



# Die Ofenmacher e.V.

## Rauchfreie Küchenöfen statt offenes Feuer



# Annual Report 2019 · 2020

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## Impressum

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**Cover Picture:** Mud stove in Ethiopia



## Ten Years – 100.000 Stoves

In 2020, the association celebrated two important anniversaries: The date of its founding was celebrated for the tenth time in March, and by the end of the year we had achieved the proud figure of 100,000 stoves built. This is reason enough to review the history of the association and to trace how everything originated.



### How we reached where we are

The basic idea to build stoves for the benefit of the rural population was born by Christa Drigalla, at that time nursing director of the Sushma Koirala Memorial Hospital (SKMH) in Sankhu near Kathmandu. In spring 2009 Katharina Dworschak and I met Christa and were immediately enthusiastic.

In the plans we made with her in Sankhu at that time, the foundation of an association was not mentioned at all. Above all, we wanted to expand the financial scope for the construction of stoves and started several campaigns for this purpose.

The repeated question for donation receipts was then one of the triggers for the foundation of the association "Die Ofenmacher" on March 2, 2010.



2011: Foundation meeting of Swastha Chulo Nepal

In the first year, the stove project in Nepal was supervised by Mamata Raj Singh and Bhola Bista in the administration of the SKMH. In May 2011, together with Anita Badal, we founded the local organization Swastha Chulo Nepal (Healthy Stove), which from then on took over the implementation of the stove building. Anita also immediately became the manager of the organization, having previously worked as a nurse at the SKMH and then spent several years studying nursing management in Freiburg. She is familiar with both cultures and can be a bridge between them.

In the same year, the first ideas emerged to obtain certification for the climate effectiveness of the mud stoves in order to generate additional income with the certificates. Reinhard Hallermayer developed a project proposal, which was submitted in March 2012 to the Gold Standard Foundation, which establishes and verifies very strict rules for the implementation of climate protection projects.

Fortunately, we all had no idea at the time how time-consuming the process would be. But Reinhard was never discouraged and the project was finally approved in January 2014. In autumn 2012, the construction of the stoves in the project area began. Since then, the stoves have been certified as having an impact on the climate (about one tonne of CO<sub>2</sub> per stove per year). In January 2015, we finally registered the first 1,967 certificates per tonne of CO<sub>2</sub> in the Gold Standard database.



At the beginning of 2013, at the initiative of the Vaterstetten-Alem Ketema partnership, we visited the district capital of Alem Ketema in Ethiopia to see whether it would make sense to build mud stoves there. Immediately afterwards, we travelled to the neighbouring country of Nanyuki at the foot of Mount Kenya. The Wildlife Conservation Ol Pejeta had shown interest in including the mud stoves in their programme to support the surrounding communities. The first ten pilot stoves constructed there showed that the stove from Nepal is well suited for the cooking habits of the local Kikuyu and Maasai people.

In December 2013, we organised the first training for stove builders in Ol Pejeta. The transfer of know-how



Maasai and Tamang - cross-cultural cooperation

from Nepal to Kenya was provided by Bel Bahadur Tamang, who made his first trip abroad for the occasion. Kedar Silval, Anita Badal's husband, accompanied him as translator and trainer. As a multicultural event with participants from three continents, the training turned out to be a success and two weeks later ten freshly trained stove builders started their work in Kenya.

However, as the training progressed, the poor quality of the clay resources proved to be an obstacle to the dissemination of the stoves. This was made worse by the fact that the preparation of Ugali, the traditional dish made from maize and beans, involves vigorous stirring and pounding. After a short time, the stoves showed cracks and disintegrated.

In Ethiopia, it became clear that a completely new stove had to be developed for the cooking habits of the Amhari, on which Injera, the Ethiopian flat bread, can be prepared. In autumn 2013, we travelled to Alem Ketema again, this time together with Christoph Ruopp. The stove builder from Wain in Swabia had designed a mud stove that we wanted to test on site with the housewives. Several versions of this stove were tested on site, but were ultimately ruled out for various reasons.

Finally, Christoph Ruopp and Marius Dislich presented the new design of a brick-free construction made of mud, which met all the requirements for function and feasibility. The so-called "Chigir Fechi" (problem solver) was measured in May 2015 in cooperation with the Gesellschaft für internationale Zusammenarbeit (GIZ) in Addis Ababa, approved by the Ministry of Water, Irrigation and Energy in October and has been our standard in Ethiopia ever since.



Chigir Fechi in operation - result of long-standing development

Back to Nepal: in June 2013, we had built the first 10,000 stoves there and had enough money in our account to continue building stoves. Therefore, we agreed with the



Alternative Energy Promotion Center (AEPCC), an institution that works for the Ministry of Energy and Water, to make the entire district of Gulmi with about 300,000 inhabitants smoke-free, i.e. to install mud stoves in at least 75 percent of the households. In

June 2013, we installed the first stoves there.

In April and May 2015, violent earthquakes struck central Nepal, destroying thousands of homes, killing over 9,000 people and injuring countless others. Although fortunately none of our stove builders suffered any physical damage, we were nevertheless affected: The epicentre of one of the most violent quakes was in the area of the climate protection project. Together with the houses, about 70 percent of the stoves built so far were destroyed.

In the following months, sometimes even years, the people lived in temporary shelters made of metal sheets and tents. In order to enable them to cook in a reasonably safe and healthy way, we distributed about 7,000 portable stoves made of mud, so-called Rocket Stoves, in the months after the quake.

The Gold Standard's crediting of standard mud stoves with chimneys was suspended for three years until the newly built houses could be used to build stoves again and the stock recovered.



Bel Bahadur hands over a Rocket Stove

In Kenya, we made various attempts to stabilize the stove despite the poor quality of the clay. After many experiments with admixtures and components made of cement, we finally ended up with an inlay made of fired clay. It forms the combustion chamber of the stove and supports the pot, which is exposed to the most mechanical stress during cooking. A welcome side effect of this design was that it provided a secure source of income for the potter Gilbert Mithamo, who supplies the inlays.

This version of the stove has been built in Kenya since 2014. For an additional charge, a luxury version is also available, in which the entire stove is surrounded by a coat of cement.



