

Statement myclimate

Response to articles in the Guardian and other media on the study "Pervasive over-crediting from cookstove offset methodologies" by Gill-Wiehl et al. published in Nature magazine in January.

Zurich, 31.01.2024 - myclimate has analysed the study published in Nature by Gill-Wiehl et al. on the effectiveness of cooker projects and the integrity of the emission reduction certificates issued for them. Even though myclimate expressly welcomes new research approaches aimed at improving project quality, the climate protection organisation from Zurich regrets the simplified presentation of the projects and the fundamental methodological shortcomings of the study. The results of the study, which assume a massive over-crediting of cooker projects, are therefore not acceptable in myclimate's view.

The development of carbon offset projects that are financed via the voluntary markets is extremely complex. The myclimate foundation has over twenty years of experience in this area and in-depth knowledge of effective, high-quality cookstove projects. As a result, myclimate is more than familiar with the challenges and pitfalls that such projects can entail and the uncertainties associated with calculating the emission reductions achieved through project activities.

The following statement on the study "Pervasive over-crediting from cookstove offset methodologies" by Gill-Wiehl emphasises that we do not agree with the results and methodology of the study in some crucial points. myclimate therefore disagrees with the generalised conclusions, in particular the alleged massive over-crediting of emission reductions.

The main criticisms levelled by myclimate are:

- The study uses values from the literature for individual factors in the calculation of specific CO₂ savings (utilisation rates, firewood requirements, etc.) as comparative values and assumes that these values are better/more accurate than the data collected through the annual monitoring of certified projects.
- The paper identifies differences, but completely overlooks the fact that the projects may even have better factors than the - sometimes very old - mean values. The performance-based crediting mechanisms are used, for example, to train users in projects supported by myclimate or to carry out maintenance programmes for the cookers.
- These instruments are omitted from the comparative values on which the study focusses. The underlying data is therefore distorted and the study exhibits a "data bias".
- The success of a project always depends on many local factors. It is therefore generally very questionable from a methodological point of view to use a global average from the

literature (which after all covers numerous projects from Asia, Africa and South America with a data basis dating back to 2009) as a reference for project-specific factors. The study itself contradictorily emphasises the need to take greater account of local conditions and contexts when evaluating climate protection projects.

- The methodology of the myclimate projects for more efficient cookers always uses the most conservative approach to realistically measure fuel consumption by conducting kitchen performance tests for both the baseline and the emissions calculation, rather than relying on default values. This allows for a more reliable and representative estimate of actual fuel consumption under varying conditions such as different climates and cooking habits.

The Cookstove projects supported by myclimate for many years have had a very positive impact on the lives of many people over and above the proven CO₂ savings. Nevertheless, myclimate emphasises the importance of a differentiated view and the need for continuous improvement and adaptation of methods in the area of climate protection. We recognise the general points of criticism and encourage the Voluntary Carbon Markets Standard (VCM), the other standards and project developers to take them seriously.

We also believe that this study, while generally highlighting relevant opportunities for improvement, vastly overestimates the potential for overvaluation in digester projects. We will continue to work towards a better understanding of the factors influencing the success of a project.

The aim of myclimate is to find the right balance between a robust and conservative estimate of all values and applicability (cost/benefit) on the ground to ensure that as many people as possible have access to clean and climate-friendly cooking.

Detailed feedback on the myclimate study can be found on the second page.

Further links:

[Gold Standard assessment](#)

[Open letter on the study from other experts, researchers and project developers](#)

[The study by Gill-Wiehl et al.](#)

[Article in the Guardian](#)

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Detailed explanation of the study, cooker projects and the carbon market

Despite various challenges, myclimate is fully committed to the concept of successful projects for more efficient cookstoves and cleaner cookers. We are convinced of the positive effects that we see on the ground every day. The impact of a project goes far beyond simply reducing emissions and improving the living conditions of the local population.

myclimate recognises and supports constructive criticism, as we also strive to use the most robust and conservative approaches possible to estimate the climate impact of our projects. myclimate therefore agrees with the general criticism approaches mentioned in the study "Pervasive over-crediting from cookstove offset methodologies" by Gill-Wiehl, Nature Sustainability, 2024. These show which general challenges cookstove projects face and which factors are crucial for a realistic estimate of the climate impact.

However, this study shows a very one-dimensional view of a much more complex issue and, although it basically looks at the right points, shows fundamental methodological flaws in quantifying a possible overestimation of the effect of these individual factors. **We therefore strongly disagree with the results of the study and reject the accusation of up to nine-fold overestimation - 1000% according to the Guardian - for the common cookstove methods.**

In the following, we explain what we consider to be fundamental methodological weaknesses, which lead to statements that are not tenable overall.

