



Monitoring with ease
Signal Monitoring Technologies

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Product Portfolio

Solar pump automation & theft protection

Discover our solar pump automation control unit with built-in theft protection, offering a robust solution to enhance your water management while ensuring the safety of your equipment. This advanced system automatically activates or deactivates the solar pump based on the water level in the connected tank. Additionally, you have the convenience of remotely controlling the pump's operation through your mobile phone.

Our cutting-edge control unit is designed to adapt to your unique needs. By incorporating additional sensors, such as a water flow sensor, you can gain precise insights into the amount of water being pumped. You can also install a water level probe for your borehole, enabling you to easily monitor water levels and make informed decisions.

Our system includes an advanced anti-theft feature that instantly notifies you of any tampering. To enhance security, we recommend implementing measures that make pump removal extremely challenging, taking thieves 2-4 hours to access. This ensures a prompt response, increasing the chances of catching them in the act and protecting your valuable solar pump.



Water level – for boreholes and tanks

The water level detection sensors provide seamless monitoring of water levels in both open and closed tanks as well as borehole levels, with a straightforward installation process. We have developed a user-friendly baboon-safe installation system that can be set up by anyone in under 5 minutes, without requiring specialized knowledge or technical expertise. Once installed, the sensor periodically detects water levels and relays the information to the network, where tank levels are easily visualized for convenient observation.

Stay informed with timely alerts sent directly to your phone in case of high or low water levels, allowing you to take necessary action for empty or overflowing tanks. Furthermore, this system proves invaluable in detecting water leaks. It identifies abnormal scenarios such as rapid water level drops or stagnant levels despite receiving water inflows, helping you address potential issues promptly.

Open tanks



Closed tanks



Control valves

In addition to monitoring water levels, our system offers the capability to regulate gravity-fed water tanks or systems that pump water to multiple tanks using automated valves. This powerful feature allows you to efficiently manage and distribute water among different tanks, optimizing the utilization of your water resources. With our automation system, you have full control over the opening and closing of valves associated with each tank, enabling precise management of the filling process. These valves can be triggered automatically based on preset conditions or manually through your mobile phone.

By effectively diverting water from a single pump or tank to multiple tanks, you can ensure a balanced and reliable water supply across your property. This centralized control simplifies your water management tasks, providing convenience and flexibility in operating multiple water tanks effortlessly. Maximize the efficiency of your water distribution and enjoy the ease of managing multiple tanks with our advanced system.



Water flow

The water meter continuously monitors water flow, offering valuable insights to optimize water management and detect potential issues. With its simple installation process and user-friendly interface, you can easily access real-time flow measurements. This empowers you to make informed decisions and ensure efficient water utilization. By utilizing this reliable water flow measurement system, you can effectively save water, detect leaks, and enhance resource management.



RFID livestock check-in counter

Our system includes an RFID reader that seamlessly connects to the network, enabling the simultaneous detection of up to 25 RFID tags within a 6-meter range. These tags can be easily attached to the regular ear tags worn by your animals. The RFID reader, installed strategically at a water trough or gate entrance, effortlessly records each visit.

This invaluable information is then utilized to generate a comprehensive report, detailing the animals that have visited the water trough or kraal throughout the day, as well as those that haven't. This feature proves instrumental in early detection of any potential health issues among your animals, enabling prompt action and minimizing the risk of losing them.

With this system in place, you can ensure efficient monitoring and greatly enhance animal welfare on your farm or property. Take advantage of this advanced solution to streamline your operations, effortlessly track your livestock, and proactively care for your valuable animals.



GPS collars & trackers

Introducing our livestock collar/ear tag solution with solar-powered GPS tracking for comprehensive animal monitoring. The GPS module in the collar sends periodic location updates, allowing you to track your animals reliably. The collar also includes a motion sensor for emergency signals in case of prolonged inactivity, ensuring immediate notifications for potential emergencies.

Additionally, we offer a separate GPS tracker for vehicle and fleet management. Track your staff and their vehicles in real-time, enhancing operational efficiency and providing full visibility over fleet movements.

Experience advanced control and real-time monitoring with our innovative GPS solutions for both livestock and fleet management.



Weather stations

Introducing our versatile off-grid weather station, a comprehensive solution for various applications. Tailor the station to your needs by selecting specific parameters to monitor, including temperature, humidity, wind speed and direction, and rainfall. Gain valuable weather data with ease and precision.

