 1 January</b>	<b>63,812</b>	<b>432,064</b>
<b>Cash and cash equivalents at 31 December</b>	<b>57,801</b>	<b>63,812</b>

Water Resources Commission Annual Report and Financial Statements for the year ended 31st December, 2021

**WATER RESOURCES COMMISSION  
NOTES AND SCHEDULE FORMING PART TO THE FINANCIAL STATEMENTS FOR THE  
YEAR ENDED 31ST DECEMBER, 2021**

**1.0 CORPORATE INFORMATION**

**1.1 Nature of the Commission and Domicile**

The WATER RESOURCES COMMISSION was established under Section 1 of the Water Resources Act, 1996 (Act 522) as a body corporate with the objective of:

Regulating and managing the utilization of water resources, and the co-ordination of any policies in relation to them.

The Commission is domiciled in Ghana with its registered office at No. 4 E Leshie Crescent, Labone Estates, Accra.

**1.2 Compliance with International Public Sector Accounting Standards**

The financial statements of the WATER RESOURCES COMMISSION for the year ended 31<sup>st</sup> December 2021 have been prepared in compliance with International Public Sector Accounting Standards (IPSASs).

**1.3 Authorisation date**

The Financial Statements were authorized for publication on...18<sup>th</sup> September...**2022** by the Board of Commissioners of the WATER RESOURCES COMMISSION.

**2.0 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The significant accounting policies applied by WATER RESOURCES COMMISSION in the preparation of the Financial Statements are stated below:

**2.1 Basis of preparation**

The Financial Statements have been prepared under the historical cost convention as modified by the revaluation of land and the adoption of fair value measurement basis for assets and liabilities required to be so measured by relevant International Public Sector Accounting Standards (IPSASs).

The accounting policies have been applied consistently throughout the period.

**WATER RESOURCES COMMISSION  
NOTES TO THE FINANCIAL STATEMENTS FOR THE  
YEAR ENDED 31ST DECEMBER, 2021**

**1.2 Reporting Currency**

The reporting currency is Ghana is Ghana Cedi (GHs) which is the functional and presentation currency of the commission.

**1.3 Revenue recognition**

Revenue is recognized to the extent that the economic benefits will flow to the Commission and the revenue can be reliably measured. The following specific recognition criteria apply to revenue recognition.

**1.3.1 Government of Ghana subvention, Registration and Licensing fee and Other Income**

Government of Ghana (GoG) subvention is recognized in the income statement when received. Government of Ghana subvention represents releases from Government Treasury into the Commission's bank account or releases paid directly to third parties on behalf of the Commission. Licensing fee is accrued when invoiced. Other income is recognized when received. Other income includes donations from donor organization for specific projects/ activities.

**2.4 Property, Plant and Equipment**

The WATER RESOURCES COMMISSION recognizes an item of property, plant and equipment as an asset when it is probable that future economic benefits will flow to it and the amount meets the materiality and threshold set by the Commission.

Property, plant and equipment are initially measured at cost.

Cost includes costs incurred initially to acquire or construct an item of property, plant and equipment and costs incurred subsequently to add to or replace part of it. If a replacement cost is recognized in the carrying amount of the item of property plant and equipment, the carrying amount of the replaced part is derecognized.

Property, plant and equipment are carried at cost or valuation less accumulated depreciation and any impairment losses. Property, plant and equipment are not carried in the statement of financial position at an amount more than its recoverable amount. Recoverable amount is the greater of fair value less cost to sell and value in use. If recoverable amount is lower than the carrying amount, the assets is impaired and is written down the recoverable amount. An impairment loss is recognized in the income and expenditure account immediately.

Depreciation is provided on the depreciable amount of each component on a straight-line basis over the anticipated useful life of the assets. The depreciable amount related to each asset is determined as the difference between the cost and the residual value of the asset. The residual value is the estimated amount, net of disposal costs that the Commission as expected at the end of the useful life of the assets.

**WATER RESOURCES COMMISSION  
NOTES TO THE FINANCIAL STATEMENTS FOR THE  
YEAR ENDED 31ST DECEMBER, 2021**

The current annual depreciation rates for each of property, plant and equipment are as follows:

<b>Land &amp; building</b>	<b>3%</b>
<b>Plant &amp; Machinery</b>	<b>15%</b>
<b>Computer</b>	<b>33%</b>
<b>Furniture &amp; fittings</b>	<b>15%</b>
<b>Motor vehicles</b>	<b>20%</b>

Cost associated with routine servicing and maintenance of the assets are expensed as incurred. Subsequent expenditure is only capitalized if it is probable that future economic benefits associated with the item will flow to the Commission.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the item) is included in the income and expenditure account in the year the item is derecognized.

