



**Annual  
Report  
Humasol  
2023-2024**



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01

## Who We Are

Humasol is a non-profit organisation that envisions a future where renewable energy and sustainable technology is accessible to all. In cooperation with partners abroad, we construct projects that directly benefit the communities at project locations. Our organisation consists of enthusiastic volunteers, mostly students, committed to international solidarity.

## Contact us

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2018 Antwerpen

### Contact us

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### Connect with us

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[@humasol\\_vzw](https://www.instagram.com/humasol_vzw)





02

## Message from the President

Hi Humasol enthusiast!

Last year, we decided to take a step in a new direction. We wanted to radically rethink our partnerships, projects and vision. One year on, the first fruits of this bold move are beginning to materialize, and we are pleased to report that the journey has proven anything but unsuccessful. For the first time in our 15-year history, we successfully concluded three collaborative projects uniting Belgian students with students in a partner country under shared objectives. Moreover, we will even continue this new form of partnership, with another joint endeavor planned for this year. Also within our projects we explored new horizons. We stepped away from well-trodden paths and immersed ourselves in the world of plastic recycling, heat stress and water purification. For next summer, we have a lot of other exciting projects in the pipeline aimed at e.g. innovative drying technologies and sustainable packaging or building upon the experience we gained on water purification. A priority as pressing as ever has been the decolonization of our mindsets. This commitment was underscored by our collaboration with Aysha and Sundos Azza, two Palestinian activists from Youth Against Settlements, who joined us at our annual Happening. With the formation of a remote working group on a project in the West Bank, we are steadily advancing toward our goal of making renewable technology accessible to all.

Altogether, these efforts reflect our commitment to meaningful change and a sustainable future that benefits everyone involved.

Michiel Van Cauwelaert  
President 2023-2024





Cooling Solutions



Solar Energy



Agricultural Solutions



Water supply



Waste Water Treatment



Cooking Solutions



Plastic recycling



Biogas

We are shifting towards more challenging projects, from wastewater treatment, biogas formation and plastic recycling.

### 03

## Our Vision

Our partner countries are rapidly evolving and we are convinced that we have to evolve together with them. In order to remain relevant in the future, we want to diversify our project portfolio and execute more projects involving innovative technologies. Since the knowledge regarding certain technologies is often already present, we want to exchange our expertise where it is really valuable.

## Our Mission

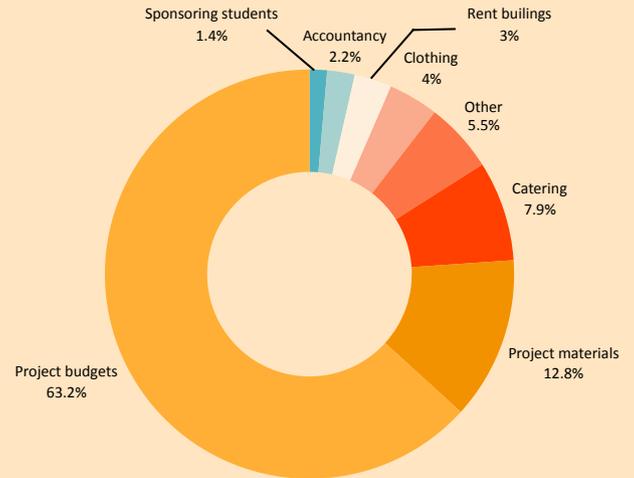
Our mission is to make renewable technology accessible for everyone. Every year, around twelve project teams undertake initiatives centered on sustainable technologies, including solar energy, water supply, plastic recycling, and agricultural optimization..

Projects in the Global South are always carried out in close collaboration with partners on location. To ensure long-term sustainability, we focus on strong cooperation through knowledge exchange, enabling local communities to maintain, repair, and replicate installations. Our goal is to plant a seed that will grow and inspire further development in its surroundings.

