

Report on Abeku Community Smart Water Kiosk

Report Period: 3 Years

Launch Date: 21 May 2021

Functionality Status: Functional

Sustainability Rating: 100%

Reliability Rating: 98%

Report Date: 15/05/2024

Overview

Fairaction Nigeria is a registered charity under the Nigeria Corporate Commission (CAC), dedicated to ensuring access to safe and affordable drinking water for all Nigerians. Our approach is holistic, focusing on the sustainability of water projects. Through our parent organization, Fairaction International, and partnerships with global entities, we leverage findings from Research and Development to guide our implementations.

The Abeku Smart Water Kiosk, equipped with a sophisticated system developed by Clean Water for All Pty Ltd, serves as a focal point for our data-driven strategy. Over the course of 1080 days of operation, we have collected comprehensive metrics, including water credits, user behaviour, sustainability ratings, revenue and non-revenue water, and assessments of infrastructure reliability and functionality. This data enables us to continuously refine our methods, leading to the development of more resilient and sustainable water systems.

This report presents an in-depth analysis of the three-year operational period of the Abeku Smart Water Kiosk, showcasing the effectiveness and impact of our initiatives.



Abeku Community Leaders, Fairaction Team, and the Smart Water Kiosk on Launch Day, 28 September 2020.

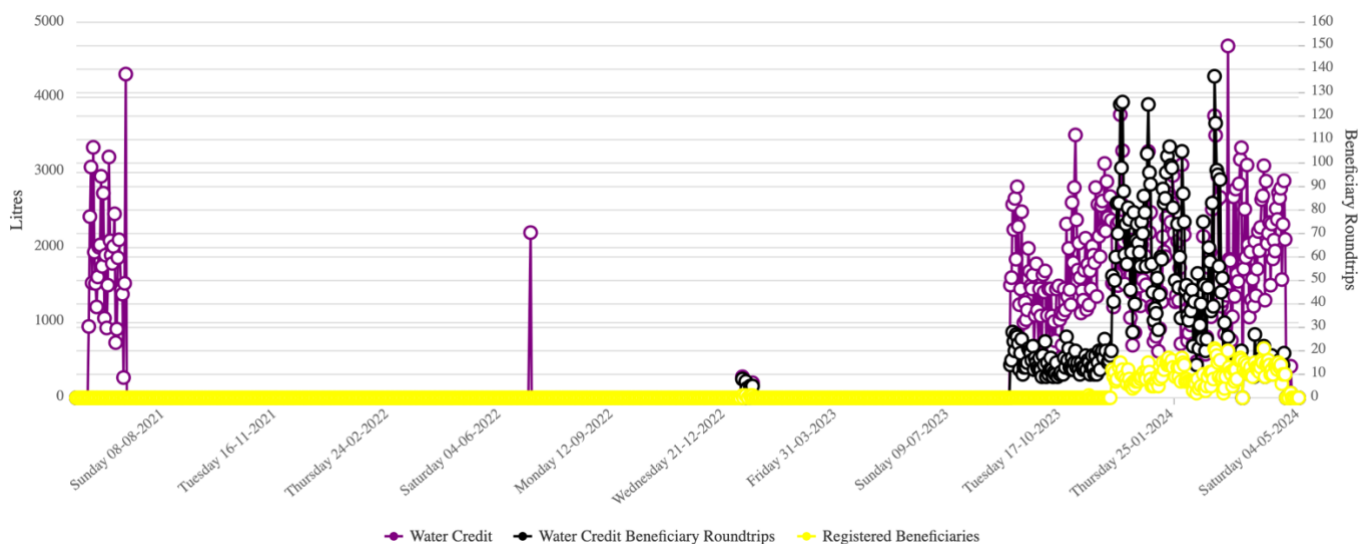
Data Report for the Abeku Smart Water Kiosk: A 1091-Day Overview

Water Credit: The amount of water provided for free to help those who need it. This does not include water sold or lost.