Kenya: stove with cement coating



At the end of 2014, we received a request from the African Wild-life Foundation (AWF). We were offered to fund a stove-building project around the Simien Mountains National Park in northern Ethiopia to support the communities living on the edge of the park. In March 2015, we carried out a preliminary investigation and found that the Chigir Fечи could also be used at high altitudes in the Simien Mountains. Nevertheless, it still took two years until the first ten pilot stoves were installed.

2016 marked the completion of work at Gulmi in Nepal. It was declared "smoke-free" in December. In the spring, we carried out a preliminary survey of the need for stove maintenance services. The idea was to set up a kind of "chimney sweep" job, where experienced stove fitters would help households with repairs and maintenance work. This would also improve the lifespan and long-term quality of the stoves. The survey confirmed the need and so the starting signal was given for the so-called maintenance project.

Meanwhile, the increasing number of stoves in Alem Ketema and the construction of the pilot stoves in the Simien Mountains made it necessary to achieve official status as an organisation in Ethiopia. In September 2017, we therefore submitted a request to have th“Die Ofenmacher“ approved as a "foreign charity". We started down a winding and rocky road, but with the help of Girma Fisseha we were able to successfully complete it in November 2018. Girma became the first Country Director of the "Ofenmacher" in Ethiopia. To everyone's regret, Girma died at the end of 2020. His achievements for „Die Ofenmacher“ remain unforgotten.

In February 2018, our project in the Simien Mountains started with the first training for stove builders. It was conducted by Abebaw Birhanu, the project leader in Alem Ketema, and the two experienced stove builders Genet Mekeberaw and Yeshehatseway Delelegn.



Registration as "Foreign Charity" in Ethiopia

Also in early 2018, we started with the third district in mid-western Nepal, Arghakhanchi. A year later, in January 2019, the stove construction in Pyuthan district was successfully completed. And in autumn of the same year, the first training for maintenance workers took place in the Pyuthan district, financed by the Georg Kraus Foundation.

The lockdowns in 2020 almost brought stove construction to a standstill in all countries. In Ethiopia, however, they were quickly back to almost normal daily life. In Kenya and Nepal, too, the stove construction figures returned to the old level in the course of the year. It seems that life in the remote villages where the stoves are built is much less affected by the virus than in the cities. So we were able to pass the 100,000 stove mark exactly at the end of 2020.

Regardless of all the developments in the project areas, however, the basis of our work is here in Germany, where we collect donations, maintain communication and carry out the unavoidable administrative work. The board of directors at the time of the foundation was, together with myself, Hans-Peter Daunert as second chairman, Elisabeth Dirr as treasurer, Katharina Dworschak and Maxim Messerer as assessors. The latter still ensures that the average age of the board is not completely out of line.

Later on they were joined by: Matthias Warmedinger, who took over the second chairmanship, Burkhard Dönitz as treasurer and Theo Melcher, who gave new impetus to fundraising. Finally, Robert Pfeffer took over the increasingly extensive tasks of the treasurer. My thanks go to all of them and to the many I could not mention in this short summary due to lack of space, for their tireless commitment.

It has been a moving ten years - in the most literal sense of the word - and there have been numerous individual events that have led us to where we are today. Our success is made up of many small steps and some big ones, and has many mothers and fathers. I thank all those who have given and entrusted us with the funds for projects. For me and everyone else in the association, the ten

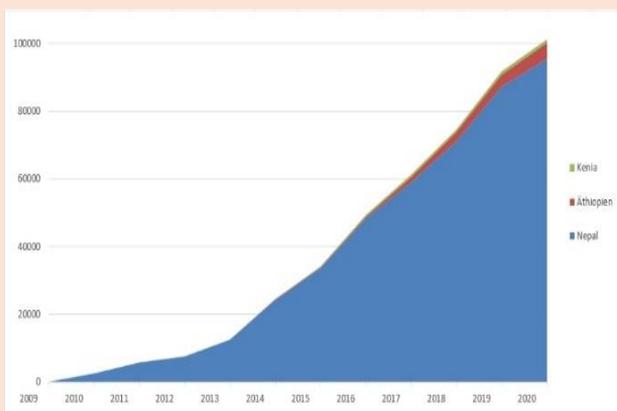
years so far and what we have achieved are a great incentive for the next six-figure number of stoves.

*Frank Dengler*



## More than just a number

The Board of „Die Ofenmacher“ is proud to report that we will have built more than 100,000 stoves by the end of 2020.



Total number of stoves built from 2010 to 2020

But I would like to convey my pride above all to those who have supported us for many years. There are now more than 2,700 different donors who have provided us with revenue. Behind them are private individuals, foundations, associations and companies and donors who use our climate project to compensate for unavoidable greenhouse gases.

Sometimes donations are awards from competitions for the best ideas for charitable actions, sometimes they are funds from the German government for development projects. All these donations are at the beginning of the "technical food chain". In total, more than 1.3 million Euros have been donated since the association was founded almost eleven years ago.

But what is the meaning of the 100,000 stoves built? What results are achieved with them? To answer this,

<sup>1</sup> Source: Average Mileage Passenger Cars: Kraftfahrtbundesamt, CO<sub>2</sub>-Emissionen/km: 130g (Middle Class)

one needs more detailed information about what actually happens to a stove once it has been built over the years. Is the stove used at all? Is it properly maintained? How long does it hold out? How many were destroyed in the 2015 earthquake or other natural disasters? In field studies, we have investigated the cooking habits of stove owners, as well as the durability of the stoves built.

On the basis of this data, we can deduce what results we have achieved with the stoves with smoke extraction built in the last eleven years:

- More than 400,000 people enjoy a significantly higher standard of living, because their living rooms are practically free from the toxic smoke gases of open cooking areas and the typical burn hazards, especially for children, are avoided.

- More than 350,000 tonnes of CO<sub>2</sub> have been saved. This corresponds to the annual CO<sub>2</sub> emissions of 200,000 medium-sized cars in Germany<sup>1</sup>.