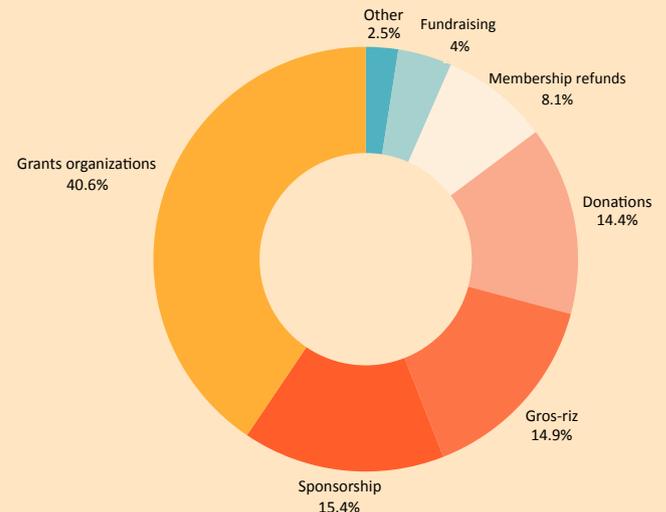
## Constatations

- More than 75% of our expenses are allocated to our projects. While project costs are typically shared, with Humasol covering 30% and the partner 70%, this year, we contributed a larger share for certain projects.
- The majority of costs for catering, rental buildings and clothing are covered by our members (see Membership refunds).
- Sponsorship for students, up to a maximum of €300 per person, is available for those who cannot apply for a scholarship.
- Expenses are mainly covered by grants, sponsors, Gros-Riz applications and donations.

## EXPENDITURE



## INCOME



# Achieved goals

## 1. Partner universities

Expand collaboration beyond Belgian students by involving universities and students at project locations. Increase engagement and international cooperation, acquire benefits through year-round data collection and on-site follow-ups.

## 2. Advisory board

Establish a diverse advisory board to provide strategic guidance, offer fresh perspectives, and enhance decision-making processes.

## 3. 15 year humasol

Celebrate Humasol's achievements since 2008 with an alumni event, reconnecting with past project students, partners, and sponsors. The day was filled with lively talks, happy memories, and fun quizzes, showing how much Humasol has achieved.

## 4. Website

Revamp the website to provide updated documentation, ensuring that students, partners, and sponsors can easily access collaboration info, read blogs, and stay informed about upcoming events.

## 5. Coaching role

Enhance student guidance through better coaching. Initiate sessions for coaches on how to identify challenges, motivate students, and offer effective support throughout their projects.

## 6. Job and internship fair

Launch a job and internship fair to raise brand awareness, facilitate student recruitment, and give sponsors a platform to come into contact with our students. Focus on connecting students with sustainable companies, with plans to repeat an expand next year.

## 7. External support

Collaborate with external companies for feedback and advice on project reports, gaining fresh insights and knowledge that complement the internal expertise within the organization.

## 8. Student research

Support students in completing bachelor's and master's theses focused on developing water quality monitoring devices, project follow-up, and effective feedback and leadership within Humasol, contributing valuable research to the organization's efforts.

September

## Members Kick-Off

Welcoming all members of our organization! Together, we reflect on the achievements of the past year, set inspiring goals for the year ahead, and have knowledge transfer in the working groups. To end, a team-building activity to strengthen our connections and spirit!

## Students Kick-Off

Welcoming our new project students! They receive an introduction to Humasol, how to use the Drive to access information, deadlines, templates etc. The highlight? Getting to know the team, exploring their projects, and making first contact with their partners. An exciting start to their journey!

November

## Humasol weekend

In the beginning of November, our weekend takes place where project work is combined with various activities, info sessions on vaccines and communication, and brainstorming on integrity and sponsorship. Guest speaker Moussa Don Pandzou offered valuable insights on international solidarity and racism. We also enjoyed team building with a fun quiz and Battleship, followed by a photoshoot.

## Honoring 15 Years Building Sustainability: Humasol's Journey!

### Quiz Night in Ghent and Leuven

An exciting evening combining fundraising and raising awareness! A thrilling quiz where brilliant minds come together to compete and showcase their knowledge. All proceeds go to support our organization.

