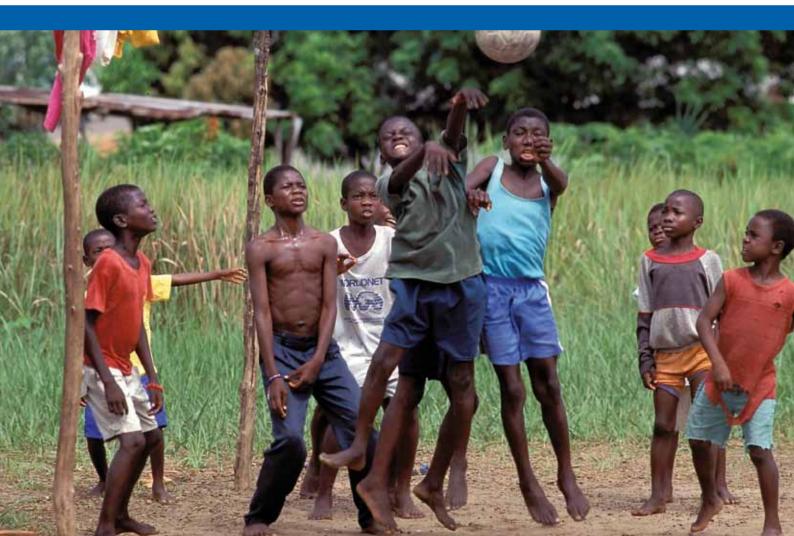


UNDP'S PARTNERSHIP WITH THE GLOBAL FUND IN LIBERIA

Supporting implementation, developing capacity



Global Fund Partnership Team HIV Group Bureau for Development Policy (BDP)

In collaboration with the UNDP Liberia Country Office and the Capacity Development Group, BDP.

UNDP December 2010

CONTENTS

ACRONYMS AND ABBREVIATIONS		4	
FO	PREWORD	5	
EX		6	
1.	THE BACKGROUND	9	
	A buckled health system		
	The big three: AIDS, tuberculosis and malaria in Liberia	13	
2.	DOING REPAIRS AND CATCHING UP: late 2004–2007		
	Building Liberia's AIDS response		
	Putting the TB programme back on track		
	Making up lost ground against malaria		
3.	BUILDING SYSTEMS AND EXPANDING SERVICES: 2007–2009	25	
	The second HIV/AIDS grant (2007)		
	The second malaria grant (2007)		
	The second tuberculosis grant (2007)		
	Going through the gears		
	The capacity-building plan (2007)		
	Financial management		
	Procurement		
4.	CONSOLIDATING GAINS, GOING FORWARD		
	Looking back – and ahead		

ACRONYMS AND ABBREVIATIONS

ACT AIDS	Artemisinin-based combination therapy Acquired immunodeficiency syndrome
ANC	Antenatal clinic
ART	Antiretroviral therapy
ARV	Antiretroviral
CBO	Community-based organization
CCM	Country Coordinating Mechanism
CBP	Capacity-building plan
DFID	Department for International Development (UK)
DOTS	Directly observed therapy short-course
GDP	Gross domestic product
HDI	Human development index
HIV	Human immunodeficiency virus
IT	Information technology
LCM	Liberia Coordinating Mechanism
M&E	Monitoring and evaluation
MDG	Millennium Development Goal
MOH&SW	Ministry of Health & Social Welfare
NAC	National AIDS Commission
NACP	National AIDS and STIs Control Programme
NDS	National Drug Service
NLTCP	National Leprosy and Tuberculosis Control Programme
NMCP	National Malaria Control Programme
PCU	Programme Coordination Unit
PEP	Post-exposure prophylaxis
PEU	Project Execution Unit
PMTCT	Prevention of mother-to-child transmission
PR	Principal Recipient
SR	Sub-Recipient
STI	Sexually transmitted infection
ТВ	Tuberculosis
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV&AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund United Nations Children's Fund
UNICEF USAID	
VCT	United States Agency for International Development Voluntary counselling and testing
WFP	World Food Programme
WHO	World Health Organization
	wond nealth Organization

FOREWORD

The Ministry of Health and Social Welfare (MOH&SW) of the government of Liberia and UNDP/Liberia have had an excellent collaborative partnership in tackling the national response to deadly diseases in Liberia. Despite difficult and challenging conditions, our combined efforts have yielded remarkable outcomes. They have also produced valuable lessons that can guide similar partnerships in other countries where extraordinary circumstances stand in the way of putting Global Fund grants to work effectively and efficiently.

Within the framework of the partnership with UNDP, the MOH&SW was able to produce adequate treatment guidelines and policies, develop standard operating procedures and tools to ensure quality care and treatment, and achieve accurate data production and reporting. The Ministry was able to scale up service delivery points, which resulted in a strong increase in the number of people with access to treatment and prevention services:

- 2,970 People were receiving antiretroviral treatment in 2009, compared with 906 in 2007;
- 1.9 Million persons were treated for malaria and 83,601 pregnant women were reached with intermittent preventive treatment in 2009, compared with 1 million and 155 000, respectively, in 2007;
- The number of people receiving treatment for tuberculosis (TB) increased from 2,633 in 2007 to 8,558 in 2009.

A large number of health staff was also trained to ensure quality of care and treatment. On-site mentoring and formal training were provided to health workers in each of Liberia's 15 counties. In close partnership with the MOH&SW UNDP strived to ensure consistent supply of drugs and health products to health facilities throughout the country. In addition to the substantive procurement of drugs and related products, extensive efforts were made in the establishment of the National Reference Laboratory, the Drug Sensitivity Laboratory and the regional blood banks.

Capacity building was a major activity during the recent grants, and UNDP supported the MOH&SW in mobilizing USD 1.2 million for capacity development activities, which UNDP facilitated. This resulted in major gains, as demonstrated when the Ministry assumed the Principal Recipient function of the HIV grant in early 2010.

With the systems and business processes reinforced, the leadership and management of the national response to the disease have been strengthened, as shown in the good results achieved by the MOH&SW in our first quarterly report to the Global Fund. The operational research capacity of the MOH&SW has also steadily increased, as is evident in the growing body of research undertaken since 2007 (including antenatal clinic surveys, a prevention of mother-to-child transmission study, an antiretroviral therapy survey, a risk perception survey, a TB desk review, a TB/HIV co-infection study, and the Liberia Malaria Indicator Survey).

UNDP's support to the MOH&SW has yielded tangible and measurable results and impact. This report not only celebrates the joint achievements of the partnership between the MOH&SW and UNDP, but also serves as an illuminating case study that can inspire other countries in similar contexts to learn from the successful experiences of Liberia.

Dr. Bernice T. Dahn Deputy Minister for Health, and Chief Medical Officer, Republic of Liberia

EXECUTIVE SUMMARY

This publication describes the partnership in Liberia between UNDP, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and Liberia's Ministry of Health and Social Welfare (MOH&SW).

It focuses on programme implementation, service delivery and capacity-development achievements made since 2004, when UNDP assumed the role of Principal Recipient (PR) in a country rebuilding itself after more than a decade of ruinous civil conflict.

The background to this transitional arrangement is sketched in the first section of the publication, which then analyses the experiences of the partnership over two phases:

- 2004–2007, during which Liberia received its maiden round of grants, and implementation occurred alongside a major reconstruction effort in the health and wider public sector;
- 2007–2009, when the rollout of infrastructure and services continued alongside a concerted drive to strengthen the underlying capacities and systems in the MOH&SW.

The publication also analyses and distils the important lessons learned from those experiences, which yielded formidable gains despite difficult circumstances:

• More than 8,600 new smear-positive TB cases were diagnosed and successfully treated, and TB/HIV services benefited 3,700 people.

- Some 685,000 insecticide-treated nets were distributed, and 2.9 million cases of malaria were treated.
- More than 15 million condoms were distributed, 370,000 cases of sexually transmitted infections (STIs) were treated, and 157,000 HIV counselling and testing sessions were provided. By end-2009, almost 3,000 people were receiving antiretroviral therapy (ART), and 1,100 pregnant women were receiving antiretroviral (ARV) prophylaxis.
- The Round 6 HIV grant programme earned an outstanding A1 performance rating from the Global Fund ("exceeding performance expectations"), and the role of Principal Recipient was successfully transferred to the MOH&SW in January 2010.

The technical and functional capacities of the three disease-control programmes, and of the MOH&SW overall, were transformed beyond recognition.

All this was done with transitional arrangements that reduced the risks associated with a disruptive, post-conflict setting. Programmes were repaired and expanded, while the capacities of national entities were rebuilt and refined. The understanding was that the PR role would revert to a national entity, as soon as capacities and circumstances permitted.

Solid financial systems, reliable procurement chains and accurate monitoring and evaluation (M&E) processes became priorities alongside the provision of tools and skills needed to manage the various programmes. Although modestly funded, the capacity-building efforts yielded the following significant gains:

- The MOH&SW and UNDP drafted an intensive capacity-building plan, which focused on the Ministry's capacity to manage Global Fund grants, while also enhancing capacity to manage its overall operations.
- Major improvements were made in the Ministry's financial management systems (including budget monitoring, financial reporting, sound financial analysis and accounts reconciliation).
- M&E systems and capacities had been absent when UNDP took on the PR role. An M&E unit was set up in the MOH&SW, drawing in newly trained M&E staff from the disease-control programmes. The unit now operates in accordance with an agreed M&E plan, and with an approved annual work plan and indicators. The unit can now monitor key activities in almost all 15 counties.
- A reliable procurement system was built, with new procurements units set up in the MOH&SW and the National Drug Service (NDS) upgraded to broadly service Global Fund grant projects and the public health system. Manuals and tools were introduced, and equipment and storage facilities were upgraded.