Rain gauge



Wind sensor



Temperature & humidity



Soil moisture sensor

Our soil moisture sensor provides accurate data on moisture levels and temperatures in your irrigated field, facilitating optimal agricultural practices. By monitoring this data in real-time, you can make informed decisions regarding irrigation scheduling, promoting water conservation and healthy plant growth simultaneously. Access the data conveniently through our user interface and even automate your irrigation based on preset values, streamlining your irrigation process.



Temperature sensor

Our temperature and humidity sensor is specifically designed for monitoring freezer or cooler rooms and other temperature-dependent applications. With our user-friendly interface, you can receive alerts for values that fall outside of your set range. Stay informed and ensure optimal conditions for your valuable assets with ease.



Contact sensor

Introducing our outdoor contact sensor, a versatile tool for monitoring various applications and delivering real-time status updates. With its wide range of capabilities, our contact sensor proves invaluable for monitoring wildlife traps, enhancing safety and effectiveness. For example, when a trap is activated by a leopard, the sensor detects it instantly and sends an immediate alert. This enables swift action to ensure the well-being of both the animal and handlers.

In addition to wildlife traps, our contact sensor finds practical use in numerous other scenarios. It effectively monitors gate opening statuses, providing timely notifications when gates are opened or closed. This feature enhances security by promptly addressing unauthorized access. Moreover, the contact sensor can be utilized in diverse environments to monitor the status of doors, windows, cabinets, or any other items requiring security or operational monitoring.



Antenna

Our long-range, low-power network gateway offers an affordable solution for remote areas with limited cellphone coverage. It provides reliable connectivity even in areas where traditional network signals may be weak. Only the gateway requires an internet connection, making it a cost-effective choice.

With a coverage radius of up to 12km, depending on the terrain, our gateway ensures connectivity over a wide area. You have the flexibility to choose between gateways that connect to your existing internet infrastructure or opt for our off-grid solution, which connects to a GSM network.

Stay connected and access vital data even in remote locations with our long-range, low-power network gateway. Enjoy seamless connectivity and expand your possibilities in areas where traditional cellphone coverage may be limited.



