

ICTSD Series on Trade-Supported Strategies for Sustainable Development



Aid for Trade and Climate Change Financing Mechanisms



Best Practices and Lessons Learned for LDCs and SVEs in Africa

By **Vinaye Dey Ancharaz**, Senior Lecturer, University of Mauritius
Riad A. Sultan, Research Executive, National Economic and Social Council



International Centre for Trade
and Sustainable Development

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LIST OF ACRONYMS

AEPP	Agricultural Export Promotion Project
AEZ	Agro-economic zone
AFT	Aid for trade
AGOA	African Growth and Opportunity Act
AGS	Accelerated growth strategy
CARLA	Climate Adaptation for Rural Livelihoods and Agriculture Project
CCC	Creation/curse/catastrophe model
CDM	Clean development mechanism
CIDA	Canadian International Development Agency
CTF	Clean Technology Fund
COMESA	Common Market for Eastern and Southern Africa
DTIS	Diagnostic trade integration study
EAC	East African Community
EC	European Community
EIF	Enhanced integrated framework
EPAs	Economic partnership agreements
EU	European Union
FAO	Food and Agriculture Organization
FIP	Forest Investment Program
GEF	Global environment facility
IF	Integrated framework
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
ISRA	Institut Sénégalais de Recherches Agricoles /Senegal Agronomic Research Institute
ITA	Food Technology Institute
ITC	International Trade Centre
IWRM	Integrated water resource management
JICA	Japan International Cooperation Agency
LDCs	Least developed countries
LCDF	Least Developed Country Fund
MDGs	Millennium development goals
NAPA	National action plans for adaptation
ODA	Official development assistance
OECD	Organization for Economic Co-operation and Development
PACD	Competitive and Sustainable Agriculture Programme
PCM	Parallel climate model
PRDTC	Programme to Strengthen and Develop Trade Capacity
PRSPs	Poverty reduction strategy plans
PPCR	Pilot Program for Climate Resilience
RECs	Regional economic communities
SADC	Southern African Development Community
SCCF	Special Climate Change Fund
SCF	Strategic Climate Fund

SCPM	Smallholder Crop Production and Marketing Project
SPA	Strategic priority on adaptation
SREP	Scaling Up Renewable Energy in Low Income Countries Program
SSA	sub-Saharan Africa
SVEs	Small and vulnerable economies
TR	Technical review
TRTA/CB	Trade-related technical assistance and capacity building
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	UN Framework Convention on Climate Change
USAID	United States Agency for International Development
WANI	Water & Nature Initiative
WTO	World Trade Organization

FOREWORD

Many African countries' key economic sectors, including agriculture, fisheries, and livestock are among the most susceptible to climate change's physical impacts. Events such as rising temperatures, droughts, and sea-level rise will have significant impacts on agricultural crops, livestock and fisheries, water resources, and infrastructure as well as human health, particularly in the least developed countries (LDCs). Fostering economic resilience and climate change adaptation and mitigation is thus of crucial importance for Africa.

Aid for trade and climate change financing may be addressing similar objectives. If used in a complementary and reinforcing manner, they may help build the economic resilience and supply-side capacity LDCs need to adapt and mitigate climate change and link to the world economy on better terms. Climate change-related projects in agriculture, fisheries, and livestock often have trade-related impacts and vice-versa. Both climate change and trade-related objectives could thus be addressed in a coherent way through the implementation of climate change financing mechanisms and aid for trade. A number of challenges that would need to be addressed, however, include governance issues related to current and future financial instruments: funds' 'additionality', predictability, monitoring, and donors' conditionality, among others.

This paper explores how climate change financing and aid for trade can address the climate change adaptation needs and specific supply-side constraints of African LDCs and small, vulnerable economies (SVEs) in a complementary and supportive manner.

The paper concludes that to make climate change financing and aid for trade complementary and mutually reinforcing, both African countries and donors need to recognize and specify the trade impacts of National Adaptation Plans of Action (NAPAs) projects and the climate change implications of aid for trade projects. Moreover, the analysis highlights that both NAPAs and Poverty Reduction Strategy Papers (PRSPs) should be closely linked when designed, funded and implemented. A great deal of coherence will thus be required among African governments, private sector actors, members of civil society, and donors.

With this paper, ICTSD aims to contribute to a knowledge-based debate in this area and foster greater coordination between trade and climate change issues, particularly as they affect the least and most vulnerable developing countries.



Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

Trade and climate change issues are intricately linked, especially in Africa, where economies rest on agriculture, a sector that is extremely vulnerable to climate change. The cumulative evidence shows that sub-Saharan Africa (SSA) will be the most affected region of the world. Climate change-induced events, such as droughts, global warming, and rises in sea levels, will have substantial impacts on Africa's agricultural crops, livestock and fisheries, water resources, coastal zones, and infrastructure as well as on human health.

This report focuses on links between climate change adaptation measures undertaken by African least developed countries (LDCs) and small and vulnerable economies (SVEs) and their impact on trade. Africa's position in world trade is marginal, and various factors, including geography; concentration on low-value, inefficient agriculture; distorted policies; deficient infrastructure; and poor institutional support, have prevented African LDCs and SVEs from taking advantage of existing market access privileges, like the African Growth and Opportunity Act (AGOA) and economic partnership agreements (EPAs), to integrate into the world economy in more important ways that would make an impact on economic development and poverty alleviation.

The Aid for Trade (AFT) initiative has been welcomed as an instrument that carries the potential to help developing countries, and LDCs in particular, address key infrastructure-related bottlenecks as well as build productive capacity in ways that would allow them to generate greater exports. Significant AFT resources have flowed to Africa; yet, the demand for such funds far exceeds the available endowment, which is uncertain of being replenished beyond 2010. Africa received 42 percent of total AFT in 2007, which represents an increase over the previous year. This trend is encouraging, and given donors' engagement with Africa's development agenda, it is likely to be sustained in the future, subject to available resources.

African LDCs have also been receiving aid from the Global Environment Facility and from bilateral donors to implement climate change-related adaptation projects. These projects have spanned a wide array of sectors. Under the LCD Fund (LCDF), 80 projects with a total project value of USD 101.3 million have been approved for funding. Fourteen are currently being implemented. These projects will use up a large chunk of the LCDF endowment of USD 179.9 million, and will leave little for future projects. The total cost of projects based on national adaptation programs of action (NAPAs) submitted by African LDCs amount to USD 586 million, which is far greater than the amount of funding left to be utilized. In the absence of additional resources, it will not be possible for these countries to implement adaptation projects. While other funding options are available, the requirement for co-financing means that LDCs incapable of pooling funds from other sources (including debt) will not be able to adapt adequately to climate change. This unfortunate scenario seems likely.

Co-financing provides a way to harness AFT an effective means of securing the additional funding needed to implement projects that integrate components of climate change adaptation and trade competitiveness. A complementary and reinforcing approach between the two funds is likely to bring additional benefits and greater effectiveness in tackling both climate change and trade-related issues. Such an approach is motivated by the fact that many of the climate change-related projects have clear trade-related impacts. These are most obvious in sectors like agriculture, fisheries and livestock, and water resources. Needs related to climate change adaptation in these sectors can be matched to AFT categories, such as economic infrastructure for building productive capacity, in so far as they have impacts on export capacity or competitiveness. For instance, climate change-induced water stress can adversely affect agricultural yield and output, leading to a fall in exports. Adaptation measures aimed at relieving water stress - for example, building dams - will thus also boost exports.

Hence, AFT resources can supplement available GEF funds to support projects that address both climate change adaptation as well as the capacity of the African LDCs to engage in international trade. For this to be effective, however, it is crucial that *additional* resources be mobilized for AFT. Existing AFT funding should not be diverted to finance climate change adaptation needs.

The case studies of adaptation and AFT projects presented in this report show that the desired complementarity between climate change financing mechanisms and AFT is already a reality. Based on the lessons learned from these case studies, and building on the similarities in the modes of operation of trade and climate change funds, we propose a strategy for making these funding mechanisms complementary and mutually reinforcing in meeting a common set of objectives. This strategy rests on four pillars:

Maximizing synergy

A significant degree of complementarities already exist between the types of projects that AFT and climate change funds finance. Many of the adaptation projects identified in NAPAs have clear links to economic infrastructure and/or building productive capacity. These links should be recognized and built upon to develop and maximize synergies between AFT and climate change projects. One way this can be done is by specifying the trade impacts of NAPA projects and clearly linking NAPAs with Poverty reduction strategy plans (PRSPs).

Inadequacy and co-financing requirements in adaptation funds as scope for AFT

Adaptation funds are grossly inadequate to meet the numerous projects in need of funding. Moral responsibility calls for greater resources to be put at the disposal of vulnerable countries to combat the damaging economic effects of climate change. Yet, the future of the LDCF is uncertain. While AFT commitments have increased from the 2005 baseline, there is no guarantee that these funds will continue to flow in smoothly far into the future. It is therefore critical that LDCs impress on their richer, more industrial partners the need - indeed, the moral obligation - to provide more aid for adaptation purposes. In so doing, LDCs and SVEs can appeal for AFT and climate change financing mechanisms to be coordinated in a way that would permit greater coherence, transparency and predictability in resource flows. Moreover, AFT can help co-finance climate change projects that will have a measurable impact on the trade capacity of the implementing countries.

Governance structure

Achieving complementarity between AFT and climate change financing mechanisms at the operational level requires, in the first place, that a country submit its NAPA and PRSP at the same time and to the same funding agency as complementary documents to be read together. This is not only technically cumbersome, especially for human resource-constrained LDCs and SVEs, but also impracticable, because AFT lacks a governance structure like that of the GEF. As long as adaptation projects are financed through global funds like the GEF while AFT projects are funded directly by donor countries, it will prove difficult to achieve the desired complementarity between the two funding mechanisms. Hence, the call for greater complementarity between AFT and climate change funds is a call for greater coordination in the disbursement of AFT resources, ideally through a centralized facility like the GEF.

Learning from experiences

Both AFT and climate change funding have existed long enough to generate positive experiences that can be drawn upon in the effort to make the two instruments operate in a coherent, complementary, and mutually reinforcing manner. In fact, each boasts some

features that the other can learn from and adapt to improve delivery and effectiveness. Climate change-funded projects are generally better coordinated and more fully owned by the implementing country than AFT projects. At the same time, the latter are more deeply rooted in development and poverty reduction. Thus, there is a need to emphasize the development dimensions of climate change adaptation projects through the trade vector as far as possible.

1. INTRODUCTION

1.1 Trade and Climate Change: Challenges and Opportunities

Evidence from the Intergovernmental Panel on Climate Change (IPCC) clearly shows that changes in climatic conditions are expected as greenhouse gases accumulate. (IPCC, 2001, 2007a, b) According to the impacts, adaptability, and vulnerability analysis of the IPCC Fourth Assessment Report (Boko et al. 2007), the influence of human-induced climate change on physical, biological, and social systems is clearly observable, and the consequences of warming have started to be felt in various parts of the world. Warming of the climate system is considered to be “unequivocal.” Signs of climate change include the uneven rise in temperature across regions. Globally the indicators include the temperature spread in terms of land and ocean surface, the rise in sea levels, precipitation changes and extreme weather events.

The climate system exerts significant control on the day-to-day economic activities of Africa, since it affects particularly the agricultural and water-resource sectors, at regional, local, and household levels, and agriculture continues to be the lifeblood of African economies. Thus, it contributes to the livelihood of the population and carries the potential to alter economic conditions in fundamental ways. Climate change studies, using a variety of methods, have identified the LDCs and SVEs in Africa as one of the sectors of the world most vulnerable to climate change. This is mainly because parts of Africa are already hot and dry, many economies are tied to agriculture, and farming methods are relatively primitive. (Boko et al., 2007)

For a country to be classified as an LDC, it must satisfy three criteria: it must have low income (annual per capita gross national income of less than USD 750) and, human resource weakness and it must be economically vulnerable. (World Bank, 2006) The current list of LDCs includes 49 countries - 32 in Africa, 16 in Asia and the Pacific and 1 in Latin

America. (FCCC/TP/2008/9) In 2005, LDCs had a combined population of 750 million, which is equivalent to about 12 percent of the world's population, but their share of the world's GDP is less than 1 percent. In 2005, about 40 percent of the total population of LDCs lived in extreme poverty (that is, less than USD 1 a day), and the number of poor people was larger than it was in 2000.

The IPCC Fourth Assessment Report identified 5 sectors that are likely to be affected by climate change: agriculture, forestry and fisheries, water supply, human health, coastal zones, and infrastructure.

As African countries progressively integrate into the global economy and as pressure to liberalize markets mounts, climate change can impact trade by adversely affecting the range and output of exportable agricultural goods, productivity, and the cost of production. The current debate on climate change recognizes that agricultural trade holds considerable promise to deliver long-term economic development and to contribute to ongoing efforts to achieve the millennium development goals (MDGs). One area of active research is the impact of climate change on Africa's exports and the design of effective trade strategies that can help countries adapt to climate change.

For LDCs, the key strategy proposed to deal with climate change is adaptation. However, for African LDCs and SVEs, there are important development implications. The adaptation process involves various elements, and capacity-building is among the most critical measures, necessitating substantial investment and financial flows.

Numerous efforts are underway to facilitate adaptation. The national communications to the UN Framework Convention on Climate Change (UNFCCC) and NAPAs aim at assessing vulnerability and adaptation options. Projects to adapt and mitigate climate change, where possible, are funded through various channels:

the Global Environmental Facility Trust Fund, the Special Climate Change Fund (SCCF), the Least Developed Country Fund (LDCF), and the Adaptation Fund of the Kyoto Protocol are some examples. Recently, the World Bank has established funding initiatives for climate change.

AFT carries the promise of helping LDCs integrate global trade by harnessing their comparative advantages. Yet, AFT represents another channel to enhance capacity building similar to the climate change adaptation process. Hence, there are important parallels between trade capacity building and climate change adaptation capacity building, which can reinforce each other through well-planned strategies. This report brings to the fore the main challenges that African LDCs and SVEs may face in efforts to remain competitive in international markets and discusses how financing mechanisms can help address both trade and climate change challenges from a sustainable development perspective.

1.2 Expected Key Future Impacts of Climate Change in African LDCs and SVEs

The Third Assessment Report of the IPCC (IPCC, 2001a) and the Fourth Assessment Report (Boko et al. 2007) identified changes in temperatures, precipitation, and extreme weather events such as droughts and floods

as major changes in climatic conditions for African LDCs and SVEs. One of the consequences, according to climate models, is that water stress will increase by 2055 in northern and southern Africa, while in eastern and western Africa, a reduction in water stress is projected. (IPCC 2007b) In some countries, yields from rain-fed agriculture could be reduced by up to 50 percent of agricultural production. This may be a combination of a change in productive agricultural land (Box 1.1) as well as agricultural yields (Box 1.2). Toward the end of the twenty-first century, projected sea-level rise will affect low-lying coastal areas with large populations. By 2080, arid and semi-arid lands in Africa are projected to increase by 5 to 8 percent under a range of climate scenarios. According to the detailed analysis of Boko et al. (2007), climate change is likely to have substantial effects not only on agricultural activities, but also on health conditions of the population and the labor force, activities linked to coastal zones, and various infrastructures that are necessary for trade. These sectors are important to maintaining trade competitiveness at the international level for African LDCs and SVEs. Hamilton et al. (2001) provides a systematic overview of projected impacts of climate change on a number of SSA countries. (Ikeme, 2003) Table 1.1 presents some findings on the severity and multidimensional nature of the projected impacts on the region.

Table 1.1. Expected Impacts of Climate Change on Selected Sub-Saharan Countries

Countries Analyzed	Crop Yield (2050)	Sea Level Rise	Diseases (expected to spread)
South Africa, Namibia, Mozambique, Botswana, Zambia, Zimbabwe, Tanzania, Uganda, Kenya, Nigeria, Cameroon, Ghana, Sierra Leone, The Gambia	Decline (10-20%) in Mozambique, Tanzania, Uganda, Botswana and Namibia; up to 10% decrease in other African countries.	10 to 50 million people expected to be affected along the coast stretching through Namibia, South Africa, Mozambique, Tanzania, Kenya. Major impact also on Nigeria, Cameroon, Ghana, Sierra Leone and The Gambia.	Trypanosomiasis, Onchocerciasis, Yellow Fever, Malaria, Schistosomiasis, Filariasis, Leishmaniasis, Dengue.

Source: Hamilton et al. (2001), reproduced in Ikeme (2003).

