MINISTRY OF WATER AND ENVIRONMENT

WATER AND ENVIRONMENT INFORMATION SYSTEM

WEIS BEACON

Your Quarterly Byte of the Water and Environment Information System

Volume 1, Issue 3, July - September 2025.

A. Message from the Editorial Team

The Beacon is a quarterly digital newsletter that aims at continuously creating awareness, promoting the visibility, adoption and the importance of the WEIS among its wide range of stakeholders.

This third issue provides a perspective on the database modules of the WEIS and how to access them via your internet enabled computer browser. It also highlights the importance of the system to MWE and its stakeholders through the case-study section. There are various statistics that have been presented as pull-quotes to illustrate the usage of the WEIS components among others.

The confirmation that we have compiled and acted upon your feedback from the 1st quarter of FY 2025/2026 is included in the system enhancements sections.

The content of the Beacon presents the importance of the WEIS in improving the quality and access to the water and environmental data and information in MWE for decision making.

You are requested to register, login, use the system and share your feedback by scanning the quick reference code on page 13.

Nice reading, cheers.

B. Overview of the WEIS

The WEIS is a web-based system being operationalised by MWE to effectively manage water and environment data and information for its stakeholders, which seemingly appears as a single file. The WEIS, therefore, is a collection of numerous thematic independent databases integrated and sharing common data through the exchange of messages. The access to each thematic database module is determined by role-based rights and privileges assigned to the end users.

Contents

The different thematic databases modules are; borehole Information portal, Permits Management Portal, Surface water database, Ground water database, Water Quality Management Database, Dam and Waterways Safety Database, Forestry Sector Support Database, National Wetlands Information System, Rural Water and Sanitation Database, Water for Production database, Sanitation Management Information System, Environment Management Information System, Water and Sanitation Management Information System, Data Dissemination Services, Assets Information Management Database, Spatial Data Services and the Document Management System. Apart from the Data Dissemination Services, Assets Information Management Database, Spatial Data Services and the Document Management System, all other modules belong to specific departments and are operated to fulfil their respective mandates.

All modules contain public data and information that is accessible online through the WEIS homepage; however, to view detailed content, users must log in. You can access the WEIS by visiting https://weis.mwe.go.ug in your preferred browser on any internet-enabled device.

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Vision of the WEIS

The vision of the WEIS is to provide a centralized, secure and structured online interface to access the water and environment data and information for both internal and external stakeholders of MWE and to enhance integrated, data-driven decision-making.

C. Case Studies on the WEIS Database modules

This section provides a collection of case studies that demonstrate how the WEIS has been successfully implemented to deliver tangible results, streamline operations, thereby solving complex challenges for the end users. Each case provides an insight of measurable outcomes, from increased efficiency to cost savings approaches.

C1. Surface and Ground water Database Case Study

Modernizing Hydrological Data Management from isolated system to Real-Time Analytics with AQUARIUS

Challenge:
The surface water and groundwater time series data was previously managed from a desktop application (HYDATA). This presented a number of challenges such as a standalone database system with the inability to upload data in real time. This led to formation of multiple time series databases within the department to archive telemetry data and manual stations.

Solution:
During the implementation of the WEIS, the hydrological data was extracted from HYDATA and other existing redundant files, merged, cleaned and then migrated to WEIS Timeseries module (AQUARIUS). It comprises of three sub modules namely TimeSeries for data collection, exploration, analysis and reporting; a web portal for dissemination; and Application Programming Interfaces for the automation of the import or export of data to and from other sources respectively.

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borehole completion reports were submitted by the registered drillers via the WEIS borehole module during Q1 FY 2025/2026.

Outcomes:
Data correction is considerably easier with the Timeseries visual tools. It provides tools to view and visualize time-series data on charts and dashboards, allowing for detailed analysis and comparison of data over time.

The Web portal displays the status of data for each station. Consequently, decision-making has become easier because it provides secure, real-time access to quality-assured data for various stakeholders, enabling them to view, analyze, and act on critical information to support environmental management decisions like flood control and water resource monitoring.

