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# When cultural political economy meets 'charismatic carbon' marketing: A gender-sensitive view on the limitations of Gold Standard cookstove offset projects



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### ABSTRACT

Charismatic carbon projects are becoming increasingly popular in the voluntary carbon market. These are carbon offset projects that lend themselves to telling stories about the livelihood benefits they provide for poor people in the Global South in addition to carbon emission savings. I use cultural political economy as a theoretical heuristic to analyse how Gold Standard-certified cookstove carbon offsets are framed as delivering charismatic carbon. Methodologically, this is done through a content analysis of the online visual and textual marketing of 22 Gold Standard-certified cookstove carbon offset projects. I find that the project marketing makes particularly strong claims to improve family livelihoods, income generation and women empowerment, whilst de-politicising the feminist concern with women's agency. The Gold Standard is one of the major and most well-regarded offsetting standards. Therefore, this research may reveal important limitations in the current and future shape of the wider voluntary carbon market.

### 1. Introduction

The offsetting of greenhouse gas (GHG) emissions is one of the major strategies foreseen by the current climate change regime for the mitigation of global warming. Since the early 2000s, a veritable offset market has developed in which emitters can purchase offset certificates that confirm that a specified amount of emitted GHGs – mostly carbon dioxide – has been saved by projects that reduce emissions elsewhere, for instance through reforestation or the installation of wind or hydropower plants. Although states have emission reduction obligations under the current climate change regime, many private persons and companies also aim to offset their emissions voluntarily to decrease their individual environmental footprint or as part of their corporate social and environmental responsibility strategies.

In this voluntary carbon market, a popular catchphrase is 'charismatic carbon,' meaning that carbon offset providers look for 'small scale, cute and cuddly carbon projects' [1] to increase carbon credits' marketing appeal. Charismatic carbon projects tell stories about the reduction of carbon emissions and social co-benefits that support poor people - especially women - in the Global South. A popular example is energy-efficient cookstove projects with the potential to reduce indoor air pollution [1]. Offset project developers and carbon market brokers put a high emphasis on selling charismatic carbon credits to their clients so that these may have a good standing in the eyes of their end

consumers [2–4]. Yet far from only a marketing tool, how co-benefits are framed is a politically important question because successful frames can shape the future design of monitoring and verification criteria for social co-benefits in the voluntary carbon market ([49], 77).

How is charismatic carbon constructed, i.e. what marketing tools are used to create the image of 'small scale, cute and cuddly projects'? What are its political implications, i.e. what message does the Gold Standard's marketing of charismatic carbon convey to offset purchasers about the benefits created and what social role ascriptions manifest therein? These questions are at the heart of this article. They force us to engage with the mechanisms that keep the carbon market running, but they have rarely been scrutinised by scholars and NGOs. Research on carbon offsetting thus far has focused mostly on the mechanisms through which carbon offset projects unfold at the local level and what social-ecological outcomes they entail [5,6]. Other research has focused on the normative quality of the standards and the standard setting process - including from the point of view of human rights [7-9] or fairness [10]. To date, only a few analyses of the public image of offset certifications exist. With this article, I hope to contribute to filling this void by scrutinising the marketing material used to make cookstove projects attractive to potential offset purchasers.

A particularly relevant actor for the promotion of charismatic carbon is the Gold Standard – a standard setter for carbon offset certification prominent among carbon market participants for most

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consistently including sustainable development criteria in its certification standards ([11], 36). Moreover, the Gold Standard itself explicitly uses the vocabulary of charismatic carbon to promote the purchase of Gold Standard certified offsets among carbon market participants. In this paper I therefore zero in on the Gold Standard's attempt to create the image of charismatic carbon and I discuss its political implications.

For this purpose, I proceed as follows. I present the theoretical framework of cultural political economy (CPE) in Section 2, which enables a much-needed cultural view on aspects of economic policies. In Section 3, I introduce actors' motivations in the voluntary offset market and improved cookstove dissemination as a particularly popular project type associated with charismatic carbon. In Section 4, I propose qualitative content analysis to study the Gold Standard's visual and textual marketing material. I empirically analyse and discuss the public presentation of 22 Gold Standard-certified cookstove projects along three dominant frames in Section 5, which I call *The Climate Change Mitigation Frame, The Household Care Frame* and *The Employment and Income Generation Frame*. I conclude in Section 6 that the attempts to construct charismatic carbon link socio-economic benefits with an apolitical notion of women empowerment.

### 2. A cultural political economy perspective

I contend that carbon offset providers' marketing attempts to sell their 'products' cannot be fully understood without an appreciation of the cultural processes surrounding the carbon market. To make sense of and critically discuss the implications of the charismatic attributes of carbon offsets, I follow the lead of CPE [12]. CPE's objective is to analyse the political effects of economic processes and how culture helps to shape them. In that sense, it aims to complement standard political economy approaches by 'showing how culture - understood specifically as the intersubjectively produced meanings through which practices are rendered intelligible and normatively charged - is crucial to understanding political economy' ([13], 67). A CPE focus, then, contributes to our understanding of core political economy questions, including the nature of production, trade and finance as well as patterns of global distribution and inequality ([12], 22). In previous research on the construction of carbon markets, a CPE perspective has proven useful to disentangle the 'affective processes by which market participants intersubjectively mobilise desire for carbon markets' ([13], 68). In terms of theoretical traditions, CPE is a broad field in which different approaches can co-exist that focus on culture as a concept to understand the economy. Owing to the critical Marxist pedigree of much political economy, questions of hegemony are a likely concern for CPE analyses [14], but CPE also allows for more open-ended interrogations [12]. In this latter sense, I use CPE as a heuristic to trace the cultural process of the construction of charismatic carbon through the public documentation of cookstove offset projects and discuss its political implications.

First, however, some clarification is needed for how I look at culture in CPE. I align with Best and Paterson, who in a most general sense follow Geertz ([15], 5) to suggest that the cultural angle of CPE is concerned with the 'webs of significance' or 'systems of meaning through which social life is both interpreted and organized' ([12], 8). In this understanding culture permeates all practices; the values that people ascribe to objects and experiences condition their economic behaviour and consequently 'the economy must be read culturally' ([12], 6). Cultural processes can thus plausibly be assumed to play a major role in the construction of the carbon market ([13], 69). In this sense, 'the deployment of culture by economic actors is always at the same time political' ([12], 6). For my analysis, this economic actor is the Gold Standard and in the next section I introduce the voluntary carbon market and its need for affective marketing before I scrutinise the Gold Standard's own marketing activities more closely.