Box 1.1 Changes in Agricultural Land

Impact assessment studies conclude that productive agricultural land is expected to change with climate change. Lotsch (2007) predicts that the continent will lose on average 4.1 percent of its cropland by 2039, and 18.3 percent is likely to have disappeared by the end of the century (see Table 1.1.1). The IPCC Fourth Assessment Report reports that the northern and eastern regions of Africa are expected to lose up to 15 percent of their current cropland area within 30 years or so. (Boko et al. 2007) Gains in cropland area in western and southern Africa due to projected increases in precipitation during the earlier portions of the century will be offset by losses later on. It is estimated that, by 2100, parts of the Sahara are likely to emerge as the most vulnerable, showing likely agricultural losses of between 2 and 7 percent of GDP. Western and central Africa are also vulnerable, with impacts ranging from 2 to 4 percent. Northern and southern Africa, however, are expected to suffer smaller losses - of the order of 0.4 to 1.3 percent.

Table 1.1.1 The Impact of Climate Changes on Cropland Area in Africa

	2010-2039	2070-2069	2070-2099
Africa	-4.3	-9.4	-18.3
North	-12.4	-20.1	-31.3
West	12.7	8.5	3.8
East	-14.9	-18.8	-30.4
Central	-2.2	-11.5	-20.9
South	2.8	-0.5	-5.6

Source: Lotsch (2007).

Note: Changes in cropland area (percent change relative to current extent) are based on average mean projections from 7 Atmosphere-Ocean General Circulation Models (AOGCMs) for 2010-2039, 2040-2069, and 2070-2099. The figures show changes for the entire continent and for 5 sub-regions.

Climate change studies such as Kurukulasuriya and Mendelsohn (2008) analyze how temperature, precipitation, and elevation cause land to be in one Agro-Economic Zone (AEZ) or another. The latter uses the parallel climate model (PCM) and the creation/curse/catastrophe (CCC) model to predict change in AEZs. The PCM assumes that mild temperature increases of about 2 degrees Celsius and marginal gains in precipitation during summer and winter months while the CCC model predicts warming of over 5 degrees Celsius with drier summers and wetter winters. The results suggest that warming will be harmful to African agriculture not because it will reduce cropland, but because it will reduce the value of cropland. The mild PCM scenario predicts a 5 percent reduction in cropland but a 14 percent reduction in crop net revenue. The CCC scenario predicts a 4 percent increase in cropland but a 30 percent reduction in crop net revenue. The resulting change according to region is provided in Table 1.1.2.

Table 1.1.2 Change in Annual Crop Revenue by Region (USD billions/yr)

AEZ	PCM	CCC
North Africa	-4%	-7%
West Africa	-17.5	-32%
Central Africa	-28%	-79%
East Africa	-11%	-12%
Southern Africa	-12%	-17%
Total	-14%	-30%

Source: Kurukulasuriya and Mendelsohn (2008).

Box 1.1 *Continued*

The results, while diverging according to studies, suggest that there are significant changes of cropping patterns across the region, which are likely to have implications for agricultural markets and trade.

Box 1.2 Changes in Agriculture Yields

Yields are sensitive to climate change not only because of the geographical characteristics of the LDCs in Africa, but also because of agricultural products and practices. The results of Barrios et al. (2008) suggest that if rainfall and temperatures had remained at their pre-1960s level, by the end of the twentieth century, only 32 percent of the gaps of agricultural production between SSA and other developing countries would have existed. Plant experiments have been conducted to shed light on potential impacts of climate change on crop yields, such as the direct impact of elevated concentrations of atmospheric CO₂ and ozone, and changes in climate in terms of warmer temperature, different rising levels of temperature and water stress. Some crops may experience an increase in yield as a result of higher rates of photosynthesis - while the rate of photorespiration is reduced by an elevated CO₂, it increases in warmer temperatures. Some examples of crop yields impact assessments for Africa are shown in the Table 2.1. There are mainly two different methods used to measure the economic impact of climate change on African agriculture: the crop simulation approach and the Ricardian approach (for a review of these methods, see Challinor et al., 2007).

Table 1.2.1 Selected Crop Yields Impact Assessment for Africa

Region	Crops	Crop response tool	Yield impact %	Comments	Reference
Africa	Cereals	FAO method with monthly data	See comments	For 29 countries: 35M tons of potential cereal production; for 17 countries, +30M tons	Fisher et al. (2001)
Zimbabwe	Maize	CERES crop model	-14; -12	Two doubled CO ₂ climate scenarios	Smith et al. (1996)
Zimbabwe	Maize	CERES crop model	-17	HadCM2 2040 - 2069 downscaled to 10 min of arc by interpolation	Jones and Thornton (2003)
Africa	Maize, Millet	Various methods	-98 to +16 -79 to -14	Range is across sites and climatic scenarios	Reilly and Schimmel-pfennig (1999)
Africa	Cereals	Yield transfer functions	-10 to +3	Range is across sites and climate scenarios. Includes adaption	Parry et al. (1999)
Africa	Maize	Yield transfer functions	Falls by as much as 30%	Similar methodology to Parry et al. (1999)	Parry et al. (2004)

Source: IPCC (2001b, Table 5-4); reproduced in Challinor et al. (2007).

1.3 Main Challenges in the Context of International Trade in Africa

While trade liberalization is creating new export opportunities, it is also exposing farmers and producers to tough competition from cheaper exporting countries. There are, thus, important implications in the context of international trade in African LDCs and SVEs when faced with changing climatic conditions.

Export of agricultural products and related goods

Climate change is likely to affect the level of agricultural exports, their cost of production, labor productivity and, eventually, the price of the exports. Countries that rely on agricultural exports for their earnings will experience the worst scenarios. Recent climate change studies show that farmers have already started to adapt to climate change by switching crops and by applying techniques to overcome the biological and physical constraints that climate and land pose for the production of crops. The initiatives include irrigation, land terracing, and fertilization. However, since crops remain dependent on ecological conditions, such as the precipitation level and temperature, soil fertility, and the length of the growing season, the existing effort for adaptation is not sufficient to meet future challenges of climate change.

A possible initiative is to provide farmers with more choices of crops that are resistant to the changing climate. Hence, there is a whole process that needs to be set up and implemented, starting with agronomic research in developing new varieties that are better suited for higher temperatures, information dissemination, and implementation of projects. At the outset, pilot projects are usually envisaged. Future farmers may have even better adaptation alternatives with an expanded set of crop choices specifically designed for higher temperatures.

Climate change and export of fisheries

Fisheries are affected by changes in air and water temperatures, precipitation, salinity, ocean circulation and mixing, sea and lake levels, river flow, storm frequency and inten-

sity, nutrient levels, ice cover, glacial melt, and flooding. (Allison et al., 2009) The known direct effects of climate change include changes in the abundance and distribution of exploited species and assemblages. Extreme events, such as floods and storms, affect fishing operations and infrastructure. According to the analysis of Allison et al. (2009), Africa is the most vulnerable region to climate-induced changes in fisheries and many of these economies are LDCs. The most vulnerable countries produce 20 percent of global fishery exports. In the absence of capacity to cope and adapt to climate change, fisheries trade will be seriously affected.

Climate change, extreme weather events, and coastal infrastructure

Extreme weather events may lower production, irrespective of the long-term effect of global warming. Ikeme (2008) refers to the case of Madagascar as an example of how climate-related catastrophes could impact the economy. Madagascar's economy was seriously affected in the first quarter of 2000 by 3 cyclones that devastated some regions of the country. This caused considerable loss of human life, infrastructure, and agricultural crops. The impact of the cyclones on export crops and on the demand for imported rice, raw materials, and equipment necessitated an upward revision of the external current account deficit, excluding grants, from 7.3 percent to 9.1 percent.

Extreme weather events (such as hurricanes) may temporarily close ports or transport routes and damage various infrastructures critical to trade. Transportation of bulk freight by inland waterways, such as the Rhine, could be disrupted during droughts. Disruptions to supply, transport, and distribution chains would have the effect of raising the costs of undertaking international trade. While an increase in trade costs would be bad for trade in general, many developing countries whose integration into the global economy is based on production and distribution chains may be more vulnerable than developed countries. Infrastructure development to accommodate

extreme weather events is among the most important challenges in the context of climate change.

Challenges posed by sea-level rise

Projected sea-level rise could increase flooding, particularly in low-lying lands and on the coasts of eastern Africa. This will impact coastal settlements and damage coastal infrastructure and distribution facilities. It may have health implications that could, in turn, affect the productivity of labor. Investment in coastal protection infrastructure to reduce vulnerability to anticipated sea-level rise is an example of actual adjustment.

African LDCs, water stress and climate change

Climate change will aggravate the water stress currently faced by some countries, while countries that currently do not experience water stress will become at risk of it. Climate change and variability are likely to impose additional pressures on water availability, water accessibility, and water demand in Africa. This will affect production substantially. The analysis of Kurukulasuriya and Mendelsohn (2007), which focuses on Burkina Faso, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Niger, Senegal, South Africa, Zambia, and Zimbabwe, concludes that a 7 percent decrease in precipitation would cause net revenues from crops to decline by USD 4.4 billion, and a 14 percent decrease in precipitation would cause it to fall by USD 9 billion. Increases in precipitation would have the opposite effect on net revenues.

Thus, the adoption of agricultural techniques that optimize water use through improved irrigation systems and the development of new crops and grazing areas are important to sustaining trade competitiveness.

1.4 Potential Role of Financing Mechanisms in Addressing Both Trade and Climate Change Challenges

Adaptation and mitigation are the 2 main remedies applied to climate change. Energy development is low in African LDCs and SVEs

(although there are fears that water stress can lead to a fall in hydropower generation, forcing these countries to turn to inefficient technologies to produce energy). This means that SSA is at the receiving end, being negatively impacted by climate change-induced actions taken elsewhere. Adaptation to climate change is therefore most appropriate and urgent for African LDCs and SVEs if these countries are to maintain their current pace of economic development and remain competitive in international markets. Adaptation measures can reduce vulnerability, in both the short run and the long term. (IPCC, 2007a)

Adaptation is defined as adjustments in natural or human systems made in response to actual or expected climatic stimuli or their effects to moderate harm or exploit beneficial opportunities and enhance the resilience of the economy. (IPCC, 2001) However, African LDCs cannot fully adapt to climate change because adaptive capacity is low, the population is poor, there are frequent natural disasters, and agriculture depends heavily on rainfall. (Huq et al., 2003) Recent empirical studies indicate that farmers have already adapted to the existing climate by choosing crops or livestock that are ideal for their current climate.

Adaptation is a process that begins with an understanding of current vulnerabilities. Building capacity to support adaptation planning and implementation is the next stage of the process and represents the main challenges facing African LDCs. Financing mechanisms are important, in this respect, for capacity building and to apply supply-side strategies to foster a culture for adaptation to climate change. For instance, Lotsch (2007) suggests that sound policies and good institutions are important to manage existing agricultural lands and the productivity of cropping systems in Africa and, hence, the creation of a system of incentives to facilitate the adaptation of agro-ecosystems to new conditions is important.

The study of Seo and Mendelsohn (2007) on the impact of climate change on animal husbandry shows that large farms are vulnerable to global warming, because they rely on species such

as beef cattle that are not well suited to high temperatures. Small farms are less vulnerable to climate change, because they can substitute species, such as goats that can tolerate high temperatures. The fact that small farms tend to be more labor-intensive and rely on native stocks while large farms tend to be more commercially oriented, with much larger stocks and more modern approaches, implies a major constraint for large firms to substitute vulnerable species or breeds. Adaptation must take place at the sectoral level, taking into account the contextual constraints facing the country.

There are also possible synergies between mitigation and adaptation that can increase the cost effectiveness of actions. (Klein et al., 2007) While mitigation can take the form of investing in energy-efficient equipment and the development of low-carbon terrestrial agriculture, the pressing needs of African LDCs and SVEs is adaptation. Financing mechanisms can be used to resolve two fundamental issues, namely: (i) how to adapt to climate change impact to be able to sustain earnings from exports of agricultural products; and (ii) how to enhance productivity.

The Fourth Assessment Report identified five main sectors where adaptation is important. These are (1) agriculture, forestry and fisheries; (2) water supply; (3) human health; (4) coastal zone; and (5) infrastructure. The report further discusses six determinants of adaptive capacity, namely economic resources, technology, information and skills, infrastructure, institutions, and equity. The investment and financial needs are substantial according to a recent report from the UNFCCC. Adaptation projects can take different forms, ranging from information dissemination campaigns to raise awareness of climate change, to capacity building to better respond to adaptation options and to investment in changing resource management.

In the agriculture, forestry, and fisheries sectors, options include adjusting to planting dates, changes in the mix of crops, forage and tree species, crop relocation, changes in the mix of livestock and fish species/breed, changes in management of crops, forests and

fisheries, moisture management/irrigation, pest and disease management, management of natural areas, fire management, improved land management and enterprise choice changes, research, extension and training, transitional assistance, trade policy and infrastructural development. Technologies and finance are the main barriers; access to new varieties and markets represent further challenges. Allison et al.'s (2009) analysis of fisheries concludes that, except for Botswana, Namibia, and South Africa, all African countries have low adaptive capacity.

For water stress, the IPCC (2007a) identifies reservoir construction, better irrigation facilities, increased waste water re-use and desalination, more efficient waste water treatment and application of water saving technologies. The key constraints are financial, human resources, and physical barriers.

In relation to the health sector, the fundamental adaptation requirement is to improve the capacity of the public health system. Improving the delivery of health care could substantially reduce vulnerability to climate change. Other measures include improving monitoring systems to detect the arrival or presence of infectious diseases and heat-watch warning systems to warn urban populations about heat waves.

With respect to sea rise and extreme weather conditions, institutions and infrastructure development are important, and financing will play a critical role. There are two types of climate change adaptation in infrastructure. First, countries may make modifications to, or changes in, operations of infrastructure such as water or coastal resources infrastructure. Infrastructure for water resource management applications includes flood protection, water supply, water quality treatment, hydropower production and other uses, which may be modified to adapt to changing run-off patterns. For example, the size of a reservoir could be increased.

The second type of adaptation is related to climate-affected sectors or resources. Exam-

ples include public health services, agriculture extension, and research. The cost of adaptation to sea-level rise could amount to at least 5 to 10 percent of Africa's GDP.

Climate change financing mechanisms and AFT have a lot in common in terms of supporting the above mitigation and adaptation strategies. This issue is covered in Section 4 of this report.

2. TRADE-RELATED ASSISTANCE: AFT AND EIF

To effectively access AFT resources, developing countries must identify their trade-related development needs, clearly prioritize them, and channel their demands as efficiently as possible to their development partners. All of this can be achieved if the countries mainstream their AFT needs into their national development strategies. PRSPs have become the standard tool in the search for trade-related assistance, since they serve as the platform on which donors base their aid planning.

The LDCs can take advantage of the Enhanced Integrated Framework (EIF) - an international initiative tailored to address specific needs by helping LDCs mainstream trade into national development plans and to help bridge the gap between the demand for and the supply of aid for trade.

In this section, we describe both AFT and the EIF; provide an assessment of these efforts to provide trade-related assistance to developing countries, and LDCs, in particular; and present some in-depth case studies that provide lessons for best practices.

2.1 Aid for Trade

The objective of AFT is to enable developing countries to achieve their development objectives and the MDGs by harnessing the potential of trade as an engine of growth. The AFT is aimed at supporting developing countries' liberalization efforts through technical assistance and accompanying measures, at improving their capacity to export by building proper infrastructure and institutions, addressing other supply-side constraints.

2.1.1 Scope of AFT

The WTO Task Force on Aid for Trade recommended that AFT cover six broad categories, namely:

- (a) Trade policy and regulation, which includes training trade officials, helping governments implement trade agreements and strengthening institutions to comply with rules and standards.
- (b) Trade development, including trade and investment promotion, business facilitation, and trade finance.
- (c) Trade-related infrastructure, which encompasses all physical infrastructure (roads, ports, transport and storage, communications, and energy) minus water supply and sanitation.
- (d) Building productive capacity, which includes all activities aimed at improving a country's capacity to produce goods and services.
- (e) Trade-related adjustment, defined as accompanying measures that mitigate the economic costs of trade liberalization, including financial assistance to losers and fiscal and balance-of-payments support.
- (f) Other trade-related needs.

While the recommendations of the Task Force were, in principle, endorsed by the international community, the Organization for Economic Co-operation and Development (OECD) - representing the bulk of the donor community - has expressed certain reservations about the categorization of AFT as presented above.

