

# A monetary plan for upgrading climate finance and support the low-carbon transition

This article examines how carbon finance can be part of a general reform of the financial system. Climate policies can indeed stimulate a sustainable and inclusive climate finance, in line with the call of the Cancun Agreement for a paradigm shift in climate negotiations. The mechanism described in this article is based on the adoption by Parties to the negotiations of a social value of carbon to trigger a wave of low-carbon investments in the world. Central banks offer credit lines for commercial banks backed by this social value of carbon, which are then used to cut the risk to invest in low-carbon investments. A future agreement in Paris next year should support this type of mechanisms.

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## Introduction

The Cancun conference (COP 16) statement for “building a low-carbon society that (...) ensures continued high growth and (...) an equitable access to sustainable development” [1] clearly calls for a paradigm shift in the climate negotiations. This would depart from an adversarial game about sharing the remainder of a global emissions budget to a cooperative exercise linking climate and development policies, in recognition of the diversity of domestic agendas. To serve this new paradigm, the 2010 Cancun Conference establishes a Green Climate Fund (GCF), devoted in part to funding low-carbon development projects (LCPs) in non-Annex 1 countries, and their adaptation and capacity build-up. Yet, there is a huge gap between

the USD 100 billion per year that Annex 1 countries have pledged for the GCF by 2020, and the USD 15 billion per year envisaged by EU member States in a first step. The World Development Report [2] estimated the financial needs for mitigation and adaptation at USD 140–175 billion per year by 2030 (this actually corresponds to USD 264–563 billion of upfront financing needs). A “global peaking of GHG emissions” compatible with the 2 °C objective [3] requires indeed a deep restructuration of existing capital stock in developed countries, and massive redirection of infrastructure investments in developing countries, to avoid their lock-in in carbon-intensive development pathways.

This article first examines how climate finance can play a significant role in the low-carbon transition, albeit in an adverse context. It then presents a mechanism bringing a way-forward to continuing world development through massive low-carbon investments based on previous works [4, 5, 6, 7] before examining the conditions required to include it into the negotiations.

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## Turning the constraints of an adverse context into a fulcrum for action

The Kyoto Protocol prescribed a single type of mitigation commitment for developed countries (absolute, economy-wide emission targets), which was interpreted by most economists as preparing a global carbon market generating the same carbon price for all individual carbon emitters [8]. However, carbon price alone is not sufficient to redirect investments towards a low-carbon transition. Its impact can create adverse effects for high dependent fossil fuel countries, in particular emerging and least developed countries (a 50 USD/t-CO<sub>2</sub> for instance doubles the price of cement in India). Developed countries will also probably be reluctant to accept to compensate the losses in these countries.

Against this background and pursuing the objective to provide equitable access to development, it is necessary to envisage complementary financial systems to redirect investments towards the low-carbon transition. The GCF is one of them but its implementation occurs in an adverse context. First, pressures on public budgets in Annex-1 countries (the industrialized countries which committed to emission reduction objectives under the UNFCCC convention) after the financial crisis cast doubts about the amount of funds the GCF will effectively mobilize. Second, the financial flows for a transition towards the 2 °C objective cannot be provided by the GCF alone. Third, the context of “depression economics” [9] and of re-equilibrium of economic forces at the global scale undermines the political acceptability of large North/South transfers. Fourth, in this context, many Annex-1 countries will be reluctant to really engage their own transition towards decarbonization, because of social resistance to explicit or implicit carbon pricing, of concerns about competitiveness and employment, and the priority given to debt management and banking system stability.

Low-carbon investments are currently not blocked by a lack of available financial resources rather by the over-cautiousness of financial intermediation over the two last decades vis-à-vis long-term investments and by its preference for liquid assets.

This behavior raises specific barriers against low-carbon projects (LCP), which look riskier than business-as-usual investments due to higher upfront costs, lack of a carbon-prices and missing records on their financial performances.

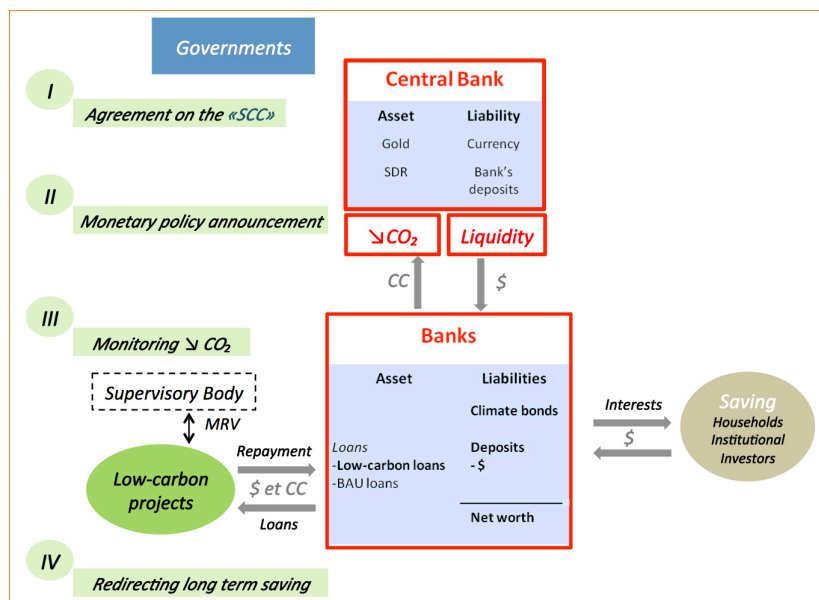
From our perspective, the challenge is to reduce the investment risks of LCPs by sending a credible signal to investors about the “social value of avoided carbon emissions” without hurting the existing capital. In so doing, climate finance could provide a lever to a sustainable economic recovery if it results in efficient intermediation bridging long-term assets and short-term cash balances. Based on this pre-requisite, it becomes possible to build an innovative financial device that is apt to: a) lower investment risks of low carbon projects, b) redirect dramatically world savings towards climate finance, c) surmount both the public budget constraints and the vulnerability of the banking systems through a form of carbon-based monetary instrument.