- More than 280,000 tonnes of fuel were not required. This is a very important contribution to the preservation of the forests, as reforestation after clearing is rare in developing countries. 250,000 tonnes correspond to the load of more than 17,000 timber trucks.

- More than 200 stove builders are continuously working on the stove construction projects in the developing countries. For the active stove constructors, this income is a crucial contribution to their livelihoods.

So where do we go from here? First, we have to guide the stove projects through the current situation. Not easy, but we are very confident. As a strategic goal, we want to reach another milestone before the end of this decade, namely the next 100,000 stoves.

*Theo Melcher*

Reports from the Countries



Stove Projects Nepal

General Situation in the Country

Nepal was also hit hard by the pandemic. The lockdown came at the end of March 2020 without much announcement, so that six of our stove builders in Arghakanchi were caught by surprise and trapped.

The wave of infection reached Nepal later than Europe, but then very violently. The hygiene regulations and closures of factories and construction sites worldwide also affected many Nepalese workers in India and other countries, who therefore traveled home. In doing so, they brought the virus into the country and down to the smallest village. The health system very quickly reached its limits and unfortunately little credence could be given to the official figures.



Medical oxygen is in scarcity in the country



Distance rules in Nepali

Parallel to the pandemic, there were repeated crises of governance in the country, characterized by internal parliamentary disagreements and mutual motions of no confidence. The consequences were obvious: a lack or complete absence of management of the epidemic situation in the country. Vaccine supplies from India were interrupted because everything was needed in India itself. In the meantime, however, Nepal is receiving vaccines from other countries (e.g., China) and has begun immunizing the population.

Among our employees in Nepal, some stove builders tested positive for the virus, others were sick and had typical symptoms but did not get tested. The hardest struck was our senior stove builder coordinator of many years,

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Bel Bahadur Tamang. He himself and his entire family fell seriously ill and took weeks to recover.

Additionally, Nepal has been affected by extreme weather. For example, in early 2019, there was a heavy snowfall that affected life as far away as the Kathmandu Valley. Heavy and prolonged rainfall is also increasingly causing landslides.



Landslides devastate mountain villages repeatedly

In our stove builder areas, villages in Gulmi and Ramechhap were particularly affected. Before the rainy season it was disproportionately warm and huge swarms of locusts appeared, which destroyed the freshly planted fields, for example in Arghakanchi and Gulmi. During the fight against the insects, our stove builder Hum Bd. Buda Magar was seriously poisoned and had to be treated in hospital.

### Progress in Stove Building

Despite this difficult situation, stove building continued. In 2019, we even reached the highest number of newly built stoves per year ever, more than 16,000. In Pyuthan district, the work was completed. Arghakanchi district formed our main area of operation in 2019 and 2020. In Kavre-Palanchok and Dolakha, the districts where the climate protection project is located, stove construction continued steadily, and in the east, in Udaypur, about 250 stoves were also installed.

However, the demand continues to be high, because alternative cooking on gas (LP gas cylinders) is much more expensive than firewood and is thus used only rarely and very selectively, mostly for tea. There are official government plans to complete electrification of all communities by 2030, providing the opportunity for clean energy for cooking for every household. They are unlikely to be met.

In addition, there is a lack of acceptance in rural areas for cooking on electric plates. People would like light and electricity for their cell phones, but "food needs fire," says the housewife.

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### From the SCN Office

The office of Swastha Chulo Nepal (SCN), our Nepalese partner organization, is the hub of all activities. The manager Anita Badal coordinates and controls the stove builders in all districts. She is responsible for contact with all authorities relevant to the work. Bank transactions, bookkeeping and reporting are as much a part of her duties as project trips and the organization of trainings. Anita is dedicated to her work and is always building bridges between the cultures and ways of thinking of the people in Nepal and Germany. She is clearly a fundamental pillar!



Anita Badal with her children

Of particular importance is the cooperation with the Social Welfare Council (SWC), a government agency responsible for projects like ours. The SWC is responsible for legalizing the introduction of donated funds into Nepal, and it also audits the projects accordingly. Anita submitted the application for the final monitoring in the stove construction areas Kavre Ramechhap and Dolakha. Due to the pandemic, however, this action was delayed again and again and could not be completed yet.

The registration of all our stove builders to the newly introduced Social Security Fund (SSF), a state social and health insurance, had a real project character. This extensive work took a lot of time and nerves until the official

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recognition, but the benefits are great. Now all stove builders and employees are covered by social security! This had a very positive effect, especially during the pandemic.



Advertising for social security

SCN is a registered association in Nepal and has, as usual in Germany, a board of directors. After eight years of chairmanship, Mr. K. P. Maskey resigned from this office for private reasons. Mr. Phanindra Adhikari was unanimously elected as his successor. He has experience from working abroad and with international NGOs. We expect a further very good cooperation.

Since the beginning of 2019 we have been working on the creation of our own website. The first beginnings took place in Anita's living room office. Then we got help from an experienced designer from Germany and in the fall the new website could finally go online:

<https://www.swosthachulo.org.np>



Among all those who build stoves, women are particularly notable. These are women stove builders who are not only among our best, but also became fundamental pillars of their families with the money they earned. In Arghakhanchi, Ambika Pun Magar was even able to bring her husband back home, who was working as a day laborer on a construction site in India, and win him over as a

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"handyman". Together, they increased the number of stoves built and billed, providing them with a secure livelihood. Ambika, a mother of two, has now built more than a thousand stoves and also runs a small farm. A real "power woman"!



Ambika Pun Magar with her husband

Christa Drigalla

## The Mud Stove Maintenance Program

For more than ten years now, mud stoves have been built in Nepal with the support of „Die Ofenmacher“. With good care, the stoves from the early days can still be used today. However, "good care" means that the chimney has to be cleaned regularly and minor cracks in the stove body have to be repaired continuously. When each stove is handed over to its users, this is specifically addressed and explained. Complaints such as "my stove is smoking" or "the pot doesn't fit properly anymore", could consistently be attributed to a lack of care for the stove. A small pilot study in 2018 demonstrated a great need for stove repairs for the Gulmi area and planned a training program for "maintenance experts".

