



**Annual  
Report  
Humasol  
2022**



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# Preface

Hi Humasol sympathizers,

First of all, thank you for the interest in our organization and in this annual report! After two remote years without being able to operate our projects, 2022 was a very important year. During this year, we restarted doing what we were founded to do: making sustainable technology and renewable energy accessible for all!

We have been able to contribute to this mission by performing 10 projects in 6 countries including a broad range of technologies. We were not only able to install several PV installations and solar pumps, we also discovered other technologies such as cooling and sustainable cooking solutions. I want to thank our projects students for their endless motivation, dedication and flexibility throughout this year! Thanks to your perseverance, we were able to re-boost Humasol after difficult years.

Of course, the organization would not be the same without the enormous support from our working groups in Belgium, where we can also celebrate some accomplishments. Thanks a lot to all our volunteers and members for dedicating your free time to our organization and building towards our dream! I am looking forward to all the great achievements ahead of us and invite you to keep supporting us along the way!

Louise Dalle  
President 2021-2022





# Preface

Dear Humasol enthusiast,

Fifteen years ago, the first Humasol project was performed. In this period Humasol has evolved drastically. What started as a noble idea from two engineering students, has grown into the organization we are today. A dynamic group of committed students, performing every year around 10 projects in our partner countries. An accomplishment we can and should be proud of.

Also this year, we have not been idle here in Belgium. We strengthened our collaboration with Wetenschapswinkel, a platform facilitating socially relevant research. Together with students from different Flemish universities, we are currently working on various research questions. Amongst others the creation of a general framework for performing market research, which can be easily reused for future projects. Next to this, establishing a new Humasol branch in Brussels was a major milestone for Humasol last year. We strive to continue along this path and further grow.

As Humasol is an organization by students and for students, this would of course never be possible without our amazing group of members, projectstudents and volunteers. So I would like to end by thanking all of them. I am looking forward to what the future will bring!

Michiel Van Cauwelaert  
President 2022-2023





# Mission

Humasol is a non-profit organization that envisions a future where renewable energy and sustainable technology is accessible to everyone. In cooperation with partners abroad, we construct projects that directly benefit the communities on project locations.



Our projects are carried out by students and volunteers who, after thorough preparation in Belgium, spend several weeks or months at the project location. During our projects we pay attention to the technical aspect, but also to the socio-economic context, such as setting up local management organizations that maintain and monitor the installations.



# 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 focus more on less conventional sustainable 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.

Secondly, we will focus on the active decolonization of our organization. Our goal is to evolve towards an international solidarity organization and to reach a truly equal partnership. We are tackling for example language use and imagery. Besides that, our recruiting strategy will be given a new shape.



# Humasol Leuven

Dear annual report reader,

I am delighted to note that all projects from Leuven were executed successfully by our wonderful volunteer students. The board in Leuven has undergone some large changes and were delighted to welcome many new faces. Many of these new faces were project students last term which created a strong sense of togetherness within the group. We decided to continue this year by strengthening these already very strong bonds by organizing multiple teambuilding activities and stadsmeets. What a wonderful year it has been!

Besides the new board we were delighted to welcome a new group of project students who have already shown their determination, intellect and devotion to their projects. Boy, does that bode well for next year!

The start of this Humasol term has been a wonderful experience and has left behind some great memories for everyone. Next semester we will continue along this line and work hard to deliver outstanding project results to our partners with the idea in the back of our mind that together and with the right team spirit we can create a great success story!

Pieterjan Espeel,  
Vice-President Leuven







# Humasol Ghent

Hi Humasol-fan,

Time flies when you're having fun. This is certainly applicable to this first semester because of the many amazing teambuildings we have done. A classic but very fun pool-evening with a drink, an enjoyable bowling session and even an hour of seriously exhausting jumping in JumpSky. And then I haven't even talked about the epic Humasol weekend.

The most important part of Humasol is still the execution of the projects and I am very happy to announce that we have an amazing group of new project students. They are working their hardest to tackle the challenges and uncertainties of their project.

I am very much looking forward to next year, where we will keep supporting our students, try to improve Humasol as an organization and last but not least, have lots of fun.

Lars Baert,  
Vice-President Ghent





# Humasol Brussels

After being active for almost 15 years at the Catholic University of Leuven (KUL) and Ghent University, we decided it was time to broaden our horizons by starting a new Humasol branch at the Free University of Brussels (VUB).