The OECD has traditionally channelled development aid for trade-related technical assistance and capacity-building (TRTA/CB), which roughly covers activities under (a) and (b) above. Moreover, support for building export capacity and for enabling adjustment in developing countries has been part official development assistance (ODA) for a long time. Such development aid, as well as AFT-related infrastructure, is now being repackaged as AFT and tagged to an extended AFT agenda as categories (c) - (f).

The OECD agrees that TRTA/CB and infrastructure should be part of the AFT agenda. (OECD, 2006) However, it differs fundamentally from the WTO's categorization of AFT. For example, the OECD argues that there is no legal definition of "productive capacity." While this component is meant to address supply-side constraints, it is not clear whether it should be limited to trade facilitation or include support to increase the productive and competitive capacity of the private sector.

The OECD also disputes the compartmentalization of "trade-related infrastructure" and "building productive capacity" since, it argues, the former is an integral part of building export capacity and cannot logically be singled out. Furthermore, the OECD questions whether infrastructure can be singularly identified as being related to trade, since activities meant to enhance "trade-related infrastructure" also end up improving the general economic climate of the country. It is probably because of these difficulties that the OECD/WTO database does not officially include "trade-related infrastructure" as a stand-alone AFT category.

Finally, the OECD rejects the idea that adjustment costs should even be part of the agenda. Donors believe that several aspects of adjustment are already taken care of in the other AFT categories. What these categories do not include, however, is financial compensation to the government for loss of fiscal revenue and safety nets to protect those adversely affected by multilateral trade liberalization or preference erosion. (OECD, 2006)

In sum, the OECD embraces two broad components of the WTO AFT agenda, namely "trade-related technical assistance and capacity building," which encompasses categories (a) and (b) above and "supply-side constraints," which bring together categories (c) and (d). Trade-related adjustment has been left out of the OECD's AFT agenda altogether. (IATP, 2006) However, some donors have proposed financing adjustment costs.

2.1.2 A schematic analysis of AFT flows to SSA

AFT flows to Africa have fluctuated quite appreciably over the period 2000-07, both in aggregate terms and by category. Total flows to Africa hovered around the USD 3 billion mark between 2000 and 2004, but a significant increase in such flows is noted in recent years. Africa received close to USD 5 billion in AFT in 2007, which represents a 60.8 percent increase over 2000. Despite this increase, however, Africa has been losing out relative to the rest of the world. During 2000-2002, Africa received 32.4 percent of the world's AFT resources; this share was down to 25.4 percent for the last three years for which data are available. Given the role that AFT can play in Africa's integration in the world economy, in promoting economic development in the continent, and in alleviating poverty in African LDCs, one can only hope that the recent trend will be reversed in the future, and that a fair share of AFT resources will flow to Africa.

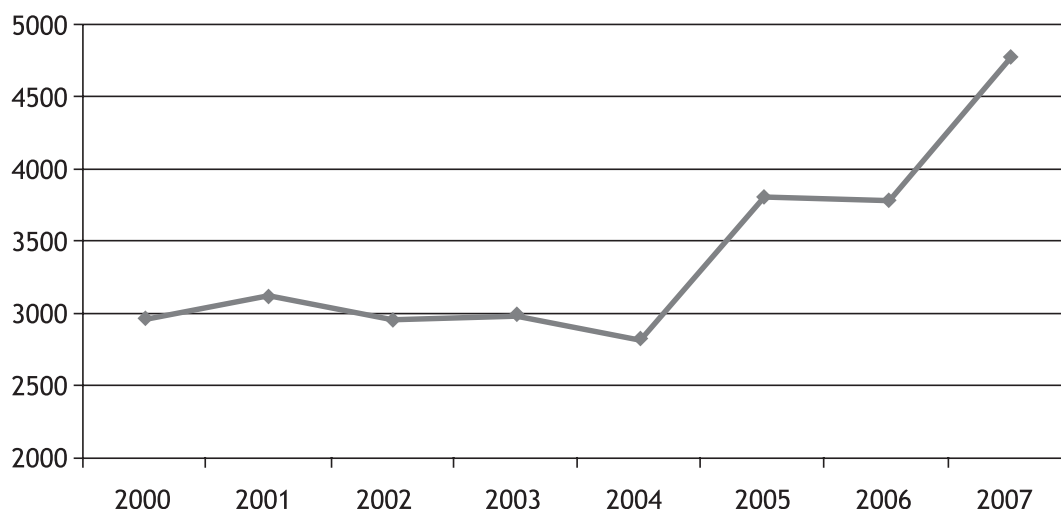
Figure 1: Aid For Trade Flows to Africa, 2000-2007 (US\$ millions at 2007 prices)

Table 2.1 (below) shows the country distribution of AFT during the 2000-2007 period. A careful inspection of the table yields several important observations. First, the whole of SSA received about two-thirds of AFT flows to Africa, which means that the richer countries of North Africa absorbed a significant one-third of AFT resources. Second, small economies (Cape Verde, Comoros, Mayotte and Sao Tome and Principe) have received more AFT per capita than other states. It is not clear whether this is a statistical anomaly attributable to size, or whether it genuinely represents greater AFT being directed to SVEs. However, some middle-income, island economies, such as Seychelles and Mauritius, that have been flagging their SVE status to attract more AFT funding have apparently not succeeded in that endeavour. Third, the evidence indicates that the bulk of financial resources has been directed to the LDCs. However, among the LDCs, there is little correlation between country size and AFT flows, as suggested by the large disparity in AFT per capita across countries. It appears that success in securing AFT is based more on the applicant's ability to develop a solid proposal (such as a PRSP) or a diagnostic study to identify key areas for intervention than on merit *per se*. While the EIF has helped LDCs mainstream trade into their national development plans and promoted the delivery of trade-related technical assistance in a coordinated manner, it appears that few LDCs have taken advantage of this facility.

On the whole, AFT flows to SSA have remained very small and almost insignificant. Some of the poorest economies of SSA have received a pittance of AFT. Ethiopia, for example, got USD 1.17 per capita, Sudan USD 1.53 and the Democratic Republic of the Congo less than USD 1. While there is no available benchmark to determine the adequacy of AFT funding, these figures indicate that SSA has not received a fair share of AFT resources. In this respect, "fairness" is meant to reflect SSA's marginal economic state and its urgent need for aid.

AFT to Africa has spanned the whole range of sub-categories listed in the OECD/WTO database (Table 2.2). Considering the cumulative flows over the 2000-2007 period, AFT has mainly been directed to build productive capacity and to economic infrastructure. These two categories represent about 95 percent of resource flows to Africa. Within the category of 'Trade Policy and Regulations', the bulk of AFT has been allocated to trade policy and administrative management. Sadly, only a small amount of resources has flowed into trade facilitation, which remains an important constraint to trade in SSA. Not surprisingly, however, about 60 percent of AFT has been directed to economic infrastructure, and 24 percent of total AFT flows have been devoted to transport. Although detailed data by country is not available, it is conceivable that the land-locked countries of SSA have

been the main beneficiaries of such funding - aimed at improving road and rail networks.

On the whole, agriculture has attracted the largest amount of AFT in Africa. During the period under analysis, 26 percent of total AFT flows were absorbed by this sector. This reflects the importance of agriculture in SSA economies and provides hope for pooling financial resources for AFT and climate change adaptation in a complementary and reinforcing way.

Bilateral data on AFT flows between donor and recipient countries could not be obtained from official sources. Table 2.3 shows EU total support for trade-related assistance during 2000-2006. Excluded from the table are the EU member states (mostly from Eastern

Europe) that made no or only negligible AFT contributions over the period. The data show that about two thirds of EU AFT came from the EC, with the rest representing additional contributions by member states. The Netherlands, France, Germany and the United Kingdom, in that order, are the biggest AFT European donors.

While large amounts of AFT resources have been pooled and channelled through specialized funds, some donors have given aid on a bilateral basis. In such cases, the motivations behind AFT are not clear, and it is likely that aid is allocated on the basis of political constituencies rather than economic imperatives. Such practices can hinder the smooth implementation of the AFT programme and should be discouraged.

Table 2.1 AFT Flows to SSA by Country, 2000-2007 (USD millions at 2007 prices)

Recipient(s)	2000	2001	2002	2003	2004	2005	2006	2007	2000-07	AFT per capita (2007)
Angola	35.37	24.29	20.04	8.79	5.91	11.41	14.46	10.89	131.16	0.62
Benin	97.26	26.52	16.11	20.93	42.19	83.62	223.96	39.13	549.72	4.66
Botswana	1.87	3.74	3.47	5.45	2.89	3.19	1.91	9.32	31.84	4.95
Burkina Faso	157.40	41.83	32.90	40.48	51.72	147.16	51.98	44.86	568.33	3.04
Burundi	1.60	0.85	2.05	1.60	3.94	8.34	16.12	12.04	46.54	1.54
Cameroon	28.00	47.46	56.10	43.36	25.96	36.03	46.42	67.14	350.47	3.62
Cape Verde	5.93	12.43	7.31	7.72	5.89	186.73	17.60	76.58	320.19	155.74
Central African Rep.	26.56	17.93	2.04	9.82	1.77	32.57	6.73	18.35	115.77	4.22
Chad	29.22	4.45	28.34	4.21	12.78	7.59	2.00	6.62	95.21	0.62
Comoros	2.81	0.84	0.68	0.68	4.78	2.92	4.92	3.22	20.85	5.12
Congo, Dem. Rep.	4.57	29.65	6.35	6.99	21.46	39.42	49.71	61.60	219.75	0.99
Congo, Rep.	1.45	0.86	2.49	0.56	17.73	1.07	0.45	7.98	32.59	2.25
Cote d'Ivoire	40.53	8.39	21.57	3.43	3.48	3.87	12.21	2.44	95.92	0.12
Djibouti	5.25	1.83	1.85	2.63	4.10	0.69	0.67	2.11	19.13	2.53
Equatorial Guinea	1.54	1.38	0.84	1.06	0.31	0.28	0.02	0.72	6.15	1.12
Eritrea	14.65	13.55	10.41	2.97	5.44	10.82	4.04	7.36	69.24	1.52
Ethiopia	77.47	79.57	91.23	42.81	93.57	506.88	56.06	92.37	1039.96	1.17
Gabon	15.56	2.48	2.00	14.88	28.93	2.71	52.16	15.29	134.01	10.75
Gambia	3.46	11.75	1.63	1.95	2.71	3.27	2.98	3.05	30.80	1.89
Ghana	48.34	80.31	51.85	225.19	154.35	104.55	123.12	527.89	1315.60	23.08
Guinea	20.76	21.30	29.29	17.64	42.34	7.67	21.06	29.15	189.21	3.03
Guinea-Bissau	5.36	4.23	0.87	2.33	1.95	1.46	1.54	2.29	20.03	1.49
Kenya	70.53	63.64	22.69	94.08	137.11	170.73	206.42	370.00	1135.20	9.86
Lesotho	8.07	7.20	5.27	3.59	4.21	1.87	1.65	1.54	33.40	0.77
Liberia	2.55	3.29	0.09	0.20	0.48	2.26	1.92	54.38	65.17	14.99
Madagascar	44.23	18.91	30.23	62.59	21.89	92.34	28.50	109.83	408.52	5.90

Table 2.1 Continued

Recipient(s)	2000	2001	2002	2003	2004	2005	2006	2007	2000-07	AFT per capita (2007)
Malawi	58.20	29.39	28.69	21.84	17.11	38.95	44.38	48.99	287.55	3.52
Mali	54.73	33.28	39.17	36.06	38.42	68.32	40.12	529.86	839.96	42.96
Mauritania	13.68	38.28	11.11	11.34	23.81	29.05	18.28	12.51	158.06	4.01
Mauritius	1.38	2.09	7.49	207.52	0.17	0.14	12.71	0.99	232.49	0.79
Mayotte	0.00	14.09	16.56	13.69	38.92	0.23	0.17	36.27	119.93	195.00
Mozambique	196.74	210.40	186.45	95.91	75.94	156.76	149.38	230.22	1301.80	10.77
Namibia	38.01	20.21	26.40	16.04	40.23	28.23	96.95	29.27	295.34	14.07
Niger	13.35	18.46	14.31	24.53	28.16	11.74	18.85	18.18	147.58	1.28
Nigeria	59.99	35.41	48.62	20.43	38.64	25.44	60.61	30.84	319.98	0.21
Rwanda	12.93	12.62	8.52	15.75	17.32	41.34	18.44	68.36	195.28	7.23
Sao Tome & Principe	3.89	4.74	7.07	2.88	3.57	2.27	2.17	2.42	29.01	15.32
Senegal	41.89	87.52	44.35	105.48	69.97	71.77	94.14	66.76	581.88	5.61
Seychelles	0.75	5.16	0.44	0.90	1.08	1.30	1.68	0.64	11.95	7.53
Sierra Leone	4.48	2.71	2.42	2.14	33.96	12.21	12.84	25.92	96.68	4.78
Somalia	1.29	1.38	1.72	1.51	0.68	0.56	7.01	0.37	14.52	0.04
South Africa	49.62	74.31	86.97	45.50	32.90	194.42	86.84	70.46	641.02	1.47
Sudan	1.63	1.77	9.95	3.45	27.21	3.36	14.31	61.71	123.39	1.53
Swaziland	4.92	35.27	16.13	1.24	2.14	11.53	1.68	0.28	73.19	0.24
Tanzania	275.70	151.68	111.90	133.95	112.64	240.05	74.96	154.18	1255.06	3.74
Togo	5.01	1.20	0.87	15.36	2.55	1.79	2.92	2.32	32.02	0.37
Uganda	56.91	80.60	58.43	27.49	111.45	66.77	47.46	120.53	569.64	3.93
Zambia	131.73	47.18	92.91	32.26	69.45	37.10	78.75	136.55	625.93	11.09
Zimbabwe	20.54	8.87	6.78	14.72	4.54	6.47	4.54	18.86	85.32	1.51
TOTAL SSA	1797.71	1445.30	1274.96	1475.93	1488.75	2519.25	1837.80	3242.64	15082.34	
SSA share	67.94	69.76	56.48	67.17	62.07	75.11	55.81	74.74	66.86	

Source: OECD CRS Database; Population figures for calculation of AFT per capita from World Bank's WDI Online 2009.

Table 2.2 AFT to Africa and African RECs by Category, 2000-2007 (constant 2007 USD millions)

	2000	2001	2002	2003	2004	2005	2006	2007	2000-2007
TRADE POLICY AND REGULATIONS and TRADE-RELATED ADJUSTMENT	40.96	83.89	474.62	108.23	113.11	163.56	383.87	92.70	1460.94
Trade policy and administrative management	40.96	46.04	450.26	72.79	91.22	145.91	342.08	72.36	1261.62
Trade facilitation	..	4.85	1.27	0.27	1.69	9.51	11.82	9.08	38.49
Regional trade agreements (RTAs)	..	0.01	22.93	21.37	12.68	3.24	3.17	6.98	70.38
Multilateral trade negotiations	..	31.59	0.11	7.79	5.01	1.94	10.38	1.08	57.90
Trade-related adjustment	0.28	0.28
Trade education/training	..	1.40	0.05	6.01	2.51	2.96	16.42	2.92	32.27
ECONOMIC INFRASTRUCTURE	1023.83	1081.71	1083.64	1415.92	1023.05	1993.13	1415.08	2290.93	11327.29
Transport and storage	571.58	753.91	593.57	628.72	457.15	1218.45	874.56	1508.55	6606.49
Communications	274.37	144.29	199.19	346.89	78.04	107.77	144.57	211.56	1506.68
Energy supply and generation	177.88	183.51	290.88	440.31	487.86	666.91	395.95	570.82	3214.12
BUILDING PRODUCTIVE CAPACITY	1905.14	1950.22	1414.13	1475.77	1702.67	1662.10	2001.67	2393.36	14505.06
Business and other services	92.31	199.68	160.96	270.47	137.14	300.33	136.71	292.39	1589.99
Banking and financial services	186.46	448.85	236.80	247.87	402.22	257.22	202.99	314.55	2296.96
Agriculture	912.12	723.83	751.81	661.91	835.34	808.11	991.26	1395.46	7079.84
Forestry	150.00	141.16	47.82	57.15	60.40	79.28	69.25	36.01	641.07
Fishing	81.42	127.36	66.95	71.05	81.73	45.51	46.47	77.41	597.90
Industry	283.00	227.24	110.92	142.92	172.17	143.44	118.92	252.15	1450.76
Mineral resources and mining	195.09	77.59	30.63	16.57	7.23	24.12	52.23	12.48	415.94
Tourism policy and administrative management	4.74	4.51	8.24	7.83	6.44	4.09	383.84	12.91	432.60
TOTAL	2969.93	3115.82	2972.39	2999.92	2838.83	3818.79	3800.62	4776.99	27293.29

Source: OECD CRS Database.

