



**Annual  
Report  
Humasol  
2023**



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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.

## Where to find us

### Post

Desguinlei 214  
2018 Antwerpen

### Contact us

[info@humasol.be](mailto:info@humasol.be)

### Connect with us

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





02

## Message from the President

Hi Humasol enthusiast!

We can look back on another very successful Humasol year. More than ever, Humasol is an amazing team of inspiring students, pursuing the same goal. The question, however, is how to achieve this goal of making renewable technology accessible to everyone. Something we have been thinking a lot about in the past year. We have been around for 15 years now, but what kind of organization do we want to be in 15 years' time?

I am very proud to say that we already took our first steps in a new direction. For the first time we will have three projects where Belgian students and students in a partner country will cooperate on the same objectives. Last summer, when we had students working on the production of probiotics for example, showed that we can bring even these challenging projects to a successful conclusion. For next summer, we have a lot of other exciting projects in the pipeline with innovative technologies such as water purification, heat stress management or sustainable packaging.

We were also not afraid to question ourselves. The road to decolonizing international solidarity is one with many pitfalls. But I am glad to share this journey together with you as a project student, member or sympathizer! Cheers to another 15 years of friendship, sustainability and great collaborations.

Michiel Van Cauwelaert  
President 2022-2023





In the past, we mainly carried out solar panel projects. Much knowledge is already available, and several companies in the countries can execute these projects themselves. We are shifting towards more challenging projects, from wastewater treatment to 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 to place for example solar installations is often already present, we want to exchange our expertise where it is really valuable.

## Our Mission

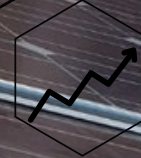
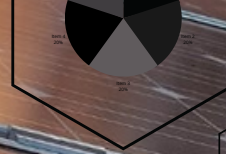
Our mission is to make renewable technology accessible for everyone. Every year, around ten project teams perform projects involving sustainable technologies such as solar energy, water supply, plastic recycling or agricultural optimization.

The projects are always executed in collaboration with the partner on location. In order to ensure the long-term sustainability of our projects, we try to collaborate as well as possible, by exchanging knowledge to maintain, repair and reproduce installations. The idea really is to plant a seed, that then hopefully further grows and spreads to its surroundings.

This year, our book year was from January 2023 to September 2023. This short financial year is necessary to align in the future with an academical financial year. That gives us the benefit to have a clear overview of academic yearly outcome.

04

## Financial Report



In managing our finances, we prioritize transparency and accountability. The majority of our revenues comes from sponsorships, followed by governmental grants, and a smaller portion from gifts. A significant portion of our financial resources is dedicated to our projects, which were fully covered by sponsorship and grants thanks to better budget estimations. We typically cover 30% of the total project costs, the remaining amount is financed by our partners.

In addition, Humasol organizes engaging events. This year we had our Info Event, Congo Talk, and a Humasol Insight Session. These events not only contribute to our mission but also attract new students, encouraging their participation in our initiatives.

Specific allocations cover essential areas, including administration, project costs and small miscellaneous expenses. Additionally, meticulous attention is given to ensure our team's safety through insurance, facilitating effective collaboration.



# 2022-2023 Impact report

Let's conclude this year in numbers

9

Projects

37

Project Students

38

Members

9

Partners

6

Countries

5

New Collaborations



# Since 2008

We did some great work!



101+

Projects

330+

Project Students

80+

Partners

17

Countries

# 06 Our projects

6.1

**Creating Power**

6.2

**FOS**

6.3

**Een Hart voor Senegal**

6.4

**Chabwino**

6.5

**Lumen Christi**

6.6

**Agrimulimi Fresh Solutions**

6.7

**Cacana**

6.8

**KinkeliBa**

6.9

**Hubi & Vinciane**

# Project locations



# Malawi - Creating Power

In May 2022, we received the incredibly exciting news that we had been chosen to participate in a project with Humasol! After four months of patiently awaiting details about our project and its location, we finally received the news in September 2022: we were tasked with building a water purification system at Ngobya Primary School. It was truly an experience of a lifetime, and our eagerness to commence the project knew no bounds!