Summary:

- **Reporting Period:** 1091 Days
- **Total Water Credit Distributed:** 503,901 litres
- **Average Daily Distribution:** 462 litres

Water Credit Graph

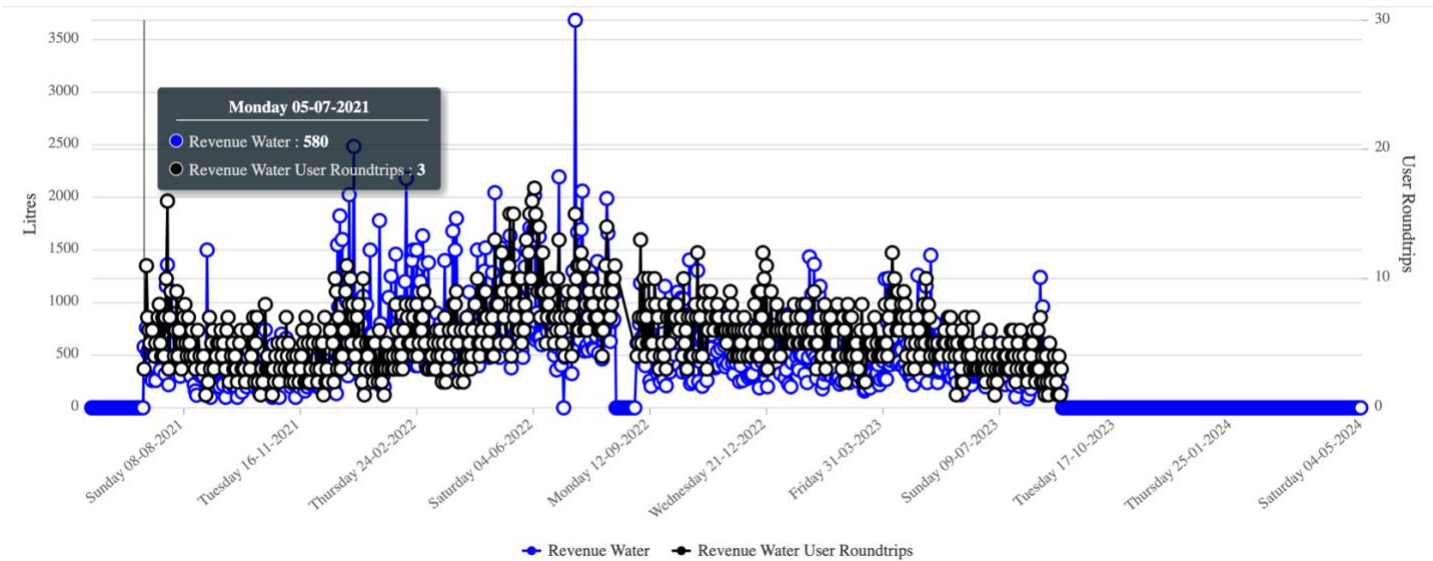


Revenue Water: The total amount of water dispensed by the Smart Water Kiosk that is successfully billed and paid for by users.

Summary of Revenue Water:

- **Reporting Period:** 1091 Days
- **Total Volume of Water Sold:** 445,725 litres
- **Average Daily Volume Sold:** 409 litres
- **Total Revenue Collected:** ₦255,486
- **Average Daily Revenue:** ₦234