Some inspired decisions helped – for example, the MOH&SW's Programme Coordination Unit was embedded in the Ministry, thus avoiding the creation of a parallel, duplicating structure. Knowledge-sharing and capacity-strengthening were more widely diffused, rather than being trapped in a single, isolated unit.

Crucial to the achievements overall was the Liberian Government's strong political support, the Ministry's determination to strengthen itself (and, especially, its main disease-control programmes), and UNDP's commitment and close collaboration with the MOH&SW, the Global Fund, and other United Nations (UN) agencies (including UNAIDS, UNICEF, WFP and WHO¹).

Moving forward

The following important lessons can inform the rebuilding efforts in Liberia and elsewhere:

- The capacity-development gains of the past few years must penetrate more deeply into the MOH&SW's systems and institutions. Gains at central levels must be emulated at other levels – especially those of county health teams.
- There is top-level support for accountability and transparency, but it is not yet reflected consistently in everyday work. Accountability mechanisms need to be strengthened all the way down the management chain.
- The impressive accomplishments on the procurement front need to be extended and consolidated. One starting point would be to more clearly define the roles

¹ The Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP), and the World Health Organization (WHO)

of the various procurement actors.

- Maintaining the momentum requires adequate funding earmarked for capacity development. In Liberia, that funding does not yet approach the scale of need.
- The time seems ripe for a functional review of the Liberia Coordinating Mechanism and for support that is tailored to upgrade its capacity to advocate, set strategies, and monitor projects.
- Capacity development should be integrated more explicitly into Global Fund grantmaking and -management processes. The Global Fund could mandate capacity assessments and capacity-development plans as part of its grant programmes. There should be clear milestones and indicators, and dedicated staff and budget.
- There is excessive dependency on the Global Fund for funding. Supplementary and sustainable funding strategies are needed.
- The public health system is starved of qualified personnel. Unless human resources are grown and health education improves, longer-term capacity-development gains will be constrained.
- UNDP is ideally placed to assist the MOH&SW in devising a longer-term national capacity-development plan to further strengthen national systems and the programme implementation capacity of the health sector.

Six years of partnership between UNDP, Liberia and the Global Fund have brought remarkable improvements.

Systems for managing and monitoring the main disease-control efforts are now functioning. Standard operating procedures have been introduced, and appropriate diagnostic and treatment protocols are being applied. Intensive formal training and mentoring, as well as the recruitment of key staff, have boosted human resource capacities. Many of the systems, processes and skills needed to run Liberia's disease-control programmes effectively and efficiently are in place.

The challenge now is to consolidate and deepen these gains, which requires greater investment in capacity development.

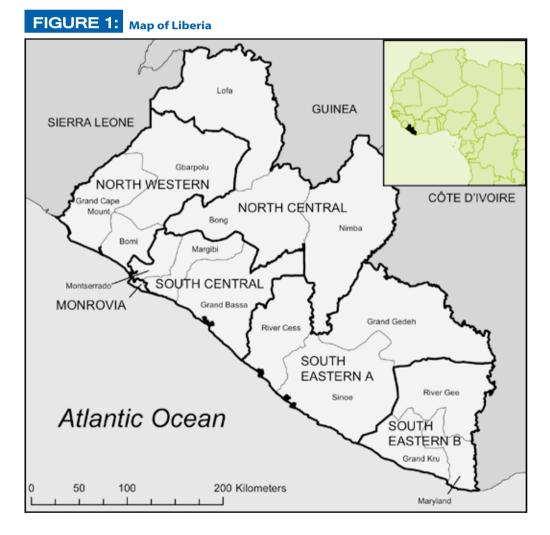
- THE BACKGROUND



Liberia is Africa's oldest republic, but it became better known in the 1990s for two longrunning, ruinous civil wars that cost hundreds of thousands of lives and set back the country's development by decades.

Like the economies of many low-income countries, Liberia's depends heavily on natural resources. While industry and services (and the infrastructure supporting them) are relatively undeveloped, this West African country's natural wealth has been its economic mainstay. But the abundance of iron ore, timber, diamonds, gold and rubber has also sporadically sparked violent conflict.

In the late 1980s, arbitrary rule and economic collapse culminated in a civil war that erupted in 1989. Among the key underlying factors were poor governance and economic mismanagement. The war became one of Africa's most brutal conflicts, claiming the lives of more than 200,000 Liberians and displacing a million more. The conflict embroiled neighbouring countries, before eventually yielding to a 1995 peace agreement.



Source: National Malaria Control Programme et al. (2009)

Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

The respite was brief. In 1999, fighting resumed in northern Liberia, triggering a second civil war, which soon engulfed much of the country.

In 2003, a new peace agreement led to the creation of a transition government composed of rebel, government, and civil society groups. The economy, however, was in ruins, and much of the country's infrastructure had been laid to waste. Travel - even communicating - outside the capital and main towns was difficult and sometimes impossible.Water and sanitation systems were damaged or destroyed, as were health and education services. Over 70 percent of school buildings, libraries and teaching materials were destroyed (UNDP, 2006). Thousands of gualified health workers had fled. Governance and management systems were weak - even absent, in many places – and corruption was rife. A process of rebuilding began – fitfully at first, but gaining momentum, especially after the 2006 inauguration of President Ellen Johnson-Sirleaf, Africa's first elected female Head of State.

The wars and the neglect that preceded them had a devastating effect. Public finances collapsed, and per capita public expenditure plummeted to about US\$25 – one of the lowest levels in the world (Government of Liberia, 2008a). Three quarters of the population lived below the national poverty line in the mid-2000s (UNDP, 2006),² gross domestic product (GDP) per capita was about US\$150, and the country's external debt had ballooned to more than 700 percent of GDP (World Bank, 2009a). The wars also destroyed a great deal of the State's capacity to bring services to citizens. Electricity or piped water would remain a rarity until 2006. Basic health and education services were badly disrupted or non-existent. An entire generation had spent more time embroiled in war than in the classroom (Government of Liberia, 2008a). Almost one third of the population, including scores of trained professionals, had fled their homes. As late as 2004, there were an estimated 260,000 internally displaced persons in this country of 3.5 million people (UNDP, 2006).

The damage was so serious that even the collection of basic data was near impossible: in the early 2000s, the country was not ranked in terms of human development due to an absence of data (UNDP, 2006).

Liberia embarked on a massive reconstruction effort. Security, economic recovery, infrastructure (including transport and communications) and basic services, good governance and the rule of law were identified as priority areas.

Less than a decade after the war ended, there has been admirable progress in rebuilding the country. But much remains to be done in one of the poorest countries in the world, where food insecurity and health risks are pervasive threats. An estimated one in five (20%) Liberian children younger than five years are malnourished (World Bank, 2010) and 39 percent are stunted (Liberia Institute of Statistics and Geo-Information Services et al., 2007).

Preventable diseases such as malaria, tuberculosis and HIV are serious threats.

² The national poverty line was fixed at an intake of 2,400 K/cal per adult per day.

The tuberculosis incidence rate in 2007 was 277 per 100,000 people (WHO, 2010). The annual TB mortality rate is high – approximately 62 per 100,000 people (WHO, 2010), which is almost three times higher than the 2015 target. An estimated 1.7 percent of the adult population was living with HIV in 2007 (UNAIDS, 2008).

Vector-borne diseases, particularly malaria and yellow fever, are also major causes of ill health, as are acute respiratory infections, diarrhoea, sexually transmitted infections (STIs), worms, skin diseases, malnutrition and anaemia. Only one in four (24%) people have access to safe drinking water (UNDP, 2009a), and 55 percent of households have no toilet facility. Poor sanitation is especially acute in cities, where waste disposal and sewage services are in disarray, generating serious environmental and health problems.

Life expectancy at birth was estimated at 58 years in 2006 (UNDP, 2009b), while the infant mortality rate was 72 per 1,000 live births. The maternal mortality rate in 2008 was 994 per 100,000 live births (Liberia Institute of Statistics and Geo-Information Services et al., 2007). The country's human development index (HDI) was 0.442 in 2007 – the ninth lowest out of 177 countries (UNDP, 2009b).

A buckled health system

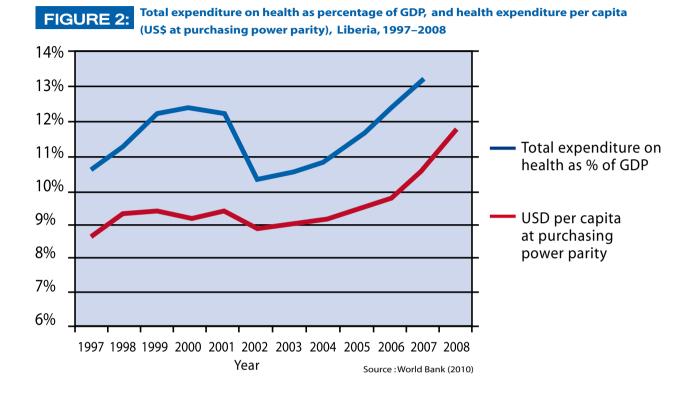
The conflict badly damaged Liberia's health system, partially or entirely destroying about 95 percent of the 325 health facilities that existed before the conflict began. A 2006 survey found that only 10 percent of communities had a health facility in their neighbourhood (Government of Liberia, 2008a). Even where services existed, citizens either found access blocked by financial barriers or encountered poor-quality health care.