## Rationale for carbon-asset-convertible carbon certificates (C4) mechanism

Along with taxation, public credit is one of the few possible macroeconomic “lubricants” to major economic and technological transitions. Several monetary proposals have been suggested, including the use of Special Drawing Rights (SDR) issued by the IMF [10], and the implementation by central banks of “green quantitative easing policies” [11]. Each of these proposals seeks to leverage private climate finance without direct public money disbursement. Yet, in the absence of a carbon price they are not sufficient to make most low-carbon projects more attractive than their high-carbon alternatives.

The mechanism presented here (C4) is designed along the same lines but with a carbon-value mechanism improving the LCPs return on investment and reducing their risk by including a social value of avoided carbon emissions (SVACE).

Its basic principle, as shown in Figure 1, consists in central banks injecting liquidities into the economy, in the same fashion as the “unconventional monetary policies” implemented after 2008, but provided



**FIGURE 1** The key elements of a climate-friendly financial architecture

that the money is used to fund LCPs. Governments provide a guarantee on a given amount of “carbon assets” that will allow central banks to open credit lines. The reimbursement of the credits are made by “carbon-certificates” (CC) certifying the reduction of GHGs emissions, valued at the pre-determined SVACE and ultimately swapped into carbon assets. The Central Banks announce that they will accept the CC as repayment after due verification of the actual reduction of investments by an independent body. These CC are then converted into carbon assets while entering the central bank’s balance sheet. This comes to a money issuance based on the guarantee that “something of value” has been created in the form of low-carbon equipment. Banks or specialized climate funds can use the carbon-based monetary facility to back highly rated climate-friendly financial products, such as “AAA” climate bonds, in order to attract long-term saving. Institutional investors could be interested in safe and sustainable bonds instead of speculative financial products for both ethical and regulatory purposes. Part of the CC could also be used to scale up the Green Climate Fund in order to secure multilateral cooperation around climate policies and the funding

of NAMAS (Nationally Appropriate Mitigation Actions) [12] without crowding out overseas assistance by each individual country.

### From principles to climate negotiations

The current process of climate negotiations is supposed to achieve a legally and universal agreement on climate at COP21 in Paris which also solves the issue of financing the low carbon transition. The mechanism described above could be included in a climate regime adopted in Paris in order to align climate and development policies without abandoning the 2 °C stabilization objective provided that [13]:

- it relies on voluntary initiatives by a “club” of countries [14];
- it is not seen as a full-fledged global architecture but as a support to a diversity of bottom-up initiatives and as a way of hedging against the economic and political costs of their fragmentation;
- it incorporates no penalty for a defaulting country other than being *de facto* excluded from the access to investments facilities provided by the system.

To meet these conditions the C4 mechanism necessitates an agreement of volunteer countries around a common set of principles agreed within the UNFCCC and periodically adapted:

- A mutually agreed SVACE for the sake of the overall consistency of decentralized initiatives.
- Rules to determine the “quantity of carbon assets” issued by central banks (and guaranteed by their states) and the “access rights” of the recipient countries to the opened credit lines.
- A credible Monitoring Reporting and Verification (MRV) process under an Independent International Supervisory Body, in charge of determining the conformity of the projects to the NAMAS presented by the Parties, attributing carbon certificates to projects and certifying their completion.



4. A “share of the carbon assets” considered as a contribution to the GCF. This will then support the financing of NAMAs considered as implementation tools to achieve the INDCs [15].

## Conclusions

The journey to COP 21 will be successful only if it lays the foundation of a new global “social contract”, which would include the protection of our global commons. Upgraded climate finance has to be part of this contract. This can happen if it also contributes to equitable access to development and to long-term investment adapted to a low-carbon economy. The C4 mechanism provides the opportunity, not to be missed, for a large alliance around climate policies. In addition to LCPs, this system could support any recognized “club” of actors in developing initiatives

recognized by the UNFCCC. This could be the case for sectoral agreements in energy-intensive industries and for initiatives taken by cities and local authorities to improve the synergies between climate policies and local development. In addition, as this carbon-based monetary instrument embarks economic partners in a forward contract, this device would create a reference for carbon pricing mechanisms, progressively facilitating their social acceptance.

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