Then, in October 2019, the first special training for the "chimney sweeps" took place in Bhagdulla in the district of Pyuthan. Candidates were experienced stove builders who had already built more than 300 stoves and who would like to work actively in their local area. With the financial support of the Georg Kraus Foundation in Hagen, Germany, a comprehensive training program was developed. The following topics were covered in the five-day courses:

- Technical stove data, standardized rules for construction, dimensions, etc.
- Correct firing (wood drying, lighting), different types of wood and fuel materials.
- Environmental aspects related to deforestation, climate and CO<sub>2</sub> emissions.

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- Health-related topics related to smoke exposure and first aid for burns
- Educational basics, teaching users, persuasion work, etc.
- Business relevant topics, way to self-employment, basics of documentation, etc.
- Practical application of what has been learned
- Conclusion with certificate and assignment of local responsibilities

The training was prepared by Rajendra Bista (coordinator Gulmi) and Kiran Lama (coordinator Pyuthan) on site. Anita Badal and Christa Drigalla traveled to Bhagdulla to give lectures on some topics of the training themselves. The registered 20 participants all attended and worked very actively.



Final photo of the training days for Maintenance Experts

These were highly intensive days, during which a great deal of feedback was received from the experienced stove builders. Role plays were used to practice offering the service independently. This revealed some great acting talent in the group. On the practice day, the freshly trained maintenance experts went to the nearby villages and offered their services: Chimney cleaning, re-repairing the smoke outlet, restoring proper airflow inside the stove, repairing the surfaces of the cooking area.

The first barrier was regularly offering the maintenance service for a fee, because the stove users could actually provide this service themselves. To support the start of this self-employment, we promised to pay half of the costs incurred by the homeowner for two project years.

One example: A repair would cost 150 rupees. The chimney sweep informs the stove owner about this, but only asks for 75 rupees, because the rest is being subsidized by „Die Ofenmacher“. With the documentation and the signed receipt, the coordinator submits these expenses to Swastha Chulo Nepal and receives the corresponding sums for payment to the "chimney sweepers".

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The repairs on site sometimes turned out to be more extensive than expected. We soon had to give up our division into "small" and "large," because those who call in the experts often also have a large repair to do.

In the course of 2020, it also became clear that we had set the introductory prices considerably too low. Experts often spend three to four hours on site for a repair, which is equivalent to the time needed for a new building. Maintenance will still play a role in the future, so as not to cause competition between stove builders and "chimney sweeps".



Expert Manju Mahatara at the repair of a stove

Immediately after the training, the experts were able to begin their work, but were slowed down by the Corona pandemic in the spring of 2020. Nevertheless, almost 3,000 services were accounted for. The focus of the work was in Gulmi.

The maintenance contribution to health and the environment will only be measurable in the long term, but the restoration of a stove's proper function, on the other hand, will be immediately registered and positively noticed by users. Local community representatives are sensitive to environmental issues, because local disasters in Nepal are a direct reminder of the effects of climate change. Thus, some communities are willing to support the stove repairs financially from their environmental budget. This is primarily thanks to our coordinator Rajendra Bista, who is particularly active in this area and carries out valuable educational work in the communities.

*Christa Drigalla*

# Gold Standard®

Climate Security & Sustainable Development

## Climate Protection Project Nepal

### Gold Standard Project GS 1191: “Smokeless Cookstoves for Rural Districts of Nepal”

It is now about five years since a disastrous earthquake struck Nepal, devastating large parts of the country and leaving many families homeless. The area of our climate protection project was hit particularly hard. Many people lost their lives. A large number of livestock were killed.

The reconstruction of the destroyed houses was very slow under the already limited conditions of a poor country. Stove building in the project area was no exception. However, in 2017 and 2018, stove builder activities slowly started up again. And in the two reporting years 2019 and 2020, very good figures were achieved with around 4,000 mud stoves per year.

The distribution among the three districts of Dolakha, Kavre-Palanchok and Ramechhap was, however, as in previous years, extremely different. Swastha Chulo Nepal did not succeed in resuming the distribution of stoves on a large scale in Kavre-Palanchok and Ramechhap. There were several reasons for this: Many local residents no longer wanted wood stoves in their new homes. Most people made temporary repairs to their old house and then used it as a kitchen, even though they knew that this was harmful to their health. The government in Nepal also encouraged people to use electric cooking, even though cooking facilities were lacking and the infrastructure for providing electricity was still hopelessly backward and unreliable.

In the district of Dolakha, the situation was different. Many of our stove builders come from there and were therefore happy to work in their home region again. The local population was very open-minded towards the new mud stoves and also wanted a new stove in the new house. Dolakha reported the construction of 4,049 kitchen stoves in 2019 and a total of 3,397 stoves installed in 2020, while the other two districts together only reported just under 500.

These figures already include the next serious setback for stove builders in Nepal: the Corona pandemic, which reached even the last corner of the country. In April 2020, no stoves were reported at all, and even in the following months, stove construction figures did not reach the pre-crisis level.

The number of stoves installed allowed the project to pick up the thread and get back on track with Gold Standard after a three-year earthquake-related suspension. However, an adapted project description first had to be validated by Gold Standard. After that, the final report on the monitoring period from the beginning of May 2018 to the end of July 2019 could be prepared.

The report is based, as in the last two periods until the earthquake, on the field visits of our representative Tobias Federle and his team. 515 mud stoves were inspected in the field and stove owners were asked about their usage habits and experiences with the stoves. The feedback was mostly positive, as it was before the earthquake. Housewives were absolutely satisfied with the clean cooking facilities and greatly appreciated the savings in firewood. There were hardly any total failures of the stoves. Three-quarters of the cooking for the families was done on the mud stove.

Many recipients still kept their traditional cooking place and cooked, for example, the cattle fodder on it. However, since this device was almost exclusively located outdoors, cooking there did not affect people's health. And this is the most important result for „Die Ofenmacher“: smoke-free cooking for healthy families.

To Gold Standard, the monitoring report was able to report a total of 9,460 smoke-free mud stoves in operation at the end of July 2019. By the end of 2020, there were 14,540 stoves. After intensive assessment and verification of the CO<sub>2</sub> savings calculations, Gold Standard gave the go-ahead.

