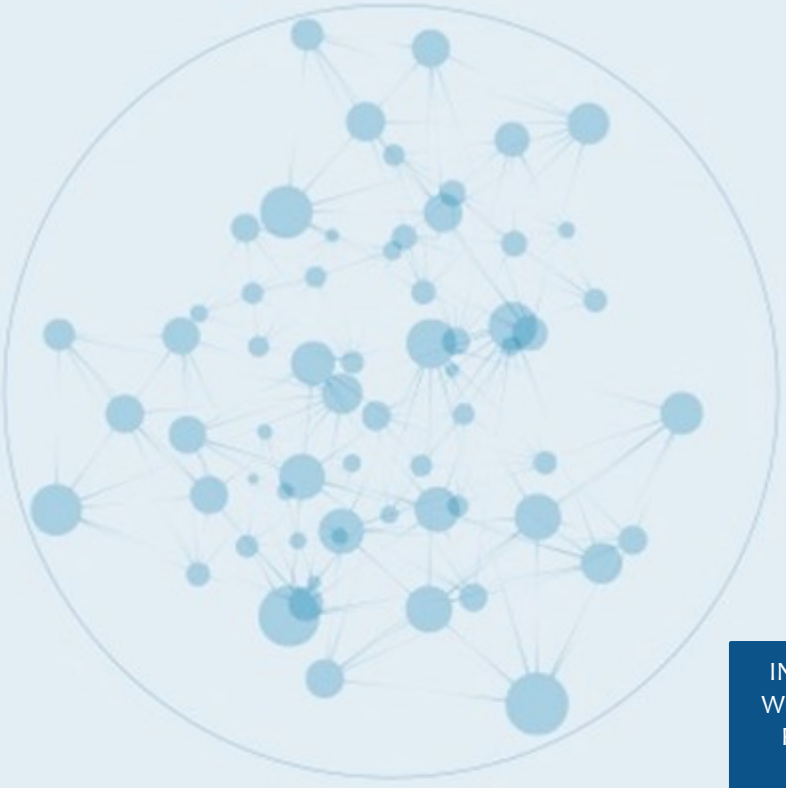
Inquiry: Design of a
Sustainable Financial System

UNEP

THE ROLE OF POLICY-DRIVEN INSTITUTIONS IN DEVELOPING NATIONAL FINANCIAL SYSTEMS FOR LONG-TERM GROWTH



INQUIRY WORKING PAPER

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The UNEP Inquiry

The Inquiry into the Design of a Sustainable Financial System has been initiated by the United Nations Environment Programme to advance policy options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy—in other words, sustainable development. Established in January 2014, it will publish its final report in October 2015.

More information on the Inquiry is at: *www.unep.org/inquiry* or from: Ms. Mahenau Agha, Director of Outreach *mahenau.agha@unep.org*.

The Centre for International Governance Innovation (CIGI)

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About this report

This working paper results from a workshop the UNEP Inquiry and CIGI held on 2-3 December 2014 in Waterloo, Canada to discuss options for a sustainable global financial system. The workshop included participants from a range of academic and research institutions from the Waterloo region and abroad, including the University of Waterloo, the University of London, Harvard University, and the University of Gothenburg.

Comments are welcome and should be sent to *simon.zadek@unep.org*.

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Abstract

Access to affordable, long-term finance is a pre-condition for sustainable development. High financing costs in developing countries penalize green investment because of their higher upfront capital requirements. To facilitate access to long-term affordable finance for sustainable development, governments in developing countries are designing and implementing green industrial policies to de-risk clean technology investment by removing technology-specific investment barriers. Over the past ten years, the number of countries promoting renewable energy with direct policy support has nearly tripled, from 48 to over 140, and an ever-increasing number of developing and emerging countries are setting renewable energy targets and enacting support policies.

While establishing an adequate technology-specific policy environment is critical to mobilize private finance for sustainable development, the depth and diversity of national financial markets are also important determinants of the conditions under which private sector investment occurs. Developing countries tend to have weak financial systems, with local capital markets lacking long-term financial products in domestic currencies and under-developed financial intermediation, sometimes in combination with excess liquidity in the banking system. The degree to which countries are able to overcome these barriers and influence the allocation of lending to the private sector varies. Some countries have relied on directed credit to achieve public policy goals. Others are experimenting with regulatory or financial incentives. The past few years have also seen a growing interest in policy-driven institutions – such as national development banks (NDBs) and national green funds (NGFs) – to provide grants, credit-enhancement instruments or lend directly to project proponents in specific green sectors.