Human resources are at a premium. There were only 122 physicians (51 of them Liberian), or one for every 70,000 citizens (Government of Liberia, 2008a) and 297 nurse midwives (excluding trained traditional midwives) working in the health sector in 2007. Fewer than half (46%) of births are attended by a skilled provider (Liberia Institute of Statistics and Geo-Information Services et al., 2007). Clearly, one of the central challenges facing Liberia is to deliver good-quality health and social welfare services to its people – a task that mainly falls to the Ministry of Health & Social Welfare (MOH&SW).

Liberia's total expenditure on health amounted to almost 12 percent of GDP in 2008, up from about 9 percent a decade earlier, largely thanks to grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria (World Bank, 2010). But in a small, battered economy, the healthspending shortfalls are still considerable. The MOH&SW four-year National Health Plan budget (2007–2010) is US\$283 million – or approximately US\$18 per capita per year.

As Figure 2 illustrates, health spending has increased significantly since the early 2000s, when Liberia's first Global Fund grants were approved.

1-THE BACKGROUND



The big three: AIDS, tuberculosis and malaria in Liberia

A large part of Liberia's disease burden involves three diseases: AIDS, TB and malaria.

Although it is preventable and curable, malaria is a severe public health problem. In the early 2000s, when Liberia approached the Global Fund, requesting support for its disease-control efforts, two thirds (66%) of children younger than five years were infected with malaria parasites. Malaria was the leading cause of hospital attendance by out-patients (40–45%) and the leading cause of in-patient deaths. By the mid-2000s, close to half (42%) of in-patient deaths were due to malaria (National Malaria Control Programme, 2006). About 60 percent of children under the age of five experience at least one episode of malarial attack each year, and about 20 percent of those cases are considered severe (UNDP, 2007a). It has been estimated that about 60,000 children under five years of age die each year in Liberia, and that close to 11,000 of those deaths are attributable to malaria (USAID, 2009).

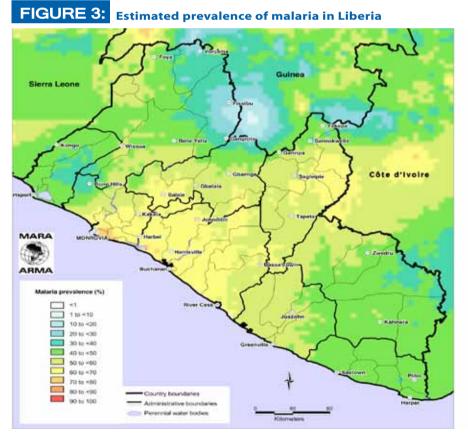
Tuberculosis (TB) is another serious health threat. The civil wars made it very difficult to track trends in the TB epidemic, but the available data pointed to a TB incidence rate of about 310 per 100,000 people in the early 2000s (UNDP, 2007b). By the mid-2000s, TB was

killing an estimated 2,300 Liberians each year – a mortality rate of 62 per 100,000 people; the Millennium Development Goal 2015 target was a rate of 29 per 100,000 (WHO, 2008).

Liberia's civil wars also made it impossible to track the extent and growth of its AIDS epidemic, but the spread of HIV in neighbouring countries suggested that a serious epidemic was emerging in the 1990s. The first AIDS case in Liberia had been detected in 1986.³

The government responded quickly, setting up a National AIDS and STIs Control Programme (NACP). But a lack of funds and the malaise in the public health system caused that initiative to languish. When the first civil war erupted, data collection became impossible in many parts of the country, making it even more difficult to gauge the spread of HIV. The sense of urgency and political commitment to fight the disease dissolved.

The interlude between the two civil wars was too brief for the damage to public health facilities and surveillance systems to be repaired. It was not until 2006, when an antenatal clinic survey found an HIV prevalence of 5.7 percent among pregnant women (Ministry of Health and Social Welfare Liberia, 2007), that a clearer picture of the epidemic emerged, indicating that Liberia had one of the most serious AIDS epidemics in West Africa.



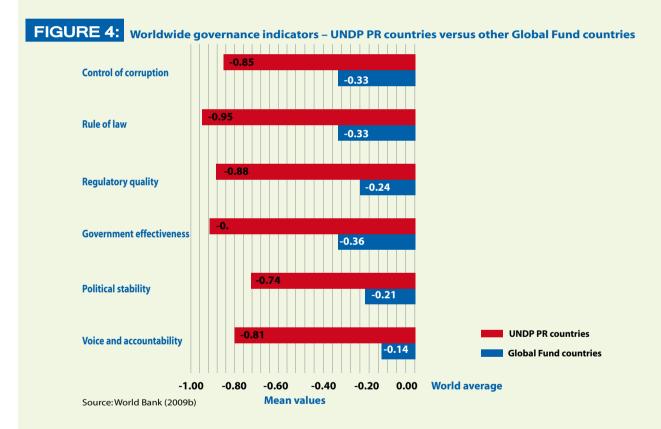
Source: Mapping Malaria Risk in Africa (http://www.mara.org.za/pdfmaps/LibPrevModel.PDF) Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

³ At the Curran Lutheran Hospital, Zorzor, Lofa County

The Global Fund and UNDP

Established in 2002, the Global Fund is an innovative funding mechanism designed to fill countries' funding gaps in their AIDS, TB and malaria responses. By mid-2010, it had allocated more than US\$19.3 billion to 144 countries through nine competitive funding rounds.

As part of its broader partnership with the United Nations, the Global Fund has partnered with UNDP in several countries to ensure that grants are implemented and services delivered, and to develop institutional capacities in countries experiencing special difficulties. As Figure 4 illustrates, the circumstances in these countries are unusually challanging.



This partnership spans three overlapping zones of work.

• Support for implementing and managing grants efficiently. In exceptional circumstances, UNDP serves as interim Principal Recipient in countries facing capacity constraints, complex emergencies, poor governance environments, or donor sanctions. It does so only upon request by the Global Fund and/or the Country Coordinating Mechanism (CCM) and when it has been

determined that no national entity is ready to take on the PR role at the time. The support covers the purchasing of equipment and medicines, logistical and other implementation support, systems design and strengthening, training and more. UNDP currently serves as interim PR in 25 countries and helps administer about 10 percent of Global Fund grants. Examples include Chad, Democratic Republic of Congo, Haiti, Iran, Iraq, Liberia, North and South Sudan, Tajikistan, Togo and Zimbabwe.

• The partnership prioritizes capacity development. A key yardstick for success is the handover of the PR role to national partners. UNDP's support for capacity development has seen the management of one or more Global Fund grants handed over in 12 countries, and UNDP is on track for handing over the PR role for at least one grant in 11 other countries. Importantly, this work extends beyond countries where UNDP serves as interim PR; in another 6 countries, UNDP has helped to strengthen the capacity of prospective and current national PRs to manage and implement Global Fund-financed programmes.

• UNDP also engages the Global Fund on key policy and programmatic issues, in line with its mandate as Cosponsor of UNAIDS. The issues include promoting the incorporation of good governance principles, and human rights and gender initiatives into Global Fund grants, ensuring that financing reaches key affected populations (such as men who have sex with men, transgender people, sex workers, people who use drugs, and local networks of people living with HIV), and helping align grants with national development plans and poverty reduction strategies. UNDP also supports country-level governance of Global Fund programmes in ways that respect national ownership and enhance their effectiveness.

UNDP brings to these partnerships a potent combination of operational experience and capacities to deliver large-scale programmes in challenging environments, as well as global expertise in the areas of good governance, public administration reform, and institutional capacity development.

The partnership is making important contributions to the achievement of the Millennium Development Goals (MDGs) – particularly MDG 6.⁴ It promotes longer-term sustainability by strengthening countries' capacities to manage their large-scale public health and development programmes efficiently, reliably and effectively.

UNDP's partnerships with the Global Fund and national entities operate in complex, and often extremely difficult, circumstances – as Liberia's case attests.

Despite the challenges, the outcomes are excellent. Four in five grants (83%) managed by UNDP are rated A1, A2 or B1 by the Global Fund.

⁴ This requires that countries "halt and begin to reverse the spread of HIV/AIDS", "achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need

it", and "halt and begin to reverse the incidence of malaria and other major diseases". See http://www.undp.org/mdg/goal6.shtml

2-DOING REPAIRS AND CATCHING UP: LATE 2004–2007



The emphasis during the first phase was on implementing and managing the grants efficiently. This entailed a great deal of hands-on support, while gradually rebuilding the capacities of national partners to take over the Principal Recipient role as soon as circumstances permitted.

When the Global Fund grants started, and UNDP took on the interim PR role, large parts of Liberia's public health system had been destroyed or damaged. Key personnel had been forced to flee; management skills were scarce and systems (including financial controls) were in disarray or absent. Infrastructure had been ruined and equipment destroyed. Transport and communication networks were being repaired, but access to health sites remained difficult. Poor security, impassable roads and patchy telecommunications meant that collecting and sharing data, delivering supplies and performing oversight activities were very difficult, especially during the rainy season.