January

## Humasol Happening

A heartfelt gathering to share experiences, connect, and celebrate! Our project students recounted their inspiring adventures from the past summer, highlighting their achievements and challenges. Surrounded by partners, family, and friends, we raised our glasses and enjoyed delicious snacks and drinks.

October

## Intermediate Reports and Presentations

All projects document their progress from the past months, including a literature study, multiple solutions, and calculations. This allows everyone to provide feedback, stay updated.

February

## Information Session

An opportunity for new students to learn all about Humasol! To get a clear overview of how everything works. A perfect first step into the world of impactful projects!

December

## SoliDare

the youth festival on international solidarity organized by BeGlobal.be, Enabel's center of expertise for global citizenship education. The programme was filled with workshops on project development, gender, diaspora, decolonization, climate and art as a catalyst for change. But there were also performances by Brussels-based artists. We gave a workshop about international solidarity for students: opportunities, experiences and pitfalls and a presentation about decolonization in practice. Here, we explained how we are trying to future-proof our organization, Finally we also tackled how to deal with cultural differences in the context of international solidarity.

March

**Humasol fun weekend**

Another weekend, this time only fun activities so no work. Nice to see each other back and share experiences! All the food at our weekends is vegetarian/ vegan, as many of us are.

**Job and internship fair**

May

**Final reports, presentations & conditional go's**

Important deadlines for financial, social and technical reports are met, marking the final efforts in Belgium. After the last feedback, some adjustments are made and all projects received permission from the board to go!

An end-of-year IMC session focused on language use, imagery, cultural differences, and mental health was given.

July

**Project Students are on Location!**

Our project students are on-site, ready to turn their final report into reality. The board is standby, providing support and guidance. Let's make it happen!

**Recruitments**

HR is holding recruitments and cases for new studentes for next year's projects!

June

**Goodby event**

Enjoying a great barbecue and even better company. <3

**Palestine through women's eyes**

Together with Broederlijk Delen, we hosted an event in Leuven where Aysha and Sundos Azza, members of Youth Against Settlements, shared their personal experiences as women living in Tel Rumeida, Hebron. Also photos taken by 50 women were a testimony for the daily life in these explosive areas. The warm atmosphere of the pictures together with the stories of violence and injustice were an eye-opening and inspiring mix.

August

The board is preparing for the new year, with roadmaps finalized to ensure a smooth transition for incoming members. The projects for next year are chosen.

The project students are still working on the project - we stay in contact!

# 07 Our projects

7.1 Ecoplastile

7.2 FOS

7.3 Mbarara university  
irrigation

7.4 Entente irrigation

7.5 Islas de Paz Peru

7.6 SawallaH

7.7 Entente PV & biogas

7.8 Hope for Girls and Women

7.9 Mbarara university  
water purification

7.10 From Waste to Wind

7.11 HUCE

# Project locations



# Uganda - Ecoplastile

During our project, we focused on building a washing machine. That was quite a challenge! From a technical standpoint, we had to make several adjustments to the machine's design due to the availability of different materials in the hardware shops of Kampala, which differed from those originally planned. Reinforcements were also added in key areas of the design that proved to be structurally weak.

Furthermore, beyond building the machine, we actively engaged with various colleagues at Ecoplastile, observing their roles within the company and collaborating on areas where we could provide support during our time there. Our team was instrumental in helping them address specific challenges they were facing. In the final weeks, we also worked on resolving logistical issues related to the WastePays project and devised an updated system to improve operations.

Anais Wydaeghe, Antonia Vermassen Steel, Kasper Huysentruyt & Loïc Stockx



# Uganda - Ecoplastile



The pearl of Africa did not steal its name. From east to west, north to south lies great beauty in nature but mostly in the kindness of the people of Uganda as they are the true foundation of the country. These are the people that made our internship memorable. For instance each morning we had enjoyable and quite funny conversations with our driver (PS: he is more a fan of Pommelien Thijs than of Vieze Asbak!). During lunch, we had endless conversations with the members of the Ecoplastile team about their lives, beliefs and dreams. It was wonderfully interesting to learn from them and also share our own stories.