AQUA Connect offers a range of Application Programming Interfaces (APIs) that simplify tasks through automation of processes and the structuring of the schema to support the integration of data from external sources. For instance, it is used for the automated upload and integration of telemetry data eliminating the existence of multiple databases within the department.

C2. Water Quality Management Database Case Study

Field Sample Metadata Collection with the Water Quality Management Database – Offline data collection Tool

Challenge:
Prior to the WEIS Water Quality Management Database (WQM-DB) module, water analysts collecting network samples (routine monitoring samples from lakes, rivers and groundwater sources) faced major issues in tracking and processing field samples.

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C. Case Studies on the WEIS Database modules

The sheer volume of samples often collected in bulk from multiple sites created bottlenecks at lab reception. Analysts had to manually log each sample's metadata (location, time, environmental conditions) in the lab reception book before submitting the samples for analysis. This painstaking process slowed down sample registration delaying testing timelines.

Without an online management and tracking system, labs struggled to:

- Prioritize urgent samples (e.g., suspected contamination cases) due to disorganized paper trails.
- Prevent mislabelling or lost samples when handling hundreds of submissions at once.
- Ensure data accuracy, as manual entry introduces errors in critical details like sample IDs, location details and collection times.

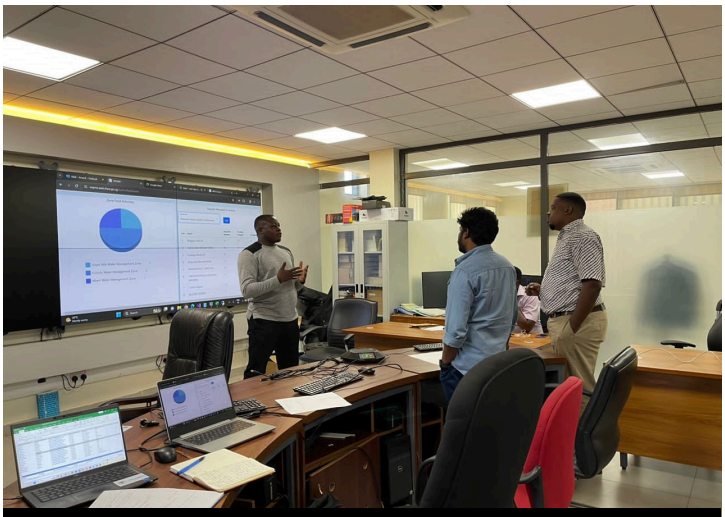
These delays cascaded into the entire workflow delaying analysis, certification and regulatory reporting.

Solution:

The WEIS, WQM-DB Offline Data Collection Tool improved the way the field teams handle network sampling by introducing an end-to-end online workflow system. Water analysts now can capture all sample metadata including GPS coordinates, collection times and environmental observations and photo functionality directly through a mobile application designed for Uganda's internet connectivity challenges. The application automatically generates unique IDs for each sample, eliminating manual numbering errors that previously caused confusion at lab reception.

When field teams return from the remote site with limited connectivity, the water analysts can now initiate the upload and sync functionality from the WEIS WQM-DB offline tool that sends the data to the central server at MWE, giving lab technicians near real-time visibility of incoming samples. At lab reception, since the sample meta-data has already been added to the sample submission form on the lab receptionist dashboard replacing manual logbook entries, thus, reducing sample processing time from 15 minutes per batch, to less than 120 seconds.

Built-in validation checks ensure parameter values fall within expected ranges before submission, while the online chain-of-custody provides a complete audit trail from collection to analysis then finally to generation of certificate.



A stakeholder engagement on system enhancements of the Water Quality Management Database in the WEIS support office at MWE headquarters.

Outcomes:

Field teams now complete documentation during sample collection rather than after returning to the office, saving an average of 2.5 hours per monitoring trip. In addition, the online data transfer to the sample submission forms has reduced metadata errors by 90% compared to manual data entry. The lab receptionist processes delivered samples 60% faster since staff no longer decipher handwritten field notes.

