

# **The future of the CDM and the new market mechanisms**

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## **Abstract**

The CDM has been an unexpected success and surpassed the other Kyoto Mechanisms. This is due to limited government interference and clear incentives for the private sector. In a post-2012 climate policy regime, a project-based mechanism with these characteristics should thus be retained. Moreover, incentive issues should guide the design of new market mechanisms. Sectoral mechanisms face free riding problems. Units should remain fungible and demand should be driven by a strong global regime with binding emission targets for a maximum number of countries.

## **1. Expectations for the Kyoto Mechanisms**

The Kyoto Protocol introduced two project-based market mechanisms (Clean Development Mechanism, CDM and Joint Implementation, JI) and one government-to-government trade based mechanism (International Emissions Trading, IET). At the end of the 1990s, researchers expected that IET would dominate numerically due to the high supply of “hot air” in countries in transition and low transaction costs (see e.g. Haites 2000). JI was thought to be attractive, especially in countries in transition, as institutions are developed and the level of technical know how is high. In contrast, CDM was seen as likely to fail as its rules would be much too cumbersome. Moreover the investment climate in developing countries was much less attractive than in the countries in transition (see e.g. Black-Arbeláez 2003).

## **2. Actual results**

After 10 years of implementation of Kyoto mechanisms, the CDM has become an overwhelming numerical success. Over 3000 projects have been registered and another 3000 are in the pipeline. Over 680 million CDM credits (Certified Emission Reductions, CERs) have been issued and overall, 1.1 billion CERs are expected before the end of 2012, while total credit forecast reach over 3 billion. However, some sectors such as transport and demand side management have essentially been sidelined.

IET was stalled for a long time due to mistrust of buyers in government sellers. The first transactions were tainted with corruption, e.g. the sale of allowances by the Slovakian government to an obscure US company for half the market value. To date total IET volumes has reached less

than 250 million allowances. JI is a latecomer due to late institutional decisionmaking and the fear of buyers that governments would eventually not transfer the emission reduction units. The volumes reach just 400 million units (see Figure 1).

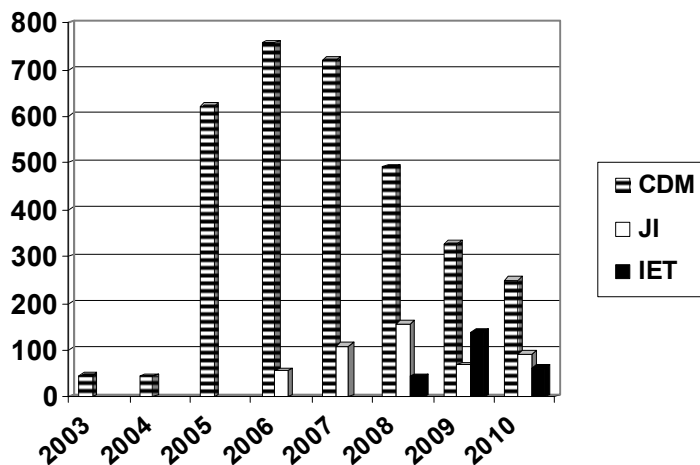


Fig. 1 Turnover of the Kyoto Mechanisms (million units)

The CDM success is due to clear incentives for the private sector and limited government interference. How can we further build on this success in post-2012 climate policy?

### 3. Two climate policy futures

After Copenhagen and Cancún, two possible paths of climate policy have emerged. A unified climate policy regime would be built on the principles of the Kyoto Protocol. Such a global agreement would lead to a global carbon currency, which could be compared to the classical “gold standard” currency system. Unfortunately, this is getting less and less likely. The more likely path is a fragmented world based on the “pledge and review” system. Country groups would develop distinct carbon market systems, which eventually would lead to a hodgepodge of non-convertible carbon currencies. In such a situation, the demand for credits from market mechanisms would be lower. While specialized consultants might flourish, the incentive for substantial investments in emissions mitigation projects would be reduced.

### 4. Proposed new market mechanisms and their incentive problems

A number of new or reformed market mechanisms have been proposed in the post-2012 climate policy negotiations. The EU has suggested a sectoral crediting mechanism (SCM). Other countries have proposed to credit policies (Nationally Appropriate Mitigation Actions, NAMAs). crediting mechanism (NCM). For the CDM, discounting of CERs according to the degree of development of

the host country has been proposed to generate emissions reductions by developing countries. Moreover, to reduce its transaction costs, standardized baselines or benchmarks could be introduced. Japan has proposed a bilateral mechanism and already selected the first projects.