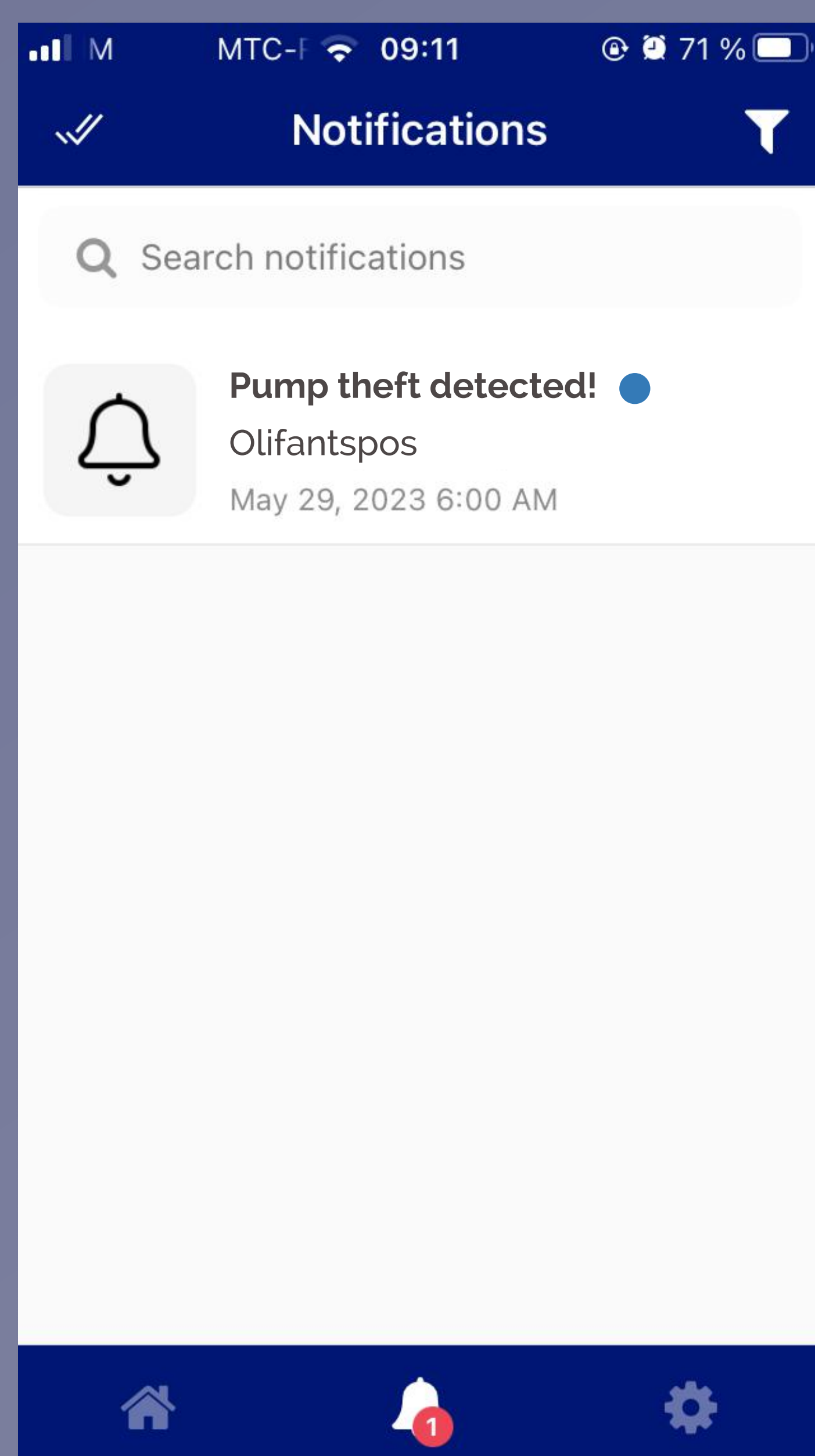
App

Experience complete control with our app. Gain instant access to your water levels and effortlessly monitor them at any time. Take charge by seamlessly switching pumps between automatic and manual modes, giving you the power to turn them on or off with ease. Stay informed with real-time updates on the current status of your pumps, always at your fingertips.