### 3. Carbon offset certification and the clean cookstoves sector

In a nutshell, the voluntary carbon market functions through offsetting projects that aim to reduce GHG emissions or to enhance GHG sinks against a baseline scenario of business as usual. On this basis, carbon credits are calculated that can be sold by offset project developers and bought by emitters ([16], 112–113). From the early days of the international climate regime and the emergence of carbon markets, carbon offsetting has strongly been linked to a win-win rhetoric. According to this rhetoric, emission reductions are not only cheaper in the Global South than in the Global North, but also offset projects in the Global South can at the same time promote sustainable development.

Yet because the voluntary market lacks a centralised structure and the host country governments need not approve whether a project promotes sustainable development, this market leaves considerable leeway for the standards and criteria applied to offset projects ([17], 108-109). In response to quick allegations of greenwashing, private standard setting schemes have emerged. Offset projects should only be certified according to these standards if they make additional contributions to the livelihoods of local communities hosting the projects ([18], 97-98; [17], 107). Indeed, the Gold Standard was founded in 2003 by international NGOs, notably the WWF, to manage 'best practice standards'2 to ensure sustainable development co-benefits of carbon offset projects. In 2016, 99% of voluntary offsets were thirdparty certified, 58% by the Voluntary Carbon Standard, followed by the Gold Standard with 17%. However, the Gold Standard is widely considered to be more ambitious in terms of sustainable development criteria than other standards ([11], 36) and with \$4.6/tCO2e, Gold Standard certification realised the highest average price ([19], 15).

Owing to their assumed development co-benefits, a particularly popular type is clean cookstove projects, i.e. projects that generate emission reductions by distributing energy efficient cookstoves to households in the Global South. Household air pollution due to smoke from the indoor burning of solid fuel in inefficient cookstoves had been identified as one of the major disease burdens - and indeed one of the major causes of death - in the Global South [20-22]. Cookstove distribution programmes are therefore heralded by many as a major opportunity both to promote emission reductions ([23]; Ramanathan and Carmichael 2008) and to improve health [24,25]. It is projected that by 2020, cookstove projects will be the second most important type of offsets in terms of the monetary worth of the sum of issued credits after Reducing Emissions from Deforestation and Forest Degradation (REDD +) projects. In the voluntary market, nearly all cookstove projects have so far been certified by the Gold Standard ([26], 57). Among Gold Standard projects in the pipeline in 2017, 337 of 1394, i.e. 24%, were cookstove projects that in absolute terms were the single most important project type, followed by wind power (236) and hydro power (151) projects ([27], 6).

The purchasers of carbon offsets are mostly companies. In 2015, they accounted for 98% of finance generated from carbon offsets ([28], 5) and offsetting is an important element of their corporate social and environmental responsibility strategies ([29], 17). For individuals, buying offsets directly, e.g. for their holiday flights, or indirectly as customers of offsetting firms, serves to ease their conscience over their consumption decisions ([30], 217–219). In 2016, 86% of offsets worldwide were purchased by European and North American buyers ([31], 5) and offsets with social co-benefits are particularly appealing to them. For 35% of voluntary offset buyers, co-benefits, particularly community development, were the most important criterion in choosing an offset project, followed by costs (25%) and fit with their organisational mission (18%) ([31], 14).

Previous ethical consumption research on organic and fairtrade

<sup>&</sup>lt;sup>1</sup> Gold Standard Webinar on 21 March 2017.

<sup>&</sup>lt;sup>2</sup> https://www.goldstandard.org/our-story/who-we-are (last access 30 April 2019).

goods has shown how people react positively to the promise of doing 'good' through consumption choices. However, people do not respond well to moral appeals that induce a feeling of guilt. Instead, it is important to give potential buyers of ethical products a pragmatic sense that they can promote change and to communicate this opportunity through personal and emotional messages ([32], 214). Politically, this approach reflects 'an attempt to construct a novel morality connected through the economies of Southern development and Northern consumption' ([33], 903).

Earlier studies suggest that similar cultural processes are at work in the construction of carbon offsetting. According to a key carbon market narrative, Northern consumers can build a connection to people in the Global South. Heather Lovel, Harriet Bulkeley and Diana Liverman ([48], 2369) illustrate this point with a quote from an interview with a media officer of an offset organisation:

'It is important to be able to make it real to people, especially as carbon is so abstract ... community-based projects are colourful and personable and they invoke real people and things that people can engage with, so you don't have to talk to them about hydrofluorocarbons ... you can talk about cooking your evening meal without having smoke-filled kitchen'.

They also observe that corporate consumers are especially anxious to have a positive and personal story attached to their offsets because their corporate responsibility image depends on their clients and customers' interpretation of their climate strategy ([48], 2368–2369). Similarly, Philippe Descheneau and Matthew Paterson in their study of carbon finance ads, find that marketing of carbon offsets is aimed at transforming people's sense of guilt around their carbon emissions 'into a motivation to "do good" by investing in offset projects' ([13], 71).

However, not only end consumers need to be attracted by the marketing of carbon offset projects as large corporate groups are major purchasers of Gold Standard certified offset. Corporate social and environmental responsibility officers must gain the support of their audiences inside and outside the company. One can assume, though, that corporate decision makers are influenced by the same kinds of personal stories as individual consumers. To illustrate, in their interviews with carbon market actors, Philippe Descheneau and Matthew Paterson were 'struck by the affective economy of such markets, that they are driven and sustained as much by an emotional investment in carbon trading as in narrowly financial assessments of investment opportunities and strategies' ([13], 78).

To be sure, not all addressees of such marketing readily buy into these stories. Whereas some carbon offset buyers may be primarily 'concerned to promote their self-image as "Green" ([34], 186), empirical research has shown that many others do indeed care about the credibility of labels and certificates: They question whether they eventually support a growing market built on greenwashing ([35], 266; [16], 115) and they lose trust in the market when the failure of offset projects makes media headlines ([36], 147).<sup>4</sup> In the light of criticism about greenwashing and questions of justice, fairness and sustainable development contributions of carbon offsetting (e.g. [10]), there is a clear need for offset providers and certification schemes to present the projects in ways that counter this criticism. For instance, a study on the

Climate, Community and Biodiversity (CCB) certification scheme finds that technocratisation narratives are important to underline the credibility and social and environmental effectiveness of certified offset projects [37].