**Our contribution to global climate protection is 6,696 tons of CO<sub>2</sub> saved and credited to the association as VER certificates.**



... and once again a clean stove for the housewife

Reinhard Hallermayer

### Stove Projects Ethiopia

The retrospection unfortunately starts with sad news. On December 20, 2020, the first Country Director of „Die Ofenmacher“ in Ethiopia, Girma Fisseha, died after a long illness.

He came to Germany from his homeland Ethiopia in 1976 and became head of the Ethiopia department of the Ethnological Museum in Munich. In 2008, Girma Fisseha received the Federal Cross of Merit.



Since 1996 he advised the association "Partnership Alem Ketema-Vaterstetten" in its work and also coordinated on site in the partner town.

Girma advised and supported the registration of „Die Ofenmacher“ in Ethiopia and had a significant share in the success. Since 2018 he was our country representative. After an operation in October 2020 in Munich, he returned to his home country and died there a few weeks later at the age of 79.

As his successor we appointed his former deputy, Abebaw Birhanu.

### Alem Ketema and Merhabete

In 2018, stove building in Merhabete was declining compared to the previous year. The same was also apparent for 2019. On the other hand, with the official registration of „Die Ofenmacher“ in Ethiopia at the end of 2018, the way was open for an intensification of the projects.

In March 2019, Katharina Dworschak and I travelled to Ethiopia to present and register the organisation, which had been approved by the federal authorities, with the regional authorities of Amhara in Bahir Dar as well. Furthermore, we investigated the causes of the reduced stove construction in Merhabete.

After a series of visits to rural households and discussions with women stove builders, we were able to identify a variety of causes for the slowdown in the spread of stoves. However, it was encouraging to note that during all the visits to the households, the stoves were found to be in excellent condition and the users were extremely satisfied.



Meeting with women stove builders

A number of measures were agreed with Abebaw, the local coordinator, including a stove building campaign in Alem Ketema, which started back in April.

At the end of 2019, a large "Quality Reinforcement" training was held with 57 participants. The aim was to further improve the quality of the stoves and to eliminate any defects in the product and processes that had occurred up to that point. This was followed by a training course for another 26 women in February 2020. In total, we have now trained 150 mostly female stove builders in Merhabete.

Of course, Abebaw and his team continue to organise awareness events and cooking shows. These are village gatherings where the benefits of a stove are demonstrated to residents in the most practical way possible.

In 2019, our stove builders erected 800 stoves, and by 2020 they had erected 1,353, more than in any previous year. The Corona pandemic initially caused a brief halt in production in the middle of the year. However, the virus did not have a lasting effect on life in the villages and stove building remained almost unaffected in Merhabete over the course of the year.

*Frank Dengler*

### Simien Mountains

Towards the end of 2018, the project in the Simien Mountains had largely come to a standstill. In the summer, „Die Ofenmacher“ and the African Wildlife Foundation (AWF) agreed that a decision had to be made regarding the project: Resumption or termination.

In October, Katharina Dworschak and I therefore travelled to Debarq together with Abebaw Birhanu to explore the situation on the ground and decide whether the project should be continued.

Abebaw Azanew, the new head of the Park Office, expressed great interest in the project, which he confirmed by assigning his colleague, Amanuel Ashagre, as a potential local coordinator and promising us support with one of the critical points of the project, the transport of materials.

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The assumption that there was a demand for the stoves not only in the villages around the park but also in the town of Debarik was confirmed. Since a large part of the firewood used by the residents of Debarik is cut in the national park, the park also benefits from the stoves in the town.



Village assembly in Milligebsa

Half of the stove builders who were trained in spring 2018 expressed interest in working for the stove builders again, as did the potters who make the chimney end pipes. The stoves built so far in the households in Milligebsa and Debarik were in very good condition and were obviously appreciated by the owners.



Chigir Fechi in Debarik in excellent shape

The sum of the positive feedback led to the decision to continue the project even if no further funding from AWF was forthcoming. However, the stove builders were to be extended to Debarik and the surrounding villages.

However, to get it up and running again, further training was needed, which was planned for spring 2020. The AWF agreed with this perspective and even offered funding again. The planning for the training had already been completed and everything was ready when the Corona

## Smoke-free Cooking Stoves

pandemic broke out and all activities were stopped. The project remained in this state for the rest of 2020.

*Frank Dengler*

## Stove Project Kenya

After the training at the end of 2018, stove building in the villages around Ol Pejeta experienced a revival. In 2019, our new stove builders were able to set up 184 stoves, more than twice as many as the year before.



Cement sheathed stove in Kenya

This prompted Hillary Mutuma, the local coordinator, to start developing alternatives. He sought cooperation with Gilbert Mithamo, the supplier of clay inlays, and two vocational schools in Nanyuki.

The "Jiko smart" resulting from this cooperation has been in use since spring 2021, which will be reported on in the next annual report.

*Frank Dengler*

### Pilot Project in Togo

In 2018, the small NGO Africavenir contacted the Senior Expert Service (SES) to ask whether a stove project in Togo would be possible. Since the organisational and financial capacities of „Die Ofenmacher“ were already exceeded, another donation-financed project like in Ethiopia and Kenya was not an option. However, Frank Dengler, Katharina Dworschak and I wanted to get involved in an exploration phase with the construction of pilot kilns in Togo. The following goals were set:

- Transfer of know-how on the construction of smokeless mud stoves of the "Nepal brick stove" type
- Construction of ten pilot stoves in local households
- Collecting information about the cooking habits and facilities of the households
- Assessing the technical conditions in the region (clay quality, tool and material suppliers)

This would allow initial conclusions to be drawn about the chances of success of a stove project in Togo: Is the Nepal stove suitable for local cooking habits?

In advance, Africavenir had designated three members to learn the craft of stove construction. Pilot mud stoves were then constructed in ten selected households in August 2019. The participants were taught the individual steps of stove construction so that they were able to build stoves on their own at the end.



Preparation of the mixture of mud

After one month of operation, the stoves were inspected and a survey was conducted among the owners. No problems were encountered. The stoves are well suited for the cooking habits in Togo and so far meet all requirements. A further survey at the end of 2019 after more than three months of use confirmed this impression.