“God puts away” is one of our favorite quotes of the project. This little sentence has a profound meaning. It reflects the belief that the past, present, and future are in the hands of God, and that happiness is destined for all. For us, it symbolizes how people in Uganda deeply feel their religion, fostering a vibrant, joyful community. We are grateful for our time in Uganda and the kindness of the people who we now call friends.

# Ghana - FOS

In July the time had finally come to leave Belgium and start our Ghanaian summer! We were going to install 54 solar panels to empower a large solar pump which would pump water to a whole community in the Volta Region. However, due to delayed materials being shipped from Belgium, we couldn't start immediately.

Luckily our partner Coliso also had another small project going on. This project took place in Kyirimankani, a small village in the Eastern region in Ghana. Here we installed six solar panels connected to a solar pump together with a local team. The installation of this solar pump replaced the manual hand pumps in Kyirimankani. So the first two weeks we focused on this side-project, while getting to know the amazing Ghanaian culture. The people there were very welcoming and shared a lot of good vibes.

In the meantime, we also visited a few previous projects to carry out repairs, and in the end, we successfully restored two projects!

Mila Liu, Stijn Vanoudenhove, Frances Aelbrecht & Eline De Loore



# Ghana - FOS

Our adventure wasn't done yet. First we went to explore more of Ghana and after two more weeks, our materials had arrived! We were thrilled to start with our big project. We travelled to Anlo Afiadenyigba in the Volta region. Nature, the community chairman, was waiting there to welcome us. He made us feel comfortable and showed us around in his region! We also finally got to know the Coliso workmen better. We slept in the same building, so we really had the chance to get to know them outside of the working scene.

The last few weeks of our adventure was dedicated to our project. After days of hard working, we felt very proud of ourselves to see the 54 panels up on the roof. Sadly enough, there was a constriction in the new borehole, which didn't fit the pump. This will be fixed by the boreholedriller. We stay in touch with our partner to hear the progress!

It was an amazing experience and we would immediately do it all over again if we could! The resilience and happiness of the Ghanain people is amazing. We are glad for all the persons we met!



# Mbarara university-irrigation

In Uganda, agriculture is very important because as it is the main source of livelihood for many Ugandans. However, farmers face difficulties due to the changing weather patterns caused by the rapidly shifting climate. Especially during the dry season, there is no longer certainty that crops will survive. Poor yields lead to lower supply, driving up food costs and increasing food insecurity.

Many Ugandans cannot afford these rising prices, making them vulnerable to malnutrition. Fortunately, Uganda has good water sources and plenty of sunshine, two key conditions to install a solar-driven irrigation system! Although irrigation is becoming more popular among farmers, a lack of efficiency and innovation is slowing down its integration.



The Mbarara irrigation team of Humasol aims to empower this transition by installing a solar driven-irrigation system using sprinklers. Solar energy powers the pump, making the system renewable while significantly reducing operational costs, as it only requires long-term, low-maintenance upkeep. The pump supplies water, collected from a large valley dam, to two water tanks located at the top of the farm, elevated 4 meters above the surface. The total storage capacity amounts 20 000 liters, from which water is distributed to the sprinklers in the field.

7.3

# Mbarara university-irrigation



With the pump and the solar panels already installed at the farm, the team was responsible for designing and building the full distribution system. This included pressure calculations, fabrication and erection of both the 4 meter high tank stands, making the concrete foundation and of course all the plumbing! By the end, the farmer was very enthusiastic about the fully operational system, which covers 1,5 acres of land and is controlled by just three valves from a single control space!

# SawallaH - Gambia



In September 2023, we received the exciting news that we would be forming Team SawallaH and carrying out a project in Gambia. For this project, we partnered with SawallaH vzw, who took the initiative to establish the 'SawallaH Primary and Nursery School' in the village of Sinchu-Gidom in 2011. Since then, they provide quality education and create a supportive environment for young people to develop, contributing to the overall growth of the community. In 2018, a water well was drilled and equipped with a solar-powered distribution pump. In addition to the water supply, an electricity supply was provided last year to further enhance the quality of education. Unfortunately, the electricity grid is unstable, causing interruptions of classes due to darkness and heat. The lights go out and the fans stop working, leaving the classrooms without proper ventilation. To address this, our partner reached out to Humasol to collaborate on a solar panel installation that would meet the school's energy needs.