In the light of these observations, a CPE-informed analysis of the marketing of Gold Standard certified projects can build on and complement the few available studies on the representation of carbon off-setting with a more nuanced scrutiny of personal stories told, and a stronger focus on their political implications beyond the alleviation of consumers' feelings of guilt.

### 4. Methods

To unravel how the Gold Standard promotes its certification standard through the construction of charismatic carbon, I draw on the public presentation of all 22 Gold Standard certified cookstove offset projects featured on the Gold Standard's homepage at the time of data collection for this study in spring 2018. The projects' presentations contain icons of the UN Sustainable Development Goals (SDGs), photos and brief written descriptions of the projects. Viewed together, the different project descriptions create the public image for how the Gold Standard certification of cookstove projects is supposed to contribute to development-oriented carbon offsetting.

I employed qualitative content analysis - a method to interpret communications with a view to their intended and/or potential impacts on their recipients, which is commonly applied to written material but can analogously also be applied to images ([38], chapter 5). My primary approach to the material was inductive and data-driven ([39], chapter 5): Through iterative looks at the visual material and reading of the textual material I identified the main frames in which the aspired benefits of cookstove offset projects are packaged. Following Robert Entman, I understand framing as 'selecting and highlighting some facets of events or issues and making connections among them so as to promote a particular interpretation, evaluation and/or solution' ([40], 5). In that sense, frames are inevitably normative as their promoters take sides on specific policy issues ([40], 26-27). Framing can have different functions (e.g. problem definition, identifying causes of problems) and here I am primarily interested in the function of promoting remedy ([40], 5) because the Gold Standard's very self-understanding is to develop solutions to the intertwined challenges of climate change and development.

More concretely, the analysis consisted of two main steps: First, I identified three main frames that in my reading capture the core reasons given why the Gold Standard promotes cookstove offset projects as a remedy to climate change and poverty. For this purpose, I looked at the patterns prevalent in the images as well as the texts and identified their overlap. Especially for photos, it has been pointed out that their content has denotative and connotative elements; the former referring to the objects, signs, patterns and compositional characteristics clearly identifiable in the images; the latter referring to the intentionally open level of symbolic content that will lie in the eye of the observer to interpret ([41], 185). The denotative content of images in particular allows for the analysis of the typical characteristics of a set of photos ([42], 175). Moreover, the denotative elements of images invoke the common knowledge and broadly shared set of background assumptions of their viewers that allow for a methodologically informed and intersubjectively plausible interpretation of the images ([43], 173). This is important especially in political contexts because photos are not a mirror of 'reality' but a tool to purposefully create a specific perception of 'the world out there' ([41], 188). Analogously, language contains both denotative and connotative elements. To carve out the presumably widely resonating political messages of the project presentations, I focused my analysis on the material's denotative content.

The second main step of the analysis situated the texts and images in their wider policy context. The political implications of the images and texts were assessed through a review of critical literature on cookstoves,

<sup>&</sup>lt;sup>3</sup> For example, DHL http://www.dpdhl.com/en/responsibility/environmental-protection/green\_products\_and\_services/climate\_protection\_projects.html (last access 30 April 2019); Ferrero confectionaries http://carbon-pulse.com/7035/ (last access 30 April 2019).

<sup>&</sup>lt;sup>4</sup> One prominent example of this occurred after the band Coldplay announced offsetting the emissions generated by the production of its second album by planting 10,000 mango trees in the Southern Indian state of Karnataka. Yet the public learned that after a short time only about a hundred tree samplings were still alive in this dry environment ([36], 147). For media headlines on this see e.g.: http://www.telegraph.co.uk/news/worldnews/asia/india/1517031/How-Coldplays-green-hopes-died-in-the-arid-soil-of-India.html (last access 30 April 2019).

carbon offsetting, and gender in development interventions: I notably discussed how the material analysed here presents cookstove projects as charismatic interventions and how this supports or undermines transformative development-oriented solutions to the current climate crisis. Focusing strictly on the public presentation of cookstove carbon offset projects allows for a nuanced analysis of the messages they convey. On this basis, interviews with Gold Standard staff or cookstove offset project managers would be an important next step to better grasp the strategies and intentionality of these presentations.

## 5. The construction of charismatic carbon on the Gold Standard homepage

On its website, <sup>5</sup> the Gold Standard documents Gold Standard-certified offset projects and encourages GHG emitters to contribute to these projects through the purchase of offsets that can conveniently be done online using *PayPal*. It encourages developers of Gold Standard-certified projects to submit photos and descriptions documenting their activities to feature on the foundation's homepage. These documentations must follow the Gold Standard's clear guidelines, which are aimed at a corporate audience and intended to support the foundation's demand building strategy. <sup>6</sup> Although the single project developers contribute the material, it can thus nevertheless be interpreted as a manifestation of the Gold Standard's approach to constructing charismatic carbon.

Each project has one sub-site on the Gold Standard's website and its presentation consists of three main elements: at the head of the page, a few photos picturize the project setting, usually three to five per project, followed by the icons of the SDGs that the project claims to contribute to and, finally, a short text that explains the project setting, including quantifying achievements and illustrating their livelihood relevance through quotes from project beneficiaries. The photos very much look like snapshots as the illumination frequently is poor, several photos cut off parts of people's heads and faces and some photos are even slightly blurry. This certainly creates the impression that these photos are not whitewashed for marketing but tell the viewers something about the local 'realities' in project settings. Together with the accompanying SDG icons and texts, this Gold Standard marketing material creates three dominant frames – one frame primarily covering the aspect of climate change mitigation and the other two primarily epitomising its aspired charismatic character through, first, improved household care, and, second, improved job and income opportunities.

### 5.1. The climate change mitigation frame

With cookstoves as a carbon offset tool, the ambition to contribute to climate change mitigation is constitutive of the first frame. Photos of cookstoves, alone or together with people, are a ubiquitous element across all projects on display and all project presentations are furnished with the icon of SDG 13 'climate action', many more with the icon of SDG 7 'affordable and clean energy', which are pictured in Fig. 1:<sup>7</sup>

The Gold Standard has entered a strategic partnership with the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) with the mission to promote the SDGs via climate change mitigation measures. Accordingly, its UN-backed use of the



Fig. 1. SDG icons.

