

Annual report 2025

In the annual report, we would like to transparently present the progress of our work as well as the challenges and problems of the past year and go into more detail about our association's work. The annual report is divided into the activity report and the financial report. The activity report explains the progress made in the respective specialist areas of operations, technology and marketing & fundraising. The financial report shows the financial development of the association separately.

Activity report

Operations

Wajir (Partner WASLE)

In 2025, the Spirulina Project in Wajir was successfully continued in close collaboration with Wajir Smart Learning (WASLE). The previous year, an initial pilot plant had already been constructed to gather practical experience on site. This yielded important insights: for example, the need to avoid welded joints due to frequent power outages, as well as the critical observation that mother cultures must be transported quickly and kept well-chilled. It also became clear that materials should be purchased locally whenever possible to minimize logistical challenges. Based on these experiences, we successfully submitted a grant application for over €12,500 to the “Eine Welt Netzwerk Bayern” to facilitate the further expansion of the facility. Despite delays caused by lengthy international wire transfers and unfavorable exchange rates, the purchasing and coordination between us, Eddi, and Dalmas went smoothly. With the approved funding, a larger greenhouse with four additional spirulina tanks was finally constructed; together with last year's tanks, it now forms the basis for regular harvests. Local workers have been trained, continuously document water quality, fertilizer use, and harvest yields, and are increasingly contributing to operations on their own. Both greenhouses are stable and productive; In total, approximately 16 kg of spirulina (dry weight) has been harvested since the end of September (as of Nov. 11, 2025)—which corresponds to an average daily harvest of about 3–4 kg (wet weight). Approximately 4 kg of spirulina powder has already been distributed to the local community. At the same time, we continue to work on building networks and spreading knowledge about spirulina in the region. At the same time, we are currently working to obtain the most accurate data possible on harvest yields, water quality, and fertilizer use in order to fully understand the production process and enable reliable forecasts in the future. Based on this data, a sustainable export strategy will be developed. The current plan is to export 40–50% of the spirulina produced in the long term. These revenues are intended to cover the farm's operating costs and thus ensure the project's financial sustainability, while the remaining portion continues to benefit the local community.

Technology

In 2025, the focus of the Technology department was on the further development and adaptation of the existing sensor platform to a new application scenario. While the previous

sensor, Smart Spiru, was designed for continuous measurement directly within the spirulina cultivation basin, a new mobile handheld sensor called SpiruScreen was developed. This device is only immersed in the basin for a short period (approximately 20–30 seconds) to capture the relevant measurement data. This transition required extensive technical adaptations across hardware, software, and cloud infrastructure.

Hardware & Electronics

A key area of work was the adaptation of the existing printed circuit board (PCB) to meet the requirements of handheld operation. The ESP32 remained the central core component of the system. In addition to revising the circuit design and implementing functional adjustments, extensive hardware testing was conducted. Furthermore, calibration measurements were performed under various temperature conditions to ensure reliable and reproducible measurement accuracy.

The sensor measures the key parameters relevant to spirulina cultivation: basin temperature, pH value, optical density (as an indicator of spirulina concentration), and the conductivity of the medium.

Enclosure Development

In parallel with the electronics development, a new sensor enclosure was designed specifically for mobile use. The enclosure was fully designed in CAD and implemented as an initial prototype using 3D printing. In addition to the mechanical integration of the sensor components, usability was a key focus. A cost calculation for the enclosure was also prepared to better assess the feasibility of future series production.

Embedded Software

The embedded software was specifically adapted to the new measurement workflow. Since SpiruScreen does not operate continuously but is only active for short measurement intervals, the measurement logic, data processing, and device control had to be reworked accordingly. The ESP32 hosts an integrated web server that enables direct interaction with the sensor, forming the basis for an energy-efficient, stable, and user-friendly handheld operation.

Frontend & Cloud Backend

A web-based user interface was developed to operate the sensor, usable on both mobile devices and desktop systems. Through this intuitive UI, the sensor can be controlled directly via smartphone or laptop, and measurements can be triggered and reviewed.

The collected measurement data is additionally stored in an AWS-based cloud infrastructure. Targeted modifications were made to the existing cloud backend to support the new measurement workflow and the modified data acquisition of the handheld sensor.

Documentation & Infrastructure

Alongside the development work, the technical documentation in Bookstack was updated. In addition, measures were implemented to clean up and restructure the development infrastructure, particularly with regard to Git repositories and the associated workflows.

Team & Outlook

In 2025, the Technology team initially consisted of three members. Towards the end of the year, the team was strategically expanded by two additional members in the areas of IT and

test engineering to better support future development, quality assurance, and system scalability.

Conclusion

The year 2025 marked an important transition from the stationary sensor system Smart Spiru to the flexible handheld sensor SpiruScreen. Through the close integration of hardware, embedded software, frontend, and cloud development, a functional prototype was created, providing a solid foundation for further testing and future product development.

Marketing & Fundraising

In 2025, the Marketing & Fundraising Team made great strides in public relations. Thriving Green further expanded its presence on social media (Facebook, LinkedIn, Instagram, TikTok), with short video posts appearing more and more frequently alongside text messages. The new reels provide a direct glimpse behind the scenes and invite viewers to get to know the team in an uncomplicated way. We are also delighted to have been invited to appear on the BR podcast “Sparks” and to have been featured in articles in the Ebersberger Zeitung and Mittelbayerische Zeitung newspapers, which bring Thriving Green's work to a new audience of listeners and readers. Traditional communication channels such as the email newsletter and blog posts also appear regularly and are coordinated within the media strategy. In addition, the homepage is constantly updated, new partners are added, new locations are entered, and the team overview is adjusted. In addition to its digital offerings, Thriving Green was once again represented at the Regensburg Campus Festival in June. There, it was able to generate a lot of interest among fellow students and collect some donations for our projects. In order to further secure the association financially, a crowdfunding campaign was launched again this year, which has raised around €755 to date. This is very welcome news, as these funds will enable investment in a hydroponics facility. As a further source of funding, TG was able to use money from the “Eine-Welt-Netzwerk Bayern” (Eine Welt Netzwerk Bayern) application in 2025, which was approved at the beginning of the year and provided €12,550 for the spirulina project in Wajir.

Others

To promote team development and collaborative work on projects, the team traveled to the Bavarian Forest for a weekend in May and November. The accommodation there provided plenty of space for developing new ideas and sparked new inspiration in existing working groups.

This also allowed new team members to settle in well and take the opportunity to lead workshops on marketing strategies and project management. Between activities, there was plenty of time to explore the natural surroundings or take part in outdoor activities such as table tennis or archery.

Financial report (reporting date 31.12.2025)

Last year, cash holdings increased by €4,358.84 to a total of €6,525.27. Successful fundraising was a key factor in this positive development. Targeted fundraising measures and the expansion of our circle of supporters enabled us to increase income from private and institutional donations. In addition, a funding application was approved, providing additional financial resources. This enabled numerous projects to be successfully implemented.

Overall result

Cash on hand (2024)	2166,43 €
Deposits	20.004,77€
Payments	24.363,61€
Cash on hand (2025)	6525,27€

Deposits

Membership fees	1.015,50 €
Private donations	7.809,96 €
Services	1.600,00 €
Organisational donations	1.357,64 €
Funding applications	12.550,00 €
Total income	24.333,10 €

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Administration	-740,07 €
Marketing&Fundraising	-189,83 €
Operations	-14.512,86 €
Technology	-311,92 €
Expense allowances	-3.720,00 €
Member retention	-499,58 €
Total expenditure	-19.974,26 €