Rotary  
L Gent



# SawallaH - Gambia

After a year of thorough preparations, we embarked on this unique journey with ample luggage (both literally and figuratively). We were received with open arms by Bamadi (our main contact), Sirra (our Gambian mom) and Mr. Jallow (our Gambia dad). They were always available to answer our questions, show us around and give us the authentic Gambian experience. We got to know the teachers and pupils at the school and, after playing and chatting, we all became good friends. They invited us to the graduation ceremony, a wonderful day at which the entire village came together to celebrate.



Our project consisted of two parts: wiring the nursery school and installing a solar panel system. For the implementation of our project we collaborated with Little Trees Training Center. A special thanks goes to Mr. Sillah and Mr. Huma for the constructive cooperation, making it possible to successfully install 16 solar panels on a perfectly crafted frame. Lastly, we want to thank the beautiful couple, Rudy & Anne-Mie, without them this would not have been possible. We are very grateful for their smooth collaboration and trust throughout this project.

7.7

# Senegal - Entente PV & biogas

Last summer, we set off on the adventure of a lifetime to Senegal, where we executed a project in collaboration with Entente de Diouloulou - a local farmers' organization dedicated to tackling the socio-economic challenges in the region. They do this by promoting community-driven initiatives that improve the living and working conditions of the local farmers.

Our project had 2 exiting goals. Firstly, we designed and built two small-scale biodigesters that transform organic waste into biogas. To ensure that the impact doesn't stop there, we also created a guide so others can replicate the design, thus further promoting responsible waste management in the region. Secondly, we constructed a solar-powered cold room. This solution provides a sustainable way to store fruits and vegetables, helping to reduce waste and improve food security.

Kasper Michiels, Eva Donnay, Ruben Vanherpe & Kamiel Kenis



After 10 months of preparation, we were more than ready to get our hands dirty! Once arrived in Kabiline 2, we were warmly welcomed by the amazing Entente community – our first (but definitely not our last!) experience of Senegalese hospitality. Then it was time to get to work! Over the following weeks, we installed the PV panels on the roof, build the biodigesters and gas circuit, set up the electrical installations, and more. Some highlights of our stay? Watching the PV system produce its first Watts and cooking an egg on biogas we had generated ourselves!

# Senegal - Entente PV & biogas

Of course, as with any project, things didn't always go as planned. Our biggest challenge? The cold room was delayed in the port of Dakar and didn't make it to Kabiline 2 until a week after we had to leave. Frustrating, to say the least, but luckily, with the help of the technicians from Entente, no obstacle was too big to overcome! With our remote help from Belgium, the cold room was installed as well, making the project a success. Shout-out to Yaya, Moussa, Seku, Ali and all the other people who helped us along the way!

“We are incredibly grateful for all the amazing people we had the chance to meet and everything we learned from them. Thanks to them, our two months in Senegal were truly unforgettable!”



Une structure paysanne au service de la souveraineté alimentaire



**ondernemers  
voor ondernemers**  
Duurzame samenwerking met het Zuiden



# Tanzania - Hope for Girls and Women

In October 2023, our adventure as project students kicked off with Hope for Girls and Women, an amazing voluntary organization in Tanzania. Hope provides shelter and support to girls and women who have faced FGM, domestic violence, child marriage and other tough challenges.

One of their biggest hurdles? A lack of reliable electricity. Frequent blackouts disrupt the girls' studies and create an unsafe environment at night. Here is where Humasol stepped in, we made it our mission to bring light (literally) into their lives! We installed two solar systems with batteries at Hope's safe houses in Butiama and Mugumu, ensuring a stable and renewable energy supply.

In the initial weeks of preparation, we focused on understanding the organization's needs. Watching the documentary of Hope "In the Name of Your Daughter" gave us deeper insight into the challenges faced by these brave girls.

Over the next few months, we dived into research on photovoltaic systems and dimensioned the system. Alongside the technical plan, we developed a business model to ensure Hope can replace components when needed. Renting out rechargeable lamps not only illuminates market stands of the mama's but also provides a new income source for the community. Win-win situation!

