



THE SAN GIORGIO GROUP INAUGURAL MEETING: Proposed Analytical Program to Support Green, Low- Emissions Finance

16-17 OCTOBER 2011, VENICE

On October 16th and 17th, 2011, Climate Policy Initiative (CPI) and the World Bank Group, in collaboration with China Light & Power (CLP) and the Organization for Economic Co-operation and Development (OECD), hosted the inaugural meeting of the San Giorgio Group (SGG), a new working group of key financial intermediaries and institutions actively engaged in green, low-emissions finance.

CPI's Landscape of Climate Finance published in early October indicated the critical role being played by private finance and pointed to the potential role of public finance as a catalyst for private investment. Given the scarcity of systematic, 'on-the-ground' information about the elements that make investments successful from a financial, environmental, organizational, and political perspective, there was broad agreement amongst financial actors engaged in green finance on the importance of and need for rigorously analyzed case studies. The San Giorgio Group was thus convened to address this gap in climate finance information. The Group's careful description of actual investment decisions will shed light on how public finance interacts with private investment in infrastructure and capital goods projects.

Drawing on the experience of its members and their organizations, the Group will develop detailed analysis of the goals and governance of public investment portfolios, as well as their implementation under individual projects. The analysis will aim to provide information on how to align public and private incentives, manage risks, and coordinate different actors to most effectively deploy and scale-up green, low-emissions funding. The case studies will be analyzed in close cooperation with members and will be used to engage in outreach between SGG meetings.

The context: framework and facts

As the growth rates of emerging economies continue to exceed those of developed countries and as three billion people move out of poverty, a "new world normal" is surfacing with considerable additional pressure on natural resources. At the same time, our current global development pathway has put us on course for a 700 ppm world, corresponding to an increase in global average temperature of 5 degrees Celsius (IPCC, 2007). The framework for the SGG's work is based on the critical need for a transformation from today's crisis to the "new normal," which attempts to address the need for growth while avoiding long-lasting damage to our environment.

Accommodating global growth in a more sustainable way requires an improvement in resource productivity through systemic organizational, policy, political, and technology changes, as well as correcting incentives

that have led to the misuse of resources in the past. A green growth agenda must manage the distributional shifts and coordinate the systemic reforms associated with successful transitions.

Historically, the structure of the global economy has been driven by the flows of capital rather than by regulation. *How then do we ensure that flows of capital lead us to a low-emission, resource-efficient and climate-resilient future?*

CPI's initial Landscape of Climate Finance, which described current climate finance flows, is an important step toward determining how best to scale-up climate finance. The landscape study found, for instance, that in order of magnitude, private sector flows make up the largest component of current climate finance (CPI, 2011), followed in scale by national and then international official flows. Furthermore, investment flows in and to developing countries are increasingly coming from emerging economies such as China, Brazil, and India, which are much less reliant on foreign capital than they were in the past.

FACTS & FIGURES: THE SIZE OF CURRENT CLIMATE FINANCE FLOWS COMPARED TO INVESTMENT NEEDS (US DOLLARS)

\$10 trillion	Total annual investment needed in developing countries by 2015. Source: IMF, World Economic Outlook database, April 2011
\$1.2 trillion	Additional annual investment by 2050 in energy supply and use to avoid a temperature increase beyond 2°C. Source: IEA, Energy Technology Perspectives, 2010
\$243 billion	Global total investment in clean energy in 2010. Source: World Economic Forum and Bloomberg New Energy Finance, 2011
\$100 billion	Annual amount of public and private finance pledged by developed countries to collectively support developing countries' transitions to low-carbon futures by 2020. Source: Copenhagen Accord, 2009
\$97 billion	Current climate finance flows from developed to developing countries, including public and private finance and to a limited extent South-South and domestic sources. Source: CPI Report, 2011

By distilling lessons from emerging financial practices, the SGG will investigate how these flows could be directed towards low-emissions, climate-resilient activities and combined to maximum effect. In addition to achieving effective financial engineering, i.e. creating, repackaging, and combining a variety of financial instruments to support low-carbon development, reforms calling for political and corporate leadership and coalitions of the like-minded will be required.