#### **2.5 Provision**

The Commission recognizes provisions when it has a present obligation (legal or constructive) as a result of past events and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

#### **2.6 Employee benefits**

##### **2.6.1 Short – term employee benefits**

Short-term employee benefits are employee benefits (other than termination benefits) that are due to be settled within twelve months after the end of the period in which the employees render the related service.

The cost of short-term employee benefits is recognized as an expense in the period when the economic benefit is given as an employee cost. Unpaid short-term employee benefits as at the end of the accounting period are recognized as an accrued expense and any short-term benefits paid in advance are recognized as prepayment to the extent that it will lead to a future cash refund.

Wages and salaries payable to employees are recognized as an expense in the income and expenditure account at gross amount. The Commission's contribution to social security fund is also charged as an expense.

**WATER RESOURCES COMMISSION  
NOTES TO THE FINANCIAL STATEMENTS FOR THE  
YEAR ENDED 31ST DECEMBER, 2021**

**2.6.2 Social Security and National Trust (SSNIT)**

Under a National Defined Contribution Scheme, the Commission contributes 13% of employee's basic salary to SSNIT for employee pensions. The first tier which is 13.5% is managed by SSNIT. The Commission has appointed a private fund manager who manages the second tier. The Commission's obligation is limited to the relevant contributions which are settled on due dates.

**2.7 Financial and measurement**

**2.7.1 Initial recognition and measurement**

Financial instruments are recognized initially when the commission becomes a party to the contractual provisions of the instructions.

The Commission classifies its financial instruments, or their component parts, on initial recognition as a financial asset, a financial liability, or an equity instrument in accordance with the substance of the instrument. These are initially measured at fair value through surplus or deficit).

**2.7.2 Subsequent measurement**

For purpose of subsequent measurement, financial assets and financial liabilities are classified as:

- a) Financial assets measured at fair value through surplus or deficit;
- b) Financial liabilities measured at fair value through surplus or deficit;
- c) Financial assets measured at amortised cost;
- d) Financial liabilities measured at amortised cost; and
- e) Financial assets measured at fair value equity.

**2.7.2.1 Financial assets or Financial liabilities at fair value through surplus or deficit**

A Financial assets or Financial liability at fair value through surplus or deficit is one that either:

- a) Is designated as such upon initial recognition, or
- b) Meets the recognition of 'held for trading'.

A financial asset or financial liability is deemed to be 'held for trading' if:

- i. It is acquired or incurred principally for the purpose of selling or repurchasing it in the near future, or
- ii. On initial recognition it is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking.

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NOTES TO THE FINANCIAL STATEMENTS FOR THE  
YEAR ENDED 31ST DECEMBER, 2021**

**2.7.2.1 Financial assets or financial liability at amortised cost**

Financial assets or financial liabilities at amortised cost are measured, subsequent to initial recognition, at amortised cost using the 'effective interest method'.

The 'effective interest method' is a method of calculating the amortised cost of a financial asset or a financial liability and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to be net carrying amount of the financial asset or financial liability.

**2.7.2.3 Financial assets at fair value through equity**

Financial assets or financial liability at fair value through equity are measured, subsequent to initial recognition, at fair value with gains or losses recognized in equity

The Commission's principal financial assets are each cash and cash equivalents and receivables. These are also measured at fair value through surplus or deficit.

Its principal financial liabilities are bank overdraft, payables and accruals. These are also measured at fair value through surplus or deficit.

**2.7.3 Determination of fair value of financial instruments**

**a) Availability of active market**

The fair value of a financial instrument traded in active markets such as the Ghana stock Exchange (GSE) at the reporting date is based on its quoted market price without any deduction of transaction costs.

**b) Non-availability of active market**

Investments that do not have a quoted market price in an active market are measured professionally through the use of valuation techniques.

The fair values of the Commission's financial instruments which are all short term, are determined based on the probable cash flows at the date of recognition. The book values of the instruments therefore approximate their fair values as they give indication of the possible future cash flows at the reporting date.

**WATER RESOURCES COMMISSION  
NOTES TO THE FINANCIAL STATEMENTS FOR THE  
YEAR ENDED 31ST DECEMBER 2021**

**2.7.4 Derecognition of financial assets and liabilities**

A financial asset or a portion thereof, is derecognized when the Commission's rights to cash flows has expired or when the Commission has transferred its right to cashflows relation the financial assets, including the transfer of substantially all the risk and rewards associated with the financial assets or when control over the financial assets has passed

A financial liability is derecognized when the obligation is discharged, cancelled or has expired.

