



# Dutch approach for clean cooking solutions

Dutch public and private actors join hands to tackle in-house air pollution by promoting Clean Cooking Solutions. Together we strive for healthy living conditions, especially for women, and less environmental damage due to deforestation. This approach offers great opportunities for carbon market development and innovations geared towards the cleanest solutions!



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# Dutch approach for clean cooking solutions

Rooted in the Dutch tradition of constructive cooperation between public and private stakeholders – better known as the "polder model" – Netherlands based private, governmental, development and finance partners are aligned in their contribution to the ambitious goals of the Global Alliance for Clean Cookstoves (GACC).

Adhering to a market based approach, we have the ambition to boost impact at the Base of the Pyramid through universal implementation of clean cooking solutions with a keen focus on the following three areas:

- 1. Clean cooking: in our support of market development and innovation of improved cooking solutions, we particularly push to stimulate demand for- and scale-up of clean- and affordable cooking and healthy living environments. The cleanest solutions such as biogas and tier four biomass stoves are preferred, albeit that we recognize that, in the short term, also lower tier solutions will be necessary, being the affordable solution for larger populations. All these clean cooking solutions will boost health- and economic impacts for vulnerable people in low- and middle income countries.
- 2. Environment: clean cooking solutions contribute to climate change mitigation and the avoidance of deforestation. Through growing global investments in low carbon development we will boost environmental, health and economic impact for vulnerable groups those most affected especially for women.
- 3. Off-setting: we actively create awareness on climate change impact and promote the sales of offset in The Netherlands to consumers and corporates who have a surplus carbon emission. We do this through innovative financing and business models such as the sale of cookstoves and other climate neutral products and services.

# **Dutch Ministry of Foreign Affairs and Netherlands Enterprise Agency**

The government of the Netherlands strives for an ambitious international climate change regime and supports developing countries with their transition towards resilient, low carbon development paths, with particular attention for low-income countries and gender.

The Netherlands supports the ambitions of the Global Alliance for Clean Cooking and commends its global leadership to help people to move beyond traditional ways of cooking (three stone fires) and to have clean kitchens in their houses. The Netherlands has advocated for clean cooking solutions for many years. Since 2005, the Netherlands has invested over 150 million Euro in support of markets for clean cook stoves in low income countries. Support was provided through programs promoting domestic biogas both in Asia and Africa, through the Energizing Development program, and through a sizeable number of partner organizations like the World Bank, SNV, Hivos, Philips, FMO and NL Enterprise Agency. In 2005, the Netherlands targeted to reach 10 million people with access to energy in 2015; last year we surpassed the target and have reached 14 million people.



The Dutch government has been supporting the Global Alliance since 2011 and continues its support during the Alliances' second phase. Through its partners the Netherlands will remain at the front of developing and up-scaling markets, strengthening capacities, and of continuous innovations towards clean, climate friendly and inclusive cooking and kitchen solutions.

For the period 2014-2018, the Netherlands will provide the following support to clean cook stoves:

- Support the national programs for domestic biogas in Burkina Faso, Ethiopia, Kenya, Tanzania, and Uganda through the second phase of the Africa Biogas Partnership Program, targeting 100,000 households by 2017 (contribution 20 Million Euro).
- Support the third phase of the Energizing Development EnDev program (tentative contribution of 30 Million euro).
- Support the early launching of the GACC/ Deutsche Bank Working Capital Fund, and strengthen national capacities on clean cook stoves in 3 GACC priority countries (tentative contribution 4 million Euro).
- Support innovative clean cooking activities of the World Bank through the Energy Sector Management Assistance Program (ESMAP, total contribution 27.5 Million USD, part of which to clean cooking) and the Asia Alternative Energy Program ASTAE (total contribution 12 Million USD, part of which to clean cooking).



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#### **SNV** Netherlands Development Organisation

SNV Netherlands Development Organisation (SNV) is a not-for-profit international development organisation. Founded in 1965, we have built a solid local presence in many of the poorest countries in Asia, Africa, and Latin America. In Renewable Energy, we provide clean cooking, lighting, and powering agriculture solutions that are locally adaptable and scalable. To date, we have facilitated access to clean energy for over 3 million people in low-income countries worldwide, through a market-based and sector development approach. Since the early nineties SNV has been setting up biogas sector programs which have resulted in the construction of more than 620,000 biogas units in three continents.

Since the launch of the Global Alliance for Clean Cookstoves in 2010, SNV Netherlands Development Organisation, as one of the founding members, has contributed to the ambitious GACC goals. SNV has been building capacities for the adoption of clean cook stoves and fuels in households in more than 20 developing countries in Asia, Africa and Latin America. Currently SNV has biomass stoves programs in more than 15 countries including the GACC focal countries Kenya, Uganda, Ghana and Bangladesh.