Revenue Water Graph

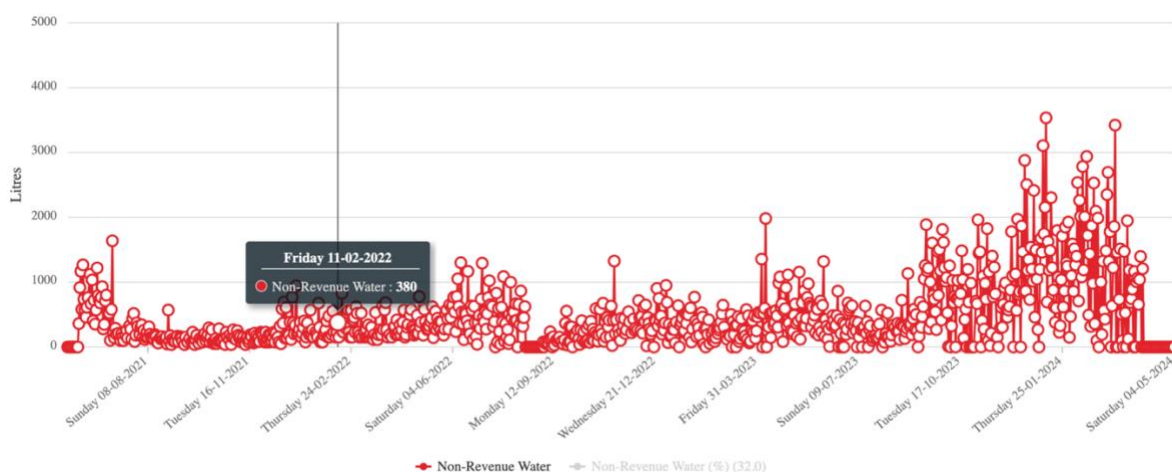


Non-Revenue Water: Water that is dispensed by the Smart Water Kiosk but does not generate revenue or count towards water credits. This includes water lost to leaks, errors in metering, and unauthorized usage. Non-revenue water indicates areas where the water distribution system may be improved to reduce losses and enhance operational efficiency.

Summary of Non-Revenue Water:

- **Selected Period: 1091 Days**
- **Total Non-Revenue Water: 478,571 litres**
- **Daily Average: 439 litres**

Non-Revenue Water Graph

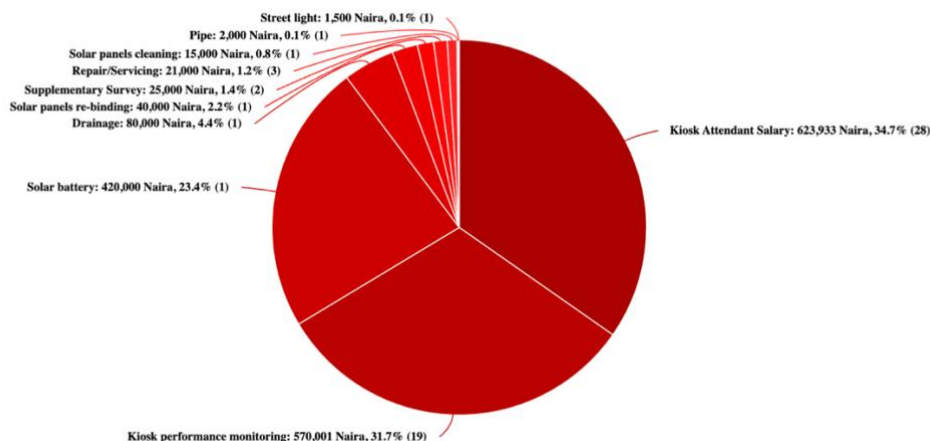


Expenses: Costs associated with the operation, maintenance, and repair of the Smart Water Kiosk. This includes the salaries of kiosk attendants and all other costs necessary for the day-to-day running of the kiosk, ensuring its functionality and efficiency.

Summary of Expenses:

- **Reporting Period:** 1091 Days
- **Total Expenses:** ₦1,798,434
- **Daily Average Expense:** ₦1,648

Expenses Chart



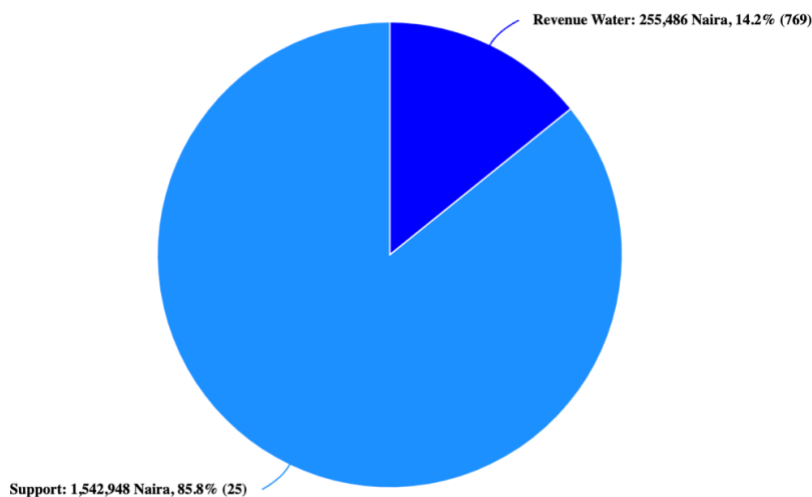
Income: The total financial earnings of the Smart Water Kiosk, calculated as the sum of Revenue Water (in Naira) and Support (in Naira). Revenue Water represents money collected from water sold, while Support includes donations, grants, or any other financial assistance received to aid the kiosk's operation.