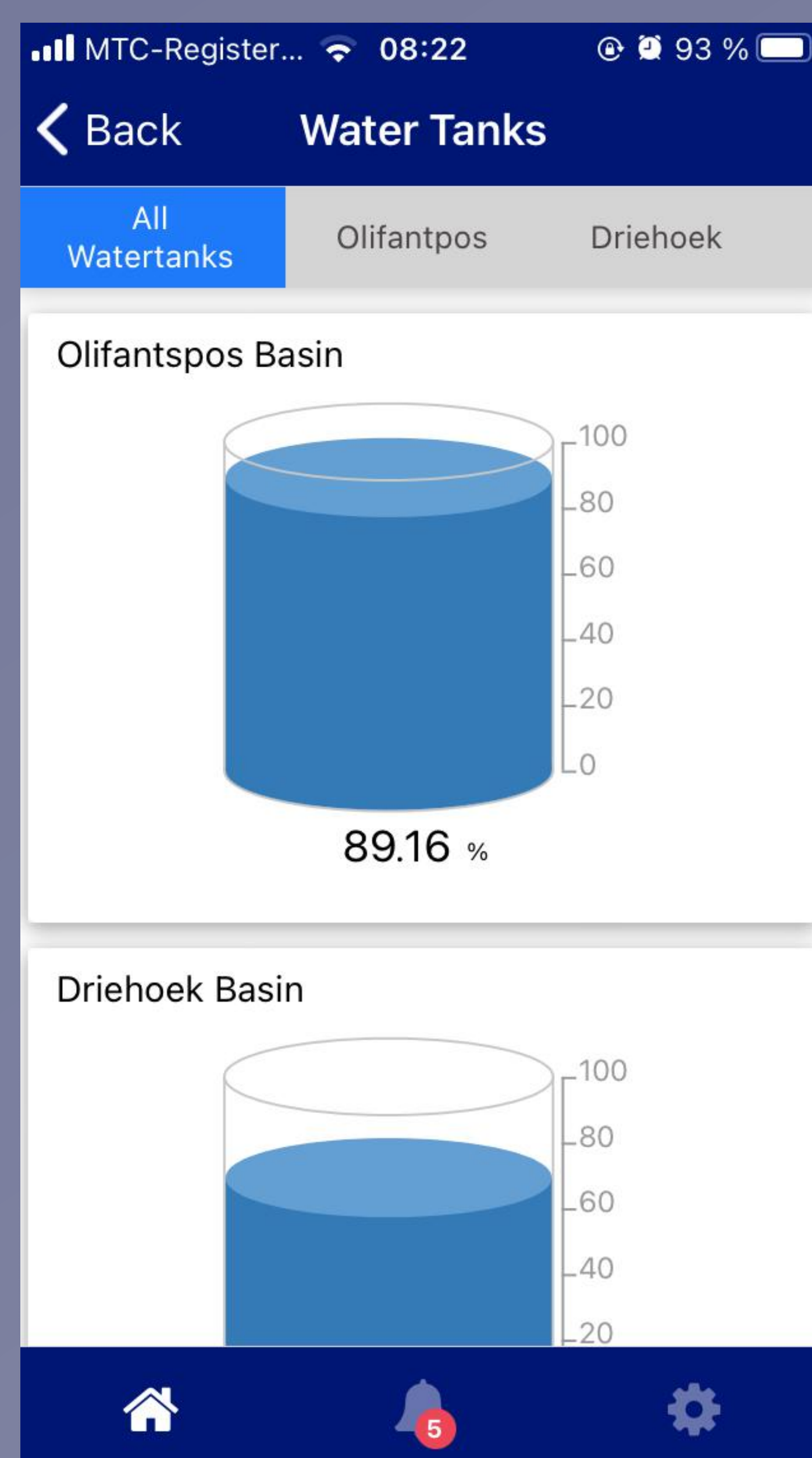
But that's not all – our app goes beyond just managing water levels. Utilize GPS collar tags to track and locate your most precious animals. Witness their grazing patterns and explore their roaming territories. In the unfortunate event of a theft, receive instant notifications on your cellphone, alerting you to any suspicious activity involving your solar pump.

