

# DIRTY EXPLOITATION OF CDM. THE KYOTO PROTOCOL MUST BE CHANGED

The Clean Development Mechanism (CDM) of the Kyoto Protocol establishes that the parties not included in Annex I (developing countries) shall benefit from the activities of projects resulting in certified emissions reductions (CERs) and the parties included in Annex I (industrial countries) shall be able to use the certifications to contribute to the partial fulfillment of their obligations. The purpose is to encourage sustainable development in developing countries and facilitate industrialized countries the fulfillment of their obligations to reduce greenhouse gases (GG) in the cheapest possible way. One CER or "carbon credit" amounts to 1 ton of CO<sub>2</sub>-eq.

Unfortunately, CDM is not achieving its goal of helping to stop global warming but, rather, is inducing the exacerbation of the problem. Enterprises of industrialized countries invest in developing ones, thus generating CERs, but the new developments frequently emit additional GG. CERs are acquired and used by said enterprises to fulfill their reduction obligations, resulting that the industrialized countries continue to emit the same, and developing countries increase their emissions. Independent evaluations have found that CDM projects often do not reduce the promised emissions, and many do not meet the goal of sustainable development. Also, ~20% of the projects do not satisfy the principle of "additionality", which implies that they would not take place without the CER incentive.

The most controversial, even outrageous, projects are those of HFC-23 emission reduction (<http://www.cdm-watch.org>). This hydrofluorocarbon, a greenhouse "supergas" 11700 times more powerful than CO<sub>2</sub>, is emitted to the atmosphere during the production of HCFC-22, the main substitute –temporarily permitted by the Montreal Protocol (MP)– of CFC-11 and CFC-12, the principal causes of the destruction of the ozone layer. HCFC-22, mainly used for refrigeration, destroys much less stratospheric ozone than CFCs; it is also a potent GG, with a potential for global warming (GWP) of 1800.

Given the very high GWP of HFC-23, its burning generates 11700 CERs per destroyed ton, with a market value about five times that of the sale price of HCFC-22. On the other hand, the burning cost (USD0.24/ton) is 70 times less than that of the CERs generated (USD17/ton), which encourages HCFC-22 overproduction. Furthermore, a complaint presented to the CDM's Methodology Panel showed that

HCFC-22 manufacturers manipulate their operations to increase the HFC-23 generated for its destruction and, thus, increase the CERs. In this manner, CDM would be propitiating the production of two powerful GGs in an enormous deal, partly fraudulent, whose activity does not help sustainable development. Also, the auspice of HCFC-22 production by CDM plays against the MP, which approved to finance the future replacement of HCFC by substances without effects on the ozone layer.

Only 2.5% of CDM projects refer to HFC-23, but generate 52.6% of CERs. Clearly, low cost projects are being financed. The investment in HFC-23 projects is, on average, of USD1.12/REC/year, while one of solar energy would require over USD7000/CER/year. Simple mathematics: HFC-23 projects are 6250 times cheaper than solar ones. Chemical enterprises operating in developing countries benefit, as do bankers of industrialized countries and some governments by levying taxes on CERs. It should be mentioned that less than half of the world production of HFC-23 is incinerated, and in this respect a substantial increase of CDM projects is expected, at the expense of projects that really foster a sustainable development in developing countries.

The evaluations made on the occasion of the Copenhagen Agreement foretell a catastrophic warming in the 21<sup>st</sup> century (*Interciencia* 35: 624-631, 2010). To avoid it, industrialized countries should drastically reduce their local emissions, but not through CERs. In turn, developing countries, particularly emerging countries, should work in search of solutions. The structure and mechanisms of the Kyoto Protocol are not consonant with the dramatic situation, and upon culminating its first term in 2012, the protocol should be amended or changed for a new treaty. CDMs ought to be modernized, its environmental integrity improved, and financing in the less developed countries should focus on sustainable projects that include economical, social and environmental components. The problem posed by HCFC and HFC should be handled by the MP through the Multilateral Fund, directly financing the incineration of all the produced HFC-23. If CERs, or something similar, is maintained, its amount should be limited, be carefully evaluated, and adjusted to the amounts invested in development projects. It must be avoided that financiers continue to harvest only the low-hanging fruits.

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