Summary of Income:

- **Reporting Period:** 1091 Days
- **Revenue from Water Sales:** ₦255,486
- **Support:** ₦1,542,948

Total Income: ₦1,798,434

Income Chart

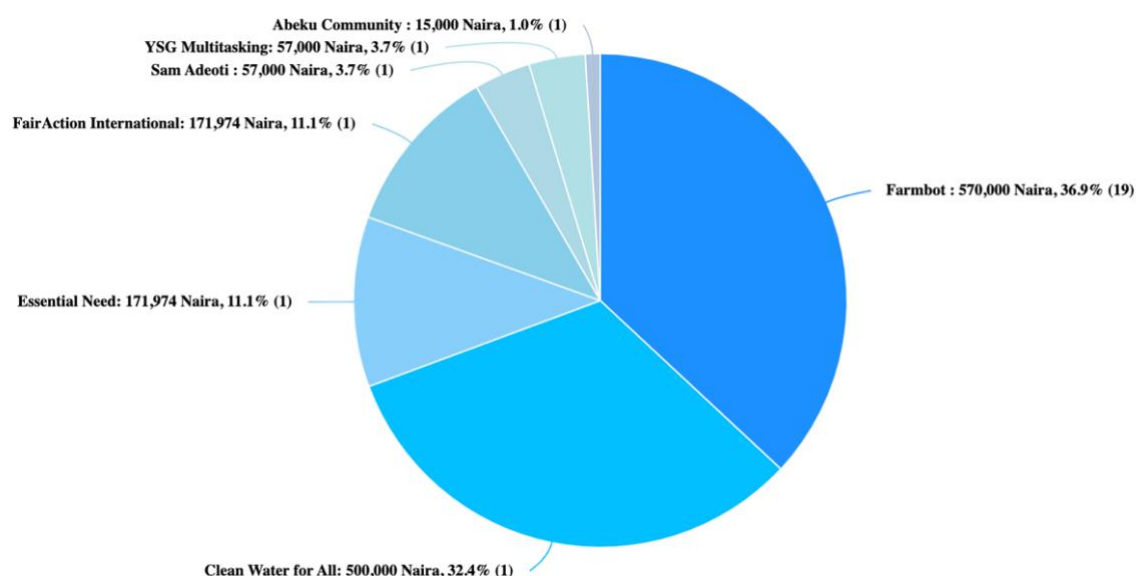


Support: Financial contributions received to aid the operation of the Smart Water Kiosk. This support is crucial for covering operational costs in scenarios where revenue from water sales alone is not sufficient to sustain the kiosk independently.

Supporters Contribution Summary:

1. **Farmbot:** ₦570,000 (36.9%)
2. **Clean Water for All:** ₦500,000 (32.4%)
3. **FairAction International:** ₦171,974 (11.1%)
4. **Essential Need:** ₦171,974 (11.1%)
5. **YSG Multitasking:** ₦57,000 (3.7%)
6. **Sam Adeoti:** ₦57,000 (3.7%)
7. **Abeku Community:** ₦15,000 (1.0%)

Support Chart



Sustainability Rating: A metric expressed as the ratio of total income to total expenses for the Smart Water Kiosk, presented as a percentage. A rating of 100% or higher indicates that the income is sufficient to sustain the kiosk's operation, maintenance, and necessary repairs.