The SGG will break down the cost components and risks unique to low-emissions, climate-resilient investment, while also tracking costs as they develop over time. These costs might include:

1. Learning costs, i.e. costs required to move down the learning curve;
2. Viability gap-related costs, i.e. the difference in cost (after expected learning) between

low-emissions, climate-resilient options and business as usual investments; and

3. Stranded costs¹ from old inefficient plants.

The SGG will also concentrate on analyzing the varied sources and costs of added risks (reflected in the cost of capital) involved in greener investments, including:

1. Technological, political, regulatory, and operational risks; and
2. Resource efficiency improvement costs, related to both changes in demand patterns and improvements in the way resources are extracted, transformed, and used.

¹ Stranded costs: costs that are related to existing incumbent investments, which may become redundant in a competitive environment; for example, costs incurred by a utility company in building new generation plants and increasing capacity that are not recouped because of changes in regulations.

CASE STUDIES REVIEWED AT THE INAUGURAL SGG MEETING

The **Clean Technology Fund** investments in the Middle East and North Africa Concentrated Solar Power Scale up Program, which includes financing for the world's largest concentrated solar power plant in **Ouarzazate**, in eastern Morocco.

The **Walney Offshore Windfarm project**, located in the United Kingdom, which is led by DONG Energy alongside Scottish and Southern Energy and a consortium of PGGM and Dutch Ampère Equity Fund, managed by Triodos Investment Management.

PROSOL, a joint initiative of Tunisia, Italy, and UNEP, which aims to accelerate the penetration of solar water heating in Tunisia by targeting domestic financial institutions.

The **Overseas Private Investment Cooperation (OPIC)**, the US government's independent development finance agency, which is increasingly engaged in renewable energy funding.

The **German Special Fund for Energy and Climate**, which will provide additional financing for renewable energy, energy efficiency, and national and international climate protection. The financial basis is long-term, budget-independent financing that complements existing budget allocations with the lion's share coming from auctioning of emissions allowances.

The **Capital Markets Climate Initiative (CMCI)** case study on India solar, a UK-led initiative aimed at supporting the scale-up of private finance flows to developing countries.

What is the role of public money?

Public policy plays a critical role in addressing the challenges to scaling-up finance, which are triggered by various types of costs and risks. To date, public finance has been at the center of international discussions on how to finance the transition to a low-emissions future, but its scale is restricted. The bulk of finance is thus expected to come from the private sector. Nonetheless, available public funds, including international public money, have a significant role to play in taking on the classes of risk that the private market will not bear (e.g. where returns cannot be monetized or appropriated by the investor) and in assuming tailored ownership interests in cases where the public sector can manage the costs of risks more effectively than the private sector (such as regulatory risk, risks associated with the absence of complementary public goods, and risks that are more perceived than real, e.g. demonstration of a proven technology). The scale of these publicly-offloaded or assumed risks depends on the nature of the investment. Case studies such as the DONG Walney Offshore Wind Farms case show that companies are accustomed to bearing many operational risks but are less likely to take on political and regulatory risk.

Initial case study discussions during the inaugural SGG meeting indicate an emerging consensus on the tenet of maximum possible leverage for public finance—or, minimizing public support relative to private investment so that limited public budgets cover no more than is needed. In other words, public finance should focus on compensating for the particular risk premia required to supplement available market returns to private capital for

each specific class of low-emissions investment. The Group also suggests that emerging markets and transformative activities that are scalable and replicable should be the focus of public funding. Transformative activities do not just extend or improve over previous activities, but support a state change in form of a redirection towards low-carbon, climate-resilient development as well.

Moving forward, the SGG will explore the **public policies** that are able to match the specific risk and cost components, i.e. the most effective public portfolio composition given the respective capabilities of the public and private sectors to take on different risks. Detailed case studies will help shed light on the most effective balance between public and private capital. They will also explore whether public money should be primarily dedicated to capacity building or infrastructure, to negative or positive components of the cost curve, as well as how to achieve the multiple goals of public funding (including carbon, ecosystem services, jobs, growth, and poverty reduction).