A huge recuperation effort was under way, as Liberia's government sought to get basic services functioning, and the MOH&SW tried to rebuild the health system. Aided by donor assistance, the Ministry had set about reopening health facilities, hiring and training health workers, restarting immunization campaigns, and updating its strategic plans. The Global Fund became part of this bustle of recovery.

If the Global Fund grants were going to be implemented as planned, a degree of improvisation and gap-filling had to occur. The Liberia Coordinating Mechanism (LCM) asked UNDP to become interim Principal Recipient for the grants. The priority was to implement the grants in an accountable and sustainable manner, which implied bridging the main gaps, beginning to strengthen capacities and rebuilding systems.

Building Liberia's AIDS response

Very few solid data on Liberia's HIV epidemic were available at the time. But it was assumed that the upheaval caused by the civil war was accelerating the spread of HIV in Liberia.

In 2000, the Government of Liberia and a newly established Expanded Theme Group on HIV/ AIDS⁵ launched a three-year multisectoral National Strategic Plan of Action. Resources were scarce, however, and the national response relied heavily on funding from UNAIDS, WHO, and the Government of Taiwan. That changed when the Global Fund approved Liberia's first HIV/AIDS grant proposal in February 2003. Civil war, however, delayed the grant's implementation until December 2004.

Extrapolating from scarce data, UNAIDS estimated at the time that national adult HIV prevalence lay somewhere in a range of 2.7 percent to 12.4 percent (UNAIDS, 2004). The grant's central target was to reduce HIV transmission by 25 percent. The first step was to achieve blood safety at 33 selected health facilities – a fundamental starting point for HIV control programmes. Then came the more ambitious tasks of strengthening prevention, treatment and care activities, and gathering accurate data on the epidemic.

⁵ These theme groups serve as the main instrument for UN coordination and leadership on AIDS at the country level.

2- DOING REPAIRS AND CATCHING UP: LATE 2004–2007

Prevention and control strategies that had proved effective elsewhere provided the basic template. They included large-scale information, education and communication campaigns aimed at promoting safer sex, improving access to good-quality STI case management, condom promotion and provision, and caring for people living with AIDS, as well as increasing their involvement in the response. The local implementers included the NACP, the Liberian Orphans of AIDS Foundation, the Light Association, and the Catholic Church HIV/AIDS programme.

UNDP made a special effort to support the Light Association, Liberia's national network of people living with AIDS, with technical assistance and by helping it mobilize donor assistance.

TABLE 1: Achievements during the Round 2 HIV/AIDS grant (Dec. 2004 – Feb. 2007)

	KEY INDICATORS	Targets	Results
1	Percentage of transfused blood units screened for HIV	100%	100%
2	Number of physicians, laboratory technicians, paramedics trained in blood transfusion and universal precautions	85	104
3	Number of blood banks set up and running in country.	3	1
4	Number of people with advanced HIV infection receiving ART	3,350	916
5	Number of patients treated for STIs based on syndromic management	5,160	30,986
6	Number of HIV-infected pregnant women receiving complete course of ARV prophylaxis to reduce the risk of mother-to-child transmission of HIV	900	207
7	Number of AIDS-affected families receiving capacity-building support (income-generation training and home-based care training)	180	371
8	Number of AIDS orphans enrolled in school, and with access to health care	116	500
9	Number of condoms distributed	2,293,500	5,428,855
10	Number of cultural and traditional leaders sensitized for information dissemination	130	735
11	Percentage of counties that conducted tam-tam social mobilization	100%	67%

Target achieved

Target surpassed

Target not achieved

Source: UNDP (2007c)

Implementation of the first major HIV programme ran up against several hindrances, such as damaged infrastructure, frail systems, and limited technical capacity in the health sector. Nevertheless, 6 of the 11 programme indicators were emphatically surpassed and one was achieved. The grant received a B2 rating from the Global Fund, signalling inadequate performance, but with demonstrated potential for improvement.

A key factor was the emphasis placed on strengthening health professionals' capacities to upgrade and provide services. Training and workshops were the mainstay activities. Hundreds of doctors, laboratory technicians, paramedics and health workers in all 15 counties were trained in safe blood transfusion procedures and universal precautions, CD4 laboratory procedures, the syndromic management of STIs, and provision of ART.

Other basic building blocks of an HIV programme were put in place. More than 5 million condoms (twice the targeted number) were distributed, STI treatment expanded (some 31,000 people received syndromic treatment), and community outreach services reached 19,000 Liberians.

Some targets were missed. Contracting and procurement delays meant that only one of three new blood banks was set up, while tardy reporting by communitybased organizations slowed community mobilization. Provision of ART also lagged, largely because the infrastructure was not in place. The main entry points to ART – HIV counselling and testing, and programmes for the prevention of mother-to-child transmission – had not featured in the grant. Nonetheless, about 1,000 people were receiving ART by mid-2007.

Liberia's HIV response gaining was 2006, momentum. In the MOH&SW conducted the country's first HIV survey at antenatal clinics. The findings underlined the need to speed up an effective HIV response: nationally, 5.7 percent of pregnant women were found to be HIV-positive (Ministry of Health and Social Welfare, 2007).

But HIV knowledge was still poor, misconceptions about HIV transmission were prevalent, stigma was rampant, and risky behaviour was widespread, as Liberia's 2007 Demographic and Health Survey (DHS) showed (Liberia Institute of Statistics and Geo-Information Services et al., 2007).⁶ A lot of work still lay ahead.

Putting the TB programme back on track

Like the rest of the public health system, Liberia's TB control programme was in disarray when the country applied for its TB grant from the Global Fund.

A National Leprosy and TB Control Programme (NLTCP) had been set up in 1976. The government and international partners supported the programme until the 1980s, when financial assistance declined in the face of political instability and financial impropriety.

⁶For example, only 14 percent of young women and 22 percent of young men who had more than one partner in the 12 months before the survey said they used a condom the last time they had sex (Institute of Statistics and Geo-Information Services et al., 2007).

Liberia appealed to the German Leprosy Relief Association in 1988 to add TB to its leprosy control activities, but the reorganizing was scuttled when the first civil war started in 1989.

During the conflict, TB control activities all but came to a halt, as buildings and equipment were looted and wrecked, and staff fled. The TB Hospital (created in 1976) in Congo Town was also damaged, but staff kept it operating throughout the conflict. Despite the mayhem, the TB programme was revived in 1994, although it was impaired by the fighting and political instability. Liberia adopted the WHO Directly Observed Therapy Short-course (DOTS) strategy in 1999. By 2001, DOTS was operating in 7 of the country's 15 counties.

It was against that backdrop that the Global Fund in 2003 approved a grant to support Liberia's TB control efforts. The grant set the ambitious target of reducing TB morbidity and mortality by 25 percent by 2006.

The DOTS strategy was to be expanded into all 15 counties, stronger collaboration with the NACP was to be achieved, and stronger community participation in programme monitoring and evaluation was to be sought. The NLTCP was designated as the main implementing partner.

Serious constraints had to be overcome, but the project brought relief to large numbers of TB patients and their families, and massively boosted Liberia's TB control efforts – as Table 2 illustrates. In only two years, the number of TB treatment facilities increased from 24 to 202 in the 15 counties, and the TB Hospital was refurbished. Patients' access to treatment and the quality of diagnosis and treatment improved significantly, not least because of training provided to almost 400 health workers and 120 laboratory technicians.

The 75 percent target for registering smearpositive TB cases under DOTS was exceeded. The defaulter rate fell from about 17 percent in 2004 to 9.2 percent in 2006, and the treatment success rate increased from 71 percent to 81 percent in the same period – largely due to the creation of treatment centres across the country.

On the negative side, delays in setting up voluntary counselling and testing centres compromised the detection and treatment of HIV/TB co-infection. The envisaged number of health facilities implementing DOTS also fell short, due to delays in renovating some of them.

All in all, 7 of the 10 targets were achieved or surpassed, resulting in a B1 rating ("adequate performance"), which was a commendable achievement, given the circumstances.

Target surpassed

	KEY INDICATORS	Targets	Results
1	Percentage of smear-positive TB cases registered under DOTS	75%	83%
2	Treatment success rate	85%	85%
3	Number of facilities implementing DOTS (cumulative)	270	202
4	Number of health workers trained (cumulative)	237	380
5	Number of laboratory technicians trained (cumulative)	120	120
6	Defaulter rate	10%	4%
7	Number of patients visiting TB facilities who received counselling on co-infection (cumulative)	1200	688
8	Number of health facilities with information, education and communication services	200	732
9	Number of TB patients with HIV co-infection who were identified and treated (cumulative)	260	71
10	Number of networks/patients involved in TB control (cumulative)	10	16

Target not achieved

Target achieved

Source: UNDP (2007b)

Making up lost ground against malaria

Even before the civil wars, malaria was one of Liberia's biggest health burdens. The fighting and displacement badly disrupted control efforts. As the second civil war abated, it was clear that the initiative had to be regained against this disease.

In the early 2000s, the MOH&SW introduced a new Malaria Policy and Strategic Plan for Malaria Control and Prevention, and the Global Fund approved a grant (worth about US\$12 million) designed to support that policy. The project began in the last weeks of 2004.