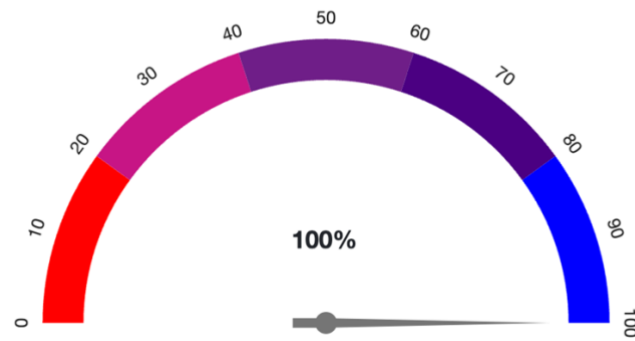
Summary of Sustainability Rating:

Total Income: ₦1,798,434

Total Expenses: ₦1,798,434

Sustainability Rating: 100%

Sustainability Rating



Reliability Rating: A measure of the operational efficiency of the Smart Water Kiosk, calculated as the percentage of total operational days relative to the total period considered. It accounts for downtime and the time required to restore functionality.

Summary:

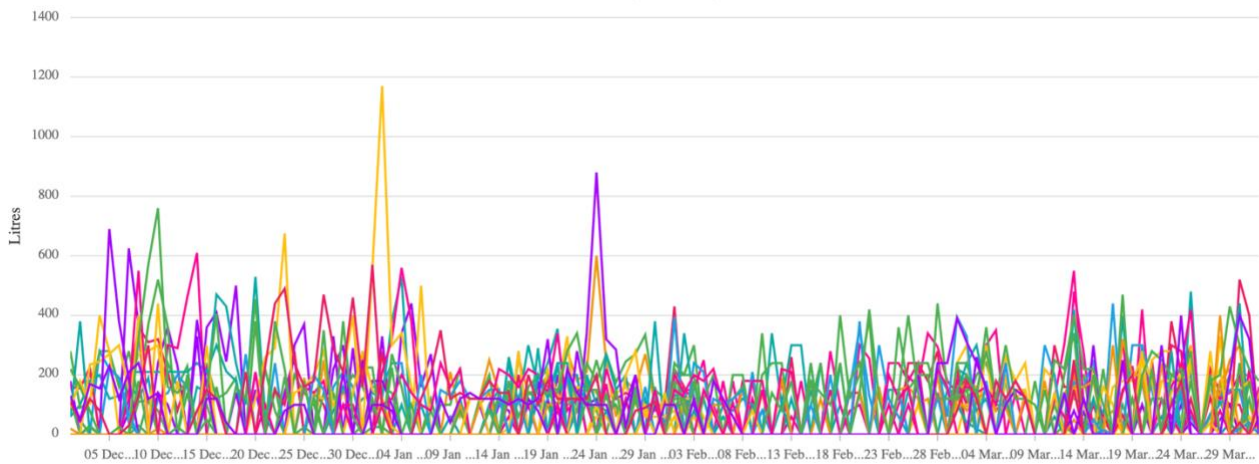
- **Reporting Period:** 1074 Days
- **Downtime:** 20 Days
- **Functioning Days:** 1054
- **Reliability Rating:** Approximately 98.1%

Reliability Rating Graph

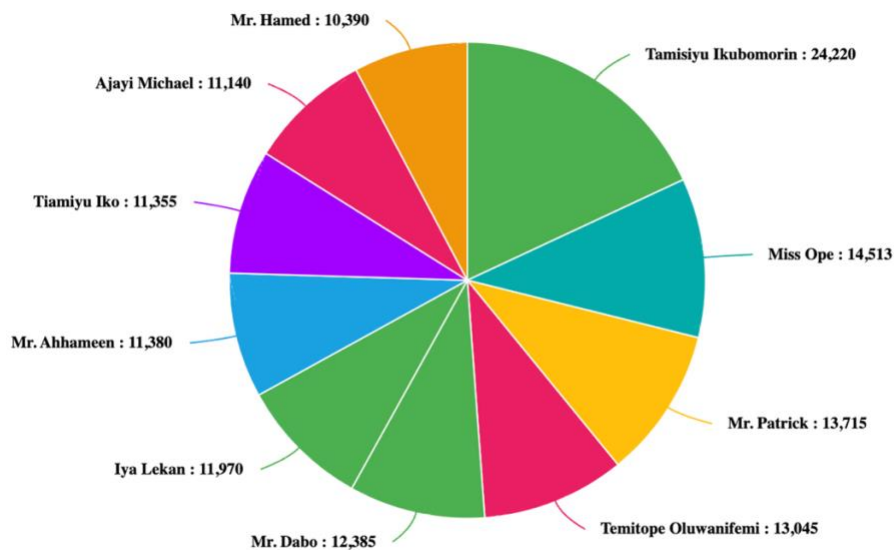


Beneficiary Analysis: This process tracks the daily water usage, number of trips to fetch water, purposes for using the water, and volume fetched by users of the. It helps identify top users to gather feedback for service improvement and understand how to enhance the experience for less frequent users.