Billions of dollars are allocated by governments to support these interventions. Yet, there remains a gap in our understanding of their comparative effectiveness to deepen national financial systems. As part of ongoing efforts to bridge this gap, the paper discusses the role of NGFs in catalysing institutional innovations and facilitating access to long-term affordable finance for green, low carbon and climate resilient investment. It is divided into three sections. Section 1 lays out some of the challenges associated with raising private sector financing for sustainable development in developing countries. Section 2 reviews existing strategies to develop national financial systems. Section 3 adopts an ecosystem lens to assess the possible roles of NGFs in deepening national financial systems.

The paper concludes that there has been a disproportionate level of focus on the capacity of NGFs to manage international green and climate finance. While NGFs could play a supporting role in the design and implementation of NAMAs, their direct capitalization from international sources is likely to remain limited. The paper argues that the key added value of NGFs might lay in their capacity to foster institutional innovations and partner with other financial and regulatory institutions in such a way as to increase the diversity and depth of local financial markets and enhance the domestic supply of green finance.

1 Opportunities and challenges for financing sustainability

Sustainable development in developing countries involves the promotion of high levels of domestic savings and investment, as well as the efficient allocation of these funds to green, low carbon and climate resilient skills, technologies and infrastructure. This first section discusses some of the opportunities and challenges faced in meeting these objectives.

1.1 Investment Needs and Gaps

The transition to sustainable development will involve trillions of dollars of new investment annually, and the reallocation of many tens of trillions of dollars of existing assets that underpin today's unsustainable economy (UNEP, 2014a). For example, the World Economic Forum (2014) projects that by 2020, about US$5.7 trillion will need to be invested annually in green infrastructure to build new transport, energy and buildings infrastructure which is cleaner and more resilient, much of which will be in today's developing world. This will involve shifting the world's annual US$5 trillion in business-as-usual investments into green investments, as well as mobilizing an additional US$700 billion annually in additional investment to ensure this shift actually happens.

It is critically important to distinguish additional investment from additional costs. In many sectors, investments required for a transformation of the global economic system are potentially profitable. Investment in energy and resource efficiency not only reduces resource consumption and pollution loads but also generates attractive returns on investment. McKinsey (2011) estimates that potential efficiency gains in the energy, water, waste and transport sectors could unlock annual savings to society of US$2.9 trillion by 2030, at current market prices. Importantly, developing countries account for 70 to 85 per cent of resource productivity opportunities.

The existence of significant potential for sustainable development investments should make a compelling case for businesses, private investors and households to independently adopt green, low carbon and climate resilient technologies and practices. However, total investment in renewable power and fuels (excluding large hydro-electric projects) actually fell for the second year running in 2013 after years of rapid growth, reaching US$214 billion worldwide, some 14% lower than in 2012 and 23% below the 2011 record. The decline reflected a sharp fall in solar system prices but also the effects of policy uncertainty in many countries.

Thus, there remains a significant gap between the global investment needs and current levels of investment. The investment gap is particularly critical in low income countries that account for an even more modest share of investment flows (US$10-20 billion). While South Africa attracted US$4.8 billion in large scale renewable energy investment, the rest of Africa accounted for less than 1% of total investment (UNEP, BNEF, 2014).

This regional unevenness substantially compounds the global energy transition challenge. Under the IEA baseline case forecast (2014), non-OECD markets are expected to account for around 70% of new renewable power generation from 2013-20. Renewables are projected to meet only 35% of fast-growing electricity needs through 2020, illustrating the still-significant role of fossil fuels and large upside for greater renewable growth (IEA, 2014).

1.2 Barriers to climate investments

Investment in seemingly profitable opportunities faces a range of informational, technical, institutional and financial barriers. The following is a non-exhaustive list of generic barriers to green, low carbon and climate-resilient investment clustered into five key categories:

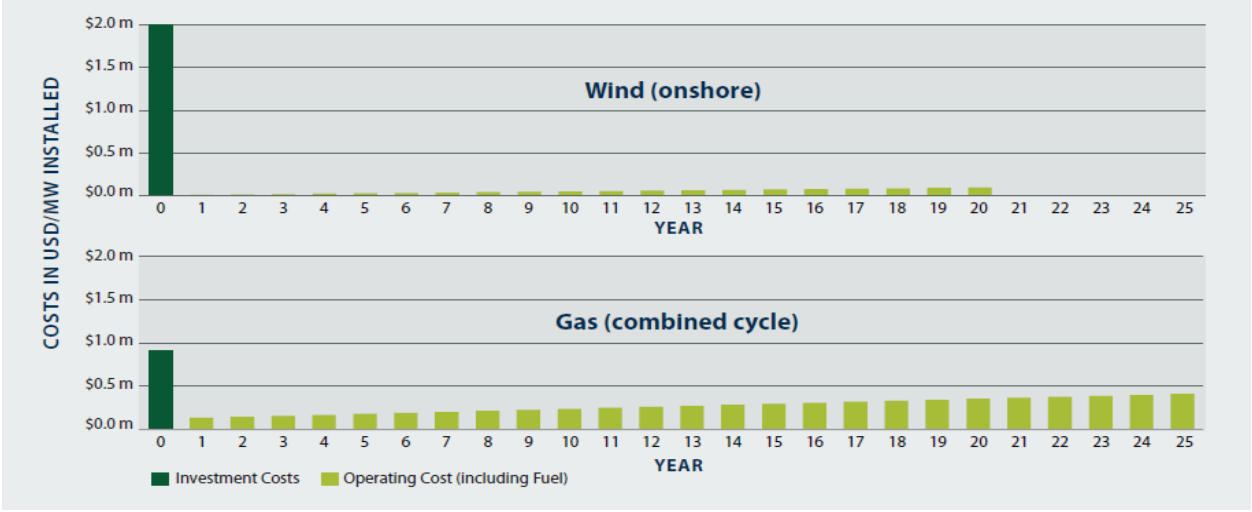
- *Information and awareness barriers*: the business community in developing countries has a limited awareness of the risks and opportunities associated with global environmental changes and the transition to green, low carbon and climate resilient development pathways. Even if a business is aware of climate risks, it is difficult to integrate scientific information on long-term climate change scenarios into site-specific short-term business plans (UNEP, 2011a).
- *Technical and capacity barriers*: technical skills to adopt and adapt green technologies and practices are in short supply and technical standards and quality assurance mechanisms are missing for new clean technologies.
- *Institutional and regulatory barriers*: lack of integration of climate and environment risks into legislation and codes (building codes, land zoning, safety codes, etc.), insufficient enforcement of existing regulations (environmental and social impact assessments, land tenure regimes, green procurement, etc.); complex, inconsistent or opaque licensing procedures for green investment leading to transaction delays and costs.
- *Market barriers*: green markets often suffer from uncertainty on market size, entrenched monopolies and policy barriers to new market entrants, difficulty to convert social benefits into private profits and mismatch between time horizons of costs and benefits.
- *Financial barriers*: Budgets are lacking to implement public policies and strategies and provide critical public services (rule of law, security, etc.); access to international capital markets is limited and local capital markets are under-developed to finance investment projects.

All these investment barriers translate into perceived higher risks and thus higher financing costs. Providers of financing require a higher return and will offer less attractive financing terms to compensate themselves for these higher risks. In practice this translates into higher interest rates (debt), required returns (equity), shorter loan tenors and a higher share of more costly equity in capital structures.

These high financing cost environments in developing countries particularly penalize clean investment when compared to conventional investment because of their respective cost profiles. Many green infrastructure and technologies typically have higher upfront capital requirements in exchange for lower operations and maintenance costs.

As an illustration, Figure 1 shows the different cost profiles of electricity generation from onshore wind energy and combined-cycle gas plants. Investment costs account for approximately 80% of the total lifetime technology costs for wind energy but only account for around 15% in the case of gas (Waissbein et al., 2013). Conversely, annual operating costs are relatively low for wind energy but predominate in the case of gas. Likewise, climate resilient roads will have higher construction costs than climate vulnerable roads but require less operation and maintenance work.