Thanks to the good contact, Humasol was recognized by the Department of Engineering Technology and Bioengineering Sciences. Our task was to bring the Humasol mission to this new audience of engineering students. Here we applied the proven concept that Humasol has followed for many years already: via a combination of advertising in Facebook groups and lecture presentations, our brand awareness significantly increased. We are especially grateful to Yaro, who put his shoulder to the wheel on this project.

And then finally, the Polytechnische Kring, a student association of engineering students at the VUB, gave us the opportunity to represent Humasol at their Job Fair. An afternoon of fruitful discussions later, only the final hurdle still needed to be taken: the recruiting itself. Selecting from all applications we received, the first team of project students in Brussels was formed, team Hubi & Vinciane. A harbinger of new collaborations in the future?



# Humasol happening

In September, we started the semester with the Humasol Happening. All students from the projects executed in summer '22 could share their experiences and results with each other, friends, family and partners. What a great way to look back at the achievements of these motivated people!



The students brought all kinds of local food, clothes, pictures and a lot of stories. It was a lovely event, many interesting conversations and a lot of laughs were shared.



# Humasol weekend

Following the annual tradition, all our members and project students gathered for the Humasol weekend. The weekend started with a fun and educational quiz and resulted in a really creative and entertaining evening.

The main goal of the weekend is to assist the teams with their projects. They were able to interact with other teams and achieve substantial progress thanks to coaching sessions, IMC (Intercultural Management and Communication) sessions, and project work. Meanwhile, the board spent its time in workgroup meetings, coaching and brainstorm sessions. In between we all joined together for a photoshoot and some outdoor games. An ultimate battle of the Humasollers led to the discovery that our organization maybe isn't filled with the brightest of singing talents.

Thanks to the amazing cooking team, every meal was super tasty and recharged us for the following activities. It was a pleasure to get to know all the incredible, enthusiastic, and motivated project students and the humasol members! :)





# Quiz

The Humasol quiz was definitely a spectacular success with this years' edition achieving a record breaking new level of attendance.

The quiz was organised by Public Relations and took place in both Leuven and Ghent. Students gathered with their smartest friends and family to try to solve our difficult questions and puzzles. To keep the hard working brains full of energy, visitors could enjoy a drink or snack. The best performing teams are awarded with several unique and adventurous prizes to relax with after such an intense evening full of brainteasers.

The quiz tested their knowledge about a lot of different topics. The participants had to dig into their memories about sports, geography, school, etc. They had to think outside of the box during the snake round and got an introduction to all Humasol projects of the last summer during the Humasol round.





# Looking back

**Gambia - Warme Gloed**

**Ghana - FOS**

**DR Congo - Mama Lufuma**

**Senegal - OVO**

**Uganda - Sahaya**

**Uganda - Elgon Fresh Solutions**

**Senegal - Bagaya**

**Uganda - Ekisande**

**Malawi - Kudimba**

**Uganda - VMG + MACCA**



# Project locations





2021-2022

# Gambia – Warme Gloed



Together we went to Kunting, to improve the village's water supply. During the first month, we mainly focused on laying the 1500 metre of water pipes. Many leakages occurred as the quality of the pipes was not the best, which led to many hours trying to fix the pipes.

"We got ready for Tabaski and danced with the people after the hard work."

Four water tanks were placed on the 11 m high tower, the solar panels were installed and the pump was connected. This was a big task which we could never have accomplished on our own. We received a lot of help from the people at Warme Gloed and the Moobeta foundation, the board of Humasol and especially Saikou Jawla and Kawsu Jaiteh. They're making sure that the project stays in good condition and they're expanding it where possible.



Robben Baetens  
Senne Strobbe  
Mathis Bracke  
Miel Provoost





2021-2022

# Ghana - FOS



Our project brings filtered water to about ten thousand people in two rural villages, Gyaha and Anamase. Thanks to strategically placed taps, the distance to queue water reduces. The residents can now use this extra time to go to school, develop further in studies, jobs or leisure. Since the water is filtered, they don't have to worry anymore about the quality.

The moment the water was running out of the taps for the first time is golden. People were dancing at the taps and were so happy. A family living at the top of the hill of Anamase came up to us to thank us: "We used to fetch our water from the well below and drag it 40 metres up. Now the water comes almost to our front door. God bless you!"