Beneficiary Analysis



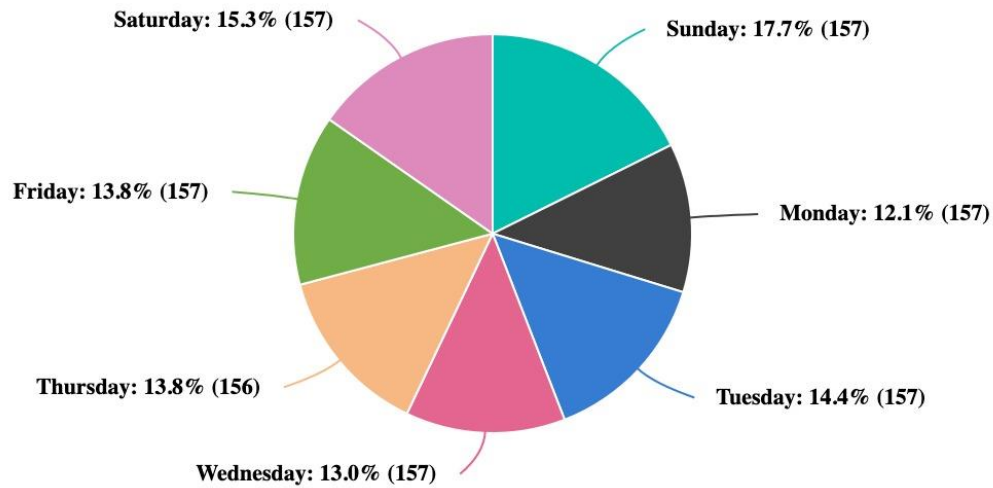
Top 10 Beneficiaries



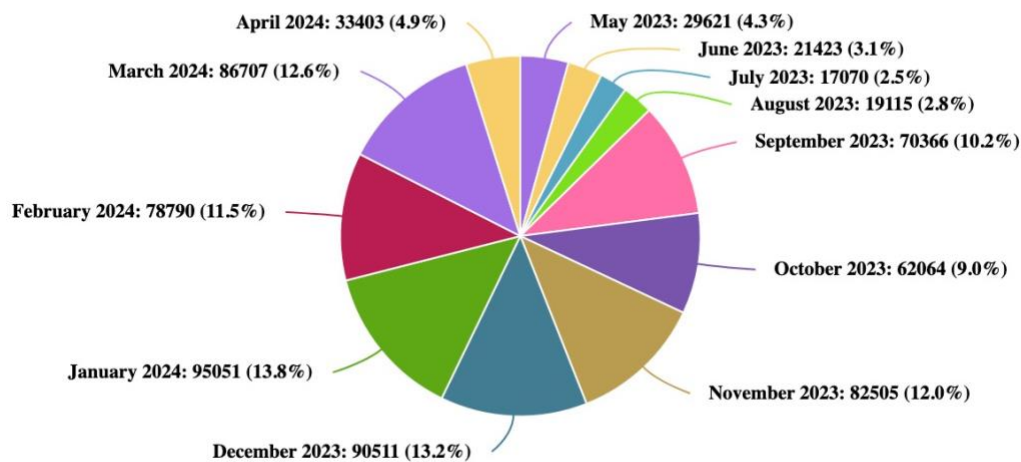
User Behavior: User Behaviour: The analysis of how frequently and when users fetch water from the Smart Water Kiosk. This includes daily and weekly patterns, such as higher water usage on Sundays compared to Mondays, and monthly variations throughout the year. Tracking this behavior helps identify seasonal impacts on water demand, enabling targeted management and service adjustments.