Mechanisms based on “no-lose” targets are unlikely to perform, as incentives for emission reductions will be diluted. Emissions increases will not lead to negative consequences for emitters, but they will reduce the credit volume for those who actually reduced emissions. Free riding will ensue, and mitigation action will become elusive.

Even if this problem can be resolved, the indirect accrual of revenues from credit sales remains a problem. The governments can sell credits, but it is unclear whether they will pass through the revenues to the private sector actually achieving the reductions. Only a trustworthy government, which is rare in developing countries, will mobilize reductions.

Incentives could be maintained through direct allocation of credits and a government guarantee to cover eventual emissions increases. Alternatively, revenues could be split between the government and the private sector, but a guarantee would still be required. The most robust solution would be a mandatory sectoral trading scheme with sanctions for companies that do not comply.

## 5. Stacking CDM and other financing sources

Instead of experimenting with new mechanisms, a combination of financing sources could be envisaged in the context of NAMAs. A domestic reduction of fossil fuel subsidies would be a unilateral NAMA, whereas the CDM revenue plus a subsidy from industrialized countries could cover the rest of the cost gap between fossil fuel and low-carbon technologies. Over time, the subsidy could be phased out, as the cost gap is reduced (see Figure 2).

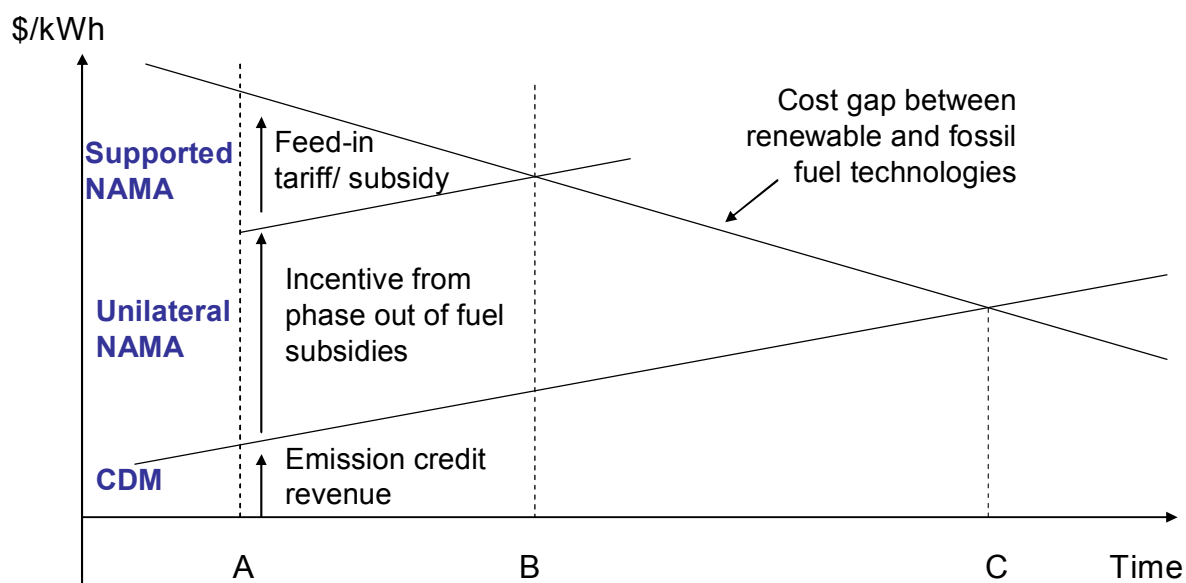


Fig. 2 Combination of financing sources for mitigation in developing countries

## 5. Policy recommendations

New mechanisms only make sense under a global regime with strong demand. This would require binding emission targets for a maximum number of countries. Such a regime would have to guarantee fungibility of units to avoid fragmentation of markets. In this context, a rational decision might be to retain the CDM where it has been successful. Moreover, an “à la carte” choice of mechanisms should be allowed. Sectoral / NAMA crediting probably works well in sectors with many dispersed sources but strong emissions growth. And “stacking” of different finance sources should be encouraged.

## References

- Black-Arbeláez, Thomas (2003): *The state of development of National CDM offices in Central and South America. Barriers to the deployment of CDM potential*, Bogota
- Haites, Erik (2000): Proposed rules and the size of the CDM market, Institute of Global Environmental Strategies (ed.) *Potential and barriers to the CDM*, proceedings of the IGES International Workshop on the Clean Development Mechanism, 26-27 January 2000, Hayama, pp 133-137