UNEP

GREEN economy

Briefing Paper

Finance

Overview

The financing required for a green economy transition is substantial, but it can be mobilized by smart public policy and innovative financing mechanisms. Supportive public finance and policy, the growing green orientation of capital markets, and the evolution of emerging market instruments are opening up the space for large-scale financing that will bolster national initiatives to green economies. But these flows are still small compared to total volumes, and urgently need to be magnified for the transition to be successful in the near-term. Concentrated pools of assets, such as those controlled by long-term investors like public financial institutions, development banks and sovereign wealth funds, as well as some pension funds and insurance, will have an important role to play in facilitating this economic shift at the national and global levels.

A growing body of evidence has underlined the scale of the challenge in mobilizing capital flows for the transition towards a green economy. For example, UNEP's Green Economy Report estimates that 2 per cent of the global GDP (currently USD 1.3 trillion per year) is needed to finance the transition to a green economy by 2050. Estimates elsewhere are similar. For example:

The IEA Blue Map scenario estimates that approximately USD 750 billion per year up to 2030, and USD 1.6 trillion per year from 2030 to 2050, will be required to halve worldwide energy-related CO_2 emissions. The World Economic Forum and Bloomberg New Energy Finance project that clean energy investment must rise to USD 500 billion per year by 2020 to restrict global warming to 2°C. HSBC estimates that the transition to a low carbon economy will see a total growth in cumulative capital investments of USD 10 trillion between 2010 to 2020.

Addressing the misallocation of capital in the brown economy through policy reforms, especially the removal of outdated fossil fuel subsidies and the introduction of green taxes, has the potential to engender directional behavioral change and raise capital to support the transitions towards greener economies. Nonetheless, the dominant scale of global and national private capital markets, the maximum possible revenues that can be raised through policy reform and the growing fiscal challenges in many developed economies suggest that the large financial flows required for a successful green economy transformation will, in the long run, be mainly private in composition. Hence, policy and regulatory reforms must shift the incentives and the risk profiles of the capital markets so that the financing of the green economy becomes commercially viable without subsidies.

Existing and emerging financing opportunities in the green economy

Emerging green markets. A number of green markets have emerged as a result of increased public and private investments. Notably, a persistent growth in capital flows has been recorded in the renewable energy sector since 2004, hitting a record of USD 211 billion in new investment in 2010 (see Figure 1).

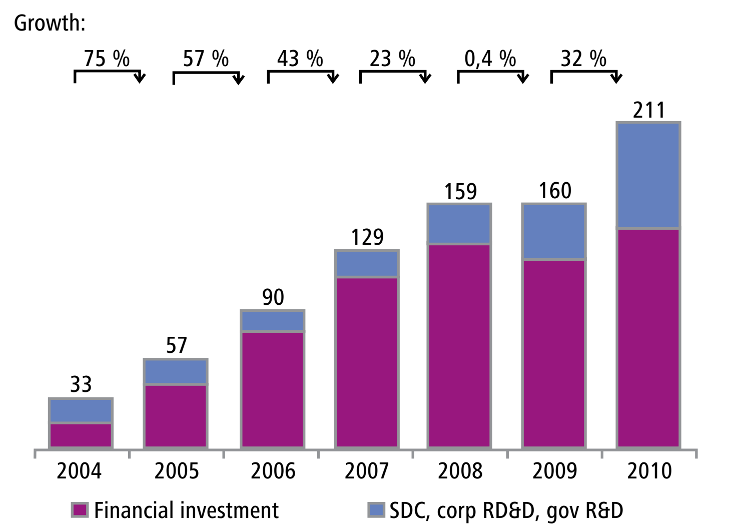
Innovation in financial instruments. Other examples of green markets and financial instruments that have emerged in the past decade include: carbon finance, green

UNEP defines a ***green economy*** *as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.*

stimulus funds, microfinance, weather-indexed insurance products, green bonds and thematic funds such as international and national climate funds, green infrastructure, real estate funds and socially responsible equity funds, among others.

Essential infrastructure and institutions. The introduction of 'green' essential infrastructure and institutions that facilitate the allocation of capital into low-carbon and resource-efficient markets, including markets underpinned by valued biodiversity and ecosystem services, have evolved as important mediums that also catalyze private finance. Some notable examples include: payments for ecosystem services, over 50 sustainability indexes and a number of emerging climate indexes and specialized green investment banks.

Figure1: Global new investment in renewable energy, 2004 - 2010 (in USD bn)



SDC - Small Distributed Capacity. New investment volume adjusts for re-invested equity. Total values include estimates for undisclosed deals.

Source: Bloomberg New Energy Finance.

Drivers of green investment. A confluence of targeted policy support and market demand, combined with innovations in public and private financing mechanisms, have underpinned the emergence of green markets, and the growth in renewable infrastructure in particular. In addition, the take up of integrated financial and non-financial information (environmental, social and governance issues) and disclosure are key drivers of future-proof investment decision-making.

However, there is a series of broader market, institutional and policy failures and associated risks, which are still hampering green investments at scale.

Challenges in mobilizing finance at scale for a green economy

Green investments, like any other type of investment, are determined by a multiplicity of financial and extra-financial factors, which may vary by sector, country or other criteria. Growing evidence and feedback from the financial sector from a number of international processes, including those convened or supported by UNEP, suggest that there is general agreement about the following broad categories of barriers specific to green investment:

- **Market, institutional and policy** failures or barriers that make green markets unattractive by depressing risk-adjusted private return in infrastructure projects that underpin growth and job creation in key green sectors such as renewables and energy efficiency, transport, water, forestry, and sanitation.