The grant's focus was on better and more extensive prevention, improved case management, and increased access to effective drugs and treatment at health facilities. There was particular emphasis on improving malaria prevention and treatment in the most vulnerable populations (pregnant women and children younger than five years).

TABLE 3: Achievements during the Round 3 malaria grant (Dec. 2004 – Feb. 2007)

	KEY INDICATORS	Targets	Results
1	Number of health workers trained in malaria case management	10,633	8,510
2	Number of health facilities with no reported stock-outs of anti-malaria drugs	250	191
3	Number of malaria cases treated with Artemisinin-based derivative	1,500,000	1,021,621
4	Number of pregnant women receiving correct intermittent preventive therapy for malaria	180,000	155,096
5	Number of health facilities implementing intermittent preventive therapy with sulfacoxine-pyrimethamine	250	398
6	Number of insecticide-treated nets distributed	324,000	491,225

Target achieved

Target surpassed

Target not achieved

Source: UNDP (2007a)

A range of organizations acted as implementing Sub-Recipients (SRs), including the National Malaria Control Programme, the Christian Health Association of Liberia, the Anti-AIDS/STDs/Malaria Awareness Movement, MENTOR, the Community Health Care Education & Prevention Programme, the Young Men's Christian Association, Concern Worldwide, and Medical Emergency Relief Cooperation.

A great deal of effort was made to distribute insecticide-treated nets to households, providing pregnant women with intermittent preventive therapy, and introducing more effective drugs and treatment. This was buttressed with extensive training to boost both technical and functional capacities to provide the planned services, and build referral and other systems. Training was provided to more than 10,000 health workers active in clinical case management and prevention of malaria.

By early 2007, almost 400 health facilities were implementing intermittent preventive therapy, and more than 150,000 pregnant women had received the therapy. Almost 500,000 insecticide-treated nets had been distributed. Systems also improved, with three quarters of health facilities reporting no stock-outs of anti-malaria drugs.

Infrastructure constraints and logistical problems (especially poor transport) had held back progress in some areas, however. The introduction of new, more effective therapies proved more difficult than anticipated. Concerns about possible drug resistance meant that only trained health staff initially provided the new Artemisinin-based Combination Therapies (ACT).

This limited ACT provision, but in the longer term probably increased their efficacy. Nonetheless, 1 million cases of malaria were treated with an Artemisinin-based derivative.

Overall, the gains were strong enough to earn the grant a B1 rating ("adequate performance") – a laudable achievement.

During this first phase, implementing the grants was the overriding priority. UNDP therefore placed much emphasis on delivering and managing key services, and helping to strengthen the knowledge and skills of health professionals and communities.

Crucially, UNDP also provided important support in the form of salaries/incentives and infrastructure (vehicles, computers, Internet connectivity) – all vital interventions in a post-conflict setting. Some effort also went into mending systems and implementing more appropriate and efficient procedures, but these did not yet sit at the heart of the PR activities.

This mix of activities changed with the second trio of Global Fund grants, which began in mid-2007.

3-BUILDING SYSTEMS AND EXPANDING SERVICES: 2007–2009



In the second phase of UNDP's PR role in Liberia, a more evenly balanced blend of training, technical assistance, and support to systems development and institutional strengthening evolved. Grant implementation continued to improve.

Much more emphasis was now placed on strengthening the functional capacities of the MOH&SW to the point where it could manage future Global Fund grants without assistance. When the LCM again designated UNDP as PR of the three Round 6 (HIV/AIDS) and 7 (TB and malaria) grants, it underlined the need to boost the Ministry's capacity to take over the PR role after the first phase of the grants. Four priority areas for improvement were highlighted:

- strengthening health systems and programme management for effective implementation of disease-control and other public health interventions;
- enhancing financial management;
- improving the Ministry's ability to plan, manage, monitor and evaluate its activities;
- shoring up its ability to manage procurement operations.

Strengthening institutional arrangements became a priority. This included organizational design, the development of standard operating practices and procedures, performance appraisals, and M&E systems.

As in the first (2004–2007) phase, there were also investments in salaries and incentives, as well as logistics and infrastructure – all of it aimed primarily at achieving efficient implementation, but also helping to bolster longer-term capacity. Knowledge-building continued to feature – via mentoring/coaching, on-the-job and various other types of training, workshops, and study tours. The success of these efforts would become evident in the transfer of the Round 6 HIV/AIDS grant to the MOH&SW in January 2010, and in the pending transfer of the malaria and TB grants.

The second HIV/AIDS grant (2007)

In early 2007, the Global Fund approved a second HIV/AIDS grant (worth US\$16.8 million) to Liberia. This Round 6 grant was to run from May 2007 to December 2009. The main goals were to reduce HIV incidence, stabilize HIV prevalence, and expand access to treatment, care and support.

Liberia's government, meanwhile, was revamping some of its core AIDS structures. The National AIDS Commission (NAC) was revived in June 2007 (with UNDP providing seed money). A few months earlier, the NACP had been restructured and expanded. The former would guide Liberia's AIDS programmes, while the latter would oversee programme implementation.

Implementation of the Global Fund grant was in the hands of a half-dozen SRs: the Ministry of Health/NACP, the Liberian Orphans of AIDS Foundation, the Light Association, the National Drug Service, the Catholic Church, the Christian Health Association of Liberia, and Samaritan's Purse. In addition, UNDP also worked with various others partners (including UNICEF and the Clinton Foundation) to improve the quality of laboratory work, services for prevention of mother-to-child transmission (PMTCT) of HIV, and supply chain management.

Training remained a feature, with almost 3,000 health-care providers upgrading their skills in HIV counselling and testing, STI diagnosis and management, PMTCT, ART, and laboratory techniques. Some 2,400 community service providers were trained in the delivery of prevention messages. Information, education and communication activities were stepped up, especially among young people, and more than 10 million condoms were distributed.

But most of the focus was now on overcoming the impediments to expanding HIV-related services. This meant human resource development, strengthening health systems and building the structural capacity of the HIV programme. More health professionals were recruited and trained, and technical assistance was expanded.

Important gains were made in rebuilding or introducing infrastructure.

- A National Blood Safety Programme was established. Operational guidelines were drafted and laboratory technicians were trained. The three existing facility-based blood banks were strengthened, and two new regional blood banks were added.
- New sites for HIV testing and counselling, PMTCT and ART provision were created. About 155 000 people took HIV tests during the 30-month grant period. STI centres were set up in border areas to service key populations at higher risk, and 2300 health workers were trained in STI management. By end-2009, almost 340 000 people had had STIs diagnosed and treated – a four-fold increase since 2007 (UNDP, 2009b).
- The reach of the PMTCT programme was extended considerably, with 55 PMTCT sites (the target had been 41) operating in 11 counties with Global Fund support. The number of pregnant women taking HIV tests and receiving the results rose to 57,000, and almost 1,000 of them received a complete course of ARV prophylaxis (roughly 40% coverage).
- Ten new antenatal clinic sentinel surveillance sites were set up, making it possible to track

the HIV epidemic's pattern and trends more accurately. A second ANC survey, in 2007, revealed an HIV prevalence of 5.4 percent among pregnant women nationally, with infection levels in the south-eastern and eastern regions of the country higher, at 7.4 percent (Ministry of Health and Social Welfare, 2008). The following year, the results of a third, expanded national ANC survey showed an HIV prevalence of 4 percent among pregnant women (Ministry of Health and Social Welfare, 2009).⁷

- National guidelines for adult and paediatric care and treatment of HIV were introduced, the number of sites providing ARV therapy increased from 5 to 22 (exceeding the target), and the number of people receiving ARVs rose by 300 percent, to 2,970. A reliable supply of ARV drugs and medicines for treating opportunistic infections was achieved.
- HIV services were introduced at TB clinics, and data collection tools were revised to capture HIV-related indicators. A TB/HIV co-infection survey was conducted, county TB/HIV focal persons were appointed and providers were trained to support the scale-up of TB/HIV-related activities. There were more than 2,500 diagnoses of TB in persons living with HIV. A range of other activities continued to support people living with HIV, orphans and other persons affected by the epidemic.

When implementation of this grant began in 2007, Liberia had no M&E system for its AIDS response. So, one of the first steps was to draft an M&E plan covering the 2007–2009 period, after which strategic and operational plans and guidelines were developed. The M&E plan became the foundation for a single, national M&E framework (see 'Keeping track' box, below). Meanwhile, UNDP and the NACP together coordinated

⁷ The Demographic and Health Survey (DHS) conducted in 2007, meanwhile, put national adult HIV prevalence at 1.5 percent (Liberia Institute of Statistics and Geo-

Information Services et al., 2007). In 2008, UNAIDS estimated adult national HIV prevalence at 1.7 percent (UNAIDS, 2008).

the monitoring and evaluation of HIV-related activities (Government of Liberia, 2008b).

The overall achievements were superb, earning the project an A1 rating on the Global Fund grants rating scale: "exceeding expectations".

An independent evaluation of Phase 1 of the Round 6 HIV/AIDS grant showed that accountability had been assured for all funds disbursed to SRs. Disbursement procedures had been clear, and regular financial reports had been submitted. In a country with an unenviable reputation for financial mismanagement and corruption, this was no mean achievement.

The improvements in capacity were widespread and solid enough for the MOH&SW to take over the PR role from UNDP in January 2010.