First firing and handover to the owners

Already during the construction phase of the pilot stoves, it became clear that there were different opinions within the management of Africavenir in which part of Togo further stoves should be built. As a consequence, Jean Philippe Ahli, the leader of the project, was no longer willing to continue with stove construction under the umbrella of Africavenir. Through a contact with the German NGO Nature Office, which runs a larger forest project for CO<sub>2</sub> compensation in cooperation with the Togolese organisation Ecocent, Jean Philippe was able to continue to contribute his stove-building experience as an employee of Ecocent.

Despite the Corona-related restrictions, another 22 stoves were built and put into operation in the Fokpo area by the end of October 2020.



A first smoke-free stove in Fokpo in the southwest of Togo

After that, Ecocent is planning a major advertising and information campaign in the surrounding communities to make the advantages of smoke-free stoves known to the population. We, as „Die Ofenmacher“, will continue to support this project in the sense of a free franchising model in order to promote the spread of the stoves outside our own projects.

*Ernst Wehreter*

### Review of our Help

The distribution of smoke-free mud stoves is, according to the purpose of the association of 'Die Ofenmacher', first and foremost a contribution to the preservation of health of the rural population. The hazardous smoke is eliminated from the living rooms. Families can breathe clean air. Wood consumption for cooking is roughly halved. This not only relieves the wife of the house of the need to provide firewood, but also protects the surrounding forests. Health care, environmental protection, climate protection means an all-round package for the development of the country. This is true for Nepal as well as for the African regions.

### Stove Building Figures

	2018	2019	2020
Nepal	12.043	16.208	8.107
Äthiopien	1.004	800	1.353
Kenia	80	184	128
Total	13.127	17.192	9.588

During the 2019/2020 reporting period, the Ofenmacher had a total of 26,780 stoves built. On average, a family in rural areas consists of five people. As a result, the living conditions of around 134,000 needy people have been fundamentally improved. In Nepal, Swastha Chulo installed stoves in eight districts of the country during the reporting period.

The figures also clearly reflect the impact of the global corona pandemic. The lock-down in all stove-building districts caused the numbers to collapse to almost half. Nevertheless, activities continued under the circumstances.



This house in Nepal owns the stove with the registration number CZ1633.



Fatima's healthy stove in Ethiopia



"The harmful smoke gases now go directly to the exterior," Tadla is pleased to say.

### Active Stove Builders

In our project areas, around 130 stove builders were active in each year during the reporting period, installing 26,780 new stoves. This means an average output of 250 stoves per year per woman or man. In return, they received an average wage of around €700 per year from Swastha Chulo in Nepal. This sum corresponds to an average annual income in Nepal. It is welcomed as an additional income for our stove builders, who earn their living mainly from farming.

	2018	2019	2020
Nepal	85	58	41
Äthiopien	80	64	75
Kenia	9	10	8
Total	174	132	124



Last touch and the healthy oven is ready

### Training of Local Experts

The way to a better life for the people in the global south is primarily through a sound education. The Ofenmacher are therefore pleased to be able to give a small but significant push by promoting local workers in the field of stove construction. The stove builder training is help for selfsufficiency. Women in particular will benefit from it.

	Training Courses	Participants	Including Women
2019	3	84	68
2020	1	26	26
Total	4	110	94



A group of proven stove builders after receiving certificates recognizing their achievements

### Steps to Sustainability

The UN has defined 17 Sustainability Development Goals (SDGs) for the year 2030 to which development projects in the global South should be related. Each project should identify the goals to which it makes substantial contributions.

The stove projects of the Ofenmacher contribute to the following sustainability goals of the UN:



## Stovebuilder Genet in Ethiopia

Genet's story is to demonstrate what donations can achieve. It is not only the stoves themselves that are supported, but also the people who are given a chance.

Genet lives in a small village not far from Alem Ketema. We drive as far as we can on a bumpy dirt road by car, then walk along narrow paths to her little house. All the neighbours are there and Genet has prepared delicious food - on her self-built stove-maker Injera stove.

Genet is 33 years old. She started with us a good six years ago as one of the first stove builders in Ethiopia. At that time, she was in a very bad, hopeless living situation. Abebaw, our local project manager, always says: „Die Ofenmacher“ saved Genet“.



She grew up in this village. Her parents farmed a small piece of land and were able to feed the family to some extent. Genet was even able to attend school, which is why she can read and write. But then her father died suddenly and shortly afterwards her mother. Suddenly she was on her own and looked for a way out in an early marriage far away from home.

But unfortunately she did not marry a good man. He treated her badly, was dominating and lazy, did not take care of her and their child. After a few years, Genet decided to take a rocky road and leave her husband. She divorced him and went back to her home village with her little daughter.

Without a family, without state support, it was very difficult for her. Her house had almost fallen into disrepair. She tried to grow vegetables and cereals, but there was not enough to keep animals. Her little daughter was still a baby. According to Abebaw, Genet herself was in a very poor nutritional condition. It was no longer possible for her to produce enough food for herself and her child.

In this desperate situation, Genet heard about „Die Ofenmacher“, contacted Abebaw and did not let up until she had a job. And that was the beginning of her journey out of poverty. Genet very quickly proved to be an extremely reliable, hard-working and good worker. Within a very short time, she was one of the best stove builders.

When we then started our second project in Ethiopia in the Simien Mountains, we needed someone with experience to accompany us for several weeks in the remote regions. Genet was immediately ready to accept the challenge and come along. It is by no means a matter of routine for a single Ethiopian woman to embark on such an adventure. But there, too, she proved herself.

In the meantime, Genet is permanently employed as a supervisor. She no longer builds stoves herself, but checks the quality of the stoves built and corrects mistakes made by her former colleagues. In the spring of 2019, during our trip to Alem Ketema, we were able to see for ourselves the excellent quality of the stoves built, which is certainly due in no small part to Genet.



Genet with stove building students in Debarq

Genet has a regular income with „Die Ofenmacher“. She was able to restore her parents' house and repair the roof. Her home is comfortable and she is obviously well respected by the neighbours. Her little daughter is nicely dressed and goes to school. Genet is self-confident and obviously on the right track.