SDG icons can be understood to testify to its allegiance with the UN's widely accepted values. By drawing on the broadly perceived authority of the United Nations, the use of these well-known and easily recognisable icons communicates to the visitors of the Gold Standard's website that these projects are trustworthy and contribute to sustainable development – one of the most commonly felt challenges of our times.

The claims conveyed in the photos and icons are backed up by the more technical descriptions in the accompanying texts that specify the stated emission reductions through the introduction of cookstoves. In particular, substantial quantitative information is provided about the amount of saved firewood or charcoal and GHG emissions. Some project descriptions even link this information to local deforestation and pressure on forests due to firewood collection and charcoal production. A further component of some projects hence is environmental or climate change education of target communities.

However, such propositions must gain traction with their audience in the face of widespread, serious concerns about carbon offsetting. First, aggregate analyses of offset projects provide considerable evidence that the contribution of fuelwood collection to deforestation and forest degradation is much lower than estimates from carbon offset projects suggest (e.g. [44,45]). Purchasers in the carbon market – especially if they are professionals who follow market trends and keep an eye on related political debates – may well be aware of this. The project descriptions' adamant emphasis on the emission reductions achieved by Gold Standard-certified projects may thus be an attempt to counter such concerns.

Second, although a standard justification for carbon offsetting in the carbon market discourse affirms that it makes little difference to the atmosphere where emissions are saved and that emission savings are less costly in the Global South ([48], 2367), early criticisms offered that most emissions in the Global North are avoidable and that offsets are therefore mere indulgences for pursuing what is considered by many critics as a luxurious lifestyle (for influential accounts of this position see e.g. [46] or [47]). Likewise, corporate carbon consumers from early on have been accused of using offsets as 'a relatively painless means through which to claim green credentials without undertaking any significant internal action' ([48], 2373). Offset projects obviously then cannot be successfully legitimated by their claimed environmental benefits alone. Seen in this light, it is perhaps hardly surprising that the Gold Standard puts a complementary strong focus on marketing offset projects as charismatic development benefits.

### 5.2. Making carbon emission reductions charismatic

The strong emphasis on social co-benefits of carbon offsets is clearly visible in the overwhelming pictorial and textual emphasis on improved livelihoods. The two dominant frames in this regard – zooming in on household care and then on jobs and income generation – in particular create a picture of benefits for poor women and their families and thereby strongly underline the declared ambition of generating

standard-and-unfccc-partnership (last access 30 April 2019).

<sup>&</sup>lt;sup>5</sup> https://www.goldstandard.org/get-involved/make-an-impact (last access 30 April 2019).

<sup>&</sup>lt;sup>6</sup> https://www.goldstandard.org/sites/default/files/documents/17\_nov\_2015\_-feature\_your\_project\_-help\_build\_demand.pdf (last access 30 April 2019).

<sup>&</sup>lt;sup>7</sup> The icons on display here are copied from the Gold Standard website; originally the icons are from the United Nations: http://www.un.org/sustainabledevelopment/news/communications-material/ (last access 30 April 2019).

<sup>&</sup>lt;sup>8</sup> https://www.goldstandard.org/our-work/innovations-consultations/gold-

<sup>(</sup>footnote continued)









Fig. 2. SDG icons.

charismatic carbon. The centrality of these frames in the carbon offsetting discourse is also supported by other studies (e.g. [49]), but their detailed content and political message is still up for scrutiny.

Both frames employ a combination of the SDG icons related to poverty alleviation, health, gender equality and work and economic growth (see Fig. 2), depending on the additional benefits that the project primarily claims, and to which customers are encouraged to support through their offset purchase.<sup>9</sup>

The use of these icons does not follow any clear pattern but nevertheless epitomises how socio-economic benchmarks are said to inform offset practices under the Gold Standard. Beyond that, the two charismatic carbon frames can be distinguished along the lines of distinct patterns in the photos and texts.

### 5.2.1. The household care frame

The household care frame is dominant among the two charismatic carbon frames. The frame is homogeneous, featuring women and cookstoves: sometimes the women are cooking, sometimes they are just besides their cookstoves; sometimes with old cookstoves, but mostly with new ones; sometimes with children, sometimes without children. This small degree of variation suggests that an idea of a close and invariable link between women and cookstoves is the core concern of such charismatic carbon projects. The two photos in Fig. 3 are representative of this group with the left photo depicting a woman and child with an old cookstove and the right photo depicting a woman firing new stoves. <sup>10</sup>

These photos clearly reflect the idea of charismatic carbon: They focus on women in poor countries and depict them in essential, everyday care work situations of food preparation. The background of most photos clearly displays the context of poverty in which the purported improvements in women's lives take place. We see unrendered brick, concrete or corrugated iron walls, some stained in black from soot. The stoves are centrally positioned in the photos, thereby underlining the key role they are assumed to play for the generation of sustainable development benefits. Hardly any other items distract the viewers' attention from these scenes. The introduction of improved cookstoves thus appears to address the most basic wellbeing needs of poor families – and those members who are often perceived as particularly vulnerable, women and children.

Further specification of the benefits is provided in the accompanying texts. While the photos do not feature smoke from the traditional stoves, the texts strongly emphasise how smoke contributes to respiratory and eye illnesses mostly in women and children and how the introduction of improved stoves, and the significant reduction of smoke, benefits their health. Besides reduced smoke exposure, significant benefits for women mentioned are that they spend less time and money on collecting fuel material and reduced cooking times. The

saved money, it is asserted, can then be used for other livelihood purposes such as education or medical care. In addition to general claims about health benefits and savings, many project descriptions suggest that cookstove projects can make important contributions to women empowerment, mostly by freeing up time and reducing the hard work of firewood collection.

Again, these presentations must convince potential purchasers in light of the evidence about the limited social benefits of cookstove projects. For instance, many studies show that: new cookstoves are frequently only insufficiently taken up as recipients use the old and new stoves together (e.g. [50–53], 8); evidence is mixed as to whether improved stoves have a significant emission reduction and health benefit potential under 'real world conditions' as opposed to laboratory-type measurements [54–57]; or the monetary saving potential of the switch to improved cookstoves is uncertain due to a huge divergence in the affordability of fuels needed for some types of improved stoves ([58], 557–558; [53], 7).