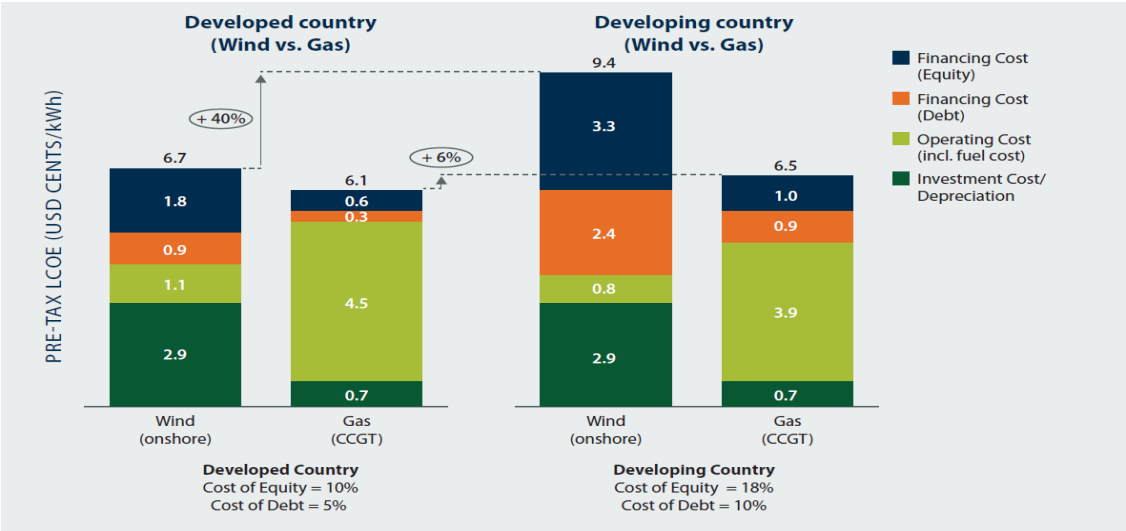
Figure 1: Capital Intensity of Clean Technologies



Source: Waissbein et al., 2013

High financing costs will dramatically impact the competitiveness of green, low carbon and climate resilient clean technologies and infrastructure. Figure 2 compares the levelized cost of electricity (LCOE) of onshore wind energy and combined-cycle gas in a developed and developing country. In a developed country benefiting from low financing costs, wind power can be almost cost-competitive with gas. In a developing country with higher financing costs, wind power generation cost becomes 40 percent more expensive than in a developed country. In contrast, gas only becomes 6 percent more expensive due to these higher financing costs. Thus, in a typical developing country, wind power is no longer competitive with gas, simply because of the impact of high financing costs.

Figure 2: The Impact of financing costs on wind and gas power generation costs



Source: Waissbein et al., 2013

This sensitivity of climate investments to financing costs is central to the challenge of reallocating private sector flows from business-as-usual to climate-friendly activities. If private finance for sustainable development is to be mobilized at the scale required to meet the world's pressing environmental challenges in a timely manner, a key objective must be to provide access to large quantities of low-cost and long-term (with respect to loan tenors) financing.

In order to address this, governments seeking to facilitate access to long-term affordable finance for sustainable development are designing and implementing green industrial policies to de-risk clean technology investment. By removing technology-specific investment barriers, providers of debt and equity can offer lower financing costs and more attractive financing terms, reflecting the lower risks in the investment environment (Glemarec, 2011; Glemarec et al., 2013; Waissbein et al., 2013). Since 2004, the number of countries promoting renewable energy with direct policy support has nearly tripled, from 48 to over 140, and an ever-increasing number of developing and emerging countries are setting renewable energy targets and enacting support policies (REN21, 2014).

1.3 The importance of national financial systems for sustainable development

While establishing an adequate technology-specific policy environment is critical to the mobilization of green private finance, the depth and diversity of national financial markets are also important determinants of the conditions under which private sector investment occurs. Developing countries have been benefiting from the recent appetite of investors for higher yield bonds to increase their access to capital markets. Before 2006, only South Africa had issued a sovereign bond. In 2014, more than a dozen Sub-Saharan countries had done so. Sub-Saharan African countries have raised nearly US$7 billion during the first three quarters of 2014. The proceeds from the bond sales are used to improve infrastructure, restructure debt and finance deficits (Dealogic, 2014). However, international markets can only be part of the solution. Because of past debt restructuring events, many developing countries are still unrated by the major credit ratings agencies. Only a handful of developing countries are rated BBB and above by S&P, which is considered as the lowest investment grade by market participants.

Furthermore, the bulk of climate investment comes from the private sector at the local level. 76% of all climate finance is spent by countries entirely within their own borders, reflecting a strong preference of investors for a familiar environment that they perceived as lower risk (CPI, 2013). The importance of local financial markets will keep growing as decentralized renewable energy and energy efficient investments scale up in the coming years. These investments will need to be supported by national financial systems and local currency products.

Financial markets in developing countries are usually immature. Numerous variables have been used to analyse the level of financial development of a country, including: the level of deposits in banks, bank concentration and the level of overall credit provided by the banking sector, in particular to private firms; the size of domestic stock and bond markets; and assets of non-bank institutions such as pension funds and life insurance companies. In most developing countries stock and bond markets are very thin and bank lending represents the largest source of financial intermediation (Freedman and Click, 2006).

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