Our journey began with an initial assessment of the school and the water supply issue. We quickly identified a significant problem with water scarcity during the dry season. On top of that, the wastewater was discharged into neighboring areas, causing conflicts. It became evident that we needed to take action! We were really committed to the school and this gave us extra motivation to design the best system possible. As we are students from different backgrounds, it was very interesting to see how everyone could shine in their own field during the development phase. We complemented each other's knowledge and sought assistance from external experts when needed.



Emma Vandamme, Wiede Ceulemans,  
Maurie Keppens, Freya Beyne

# Malawi - Creating Power



Finally, in July 2023, the time had come to visit Ngoby School and implement the system we had designed! During our stay, we dug numerous trenches, learned how to connect water pipes, installed storage tanks, and even mastered the installation of pumps and their electrical control. Each day, we were greeted with warmth and enthusiasm by the cheerful children at the school. We had the opportunity to engage in games with them, attend an introduction party, and explore the pearl of Africa, including an unforgettable encounter with the mountain gorillas!



Beyond our work at the school, we became an integral part of a community that welcomed us like family. Matilda, the school's director, became our Ugandan "mom" for life. We were honored to help solve the school's water issue, and we can't wait to return someday to see how our system is working and to reconnect with the school and community. Uganda holds a special place in our hearts, and the memories of our time there will stay with us forever!

# Ghana - FOS

We were thrilled that the time had come to embark on our water project in Ghana and meet our Ghanaian partner (COLISO). First, we went to the town Akenkansu. We loved our accommodation and Abigail, who took care of us and cooked us the most delicious Ghanaese meals.

The village was always buzzing with children playing football or engaging in games, mostly 'SET.' In the initial three weeks, we assisted the villagers in digging trenches for the water distribution network. Since our materials hadn't arrived yet, we had the opportunity to acclimate to Ghanaian life. On weekends, we explored the country, visiting places such as Cape Coast, Kakum National Park, and Akim Oda.

In August, our materials finally arrived, and we began installing the first PV installation in Wassa Saa, collaborating with the COLISO team and villagers. The network and tanks were already in place in this town, so our stay there was brief. We held a meeting with the water committee of Wassa Saa to explain the functioning of the solar panels and ensure the proper maintenance of the installation.



Marte Verstraete, Lotte Neckebroeck,  
Helene Lejon, Marnix Christiaens

Subsequently, we returned to Akenkansu to install the second PV installation. A filtration system was set up to guarantee excellent water quality. Upon completing the installation, a grand opening event was arranged, featuring speeches, gifts, and music. Dignitaries from the district graced the occasion by inaugurating the installation. The atmosphere was festive, with everyone dressed in their finest attire. Additionally, we were gifted beautifully crafted clothes adorned with traditional African patterns.

# Senegal - Een Hart voor Senegal



In M'Bour, there is a school with more than a thousand students. This school is called 'Un Coeur Pour le Sénégal'. The cost for electricity has strongly increased due to the rise in the number of pupils. The Belgian organization 'Een Hart voor Senegal' pays for these bills. In order to improve the independence between the school and the organization, we placed a solar panel installation which lowers the electricity cost.

We also started a small vegetable garden. The money that was previously used for buying vegetables can now be used for financing the maintenance of the solar panel installation. The children will take care of the vegetables as gardening will be part of their curriculum starting from next year. We look forward to watching these vegetables grow!

"We are very grateful for all the beautiful moments. We will never forget you. And as they would say in Senegal: On est ensemble!"



Jules Beckers, Hanne Delemarre  
Marnick Nicolaes, Maarten Vanmarcke

# Malawi - Chabwino

As a diverse team of four students, we embarked on an exciting adventure to Malawi with great enthusiasm, not fully aware of what awaited us. Despite our diverse academic backgrounds, we were united by a common goal: contributing to sustainable development and a brighter future for the people of Malawi. We were warmly welcomed by the cheerful children in the nine villages where we spent the majority of our summer. Every morning, these mischievous children would gather at our gate, calling out our names, and often asking about the football we had brought from Belgium... Nevertheless, their willingness to help us was also remarkable, whether it was fetching water from the river, washing clothes, or unloading bricks from the ox cart for our cooking stove, they spared no effort in assisting us.