How can public money be best delivered?

Given the constrained scale and scope of legitimate uses of public money, it is essential to understand which instruments and processes are most efficient in delivering public funds to acquire the collective goods components of low-emissions investments. Different public policy instruments may be more or less aligned with the principle reasons for public funding—i.e. the public assumption of privately unacceptable risk and the less costly management of such risks.

At the SGG meeting, participants examined case studies for examples of the fit between various public policy instruments and the management of privately unacceptable risks. The goal was to improve the understanding of what approach or blended combination of instruments works best to foster at scale investments in low-emissions finance. Questions included whether a) innovative financial products and new instruments need to be designed or b) it makes more sense to encourage new investors to take familiar instruments and investment practices (“plain vanilla”) and build upon them at the margin to adapt to new challenges. The latter strategy may reduce investors’ perceptions of disruptive changes to well-accepted patterns of financial engineering. Several cases indicate that a frequent problem in market-led investments is related to debt, rather than equity, financing; a financial structure that leaves key classes of lenders (e.g. a pension fund or other investment-grade institutional debt) more comfortable, as demonstrated by the DONG Energy financing strategies for large-scale offshore wind, may be more appropriate and relevant for making alternative technologies more familiar to investors.

The SGG agreed that simplicity could be key to scaling up private finance and delivering results, stressing that over time, the type of instrument is likely to be less important than its consistency. As long as government funds correct the mispriced risks of private market opportunities, adequate demand for financial instruments will follow. The Group also pointed to the importance of getting price mechanisms to work better since, in almost every resource market, they do not currently reflect long-run costs. This is especially true in the history of pervasive subsidies in many national (fossil) energy sectors. In addition, an in-depth analysis of the PROSOL financing facility in Tunisia suggested potential efficiency

gains from reworking the existing political economy of energy subsidies, in which energy services can be replicated at lower cost by shifting subsidies away from carbon intensive (LPG²) to renewable resources (solar water heating). The same case emphasized the value of capacity building at the local level as a way to improve the delivery of investments. Finally, when they can be monitored and evaluated, climate policy loans (budget support) may be also an important instrument to increase government capacity to reform institutions and policies to realign incentives across broad classes of low-emissions investments, with economy-wide impacts beyond those achievable through project-by-project activities.

Going forward, the SGG will investigate which **instruments and channels** are the most appropriate for delivering public funding given the risk structure of a specific project or fund. More specifically, the Group will ask how we can design instruments (e.g. ownership interests, grants, policy support, and contingent support) that adjust the current risk-return equation so that we start to see money flowing freely and with the most impact. Also, who is best placed to administer these instruments? In the growing crowd of bilateral and multilateral aid organizations, trusteeships, and dedicated climate finance vehicles like the prospective Green Climate Fund, how can we minimize the costs of managing international transfers or better match these organizations’ institutional capacities to financial instruments and investment goals?

² LPG is short for “Liquefied Petroleum Gas,” also called LPG, GPL, LP Gas, or liquid propane gas.

How can continued learning be ensured?

In the context of projected finance requirements (see above), SGG discussions highlighted the need to scale-up and learn fast. A wide range of funds, funding programs, and investments related to low-emissions objectives exist, raising the question of how we can evaluate and distil lessons from existing flows and structures for use in new vehicles, including the Green Climate Fund. Via its case studies, outreach, and convening activities, the SGG will address the critical question: **How do we learn?** In other words, through the continual re-examination and systematic evaluation of emerging financial practices, the SGG members will draw generalizable lessons about how to improve the performance of the investment portfolios and individual projects they implement, and they will do so during the real-time period in which these portfolios and projects proliferate.