For the 2nd phase of the Alliance (2015-2017), SNV has the ambition to facilitate the deployment of one million clean cookstoves, including biomass as well as biogas stoves. These clean cooking solutions will bring benefit to about five million people in Africa, Asia and Latin America. The total expenditure for this period is estimated around USD 107 million, excluding the investments by the households. Furthermore SNV will commit an amount of USD 190,000 for an action-research on the health related effects of cookstoves in Cambodia and Kenya.

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# **Philips**

Philips' ambition is to create impactful innovations that matter to people and address the key challenges that confront society; aligned to this Philips supports the global call for action on climate change and low carbon emissions especially in emerging markets. In Philips, we are cognisant of the fact that clean cooking has a direct positive impact on the environment as well as the health and well-being and income of people. This is why for the the last 3 years, Philips has invested in the design and manufacturing of an innovative fan driven cook stove that will improve the lives of those who rely on wood or biomass for their daily cooking. These specially designed stoves are extremely efficient and significantly reduce the use of wood as fuel. The cook stove can reduce smoke and carbon monoxide emissions by more than 90% compared to an open fire thus reducing the health risks of indoor cooking. The cook stove utilizes pellets, wood or other biomass for cooking in a healthy, environmental friendly and fuel efficient manner for families or small businesses for whom, other cooking fuels are scarce, or expensive.

In support of the ideals of the Global Alliance for Clean Cooking, Philips is currently implementing different models of the cook stove in Africa that



will ensure households adopt clean cooking technologies. We are supplying fan powered cook stoves in Malawi as part of a study by Liverpool School of Tropical Medicine (Cooking and Pneumonia Study) to understand the relationship between cooking and pneumonia in children under 5 years; we are testing fuel based cook stove models in Rwanda and Zambia; and in Kenya we are testing different financing and go-to-market models to ensure that this solution become accessible to people that would not be able to afford them otherwise. Our ambition is to have 1 million households in Africa adopt these technologies by the year 2018. In the next one year, Philips will continue to invest in research, production and distribution of fan driven cook stoves and together with our partners, support and contribute to the study of the health benefits of clean cooking.

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#### **SimGas**

SimGas' ultimate goal is to make renewable energy and sanitation solutions accessible for all. SimGas designs and produces revolutionary, high quality, mass-produced biogas systems that make affordable and clean cooking energy available for millions of rural households. By doing so, we create healthy and safe environments for rural households while contributing to the reduction of deforestation and carbon emissions. Having our own in-house factory in Tanzania, SimGas is already the largest supplier of biogas systems in Africa. We have the ambition to become the main supplier of sustainable and decentralized household energy and sanitation systems in Africa and Asia.

SimGas was awarded a grant from GACC's Spark Fund in 2014. The support of GACC includes financial and consultancy support to improve the distribution efficiency, redesign a number of system components, address and incorporate gender aspects and improve impact measurement. As a Spark grantee, we have regular contact with the GACC, to discuss the progress in order to contribute to the Alliance goal to increase access to clean cooking.



By 2017, SimGas plans to:

- sell 67,500 biogas systems to households in Africa and India;
- invest USD 8.8 Million in Capital Expenditures (e.g. production lines in East Africa and India) and R&D:
- setup a production line for improved biogas stoves in East-Africa;
- implement innovative customer finance,
   -service, and distribution models;
- develop and bring to market additional biogas products for sanitation, milk chilling, cooking equipment, remote sensing and pressure regulating.

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# **African Clean Energy**

African Clean Energy believes that dangerous cooking smoke should be a thing of the past, and will strive continuously to innovate on its products and distribution methods, and ensure that truly clean cooking and access to basic electricity becomes available to all.

African Clean Energy has been a long time member of the Global Alliance for Clean Cookstoves. Its commitment is to offer a viable, scalable, and locally produced stove that will help fulfill its mandate without compromise.

African Clean Energy plans to continue providing clean energy technology through products such as the ultra clean biomass cookstove, and lead campaigns to generate awareness on the cooking revolution.



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#### **BIX Fund**

BIX Fund provides impact finance to grow markets for products that improve lives at the Base of the Pyramid.

We unlock demand for Essential Household Products, such as Clean Cooking Solutions. By monetising impacts, BIX Fund improves the route to market of such products and enhances affordability to BoP consumers at the same time.

By investing in these value chains the fund achieves the following:

- Significant boost of Social Impact for underserved people
- Competitive Return on Investment (ROI) to its investors
- Vital and growing 'market' for monetized social- and environmental impacts

BIX is one of the preferred partners of the Alliance in the execution of Capacity Building and Business Development from the dedicated facility the Alliance has made available for the Clean Cookstove sector. Through personal involvement we have been instrumental in creating the Alliance with other key stakeholders and Jeroen Blum (our managing director) served on the Alliance board from 2010 to 2013.