Possibly in reply to such concerns, all the claimed benefits of Gold Standard-certified projects are underlined by quantitative data, particularly in terms of savings on fuels. Moreover, each project description ends with a testimonial by a project beneficiary – mostly by women – which vividly conveys the message about people's livelihood benefits. One typical example is the following from a project in Kampala:

'The stove is so great that if I had the money, I would buy them for all my friends! It saves me 1000 Shillings per day on charcoal compared to my other stove'.  $^{11}$ 

There is thus a highly emotional context to the texts, which underscores how much the projects can allegedly contribute to the wellbeing of the poor in the Global South.

And yet, even if the Gold Standard-certified projects indeed fare better in social areas than projects certified according to other standards, it is less clear whether such projects can in fact support women empowerment. After all, the claims about women empowerment are consistently linked to descriptions of how the time and money saved through the use of the new cookstoves apparently flow into other household and care activities. This conclusion is particularly pronounced in the inclusion of testimonials like the following from a website:

'My new stove allows more flexibility: After turning it on, it burns on its own. While the rice is cooking, I can cut the vegetables'. $^{12}$ 

In other project descriptions the cooking time saved is overtly linked to more time for women to improve smallholdings and to care for the children. In contrast, men are neither depicted in the photos nor mentioned in the texts in relation to household activities or even the home's living conditions.

These presentations, however, hardly resonate with the prevalent notion of female empowerment as a 'process by which those who have been denied the ability to make strategic life choices acquire such an ability' ([59], 435). This understanding emphasises the power structures that condition women's subordinate position in society. A better resource endowment for women clearly is a part of this; yet it not only remains unclear from the project presentations how much of the improved resource availability really benefits women and not primarily their families, but also women's agency as another key component of making independent strategic life choices is disregarded. By marketing interventions as empowering that improve the health and income for women pursuing traditional household activities without even raising the issue of their own agency or relations between males and females, the presentations by the Gold Standard use a concept that has become fashionable in market-oriented development approaches (see [60],

<sup>&</sup>lt;sup>9</sup> Again, the icons are copied from the Gold Standard website. Originally the icons are from the United Nations: http://www.un.org/sustainabledevelopment/news/communications-material/ (last access 30 April 2019).

<sup>&</sup>lt;sup>10</sup> First photo: https://www.goldstandard.org/projects/stoves-life-energy-efficient-cook-stove-project-kakamega-kenya (last access 30 April 2019), photo courtesy of myclimate; second photo: https://www.goldstandard.org/projects/community-based-cookstoves-india (last access 30 April 2019), photo courtesy of FairClimateFund

<sup>&</sup>lt;sup>11</sup> https://www.goldstandard.org/projects/improved-cookstoves-social-and-environmental-impact-uganda (last access 30 April 2019).

<sup>&</sup>lt;sup>12</sup> https://www.goldstandard.org/projects/saving-bengal-tiger-through-dissemination-improved-cookstoves (last access 30 April 2019).





Fig. 3. Women using cookstoves.







Fig. 4. Cookstove production and sale.

5-12 for an overview) in ways that de-politicise its original eminently political ambition of contesting power relations.

A gap between outsiders' presentations of such projects as assisting with women empowerment and the replication of traditional social roles in stove-receiving communities frequently surfaces in other discourses as well. Romy Listo thus finds that one way in which women are typically stereotyped in the energy poverty literature is that it fails to consider that although across countries women spend more time on average on fuel wood collection, this pattern may differ considerably according to context ([61], 13). Similarly, this literature largely ignores whether women allocate this time to household activities or to those 'political, educational, leisure or income or independence-generating activities which are advocated by policy-makers'; thus, evidence about actual practice is mixed in this regard ([61], 14; see also [63], 207). Shonali Pachauri and Narasimha Rao claim in a rare review of empirical knowledge about the gender-energy-poverty nexus, that generally there is little manifest evidence how women benefit from transitions to modern energy services ([63], 205). Overall, this frame thus situates the public presentation of Gold Standard projects within a wider discourse based on simplified and a-political role understandings of women and that associates them with household and care work. As I show below, interestingly, this discourse is complemented by a frame that presents women as more on par with men in the world of work.

### 5.2.2. The employment and income generation frame

The analysis of the introduction of new cookstoves as a job and income generation opportunity on the one hand reinforces the narrative about an effective livelihood-focused development intervention, but on the other it creates a somewhat more progressive, even if not genuinely empowered, image of women's role. It is slightly less pronounced than

the household care frame but still visible throughout the project descriptions and thus an important complement. The three photos in Fig. 4 are typical examples.<sup>13</sup>

In terms of the overall narrative of a successful, low-intensity development intervention, the first outstanding compositional feature of this group of photos is its display of apparently simple activities. Cookstove producers are portrayed as performing manual labour using basic tools and material. Analogously, the sale of cookstoves is depicted as taking place in sheds or under the open sky with no need for complex storage or logistic facilities. Likewise, promotion and education sessions for the cookstoves are presented as held without the use of further material beyond the display of cookstoves and their functioning. Altogether, the image created is thus one of cookstoves as simple instruments that can be easily assembled, sold and their use straightforwardly communicated to intended users. The photos' complementary texts primarily emphasise different kinds of local economic benefits associated with the introduction of new cookstoves. The production and sale of cookstoves are highlighted as important income generation opportunities. The cooperation with local partners and focus on local markets are an additional important element in some of the project descriptions. Most project descriptions moreover contain some quantification of the number of people employed in the assembling and sale of

<sup>&</sup>lt;sup>13</sup> First photo: https://www.goldstandard.org/projects/solar-and-efficient-stoves-madagascar (last access 30 April 2019), photo courtesy of myclimate; second photo: https://www.goldstandard.org/projects/gyapa-cookstoves-project (last access 30 April 2019), photo courtesy of ClimateCare; https://www.goldstandard.org/projects/solar-and-efficient-stoves-madagascar (last access 30 April 2019), photo courtesy of myclimate

cookstoves, numbers of disseminated stoves and/or numbers of people trained for producing or using the new cookstoves.