Table 2.3 EU Support for Trade-Related Assistance, 2000-2006 (€ millions)

Country	2001	2002	2003	2004	2005	2006	Total 2001-2006	% of EU total 2001-2006
Austria	0.24	0.47	0.58	2.76	6.72	4.95	15.72	0.2
Belgium	9.89	8.05	51.09	38.64	26.81	23.71	158.2	2
Denmark	10.82	4.45	34.93	2.75	0.5	48.34	101.78	1.3
Finland	4.09	5.82	9.2	0	16.05	30.53	65.68	0.8
France	9.65	125.9	85.47	56.9	85.47	147.77	511.17	6.4
Germany	90.86	76.52	91.07	68.67	90.89	27.89	445.9	5.6
Greece	4.38	6.03	2.37	1.03	0.06	3.52	17.38	0.2
Ireland	0.44	0.4	0.59	0.3	0.69	5.61	8.03	0.1
Italy	7.11	4.49	2.68	7.16	1.86	5.73	29.04	0.4
Netherlands	44.68	54.58	125.27	65.19	76.16	195.24	561.12	7.1
Portugal	1.1	15.32	2.28	1.35	1.9	0.99	22.94	0.3
Spain	1.07	2.41	5.2	1.57	6.13	46.92	63.29	0.8
Sweden	10.21	4.58	17.31	8.6	31.05	22.07	93.83	1.2
United Kingdom	79.95	49.17	76.16	38.56	64	77.08	384.92	4.8
MS Total	275.34	358.24	504.23	293.52	408.37	641.44	2481.13	31.2
EC	912.44	755	922.52	958.06	983.46	940.9	5472.38	68.8
Grand total	1187.78	1113.24	1426.75	1251.58	1391.83	1582.34	7953.51	100.0

Source: Doha Development Database. Note: MS = EU Member State

2.2 The Enhanced Integrated Framework

The Integrated Framework (IF) for Trade-Related Technical Assistance was established in 1997 to support LDC governments in trade capacity building and integrating trade issues into overall national development strategies. Through the IF, the participating agencies (IMF, ITC, UNCTAD, UNDP, World Bank and the WTO) combine their efforts with those of LDCs and other development partners to respond to trade development needs. The ultimate goal is to support integration of LDCs into the global trading system in order to contribute to poverty reduction and sustainable development.

The IF has two objectives:

- To “mainstream” (or integrate) trade into national development plans such as the PRSPs of LDCs; and
- To assist in the co-ordinated delivery of trade-related technical assistance in response to needs identified by the LDC.

The implementation of the IF comprises three stages: a preparatory stage, which involves undertaking a Technical Review (TR) upon receipt of an official request from a country to participate in the IF process; a diagnostic phase during which a Diagnostic Trade Integration Study (DTIS) is carried out upon approval of the request; and a follow-up stage in which the DTIS is translated into an action matrix, which serves as the basis for the delivery of trade-related technical assistance.

AFT funds are allocated in two well-defined Tiers: Tier 1 funds are used to support the establishment of a National Implementation Unit in the IF countries; Tier 2 funds are used for diagnostic work and project development.

As of February 2009, 46 countries were at different stages in the IF process. Of these, 35 were SSA countries, and 29 had validated their diagnostic studies and action matrices (Table 2.4).

The Hong Kong Ministerial Declaration (December 2005) recognized the “urgent need to make the IF more effective and timely” and recommended that a Task Force be set up to see how the IF could be improved. The Enhanced IF should address three main concerns:

1. *Ownership by LDCs*: The IF is built on country ownership and partnership. The Enhanced IF will emphasize these key principles through dedicated funds.
2. *Additional funding*: The question of ‘additionality’ of AFT resources has been the subject of much debate. The EIF will raise the funding threshold from the current level of USD 40 million to about USD 200-400 million.
3. *Governance structure*: The EIF will have an enhanced governance structure, which will include national implementation units in the countries and a beefed-up IF Secretariat in Geneva.

Table 2.4 Status of SSA IF Countries as at February 2009

DTIS completed		TR approved	TR under way
Angola	Malawi	DR Congo	Equatorial Guinea
Benin	Maldives	Eritrea	
Burkina Faso	Mali	Guinea Bissau	
Burundi	Mauritania	Togo	
Cape Verde*	Mozambique		
Central African Republic	Niger		
Chad	Rwanda		
Comoros	Sao Tome and Principe		
Djibouti	Senegal		
Ethiopia	Sierra Leone		
The Gambia	Sudan		
Guinea	Tanzania		
Lesotho	Uganda		
Liberia	Zambia		
Madagascar			

*Cape Verde graduated from LDC status on January 1, 2008.

2.3 Case Studies

We present two case studies of trade-related assistance in SSA. One of these focuses on agricultural development in Senegal; the other is a regional, project-specific case of economic infrastructure building that showcases AFT implementation by regional economic communities. These cases have been carefully selected to enable identification of best practices and lessons learned from a broad spectrum of issues.

2.3.1 Aid for trade and agro-based private sector development in Senegal

2.3.1.1 Background

Senegal’s primary sector (agriculture, livestock, forestry, and fishing) plays a significant role in its socio-economic development. This sector contributes about 16.7 percent of the total annual output and employs about 75 percent of the working population. Groundnuts, cotton,

gum arabic, and sugarcane are the primary cash crops. Millet, corn, sorghum, and rice are the main food crops. With groundnut production accounting for 40 percent of cultivated land and cotton production another 33 percent, cash crops dominate agriculture.

Yet, Senegal is one of the largest food importers in Africa. In 2003, the agro-food trade deficit was valued at CFAF 300 billion, representing

about 42 percent of the overall trade deficit. The export-oriented strategies of the country are not producing high enough growth to achieve the MDGs by 2015. The agriculture sector is plagued with infrastructural bottlenecks that constrain production of agricultural products while diverting resources away from valuable post-production strategies (such as marketing and promotion). The table below summarizes the constraints faced by farmers in Senegal.

Table 2.5 Constraints to Agricultural Development in Senegal

Bottlenecks	Consequences
Heavy dependence on rainfall	Most of the country's farmers are subject to the caprices of nature, which determine agricultural yields. In times of unpredictable rainfall, irrigation plans need to be drawn up.
Soil degradation	Arable land has shrunk substantially in recent years and half of it is now degraded because cultural practices do not allow land to restore itself.
Lack of a proper credit system	Despite the excess liquidity positions of the country's banks, farmers lack access to credit through commercial channels, which makes harvests difficult to plan and hampers growth of competitive agriculture.
Rigidities and gaps in Property Law	Access to land in the countryside is mainly through usufruct ¹ while in urban areas and on high-grade farmland sites, access is through monetary transaction. This difference is not taken into account by the 1964 property law and causes uncertainty about investments and land access for all agricultural stakeholders.

The government has drafted several plans, like the Accelerated Growth Strategy (AGS) and the PRSP, to speed up economic growth. However, the chosen strategies might not be enough to lift rural farmers out of poverty.

The situation in the fishing sector is even worse. Policies drafted for this sector, which include the Fish and Aquaculture Sector Policy Statement, have not had the desired impact to achieve the MDGs. Structural problems, such as the existence of inadequate fishing capacity and depletion of fish stocks, are hampering efficient exploitation of this sector, exerting a drag on economic growth. Aquaculture and inshore fishing could offer solutions to the above problems, but these sectors are not very

significant and lack the technological know-how to operate at an efficient level.

2.3.1.2 Linking aid for trade to development

Senegal is one of the largest recipients of foreign aid in SSA, ranking regularly among the top ten recipients of official development assistance (ODA) between 1994 and 2006. Senegal is also the second largest beneficiary of French aid (after Cote d'Ivoire). However, the amount of aid flowing to a country may not always be effective in reducing poverty or enhancing economic growth in the targeted sector. Table 2.6 shows the amounts of foreign aid received by Senegal in various sectors during 1994-2006.

Table 2.6 Foreign aid/AFT in Senegal by Donor and Sector, 1994-2006

Sector	Donors	Number of projects	Amount (billion CFA francs)
Agriculture	European Union	2	48.8
	World Bank	1	17.5
	French Development Agency	1	2.1
	African Development Bank	6	71.7
	Spanish government aid	1	13.6
	Indian government aid	2	7.5
	FAO	3	0.7
	Italian government aid	7	4.2
<i>Sub-total (I)</i>		23	166.1
Fishing	French Development Agency	3	3.1
<i>Sub-total (II)</i>		3	3.1
Rural Development	French Development Agency	2	4.6
	CIDA	3	6.9
<i>Sub-total (III)</i>		5	11.5
Business climate Aid to private sector	USAID	6	0.85
	World Bank	1	23
	African Development Bank	1	68.21
<i>Sub-total (IV)</i>		8	92.6
Trade - Private sector - Capacity-building	USAID	12	50.74
	European Union	2	4.23
	French Development Agency	3	16.16
	CIDA	2	6.65
<i>Sub-total (V)</i>		19	77.78
Infrastructure	African Development Bank	3	84.8
	French Development Agency	5	42.7
	World Bank	5	151.5
	WADB	1	11.3
	Belgian government aid	4	9.8
<i>Sub-total (VI)</i>		18	300.1
Total (I+II+III+IV+V+VI)		76	651.18

Note: It is difficult to calculate the exact allocation of aid among sectors as the figures are mostly the amounts of commitment, with disbursement levels being typically lower. Thus, the figures reported in the table are to be interpreted as an indication of sector priorities.

CIDA = Canadian International Development Agency

WADB = West African Development Bank

Source: Hazard, Barry and Anouan (2006).

Donors see Senegal as an agricultural, export-oriented economy. Accordingly, most of the aid to Senegal has been directed mainly toward the agriculture and fishing sectors. Some of the main projects dedicated to the agriculture sector include the following:

- The World Bank is one of the biggest partners of Senegalese agriculture. In the beginning, it funded many projects helping farmers and cash-crop cultivation, but in recent years has switched to funding projects related to processing and exports.

- The Japan International Cooperation Agency (JICA) has launched a pilot project to upgrade and market local rice to gradually reduce Senegal's dependence on food imports (especially rice), which is a major burden on the trade balance.
- The EU and the French Development Agency (AFD) are also helping to head off the threat to those who depend on fishing for most of their income.

However, at the inter-ministerial meeting on the 2006-07 harvest, the Prime Minister of Senegal voiced concern about the effectiveness of such aid. Despite the huge amount of foreign assistance committed to local agriculture - and the large number of projects already developed - no concrete results have yet been seen. Hazard et al. (2006) argue that most of the aid interventions take the form of projects or programmes that span several years without proper coordination with the government's sectoral programme cycle. Such incoherence creates problems with predictability and sustainability in partners' development assistance and adds to the cost of project implementation.

A potential solution to the above problem is to promote tighter coordination between the donor countries and the government. However, this requires close attention by government officials and agencies, which is time-consuming and absorbs energy from an administration with few resources. Moreover, proper monitoring of

projects and programmes is a big burden, since each one has its own procedures.

2.3.1.3 Strengthening supply-side capacity and economic infrastructure

Infrastructure development and maintenance is crucial to sustaining growth in any economy, but perhaps especially so in SSA, where geography imposes particularly important costs on trade in a number of countries. Good infrastructure (like roads, water supply, and communication facilities) is a prerequisite for any firm to operate efficiently. A recent study by the Regional Programme for Enterprise Development (2005) finds that road upkeep and congestion in Senegal are serious problems that impose extra costs and delays for transport firms and increase the risk of goods arriving at their destination in poor condition. This is why a great proportion of foreign aid coming to Senegal is directed to projects aimed at improving the road networks in the country.

However, while improved road networks can reduce transport costs and speed up delivery, they have to be complemented with measures aimed at enhancing agricultural export supply response and market access conditions to ensure maximum impact on poverty reduction. This, in turn, calls for strengthening the supply and institutional capacities of the country and developing appropriate economic infrastructure. Box 2.1 describes various AFT projects put forward to achieve these objectives in Senegal.

Box 2.1 AFT Projects in Senegal's Agricultural Sector

Strengthening Supply and Production Capacity

- Several programmes, including those run by the International Fund for Agricultural Development (IFAD) and the Canadian and Swiss Cooperation agencies, aim to encourage peasants to group into organizations so as to be more effective as a collective force. However, these programmes are very often constrained by the lack of national, regional, and international trade outlets and are unlikely to make much of an impact until and unless the products involved are competitive in these markets.
- The Agricultural Export Promotion Project (AEPP) funded by the government and the World Bank has tried to set up an entire value-chain activity to encourage growth and diversification of agricultural products at all levels. This initiative was constrained by poor post-harvest infrastructure needed to store agricultural products for export.

Box 2.1 Continued

- AFD is working directly with the private sector in upgrading firms through selected, self-financed investment projects.

Strengthening Institutional Capacity

- National agencies, such as the Food Technology Institute (ITA) and the Agronomic Research Institute (ISRA), provide quality control/assurance and SPS services for all agricultural products. However, owing to lack of resources, these institutes cannot meet the demand of each producer. There is, thus, an urgent need to increase the capacity of these agencies given that SPS certification is crucial to agricultural exports to industrial country markets.
- The Programme to Strengthen and Develop Trade Capacity (PRDTC) provides support to national negotiating committees to participate effectively in international trade talks; upgrading firms and agencies to boost exports; encouraging e-commerce through chambers of commerce; providing technical aid to the informal sector and funding for the government's foreign trade office.
- The Competitive and Sustainable Agriculture Programme (PACD) aims at reducing poverty and improving living conditions for rural populations by rationalizing the performance, competitiveness, and sustainability of Senegal's agriculture sector.

Developing Related Basic Infrastructure

- Funded by the AFD, the Nordic Development Fund, the World Bank, and the European Commission, the Second Sectoral Transport Programme (PST-II) aims at restoring 225 km of asphalted roads, maintaining 161 km of unsurfaced roads, and completing the roads database to support the implementation of the AEPP programme.
- The National Rural Infrastructure Programme aims at helping to improve the living conditions of the poor through micro-projects, such as drilling wells, providing primary healthcare, and supporting vulnerable women and children.

2.3.1.4 Obstacles and shortcomings in the Senegalese AFT strategy

It appears that ODA/AFT has not had a major impact on the poverty levels in the country or on economic growth as a whole. Why is this so? What are the obstacles that have constrained the welfare effect of development aid in Senegal? Some of the causes of this failure are enumerated below.

Actual government capacity

Ministries' capacity is often cited by partners as a major hurdle in making aid work for the poor. Staff members are inadequately trained and/or burdened with administrative tasks that leave them little time to devote to project monitoring. The situation is particularly serious in the agriculture ministry, which is overwhelmed by the demands made on it

and which seriously lacks capacity to monitor programmes on the ground.

The government has also faced problems rallying the population behind structural reforms (such as reform of the health budget or social budget) that are necessary to achieve higher growth.

Lack of coordination between the government and donor countries

Hazard et al. (2006) argue that most of the aid interventions take the form of projects or programmes put in place over several years without proper coordination with the government's sectoral programme cycle. Such incoherence creates problems with predictability and sustainability in partners' development assistance and results in extra costs in project implementation.

Lack of coordination between government bodies/ministries

A lack of coordination and engagement among the various government departments can impact negatively on aid disbursement. This is best illustrated by the differential policy treatment accorded to the fisheries sector by different ministries of the Senegalese government. The Marine Economy Ministry, which is keen on preserving fish stocks, is sometimes at odds with the Economy and Finance Ministry, which views the fishing industry primarily as a substantial source of export earnings. This has led to a complete omission of the fishing sector in the Accelerated Growth Strategy (AGS) proposed by the government, implying that this sector will not be eligible for ODA secured on the basis of the PRSP.

Land ownership issues

Private investors require land deeds before making any investment. Law 64-46 abolished common law inheritance by families and said that the land belonged to those who “worked” it. However, “working” land is hard to define for much of the farming population, and the absence of a land register and surveys makes this law very difficult to apply.

Moreover, growth of private-sector-led agriculture, industrial or otherwise, depends on secure land titles. Steady soil degradation in recent years and the availability of newly-cleared production areas have raised the land ownership issue again.

Ownership of the projects

Few African governments are able to take the lead in designing programmes that are in conformity with national development strategies. Donor countries usually dictate the structures and procedures attached to the programmes they fund - leading to similar “off the shelf” projects that are not sustainable for the country. The government of Senegal does not have the appropriate resources and leadership to tackle such a problem.