**2.7.5 Date of recognition**

Purchases and sales of financial assets are recognized on transaction date.

**2.8 Significant accounting estimates, assumptions and judgement**

In preparing its financial statements, the Commission makes estimates concerning a variety of matters, which affect the application of policies and reported amounts of assets and of matters, which affect the application of policies and reported amounts of assets and liabilities, revenue and expenditures. Some of these matters are highly uncertain, and the Commission's estimates involve judgements it makes based on the information available to it.

The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstance, the results of which form the basis for making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions accounting estimates are recognized in the period in which the estimate is reversed if the revision affects only that period, or in the period of the revision and future periods affects both current and future periods.

Key area in which judgment is applied include the following

- I. Determination of depreciation rates from property plant and equipment
- II. Estimation of provision.
- III. Determination of contingent liabilities and contingent assets.

**2.8.1 Impairment of non-financial assets (including plants, property and equipment)**

The Commission assess at least at each financial Year end whether there is any evidence that non-financial assets (including PPE) may be impaired. Where indicators of impairment exist, an impairment test is performed. This requires an estimation of the 'value in use' of the asset or cash-generating units to which the asset belongs.

Estimating the 'value in use' amount requires management to make an estimate of the expected future cash flows from the assets or the cash generating unit and also to select a suitable discount rate in order to calculate the present value of those cash flows.



**WATER RESOURCES COMMISSION  
NOTES TO THE FINANCIAL STATEMENTS FOR THE  
YEAR ENDED 31ST DECEMBER 2021**

**2.9 RISK MANAGEMENT**

The Commission's Operations expose it to some risks. The risk emanating from financial instruments to which the Commission is exposed is credit and liquidity.

**Credit Risk**

Credit risk arises from the potential that a counter- party is either unwilling to perform on an obligation or its ability to do so is impaired, resulting in economic loss to the Commission.

The main sources of credit risk inherent in the Commission's operations arise from deposits/balances with banks and trade and other receivables. Thus far the Commission has managed this risk by restricting placements and credit to only reputable institutions.

The maximum amount of credit risk emanating from these sources is as follows:

**Short term instruments**

Bank Balance

Receivables

No collateral is held against these risks as it is not customary for these types of risk.

**Liquidity Risk**

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligation associated with financial liabilities that are settled by delivering cash or another financial asset.

**WATER RESOURCES COMMISSION  
NOTES TO THE FINANCIAL STATEMENTS FOR THE  
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The Commission's financial liabilities are due to its bankers and other suppliers in respect of its short-term borrowing/credit.

The Commission manages liquidity risk associated with these liabilities by ensuring compliance with the terms of contract on the overdraft and the terms of credit with its suppliers and service providers.

Management ensure compliance with terms of contract/ credit by matching the credit period granted to its customers with that received from service providers and suppliers. The legal and monitoring department assists in ensuring compliance with terms of credit by customers. Licenses of customers who unduly default are revoked or not renewed on submission of application for renewal.

Amounts held as bank overdraft, payables and accrual are virtually demand liabilities and therefore fall within the 0-3 month's maturity time band.

**Maturity Analysis**

Bank Overdraft

Payables and Accruals

**3.0 Comparative information**

The Comparative data covered the year ended 31<sup>st</sup> December 2020.

**3.1 Level of precision**

The figures in the financial statements have been rounded up to the nearest integer and may not add up.

## WATER RESOURCES COMMISSION

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2021

	2021	2020
<b>Note 4a: Revenue GoG Subvention</b>		
Compensation	1,543,726	1,384,989
Goods & services	903,823	318,896
	<b>2,447,549</b>	<b>1,703,885</b>
<b>Note 4b: Revenue IGF</b>		
Abstraction fees	2,194,940	2,237,809
Non abstraction fees	299,957	32,871
Administration fees	293,395	263,805
Application fees	8,200	7,500
Drilling fees	90,600	31,000
Capping deduction	(936,002)	(759,167)
	<b>1,951,090</b>	<b>1,813,818</b>
<b>Note 5: Revenue Other</b>		
World Water Day	109,100	32,500
MOFA/SIS Project	-	84,876
Exchange Gain	586	532
VRA/AGA/NGGL	296,184	135,000
Blue Deal	89,222	-
VBA / VFDMP	106,914	-
SMRS SRI SAI Drill & Co	211,070	124,300
IUCN/DHI/CERSGIS/UNESCO	81,923	17,296
Global Water Partnership	32,513	-
Project Parades	30,562	-
Income /Other fees	550	370
	<b>958,624</b>	<b>394,874</b>