Manon Fryges, Hanne Maes,  
Bram Muylaert, David De Knop



The children at the Chabwino preschool also captured our hearts. We had the opportunity to attend classes at the school, share meals with the children during lunchtime, and witness a memorable graduation ceremony. The celebration was filled with proud toddlers, parents, and the same five songs that had everyone dancing - a true representation of the vibrant spirit of Malawi.



# Malawi - Chabwino

In addition to immersing ourselves in Malawian culture, we collaborated with local community members to achieve various projects. We not only shared our knowledge but also learned valuable wisdom from them, collectively completing several initiatives. First and foremost, we constructed an efficient cooking stove for the Chabwino community. The Chabwino farmers tested their new stoves by preparing nsima for 50 Chabwino farmers, resulting in satisfactory results and happy faces.



“Malawi and all the fantastic people we had the privilege of working with hold a special place in our hearts. »



Alongside we installed a 16-panel solar panel system at the Chabwino nursery school, providing the community with clean and sustainable energy. Furthermore, we established a charging station at the school, transforming it into a genuine community hub. We can also monitor the entire installation remotely from Belgium, ensuring the long-term goals of the solar panel project. Lastly, the computer lessons we organized during our stay were highly successful, intended to ensure the effective utilization of donated laptops within Chabwino and the community. Thanks to the local population, we hope to have left a positive impact in the warm heart of Africa.

# Tanzania - Lumen Christi

After six months of getting ready for our project, it was finally time to get our hands dirty and start installing some solar systems. We were pretty exhausted from the long trip, but as soon as we arrived, we were given a tour of the campus where we'd be staying for the project. We got to see the small buildings where we were going to install the panels, although they weren't quite finished yet. But we were so eager to help that we didn't want to waste any time.

So, we kicked things off by mapping out the electrical wiring in the buildings, welding the frames for the solar panels, and digging trenches for the AC cables for the first system. About a week into it, Steve, a Tanzanian electrician, joined our crew and quickly became our buddy throughout the project.



Julie Van Zele, Stef Vanslembrouck,  
Rhani Bostyn, Emmanuel Roelens

With Steve's help, we started setting up the solar system itself. We opened up some fuse boxes to separate the heavy loads like water heaters and pumps from the lighter ones like lightbulbs and sockets. By the end of the third week, we had completed our first system, which powered three buildings.

# Tanzania - Lumen Christi



Things got a bit more hectic after that because we had to work on all the systems simultaneously. For the first system, we still needed to program some components so that we could monitor energy production all the way from Belgium. Meanwhile, we were tackling the DC part of the second system and the AC part of the third system.

Of course, there were some hiccups along the way, like pumps and heaters mistakenly running on our solar system when they should've stayed on the grid. Despite all the hard work, we tried to carve out some downtime. We'd play basketball with the guys who were still on campus during the holidays, grab a drink with Steve at a nearby pub, or unwind with some card games in the evenings.

But as the project deadline approached, we had to put in some extra hours. Thankfully, we managed to finish the project right on time, with just 10 minutes to spare!

We want to extend our heartfelt thanks to the folks at LCI for giving us this incredible adventure and to Steve for his invaluable help and teachings. We truly hope that our efforts will make a positive impact on the students at LCI.



6.6

# Uganda - Agrimulimi Fresh Solutions



This year, we worked with 'Agrimulimi Fresh Solutions' for six weeks in Uganda to optimise their cold chain logistics. During the year, we prepared the project by looking into tomato cooling options and conditions. We've reviewed various storage options and sized a cold room.

Once we arrived at our project destination, it was first necessary to redo certain initial steps. We started by visiting companies and started conversations with tomato traders. This way, we obtained some crucial information and we learned a lot about Ugandan culture. Later in the project, we also joined in picking tomatoes and then selling them at the market.

It was quite the experience for us to be on the truck with everyone else, among the tomatoes, on the bumpy roads of Uganda ;))). In the end, by testing the different options, we were able to find an optimal logistics chain that retains the quality of the tomatoes as much as possible.



