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Does the Gold Standard label hold its promise in delivering higher Sustainable Development benefits? A multi-criteria comparison of CDM projects

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ABSTRACT

The Clean Development Mechanism (CDM) has a twin objective: to help developed countries reduce GHG emissions, and to support developing countries in achieving Sustainable Development (SD). As a response to the widespread criticism of the CDM's unsatisfactory SD record, initiatives have developed premium labels like the Gold Standard, which applies two additional 'screens' to filter CDM projects for higher SD benefits. In order to determine whether Gold Standard projects can be associated with higher local SD benefits, this paper evaluates the potential benefits of 48 CDM projects using a multi-criteria method and building on existing work. The 18 evaluated Gold Standard projects are compared to a 'representative portfolio' of 30 unlabeled CDM projects in order to capture the 'full' effect of the additional Gold Standard requirements, which is further decomposed into the two 'screen' effects. The results suggest that Gold Standard Certified Emission Reductions can be associated with higher potential local SD benefits when compared to the 'representative portfolio' of unlabeled CDM projects, while the comparison of projects of the same type remains inconclusive. The results support previous findings showing that renewable energy projects may deliver comparatively high SD benefits.

1. Introduction

The Clean Development Mechanism's origins lie in the broader debates surrounding the two concepts of Sustainable Development (SD) and climate change (Olsen, 2007). The mechanism itself was invented during the negotiations over the Kyoto Protocol, which set binding greenhouse gas (GHG) emission reduction targets for industrialized countries (UNFCCC, 1997). In order to help developed countries in meeting their targets in a cost-effective manner, flexible market mechanisms were created—among them the CDM, a project-based global carbon-offset scheme.[1] As a result of the intricate negotiations, the CDM intends to fulfill a twin objective: (1) to provide low-cost emission reduction opportunities for developed countries and (2) to assist developing countries in achieving Sustainable Development (UNFCCC, 1997).

An extensive body of literature (see Olsen, 2007 for a review) argues that the CDM particularly falls short of achieving its SD goals. This SD-critique forms the starting point of this study. Building on the work of Nussbaumer (2009), I focus on the Gold Standard, a premium label for CDM projects, and follow a systematic approach in analyzing whether the Gold Standard holds its promise in delivering higher potential local SD benefits, using a multi-criteria assessment method.[2]

The Gold Standard builds on the CDM structure and applies three additional 'screens' that projects have to pass through in order to qualify for the label, two of which filter projects for a higher contribution to SD. The 'project type screen' limits the project types eligible to renewable energy- and end-use energy efficiency projects and the 'Sustainable Development screen' applies three further instruments to identify projects that foster higher local SD benefits (Gold Standard, 2003).

Nussbaumer (2009) studied the contribution of labeled Certified Emission Reductions (CER) to local SD, using six Gold Standard projects and comparing them to unlabeled CDM projects of the same methodology. With this 'within-project-type' comparison he captures only what I will call the 'Sustainable Development screen' effect. In order to assess the 'full' potential SD contribution of Gold Standard-relative to unlabeled CDM projects, I will compare an increased sample size of 18 Gold Standard projects to a 'representative portfolio' of 30 unlabeled CDM projects.[3] This 'full' Gold

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[1] For a description of the CDM project cycle, see 〈http://cdm.unfccc.int/Projects/pac/index.html〉.

[2] Although Muller (2008, p. 8) acknowledges that "labels for CDM take labelling to its limits", the term 'label' is used in the literature and the foundation itself for describing the Gold Standard and I will treat it as interchangeable with the term 'certificate'.

[3] At the time of writing, 36 Gold Standard projects were listed in the UNEP Risoe database (Fenhann, 2009), 15 of which were already officially registered as Gold Standard projects and a further seven of which had been verified by the Gold Standard (APX, 2009). For the selection of the 18 Gold Standard projects and the construction of the 'representative' portfolio, see Table 2 and the corresponding explanation.

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Standard effect is further decomposed into (1) the 'project type screen' effect and (2) the 'Sustainable Development screen' effects. This is done (1) by comparing Gold Standard projects with unlabeled CDM projects, whose project types would not be eligible for the Gold Standard and (2) by comparing Gold Standard projects with unlabeled projects of the same project type.[4] The potential SD contribution of the different projects is assessed according to a set of 12 SD criteria on the basis of the individual Project Design Documents (PDD). Because of various limitations, this study cannot claim to assess the SD-contribution of a project as such, but rather tries to provide a coherent framework for partially capturing the relative potential contribution of CDM projects to local SD in order to facilitate a transparent comparison between Gold Standard and unlabeled CDM projects.

The paper adds to the literature not only by extending the number of projects assessed by Nussbaumer (2009), but also by utilizing the innovative approach to assess the 'full' effect of the Gold Standard label on the potential contribution to SD, relative to a 'representative portfolio' of unlabeled CDM projects, and by decomposing this 'full' effect into the two 'screen' effects.

Section 2 will provide some background on the CDM, discuss Sustainable Development in this context and introduce the Gold Standard. Section 3 elaborates on the research question, the methodology and the selection of projects. Section 4 presents and discusses the results, while section 5 concludes.