Most significantly, we've eliminated the previous 3-5 day backlog between sample collection and analysis initiation. Building on this success, we're expanding the system to include Mobile printing of sample labels at collection sites and QR code labelling and scanning for improved tracking of samples.

The offline tool has fundamentally changed how we manage network samples, turning what was once a bottleneck into one of our most efficient workflows.

13,182

records were entered into the Surface and Groundwater timeseries Database during Q1 FY 2025/2026.

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C. Case Studies on the WEIS Database modules

C3. Borehole Information Portal module Case Study

Digitising the collection and submission of borehole completion reports

Challenge:
Registered drillers used the paper-based data collection method to gather and submit hard copy data forms, compiled as the Borehole completion reports, to MWE for assessment and approval. There were various versions of the data collection forms in use, which affected standardisation of the data collected, analysis and reporting. For instance, some drillers used data collection forms with more data parameters than others. There were notable data gaps since there was no enforcement of collecting the mandatory field parameters on the paper-based collection forms.

Since the drillers filled the Borehole completion forms with hand written entries, some were illegible or incomplete. In addition the drillers were required to consolidate and physically deliver the batched hard copy borehole completion reports to MWE headquarters on a quarterly basis for entry into a standalone computer system. This manual process was a bottleneck because the batched data deliveries led to a mounting backlog, overwhelming the data entry system and compromising operational efficiency.

Solution:
MWE has designed and operationalised an online WEIS Borehole information portal with role based access control rights and privileges. The system provides interfaces to registered drillers that can now submit the borehole completion reports online via the Borehole Information Portal instantly, upon fulfilling all the mandatory requirements, and track the assessment and approval of their report. Upon submission to MWE, system generated email notifications are triggered within the department of Monitoring & Assessment to commence the technical evaluation while the driller's compliance is monitored by the department of Water Resources Planning and Regulations. All the technical evaluation and compliance monitoring is done online while the driller views the progress.

In case of clarification required, MWE sends the communication to the driller who addresses the feedback within the system. Upon completion of the technical assessment and the compliance monitoring, the data in the borehole completion report is archived online within the WEIS for future reference and value addition.

This eliminates the need for printing and physical delivery, thereby saving time and reducing operational costs.

Result:
The implementation of the Borehole Module has created efficiency in the borehole reporting process, improved data quality and the compliance of the drillers can easily be monitored. It has also led to the elimination of the accumulation of the data backlog at MWE.

The WEIS provides mechanisms and tools that support offline electronic data collection in areas with unreliable internet service. Through the usage of the borehole offline data collection tool, drillers are still in position to collect data electronically on their Android smart devices in areas without reliable internet service. This data, stored in the borehole offline electronic data collection tool, is thereafter uploaded to the WEIS servers in MWE when the internet connection is restored avoiding the interruption of business processes.

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borehole completion reports have been approved via the WEIS borehole module during Q1 FY 2025/2026.

The system allows for the continuous report submission anytime, from any internet based device without being constrained. This has ensured timely data entry, eliminating backlogs at MWE. This fosters data availability and timely access for decision-making.

The WEIS borehole information portal has also eliminated the costs of printing and travel for the drillers, while freeing up valuable storage space for other operational needs in MWE.

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C. Case Studies on the WEIS Database modules

C4. Forestry Sector Support Database module Case Study

Digitalizing Tree Seedling Nursery Audit and Clonal Certification through the Forestry Sector Support Database of the WEIS

Background:
The Forest Sector Support Department (FSSD) of the MWE plays a central role in Uganda's forestry development. Among its many responsibilities, the department oversees the accreditation of tree seedling nurseries and clonal facilities, which are vital in ensuring the supply of high-quality planting materials to farmers, institutions and private investors. For years, these processes relied on manual paperwork, where officers carried out assessments using hard copy printed checklists and certificates were issued physically. This was the available approach for maintaining records, verifying compliance and generating reports for national planning. As the scale of Uganda's reforestation and commercial forestry programs expanded, it became increasingly clear that the old methods could no longer support the demand for reliable, timely and transparent certification.

To address these challenges, the FSSD module was developed and integrated into the WEIS to provide a central repository of nursery certification information by streamlining data entry and automating audit processes.