No need to constantly keep an eye on the app – it ensures your peace of mind by sending alarms directly to your device. Stay connected and in control, no matter where you are. Our app empowers you to effortlessly monitor and control your valuable assets, all through a single, convenient interface.

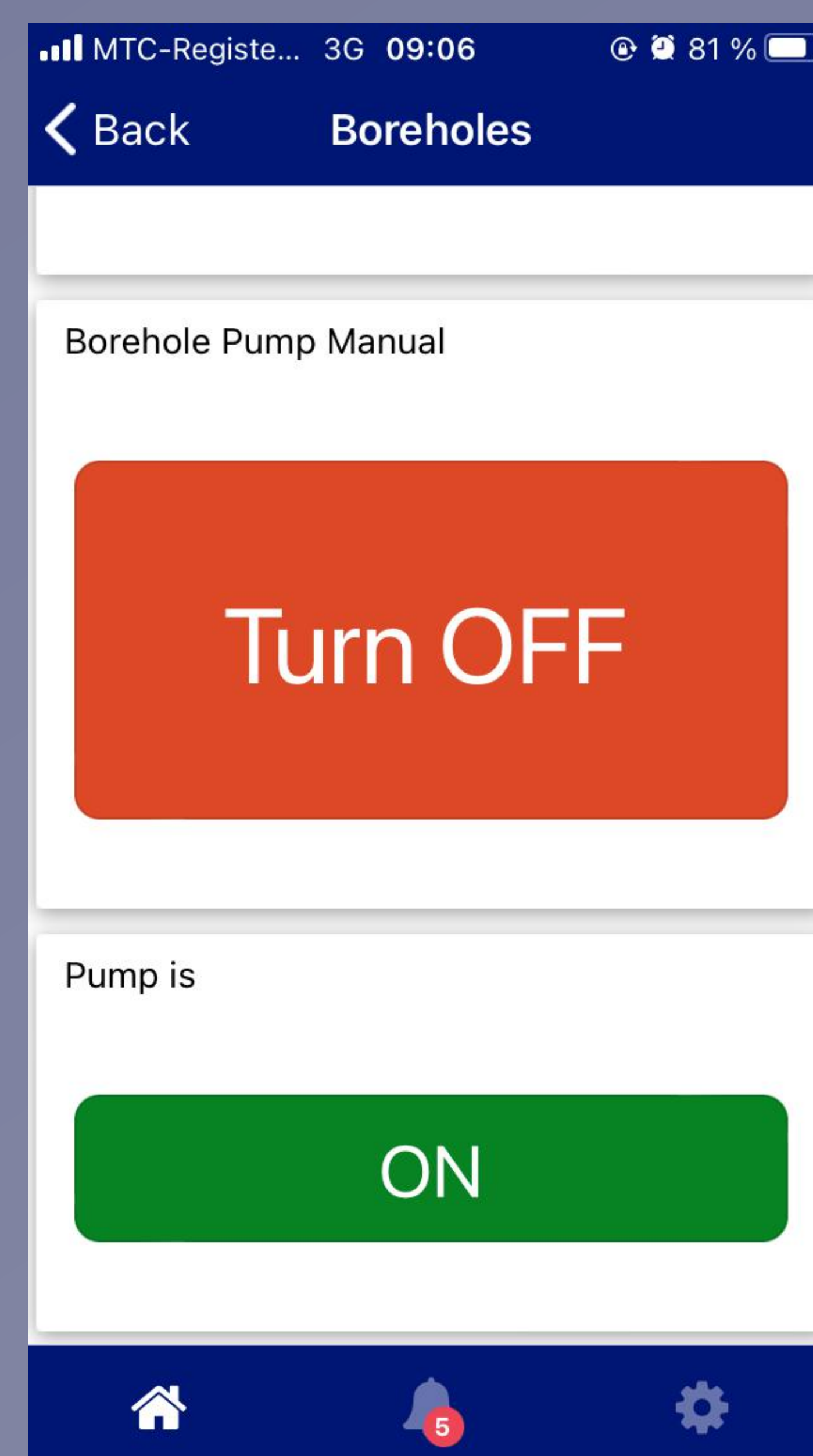
Alerting



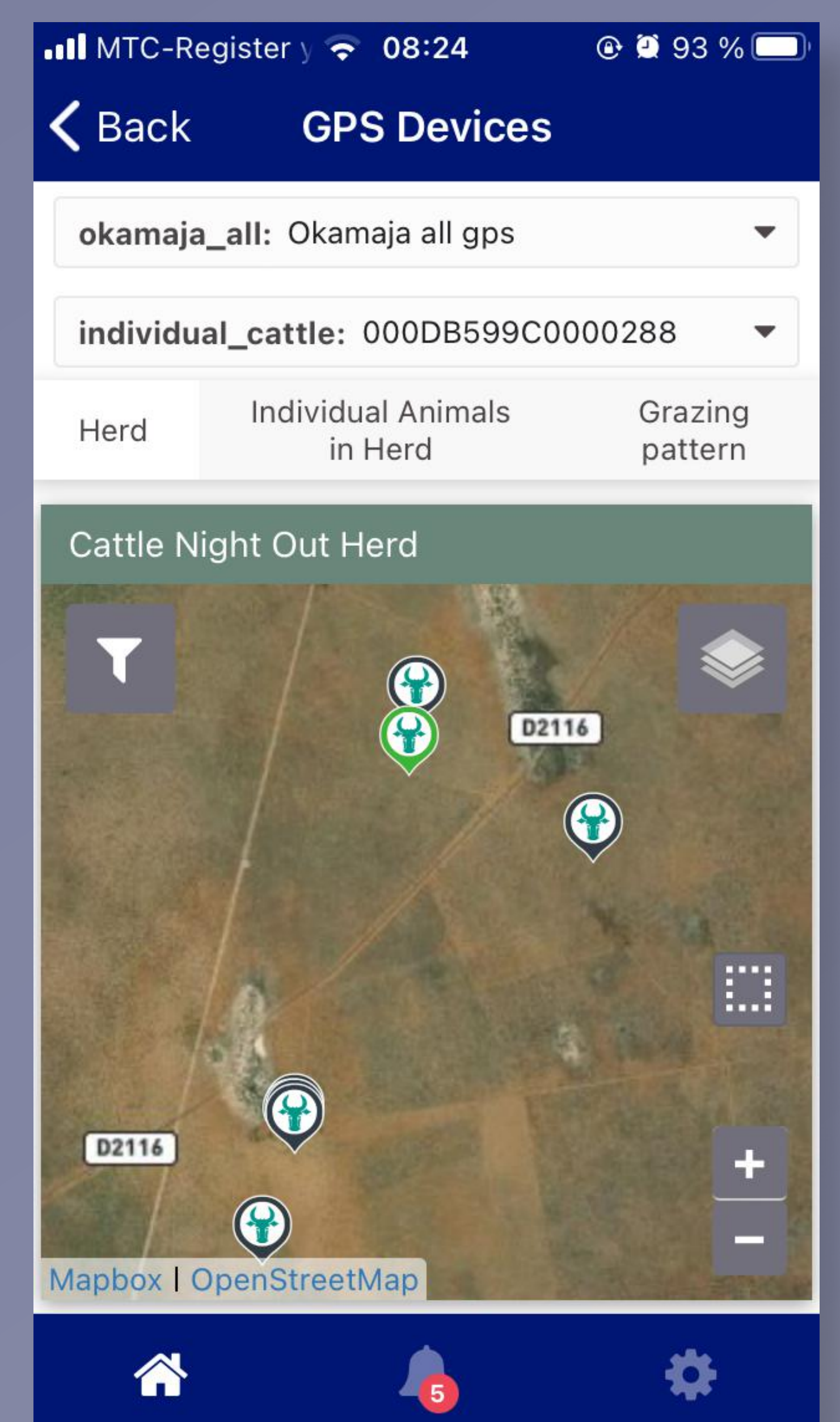
Monitoring



Controlling



Analysing



Customized sensor applications

The Sigmotec team will be able to assist with many more sensor/monitoring applications . Contact us with your specialized requirements and we will work on a solution for that application