You can watch Genet on a [youtube Video](#) from the Simien Mountains. The video has attracted a lot of interest in Ethiopia, not least because of the calm and competent way she explains stove building to her people.

*Katharina Dworschak*

### Climate Protection and Compensation

Our local partner Swastha Chulo Nepal (SCN) is not called that by mere accident. The name means "healthy stove" in Nepali. A healthy stove in the house drastically reduces air pollution in the living spaces. It is a milestone of health care for a whole family.

However, the simple mud stove has some effects far beyond the domestic environment: the keywords are environmental and climate protection, a direct consequence of the wood consumption, which can be roughly halved. Less wood cutting protects the forests, reduced fuelwood consumption saves CO<sub>2</sub>. But stop! Isn't wood a renewable resource and thus CO<sub>2</sub>-neutral? This calculation applies to Germany. Wood that has been cut down in our forests is reforested in our country. The CO<sub>2</sub> released during the burning process is bound again in the growth phase. The result is CO<sub>2</sub> neutrality in the long term. The situation is quite different in the countries of the global South. There, much more is deforested than grows back, so that the CO<sub>2</sub> balance is strongly negative. For Nepal, 85 per cent of firewood is considered a non-renewable energy source and therefore less burning demonstrably means a substantial reduction in harmful emissions.

The amount of CO<sub>2</sub> saved is calculated and submitted for verification. For the past three and a half years of the climate protection project (three years of suspension due to the earthquake have been deducted), the Gold Standard Foundation confirmed that our project has saved a total of 15,523 tonnes of CO<sub>2</sub>. This amount corresponds to the emissions of about 1,800 German citizens in one year.



Registered Gold Standard Nepal Project

At this point I would like to note that all stove projects in Nepal and Africa are implemented in the same way. Therefore, they all save CO<sub>2</sub>. Outside the delimited Nepal project, however, „Die Ofenmacher“ have not applied for a climate protection project, so there is no proof of CO<sub>2</sub> savings there. However, the positive effects on climate protection are the same.

The climate compensation mechanism allows industrial countries to offset a part of their CO<sub>2</sub> emissions through savings in approved climate protection projects. However, this type of CO<sub>2</sub> reduction should only be used for

unavoidable emissions. For greenhouse gas emissions, priority is given according to the following gradation

1. Avoid
2. Reduce
3. Compensate

Voluntary climate compensation is open to everyone: Private individuals, organizations, companies and government agencies. „Die Ofenmacher“ offer their VER certificates (Verified Emission Reductions) to all interested parties for compensation. For a donation of 15 €, one tonne of CO<sub>2</sub> is set aside (for association members already for 12 €).

Our association has to date been able to retire 8,826 VER certificates (as of October 2021) and use the donations received for the construction of new stoves. The retirement of the globally unique and identifiable certificates is publicly visible to everyone. This is a guarantee that the amount of CO<sub>2</sub> has been permanently removed from the global cycle.

PROJECT ISSUED TO	Smokeless Cook Stoves for Rural Districts of Nepal (GS1191)
SERIAL NUMBER	GS1-1-NP-GS1191-16-2019-19897-71-170
STATUS	⏏ Retired <i>Note: Klimaneutralstellung Gas-Produkte der meistro Energie Gmb</i>
NUMBER OF CREDITS	100
ISSUANCE DATE	Jul 31, 2020
RETIREMENT DATE	Aug 21, 2021

Example of retirement of 100 tons CO<sub>2</sub>

Our climate protection donors come from all the groups mentioned above. Particularly outstanding are the customers of Wikinger Reisen GmbH. This travel company offers every customer a customised offsetting of their trip through the certified stove-maker project when booking.

The reporting period shows two very different years. In 2019, Greta Thunberg's campaigns resulted in a significant upward trend in climate protection donations. However, this only lasted until the first quarter of 2020. Then came the Corona pandemic and with it, the travel agencies in particular were thrown into a sometimes existential crisis. Climate protection donations collapsed by up to 90 percent.

*Reinhard Hallermayer*

## Night of Choirs in Vaterstetten

It has become a traditional event, the "Chornacht of Vaterstetten". Here, in the community east of Munich, it took place for the 14th time in July 2019 and has established itself since 2001 as an enthusiastically received cultural event in the surrounding area.

It was again organised by the choir night team of the parish "Zum Kostbaren Blut Christi" and the location of all voices and sounds was the parish church. The first choirs started at 6.30 p.m. and there was still a lot of activity two hours after midnight. That fact in itself showed the enormous interest. Twelve choirs of all ages offered a wide range of music, from gospel to jazz to classical church music, and convinced with excellent quality.



Atmospheric scene in front of the church

The contributions changed every quarter of an hour, so people could leave the church during the breaks and quench their thirst and hunger in the festival tent or at the bar on the church forecourt.

Admission was free of charge, as all performers gave up their fees. However, the visitors were asked to donate to two social and humanitarian projects: the day care of the Neighbourhood Assistance Vaterstetten and also the

Ofenmacher. The Ofenmacher had set up display boards where we were able to inform the numerous visitors in detail about our work. And we have to thank the team of organizers, with Christian Peter as the moderator, that the visitors of the Choir Night developed a real curiosity about our projects, in addition to their musical interest. He never got tired of drawing attention to the exhibitions after each contribution. Collections were then made "by collection bag".



Twelve choirs, great interest

But not only the donations of the music-loving visitors went one hundred percent to the two projects, but also all the income from the catering. Of course, this was only possible thanks to the broad commitment of the many active members of the congregation.

The result of the choir night speaks for itself: a check with 6,420 € could be handed over to the Ofenmacher. We would like to thank all those responsible for and helping at the Vaterstetten Choir Night and have immediately forwarded the donations to the stove-building projects in Nepal, Ethiopia and Kenya.

*Theo Melcher*

## 100th Anniversary of Hagos eG

Hagos eG is the cooperative of German installers of ceramic tiled stoves and air heating systems. Over 1,300 companies in this sector are members of the company. Hagos supplies the specialized trade with all components, materials and tools necessary for the production of stoves and fireplaces. In addition, Hagos serves the industry through continuous research and development of products and systems as well as various services.