Simon Forrez, César Materné, Marie Peuskens & Jolien De Mars



**MATERNÉ** VERZEKERT



**ZONTA**  
FOUNDATION  
FOR WOMEN

# Tanzania - Hope for Girls and Women

Fast forward a year, we finally arrived in Tanzania! We received a warm welcome from Rhobi, the founder of Hope, and met the bright, curious girls and staff at the Butiama and Mugumu safehouse. They instantly stole our hearts. Over the next few weeks, we became regulars at every shop in town, hunting for components and tools for the solar installations.

The payoff? Free electricity, extra lighting and outlets, plus electric cooking appliances like rice cookers and stoves. These devices reduced reliance on firewood and create a more healthier cooking environment.



On location it was challenging to find high-quality, portable lamps, however we successfully implemented the economic plan. For the social aspect, we conducted workshops on the solar components, their maintenance and safety. These sessions empowered the girls and staff, igniting their interest in engineering as a potential career path.

We didn't stop here. We created a dedicated study environment for the girls. Previously, they had to study on the ground between the playing children. Now, with proper study areas, they are more motivated to learn!

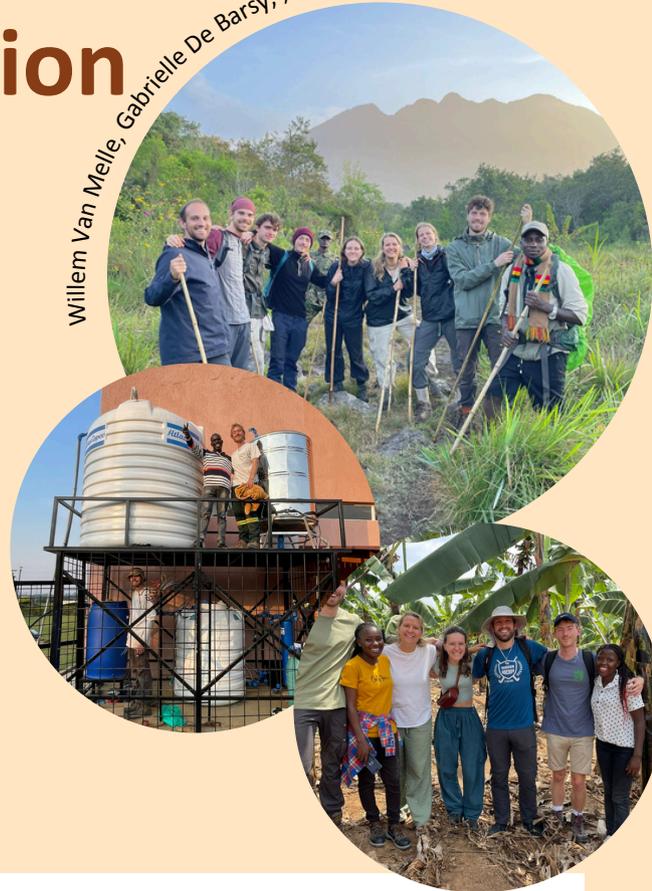
As our unforgettable journey came to an end, we returned home with hearts full of joy and gratitude. A huge tank to everyone who supported us on this incredible, once-in-a-lifetime adventure. The girls and staff of Hope will always hold a special place in our hearts.

# Mbarara university - Water purification

7.9

As we reflect on our journey with Humasol and our experience in Uganda this summer, we are filled with gratitude for the opportunities, challenges, and growth we've encountered. We started as rookies, afraid to call our suppliers and uneducated in the very necessary and subtle skill of bargaining but we became well trained over time. We experienced a lot; from late nights working with gravel and cement to the stories and laughter shared with the incredible people we met, every moment has been memorable. We have put blood (a little), sweat (buckets and buckets of it) and tears (mainly of joy ;) ) into this project. Now, looking back at the water purification system we built, we feel a deep sense of pride and accomplishment.