			_	
		KEY INDICATORS	Targets	Results
me	1	HIV seroprevalence among sexually-active population aged 15–49 years	5.7%*	4%**
Outcome	2	Percentage of young people reporting the use of condoms the last time they had sex with a non-regular sexual partner		14.2%§
	3	Number of condoms distributed free	9,406,272	10,302,682
	4	Number of people who receive HIV testing and counselling, including provision of test results	152,000	155,899
	5	Number of service delivery points providing counselling and testing	107	114
	6	Number of patients receiving diagnosis and treatment for STIs according to national guidelines	300,697	337,993
ors	7	Number of blood banks set up and running according to national guidelines for blood safety and universal precautions (including post-exposure prophylaxis (PEP))	6	3
cato	8	Number of pregnant women completing the counselling and testing process	55,079	57,178
Input, activity and output indicators	9	Number and percentage of HIV-infected pregnant women receiving a complete course of ARV prophylaxis to reduce mother-to-child transmission of HIV	904	923
utp	10	Number of health facilities providing PMTCT services	41	55
op	11	Number of people with advanced HIV infection receiving ART	2,929	2,970
y ar	12	Number of facilities providing combination antiretroviral therapy	21	22
tivit	13	Number of AIDS orphans provided with external care and support	2,600	2,755
t, ac	14	Number of sites providing prophylaxis and treatment of opportunistic infections	21	22
Input	15	Number of cases of newly-diagnosed TB identified in people living with HIV attending HIV treatment and care services	2,109	2,556
	16	Number of sentinel sites performing according to national standards	20	20
	17	Number of health services providers trained. Includes people trained in STI management, VCT and ART (new and refresher courses).	2,283	2,301
	18	Number of community service providers trained. Includes peer educators, drama groups, community leaders, volunteers.	2,437	2,403
	19	Percentage of health facilities reporting no stock-outs lasting longer than one month in the previous three months for first-line ARV drugs	90%	100%

Target achieved

Target surpassed

Target not achieved

* Ministry of Health and Social Welfare (Liberia) (2007)

Source: MOH&SW/UNDP ongoing quarterly progress reports

** Ministry of Health and Social Welfare (Liberia) (2009)

§ Liberia Institute of Statistics and Geo-Information Services et al. (2007); baseline data not available.

The second malaria grant (2007)

To build on the gains made during the first (2004–2007) malaria grant, the Global Fund also approved a Round 7 malaria grant (worth US\$12.6 million in Phase One), which commenced in mid-2008. UNDP was again designated as PR, with handover of the role to the MOH&SW scheduled for the end of Phase One.

A key challenge now was to distribute even more insecticide-treated nets and increase their use in households. That called for improvements in logistics, as well as more powerful information, education and communication activities. The managerial capacity of the National Malaria Control Programme also had to be strengthened. All this was to occur within the framework of the MOH&SW's National Strategic Plan (2008–2013), which aimed to reduce malaria morbidity and mortality by half by 2010 (the target of WHO's Roll Back Malaria campaign) (National Malaria Control Programme et al., 2009).

Various implementing partners (SRs) were involved. They included the Ministry of Health/ National Malaria Control Programme, the National Drug Service, the Stark Foundation, the Community Health-Care Education & Prevention Programme, Restore Our Children's Health Inc., the Help Our People International, the Anti AIDS/STDs/Malaria Awareness Movement Inc., and Christian Health Incorporated of Liberia.

Strong inroads were made.

• Another 194,000 nets were distributed (in addition to the 490,000 handed out during the 2004–2007 grant). Household ownership of mosquito bednets had risen by 300 percent

since 2005, and half (49%) the households in Liberia had at least one mosquito net (almost all of them insecticide-treated) – up from 18 percent in 2005 and 30 percent in 2007 (National Malaria Control Programme et al., 2009; Liberia Institute of Statistics and Geo-Information Services et al., 2007).

- People were not yet using the nets widely or consistently enough.⁸ But prevalence of malaria infection in children younger than five years was considerably lower than the target (37% versus 62%), and the management of uncomplicated malaria cases in children expanded.
- · Previously, limited access to health-care facilities had hindered the provision of intermittent preventive treatment to pregnant women. By 2007, three guarters (76%) of women who had been pregnant in the previous two years had taken some kind of anti-malarial medicine, but a small minority (12%) of them had taken the drug (sulfadoxinepyrimethamine/fansidar) recommended for intermittent preventive treatment of malaria during pregnancy (Liberia Institute of Statistics and Geo-Information Services et al., 2007). Two years later, 45 percent of pregnant women were getting the required two treatments as prescribed by national guidelines (National Malaria Control Programme et al., 2009).
- People who contracted malaria were much more likely to receive treatment than before. Almost 1.9 million cases of malaria were treated during this grant – an accomplishment made possible by improvements in infrastructure, diagnostic equipment and technical expertise, recording, referral and monitoring systems, procurement chains, and more.

⁸ About half the children and two thirds of pregnant women in households with bednets said they had slept under them the night prior to being surveyed

⁽National Malaria Control Programme et al., 2009).

Quarterly stock level and stock-out assessments were incorporated into the National Malaria Control Programme's supervision of health facilities, and stock levels were found to be consistently sufficient⁹. Each of the activity and output indicators was surpassed, reflecting the quality of management of the project. The Round 7 malaria grant earned a B1 ("adequate performance") rating from the Global Fund.

TABLE 5: Achievements during the Round 7 malaria grant

		KEY INDICATORS	Targets	Results
	1	Anaemia prevalence in children under the age of 5	85%	63%
	2	Prevalence of malaria parasite infection in children under the age of 5	62%	37%
	3	Percentage of confirmed malaria cases	40%	51%
ome	4	Percentage of children under the age of 5 (and other target groups) with uncomplicated malaria correctly managed at health facilities.	10%	17%
Outcome	5	Percentage of children under the age of 5 sleeping under an insecticide-treated net the previous night	55%	27%
	6	Percentage of pregnant women (and other target groups) sleeping under an insecticide-treated net the previous night	45%	33%
	7	Percentage of pregnant women (attending antenatal clinics) on intermittent preventive treatment in accordance with national policy	65%	45%
rs	8	Number of people receiving anti-malaria treatment as per national policy	1,787,025	1,878,951
indicato	9	Number of pregnant women receiving correct intermittent preventive treatment at health facilities	74,460	100,788
output	10	Number of insecticide-treated nets distributed to pregnant women and children under the age of 5	458,743	537,380
/ and	11	Percentage of households with at least one insecticide-treated net	65%	77%
Input, activity and output indicators	12	Percentage of health facilities with no reported stock-outs of nationally recommended anti-malaria drugs (ACT) lasting longer than one week during the previous three months	65%	89%
٩	13	Number of health workers trained in malaria case management	2,505	2,976

Target achieved

Target surpassed

Target not achieved

Source: MOH&SW/UNDP ongoing quarterly progress report Q7, 1 January - 31 March 2010

⁹ Isolated cases of stock-outs were reported but were due to communication hitches between health facilities and county drug depots, or mistakes in the drug request forms – not a shortage of drug supplies.

The second tuberculosis grant (2007)

Liberia received its second TB grant (worth US\$6.4 million in Phase One) from the Global Fund in June 2007. UNDP was again designated PR, but it was to hand over that role to the MOH&SW after the first phase of grant implementation.

Implementing partners included the NLTCP, the National Drug Service, the World Food Programme¹⁰(WFP) and WHO.¹¹

The goal was to reduce the TB burden by 2015, in line with the MDG and Stop TB Partnership targets. There were two immediate priorities: extending the DOTS strategy across all 15 counties, and improving treatment services and efficacy. This meant both increasing infrastructure and improving the skills required to detect, treat and follow up on TB cases, thereby reinforcing the foundations of Liberia's TB-control programme.

All but three of the 15 indicator targets were reached.

- Some 2,000 health-care workers were trained in TB case management and laboratory techniques. DOTS centres were set up in neglected regions, such as the south-east of the country, and DOTS coverage reached 100 percent (up from 68 percent in 2001) (WHO, 2010). Technical capacity for laboratory detection of TB was strengthened, and laboratories were renovated and re-equipped.
- Targets set for TB prevalence and mortality rates, as well as case detection, were all

surpassed. The numbers of patients using TB treatment rose impressively, and treatment success rates reached 80 percent, while the default rate dropped. Re-treatment also improved, with 84 percent of sputum smearpositive patients successfully treated in 2006, compared with 64 percent in 2001 (WHO, 2010).

• Special efforts were made to integrate TB and HIV services more thoroughly, through health provider training and by doubling the number of health facilities providing TB/HIV integrated services. As a result, more co-infected patients could access the treatments they needed. In addition, a more accurate picture of the levels of TB/HIV coinfection has emerged: a 2009 survey (done in partnership with WHO) showed that HIV prevalence among TB patients was 22 percent.

The biggest challenge turned out to be the provision of community-based DOTS.

A limited number of community health volunteers were trained in TB case management, and most of those who got training did not receive sufficient support or supervision from their county health teams.

The TB project earned an A2 rating from the Global Fund ("meeting performance expectations").

¹⁰ UNDP entered into an agreement with WFP-Liberia to provide food to patients infected with TB or with both TB and HIV.

support the TB Prevalence Survey and the TB/HIV co-infection sero-surveillance study.