The relatively strong focus on the local production in the Gold Standard marketing material contrasts with frequent criticism that the mere distribution of stoves can destroy local markets (as reported for instance in [49], 76). Beyond that, the simple production and sale conditions strongly mirror the basic cooking context and thereby reinforce the image that something 'good' is being done to improve the conditions of some of the world's poorest. Once more we can thus observe the construction of charismatic carbon through an emphasis on improving the livelihoods of the poor through small-scale interventions.

As to women's role within this overall setting, some traditional gender roles remain in place even in the Gold Standard's presentation of this frame. Several projects claim to also contribute to women empowerment by emphasising the number of women employed and trained, which so the argument goes, helps women to gain a more independent standing in their communities. However, as far as information is provided about the uses of the newly generated income, most seems to flow into children's education or basic necessities of life such as food or medical care, once more missing the inherent core idea of women empowerment.

And yet, the photos represent men and women as being much more on par. They are seemingly engaged in the same kind of activities - the same steps in the cookstove production process, selling cookstoves and educating others about their use. Men and women are also depicted in roughly equal numbers in these different activities. The texts particularly highlight the income opportunities for women. The degree of emphasis on women's independent economic agency on the one hand mirrors other research that has identified a less powerful counter-discourse of women as agents of their energy choices in a broader energy poverty literature that largely constructs women as passive victims of their social environments ([61]8, 15). On the other hand, the emphasis of women's economic and entrepreneurial activity as producers and sellers of cookstoves also links into a discourse that neoliberalises feminism. In this sense, it has been observed in various contexts that corporate social responsibility strategies articulate a commitment to gender equality to gain legitimacy and to support and expand their corporate strategies and therefore push women into entrepreneurial roles. Although development projects based on fostering market entrepreneurship have been found to have contradictory effects, for instance enhancing the social standing of some women while decreasing that of others, its generally the case that they, too, empty the language of women empowerment of its core feminist idea of collective struggle (e.g. [62]). This is also very much the case for the public representations I have analysed here as they present women as individually grateful for the new job and income opportunities without providing any information about a deeper engagement with women's views on the kind of economic roles to which they aspire.

Viewed together with the household care frame, this frame moreover reflects not only the idea that carbon offsetting can provide social benefits to the poor and vulnerable in the Global South, but also by assigning women both the role of primary household care workers and economically active alongside men, the two frames also mirror a world that will look familiar to many offset purchasers in the Global North. Overall, the frames thus reassure purchasers that they do 'good' by carbon offsetting and they link to the experiences of those who buy offsets.

### 6. Conclusion

Sustainable development co-benefits are becoming increasingly important in the voluntary carbon market and certifiers and providers of carbon offsets deliberately aim to sell them as charismatic carbon. In this article, I have identified three main frames through which the Gold Standard promotes cookstove projects as a remedy to address climate change and poor living conditions. Especially, the two frames related

directly to social co-benefits might serve to lend legitimacy to the carbon market and keep it going in the face of criticism of the mere shifting of emission reductions from the Global North to the Global South.

In the analysed images and texts, the idea of charismatic 'small scale, cute and cuddly carbon projects' [1] predominantly manifests in the presentation of health and livelihood benefits for women and their children and families. Important as these objectives are, there are several normative concerns about the way the projects are framed. Women are presented as being solely responsible for all activities related to cooking and other household work. A complementary perspective is introduced through the presentation of women as equal agents in the economy of producing and selling cookstoves. However, there is still a certain emphasis on how their incomes are used for their families and no emphasis on their own priorities, which becomes even more obvious because it is not clear whether women endorse the entrepreneurial type of activity offered by cookstove offset projects. By highlighting these limits to empowerment, this article has helped to expose how such projects are less transformative than they pretend to be – especially as they fortify ascribed gender roles. It is therefore easy to sympathise with the view expressed in Listo's review of the scholarly literature that marketing these projects as a contribution to women empowerment means to 'co-opt feminist discourses, and analytical tools and concepts, namely gender and empowerment, in ways that distort their political implication' ([61], 11). The introduction of improved cookstoves then appears to be a technical intervention at the expense of an emphasis on the need for more integrated interventions ([61], 11). Obviously, there are limits to the breadth of transformation that can be expected from a single, small-scale intervention like the introduction of cookstoves. However, if the introduction of new cookstoves was publicly framed as a process that may open up spaces to contest gendered norms of care work and local labour markets structures, this would anchor empowerment agendas much more firmly in public perceptions. But giving space to contested social relations in offset presentations might of course undermine the image of charismatic carbon, which rests on a notion of conflict-free cuddliness.

It is hardly surprising that an organisation's marketing material which is, after all, what I have analysed here - is overly positive about its achievements. And yet, owing to the imminently political role of the Gold Standard, we might want to be particularly sensitive to the frames it employs. The Gold Standard is not only one of the main standard setters for offset certifications, but also is perceived by actors in the carbon market as particularly ambitious with regard to social co-benefits; moreover, it is an official partner of the UNFCCC Secretariat. The frames it creates for cookstove projects as a particularly popular type of offset are thereby likely to have a significant impact on carbon market actors' perceptions of politically desirable types of market instruments. A CPE perspective as employed here can help to uncover just how much cultural representations can veil unjust social structures by de-politicising feminist concepts and making them palatable to the marketing needs of the carbon offset market. In that sense, a de-politicising presentation of women empowerment can have political effects in legitimating a particular shape of the carbon market.

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I have no competing interests to declare.

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#### References

- Lisa. Ashford, Charismatic Carbon Anyone? businessGreen, 2009 last access: 30, April 2019 https://www.businessgreen.com/bg/opinion/1805581/charismatic-carbon
- [2] Boyd Cohen, Charismatic Carbon-offset Projects With Co-Benefits, TriplePundit, (2011) last access: 30, April 2019 https://www.triplepundit.com/2011/01/ charismatic.carbon.offset.projects.benefits/
- charismatic-carbon-offset-projects-benefits/.