Willem Van Melle, Gabrielle De Barys, Zacharias Guislain



Atlas Copco

We hope that our work in Mbarara will endure for years to come, bringing lasting benefits to the university and its staff and students. We have put together a wonderful maintenance team that shares our love for this project and will make sure our system will operate for the years to come. Working on this project has taught us that with enough effort and a dedicated group of people, remarkable things can be achieved.

As Gabrielle de Barys said "We came here as colleagues but we leave as family."

7.10

# Malawi - From Waste to Wind

This summer, the four of us—Jesse, Michiel, Lotte, and Lien—embarked on an incredible nine-week journey to Green Malata, Malawi, with one ambitious goal: to build a fully operational wind turbine and generator from scratch. What made this project even more special was that we aimed to use as many local materials as possible. Finding the necessary materials turned out to be as adventurous as building the turbine itself. From navigating bustling markets to sourcing parts from unexpected places, every step felt like a treasure hunt. Along the way, we were continuously amazed by the warmth and kindness of Malawi, truly earning its title as "the warm heart of Africa."

Green Malata, our home base, is an inspiring community that empowers young adults through education and skill-building. We were fortunate to work alongside the students there, who enthusiastically helped us with everything from carpentry to welding. Their dedication and skill were invaluable to our success.

Of course, not everything went smoothly. Some challenges required creative problem-solving (who knew chalk powder could save the day?), and our progress often felt like two steps forward, one step back. A week before leaving, we proudly began lifting the wind turbine for the first time, only to discover a major setback: the generator didn't work. With time running out, we rolled up our sleeves for a final push.

Lien De Cordt, Michiel Spies, Lotte Cortens & Jesse Kamerling



  
**umicore**  
Precious Metals Refining

6.10

# Malawi - From Waste to Wind



Thanks to incredible teamwork—within our group and with the unwavering support of everyone at Green Malata—we pulled off a miracle. Just one day before our departure, we successfully built a brand-new stator, hoisted the turbine, and watched it spin perfectly, generating power as intended.

The proud smiles and gratitude from everyone at Green Malata in that moment were unforgettable. It wasn't just about the turbine; it was about what we had achieved together, as a team and a community.



"From Waste to Wind" will forever be one of the most rewarding experiences of our lives. It wasn't just a project—it was a testament to resilience, innovation, and the incredible spirit of the people of Malawi.

7.11

# Vietnam - HUCE

Eva Vanhulle, Stephan Fuentes & Job De Leener



You only truly notice it when you're there: the mutual curiosity, the way the entire neighborhood connects out on the streets, the different rhythm of life, the unique style of communication, and, of course, the sticky heat. That last one, more than anything else, was the reason we found ourselves spending two months in Vietnam. Driven by a passion to alleviate the discomfort caused by the heat for the local population, we set out to make a difference. It was heartwarming to see how willing everyone was to lend a hand, invite us into their personal space, and work together to find solutions.

After two months of wonderful company, kind-hearted people, and what turned out to be the two most adventurous months of our lives, we returned to Belgium with a treasure trove of data. Once processed, this data will demonstrate how reflective rooftop coatings can cool down homes, reduce AC usage, and positively impact the climate. We also investigated the cooling effects of green roofs. The results will be published in several scientific papers, laying the groundwork for future research and offering practical applications for designing new neighborhoods in Vietnam.

6.11

# Vietnam - HUCE

The work we did this summer has the potential to create meaningful change for people who truly need it, all while supporting a healthier climate—exactly what you'd expect from a Humasol project.

“Oh yes, he forgot the bottle at home... I really can't handle any more alcohol!”

Man suddenly appears with a fresh bottle of homemade rice wine from the restaurant kitchen...

That's how life goes in Vietnam ;)

From a TV interview to writing a newspaper article, and even dodging leeches in the mountains, it was an unforgettable experience. A huge thanks to everyone who supported us! It was a once-in-a-lifetime adventure!



KU LEUVEN



VLAAMS-  
BRABANT



08

# Sponsors



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WORLD.**

Thanks to all our members,  
volunteers, students, partners,  
and sponsors for their  
collaborative efforts towards  
making renewable technology  
accessible to all.