Hagos eG celebrated its 100th anniversary in 2019 with more than 1,100 guests in Stuttgart. It gave Christoph Ruopp the opportunity to present the Ofenmacher and especially the stove construction project in Ethiopia in detail. Christoph Ruopp has long been dedicated to the stove builders in Ethiopia with all his expertise. One outstanding result of his commitment is the "Chigir Fechi" type of stove, which he developed locally and which has been built there ever since.



Christoph Ruopp reports from Ethiopia

At the anniversary celebration itself, no donations were collected, but Hagos eG had published a book on the occasion with a chronological journey through the company's history. It was presented to the guests during the celebrations and offered for sale. More than 2,500 customers were also able to purchase the book at a later date. The entire revenue from the sale of the book, a five-figure sum, was donated by Hagos to „Die Ofenmacher“ to finance the stove construction projects in Ethiopia. Newspapers, trade journals and the web reported extensively on the anniversary, the celebration and the humanitarian aid provided by our association in Africa.

*Theo Melcher*

## Allianz für Entwicklung und Klima (Alliance for Development and Climate)

Since August 2019, we have been a member of the Alliance for Development and Climate, an initiative launched by the German Federal Ministry for Economic Cooperation and Development, which was transformed into a foundation under civil law in 2020. It focuses on climate protection projects for the voluntary compensation of greenhouse gases in developing and emerging countries. On the one hand, the aim is to capture the gases or reduce emissions. On the other hand, the aim is to promote economic and technological progress, protect the environment and biodiversity, and improve the living conditions of local people. The starting points are the 2030 Agenda and the Paris Agreement of the United Nations.



The alliance is relying on various measures to achieve this. A project platform is to be created for buyers and sellers of CO<sub>2</sub> certificates within the framework of the voluntary market. In addition, initiatives are to be launched to make the certificates better known to the public and the media.

For us Die Ofenmacher, the website of the Alliance for Development and Climate Foundation | BMZ is a helpful tool. It bundles the presence of several offset partners and thus also offers us as a small organisation the possibility to offer our CO<sub>2</sub> certificates for retirement to a larger circle of interested parties. We have already been able to hold initial talks with other potential partners.



In addition, the regular "supporters' circle meetings" with project fairs, workshops and lectures on professional exchange have already helped. We get to know the people involved in other compensation partners, can intensify the exchange of experiences and discuss the first possible areas of cooperation.

*Ernst Wehreter*

### Demonstration Stove in Heidelberg

In spring 2019, we received an invitation from the habito organisation in Heidelberg to set up a Nepalese-style mud stove in the organisation's intercultural multi-generational garden. We agreed that we would organise the construction as a kind of training course, where visitors could try their hand and experience what it feels like to build such a stove.



This is the direction to the mud stove building course

After careful preparations, the time had come on 24 August: the bricks had already been made a week earlier and had had enough time to dry, the place for the stove had been prepared and provisionally protected from the rain with a tent. A stable shelter was to follow later. Christa travelled from Pellworm, Katharina and I came from Munich. About 20 volunteers came and tested their skills in working with clay and bricks - successfully, as it turned out in the afternoon. There, still damp but very attractive, stood the first Nepal stove in Heidelberg.

So now there is a demonstration object for our work in the project areas not only in the north of Germany, on Pellworm, but also further south.



Concentrated work is performed



The Ofenmacher would like to thank Anna Krämer and habito e.V. for the friendly reception, the organisation of a very interesting and cheerful event and the opportunity to present ourselves with the stove.



Part of the participants with the finished stove

Frank Dengler



Expenses

Expenditures of Years 2019 and 2020

Expenses	2019	2020
Project Funding, Project Guidance	198.281,71 €	144.688,00 €
Fees Climate Protection Project	5.556,30 €	988,71 €
Administration, Promotion, Public Relation Work	4.142,91 €	2.702,28 €
Other Expenses	3.306,64 €	230,50 €
<b>Total Expenses</b>	<b>211.287,56 €</b>	<b>148.609,49 €</b>

The objective of our non-profit association is to ensure that 100 percent of all donations for stove construction reach the project countries as humanitarian aid. The promotion of the stove building projects is therefore at the core of the association's activities and, with over 95 percent of the expenditures, is the absolute top priority. All other costs are comparatively low.



Allocation of expenses to the segments

Distribution across projects and countries

Expenditures for Nepal account for the bulk of project funding. The reliable local partner, Swastha Chulo Nepal, and many trained stove builders enable the installation of thousands of mud stoves in this area.



Shares of the countries in project expenditures

The implementation of stove projects in the countries requires consistent monitoring and control by „Die Ofenmacher“. In addition to regular Skype meetings between the project supervisors Christa Drigalla and Frank Dengler with the project managers in Nepal and Africa, the work on site is inspected during project trips. These personal meetings are a source of valuable impulses for the work and motivation of the whole association. By the way, the costs of the trips are covered by the project leaders themselves.

In 2018, due to increased costs, the flat price for the production of a stove in Nepal had to be increased to 12 euros per unit. In Africa, the price is currently higher due to the more complex construction and the lower number of units and is around 26 euros.

**Each stove is 12 Euro!**

### **Non-profit association "Die Ofenmacher e. V."**

1. Chairman: Dr. Frank Dengler  
2. Chairman: Matthias Warmedinger  
Treasurer: Robert Pfeffer  
Assessor: Theo Melcher  
Assessor: Dr. Maxim Messerer

The association "Die Ofenmacher e. V.", Munich, has been declared by the Munich Finance Office on 30.10.2018 as an exclusively and directly tax-privileged charitable and non-profit organisation in the sense of §§ 51 ff. AO as serving exclusively and directly tax-privileged charitable and non-profit purposes within the meaning of §§ 51 ff.

### **New account for donations:**

Die Ofenmacher e. V.,  
IBAN: DE88 8306 5408 0004 0117 40  
BIC: GENODEF1SLR, Deutsche Skatbank

For climate compensation please enter the keyword:  
Climate protection or the number of tons of CO<sub>2</sub>