Methodological weakness "fraction of non-renewable biomass" (fNRB)

A good example of how the study makes oversimplified and inaccurate assumptions is the estimation of the share of non-renewable biomass (fNRB). This is necessary in order to estimate how much of the biomass (wood) demand reduced by a project activity actually leads to additional emission avoidance.

Determining the fNRB is a very complex task, as the necessary data availability is poor and a large number of factors flow into the system. For certain countries or regions in particular, it is often very difficult to obtain the information required to determine this factor. For this reason, the Clean Development Mechanism (CDM) agreed on national default values in 2012, which reflect a general consensus on the state of the art and attempt to generate a widely accepted, homogeneous input. These national default values were approved by the respective DNA (Designated National Authorities) of the project host country, but were only valid for five years and therefore expired in 2017. As is unfortunately often the case with political decisions, the CDM has not yet been able to update these values.

Therefore, since then, each project must calculate the local fNRB values for the region in which it is implemented using a complex tool defined in the Gold Standard and CDM methodologies. myclimate has conducted several of these studies in the past for our cookstove projects in collaboration with local experts. Nevertheless, this is a very challenging task that still leaves values with a certain degree of uncertainty. This is a fact that we are very much aware of.

The study by Gill-Wiehl et al. recommends instead using values from a 2015 scientific paper (Baillis et al. 2015), the only researcher who has studied this topic in more detail. The abstract of this study states: "We present a spatially explicit assessment of pan-tropical woodfuel supply and demand, calculate the extent to which woodfuel demand exceeds regrowth, and estimate

woodfuel-related greenhouse gas emissions for the year 2009". Gill-Wiehl et al. further claim that "our analysis uses the most rigorous and up-to-date values from the literature when available (e.g. fNRB)".

So if this is true, then the Berkeley paper would recommend that we should rely on old, often outdated data from 2009 to calculate our fNRB, rather than using recent, highly localised studies. This again highlights the problem of data availability for fNRB (and other factors). Moreover, the situation is not as simple as the study suggests, as the sources cited in the study have their own methodological weaknesses.

As far as the fNRB calculation in projects supported by myclimate is concerned, we generally work with the localised values of the CDM, which we consider to be more useful than global average values despite their expiry. Based on the aspects listed above, we have drawn up a schedule to update the fNRB values in our projects in the coming quarters with values based on more recent, independent studies (see separate document from myclimate on the subject of fNRB).

In addition, the CDM has currently published a call for contributions to a new fact sheet that will release new, regional and possibly even pixel-based default values for the fraction of non-renewable biomass (fNRB) in the near future. These values are based on a new, complex and remote sensing-based model just developed by Bailis et al. that provides promising results and better data availability. We are therefore confident that the data quality on this topic will improve significantly

Until then, we believe that using local studies is the best option to obtain robust, conservative and most accurate values.

Selection bias - data bias - for other calculation values

While the study claims to use the most robust and conservative values itself, the values selected from projects for comparison with the results show a selection bias (data bias) towards extremely low values. They are therefore not representative of the range of values found in research on this topic.

The lack of comparability between cookstoves from projects co-financed via the voluntary CO₂ markets and the cookstoves analysed in the literature means that the methodology on which the study is based is not appropriate. It is not plausible to assume that the performance (use) of project co-financed cookstoves, where users have to make a significant investment of their own, can be directly compared with values from projects that, for example, distribute new cookstoves on a large scale as part of development cooperation or charity projects. Performance-based project financing of cookstove projects on the voluntary carbon market could motivate some project owners to increase emission reductions. However, the underlying mechanisms and controls mainly motivate them to implement measures to ensure uptake, utilisation, maintenance, etc.

Comparative values are not up to date - Methods have evolved

Older projects with outdated monitoring requirements were analysed in the study. The researchers do not apply the new version of these methods, where the requirements have been updated. These guidelines have evolved over the years with stricter and more stringent rules that

refine the estimation of emission reductions so that they are now much more accurate than suggested by the study.

The basis of the study is therefore a comparative analysis of projects with old requirements (or methodology versions) with projects that apply the latest requirements.

Calculation approach from myclimate

The methods used in the projects for more efficient cookstoves often allow different options for determining the various parameters that are necessary for calculating the emission reduction. myclimate chooses the most conservative approach for its projects whenever possible. This includes, for example, carrying out Kitchen Performance Tests (KPTs) for both the baseline and the calculation of emission savings instead of using default values.

This approach enables us to measure the fuel consumption of the families involved in the projects as realistically as possible. These tests are carried out according to very strict guidelines, fulfil the statistical requirements for a representative sample and provide a reliable estimate of fuel consumption in each specific project. This is very important as this value can vary drastically under different conditions such as different climate zones and culturally varying cooking habits. Our values and approaches are therefore more representative of actual local conditions than using a global default value derived from the literature, as suggested in the study.