During the meeting, the need to make a solid financial case for profitable investment opportunities in climate mitigation and adaptation activities became clear. Consensus emerged around the great value that rigorous case studies presenting the facts and figures behind existing green investments would be for new investors, project developers, and policy makers. Systematic tracking of existing green investment projects along their life cycle, both in terms of process and design, will provide a clear and simple picture of how investments are structured and an understanding of how public and private incentives can be effectively aligned, bringing together their respec-

tive portfolios to get the risk-return equation right. By creating a record of the life cycle of a project's development from implementation to financing and through to scale up, the case studies will also help to determine whether finance is being credibly deployed through effective instruments and channels so as to 1) enhance the willingness of donors to expand their contributions and 2) expand the belief among recipient countries that low-emissions and climate-resilient growth constitutes a practical and productive national development strategy. In short, to attract additional finance, it will be important to present examples of effective investments that align public and private portfolios.

As some of the elements and data needed to carry out a significant analysis might not typically be available to the public, confidentiality is ensured during the SGG's case study work. Depending on each specific circumstance, several levels of disclosure are envisaged for sharing information about SGG analysis and will be coordinated with the relevant actors.

The case studies to be considered will be built up in collaboration with SGG members active in investments, as well as their partners, and will explore questions such as: What are the real risks? Who is bearing them? What does the enabling environment look like? What are the internal rates of return? What is the implied cost of carbon? Does the case study scale? Is it replicable? What are the broader impacts of the project on society and government? Table 1 provides an overview of the first set of case studies selected for further analysis.

Table 1 - Initial set of case studies for the San Giorgio Group

Description		Key Questions
CTF Ouarzazate I CSP Project	160 MW concentrated solar power plant (with 3-hour storage) in Morocco	How can the mix of innovative policies (feed-in tariff, competitive bidding process, and gradual shift to exports towards European power grids) and international concessional finance (Clean Technology Fund and multilateral institutions) address early technology risk in an emerging market and drive generation costs down?
Walney Offshore Wind Park	367.2 MW offshore wind farm in the UK developed by DONG Energy	How have UK policies (green certificates evolving to feed-in tariffs) and project financial engineering altered the risk-return profile of this investment so as to make European institutional investors comfortable?
PROSOL	Small-scale domestic Solar Water Heating financing mechanism in Tunisia	How can a financing mechanism influence policy-making, driving a reform in the energy subsidy framework , while incentivizing private investor involvement?

Note: The final analysis of these case studies is foreseen for Q1 2012.

Beyond individual case studies, SGG members equally recognized that the effective investment of public funds cannot rely solely on competition between financial intermediaries to sort out which players and practices should survive and expand the market shares of the portfolios they manage. It is easy to predict that private actors will seek to game the willingness of public funders to absorb a portion of the risks that attend new investments during industrial transitions. Past experience with the portfolios of public investments suggests that political actors may influence the selection of projects and that information about public and private funders in innovative capital goods decisions may not be symmetrical. In these circumstances, continued attention must be directed to the qualities of public institutions that define and manage investment portfolios. Questions ought to be focused on public institutions':

- scope and specialization of asset classes eligible for investment;

- objectives (climate, other environmental services, growth factors like jobs or income distribution) to be maximized across the portfolio;
- assurance of representation and technical expertise in portfolio governance, organizations, or public agencies qualified to apply for project funding;
- standards and modes of ensuring financial probity and social and environmental safeguards for public investments;
- provisions for the outsourcing of specific investment functions (e.g. monitoring, evaluation); and
- coordination between the wider set of investment positions and products across public and private institutions across capital markets.

With this in mind, SGG members underlined the importance of knowledge-sharing and

better communication about the risks associated with low-emissions technologies, of improved methods for monitoring and evaluating the performance of investments, and of fostering leadership and building consensus in the business community. A coalition of willing big and small players and governments was called for, asking leaders to not be afraid of letting the long-term override the short-term strategies. The SGG assembles representatives from key financial intermediaries and institutions actively engaged in green, low-emissions finance, including investors, banks, development finance institutions, and capital market representatives from emerging economies, as well as national and international policy makers. The SGG will also foster stronger engagement from private investors, institutional investors such as pension funds and Sovereign Wealth Funds, project developers, and representatives from emerging economies. Recognizing that not all relevant actors can regularly be engaged in SGG activities, a focused interaction and outreach strategy will be implemented to share key messages from meetings and case study work and to engage with other international forums, such as the Global Agenda Councils, Transitional Committee, G20, and Rio+20.