- **High risk perceptions on green markets that have a longer payback period** due to, for instance, uncertainties about future climate policy frameworks, technological uncertainties and lack of awareness or information about purportedly "unbankable" green projects (e.g., investments in cost-saving energy efficiency implementation in physical assets, such as infrastructure or buildings).

- **Absence of policy and regulatory measures to internalize externalities**, such as weak or lack of broad carbon pricing policy, unmeasured and unvalued biodiversity and ecosystem services or insufficient mandatory requirements for integrated sustainability reporting and disclosure, which in turn fuel short-term thinking in the financial sector.

UNEP launched its **Green Economy Initiative** *in 2008, and is currently supporting over 20 countries around the world in their transition towards a green economy.*

- **Low access to finance** in developing and especially least developed countries, and the **instability of the financial system** in developed countries, influenced by broader economy-wide factors that may affect private investments, especially capital-intensive and higher risk green projects.

A number of international investment initiatives have aimed at bringing down the above barriers to green investment in developing and least developed countries, including catalyzing private finance. Notable examples with UNEP's direct or indirect involvement include international climate funds, such as the emerging Green Climate Fund which targets mobilization of public and private investments in developing countries in the order of USD 100 billion per year by 2020; the Climate Investment Fund with USD 6.5 billion and portfolio activities in 45 countries; and the Global Environmental Facility.

Importantly, for green initiatives at the country level, public finance and policy can play a crucial role by establishing the incentive frameworks needed to catalyze higher levels of private investment across key sectors that underpin green growth and job creation, especially green infrastructure. Catalyzing private resources is best achieved through a combination of policy and regulatory reforms that address the short-term thinking in the financial sector and incentivize greater participation of financiers and investors in green sectors.

The way forward

To effectively address the challenges in financing long-term needs of greening global economies, the following activities will require particular attention in the short to medium term:

- **Promote public and private financial institutions' dual roles in facilitating a transition to a greener economy.** First, public finance can enhance and/or develop new incentive frameworks to catalyze greater shares of private capital flows, while private financial institutions can adopt market incentives that reward longer-term green markets. Second, public finance can focus on reorienting existing public resources from brown to green economic activities while private financial institutions can direct greater flows to assets that sustain and enhance financial, environmental and social values in economy.

- **Encourage greater participation of development finance institutions, banks and institutional investors in joint green investment initiatives**, especially in infrastructure projects that underpin job creation and growth in sectors such as energy, water, transport, education and sanitation in developing countries. In this regard, creative finance-led solutions and the use of appropriate public-private financing mechanisms that address problems, such as risk-return profiles, are critical factors in steering private sector investment strategies towards green infrastructure initiatives, especially in developing countries.

- **Promote the adoption of mandatory integrated frameworks by business and industry** to enable informed investment decision-making based on overall performance of companies, including performance on environmental and social governance issues.

- **Promote the application and the mainstreaming of environmental and social governance criteria** across the four components of the financial system**:** intermediaries, capital markets, infrastructure and the body of standard-setters and rating agencies that enable the allocation of capital to end-users.

- **Tracking new trends in green investment flows.** The tracking and precise quantification of capital flows to green markets, other than in renewables, remains a challenge. A number of organizations are working to develop methodologies to measure green investments and design tracking tools.

The **Green Economy Report**, *published by UNEP in 2011, makes a compelling economic and social case for investing two per cent of global GDP in greening 10 central sectors of the economy.*

What UNEP is doing

UNEP contributes in addressing the above challenges by engaging with financial institutions primarily through UNEP's Finance Initiative (FI) – a global partnership between UNEP and over 200 financial institutions from developed and developing countries.

UNEP FI promotes sustainable finance and responsible investment approaches that lead to the realization of green economies through projects that show the co-relationship between financial and environmental and social governance performance. It promotes leadership and the active role of financial institutions in achieving a conducive environment for green economies. Some of the projects are carried out in conjunction with partners at global, regional and national levels. The following are some examples:

The 2011 UNEP FI Global Roundtable convened over 500 banks, investment and insurance companies, policy-makers and civil society representatives under the overarching theme of "The Tipping Point: Sustained stability in the next economy."

UNEP FI continues to promote the need for a global policy framework requiring all listed and large private companies to consider sustainability issues and to integrate environmental and social information within their reporting cycle.

UNEP engages financial institutions and partners to identify finance-led solutions that address barriers to investments in green markets. Recent examples include: a report entitled *Financing Renewable Energy in Sub-Saharan Africa*, launched in February 2012, and the forthcoming report *Unlocking energy efficiency retrofit investment opportunity: Available public and private financing mechanisms*.

Building on UNEP's Sustainable Energy Finance Initiative (SEFI) work, UNEP and its partners continue to promote sustainable energy finance through a number of projects and activities. Through the Seed Capital Facility, for instace, UNEP plays a leadership role in catalyzing private investment in financing early stage low carbon energy ventures in Asia and Africa.

At the Rio+20 Conference, UNEP will be hosting a side event on "Mobilizing Capital at Scale for a Green Economy Transition: The Financing Challenge". The main objective will be to explore how current and future investment flows could be redirected to transform key economic sectors and contribute to green development pathways. It will provide a platform where leading thinkers on innovative financing mechanisms will share and discuss possible options for financing a green economy transition with the sustainable development community.

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