Utilisation rate - which cookers are actually used?

There is a fundamental difference between simple cookstove projects (i.e. where cookers are simply distributed without a long-term implementation plan) and myclimate's climate projects for improved cookstoves, which target long-term use as the main incentive. The concept of these projects for voluntary carbon markets and a certifiable CO₂ reduction is so successful because the projects have an incentive to ensure long-term adaptation and a high utilisation rate of the project technology. The projects usually run for a period of ten years in order to ensure long-term project financing through annually issued, performance-based certificates.

This is achieved through continuous support, training and awareness-raising campaigns, as well as monitoring success in the project region throughout the project duration. Projects without this performance-based financing mechanism lack this long-term focus, meaning that the adaptation and utilisation rates are usually significantly lower. Therefore, the extremely low values from the literature used in the study are not representative of improved cookstove projects with carbon finance and greatly overestimate the potential for over-accreditation

Conclusion

myclimate is aware of the risk of excessive crediting of reductions in cookstove projects and welcomes initiatives for increased project transparency in order to better understand where the supported projects stand and where they and myclimate can still improve. However, the assertion made in the study of a nine-fold over-crediting in ICS projects is not realistic and certainly not generally applicable to the projects in question.

The Cookstove projects supported by myclimate for many years have had a very positive impact on the lives of many people over and above the proven CO₂ savings. Nevertheless, myclimate emphasises the importance of a differentiated view and the need for continuous improvement and adaptation of methods in the area of climate protection. We recognise the general points of

criticism and encourage the Voluntary Carbon Markets Standard (VCM), the other standards and project developers to take them seriously.

We also believe that this study, while generally highlighting relevant opportunities for improvement, vastly overestimates the potential for overvaluation in digester projects. We will continue to work towards a better understanding of the factors influencing the success of a project.

The aim of myclimate is to find the right balance between a robust and conservative estimate of all values and applicability (cost/benefit) on the ground to ensure that as many people as possible have access to clean and climate-friendly cooking.

We are aware of the uncertainties of the relevant parameters. It is therefore the constant task and endeavour of myclimate not only to follow the latest and strictest guidelines of the available methods, but also to actively go beyond them and address critical points.

Projects mean more than "just" CO savings₂

Furthermore, we actively criticise the one-sided approach of the study, which again fails to look beyond the technical aspects to the actual impact of the project: Project development is highly complex and extremely demanding. While all parties involved have the goal of maximising emission reductions and the greatest possible impact on as many families as possible, in reality they are often confronted with major challenges during project implementation on the ground.

When working on the ground, myclimate is sometimes forced to reconcile idealistic approaches and theories with compromises and pragmatic decisions. We work with dozens of project partners in more than 40 countries in various constellations. As a climate protection organisation, myclimate often faces a kind of dilemma as to whether to implement a project with some compromises, which is based on a good and realistic, but perhaps not perfect, impact analysis, or whether to stick entirely to the "pure doctrine". The latter would mean that many projects would not be implemented and would therefore have zero impact on people and the climate.

These decisions are often not easy to make. We endeavour to strike the right balance between implementing successful projects that have the greatest possible impact on people's lives, the climate and sustainable development, while at the same time keeping the estimate - because these are always estimates based on a predetermined, agreed methodology - of avoided emissions as realistic and conservative as possible.

It is easy to find points of criticism in detail for each individual project. This is something myclimate constantly does internally during its own due diligence checks and when monitoring projects. However, we believe that an approach that aims for perfection is not feasible and is not beneficial to the climate or people. Due to the demonstrable reduction in emissions combined with the many positive aspects for people and nature, we are still firmly behind the concept of the projects we support.

What would be the alternative according to the study? Modern hobs are rarely the solution

Especially as the seemingly better alternatives promoted in the study are not in fact the better, simple solutions they claim to be: The study suggests only supporting projects with cookstoves that meet WHO guidelines for clean cooking, rather than the improved cookstoves currently in widespread use, which offer significant improvements over cooking over three stone fires.

In reality, however, there are many important reasons why improved cookstoves are often preferred to level 5 clean cookstoves (WHO guideline). This is because these cookers are much more complex, technically more complicated, more expensive, less robust and often require a change of fuel. In the individual projects, this means that households that previously cooked over open three-stone cookers now have to switch to electric cookers or other complex technologies. While this sounds tempting in theory, in practice this switch is often too ambitious to be successfully implemented on a larger scale.