BIX Fund is a US\$ 30-40m Social Impact fund. We provide impact finance to grow markets for products that improve live at the BoP. The Fund will unlock demand for Clean Cooking solutions through innovative use of Impact-Based Pre-finance.

In its 10 year life, the fund will deploy its capital to reach over 5 million households and will catalyse in access of 50 million impact units (such as "carbon credits"). Revenue from future carbon credits and other potential impact certificates will be used to repay our pre-financing with a financial return.

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Opening doors to essential household appliances

#### **FMO**

FMO Netherlands Development Finance Company is the Dutch development bank. We support sustainable private sector growth in developing and emerging markets by investing in ambitious entrepreneurs. FMO believes a strong private sector leads to economic and social development, empowering people to employ their skills and improve their quality of life. Renewable energy is a key sector for FMO. In middle-income countries, we invest in sustainable energy. In low-income countries, we invest in energy projects that enable access to energy, with a preference for sustainable solutions. Our projects include investments in Peru, Nicaragua, South Africa, Uganda, Mongolia, India and many other countries. Technologies used in our portfolio are diverse such as wind, hydro and geothermal and solar-panel systems for homes in rural villages. FMO has engaged in Climate Investments such as sustainable forestry, forest carbon (REDD+) and biodiversity conservation projects that address CO<sub>2</sub> issues from global warming.

The challenge for FMO is to facilitate the introduction of sustainable alternatives to the finite resources we are depleting today while simultaneously stimulating growth and reducing poverty. With our ambitious goal to double our



impact and half our footprint by 2020 – our path forward is about balancing the economic, the environmental and the social dimensions of our investments. We try to address all three dimensions when financing innovative and renewable energy and climate investment projects in developing countries.

FMO is supportive of clean cooking solutions and the Global Alliance. We believe that this initiative will improve people's living conditions and create better lives for many. For FMO, it is a means to reduce carbon emissions and negative health impacts associated with cooking. FMO's intention is to be involved in clean cooking projects as a financing partner going forward.

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Entrepreneurial
Development
Bank

#### **HIER Climate Bureau**

The Global Alliance for Clean Cookstoves has identified the market creation for the growing amount of carbon credits generated in clean cookstove projects as a key issue to address. Carbon finance provides a way to attract investment from the private sector, that is necessary to reach the goal of 100 million cookstoves in 2020.

Because most people in the Netherlands do not even know what a cookstove is, HIER launched a clean cookstove on the Dutch market with the name "COOX": a trendy and efficient outdoor cooking device that uses wood as fuel. The COOX, a rebrand of the Envirofit G3300, is sold with a 'one HERE, one THERE' model: for every COOX sold in The Netherlands, one stove becomes affordable for a family in a developing country. Through the COOX, HIER wants people to learn about the need for clean cookstoves in developing countries, and position the cookstove as an icon for premium CO2 compensation.

Together with large consultancies, HIER launched the label 'HIER guaranteed climate neutral' to enable companies, products and events to become climate neutral with cookstove compensation. Compensation is offered through the HIER sales platform for cookstove credits.



a collaboration with FairClimateFund, Climate Neutral Group and BIX Fund.

In 2014, the HIER Climate Bureau, a Dutch climate NGO, started a project to create a market for CO2 compensation from cookstove projects. The goal: realizing 5 million cookstoves THERE, through the demand creation for 5 million tons of carbon credits HERE. The HIER Climate Bureau hopes that this project is adopted by other countries, to help create a global market for clean cookstoves.

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#### Hivos

Hivos is an international organisation looking for new solutions to intractable global problems. It uses smart projects in the right places to work against discrimination, inequality, abuse of power and environmental overload. Hivos strives for structural change, but it is not enough to just offer counterbalance. That is why Hivos works with innovative companies, citizens and their organisations. With them, it shares a dream in which economies are sustainable and societies are inclusive for everyone.

Hivos develops innovative solutions that will allow green and fair societies to flourish. A green society is powered by green energy – everywhere and accessible for everyone. Hivos chooses 100% renewable energy: it is the best solution to the growing climate crisis and the lack of access to energy for billions of people. Clean cooking fuels such as biogas are part of the solution, and we work together with private and public stakeholders, including those united in the Global Alliance for Clean Cookstoves, to promote solutions for all.

Hivos is implementing partner of the GACC. We contribute to several country action plans. Hivos is coordinating market-based national



domestic biogas programmes in Africa and Indonesia and contribute to others in Asia and Latin America.