## WATER RESOURCES COMMISSION

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2021

	<b>2021</b>	<b>2020</b>
	<b>GH¢</b>	<b>GH¢</b>
<b>Note6: Staff Cost</b>		
Salaries and Wages	1,253,716	1,113,227
Limited Engagements	307,001	393,073
SSF 13.5%	187,674	165,875
Car Maintenance Allowance	12,600	12,969
Security Allowance	7,182	9,908
Entertainment Allowance	13,454	14,732
Fuel/ Transport allowance	269,802	67,931
Rent /Housing Subsidy Allowance	28,041	34,074
Commuted /Travel allowance	17,881	52,951
Domestic Servant Allowance	14,957	16,882
Medicals	57,823	51,281
Welfare	38,990	144,124
Long Service Award	-	32,835
Basin Board Meetings	-	18,600
Entity Tender Committee	3,900	7,250
Commissioners' Sitting Allowance	16,420	61,680
	<b><u>2,229,441</u></b>	<b><u>2,197,392</u></b>

## WATER RESOURCES COMMISSION

## NOTES (Continued)

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2021

<b>Notes 8a</b>	Land & Building	Plant and Equipment	IT Equipment & Computers	Furniture & Fittings	Motor Vehicles	<b>Totals</b>
<b>Plant, Property &amp; Equipment</b>	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢
<b>Cost</b>						
Bal. at 1st Jan. 2021	798,450	140,093	173,328	161,228	1,363,077	2,636,176
Additions	-	-	-	13,140	37,509	50,649
Transfers/Adjustments						-
Disposal						-
Bal. at 31st Dec. 2021	<b>798,450</b>	<b>140,093</b>	<b>173,328</b>	<b>174,368</b>	<b>1,400,586</b>	<b>2,686,825</b>
<b>Accumulated Dep.</b>						
Bal. at 1st Jan. 2021	164,348	110,072	153,723	152,189	1,140,509	1,720,841
Charge for the year	22,157	8,987	11,936	8,775	81,692	133,547
Transfers/Adjustments		-	-	-	-	-
Release on disposal	-	-	-	-	-	-
Bal. at 31st Dec. 2021	<b>186,505</b>	<b>119,059</b>	<b>165,659</b>	<b>160,964</b>	<b>1,222,201</b>	<b>1,854,388</b>
<b>Net Book Value</b>						
At 31st Dec, 2021	611,945	21,034	7,669	13,404	178,385	832,437
At 31st Dec, 2020	634,102	30,021	19,605	9,039	222,568	915,335

<b>NOTES 8b</b>	Land & Building	Plant and Equipment	IT Equipment & Computers	Furniture & Fittings	Motor Vehicles	<b>Totals</b>
<b>Plant, Property &amp; Equipment</b>	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢
<b>Cost</b>						
Bal. at 1st Jan. 2020	798,450	124,000	150,328	161,228	1,363,077	2,597,083
Additions		16,093	23,000	-	-	39,093
Transfers/Adjustments						-
Disposal						-
Bal. at 31st Dec. 2020	<b>798,450</b>	<b>140,093</b>	<b>173,328</b>	<b>161,228</b>	<b>1,363,077</b>	<b>2,636,176</b>
<b>Accumulated Dep.</b>						
Bal. at 1st Jan. 2020	141,393	94,619	108,493	143,056	1,066,319	1,553,880
Charge for the year	22,955	12,666	32,127	9,133	74,190	151,071
Transfers/Adjustments		2,787	13,103			15,890
Release on disposal	-	-	-	-	-	-
Bal. at 31st Dec. 2020	<b>164,348</b>	<b>110,072</b>	<b>153,723</b>	<b>152,189</b>	<b>1,140,509</b>	<b>1,720,841</b>
<b>Net Book Value</b>						
At 31st Dec, 2020	634,102	30,021	19,605	9,039	222,568	915,335
At 31st Dec, 2019	657,057	29,381	41,835	18,172	296,758	1,043,203

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## WATER RESOURCES COMMISSION