Compatibility problems in rural areas

Rural Senegalese peasants feel uneasy because the resources (financial or machinery) provided by the government and AFT partners are sometimes not relevant to local conditions. In addition, some policies are imposed by the central government without proper consultation with rural farmers. This lack of consensus building, together with the characteristic lack of resources, makes it difficult for the farmers to follow government policies.

Absence of appropriate policies to protect farmers

Rural farmers are not equipped to face competition at the regional level. The Senegalese government has made use of some rhetoric measures to protect the older farmers at the expense of the new generation. Also, no measures (like safeguards or minimum protection) have been used to protect some local peasants against broad liberalization following adherence to the WTO.

2.3.2 The North-South Corridor Programme

2.3.2.1 Introduction

If African countries want to reach high levels of economic growth - in order to meet the commitments enumerated in the MDGs - there is need for a constant increase in the levels of private sector investment in the productive sector. Investments will take place only if the costs of production are low enough to allow producers to be competitive against those in the rest of the world. However, the actual situation in Africa is alarming, with costs of internal transport remaining very high compared with other regions. Amjadi and Yeats (1995) suggest that transport costs provide a higher effective rate of protection than tariffs, and explain, to a large extent, the marginalization of SSA in world trade. Limoa and Venables (2000) estimate that a general 10 percent decrease in transport costs could cause trade volumes to increase by as much as 20 percent.

The North-South Corridor Programme is a model AFT programme that has enabled the regional economic communities (RECs) of COMESA, EAC, and SADC, their Member States and the international community to implement an economic corridor-based approach to reducing costs of cross-border trade in SSA and boosting competitiveness, thereby creating the dynamics for enhanced growth and sustainable employment. The North-South Corridor² was selected as a pilot AFT programme because it is located in the busiest corridor in the region - in terms of values and volumes of freight - and capacity constraints have resulted in costly delays at strategic points, such as border posts.

2.3.2.2 Aid for trade and the north-south corridor

Table 2.7 shows the AFT flows to the North-South Corridor countries between 2002 and 2007. Aid commitments increased 13.3 percent from an average of USD 1125.1 million during 2002-2005 to USD 1281.3 million in 2007. However, there is considerable variation in the value of AFT received by individual countries. Botswana received USD 8.5 million in AFT in 2007; at the other extreme, Mozambique received AFT amounting to USD

365.3 million, representing 27 percent of the country's total ODA inflows.

Table 2.8 highlights the importance of aid devoted to economic infrastructure in the total AFT package. It is remarkable that the landlocked countries along the North-South corridor (DRC, Malawi and Tanzania), including Mozambique and Tanzania, have received a substantial share of AFT directed toward economic infrastructure. This confirms the importance of efficient road networks in building export competitiveness in the countries of the region.

However, we note from both tables that AFT disbursements have lagged behind commitments. In 2007, the actual amount disbursed to the North-South corridor countries was less than 50 percent of commitments. In the case of economic infrastructure, this portion was even lower at 33.9 percent. Hence, it is clear that mere commitment is not enough. It is important for donors to follow through on their promises, and for RECs, regional banks, or governments (as the case may be) to keep the pressure on donors to see to it that their commitments translate into real funds (more on this below).

Table 2.7 Aid for Trade Flows to North-South Corridor Countries

	Commitments in USD millions		Disbursements in USD millions	Aid for Trade as % of total sector allocable aid
	2002-2005	2007	2007	2007
Botswana	14.2	8.5	12.5	3.5
DRC	108.4	140.1	51.6	14.1
Malawi	90.7	76.5	63.6	18.2
Mozambique	284.2	365.3	187.4	26.9
South Africa	115.3	102.9	48.5	10.7
Tanzania	324.2	398.1	179.4	25.5
Zambia	178.8	160.8	70.4	24.9
Zimbabwe	9.3	29.1	15.9	14.34
Total	1125.1	1281.3	629.3	

Source: OECD Creditor Reporting System.

Table 2.8 Aid for Economic Infrastructure Along the North-South Corridor

	Commitments in USD millions		Disbursements in USD millions	Economic Infrastructure commitments as % of total Aid for Trade
	2002-2005	2007	2007	2007
Botswana	5.4	0.4	0.37	4.7
DRC	53.9	117.2	29.1	83.7
Malawi	32.3	28.7	13.6	37.5
Mozambique	169.6	252.5	110.5	69.1
South Africa	14.7	3.6	4.7	3.5
Tanzania	151.9	298.4	104.2	75
Zambia	66.7	123.8	16.7	77
Zimbabwe	0.9	0.5	0.7	1.7
Total	495.4	825.1	279.87	

Source: OECD Creditor Reporting System.

2.3.2.3 Monitoring aid for trade for north-south corridor countries

The WTO/OECD partner-country self-assessment survey requested respondents to identify priority areas of intervention to improve capacity to benefit from trade expansion and integration into the world economy. Partner countries were asked to identify 3 priority areas among 12 different options under the AFT broad headings for trade policy and

regulation, economic infrastructure, capacity building and other priorities. Four of the North-South corridor countries replied to the questionnaire. Their answers are summarized in the tables below. Table 2.9 lists the top three priority sectors in which the participant countries think AFT is required, while Table 4 shows the areas where they believe further improvement in the implementation of AFT is needed.

Table 2.9 Aid for Trade Priority Areas for Botswana, Malawi, Tanzania and Zambia

	Priority 1	Priority 2	Priority 3
Botswana	Export diversification	Regional integration	Trade facilitation
Malawi	Transport infrastructure	Network infrastructure	Export diversification
Tanzania	Trade Policy Analysis	Competitiveness	Network Infrastructure
Zambia	Network Infrastructure	Cross-border Infrastructure	Export Diversification

Source: WTO/OECD Self-Assessment Replies.

Table 2.10 Priority Areas to Improve Implementation and Effectiveness of Aid for Trade Received

	Botswana	Malawi	Tanzania	Zambia
Greater say in design of AFT		X	X	X
Stronger donor focus on local capacity development	X	X		X
Better predictability of AFT funding		X	X	X
More extensive use of Budget Support		X		
More regular joint-donor implementation actions			X	
More harmonized reporting requirements				
More frequent joint donor-partner implementation efforts	X			
More systematic use of joint donor-partner monitoring/ evaluation	X			

Source: WTO/OECD Self-Assessment Replies.

Although the responses vary widely across the respondents, a majority identified network infrastructure and export diversification/competitiveness among the top three priority areas for AFT. Malawi emphasized the need for better transport infrastructure while Tanzania believed that greater AFT resources should be devoted to building capacity for trade policy analysis. Regional integration, on the other hand, received little attention, confirming oft-heard claims that African policymakers pay only lip service to this objective, which is steeped more in political rhetoric than in economic imperatives.

In terms of implementation, the countries unanimously point to the need for stronger donor focus on building local capacity. This echoes the earlier observation that, while economic infrastructure has received due attention in Africa, and particularly among the North-South corridor countries, much less has been done to build supply-side capacity, which remains a thorny issue for many African LDCs struggling to maintain a foothold in international markets. A large majority of respondents also identified ownership of AFT projects, and wished they could have a greater say in the design of such projects. Finally, as noted above, the gap between AFT commitments and disbursements was singled out as a major constraint to AFT effectiveness, resulting in calls for greater predictability of AFT resources and follow-up on AFT pledges.

2.3.2.4 Shortcomings and the way forward

At the High-Level Conference on the North-South Corridor, held in Lusaka on 6-7 April 2009, COMESA, EAC, and SADC authorities took note of the bottlenecks to the implementation of the various projects and programmes that constitute the North-South Corridor Model Aid for Trade Programme and discussed a strategy for rolling out those projects. The Conference generated strong financial and technical support for the North-South Corridor project. About USD 1.2 billion of funding was pledged by development partners for upgrading road, rail, ports, and energy infrastructure and to

support implementation of trade facilitation instruments.

The Conference identified funding gaps and took the following decisions to ensure greater effectiveness of AFT resources devoted to the North-South corridor:

- put in place an institutional arrangement to programme and manage the North-South Corridor Model Aid for Trade Programme;
- set up a mechanism to access and disburse the committed funds;
- prepare bankable projects and propose a sequence of implementation; and
- seek ways in which the private sector can come on board and complement public sector investment and financing for implementation of infrastructure projects.

In particular, it was decided to establish a Tripartite Fund, which will accept funding from development partners to finance identified projects aimed at improving transport corridors in eastern and southern Africa, including the North South corridor. The Fund shall be hosted at and managed by the Development Bank of Southern Africa (DBSA).

2.3.3 Summary and conclusion

The case studies on AFT presented in this section are meant to shed light on the operational issues governing AFT implementation and the constraints thereto. They were selected to achieve breadth of coverage so that a wider set of lessons could be distilled. The case study of agro-based private sector development in Senegal shows how AFT can contribute to growth and poverty reduction by harnessing a country's comparative advantage in its traditional sector. Senegal has benefited from various programmes, funded by donor countries well as by multilateral agencies like the World Bank, aimed at strengthening supply and institutional capacities in Senegal's agricultural sector, and at building basic trade-related infrastructure (roads). AFT projects have been constrained by a lack of monitoring

capacity, poor coordination between donors and the host government, and between various agencies involved in implementation and by ownership issues.

The other case study focuses on a regional AFT project that highlights the value of efficient road networks as an enabler of trade, especially in the landlocked countries of SSA. The North-South Corridor programme cuts across three of SSA's regional economic communities - namely, COMESA, EAC, and SADC - and benefits eight countries directly. Although the project's main focus is on economic infrastructure, AFT programmes have also helped the North-South corridor countries with capacity building for export diversification and competitiveness, trade facilitation, network infrastructure, and regional integration, among others, according to each country's priorities. The key constraint in the implementation of the project has been the rather unpredictable nature of AFT flows. On the whole, AFT disbursements have lagged

behind commitments, resulting in delays in implementation of the infrastructure programme and complementary projects along the corridor. The beneficiaries also complain about their lack of say in project design and poor attention given to local capacity development.

The main lessons that arise from these case studies are that AFT projects need to be developed in consultation with the beneficiaries so that the projects are tailored to their needs and are adequately owned by them. Moreover, it makes little sense for donors to finance large AFT projects without endowing the countries with the capacity to effectively monitor the projects. Hence, capacity building in government departments should be a priority. Finally, the North-South corridor countries have demanded that AFT resources be channeled through a Tripartite Fund to ensure greater predictability and transparency. This is yet another call for the setting up of a centralized AFT fund.

3. CLIMATE CHANGE FINANCING MECHANISMS

3.1 Multilateral and Bilateral Funds for Climate Change Financing

Several climate change financing initiatives and funds have been established to help developing countries mitigate or adapt to climate change. Porter et al. (2008) identified 14 climate funds and provided a comprehensive assessment of the objectives of these funds and factors affecting their

development. The funds can be classified as multilateral and bilateral (see Table 3.1). At the multilateral level, the Global Environment Facility and World Bank Climate Funds are the main financing mechanisms. However, bilateral funds have proliferated, and these are likely to alter the existing architecture for global environment finance in fundamental ways. (Porter et al., 2008).

Table 3.1 Multilateral and Bilateral Funds for Climate Change Financing

Administration	Funds	Areas of Focus
Multilateral		
Global Environment Facility	Least Developing Countries Fund (LCDs)	Adaptation
	Special Climate Change Fund	Adaptation
	Kyoto Adaptation Fund	Adaptation
	Strategic Priority on Adaptation	Adaptation
The World Bank	Clean Technology Fund	Mitigation
	Forest Carbon Partnership Facility	Mitigation
	Forest Investment Program	Mitigation
	Pilot Program for Climate Resilience	Adaptation
	Scaling-up Renewable energy Program for Low income countries	Mitigation
	Strategic Climate Fund	Adaptation
UNDP	MDG Achievement Fund - Environment and Climate Change Thematic Review window	Adaptation, Mitigation
	UN-REDD Programme	Mitigation
Bilateral		
Government of Japan	Cool Earth Partnership	Adaptation, Mitigation
Government of United Kingdom	Environmental Transformation Fund - International Window	Adaptation, Mitigation
The European Commission	Global Climate Change Alliance	Adaptation, Mitigation
Government of Germany	International Climate Initiative	Adaptation, Mitigation
Government of Australia	International Forest Carbon Initiative	Mitigation

Source: GCLA (2009), Porter et al. (2008).

3.1.2 A critical assessment of major climate change funds

Most of the climate change funds are at early stages of development and, hence, an exhaustive assessment is not possible. The effectiveness of these funds depends mainly on the number of projects being funded and the extent to, and ease with which countries have access to them. Their success will be

judged in the long term in relation to the enhanced ability of countries to adapt to and/or mitigate climate change.

The Global Environment Facility

The Global Environment Facility, established in 1991, has played a lead role in financing both adaptation projects to enhance resilience to climate change and mitigation

projects in areas such as renewable energy, energy efficiency, and sustainable transport. (GEF, 2007) The major strength of the GEF is its global approach to climate change. The Strategic Priority on Adaptation became operational in 2004 as a three-year pilot programme. It funds time-scale projects in areas in which the GEF works, namely biodiversity, climate change, international waters, land degradation, and persistent organic pollutants. Approximately USD 50 million has been disbursed to fund some 22 projects.

The GEF was named interim secretariat for the Kyoto Protocol Adaptation Fund in 2000. The Fund was established under the Kyoto Protocol to address developing countries' adaptation financing needs. A distinctive feature of this fund is that it is meant to meet the full adaptation cost in contrast to the other funds under the purview of the GEF, which fund only part of the total costs of adaptation projects. The Fund has the potential to generate significant financial resources (up to USD 950 million by some estimates) through its 2 percent levy on Clean Development Mechanism (CDM) transactions. (Ayers and Huq, 2009) However, the Fund is still not operational.

The limited involvement of potential recipient countries in the design of the funds is a major criticism of the GEF. (Porter et al. 2008) According to Mitchell et al. (2008), the GEF has not prioritized the adaptation needs of the most vulnerable and has disproportionately funded projects in countries that have relatively low rates of poverty. Processes to receive funding have been imposed on African LDCs and SVEs, with limited consideration of existing institutional weaknesses in terms of transparency, accountability, and good governance. Ayres and Huq (2008) observe that donors are delaying in meeting commitments, owing to an alleged lack of adequate and accountable mechanisms in developing countries for receiving and utilizing funds. Moreover, there are high transaction costs associated

with GEF funding mechanisms, and although funding through the GEF is not formally conditional, requirements attached to funding include burdensome reporting and co-financing criteria. For instance, the core criteria to finance adaptation projects are global environmental benefits and incremental costs which, according to Solomon (2007), have created complex and time-consuming arrangements, resulting in slow implementation of adaptation projects in LDCs.

Implementing agencies, such as the UNDP, the UNEP and the World Bank add another layer of bureaucracy to the process, causing further delays in the approval of projects and disbursement of funds. At the COP14 meeting in December 2008, the LDC group expressed concern about the rate at which countries are allocated funding for their adaptation activities. The case of Maldives serves as a good example. Maldives, a low-lying island in the Indian Ocean, is particularly vulnerable to climate change induced sea-level rise. It prepared and submitted its NAPA to the UN Convention in 2004. However, Maldives is yet to receive funding for approved adaptation projects, owing to technical and legal problems that have hampered the operation of the Adaptation Fund.

Most of the GEF funds have a limited time horizon, with no commitments beyond 2012.³ The fundamental characteristic of the GEF is that donor countries never intended to finance all the needs to achieve the objectives. The GEF was expected to serve as a catalyst to initiate financing avenues. Hence, the Fund operates through a combination of grant and concessional lending provided by the World Bank. (Porter et al., 2008) It is debatable whether this arrangement can produce significant results in reversing climate change trends.

The GEF established the Special Climate Change Fund (SCCF) in November 2004 to fund long-term planned response strategies, policies and measures for (a) adaptation; (b) transfer of technology; (c) energy,

transport, industry, agriculture, forestry, and waste management; and (d) economic diversification. (Desai, 2003) It also expects to serve as a catalyst to leverage additional resources from bilateral and other multilateral sources.⁴ All Non-Annex 1 countries are eligible to apply. Total SCCF pledges amounted to USD 122.5 million as of 30 June 2009.⁵ Of this, USD 106 million has been pledged to the Program for Climate Change Adaptation and USD 16.5 million to the Program for Technology Transfer. (GEF Annual Report 2009) As at August 2009, 22 projects, with a combined value of USD 86.55 million, were approved for financing.