 $^{^{\}scriptscriptstyle 11}$ UNDP entered into an agreement with WHO to provide technical assistance to

TABLE 6: Achievements during the Round 7 tuberculosis grant

		KEY INDICATORS	Targets	Results
Outcome	1	TB prevalence rate	507/100,000	326/100,000
	2	TB mortality rate	60/100,000	28/100,000
Outc	3	Case detection	68% (3499/5145)	74%
	4	Treatment success rate	82% (2637/3216)	80%
	5	Number of districts with at least one microscopy centre	90	90
	6	Number of laboratories offering TB culture and drug sensitivity testing	1	0
	7	Number and percentage of TB microscopy centres performing to national quality control guidelines, as a proportion of all centres	43% (54/125)	52% (79/145)
ors	8	Number of DOTS centres created and operational	302	302
indicato	9	Number of TB patients treated under DOTS (excluding community-based DOTS)	4,500	4,802
utpu	10	Number of TB patients treated under community-based DOTS	234	138
Input, activity and output indicators	11	Number of people living with HIV after screening for TB symptoms (as a proportion of all people living with HIV receiving HIV treatment and care services)	10% (72/720)	25% (1,101/4,363)
Input, ac	12	Number of registered TB patients who are tested for HIV, after giving consent (as a proportion of the total number of registered TB cases)	12% (678/5566)	34% (2461/7208)
	13	Number of public health facilities providing integrated HIV/TB services	104	130
	14	Number of service providers trained	1.884	1.892
	15	Percentage of TB treatment facilities reporting no drug stock-outs lasting more than two weeks during the previous quarter	90%	99%

Target achieved Target surpassed

Target not achieved

Source: MOH&SW/UNDP ongoing quarterly progress report Q7, 1 January – 31 March 2010

Going through the gears

Across all three grants, these were remarkable achievements. In a country crippled by war, entire disease-control programmes had been rebuilt, and public health services were being restored in all corners of the country.

Underlying the achievements was the challenge of repairing and bolstering the institutions, systems and skills that Liberia needed in order

to sustain and improve those programmes and its public health system generally. The grant programmes had been designed with the understanding that UNDP's PR role was temporary, and would be performed in ways that enabled the Liberian Government to take over the role as quickly as possible. UNDP'S approach was to take the existing base of capacities as its starting point and support national efforts to extend and sustain them. As a condition for the Round 6 HIV/AIDS grant, there was an assessment of the MOH&SW's ability to perform the PR role. The assessment revealed that further interventions were needed to prepare the MOH&SW to take over that role. The Ministry and UNDP jointly developed a capacity-development plan, with agreed performance targets and a detailed budget for the two-year transition period. The assessment report¹² pinpointed several capacity constraints, two of which were overarching: inadequate human resources¹³ and decimated infrastructure (particularly outside Monrovia).

The capacity-building plan

The assessment report became the basis for the Capacity-Building Plan (CBP), which UNDP and the MOH&SW jointly developed, and which the LCM then endorsed and the Global Fund approved. The CBP budget was US\$1.2 million, with the funds sourced from all three grant programmes. This was a fraction of the grant budgets for that period – 3.2 percent, in fact. Of the total amount of US\$51.4 million allocated for the six grants between 2004 and 2009, a mere US\$1.6 million (or 3.1%) had been earmarked for capacity development.¹⁴

The accomplishments, however, were splendidly disproportionate to the funds invested in

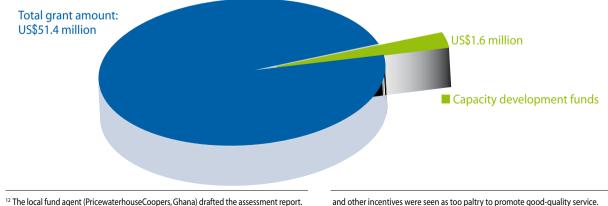
capacity development, presenting a vivid indication of what could be achieved if those investments were to increase.

The CBP focused on empowering the MOH&SW to efficiently manage the following four functional areas:

- programme management and coordination at central and peripheral levels;
- financial management and systems, including improved record-keeping and accounting, monitoring of bank operations, sound financial analysis and accounts reconciliation, and efficient internal control framework;
- procurement and supply chain management, including compliance with international standards, establishment of a procurement unit within the National Drug Service (NDS), development of a national procurement manual and storage system;
- monitoring and evaluation (M&E), including the formulation of a national M&E policy and strategy, and the development of national M&E indicators.

Although the CBP zeroed in on the Ministry's capacity to manage Global Fund grants, its scope was actually institution-wide and it held the promise of enhancing the Ministry's capacity to manage its overall operations.

Grant funds allocated to capacity development, 2004-2009



¹² The local fund agent (PricewaterhouseCoopers, Ghana) drafted the assessment report.
¹³ Many skilled Liberians had fled the country during the civil wars; those who stayed behind found their educations stunted as learning institutions shut down, and salaries

and other incentives were seen as too paltry to promote good-quality service. ¹⁴ That amount includes the US\$1.2 million destined for the CBP, and about US\$0.2 million worth of in-kind support from UNDP.

33

Improved programme management called for the development of management competencies and administrative procedures to implement Global Fund programmes, and the ability to do so in line with milestones agreed to with the Global Fund. Also needed were mechanisms for coordinating the involvement of major stakeholders in implementation.

A Programme Coordinating Unit (PCU)¹⁵ was set up and staffed with functional experts. The unit would oversee and coordinate implementation of the grants, focusing on the key functions of M&E, financial management, and procurement/ supply chain management.

The unit had a novel feature: the MOH&SW and UNDP decided to move it into the Ministry, decentralize it, and integrate its activities into the Ministry's existing functional units. So, instead of the unit being established as a separate, parallel structure, its staff members were placed in the respective MOH&SW units and were not restricted solely to Global Fund grant activities. There was some tension between the drive to achieve quick, efficient implementation, and the need for longer-term capacity development, but the overall impact on the organization was far-reaching and positive. Wide diffusion of knowledge and experience became possible.

The MOH&SW now operates with standard administrative procedures that allow for the transparent disbursement of funds and procurement in line with national policies. The PCU is able to produce and oversee regular monitoring and reporting in accordance with Global Fund requirements, and regularly meet with all partners. The CBP was meant to last a year, concluding with the handover of the PR role for the Round 6 HIV/AIDS grant to the MOH&SW. However, UNDP's Project Execution Unit (PEU) continued to provide some support for capacity development (such as on-the-job training and guidance).

Financial management

Efforts to rebuild the Ministry's financial management capacity had preceded the Global Fund grants. The United Kingdom's Department for International Development (DFID), for example, had sponsored the creation of the Office of Financial Management and provided it with long-term technical assistance. Financial management of the Global Fund grants would rely on that structure.

During the Round 6 and 7 grants, new financial management procedures were set up, and additional financial management tools and mechanisms were introduced. UNDP provided coaching and mentoring; it also facilitated the formal external training of new staff in the Office on Financial Management, as well as of national control programme finance staff. The Global Fund financed the recruitment and salaries of two additional finance staff. and funded the installation of hardware and software for a new computerized accounting system. Proper recording tools for financial transactions were developed, auditing procedures were put in place, and more efficient fund-transfer mechanisms were established. Major improvements have been made in the financial management systems of the MOH&SW.

Skills and competencies for day-to-day financial management and accounting procedures (including budget monitoring, financial reporting, sound financial analysis and accounts reconciliation) have been enhanced considerably.

Keeping track: monitoring and evaluation

When the Global Fund grants began, the MOH&SW lacked an M&E system. The policies, skills and tools for setting up and running such a system were all absent.

The starting point was to develop standardized M&E reporting forms – first for the HIV and, subsequently, for the TB and malaria programmes. On-the-job training and mentoring was provided at national and country levels. UNDP took the lead in these efforts, which benefited also from vital support from the Clinton Foundation.

When the first phase of grants ended, M&E functions were consolidated in the PEU. An M&E specialist and a procurement specialist were added to the unit, and were exclusively devoted to helping build M&E systems, capacities and procedures in relation to the three disease-control efforts.

The MOH&SW and its partners developed a national M&E policy and strategy (with agreedupon national-level indicators) and revised the Health Information System Strategy. Monitoring methodology and tools were developed as a basis for determining impact and outcome indicators. An integrated approach was taken, with M&E feeding into the nascent procurement system.

The next major step involved setting up an M&E unit inside the MOH&SW, and drawing in newly trained M&E staff from the various disease-control programmes. UNDP recruited and trained an M&E expert, who was based at the MOH&SW. UNDP provided the central M&E unit with on-thejob training and routine technical support, as well as vehicles, computer desktops and laptops, Internet connectivity and office equipment. The unit tracked programme implementation by coordinating data collection, analysis and dissemination of information, while a national M&E Technical Working Group was also established.

The efforts brought substantial rewards. By 2010, the Ministry's central M&E unit was able to provide oversight to almost all the sub-reporting entities. M&E indicators had been developed for almost all the pertinent projects and programmes, and both the national M&E strategic plan and budget were about 90 percent complete. Most of the data reporting systems were approaching completion; the exceptions were systems-tracking the distribution of commodities.

The unit is now able to conduct monitoring visits to almost all 15 counties, using standardized monitoring tools to track implementation of the National Health Plan (2007–2011). It also produces a quarterly County Monitoring report.