Catoo Billiet  
Nathan Bruynoghe  
Michiel Matthijs  
Lise Van Coillie



2021-2022

# DR Congo - Mama Lufuma

Mama Lufuma has a home in Matadi for single mothers and their children. They organise IT-lessons, sewing classes and kindergarten school. To make all this possible, an electricity supply is needed. The grid that was present is very unstable and dangerous, so to create a reliable supply, we installed solar panels and batteries. A second part of our project was installing a water pump. Next to the home, which lies in a valley, there is a natural water source. The path to this source is very steep and dangerous, especially in the rainy season. With the installation of the pump, the water is more accessible and life has become a lot easier



Adriaan Lamote  
Elisabeth Depla  
Julian Roba  
Lars Baert

"This has been an experience of a lifetime and we are very happy to have been able to complete this project. We received a lot of help from Souleyman, a local engineer, and Nathan, a student, who is also responsible for the maintenance of the installation. We still check up on each other every now and then. Not only he, but also the mothers and kids we lived with for two months, have made our stay so special and memorable."



2021-2022

# Senegal - OVO



Cas Decancq  
Lise Vanden Bergh  
Emma Van Roy  
Maxim Rutten

Within our stay, we contributed to the SmartVillages project of OVO. Our role was to merely be there to listen and observe what the needs of those people and communities were. We weren't going to solve their issues in two months and we weren't going to pretend to. This may be something that lacks in how we tackle development cooperation now: someone who just listens and tries to really understand the issues. This model of students acting as ambassadors, the 'boots on the ground' people, for those with the actual power to change things may provide a fruitful model for an organization such as Humasol.

**"We came, we saw and we fell in Love."**

Our project was related to a broad question of how to best support a variety of persons with a common goal: to lift themselves, and their communities, into a better future. Herefore we have evaluated the efficiency of a solar tracking system and investigated the feasibility of induction cooking on solar panels.





2021-2022

# Uganda - Sahaya



Together with a local team we built 24 cooking stoves for Ugandan families, which should help them in reducing their fuel use and improving the indoor air quality. This process did not consist of only building, but through mutual learning during construction and workshops, we were able to improve the design and motivated craftsmen to learn and master the skill.

With the knowledge, an elaborate manual and sufficient funds, the construction of stoves can continue, under supervision of Rafiki Memorial Wildlife Conservation Initiative

“This project can be the spark that lights a fire, an idea that spreads. In 10 years you can come back and might see change in unexpected places everywhere in Uganda.”

~ Honda Agono, founder of ‘The Purple Ray’.

Douwe De Vestele  
Michiel Devolder  
Hannah Lozie



2021-2022

# Uganda - Elgon Fresh Solutions



Elgon fresh is a startup that aims to reduce food waste in Uganda. Elgon wants to achieve this by means of reviewing and optimizing the entire supply chain of tomatoes from farmers to the central markets. The main focus of the Humasol team was on developing a zero energy cooling chamber for tomatoes. They constructed several of those chambers, both farmers and Elgon Fresh Solution are gratified about the results!

AZECCADAY ~ our battle cry

Hanna Vanhoof  
Louis Verheyen  
Willem Vanmoerkerke  
Kate Mouling





2021-2022

# Senegal - Bagaya

Bagaya is a little village in the south of Senegal. The electricity in this rural area is expensive and unreliable: each day, the power goes down for several hours. This causes great difficulties, especially in healthcare centers.

Together with the community, we installed a solar panel installation to generate enough electricity for the medical post consisting out of a maternity, a little hospital and the house of the nurse. The people of Bagaya were really greatfull for the help we could provide, the installation runs perfectly!

"We had to clear some vegetation to make sure the solar panels got enough light. While doing so, unfortunately, a tree fell on the hospital. Our friends had an unexpected way of dealing with this problem: "I'm happy it fell now, the damage would have been worse of it fall on the installation". A valuable lesson learned!"



Robrecht Abts  
Arno Hegge  
Joke Plas  
Stef Vanloon



2021-2022

# Uganda - Ekisande



"Patience pains but pays"



In Kisibere, a small village in Uganda, the Belgian charity Ekisande has built a primary school and health care center. These facilities have been limited in their capacity to educate and to care for the community by the lack of two basic utilities: a clean water source and a reliable electricity connection. This team's goal was to provide those necessities by installing a solar pump and solar panel installation. Both the solar panel and solar pumping system are working perfectly, improving the quality of education at the school for years to come.