Developing countries, including LDCs, see the governance structure of the SCCF as complex and biased in favor of donor countries. The rules make accessing funding difficult and time-consuming. Moreover, there appears to be an emphasis on supporting projects rather than programmatic approaches, and the focus on securing environmental projects over development projects results in fewer global benefits. These criticisms imply that other avenues for financing projects in relation to climate change are important. Aid for trade is a potential candidate in cases where adaptation projects can be linked to one or more of the areas for which AFT funding is available, notably for economic infrastructure and for building productive capacity.

The Least Developed Country Fund (LDCF) was established in November 2002 to address the needs of LDCs whose economic and geophysical characteristics make them especially vulnerable to the impact of global warming and climate change.⁶ The LDCF has been seen as a promising avenue for LDCs to secure funds for adaptation projects due to its relatively easier access criteria.⁷

Total LDCF pledges amounted to USD 179.9 million as of June 30, 2009.⁸ The activities supported by the LDCF are divided in two phases: preparation and implementation of NAPAs. The preparation phase provides a process for LDCs to identify priority activities that respond to their urgent and immediate

needs to adapt to climate change. Eighty projects at a total cost of USD 101.31 million have been approved for financing under the LDCF. Of these, 14 are currently under implementation.

A recent evaluation of the LDCF by the Evaluation Department of the Danish Ministry of Foreign Affairs (EVAL) brings to light a number of shortcomings in the implementation of this Fund. These include lack of human resource capacity; high technical and procedural requirements; the time taken to prepare a NAPA (as much as 22 months); and slow approval of projects (on average 95 days, and as much as 167 days in the case of Malawi). The time line seen in the case of Malawi is totally inconsistent with the LDCF's aim of attending to the immediate needs of LDCs in relation to adaptation to climate change.

The World Bank Climate Investments Funds

The Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF), both established in 2008, are two multi-donor trust funds within the World Bank's Climate Investment Funds (CIF). (World Bank 2008, Tan, 2008) The CTF aims to support the rapid deployment of low-carbon technologies on a significant scale, with the objective of achieving cost-effective reductions in the growth of greenhouse gas emissions. It purports to use a blend of financial instruments, including grants, concessional loans and guarantees to make investing in low carbon technologies more attractive to both public and private sector investors in the developing countries.

The SCF is an umbrella vehicle for the receipt of donor funds and disbursements to specific funds and programmes aimed at piloting new development approaches or scaling up sectoral, climate change-related activities. (SCF, World Bank 2008) There are three funds under the SCF framework: the Pilot Program for Climate Resilience (PPCR), the Forest Investment Program (FIP), and the Scaling Up Renewable Energy in Low Income Countries Program (SREP). The SCF will make available a range of financing, credit enhancement,

and risk management tools, such as loans, credits, guarantees, grants, and other support, targeted to the needs of developing countries. As of November 2008, developed countries had pledged to contribute USD 6.3 billion to the CTF and the SCF. (GLCA, 2009)

The similarity between the GEF schemes and the World Bank structure poses serious questions about the future financing architecture and the efficiency of distributing climate financing. Porter et al. (2008) point out the possibility of duplicating efforts to achieve the same objectives. Some observers have expressed concern that the donor countries channel financial resources to the CTF at the expense of funding GEF climate-related priorities.

The major characteristic of the World Bank funds is that loans as well as grants will be provided to recipient countries, implying that developing countries will have to pay to adapt to climate change. This is contradictory given that the LDCs' contribution to the global warming crisis is minimal.

The UN-REDD

In addition to the main climate financing mechanisms, such as the GEF and the World

Bank CIF, the recently created UN-REDD Programme may also bring about substantial financial resources to LDCs. For a comparison of these financial mechanisms, see Porter et al. (2008). Three UN Agencies - UNEP, UNDP, and the FAO - have collaborated to form the UN-REDD programme, which established a multi-donor trust fund that allows donors to pool resources and provide funding with the aim of significantly reducing global emissions from deforestation and forest degradation in developing countries. As of 30 June 2009, USD 52.2 million has been pledged by the government of Norway to this Fund.

3.2 Financial Requirements and Available Resources for Sub-Saharan Africa

3.2.1 Financial requirements of developing countries

Various organizations have attempted to calculate the cost of adaptation, although there is much uncertainty involved (see table below). Separate estimates of adaptation cost for African LDCs and SVEs are not provided, but since two-thirds of LDCs are in Africa, these figures provide an indication of the cost involved.

Table 3.2 Annual Adaptation Costs in Developing Countries

	Assessment Year	Estimated Cost (USD billion)	Time Frame
UNDP	2007	86	2015
UNFCCC	2007	28 - 67	2015
Oxfam	2007	50	Present
World Bank	2006	9-41	Present

Sources: GLCAC (2009) based on Human Development Report, UNDP (2007); *Economic Aspects of Adaptation to Climate Change: Costs, Benefits, and Policy Instruments*, OECD (2008).

The estimates range from USD 9 billion to USD 86 billion per year. The conclusion that may be derived is that the cost of adaptation runs

into billions for African LDCs and SVEs. Further information on the different sectors in need of financing is presented in Table 3.3.

Table 3.3 Estimates of Investments and Financial Resources Needed in Developing Countries by 2030

Mitigation	USD 176 billion (FCCC/SBI/2007/21, Table 5)
Adaptation	USD 28-67 billion (FCCC/SBI/2007/21, Table 3 and para. 51)
<i>Technology transfer</i>	
Emissions reduction-related technology deployment	USD 720 billion (an average of USD 24-26 billion per year) - (FCCC/SBI/2007/21, para. 93 - no breakdown for developing countries; figures based on IEA estimates)
Deployment of renewables, biofuels and nuclear energy technologies	USD 33 billion per year (FCCC/SBI/2007/21, para. 94 - no breakdown for developing countries; figures based on Stern Review)
Public energy R&D	USD 20 billion (FCCC/SBI/2007/21, para. 94 - no breakdown for developing countries; figures based on Stern Review)

Source: South Center, *Financing the Global Climate Change Response: Suggestions for a Climate Change Fund*, May 2008, para.6, Table 1.

3.2.2 A closer look at the financial requirements to implement the NAPAs

In 2001, the Parties to the UNFCCC provided a process for LDCs to identify priority activities that respond to their urgent and immediate needs to adapt to climate change. The NAPAs are intended to develop a framework for bringing adaptation into the mainstream

of national planning. Forty-one NAPAs have been completed, of which 28 are by African LDCs. Financial requirements for the African LDCs that have already submitted their NAPAs stand near the cap of USD 586 million (Table 3.4). A closer look at the LDCF (see Table 3.5) shows that only USD 179.9 million is available *for all LDCs*.

Table 3.4 Adaptation Costs for African LDCs

	LDCs	Total adaptation from NAPAs (USD)		LDCs	Total adaptation from NAPAs (USD)
1	Benin	15,580,100	17	Malawi	22,930,000
2	Burkina Faso	5,896,884	18	Maldives	24,037,820
3	Burundi	7,294,000	19	Mali	49,760,000
4	Cape Verde	16,680,000	20	Mauritania	20,158,780
5	Central African Rep	3,000,000	21	Mozambique	9,200,000
6	Comoros	4,512,000	22	Niger	NA
7	DR Congo	16,475,654	23	Rwanda	8,110,000
8	Djibouti	7,437,000	24	Sao Tome	12,340,000
9	Eritrea	33,149,000	25	Senegal	59,182,000
10	Ethiopia	69,000,000	26	Sudan	15,050,000
11	Gambia	15,082,000	27	Tanzania	17,170,000
12	Guinea	8,205,000	28	Uganda	39,800,000
13	Guinea Bissau	7,200,000	29	Zambia	14,650,000
14	Lesotho	12,841,000		Total	586,871,568
15	Liberia	68,000,000			
16	Madagascar	2,130,330			

Source: NAPAs from LDCs UNFCCC website.

3.2.3 Available financial resources

GEF-based mechanisms

available based on the Global Environment Facility initiatives.⁹ The main funds include the SCCF, the LDCF, the SPA and the Adaptation Fund.

Table 3.5 shows the financial resources

Table 3.5 Estimates of Investments and Financial Resources Available for Developing Countries by 2030

Mitigation	GEF 4th Replenishment for the period 2006-2010: USD 990 million Co-financing: USD 1.7billion
Adaptation	GEF Trust Fund: Strategic Priority for Adaptation: USD 50 million Special Climate Change Fund: USD 106 million (GEF Annual Report 2009) Least Developed Countries Fund: USD 179.9 million (GEF Annual Report 2009) USD 80-300 million per year for the period 2008-2012 from the 2% share of the proceeds of annual sales of certified emissions reductions from CDM projects - Adaptation Fund (see FCCC/SBI/2007/21, Table 2 and para. 62)
Technology transfer	
Emissions reduction-related technology deployment	The GEF estimates that 80-100 per cent of GEF climate change mitigation funding fits the technology transfer definitions used by the Convention (see FCCC/SBI/2007/21, Table 2 and para. 62). Special Climate Change Fund -USD 16.5 million (GEF Annual Report 2009)
Deployment of renewables, biofuels and nuclear energy technologies	
Public energy R&D	

Source: South Center, *Financing the Global Climate Change Response: Suggestions for a Climate Change Fund*, May 2008, para.6, Table 1. Updated where possible.

UNFCCC, *An assessment of the funding necessary to assist developing countries in meeting their commitments relating to the Global Environment Facility replenishment cycle (FCCC/SBI/2007/21, 14 November 2007)*.

GEF Annual Report 2009.

The above estimates show that the financial resources available for climate change adaptation fall well below the cap of USD 1 billion (USD 106+179+50+300 = USD 635 million). Bearing in mind that the Adaptation Fund is not yet operational, the current financial resources stand at USD 335 million for all LDCs. This funding is clearly inadequate to meet the adaptation needs of LDCs. At the same time, the GEF is based on co-financing. Since LDCs generally lack funds - more so for climate change adaptation needs, which may not receive high priority in the absence of aid - it is debatable whether they can access the funds available through the GEF. This is very unfortunate. Despite all the publicity associated with the GEF as a noble initiative in favor of the world's poorest countries, the fund will, in all likelihood, remain

underutilized, owing to lack of co-financing by LDCs.

World Bank Based Financial Mechanisms

The development of the World Bank financial mechanisms, which started in 2008, is remarkable. The total amount pledged by eight countries to the SCF was USD 1.7 billion as of 14 April 2009. (CTF-SCF/TFC.2/8, 2009) The total amount pledged by eight countries to the CTF is USD 4.7 billion. (CTF-SCF/TFC.2/6/Rev1, 2009) However, there are conditionalities attached to these funds since they are far from being grant-based initiatives.

A summary of funds available through commercial channels alongside those dispensed as grants is provided in Table 3.6.

Table 3.6 Non-Grant-Based Climate Change Financial Resources

Administration	Funds	Pledges (USD)
Multilateral		
Global Environment Facility	Least Developing Countries Fund (LDCs)	179.9 million
	Special Climate Change Fund	122.5 million
	Strategic Priority on Adaptation	50 million
The World Bank	Clean Technology Fund and Strategic Climate Fund	6.3 billion
UNDP	MDG Achievement Fund - Environment and Climate Change Thematic Review window	90 million
	UN-REDD Programme	35 million
Bilateral		
Government of Japan	Cool Earth Partnership	10 billion
Government of UK	Environmental Transformation Fund - International Window	1.2 billion
The European Commission	Global Climate Change Alliance	300 million
Government of Germany	International Climate Initiative	170 million
Government of Australia	International Forest Carbon Initiative	180 million

Source: African Partnership Forum (2009) with update from GEF Annual Report 2009.

It is evident that climate change adaptation has become an opportunity for business. There are far more adaptation resources available to LDCs through commercial channels, such as the World Bank's funds, than as aid. One may wonder whether there is connivance between the GEF and the World Bank to the extent that funds dispensed through the GEF require co-financing, which is the World Bank's business. This need for co-financing is likely to cause LDCs to shift climate change adaptation projects to the back seat as they are more preoccupied with daily survival issues, and, in any case, do not see the immediate threat posed by climate change. Perhaps, there is scope for AFT funds to boost climate change adaptation funds to enable LDCs to achieve complementary trade-related and climate-change-related supply-side objectives.

3.3 Case Studies

The previous sections of this study outlined two major climate change problems facing African LDCs and SVEs, and these are water stress and agricultural productivity. In this

respect, two case studies have been selected to present how climate change funds have been directed toward the problems of water stress (Tanzania) and agriculture (Malawi). The Tanzania project has been funded through the SCCF of the GEF while the Malawi case was processed through the LDCF of the GEF. It is important to note that few projects have been implemented in SSA in relation to climate change. Inevitably, therefore, the availability of information was the main basis on which these cases were selected.

3.3.1 Tanzania: Mainstreaming climate change in integrated water resources management in the Pangani River basin

3.3.1.1 Background

Tanzania's economy is heavily based on agriculture, which contributes more than 40 percent of GDP. The sector also provides 85 percent of exports and employs 80 percent of the work force. Due to the topography and climatic conditions, only 4 percent of the land area can be cultivated for crops. The processing of agricultural products and the manufacture of light consumer goods

represent the industrial sector. The major export commodities include gold, coffee, cashew nuts, manufactures and cotton.

3.3.1.2 Water stress in the Pangani River basin

One of the areas where the impact of climate change is most visible in Tanzania is the water-stressed Pangani River basin. The caps of Mount Kilimanjaro, which towers over the basin, have melted substantially and are projected to disappear completely by 2025. The flows in the basin have been reduced from several hundred to less than forty m³ per second.

The remaining water is seriously over-allocated. About 2.6 million people live in the Pangani River basin area, where about 80 percent of the population depends on agriculture for its livelihood. Inefficient, furrow-based irrigation systems have accentuated the water problems. Water supply falls short of demand, which is ever increasing due to industrial development in the region. Water shortages have accentuated conflicts between small farmers and livestock keepers for this resource.

The expected decrease in water flows will jeopardize important natural resources, livelihoods, industrial productivity, and the local and national economies. The consequences are felt throughout the basin, from the irrigation fields in the centre of the basin and the electricity producers further downstream, to the coastal communities, which have witnessed - powerless - the decline of fresh-water fish stocks as saltwater moved inland. According to a recent report from the Pangani River Office, agricultural production was declining or was limited in growth because of water shortages.¹⁰ A study by Turpie et al. (2004) analyzes the different users of water from the basin and concludes that agriculture is the biggest consumer, with over 50,000 hectares of fields irrigated in the Pangani basin. This includes large commercial estates - producing mainly coffee and sugar - flower farming and small-scale

mixed cropping. Small-scale farmers also have plots and demand water for irrigation, albeit to a much smaller extent.

3.3.1.3 Impacts on agriculture sector

Coffee is Tanzania's largest export crop. It is produced on large estates and by small-holder farmers. About 15 percent of sugar production is exported. The greenhouse-based cut-flower industry covers a total of 80 hectares and is mostly export oriented. Small-scale farmers make use of an estimated 2,000 traditional furrows, which tap water supplies from springs and rivers. Some of these have been upgraded in modernized irrigation systems, with the result that the efficiency of water use ranges now from less than 15 percent to over 50 percent. More than 20 different crops are grown by small-holders in the basin, with most farmers growing a variety of fruits and vegetables. Maize is the most ubiquitous crop, both in irrigated and non-irrigated areas. Coffee is grown by most households on Mount Kilimanjaro and Mount Meru. Bananas are also grown by about one third of households in the lowlands. Tomatoes are grown in all areas, but tend to be more frequent in irrigated areas, particularly in the highland areas. Beans are very commonly grown in the upper basin and in highlands. Agriculture production is strongly correlated with rainfall and irrigation inputs.

3.3.1.4 The Pangani River Basin Management

The Pangani River Basin Management is based on Tanzania's National Water Policy (2002). The Government of Tanzania; IUCN, through its Water & Nature Initiative (WANI); and the GEF through UNDP are committed to preparing water users and water managers in the Pangani Basin to adapt to shrinking water supplies. Their goal is to mainstream the negative effects of climate change into Integrated Water Resources Management in the Pangani River basin in order to support the equitable provision of freshwater for the environment and to support the livelihoods of future generations.

The Pangani River Basin Management Project, launched in 2004, will address this goal through several approaches, including: (1) an environmental flow assessment; (2) establishing forums for community participation in water management; and (3) raising awareness about climate change impacts and adaptation strategies. The project's activities will build capacity and awareness on the legal provisions for the principles of integrated water resources management. It will also focus on the risks and vulnerabilities to climate change, dwindling water flows, and possible adaptive measures.