Challenge:
The paper-based system for nursery audits and clonal certification not only consumed time but also created difficulties and inefficiencies that undermined service delivery. Certification was often delayed because physical files had to move between Nursery Assessment Officers (NAOs), Principal Forestry Officers (PFOs) and the Commissioner. In many cases, nursery operators had no tracking of the status of their applications, leading to frustration and loss of trust in the process.

Data duplication, loss of records and inconsistencies in applying audit standards were common, making it difficult for MWE to monitor compliance, conduct quality assurance or to provide accurate, evidence-based reports for policy and investment decisions.
Furthermore, the lack of a centralised database meant that information on certified nurseries was scattered, inaccessible or outdated. This reduced MWE's ability to track trends, analyse, verify the quality of planting materials or enforce corrective actions. Without a clear audit trail, accountability was also weakened, leaving room for errors and inefficiencies that hindered the goals of national forestry programs.

Solution:
The development and integration of the FSSD module into WEIS marked a turning point in the certification process. Instead of filling out paper forms, NAOs now capture all required details digitally, including nursery locations, seed sources and compliance with prerequisites such as holding capacity and recommended seed origin. The system incorporates geospatial data processing by requiring coordinates, ensuring that every certified nursery can be tracked to its precise location.

Once data is submitted, it flows seamlessly through the approval chain. NAOs compile and forward their digital reports to PFOs, who review and verify the information. The Commissioner then accesses the same records via their online dashboard, from where the requests are approved or rejected with a single action. Upon approval, the system automatically generates a certificate online, which can be accessed and printed by nursery operators. This workflow eliminates the back-and-forth of physical files and significantly reduces processing time.

The module also introduced dashboards and reporting functions that make the entire process transparent. Nursery operators and officials alike can monitor pending audits, approved certificates, and rejected applications in near real-time. The reports generated by the system are standardised, exportable into other plain text file standards and can be tailored to specific clusters, districts, or time periods. By embedding role-based access, the system ensures that only authorized officers can enter, verify, or approve data, strengthening accountability across the chain.

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C. Case Studies on the WEIS Database modules

Result:
Since its rollout and operationalization, the FSSD module has delivered measurable improvements in efficiency, transparency and accountability across the nursery audit and certification process. Certification timelines, which previously stretched over several weeks, have been reduced by over 65%, since the online workflows eliminate the back-and-forth of physical files.

Transparency has increased significantly, with more than 70% of nursery operators reporting that they can now track the status of their certification requests in near real time, compared to almost no visibility under the outdated manual system. The standardised audit checklists have also improved compliance, with an estimated 40% reduction in rejected applications due to missing or inconsistent information.

At the institutional level, MWE has gained a centralized repository of nursery data, enabling reporting that is both faster and more accurate. Report generation time has improved by over 80%, as forest officers can now export structured reports directly from the system rather than compiling them manually.

These improvements have translated into greater confidence from private nursery operators and investors, while farmers now have more reliable access to certified, high-quality seedlings. Ultimately, the FSSD module has proven to be more than a digital tool, it is a driver of efficiency, accountability and trust in Uganda's forestry sector.

C5. Dam and Waterways Safety Database module Case Study

Centralizing Dam and waterways safety inventory management

MWE maintains a national inventory of all dams and waterways, tracking key indicators to ensure they are safe and operate optimally.

Challenge:
Originally, this process relied on a paper-based data collection, analysis and reporting system. As a result, performing key tasks such as geospatial mapping, dam registration, dam classification, instrument registration, document and media management and data capture was cumbersome; and data was not standardized across operators. At times, each operator applied a different approach to similar tasks; for instance, some used the Universal Transverse Mercator coordinate system while others relied on Degrees Minutes Seconds coordinate system.