Weekday Farmbot Data (L) Comparison

21 May 2021 -> 22 May 2024

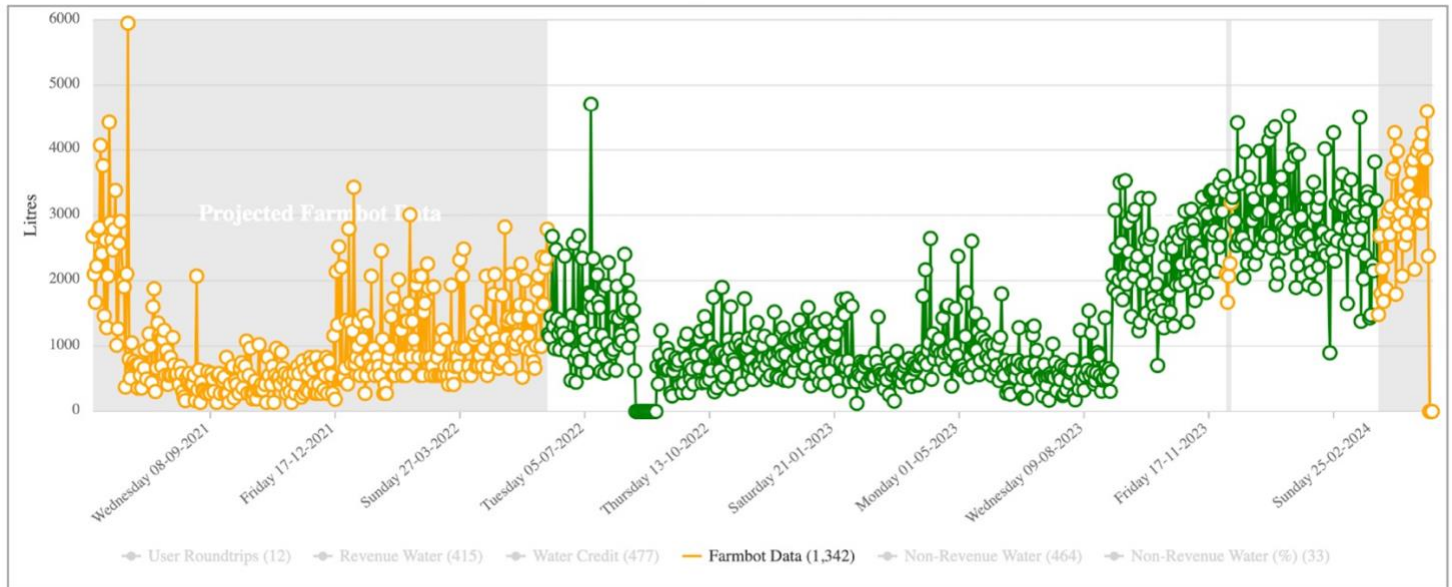


May 2023 to April 2024 Farmbot Data (L) Comparison



Overall Water Dispensed: The total volume of water distributed by the Smart Water Kiosk, including Water Credit, Non-Revenue Water, Revenue Water, and water utilized for operational maintenance such as cleaning. This metric quantifies all water outputs from the kiosk for various purposes, providing a complete assessment of water usage.

Overall Water Dispensed Graph



Selected Period (1075 days) → Total: **1,443,165 litres** Daily average: **1,342 litres**

Farmbot Life-time (1098 days) → Total: **1,458,760 litres** Daily average: **1,329 litres**

Selected Period Highest: **5,948 litres on 04/07/2021**

Project Life-time Highest: **5,948 litres on 04/07/2021**

Conclusion:

The comprehensive data collected on Water Credit, Revenue Water, Non-Revenue Water, Expenses, Income, Support, Sustainability Rating, Reliability Rating, Beneficiary Analysis, User Behavior, and Overall Water Dispensed has been instrumental in achieving and maintaining the sustainability of the Abeku Smart Water Kiosk. These metrics do more than just inform operational decisions; they provide a foundation for proactive adjustments, ensure financial viability, enhance service reliability, enable targeted community engagement, and allow for detailed tracking of water usage trends. By meticulously analyzing this data, we tailor our services to meet the diverse needs of the community, improving the impact and sustainability of current projects and enhancing strategic planning for future initiatives. This approach ensures that we continuously refine our service delivery and adapt to changing community needs, securing long-term benefits for all stakeholders.