  [3] Global Alliance for Clean Cookstoves, The Basics, (2018) last access: 16, February 2018 http://carbonfinanceforcookstoves.org/carbon-finance/the-basics/.
- [4] Original Carbon, Credit Portfolio, (2018) last accessed: 30, April 2019 http://originalcarbon.com/credit-portfolio/.
- [5] Janet Fisher, Justice implications of conditionality in payments for ecosystem services schemes, in: Thomas Sikor (Ed.), The Justices and Injustices of Ecosystem Services, Routledge, 2013, pp. 21–45.
- [6] Esteve Corbera, Adrian Martin, Carbon offsets. Accommodation or resistance? Environ. Plan. A 47 (2015) 2023–2030.
- [7] Vivek N. Mathur, Stavros Afionis, Jouni Paavola, Andrew J. Dougill, Lindsay C. Stringer, Experiences of host communities with carbon market projects, Clim. Policy 14 (1) (2013) 42–62.
- [8] Constance L. McDermott, Certification and equity: applying an 'equity framework' to compare certification schemes across product sectors and scales, Environ. Sci. Policy 33 (2013) 428–437.
- [9] Magdalena Kuchler, The human rights turn: ENGO's changing tactics in the quest for a more transparent, participatory and accountable CDM, Environ. Polit. 26 (4) (2017) 648–668.
- [10] Rebecca J. Howard, Anne Tallontire, Lindsay Stringer, Bob Marchant, Unraveling the notion of 'fair carbon'. Key challenges for standard development, World Dev. 70 (2015) 343–356.
- [11] Björn Dransfeld, Stefan Wehner, Tanushree Bagh, Patrick Bürgi, Ingo Puhl, Madlaina Zegg, Valentin Friedmann, Stephan Hoch, Matthias Honegger, Axel Michaelowa, Linde Warland, SD-Benefits In Future Market Mechanisms Under the UNFCCC. Final Report. Climate Change 04/2107, Umweltbundesamt, Dessau-Roßlau, 2017 last access: 30, April 2019 https://www.umweltbundesamt.de/sites/ default/files/medien/1968/publikationen/2017-01-30\_cc\_04-2017\_sd-benefits\_ endbericht.pdf.
- [12] Jaqueline Best, Matthew Paterson, Introduction. Understanding cultural political economy, in: Jaqueline Best, Matthew Paterson (Eds.), Cultural Political Economy, Routledge, Abingdon, 2010, pp. 1–25.
- [13] Philippe Descheneau, Matthew Paterson, Between desire and routine. Assembling environment and finance in carbon markets, in: Peter Newell, Max Boykoff, Emily Boyd (Eds.), The New Carbon Economy, Wiley Blackwell, Chichester, 2012, pp. 65–84.
- [14] Bob Jessop, Ngai-Ling Sum, Towards a Cultural Political Economy, Putting Culture in Its Place in Political Economy, Elgar, Cheltenham, 2013.
- [15] Clifford Geertz, The Interpretation of Cultures. Selected Essays, Basic Books, New York, 1973.
- [16] Peter Newell, Matthew Paterson, Climate capitalism, Global Warming and the Transformation of the Global Economy, Cambridge University Press, Cambridge, 2010.
- [17] Thomas Hickmann, Rethinking Authority in Global Climate Governance, How Transnational Climate Initiatives Relate to the International Climate Regime, Routledge, London, 2016.
- [18] Harriet Bulkeley, Peter Newell, Governing Climate Change, Routledge, Abingdon, 2010.
- [19] Kelley Hamrick, Melissa Gallant, Unlocking Potential. State of the Voluntary Carbon Markets 2017, Forest Trend's Ecosystem Marketplace, 2017 last access: 30, April 2019 https://www.forest-trends.org/wp-content/uploads/2017/07/doc\_5591.pdf.
- [20] Marcos A. Adrianzen, Improved cooking stoves and firewood consumption: quasiexperimental evidence from the Northern Peruvian Andes, Ecol. Econ. 89 (2013) 135–143
- [21] Stephen S. Lim, Theo Vos, Abraham D. Flaxman, Goodarz Danaei, Kenji Shibuya, Heather Adair-Rohani, et al., A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010, Lancet 380 (9859) (2013) 2224–2260.
- [22] Forrest G. Lacey, Daven K. Henze, Colin J. Lee, Aaronvan Donkelaar, Randall V. Martin, Transient climate and ambient health impacts due to national solid fuel cookstove emissions, Proc. Natl. Acad. Sci. U. S. A. 114 (6) (2017) 1269–1274.
- [23] Tami Bond, Chandra Venkataraman, Omar Masera, Global atmospheric impacts of residential fuels, Energy Sustain. Dev. 8 (3) (2004) 20–32.
- [24] Kirk R. Smith, Evan Haigler, Co-benefits of climate mitigation and health protection in energy systems: scoping methods, Annu. Rev. Public Health 29 (2008) 11–25.
- [25] Susan C. Anenberg, Kalpana Balakrishnan, James Jetter, Omar Masera, Sumi Mehta, Jacob Moss, Veerabhadran Ramanathan, Cleaner cooking solutions to achieve