There were also inconsistencies in records that should have remained uniform across different instances for the same operator. For example, dam operator contact details, company names, and location information were often misrepresented or duplicated. When records weren't standardized, the data lost accuracy and consistency, thereby complicating the process of analysis. Missing or inconsistent coordinates led to delays during early warning and safety inspections, for instance. This could also result in misidentifying dam sites during emergencies—posing significant safety risks. Paper-based records also slowed compliance monitoring and made it difficult to enforce the 2020 Water and Environment regulatory requirements for dam operators. Several files were either misplaced or duplicated, creating gaps in official records and undermining confidence in the accuracy of the data.

Solution:
To overcome these issues, MWE has transitioned to a centralized online inventory on the Dams and Waterways Safety database module of the WEIS. This inventory keeps records on ownership, type, purpose, safety and other critical information essential for the safe and optimal operation of dams. Dam operators and owners are also able to submit applications to register new dams that are still undergoing construction. These applications, once verified, are approved and feed into the dam inventory of the database for monitoring.

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C. Case Studies on the WEIS Database modules

Result:
The online inventory on the dams and waterways safety database has had a significant impact, as follows:

- As of January 2025, data for more than 250 dams and reservoirs of various sizes (small, medium, and large) across Uganda has been harmonised, registered and captured in the database.
- Retrieval of dam records that previously took several days of manual searching can now be done within less than 5 minutes.
- Dam registration applications are verified and integrated into the inventory within a few working days, compared to weeks or even months under the old paper-based system.
- Field teams can now capture data in situ, either online or with the dam and waterways safety offline tool significantly improving data availability and accuracy.

C6. Permits Management Portal Database Module Case Study

Automating Borehole Number Allocation for Uniqueness and Transparency in Groundwater Regulation

Overview
MWE is responsible for regulating the nation's water resources to ensure sustainable development and effective management for socioeconomic growth. This approach includes, but not limited to, issuing permits for water use, waste discharge, and compliance monitoring for water-related activities.

The allocation of borehole numbers is critical in ensuring that every drilled borehole is properly identified, monitored, and regulated. This process directly supports compliance with Uganda's Water Act Cap 152 and provides the foundation for sustainable groundwater use.

Challenge:
Until recently, MWE faced persistent challenges in managing borehole number requests since they were issued through a manual procedure. This led to data inconsistencies, with some boreholes ending up with duplicate or overlapping numbers. Tracking issued numbers was also difficult, making it hard to establish how many had been allocated, to whom, and for which specific locations. For drillers and hydrogeologists, this created delays and uncertainty, as approvals often required lengthy back-and-forth with the Ministry. From a regulatory perspective, the lack of a central system compromised oversight, as incomplete and scattered records made it challenging to monitor compliance or generate accurate reports.

Solution:
The launch of the Permits Management Portal (PMP) of the WEIS has transformed this process, ushering in a new era of accountability, efficiency, and transparency.

The portal allows registered drillers and hydrogeologists to request borehole numbers through their user online profiles. Built-in validation checks ensure that all validations and required details such as permit number, location and technical specifications are captured accurately, and verified to improve the quality of data being collected. Upon approval by MWE, the borehole numbers are automatically generated, and a notification is sent to the requestor via the online platform. Each borehole number is integrated to the Borehole Information Portal module in WEIS, promoting data sharing seamlessly as well as creating a consistent record across groundwater monitoring, permitting and compliance systems. In addition, the PMP provides real-time dashboards to track the progress of each request.

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C. Case Studies on the WEIS Database modules

Result:
The impact has been immediate and measurable. Duplicate and overlapping borehole numbers have been eliminated, improving the overall integrity of groundwater data. Applicants now experience faster turnaround times, with clear visibility on the status of their requests. For MWE, a centralized inventory is in place where every borehole number issued can now be accounted for, strengthening regulatory oversight and simplifying the generation of reports. Most importantly, the process has enhanced trust among stakeholders that's drillers, hydrogeologists, and water users who now engage with a system that is predictable, transparent, and efficient.

4,435,212

seedlings (including African mahogany, Cashew nuts, Lowland bamboo, Pink cedar) distributed to farmers through the Forestry Sector Support Database module in Q1 FY 2025/2026.