In 2015-2017 Hivos will intensify its contribution, aiming to install biogas digesters and stoves at 100,000 rural households in Africa, Asia and Latin America and another number of improved biomass stoves depending on funding. Within the Africa Biogas Partnership Program (ABPP) Hivos, in cooperation with SNV and other partners, will be organizing an international biogas conference bringing together private sector partners, policy makers and public agencies across the continents in 2015.

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# **Climate Neutral Group**

Climate Neutral Group is a social venture and was established in 2001. Climate Neutral Group strives towards a 100% climate-neutral world. With over a decade of experience Climate Neutral Group (CNG) has helped many organisations in their transition towards climate neutrality, by:

- Calculating CO, emissions;
- Developing and implementing substantial reduction measures;
- Offsetting the remaining CO<sub>2</sub> emissions.

To offset the remaining emissions CNG mainly focuses on clean cookstoves projects. CNG actively communicates about clean cookstoves projects in terms of climate impact as well as the economic and social benefits for the people at the bottom of the pyramid. Through specific reports CNG makes it clear to her customers what their contribution is.

By investing upfront in cookstoves via carbon credits, CNG gives the project developers a guaranteed sale of volume. CNG was one of the first organisation who set up a cookstoves project together with a developer in Africa. CNG gives a boost to the adaptation of offsetting via cookstove projects by large organisations. As ICROA member as well as Gold Standard



Majority pledge member we are promoting and selling cookstoves projects to our customers worldwide for over five years now.

CNG is planning to increase her impact via cookstoves projects to 500.000 households on a yearly basis by 2020. Exploring new ways to get cookstoves adopted by more organisations and consumers through our existing platforms and brands. Acceleration via a coalition with project developers including a retailplatform dedicated to cookstoves. Willing to pre-finance via a guaranteed purchase.

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Climate Neutral Group 

Output

Description:

for better business

#### **FairClimateFund**

FairClimateFund is a Dutch social enterprise that invests in carbon projects for and with local communities in developing countries. Since the start of the company in 2009 we have invested €5M. We pre-finance clean cooking solutions and we empower poor and vulnerable people to improve their health, save time and protect their environment through cookstoves or biogas digesters. Together with Community Based Organizations or farmers cooperatives we work on sustainable value chains, e.g. coffee. The carbon emission reductions realized at household level are Gold Standard and/or CDM certified. In Europe we offer parties with surplus carbon emissions to purchase offsets from these households.

FairClimateFund is a member of the Global Alliance for Clean Cookstoves and involved in the Alliance Carbon Finance Platform that provides how-to quides.

In collaboration with local producers and coffee cooperation OCFCU, this project distributes 30.000 efficient wood stoves to 15.000 coffee farmers. Every household uses one stove for regular cooking and one to bake the Injera, a flatbread traditionally made out of





teff flour. These efficient stoves reduce the use of firewood by 50%, the release of harmful soot particles by 24-45%, and carbon emissions up to 90% compared to the previous situation. Furthermore, women save 30 minutes on cooking. The farmers pay for the stoves partly in cash and partly with the carbon credits that the stoves produce. We invest, together with ICCO, retailers, and local partners, a total of  $\in$  1.5M (40% in 2015, 30% in 2016 and 30% in 2017).

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# Energia

ETC Foundation (ETC), an international notfor-profit organisation headquartered in the Netherlands, hosts the ENERGIA International network on Gender and Sustainable Energy to create an institutional base for galvanising action aimed at integrating gender into the energy access agenda of developing countries.

ENERGIA is currently implementing the Women's Economic Empowerment (WEE) and energy access programme that involves empowering women in the overall value chain through energy use: from energy generation to its end uses. This programme has three major components: Dissemination of modern energy services to the poor and women; a research programme that encompasses research, evidence gathering and dissemination, plus raising public awareness on the importance of energy access for women and girls; and targeted communication and advocacy.

#### In support of clean cooking solutions, ENERGIA will:

- Reach 2 million poor consumers modern energy services, including clean cooking solutions.
- Integrate access to clean cooking energy in its intervention plans, both in Asia and Africa.



- Integrate cooking energy in its Gender and Energy Research Programme.
- Advocate for clean cooking through its representation in Sustainable Energy for All (SE4ALL) forums.
- Advocate to create a women's economic empowerment (WEE) working group under Sustainable Energy for All, serving as the lead convener and coordinating body.
- Highlight gender, as a cross-cutting theme, at all relevant and high-level meetings for SE4ALL and is included on SE4ALL's website as a key thematic area.
- Integrate energy access for women including clean cooking solutions in its contributing to the Global Tracking Framework and the State of the Access report (SEAR).
- Participate in the Alliance's Social Impact Working Group and assist in validating an agreed-upon set of social impact indicators for measuring the social impact of clean cookstoves and fuels.

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