Summary and next steps

The need for public funding for low-emissions finance, as well as potential sources of these types of investment was established by the Secretary General's High-Level Group on Climate Finance. However, that Group did not address the linked questions of how to scale up or effectively spend those funds in any detail. In light of the long and problematic history of effective public spending that has characterized the related mechanisms of official development assistance, govern-

ment investments in technology innovation, and international carbon markets such as the Clean Development Mechanism of the Kyoto protocol, the San Giorgio Group will analyze and diffuse knowledge on the performance of investments and financial institutions in low-emission and climate-resilient activities.

Even with the establishment of a Green Climate Fund (GCF) through the UNFCCC negotiating processes at Cancún and Durban, it is apparent that no single institution will monopolize, or dominate, the flows of public financing to these activities in the coming years. Rather, there is an implicit competition to capture important shares of the administration of funding flows from donor nations through multiple intermediary agencies and their final investment destinations. This competition will pit the GCF, other special purpose funding vehicles, national and bilateral agencies, regional and multinational banks, and private fund managers against each other to demonstrate who can better yield credible returns on investment portfolios over the range of climate, environmental, and economic objectives. Regardless of the technical competence with which the GCF and other dedicated intermediaries develop new services and products, the immediate future of financial markets will provide substantial raw material for the analysis of the effectiveness of public policy delivered through low-emissions investment.

The framing agenda of the SGG going forward will plumb these diverse financial practices for guidance on the core issues of: i) the role of public money; ii) the best delivery (instruments and institutional channels) mechanisms for public money; iii) the alignment of international and national public investment flows with each other and with private investments; and iv) ensuring learning. In addition to examining the experience of its members and conducting detailed analysis and tracking of existing green

SUGGESTIONS FOR SGG ANALYSIS

During the inaugural meeting suggestions regarding focused studies for exploration at the next SGG sessions included:

- Adaptation finance, focusing on how to blend adaptation finance with the mitigation agenda;
- Alternative strategies for green banking development such as special purpose vehicles (GCF; UK Green Bank; US CEDA) versus the greening of the existing risk-return calculus in national development or private commercial banks;
- A focus on the relative effectiveness of policy delivery through joint public-private ownership interests (e.g., finance) in contrast to contributions to low-emissions activities through capital grants or payments into subsidies to operations (e.g., feed-in tariffs).

Questions were posed on:

- How to deliver technical investment services to essentially international political bodies like the Board of the GCF;
- How to design better practices to structure and integrate one or several carbon offset markets with other low-emissions financial mechanisms;
- The evolution of particular financial instruments such as the reduction of subsidies to learning across successive vintages of innovative technology applications;
- The changing roles and governance of multilateral trusteeships;
- Lessons on the efficient interplay between international transfers and national budgetary and capital contributions in low emissions development.

investments, the San Giorgio Group will follow the mandates of its members to carry out specific applied analyses of topical subjects within the emergent financial landscape.

Specific studies, chartered by SGG deliberations and supported by analytical work and outreach between meetings, will be further refined through future roundtable discussions

and other regularly-occurring events. Together with occasional papers and reports that reflect on the developing state of high-level practice of low-emissions finance, the collection of topical analyses and extensive case files will define the SGG's contribution to the continuing reform of the financial sector without which industrial transformation cannot take root.

ADDED VALUE

The work done by the San Giorgio Group will add value to the discussions surrounding climate finance and the transition to a global green economy in a number of ways:

- **Breadth.** We work across the range of funds, funding mechanisms, and intermediaries at play around the world, drawing lessons across the portfolio of current activities.
- **Depth.** We look at the entire value chain from upstream down to the execution and implementation of projects.
- **Real-time lessons.** Our work draws lessons from success and failure stories and feeds them back in real-time throughout the process.
- **Incentive alignment.** We are explicitly interested in how public policies align with private strategies and practices, to identify public policies that are both efficient and effective.
- **National and international flows.** Our work is focused on how to allocate funds on an integrated basis.
- **Green Climate Fund.** Our findings on how to spend money wisely can inform the design and implementation of a new vehicle.