C6. National Wetlands Information System Case Study

Digitalizing Wetlands Field Monitoring with the National Wetlands Information System (NWIS)

Introduction
The Wetlands Management Department (WMD), under MWE, is mandated to ensure the sustainable management, restoration, conservation and utilization of Uganda's wetlands. This responsibility covers policy guidance, coordination, inspection, demarcation and oversight of activities that safeguard wetlands as an important ecosystem for biodiversity, water purification, flood control and climate regulation.

In recognition of recurring challenges such as fragmented and delayed reporting, the Ministry developed and rolled-out the Water and Environment Information System.

Within WEIS, the National Wetlands Information System (NWIS) serves as the WMD's digital toolkit: enabling structured, geo-referenced data capture, real-time monitoring and evidence-based decision-making. This advancement strengthens WMD's ability to fulfil its mandate with transparency, efficiency and strategic responsiveness.

Challenge:
Before the NWIS, field data collection relied on paper based forms and spreadsheets. Officers working in remote wetlands had no reliable way of capturing field activity meta data in real time and reports often arrived months after the work was done. This meant that policymakers lacked a clear view of ongoing wetland activities like restoration, demarcation or inspection. Planned interventions sometimes covered tens of thousands of hectares, but without a digital tracking tool, it was very difficult to know whether targets were being achieved or delayed. In practice, this slowed responses to critical conservation needs and created inconsistencies in reporting.

Solution:
To close this gap, the NWIS introduced a hybrid model that combined offline field data collection with online dashboards. Wetlands officers now use an offline-enabled tool / application that allows them to capture activity metadata such as the type of intervention, its exact location, supporting photographs and observations even in areas with no internet coverage. Once connectivity is restored, this data syncs at a tap of a button to the NWIS online system, ensuring that no information is lost and that reporting is both timely and accurate.

The online system then reflects this data into two main dashboards. The Activity Dashboard in the NWIS provides a structured view of planned versus completed activities, including those pending approval or overdue. The Field Activity Dashboard goes further, acting as a live monitoring tool where supervisors and decision-makers can track progress in hectares and kilometers across regions, basins and districts. Together, these tools have digitized what was once a fragmented and paper-based process, creating a reliable chain of information from the field to the Ministry's strategic leadership.

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C. Case Studies on the WEIS Database modules

Result:

For the first time, Uganda has a clear picture of wetlands activities as they unfold. Out of more than 159,000 hectares of wetlands earmarked for management activities, nearly 1,500 hectares have already been completed and logged in the system since the WEIS - NWIS launch in December 2023. Demarcations, once poorly tracked, now show that five percent of the national target has been achieved, while inspections reflect four percent of planned activities. Although some areas, such as restoration and inventory, remain at zero percent progress, these gaps are no longer hidden; they are clearly visible on the NWIS dashboards, allowing managers to act quickly rather than waiting for end-of-year reports.

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harvesting licenses for forest produce were issued through the Forestry Sector Support Database module in Q1 FY 2025/2026.

The system has also improved accountability and efficiency. Supervisory approval workflows ensure that every activity is verified, improving data quality by an estimated 30 to 40 percent compared to manual entry. Reports that once took weeks to compile are now generated instantly, saving valuable time and resources. Beyond numbers, the NWIS has strengthened community engagement. More than 110 Management Action Plans are digitally tracked, with the dashboards showing how many are in progress, in the field or completed. Outreach activities are also being recorded with details on male and female participation, creating a new layer of gender-sensitive data to inform future policy.

With offline tools feeding to the online dashboards, Uganda has moved wetlands monitoring from guesswork to evidence-based management, positioning the country among global leaders in digital conservation.

D. Collaborations

The collaborations highlight the engagements by MWE's departments with various MDAs and development partners regarding the usage, adoption and improvements that can be done to their WEIS modules. These have driven technical enhancements, such as database customization and API integrations to meet specific stakeholder and end user needs for the continuous improvement of the functionality and features of the WEIS. These collaborations not only improve data verification and sharing but also facilitate the visibility, awareness, adoption and effective usage of the WEIS platform. The collaborations are;

D1. Integration of e-payments and data validation with Uganda Revenue Authority

By May 2025, MWE, in conjunction with National Information Technology Authority (NITA) and Uganda Revenue Authority (URA), successfully completed the user acceptance tests (UATs), following the numerous trials to seamlessly integrate and streamline payments for the various services of the WEIS. The services of the WEIS that require payments include water permit applications, water permit annual fees and requests for water time series data subject to the user's category.