The project is funded by the GEF under the SCCF through the UNDP. The GEF provided USD 1 million and co-financing stood at about USD 1.54 million. (GEF 2007) According to the UNDP, the project leads to a single measurable outcome: management and allocation of water in the Pangani Basin, including climate change preparation and adaptation and environmental considerations in a sound Integrated Water Resource Management (IWRM) framework. It is one of the first field-based climate change preparation projects in Eastern Africa with strong links to basin and national planning and policy. As such, it will build national and regional capacity, provide lessons, and serve as a national and regional demonstration site.

Several factors have determined the project's success. These include the following elements.

Stakeholder Participation

One of the main aspects of the project is the participation of stakeholders through different channels. One such channel is the new water strategy and legislation in Tanzania, which provides for catchment and basin-level forums. The involvement of communities to effectively participate in the management of their natural resources is highlighted. The project pilots the establishment of the Kikuletwa Catchment Forum, which will address the many conflicts emerging in that sub-catchment. It is anticipated that some

issues, such as sub-catchment water rights allocation can be debated and resolved through such forums.

Decentralization in Project Implementation

Tanzania has promoted a strong decentralization policy. Responsibilities are devolved to lower levels of governance, bringing decision making closer to the communities involved. The establishment of catchment forums further decentralizes water management to the catchment level.

Resolving Decision-Making Complex Issues

The Pangani Basin presents complex water management issues by virtue of its sheer size. The Kikuletwa Catchment occupies the north-western part of the Pangani River basin and hosts a multitude of water users, from small-scale subsistence farmers, to municipalities (Arusha and Moshi), and large-scale export farms. Their increasing water demands are straining the catchment's already over-stretched water resources. Reconciling these demands is one of the goals of the Kikuletwa Forum.

Transparency and Accountability

In terms of water management, nine major rivers or lake basins have been gazetted, and Basin Water Boards and Basin Water Offices have been established to manage and allocate water resources in a transparent manner.

3.3.2 Malawi: The climate adaptation for rural livelihoods and agriculture (CARLA) project

3.3.2.1 Background

Malawi covers 11.8 million hectares, of which 9.4 million is land and the rest is composed of water bodies dominated by Lake Malawi. Thirty-one percent of the land is suitable for rain-fed agriculture, 32 percent is marginal and 37 percent is unsuitable for agriculture (Nangoma, 2007). Malawi's population is estimated at 12 million; about 85 percent of the population is based in rural areas. Life expectancy is as low as 40 years.

The country is heavily dependent upon rain-fed subsistence agriculture; with more than 80 percent of the population generating its daily livelihood from small-scale agriculture, and currently about 60 percent have insecure access to food on a year-round basis. The economic base is narrow and limited to agro-processing industries. Hence, there is an over-dependency on rain-fed agriculture and biomass for energy. Agriculture accounts for more than one third of GDP and 90 percent of export revenues. (UN-OHRLLS 2009) Major export commodities include tobacco, tea, sugar, cotton, coffee, peanuts, wood products, and apparel.

3.3.2.2 Impacts of climate change: Evidence from the NAPA

Climate assessment studies in Malawi reveal that the country is highly vulnerable to the adverse impacts of climate change and extreme weather events. Malawi has experienced a number of adverse climatic hazards. The most serious ones have been dry spells, seasonal droughts, intense rainfall, floods and flash floods. Erratic rains have resulted in acute crop failure, which has entailed food insecurity and malnutrition, especially among vulnerable rural communities. Floods have caused disruption of hydroelectric power generation, water pollution, and increased incidence of diseases, such as malaria, cholera and diarrhoea. Rising poverty among rural communities and increasing population pressure on a limited land resource base are adding to the problem of adaptation to climate change. Nangoma (2007) reports that a great concern of the Malawi government is the loss of human, natural, financial, social and physical capital, which are caused by the adverse impacts of climate change, such as floods, droughts, and landslides, among many other natural disasters and calamities.

The threat posed by extreme weather events to food, health, water, and energy has been among the driving forces for the preparation of Malawi's NAPA in 2006. (UNFCCC, 2008b) The process of developing the NAPA for

Malawi involved a wide cross-section of consultations with many stakeholders in the public and private sectors, including civil society and vulnerable rural communities. Five projects from over a dozen were retained in terms of importance and urgency. These include: (1) improving community resilience to climate change through the development of sustainable livelihoods; (2) restoring forests in the Upper Middle and Lower Shire Valley Catchments to reduce siltation and associated water flow problems; (3) improving agricultural production under erratic rains and changing climatic conditions; (4) improving Malawi's preparedness to cope with droughts and floods; and (5) improving climatic monitoring to enhance Malawi's early warning capabilities and decision making and sustainable utilization of Lake Malawi and Lake Shore areas resources.

3.3.2.3. The climate adaptation for rural livelihoods and agriculture (CARLA) project

The LDCF provided a grant of USD 3.26 million to the Climate Adaptation for Rural Livelihoods and Agriculture Project (CARLA), which attempted to fund the above priority areas identified by the NAPA. Co-financing stands at USD 24.39 million. The project's goal is to improve resilience to current climate variability and future climate change by developing and implementing cost-effective adaptation strategies, policies, and measures that will improve agricultural production and rural livelihoods.

The LDCF project aims to achieve its goal through an investment-support component and by strengthening institutions to better adapt to climate change. The investment component aims at improving agricultural land management and natural systems as well as rural livelihoods. Short-term adaptation options include, inter alia, crop diversification, use of alternative production techniques, adoption of multi-cropping and mixed-farm systems, replacement of plant types and cultivars and changes in farm operations through cropping sequences and

timing of irrigation. A range of measures to improve irrigation. Water harvesting and water use are also envisaged.

3.3.2.4 Lessons learned from the CARLA

The way priorities from the Malawi NAPA are identified and processed into a proposal for funding is among the most important elements to secure LDCF funding. The NAPA identified 31 adaptation options from 8 sectors to address the country's urgent adaptation needs. Based on multi-criteria analysis, a shortlist of 15 priority adaptation options was developed. These priorities were further ranked according to urgency and categorized as high, medium, or low.

The CARLA project has been designed through synergies and coordination with other ongoing projects. Thus, the project does not stand alone in the adaptation strategy to climate change. It is aligned to the Smallholder Crop Production and Marketing Project (SCPMP), an initiative of the African Development Bank. The SCPMP aims at increasing the productivity and incomes of rural households through intensification and diversification of current cropping and through more efficient marketing. (AfDB, 2009) It is also expected to improve household nutrition and environmental management of natural resources. The CARLA project implements climate change adaptation measures primarily through on-the-ground investments aimed at building resilience and adaptive capacity in the areas where the SCPMP is already taking place with an additional focus on other vulnerable areas identified through the NAPA. Thus, the two projects complement each other and mutually reinforce their effectiveness.

The Danish Ministry of Foreign Affairs' evaluation of the CARLA project notes that the project has been well integrated into an agricultural sector-wide approach and, hence, into Malawi's poverty reduction strategy, which forms the formal basis for AFT financing. This illustrates the existing complementarity between climate change

adaptation measures and AFT projects beyond mere theory. The evaluation also points out that adaptation financing has been facilitated through carefully selected, well-elaborated and properly budgeted projects, implying that these are the sine qua non for securing climate change finance for adaptation.

The multi-stakeholders' approach of the project is worth mentioning since it supports adaptation of individuals, communities, and other private sector entities. By raising awareness and soliciting the concern and involvement of a broad array of stakeholders, the project aims at effectively addressing rural livelihoods. Planning by consensus is also critical to mobilizing predictable flows of financial resources and ensuring smooth project implementation, monitoring and, ultimately, sustainability.

3.3.3 Summary and conclusion

The case studies on climate change projects have been selected to show how adaptation measures have been undertaken to address the impacts of climate change. They discuss the role of climate financing mechanisms and explain critical success factors for their implementation. The first case study talks about a project to relieve climate change-induced water stress in the Pangani River basin in Tanzania. This problem has affected Tanzania's primary vocation as an agricultural exporter - mainly of coffee, sugar, and bananas. The project, funded partly by the GEF under the SCCF, seeks to manage water as a scarce resource in the Pangani Basin by sensitizing the people about the adverse effects of climate change and teaching them practical strategies to adapt to shrinking water supplies. The project has been successful because of its community-based approach, decentralized decision-making, transparency, and accountability.

The second case study showcases the Climate Adaptation for Rural Livelihoods and Agriculture (CARLA) project in Malawi. Partly financed by the LDCF, the project's goal is to improve Malawi's resilience to climate change through cost-effective adaptation strategies, policies,

and measures that would improve agricultural production and sustain rural livelihoods. Another component of the project aims at enhancing Malawi's preparedness to cope with extreme weather events by strengthening relevant institutions. The project's unique feature is its design. Inspired by the Malawi's NAPA, the project is well integrated with the country's poverty reduction strategy and fully owned by the stakeholders.

The main lessons from these case studies are that stakeholders' participation in project implementation, transparency, and accountability are fundamental to the project's success. Consultation with the beneficiaries not only improves decision-making, which is critical to

sustaining financial flows, but also leads to the project being owned by them. Synergies with existing projects in the area of agricultural development and/or poverty reduction are important to avoid duplication of resources and ultimately to promote integrated and sustainable development. The CARLA project, in particular, shows that it is possible to integrate adaptation measures rooted in a NAPA with a country's PRSP, which forms the basis for attracting AFT under the (enhanced) IF. On the other hand, while well-elaborated projects are likely to be approved faster, the approval process, in general, is fraught with delays. Given the short-term focus of NAPA projects, there is urgency to get these approved, and the funds disbursed.

4. MAPPING TRADE AND CLIMATE CHANGE FINANCING MECHANISM

We touched upon the idea that trade-related assistance and climate change financing may be addressing a common set of objectives and thus greater synergy could be achieved if AFT funds and climate change adaptation funds, such as the GEF, could be used in a complementary and mutually reinforcing manner. In this section, we explain in more detail the parallels between AFT projects and adaptation projects by mapping AFT sub-categories to adaptation activities. We show that such mapping is more easily achieved in two specific AFT categories, namely economic infrastructure and building productive capacity. Next, we discuss the potential for trade and climate change-related funds to be used in a complementary and mutually reinforcing manner to achieve common objectives.

4.1 Mapping AFT Projects to Climate Change Adaptation Projects

The OECD/WTO has an official checklist of categories under which AFT funds are typically allocated. In Section 2, we explained that, in

principle, AFT has been reported under three main categories, namely (a) trade policy and regulations and trade-related adjustment; (b) economic infrastructure; and (c) building productive capacity. Under (1), much of the funding has been for trade policy and regulations; trade-related adjustment has not received much attention from donors.

Unfortunately, no official list of climate change adaptation projects exists. In the NAPAs, the project titles span a wide range of intervention areas, and although these could be reclassified into a narrower set of project headings, it is not straight-forward to establish a mapping with the AFT categories. Even GEF's three areas of project funding - namely (a) adaptation; (b) transfer of technology; and (c) energy, transport, industry, agriculture, forestry, and waste management - do not provide as clear guidelines as the AFT categories. In particular, it is difficult to distinguish between (a) and (c), especially because adaptation measures may have cross-cutting sectoral dimensions. A priori, however, it appears that the AFT sub-categories presented in Table 4.1 are closest in substance to adaptation projects:

Table 4.1 AFT Categories and Sub-Categories Relevant to Climate Change Projects

Economic infrastructure	Transport and storage	Road transport Rail transport Water transport Storage
	Energy supply and generation	Power generation/renewable resources Hydro-electric power plants
Building productive capacity	Agriculture	Potentially all sub-categories
	Fishing	Fishery development
	Industry	Most sub-categories

The discussion and analysis presented so far indicate that agriculture is the key sector in which African LDCs have an active interest, and within this sector, climate change adaptation measures have included the following: change in crop mix, crop relocation, change in the mix of livestock and fish species/breed, management of crops and

fisheries, irrigation and management of land and natural areas. Climate change proofing agriculture may require diversification into climate-change-resistant crops and away from agriculture into light manufacturing and - less likely for African LDCs - services. This may require trade policy assistance in identifying potential new markets as well

as AFT for building productive capacity in agriculture and industry.

Agricultural diversification through changes in crop mix, and changes in the mix of livestock breeds and fish species can be mapped to one or more of the AFT subcategories under 'building productive capacity' in agriculture. These include, but are not limited to the following: agricultural land resources, water resources and inputs; food crop production, and industrial/export crops; livestock and livestock/veterinary services; agricultural education/training/extension/research; and agricultural cooperatives. Adaptation measures such as soil rehabilitation, land terracing and fertilization can also be linked to one or more of the above AFT headings, which are comprehensive enough to embrace a wide range of adaptation measures.

Climate change can have unexpected positive impacts on African economies. One of the measures suggested to address the phenomenon is to move out of vulnerable sectors. Perhaps this could serve as a springboard for African LDCs heavily dependent on agricultural production to diversify into new non-agricultural products and services. Such diversification is not so difficult to achieve since some countries are already doing it, although most of the success stories lie outside of Africa. Within Africa, Lesotho is an interesting case. The

country has made judicious use of AGOA trade preferences to build a garment industry that has withstood the forces of globalization. AFT resources can help countries diversify into basic manufactured products that utilize one of Africa's emerging abundant resources - semi-skilled labour.

Water stress is likely to emerge as a major problem for some of Africa's already water-scarce countries. Addressing this challenge calls for investments in dams, efficient distribution systems, and effective management of water resources. Such investments can be mapped to AFT's economic infrastructure. Energy-related projects, including hydropower, solar energy and other renewable energies, which are critical to both climate change adaptation and mitigation, can also be linked to economic infrastructure under sub-category 'energy supply and generation'. Finally, adaptation projects related to coastal zones and marine ecosystems involve protecting coastal areas from sea level rise, restoration of coastal sites, as well as the protection of crop areas near the coastal sites. These projects could also be mapped onto 'economic infrastructure', although, in this case, a precise sub-category that can accommodate such projects cannot be identified from the OECD/WTO AFT checklist. Table 4.2 depicts a possible mapping of AFT and climate change related projects.

Table 4.2 Mapping AFT to Climate Change Related Projects

AFT category	AFT sub-category	Climate change related project
Trade Policy and Regulation and Trade-related Adjustment	Trade Policy/ Multilateral trade negotiations	<ul style="list-style-type: none"> • Market access for new products
Economic infrastructure	Transport and Storage	<ul style="list-style-type: none"> • Investments in dams, hydraulics, modern water distribution systems • Rehabilitation of weather-battered infrastructure • Protection of coastal zones from sea-level rise
	Energy supply and generation	<ul style="list-style-type: none"> • Energy-related projects (hydropower, renewable energies)
Building productive capacity	Agriculture	<ul style="list-style-type: none"> • Soil rehabilitation, land terracing, fertilization • Diversifying into climate change resistant crops • Changes in crop mix, changes in mix of livestock breed and fish species
	Industry	<ul style="list-style-type: none"> • Diversifying away from sectors vulnerable to climate change (agriculture)

4.2 Role of Trade and Climate Change-Related Funds – A Complementary and Reinforcing Approach

The lack of financing from the GEF remains an important shortcoming of climate change funds at the disposal of LDCs that needs to be addressed urgently. Moreover, most of the funds have a limited time horizon. Their replenishment and disbursement beyond 2012 are uncertain.

However, there are other issues that are likely to determine the effectiveness of the GEF. The requirement for co-financing implies that GEF funds, such as the SCCF and LDCF, cannot meet the total amount needed for projects. The level of co-financing represents almost twice the funding secured from the LDCF or the SCCF for any approved project (GEF Annual Report 2009). Co-financing needs scrutiny, especially among LDCs, which may not be able, or wish, to secure co-financing. In many instances, the co-financing requirement has meant that GEF funding is made conditional on co-financing from the World Bank, with its associated policy conditionality. This may have adverse impacts on the developing country's policy space and on project ownership. More-

over, co-financing can lead to greater indebtedness of already indebted LDCs. For this reason, some countries may not place climate change adaptation projects high on the agenda, particularly since the outcomes of such projects are rarely visible within the short political cycle of policymakers.

It appears that some LDCs will turn to bilateral sources of aid to co-finance climate change related projects. For example, Tanzania was able to assemble USD 3.44 million from bilateral donors to kick-start the Pangani River basin project. However, the mechanisms of bilateral aid for adaptation projects, just like for AFT projects, are not very transparent. They also may not be fair in that LDCs in dire need of funding may not be able to secure funds from bilateral donors for political reasons.