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2021

	2021	2020
	GH¢	GH¢
<b>Note 7: Administrative expenses</b>		
Electricity and Water	89,567	31,211
Cleaning and Sanitation	48,007	28,371
Auditor's Remuneration	38,323	33,324
Printing and Stationery	90,600	171,512
Entertainment	1,867	1,888
Advertisement, Publicity and Public relations	242,146	28,308
Telephone and Postage	98,342	71,528
Local Travelling and Transport	63,694	80,783
Local Hotel Accommodation	88,304	52,616
Other Travel and Transport	6,840	6,300
Night Allowance	96,051	33,582
Foreign Travel	88,536	1,432
Foreign Travel per diem	46,573	91
Security services	44,732	48,770
Local consultancy	127,372	187,590
Operational Enhancement	27,060	105,173
Toll Charges Tickets	449	376
Office supplies	1,136	1,013
Insurance	35,293	29,959
Fuel and Lubricant	286,651	193,777
Vehicle Repairs and Maintenance	187,199	186,016
Residential accommodation rental	9,900	-
Office Building Repairs	24,973	10,772
Equipment Repairs	96,919	69,732
Seminars, Workshops and Conferences	307,447	328,064
Bank Charges	712	1,610
Dep: Land and building	22,157	22,955
Dep: Plant and Machinery	8,987	15,453
Dep: Computer & Accessories	11,936	45,230
Dep: Furniture and Fittings	8,775	9,133
Dep: Motor Vehicles	81,692	74,190
Intangible assets-Amortization	-	6,781
Capital Expenditure write off	33,452	14,033
	<b>2,315,692</b>	<b>1,891,573</b>

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## WATER RESOURCES COMMISSION

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2021

<b>Note 9a</b>	Balance at 01/01/2021	Additions	Write Off	Balance at 31/12/2021
	GH¢		GH¢	GH¢
Capital Expenditure				
Tano Basin	-	72,936	7,294	65,642
Black Volta Basin	68,413	3,081	6,282	65,212
White Volta Basin		198,755	19,876	178,879
	<b>68,413</b>	<b>274,772</b>	<b>33,452</b>	<b>309,733</b>

<b>Note 9b</b>	Balance at 01/01/2020	Additions	Write Off	Balance at 31/12/2020
	GH¢		GH¢	GH¢
Capital Expenditure				
Tano Basin	8,059		8,059	-
Black Volta Basin	45,392	28,995	5,974	68,413
	53,451	28,995	14,033	68,413

Intangible Assets	Balance at 01/01/2021	Additions	Prior Year	Amortization	Balance at 31/12/2021
	GH¢	GH¢	GH¢	GH¢	GH¢
Navision Software	0	-		-	0

Intangible Assets	Balance at 01/01/2020	Additions	Prior Year	Amortization	Balance at 31/12/2020
	GH¢	GH¢	GH¢	GH¢	GH¢
Navision Software	6,781	-		6,781	0

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## WATER RESOURCES COMMISSION

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2021

<b>Note 10: Receivables</b>	<b>2021</b>	<b>2020</b>
	<b>GH¢</b>	<b>GH¢</b>
Trade and sundry	1,720,928	1,534,789
Prepayments	169,112	-
Accountable Imprest	30,220	7,913
	<b>1,920,260</b>	<b>1,542,702</b>

**Note 11: Cash and Cash Equivalents**

For the purposes of the cash flow statement, cash and cash equivalent include cash and balance with banks.

Ecobank Dollar	244100988744	3,173	4,380
Ecobank Euro EU-WRC	244100988743	5,080	1,831
Ecobank Cedi WRC-IWRM	144100988755	17,615	14,987
Ecobank Euro ADAPTS	244100988754	59	55
Ecobank Cedi GOG/MOFA	144100988753	2,225	-
Ecobank Cedi ADAPTS	144100988749	53,044	29,691
Ecobank Cedi GEF	144100988746	54	8,815
Bank of Ghana Cedi HDA	1018231541028	(34,116)	-
Bank of Ghana Cedi WMA	1018631483477	10,667	2,814
Office Petty cash	-	-	1,239
		<b>57,801</b>	<b>63,812</b>



**WATER RESOURCES COMMISSION**

**NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2021**

**NOTE 13 : Payables**

Withholding Tax	17,279	32,981
GRA-PAYE	11,554	-
Welfare	4,398	4,398
Accruals - Audit Fees	38,323	33,324
Payable Services	-	7,155
Accrued - Expenses	36,601	312,457
	<b>108,155</b>	<b>390,315</b>
	<b>108,155</b>	<b>390,315</b>



## Locations | Addresses | Contacts

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