- health, climate, and economic cobenefits, Environ. Sci. Technol. 47 (9) (2013) 3944–3952.
- [26] Fiona Lambe, Marie Jürisoo, Carrie Lee, Oliver Johnson, Can carbon finance transform household energy markets? A review of cookstove projects and programs in Kenya, Energy Res. Soc. Sci. 5 (2015) 55–66.
- [27] Gold Standard, Market Report 2017, (2018) last access: 30, April 2019 https://www.goldstandard.org/blog-item/gold-standard-market-report-2017.
- [28] Kelley Hamrick, Allie Goldstein, Raising Ambition. State of the Voluntary Carbon Markets 2016, Forest Trend's Ecosystem Marketplace, 2016 last access: 30, April 2019 http://www.forest-trends.org/documents/files/doc\_5242.pdf.
- [29] Allie Goldstein, The Bottom Line. Taking Stock of the Role of Offsets in Corporate Carbon Strategies, Ecosystem Marketplace, Washington D.C, 2015.
- [30] Ingo Schoenheit, Politischer Konsum. Ein Beitrag zum faustischen Konsumverhalten, in: Michael Jäckel (Ed.), Ambivalenzen des Konsums und der werblichen Kommunikation, Wiesbaden, VS, 2007, pp. 211–234.
- [31] Kelley Hamrick, Melissa Gallant, Unlocking potential, State of the Voluntary Carbon Markets 2017. Buyers' Analysis. Forest Trend's Ecosystem Marketplace, (2017) last access 30 April 2019 https://www.forest-trends.org/wp-content/uploads/2017/ 07/doc\_5677.pdf.
- [32] Frank M. Belz, Ken Peattie, Sustainability Marketing, A Global Perspective, John Wiley & Sons, Chichester, 2012.
- [33] Michael K. Goodman, Reading fair trade. Political ecological imaginary and the moral economy of fair trade foods, Polit. Geogr. 23 (2004) 891–915.
- [34] Clive L. Spash, The brave new world of carbon trading, New Political Econ. 15 (2) (2010) 169–195.
- [35] Matthew Adams, Jayne Raisborough, Making a difference: ethical consumption and the everyday, Br. J. Sociol. 61 (2) (2010) 256–274.
- [36] Sam Headon, Whose sustainable development? Sustainable development under the Kyoto Protocol, the 'Coldplay effect,' and the CDM Gold Standard, Colo. J. Int'l Envtl. L. Policy 20 (2) (2009) 127–156.
- [37] Isabel Melo, Esther Turnhout, Bas Arts, Integrating multiple benefits in market-based climate mitigation schemes. The case of the Climate, Community and Biodiversity certification scheme, Environ. Sci. Policy 35 (2014) 49–56.
- [38] Gillian. Rose, Visual Methodologies, An Introduction to Researching With Visual Materials, Sage, Los Angeles, 2012.
- [39] Margrit Schreier, Qualitative Content Analysis in Practice, Sage, Los Angeles, CA, 2012.
- [40] Robert M. Entman, Projections of Power: Framing News, Public Opinion, and U.S. Foreign Policy, University of Chicago Press, Chicago, 2004.
- [41] Gregor Matjan, Wenn Fotos nicht lügen können, was können sie dann? Zum Einsatz der Fotoanalyse in der Politikwissenschaft, ÖZP 31 (2) (2002) 173–190.
- [42] Jennifer Gronau, Die Selbstlegitimation internationaler Institutionen. G8 und G20 im Vergleich, Frankfurt a. M: Campus, 2015.
- [43] Michael Flitner, Im Bilderwald. Politische Ökologie und die Ordnungen des Blickes, Zeitschrift für Wirtschaftsgeographie 43 (3-4) (1999) 169–183.
- [44] H. Geist, E. Lambin, Proximate causes and underlying driving forces of tropical deforestation, BioScience 52 (2002) 143–150.
- [45] Robert Bailis, Rudi Drigo, Adrian Ghilardi, Omar Masera, The carbon footprint of traditional woodfuels, Nat. Clim. Chang. 5 (2015) 266–272.
- [46] Larry Lohmann, Carbon trading. A critical conversation on climate change, privatisation and power, Dev. Dialogue (2006) 48.
- [47] Kevin Smith, The Carbon Neutral Myth: Offset Indulgences for Your Climate Sins, Carbon Trade Watch., Amsterdam, 2007.
- [48] Heather Lovell, Harriet Bulkely, Diana Liverman, Carbon offsetting. Sustaining consumption? Environ. Plan. A 41 (2009) 2357–2379.
- [49] Kamilla Karhunmaa, Opening up storylines of co-benefits in voluntary carbon markets. An analysis of household energy technology projects in developing countries, Energy Res. Soc. Sci. 14 (2016) 71–79.
- [50] Rasmus Heltberg, Factors determining household fuel choice in Guatemala, Environ. Dev. Econ. 10 (2005) 337–361.
- [51] Michael A. Johnson, Ranyee A. Chiang, Quantitative guidance for stove usage and performance to achieve health and environmental targets, Environ. Health Perspect. 128 (8) (2015) 820–826.
- [52] Yting Wang, Catherine Corson, The making of 'charismatic' carbon credits: clean cookstoves and 'uncooperative' women in Western Kenya, SAGE J. 47 (10) (2015) 2064–2079.
- [53] Ashley Quinn, Nigel Bruce, Elisa Puzzolo, Katherine Dickinson, Rachel Sturke, Darby W. Jack, Sumi Mehta, Anita Shankar, Kenneth Sherr, Joshua P. Rosenthal, An analysis of efforts to scale up clean household energy for cooking around the world, Energy Sustain. Dev. 46 (2018) 1–10.
- [54] Marc Jeuland, Subhrendu K. Pattanayak, Randall Bluffstone, The economics of household air pollution, Ann. Rev. Resour. Econ. 7 (2015) 81–108.
- [55] Sankar Sambandam, Kalpana Balakrishnan, Santu Ghosh, Arulselvan Sadasivam, Satish Madhav, Rengaraj Ramasamy, Maitreya Samanta, Krishnendu Mukhopadhyay, Hafeez Rehman, Veerabhadran Ramanathan, Can currently available advanced combustion biomass cook-stoves provide health relevant exposure reductions? Results from initial assessment of select commercial models in India, EcoHealth 12 (1) (2015) 25–41.
- [56] Roshan Whatmore, Kevin Mortimer, Andrew P. Grieshop, In-use emissions and estimated impacts of traditional, natural- and forced-draft cookstoves in rural Malawi, Environ. Sci. Technol. 51 (3) (2017) 1929–1938.
- [57] Samer Abdelnour, Crispin Pemberton-Pigott, For cook and climate: certify cookstoves in their contexts of use, Energy Res. Soc. Sci. 44 (2018) 196–198.
- [58] Farai Kapfudzaruwa, John Fay, Tigo Hart, Improved cookstoves in Africa: explaining adoption patterns, Dev. South. Afr. 34 (5) (2017) 548–563.
- [59] Naila Kabeer, Resources, agency, achievements: reflections on measurement of

- women's empowerment, Dev. Change 3 (1999) 435-1364.
- [60] Lynn Horton, Women and Microfinance in the Global South, Empowerment and Disempowerment Outcomes, Cambridge University Press, Cambridge, 2018.
- [61] Romy Listo, Gender myths in energy poverty literature. A critical discourse analysis, Energy Res. Soc. Sci. 38 (2018) 9–18.
- [62] Elisabeth. Prügl, Neoliberalising feminism, New Polit. Econ. 20 (4) (2015) 614–631.
- [63] Shonali Pachauri, D.Rao Narasimha, Gender impacts and determinants of energy poverty. Are we asking the right questions? Curr. Opin. Environ. Sustain. 5 (2013) 205–215.