Co-financing provides an opportunity for AFT to be harnessed as an effective means of securing the additional funding needed to implement projects that integrate components of climate change adaptation and trade competitiveness. A complementary and reinforcing approach between the two funds is likely to bring additional benefit and greater effectiveness in tackling both climate

change and trade-related issues. Using the NAPAs, examples of sectors/projects that are related to AFT and to climate change adaptation funds are shown in Table 4.3. The 'agriculture, fisheries and livestock' sector, for example, includes adaptation projects such as diversified agricultural crops that can resist climate change, or fishery species that are tolerant of salt and flooding. The main aspect of such projects is to increase crop yields, fisheries, and livestock by adapting to the impact of climate change. As noted earlier, such projects can be linked to the 'building productive capacity' of AFT.

Next to agriculture, fisheries and livestock, the majority of African LDCs identify water resources as another key area for climate change adaptation. Water resources are a key input into agriculture and, depending on project specifics, can be linked to either economic infrastructure (construction of dams and setting up of water distribution

networks) or to building productive capacity under the sub-category 'agriculture'.

To conclude, the NAPAs suggest at least two reasons for AFT and climate change adaptation projects and funds to work in a complementary manner. First, many of the climate change related projects have clear trade-related impacts. These are most obvious in sectors like agriculture, fisheries and livestock and water resources. Second, the total financial requirements to implement the NAPAs fall far short of the funding available through the LDCF, for example. AFT resources can supplement available GEF funds to support projects that address both climate change adaptation as well as the capacity of the African LDCs to engage in international trade. For this to be effective, however, it is crucial that *additional* resources be mobilized for AFT: existing AFT funding should not be diverted to finance climate change adaptation needs.

Table 4.3 Projects Related to Trade and Climate Change Adaptation (USD)

		Agriculture, Fisheries, Livestock	Coastal Zones and Marine Ecosystems	Energy- related projects	Infrastructure	Water resources
1	Benin		1,296,000			2,875,000
2	Burkina Faso	1,799,884		1,230,000		682,000
3	Burundi	594,000		500,000		3,000,000
4	Cape Verde	1,500,000	1,500,000			13,680,000
5	Central African Rep	250,000		250,000		250,000
6	Comoros	1,860,000			1,025,000	175,000
7	DR Congo	5,658,760	239,374			
8	Djibouti	1,700,000	529,000		820,000	1,447,000
9	Eritrea	20,847,000				7,252,000
10	Ethiopia	2,000,000			2,000,000	30,000,000
11	Gambia	5,810,000	2,300,000	230,000		910,000
12	Guinea	1,175,000	600,000	500,000	1,630,000	
13	Guinea Bissau	1,500,000	1,650,000			1,800,000
14	Lesotho	7,835,000		NA		1,170,000
15	Liberia	5,000,000	60,000,000			
16	Madagascar	270,000	32,500		929,980	
17	Malawi	7,500,000				
18	Maldives	1,852,000	4,117,000		6,670,000	10,800,000
19	Mali	27,980,000		8,500,000		1,780,000

Table 4.3 *Continued*

		Agriculture, Fisheries, Livestock,	Coastal Zones and Marine Ecosystems	Energy- related projects	Infrastructure	Water resources
20	Mauritania	3,870,000	4,446,000			6,162,780
21	Mozambique		2,000,000			2,000,000
22	Niger	NA				NA
23	Rwanda			950,000		750,000
24	Sao Tome	3,150,000		1,000,000	1,400,000	1,400,000
25	Senegal		41,248,000			652,000
26	Sudan	2,350,000				
27	Tanzania	8,500,000		620,000		4,100,000
28	Uganda					9,700,000
29	Zambia	1,375,000				75,000

Source: NAPAs.

5. TRADE-RELATED FINANCIAL ASSISTANCE AND CLIMATE CHANGE FINANCING MECHANISMS: LESSONS LEARNED FOR AFRICA

If trade-related funds and climate change financing mechanisms are to be utilized in an integrated manner to rationalize resources and maximize synergies, it is important that the process be motivated by lessons learned on the ground in implementing these funds in African LDCs and SVEs. In this section, we draw on our case studies of AFT/EIF and climate-change adaptation projects and on further evidence to discuss the modus operandi of AFT and climate change funds, highlighting the similarities and differences. We then propose a strategy for making trade and climate change financing mechanisms coherent, complementary and mutually reinforcing in meeting both supply-side and climate change adaptation objectives.

5.1 Implementation of Trade-Related Assistance and Climate Change Adaptation Funds

We presented two case studies of AFT-financed projects and another two of climate change adaptation projects in SSA. Each project is different in important ways. Therefore, it may be difficult to identify the features common to all. Here, we attempt to draw lessons and identify best practices by pooling together the case studies. Our discussion is centered on two themes - project design and project implementation and monitoring.

5.1.1 Project design

Focus

AFT projects are development focused, rooted in the need to tackle poverty by engaging in international trade in more significant ways. The EIF has allowed a number of LDCs in Africa and elsewhere to undertake Diagnostic Trade Integration Studies and develop action matrices with a view to mainstreaming trade into national development strategies, such as the PRSPs. Although climate change adaptation projects in LDCs and SVEs - most of which relate to the agricultural sector -

have implications for development, these are often not emphasized. To attain some degree of synergy between AFT and climate change-related financing mechanisms, it is important that both be aligned on the objectives of economic development and poverty reduction. The Malawi case study shows that the CARLA project, based on the country's NAPA, is well integrated into its PRSP. This should serve as an example to other countries. Achieving synergy between NAPA and AFT projects at the level of project design can pave the way for achieving greater complementarity in adaptation and AFT financing.

Sectoral emphasis

The bulk of AFT resources have flowed into financing economic infrastructure and building supply capacity. A number of African countries have benefited from aid in these sectors. The agro-based development project in Senegal contains elements of both. The North-South corridor pilot project is a major infrastructure development programme at the regional level that purports to benefit several land-locked countries in cross-hauling export cargo efficiently to the port, thereby boosting their international competitiveness.

We showed in the previous section that 'economic infrastructure' and 'building productive capacity' are the AFT categories that come closest to matching the climate change adaptation projects, especially in the agriculture, livestock and fisheries sector, in which African LDCs have a particular interest. Hence, trade and climate change financing mechanisms can complement each other so that adaptation projects that have trade-related impacts can be implemented.

Ownership

The major issue in AFT projects remains ownership by beneficiary countries. As the Senegal case study shows, most LDCs

lack the capacity to take a leadership role in project development, leaving donors to “impose” prototyped projects on them. The value of such projects is substantially lower relative to the country’s development needs. On the other hand, climate change adaptation projects are identified on the basis of a NAPA that each country prepares as a prerequisite for access to GEF financing. The NAPA reflects a country’s short-term priorities, and since it evolves from consultation among local stakeholders – as the Tanzania case study illustrates – it is fully owned by the country.¹¹

5.1.2 Project implementation

Coordination

There is a large body of evidence, supported by the Senegal case study, that LDC governments often lack the capacity to make AFT trade work due to both manpower constraints and poor coordination among various implementing agencies. Nevertheless, the Tanzania Pangani River Basin project highlights the success of a decentralized approach to project implementation: devolvement of responsibilities to lower levels of governance brings decision making closer to the communities involved.

Fund disbursement

Implementation of both AFT and climate change adaptation projects has been marred by delays and irregularity in the disbursement of funds. These could be due to poor coordination between the government and donors, as illustrated by the Senegal case study or delays in project implementation (North-South corridor project) or bureaucratic delays (as in the case of Maldives). The North-South corridor case study suggests that such delays can be reduced if a dedicated fund (like the Tripartite Fund) could be set up to access and disburse committed funds. Adaptation projects could benefit from a similar initiative.

‘Additionality’ of financial resources

Whether additional resources will be available beyond existing pledges to replenish both AFT and climate change funds is a major question. It is expected that if all donor commitments are followed through, total ODA will reach the cap of USD 130 billion by 2010. With renewed donor attention to the AFT agenda and pledges by several OECD countries, total AFT resources are likely to rise. Indeed, new AFT commitments have constantly increased since the launch of the AFT initiative in 2005. In 2007, new commitments amounted to USD 25.4 billion, representing a 21 percent increase in real terms relative to the 2002-2005 baselines. Moreover, AFT flows have increased even as the share of AFT in total allocable ODA has declined. This suggests that the increase in AFT has not been achieved at the expense of donor support for traditional social sector programmes. In other words, there is compelling evidence that the USD 4.3 billion increase in AFT in 2007 is *additional*.

The EIF promised to substantially scale up trade-related assistance from the current USD 40 million to about USD 200-400 million. However, it is not clear whether these promises have been carried out. On the whole, despite the positive trends in recent years, it is uncertain at this stage whether AFT funding will continue to flow in at a reasonable pace beyond 2010 to keep the AFT initiative afloat.

There is a similar uncertainty about climate change funds. Current financial resources (about USD 335 million in pledged contributions) are clearly insufficient to meet all project demands, and the recent EU pledge to provide an additional US 10.6 billion over the coming three years is judged inadequate relative to LDCs’ needs. For example, USD 179.9 million is available under the LDCF, but USD 586 million is needed to carry out adaptation projects identified by NAPAs in

Africa alone. Moreover, the future of these funds is uncertain in the absence, so far, of new commitments.

It appears that two options are available to sustain climate change adaptation efforts. One is co-financing, which is a requirement of GEF's LDCF, and which is supported by the World Bank through its SCF. Perhaps, private sector participation can be sought to supplement GEF funding, especially where the government cannot itself provide the required co-finance. The High-Level Conference on the North-South Corridor considered this option for financing activities and projects in the corridor countries, but it is too early to judge its effectiveness. The other option, discussed above, is for the AFT fund to supplement climate change funds in areas of common interest, notably in economic infrastructure and in building productive capacity. Given the much bigger amounts of pledges for AFT funding, parts of it can be used top up climate funds put at the disposal of LDCs.

5.2 A Strategy for Making Trade and Climate Change Financing Mechanisms Complementary and Mutually-Reinforcing in Meeting Supply-Side and Climate Change Adaptation Objectives

There are clear similarities in the modes of operation of trade and climate change funds. Both require that projects for financing be developed and motivated in terms of their value to the economy. In the case of EIF/AFT, this is achieved through the preparation of a DTIS, action matrices and a PRSP. For climate change adaptation projects, NAPAs are the usual channel for conveying LDCs' priorities to the donor community. However, the modes of financing for the two types of projects are different. While AFT projects are generally fully funded, adaptation projects require co-financing when GEF funds are used.

The mechanisms of disbursement of funds are also similar. Aid for trade funds have typically been disbursed by multilateral donors directly to recipient countries or through regional

banks, such as the African Development Bank. Fourteen LDCs are currently implementing NAPA projects using funds from the GEF, with additional contributions from other donors or their own government budgets. Bilateral aid is significant and common to both, and the same motivations - albeit not clear and transparent - seem to underscore such aid.

A strategy for making trade and climate change financing mechanisms complementary and mutually reinforcing in meeting common objectives must recognize the above similarities and build on them. Our proposal for such a strategy rests on the following key elements:

1. Maximizing Synergy

A good deal of complementarity already exists between the types of projects that AFT and climate change funds finance. Many of the adaptation projects identified in the NAPAs have clear links to economic infrastructure and/or building productive capacity in the AFT initiative. These links should be recognized and built upon to develop and maximize synergies between AFT and climate change projects. One way in which this can be done is by specifying the trade impacts of NAPA projects. Indeed, such a move will be a major step in linking formally AFT and climate change funds, and it can be achieved at little extra cost to LDCs. Moreover, this approach can also form the basis for seeking out AFT funds for climate change projects related to infrastructure (e.g., dams) and to building productive capacity (e.g., in agriculture).

2. Inadequacy and Co-Financing Requirements in Adaptation Funds as Scope for AFT

We have repeatedly stressed that available adaptation funds are grossly inadequate to meet the numerous projects in need of funding. The international community, and in particular, the donors must recognize that an LDCF with an endowment of USD 179.9 million can achieve little in helping LDCs and SVEs adapt to climate change, which is not of their making. Moral responsibility calls for greater resources to

be put at the disposal of vulnerable countries to combat the damaging economic effects of climate change. Yet, the future of the LDCF is uncertain. While AFT commitments have increased from the 2005 baseline, there is no guarantee that these funds will continue to flow in smoothly far into the future. It is therefore critical that LDCs impress on their richer, more industrial partners the need - indeed, the moral obligation - to provide more aid for adaptation purposes. In so doing, LDCs and SVEs can appeal for AFT and climate change funds to be coordinated in a way that would permit greater coherence, transparency and predictability in the operation of the funds, and this to their own benefit.

The need for co-financing of adaptation projects is a major hurdle to implementing effective climate change measures. LDCs are unlikely to resort to further international debt for this purpose. Moreover, while the World Bank has set up dedicated funds aimed at co-financing adaptation projects, few countries would want to take advantage of those funds, which may come with a string of conditionalities. It appears almost logical that the AFT fund can serve to co-finance climate change projects that will have a measurable impact on the trade capacity of the implementing countries.

3. Governance structure

How can complementarities between AFT and climate change financing mechanisms be achieved at the operational level? An answer to this question should begin with the recognition that the AFT donors are, generally speaking, also contributors to the GEF and other climate change funds. Thus, some degree of complementarity could be achieved at the outset if donors factor into their behavior the mutually reinforcing nature of AFT projects and climate change adaptation measures, especially those with purported trade impacts.

However, this is easier said than done. In the first place, it requires that a country submits its NAPA and PRSP at the same time and to the same funding agency as complementary

documents to be read together. This is not only technically cumbersome, especially for human resource-constrained LDCs and SVEs; it is also impracticable because the AFT initiative lacks a governance structure like that of the GEF. Stiglitz and Charlton (2006) argued for a stand-alone Global Trade Facility operating along the lines of the GEF. The ACP Group also endorses a similar view except that they are not in favour of the creation of a separate fund, but rather support the consolidation of existing multilateral TCB trust funds into a GEF-type mechanism. This has not happened; AFT resources have generally been disbursed at the bilateral level from a donor country to the recipient country (or group of countries) through some kind of cooperation agreement, such as the EU's EDF.

As long as adaptation projects are financed through global funds like the GEF while AFT projects are funded directly by donor countries, it will prove difficult to achieve the desired complementarity between the two funding mechanisms. Hence, the call for greater complementarity between AFT and climate change funds is a call for greater coordination in the disbursement of AFT resources, ideally through a centralized facility like the GEF.

4. Learning from Experiences

Both AFT and climate change funds have existed long enough to generate positive experiences that can be drawn upon in the effort of making the funds operate in a coherent, complementary and mutually reinforcing manner. In fact, each fund boasts some features that the other fund can learn from and adapt to improve delivery and effectiveness of aid. We showed above that climate change-funded projects are generally better coordinated and are more fully owned by the implementing country than are AFT projects. The latter are more deeply rooted in development and poverty reduction. Thus, there is a need to emphasize the development dimensions of climate change adaptation projects, more so, through the trade vector, as far as this is possible.

ENDNOTES

- 1 Usufruct is the legal right to use and derive profit or benefit from property that belongs to another person, as long as the property is not damaged.
- 2 The North-South Corridor extends from the Copperbelt of southern DR Congo and northern Zambia to the port of Dar es Salaam in the north-east and the southern ports in South Africa.
- 3 At the European Council meeting in October 2009, EU leaders pledged to pay their fair share of the money needed to help developing countries implement ambitious mitigation and adaptation strategies. Perhaps this augurs well for the future of climate change funds.
- 4 GEF Council meeting, GEF/LDCF.SCCF.6/Inf.2, 2009.
- 5 The contributing partners are Canada, Denmark, Finland, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.
- 6 GEF Council meeting, GEF/LDCF.SCCF.6/Inf.2, 2009.
- 7 For example, neither the incremental costs nor the environment benefits formula, nor indeed the Resource Allocation Framework, is applied.
- 8 The main contributors are Australia, Austria, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxemburg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.
- 9 Important developments have occurred since this article was first written. The EU, in the run up to the Copenhagen Summit, pledged USD 10.6 billion to climate change funds over the next three years. However, this sum is a pittance in relation to developing countries' needs, is short-term, and arguably not all of it is additional. Moreover, it is not clear at this stage how the funding will be divided among the various funds and across various purposes. It appears unlikely that a significant share of the pledge will go towards replenishing the LDCF. In that case, the key proposition of this article - that AFT can complement climate change adaptation funds - will still be very relevant.
- 10 Reported by The Daily News on 7th April 2009.
- 11 Although LDCs participating in the Enhanced Integrated Framework prepare a DTIS which serves as the basis for AFT through a process similar to the elaboration of a NAPA, it is worth mentioning that the DTIS has been used exclusively for the delivery of TRTA, and not for the more important components of AFT such as economic infrastructure and building productive capacity.

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