Yaro Debeer  
Ryan Deconinck  
Eveline Wuytens  
Pieter Quaghebeur



2021-2022

# Malawi - Kudimba



Kudimba, a daycare center for vulnerable children, suffers from power issues as a consequence of the low-quality grid in Malawi. The grid has tendencies to shut down sporadically for long periods of time and to induce sudden voltage surges. The latter has a devastating effect on the electrical appliances used in Kudimba, causing many to fail.

The main goal of this project was to make Kudimba fully self-sustaining. In addition, a waterpump was connected to the installation to make sure that potable water is available.

"Grateful for all the support "

Line Debeer  
Jarne De Nies  
Pieterjan Espeel  
Axelle Moortgat







2021-2022

# Uganda - VMG + MACCA

Our project consisted out of two separate subjects, we worked with two different partners: VMG and MACCA.

Vertical Micro Gardening (VMG) is a social enterprise focused on empowering urban communities to grow their own food and increase agricultural yields. We worked closely together on the sales plan and visited hotels, schools and restaurants as they formed possible selling points.

The Measures Against Climate Change in Agriculture (MACCA) is a project by Amelia Agro Farm that aims to use technology in efforts to increase resilience of smallholder maize farmers against climate change. Here we designed and created a compost sieve for the farm together with engineer Stephan, who taught us many skills like welding!



" We had 8 weeks filled with change of plans, but most importantly meeting incredibly kind-hearted people, an adventure we will cherish forever!"

Emma Sageot  
Soetkin Barbaix  
Matthijs Coninx  
Nina Claessens



# Looking forward

**Ghana - FOS**

**Malawi - Creating Power**

**Tanzania - Lumen Christi**

**Malawi - Chabwino**

**Senegal - Hart voor Senegal**

**Uganda - Elgon Fresh Solutions**

**Senegal - KinkiliBa**

**Uganda - Cacana**

**Benin - Hubi & Vinciane**



# Project locations





2022-2023

## Ghana - FOS



The team aims to provide Abompe with continuous and sufficient potable water.



FOS & COLISO



Marte Verstraete, Lotte Neckebroeck,  
Helene Lejon and Marnix Christiaen



## Malawi - Creating Power

The goal is to implement a wastewater treatment system in the Ngobya primary school. The treated water can be used for toilets, cleaning, washing ...



Creating Power



Emma Vandamme, Wiede Ceulemans  
Maurie Keppens, Freya Beyne





2022-2023

## Tanzania - Lumen Christi



The students will install solar panels on the roofs of a boarding school.



Lumen Christi



Julie Van Zele, Stef Vanslembrouck  
Rhani Bostyn and Emmanuel Roelens



## Malawi - Chabwino

The aim is to install solar panels and cooking stoves in nine small villages. In addition, side projects to address local obstacles have to be fulfilled.



vzw Chabwino



Manon Fryges, Hanne Maes  
Bram Muylaert and David De Knop





2022-2023

## Senegal - Een Hart voor Senegal



Their goal is to lower the energy cost of the elementary school in Mbourg by installing solar panels.



Hart voor Senegal



Jules Beckers, Hanne Delemarre,  
Marnick Nicolaes, Maarten Vanmarcke



## Uganda - Elgon Fresh

This team will continue the collaboration between humasol and Elgon Fresh. They are searching for possibilities to improve the chain from harvest to sale of tomatoes.



Elgon Fresh Solutions, Creamo and  
Einstein Rising

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



## Senegal - KinkeliBa



The students will help the association Sokhna Mai with expanding their bussiness that processes local fruits into jams by installing solar panels.



KinkiliBa vzw



Frederik Aerts, Christophe Dept,  
Amaris Dehertogh, Nhan Nguyen



## Uganda - Cacana

This team will set up a production chain of probiotics for fish farms. The use of probiotics will decrease the percentage of dead larvae, which will result in a higher food and protein availability



Ondernemers Voor Ondernemers (OVO)



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





2022-2023

## Benin - Hubi & Vinciane



The students will install a PV installation to supply electricity to the centre's offices, solar pump and aquaponics farm. Alternative and innovative electricity generation techniques will be explored .



Hubi & Vinciane



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







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# Thanks to



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# Contact

## More information

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