In practice, such a radical change leads to a low adaptation and utilisation rate. Instead, the improved cookstoves are a great transitional technology that represents a step away from open fires with high greenhouse gas emissions. Due to their social and economic characteristics, households in the project regions often benefit more in the long term if they first adapt to improved but still simple cookstoves instead of switching directly, but often unsuccessfully, to high-tech cookers.

When choosing the right project technology, there is no one-size-fits-all solution, and many factors relevant to success must be taken into account - cooking habits, culture, living conditions, durability of the technology, possibilities of local production from locally available materials, etc. The stoves must therefore be compatible with all these factors. The cookers must therefore be compatible with all these factors, and often high-tech solutions cannot yet be used in the project regions.

Conflict of interest?

myclimate also does not share the opinion that a simple, generalised proposal for sensor-monitored appliances is the solution to the problem, as this approach also has various shortcomings. Among other conflicts of interest in this study, it should be noted that it received research support from the Better Cooking Company Limited, whose management also commented on a draft of the manuscript. This company manufactures clean pellet cookstoves that are currently applying for inclusion as Gold Standard projects using the Performance Monitored Appliance Methodology. The results of the study are therefore not independent, but could be influenced by the interests of one company.

myclimate shares the view that high-tech cooking technologies and the approach of using measuring devices offer some advantages. Therefore, myclimate is also looking into participating in some projects with measuring devices (e.g. ATEC induction cookers, which are also mentioned in the Guardian).

This is subject to the condition that the project region is carefully selected and that all the basic requirements for the successful introduction of this technology are met. This is only the case for smaller projects in very select regions and should not be understood as a general, universal recommendation to move away from the highest-emitting three-stone fires.

Despite rather positive experiences to date, the use of such technologies must be carefully considered and acted upon in order to respect families' familiarity with their cooking habits and to provide them with clear and transparent information about the purpose of the measuring devices and the results, which are made publicly available. So while myclimate supports individual, carefully selected projects, we also recognise that this technology is not as scalable as it needs to be to have a long-term impact on clean cooking and sustainable development.

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About myclimate

myclimate is a partner for effective climate protection - globally and locally. Together with partners from business and private individuals, myclimate aims to shape the future of the world through advisory and educational services as well as its own projects. As a non-profit organisation, myclimate pursues this in a market-oriented and customer-focused manner.

The international initiative with Swiss roots is one of the world's quality leaders for comprehensive climate protection solutions. Its customers include large, medium-sized and small companies, public administration, non-profit organisations, event organisers and private individuals. myclimate is represented by partner organisations in other countries such as Germany, Austria, Sweden and Norway. At the same time, myclimate serves business and private clients worldwide from its Zurich base.

With projects of the highest quality, myclimate promotes measurable climate protection and sustainable development worldwide. Since its foundation in 2002, myclimate has developed and supported 197 climate protection projects in 45 countries around the world. There, emissions are reduced by replacing fossil energy sources with renewable energies, storing CO₂ in natural sinks (alternatively: in nature-based projects) (e.g. local reforestation measures) and implementing energy-efficient technologies. myclimate climate protection projects fulfil the highest standards. International projects can be certified according to the Gold Standard, Plan Vivo or VCS (incl. CCB and/or SD-VISta), Swiss projects according to the guidelines of the Federal Office for the Environment (FOEN)/Federal Office of Energy (FOE) or the myclimate CH VER guidelines. In addition to reducing greenhouse gases, they demonstrably make a positive local and regional contribution to the UN Sustainable Development Goals (SDGs).

myclimate encourages everyone to make a contribution to our future with action-oriented and interactive educational programmes. Around 87,000 pupils and 13,500 students in Switzerland, Germany and Liechtenstein have already been reached with this goal. In total, over 200,000 people have benefited from myclimate education projects. The foundation also provides advice on integrated climate protection with tangible added value. In the CO₂ and resource management business area, myclimate supports companies with advice, analyses, IT tools and labels. Services range from simple carbon footprints (emissions calculations) at company level to detailed life cycle assessments of products. Experienced consultants help to identify and realise potential in the areas of energy and resource efficiency.

Since the foundation was established, myclimate climate protection projects have created thousands of jobs, protected biodiversity and improved the general living conditions of hundreds of thousands of people. This is one of the reasons why the German Federal Environment Agency explicitly emphasises myclimate as a provider of climate protection investments. In both 2015 and 2012, two myclimate projects were named "Game Changing Climate Lighthouse Activities" by the Secretariat of the UN Framework Convention on Climate Change (UNFCCC) and personally honoured by UN Secretary-General Ban Ki-Moon at the UN Climate Change Conferences in Paris and Doha. The myclimate education project "Klimalokal" also won the Milestone Prize in 2012, the highest honour in Swiss tourism. In May 2016, myclimate was honoured with the Swiss sustainability award "PrixEco".