2. The CDM, Sustainable Development and the Gold Standard

2.1. The Clean Development Mechanism

Within a decade since the founding negotiations in Kyoto, the CDM has evolved into a global multi-billion dollar market for CERs (Lecocq and Ambrosi, 2007), with 1873 projects already registered in November 2009 (Fenhann, 2009). Since its creation, the CDM has been criticized for not fulfilling its twin objective sufficiently and for not being a GHG-neutral mechanism. In particular, the concept of 'additionality'[5] is intensely contested (see, e.g., Schneider, 2007), meaning that the CDM might not be GHG-neutral but rather lead to higher global emissions. Furthermore, the CDM's envisaged role in cost control is called into question, casting doubt on whether the CDM is doing a good job in assisting developed countries complying with their emission reduction commitments in a cost-efficient manner (Pearson, 2007; Wara and Victor, 2008). An even more extensive body of literature concerns the CDM's shortfalls in achieving its SD goals, which will be presented in the following subsection.

2.2. Sustainable Development in the realm of the CDM

On the theoretical macro-level, Sustainable Development is often seen as a multidimensional ethical concept that describes or prescribes an (i) inter- and (ii) intra-generational just development, as anchored in the famous Brundtland definition (WCED, 1987). Within the realm of the CDM, this abstract concept of SD has not been further clarified by official documents (Hultman et al., 2009), even though it is the explicit goal of the CDM to assist developing countries in achieving it.[6] The right to decide whether a project contributes to SD remains with the host countries' designated national authority (DNA); accordingly, the assessment of SD differs widely among host countries, and no country requires the expected SD benefits to be monitored as rigorously as the GHG reductions (Olsen and Fenhann, 2008). Furthermore, there is good reason to believe that the DNAs' qualification with regard to assessing whether and how different projects contribute to SD is fairly limited—above all, because of incomplete information and conflicting interests between (1) the short-term desire of governments to increase foreign direct investment (FDI), (2) the needs of local communities directly affected by the project and (3) the challenge of a transition to a low-carbon energy system, with the desire for FDI dominating the two other objectives (see, e.g., Brunt and Knechtel, 2005; Hultman et al., 2009; Kolshus et al., 2001; Pearson, 2007; Sutter, 2003). A potential 'race to the bottom' in order to attract CDM projects may therefore force countries to lower their sustainability standards (Muller, 2007).

In a market where only one of the two objectives of the CDM (the cost-effective GHG abatement) represents the traded commodity, it is possible to achieve the fulfillment of both goals alike only if no (substantial) trade-off between them exists (Kolshus et al., 2001). But the line of thought explained above shows that such a trade-off does exist (Sutter and Parreno, 2007), leading to a negligence of SD benefits. This allows Olsen (2007, p. 59) to conclude that "left to market forces, the CDM does not significantly contribute to sustainable development".

Further critique has been directed at aspects such as the regional distributional inequity of CDM projects (Boyd et al., 2009; van der Gaast et al., 2009; Wara, 2007) and the large quantities of HFC-23 CERs – a project type that is associated with very low SD benefits – within the CDM portfolio, which may have delayed the transition to renewable energies (Pearson, 2007; Schneider, 2007; Sutter and Parreno, 2007).

Proposals of how to reform the CDM so that it better meets its SD goals are provided, amongst others, by Olsen and Fenhann (2008), who recommend a taxonomy for an 'international standard' to assess SD that should be supplemental to national definitions, as well as by Boyd et al. (2009), who furthermore suggest to use global checklist or a policy-based adjustment favoring certain project types. Pearson (2007) goes even further, arguing that project types associated with low SD benefits should be excluded from the CDM. The policy recommendations are as diverse as the sustainability critique directed at the CDM, but the key problem remains that SD benefits are generally not prized, i.e. not given a value, in the current structure of the CDM market (Kolshus et al., 2001; Pearson, 2007; Sutter, 2003).

Muller (2008), Schneider (2007) and Sutter and Parreno (2007) allude to the potential role of premium market segments, such as the Gold Standard, as part of the solution. Because, as they argue, labels like the Gold Standard act as a best-practice benchmark and try to establish a premium price for higher SD benefits, they could incentivize project developers to pay closer attention to the SD effects their project is going to have, which will eventually lead to an increased share of CDM projects that deliver higher SD

[4] The third screen – the 'additionality and baseline screen' – is supposed to ensure a conservative estimation of 'additionality' (see footnote 5) and is not designed to check for SD benefits. I therefore excluded it from the decomposition analysis. Newer evidence by Alexeev et al. (2010) may seem to call into question my assumption that this 'screen' does not have an impact on the SD benefits of projects, as they find an inverse relationship between SD benefits and the likelihood of a project being additional. Their finding, however, mainly applies to different project types and therefore does not affect my initial hypothesis.

[5] "A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity." (UNFCCC, 2002; CMP.1, Art. 43).

[6] An interpretation of SD in the context of CDM projects has been given, e.g., by the Pembina Institute, which refers to the "livelihood benefits resulting from improved access to energy sources through projects that will also lead to reduced GHG emissions." (Brunt and Knechtel, 2005, p. 8).