The WEIS has integrated with URA to enable e-payments and data validation. The scope of the UATs focused on Tax Identification Number (TIN) validation, Payment Request Number (PRN) generation and PRN status confirmation.

From the completed UATs, a user can now connect and validate the entries provided for individual and business TINs using the existing WEIS logical processes. In addition, the staff of MWE can now generate PRNs tagged to a specific service within the WEIS. Through the WEIS interface, a staff of MWE can now get confirmation whether a service related PRN has been paid, including the other details like the amount, date and payment method.

Since the UAT was conducted on the testing environment of both the WEIS and URA portals, MWE and URA agreed that the existing WEIS logical processes and database schema integration structures should be improved to eliminate unnecessary duplicates prior to final approval and implementation on the production environment.

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E. WEIS Operationalisation Strategies

The operationalization strategies of the WEIS focus on system adoption, usage and improve user skills by integrating the WEIS into their daily workflows and processes. These strategies involve training, system rollout, awareness campaigns, and user onboarding across all levels of MWE and its stakeholders in the public domain.

E1. Induction of Dam Operators on the Dams and Waterways Safety Database

On 25th September 2025, MWE successfully conducted an induction exercise for the dam owners and operators on the WEIS Dam and Waterways Safety module. The session aimed at raising awareness and increasing adoption of the WEIS introducing the dam owners and operators to its online and offline interface structures, features, and operations. It further equipped participants with the essential knowledge to effectively use the WEIS in managing dam and waterways safety data like; registration of new dams, submission of safety plans and inspection reports, update dam inventory data, etc.

A stakeholder engagement showcasing the Dam and waterways Safety database to registered dam operators at the MWE headquarters.

Key Outcomes

- Increased awareness of the WEIS among the dam owners and operators created
- The hydro-power dam operators were registered in the system to improve monitoring
- Enhanced system features and functionality from the user feedback collected.

E2. Additional strategies to operationalise the WEIS modules

The additional strategies to promote the adoption and usage of the WEIS modules in MWE include;

- The operationalisation of the WEIS helpdesk that was established in MWE, which handles end user queries and offers hands-on end user support on the workflows of the numerous modules.
- The WEIS implementation team has worked closely with the developer through a series of technical support calls to apply patches and refine workflows to improve the overall user experience and interactivity.
- Dedicated WhatsApp groups, based on the various user categories, are in place to provide instant and non-structured communication amongst the technical and non-technical users including the MWE staff and the external stakeholders. The communication includes support requests, challenges, proposals, amongst others.

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user support calls were received by the WEIS IT support desk in Q1 FY 2025/2026.

- Active feedback channels have been maintained to allow users to report inconsistencies or suggest improvements, as part of the ongoing system maintenance roles.
- The updated versions of the user manuals have been deployed, following system improvements, to ensure consistency of interfaces and the system documentation
- Information and communication materials in form of short videos, for the specific processes of various modules, is available for reference on the WEIS YouTube page to promote availability of self-guided learning instructions for all the end users.

In conclusion, the continuous operationalization of the WEIS module is anchored on strong institutional support, reliable technical systems and continuous active engagement with the end users.

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F. System Enhancements

To improve the operationalisation, adoption and make the WEIS easier to work with, several improvements have been implemented based on the end users' feedback. These changes target the visual and interactive elements of the user interface. The user experience is also addressed to ensure the system is usable, efficient, improving the outlook, simplifies processes, reduces delays, and makes the system more responsive to the targeted user needs. In this section, we outline the key areas where the system has been improved, focusing on better usability, clearer data flow, responsiveness and smoother integration. Additional minor process flows are also considered, provided they do not require changes to the overall internal structure of the existing flowchart.