Victoria Vandenberghe, Ruben Wauters,  
Julien Storm, Nicolas De Bie

# Uganda - Cacana

This year, our team of four visionary Belgian scientists embarked on a wild journey to support a fish farm in Uganda. Our mission? To create a production process of probiotics for the African Catfish!

Back in October 2022, when our crew was formed, our project's details were about as clear as murky waters. But fear not, for we embraced the challenge head-on, seeking wisdom from professors and experts, turning our hesitance and skepticism into a thrilling adventure. After months of brainstorming and chatting with experts and our partner, the one and only Charles Mulamata, owner of the fish farm and president of the African Aquaponics Cooperative, our project was as finely tuned as a well-oiled machine. We dove into the laboratory experiments and even crafted a low-cost bioreactor for fermentating those probiotics.



Our hard work paid off big time, and come July and August, we were ready for action! The four of us spent two glorious months in Uganda, setting up the lab with all the must-have protocols and DIY instructional videos. Our goal? To make sure the local crew could fish out probiotics like pros, all while keeping contamination at bay.

With grins as wide as the Nile, we can proudly look back on our epic adventure and the fantastic partnership we forged with Charles, the catfish whisperer!

Dries De Bie, Kenzie De Smet  
Lander Inghelram, Lore Mees

# Senegal - KinkeliBa

Sokhna Mai, which began as a financial safety net and jam production on a small scale in the garage of Amy Niome, the current treasurer, has today grown into a renowned enterprise run by 25 women. Due to its considerable success, they have expanded the range of products, and since 2021 they have also been building a new production site to expand their production to include the processing of grains and vegetables. Due to the fact that the new site is located at some distance from the nearest power grid, there was a need for another energy source. Since sustainability is a core value to Sokhna Mai, we built a PV installation together with family and friends that we got to know there.



Furthermore, we assisted in designing an Excel working sheet in order to get a clear and digital overview of the gains, losses and stockage. Next, we took pictures that will be used on their website and worked together on the optimization of their social media accounts. To conclude, we organized several workshops to inform the women about the working principles of solar panels, the risks and precautions of the installation and first aid in case of emergencies.



# Senegal - KinkeliBa



We are very grateful for the practical experience we have gained because of the project but we are even more grateful for the people we have met during this adventure. Amy's welcoming family and helpful friends were involved in every step of the way: there was a lot of laughter besides the work. Frankly, intense friendships were forged as a result of the close collaboration with many people from start to finish.

This project has been enormously rewarding for us as, ultimately, this is what Humasol is all about. Besides, it granted us the opportunity to participate in this beautiful story of economic growth, renewable energy and female independence.

“Si tu peux pas faire de grandes choses, fais de petites choses avec grandeur” ~Youssoupha

Frederik Aerts, Christophe Dept,  
Amaris Dehertogh, Nhan Nguyen

# Benin - Hubi & Vinciane

In light of Hubi & Vinciane's goal to build an incubation center for young entrepreneurs in Parakou, Benin, our team was employed to engineer a PV installation to become fully self-sufficient in energy. Our adventure started in September with a team of 3 students and grew to an enthusiastic 5-people delegation. While none of us had any prior experience in installing solar panels, we managed to complete the PV-installation just in time. This project serves a dual purpose: providing energy to the center and serving as a model installation for entrepreneurs interested in photovoltaic systems. In addition to our main project, we also undertook two side projects. Firstly, we revived "PV aux villages," an old Humasol project that had encountered some issues. Additionally, we visited another Hubi project with irrigation problems in the communal gardens. We were asked to propose strategies to improve garden irrigation.

This incredible experience would not have been possible without the help of many wonderful individuals. Most notably, Amadou, the enthusiastic guardian of the center, has forever secured a place in our hearts. His smile brought sunshine even during the frequent rain showers. We also extend our heartfelt gratitude to Steve for his expertise and assistance during the PV installation process. Lastly, we want to give a shoutout to all the medical students with whom we shared our time at Saint Dieu de Boko Hospital.



Arthur Vanderstraeten, Rafael Lodewyckx,  
Stijn Van den Broeck, Louis Storm,  
Johanna Van Acker Hanskens



# 07 Sponsors



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