F1. Borehole Information Portal

- The borehole completion report forwarded for quality assurance now includes the name of the departmental member who conducted the internal assessment
- The name of the user who submitted the Borehole completion report now appears in the approved reports
- The borehole completion reports that have been resubmitted by drillers for compliance monitoring now carry the keyword 'Resubmitted' for easy identification.

Scan the QR Code to access the WEIS Youtube Channel

WEIS YouTube QR Code.

F2. Dams and waterways safety database

- The dam inventory now includes a classification section, categorizing dams as low, medium, high, or very high hazard potential.
- The system now supports sharing of dam safety plans within the department of Water Resources Planning and Monitoring, allowing the assigned officer to share reviewed plans directly to others during the dam safety plan review process.

A stakeholder engagement on the dam and waterways safety database at MWE headquarters

F3. Document Management System

- Users now receive email notifications when documents are shared with them.
- Auto-completion for searched keywords has been added based on metadata entered during uploads, improving search accuracy.
- Search results now highlight keywords, making it easier to locate public documents using the WEIS homepage search bar.
- Automatic session timeout notifications have been introduced to improve protection and safeguard user data.

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public documents were uploaded by various MWE departments through the Document Management System during Q1 FY 2025/2026.

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F. System Enhancements

Scan the Quick Reference (QR) Code to access the public documents on the Document Management System

Document Management System QR code.

F4. WEIS Offline tools added to the Google Play Store

- To improve accessibility, availability; and system compatibility, stability and seamless deployment, all WEIS offline tools are now officially available on the Google Play Store for authenticity and version control.
- Open your Google play store and search for the WEIS offline modules to complete the installation. (Specifically, search "WEIS Borehole", "WEIS Water Quality", "WEIS Compliance", "WEIS FSSD", "WEIS NWIS" to start the download and complete the installation)

A stakeholder engagement showcasing the WEIS capabilities to a delegation from South Sudan in the WEIS support office at the MWE headquarters.

G. Frequently Asked Questions

1. How is data in the WEIS quality assured?
Answer: The WEIS is a distributed system, comprising of numerous integrated thematic database modules. These modules remain under the control of their respective departments, which are mandated to manage the specific data of each database. Thus, the quality assurance of data in each database is done within the specific department by the registered end users.

Stakeholder engagement with Bujagali Energy Limited on submission of Hydraulic statements in the Permits Management Portal

2. How does the public use the WEIS?
Answer: The WEIS provides access to numerous water and environment databases and public documents like reports, manuals and knowledge products from MWE. Water related services are inline with application for water permits, requests for water quality tests, submission of borehole completion reports. The environmental related services are related to request for seedlings among others. Open your favourite browser on your internet enabled device and enter https://weis.mwe.go.ug. The WEIS home page includes searching for documents, reports and knowledge products using *keywords*. In order to make customised requests for data and knowledge products, submit the requests through the Data Dissemination Services module.

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WATER AND ENVIRONMENT INFORMATION SYSTEM

H. Testimonials from stakeholders

Behind every successful system adoption and great feature, there's a team whose daily work has been transformed and ready to share their story. This section is a collection of the feedback from the various end users who rely on the WEIS to accomplish their daily work. With the excerpts, the end users share their experiences, achievements and the impact of the WEIS in conducting their operations.

1. **Permits Management Portal**
"...The WEIS online portal has made our work easier because we no longer spend money on printing and travel. The Borehole completion reports can be submitted right from the field on time..."
Driller, Registered Drilling Company

2. **Permits Management Portal**
"...The system makes the Borehole completion reports organized, thus, easy to trace and analyze data from the Borehole portal..."
Driller, Registered Drilling Company

3. **Water Quality Management Database**
"...We can now receive complete metadata records via the Water Quality management module with the samples themselves, no more running after clients for missing information or correcting illegible notes..."
Laboratory Manager, MWE

Scan the QR Code to access the feedback form

WEIS Feedback QR code.

Stakeholder engagement with a district forest officer from Rukiga district showcasing the capabilities of the Forestry Sector Support Database offline tool at MWE headquarters.

A stakeholder engagement during the end user training of MWE staff at their office in Wakiso district.