Procurement

A reliable procurement system was critical. Non-health procurement was devolved to the MOH&SW, while health procurement was to become the responsibility of the National Drug Service (NDS) (see box in next section). This required setting up new procurement units in the Ministry and the NDS – structures that would serve both the Global Fund grant projects and the overall public health system.

The Ministry's unit was created and procurement guidelines and tools were developed and, subsequently, validated by Liberia's Public Procurement & Concessions Commission. The latter addressed internal control functions and outlined measures for enhancing the integrity and transparency of procurement processes. UNDP hired and assigned an international procurement specialist to the unit for 18 months to help upgrade the procurement systems. The purchasing of vehicles and IT materiel boosted logistical capacities. Staff training was staged over several months.

Meanwhile, the NDS's unit also had to be readied to take on complex, large-scale procurement tasks. UNDP recruited a technical assistance team and assigned it to the NDS to help build the unit. Operating guidelines and procedures were introduced, staff was trained and equipment purchased.¹⁶

The various control programmes can now conduct quarterly stock level and stock-out assessments at health facilities. The reliability and consistency of stock levels at those facilities has improved markedly. By mid-2009, no health facilities were reporting significant stock-outs of HIV- or TB-related drugs, and only 1 in 10 reported stock problems that affected the malaria control programme. ¹⁷ Stock accuracy in the NDS was rated at 95 percent, as was the accuracy of distribution. There was 90–100 percent compliance with standard operating procedures, and distribution reached health facilities in all 15 counties.

These gains enabled the MOH&SW to assume the PR role for the Round 6 HIV/AIDS grant. That breakthrough is also serving as a platform for the pending handover of principal recipient role for the Round 7 Malaria and TB grants, which is scheduled for June 2011. In late 2010, Liberia signed Phase Two of Round 7 for TB and malaria, and awaited the review of its Round 10 proposals.

Meanwhile, UNDP continues to support the development of individual-level technical capacities through the grant programmes – mainly through training, incentives to retain qualified human resources, and infrastructure to support operations and logistics.

¹⁶ For more details, see the next chapter.

¹⁷ Data are from various quarterly reporting and disbursement reports. They reflect the percentage of health facilities that reported no stock-outs lasting more than one mon-

th in the previous three months for first-line ARV drugs, lasting more than one week for nationally recommended anti-malarial drugs (ACT) in the previous three months, and lasting more than two weeks during the previous three months for TB drugs.

4- CONSOLIDATING GAINS, GOING FORWARD



In the space of six years, Liberia's major disease-control programmes have emerged stronger and more effective. Many of the improvements are spilling into the public health system generally. A bedrock of institutional strengthening and of planning, management and control systems is being built. Ongoing and new rounds of Global Fund grants, supplemented with other donor support, will enable Liberia to maintain this momentum.

In challenging conditions, the grants have yielded impressive achievements:

- More than 8,600 new smear-positive TB cases were diagnosed and successfully treated, and TB/HIV services benefited 3,700 people.
- Some 685,000 insecticide-treated nets were distributed, and 2.9 million cases of malaria were treated.
- More than 15 million condoms have been distributed since early 2004, 370,000 cases of sexually transmitted infections have been treated, and 157,000 HIV counselling and testing sessions have been provided. By end-2009, almost 3,000 people were receiving ART, and 1,100 pregnant women were receiving ARV prophylaxis.
- Three antenatal clinic HIV surveys were carried out in 2006–2008, showing HIV prevalence among pregnant women to have declined from 5.7 percent to 3.9 percent.
- The Round 6 HIV/AIDS grant programme earned an outstanding A1 performance rating from the Global Fund ("exceeding performance expectations"), and the PR role was successfully transferred to the MOH&SW in January 2010.

• The technical and functional capacities of the three disease-control programmes, and of the MOH&SW overall, have been transformed beyond recognition. The Ministry is now PR of the HIV/AIDS grant, and is expected to assume the same role for the malaria and TB grants.

The MOH&SW has embarked on several initiatives that promote good performance and innovation throughout the health sector.

Some of the most dramatic gains have been around M&E. Six years ago, Liberia's public health sector had no M&E systems, capacity or indicators. An M&E unit is now based inside the MOH&SW and operates in accordance with an agreed M&E plan, with an approved annual work plan and indicators. The unit can now monitor key activities in almost all 15 counties.

A new National Health Sector M&E Plan has been developed, and it requires each unit within the MOH&SW to draft a costed M&E work plan. A new contracting policy demands that 10 percent of the budget be earmarked for M&E, that an M&E post be created in the contracting organization, and that reporting timeframes be consistent with those of the MOH&SW. Staff contracts now include performance targets against which quarterly reviews are held, with payment pegged to the achievement of those targets.

Another signal improvement has been the bolstering of the MOH&SW's financial management capacity. A computerized accounting system has been introduced, as have proper financial transaction recording tools and auditing procedures. This is an ongoing process, but financial management and accounting are already on much more solid footing than before. New procurement units were set up in the Ministry and the NDS, to serve both Global Fund grant projects and the public health system generally (see box). Regular, routine stock level and stock-out assessments are now done at health facilities, and stock-outs have dramatically declined.

Looking back – and ahead

In all this, a consistently positive factor has been the Liberian Government's strong political support for using Global Fund resources in demonstrably effective and efficient ways, for boosting the country's national diseasecontrol programmes, and for strengthening the health sector and the MOH&SW generally. This included significant support for the introduction of transparent and accountable systems of financial management and procurement.

On UNDP's side, there has been consistent commitment – and active support – at seniormanagement level for the Global Fund programme. The creation of a strong Project Execution Unit (PEU), with a highly qualified and stable team, made it possible to translate that commitment into practice. In the background, UNDP's reputation as a trusted and accountable partner created an atmosphere conducive to collaboration with national partners.

Building national systems

The National Drug Service (NDS) presents a trenchant example of institution strengthening. The NDS is critical to Liberia's ability to procure and distribute pharmaceuticals and other medical products in a timely and reliable manner. However, the NDS had no prior experience in Global Fund-related procurement and had not been involved in complex health procurement.

UNDP recruited a specialized technical assistance team and assigned it to the NDS for six months, helping it establish a procurement unit capable of performing large-scale procurement tasks. A procurement manual was developed, as were tools for achieving timely and cost-efficient procurement of pharmaceuticals in line with international procurement practices.

Strategies were drafted to ensure that the commodities were properly stored and efficiently distributed. Workshops were held to familiarize staff with integrated supply chain standard operating procedures, and were supplemented with hands-on training. Logistics and IT equipment were provided.

The NDS improved the quality of services immensely and, together with UNDP, does quarterly inventory monitoring at drug depots. Storage and distribution challenges were addressed and the NDS central warehouse was expanded (as was its cold chain capacity). A modern office system was set up and three new regional depots were due for completion by end-2010.

The NDS's Essential Drug Programme has seen significant improvement in its stock turnover. Stock outflows now exceed the USD 2 million mark (almost four times the rate managed in 2003-2005). The NDS and UNDP now conduct inventory monitoring at drug depots every three months, while the various disease control programme and the UNDP do so at health facilities.

UNDP collaborated closely with the MOH&SW (both the central ministry and the various national control programmes) in planning, designing, implementing and evaluating the grant programmes and capacity-development activities:

- Once a deadline was set for handover of the PR role, a capacity assessment was done, and a capacity-building plan was drafted to guide the capacity-development process. Later, outputs and results were evaluated, using the nascent M&E system. This made it possible to expand and fine-tune the capacity-development interventions.
- Work plans and budgets were developed jointly, as were the standard operating procedures and guidelines, and financial and monitoring reports.
- Processes were created to facilitate collaboration. They included quarterly health sector coordination committee meetings (led by the MOH&SW), as well as review meetings (bringing together the national control programmes, county health teams and implementing partners), and regular (usually monthly) meetings of the malaria steering

committee, the M&E technical working group, and the supply chain technical working group. ¹⁸ An annual health sector conference was also introduced.

Alongside this, UNDP drew on other UN agencies (such as UNICEF, WHO and WFP) to support delivery and technical capacity development. These partnerships were built around the respective core strengths of the organizations, and involved clearly defined roles and performance expectations. For example:

- Thanks to UNDP's global partnership with UNICEF's Supply Division in Copenhagen for the procurement of health products for Global Fund grants, top-quality life-saving medicines were delivered to Liberia in a timely, efficient, reliable, and cost-effective manner. UNDP also drew on UNFPA's expertise and support in procuring a large number of condoms.
- UNICEF supported and helped facilitate a key PMTCT study, while WHO provided vital technical guidance and assistance for diagnostic procedures, treatment protocols, the national reference laboratory, the TB culture laboratory and the new blood banks;

Avoiding parallel structures

Inspired choices were made, not least of which was the design of the Ministry's Programme Coordination Unit (PCU). The unit was set up in decentralized fashion, with key staff working in their national 'host' functional units (rather than separately in the PCU). Its key functions (M&E, financial management, and procurement/supply chain) were integrated into the corresponding units in the MOH&SW.

Instead of being an 'add-on', the unit was embedded in the Ministry. This avoided the duplication involved in creating a stand-alone unit with parallel responsibilities and capacities. Knowledge-sharing and capacity-strengthening spilt wide, rather than being trapped in a single, isolated unit.

¹⁸ These and other, informal coordination meetings yielded savings of over US\$1 million by detecting and avoiding overlapping purchases, for example. • Bilateral funders such as the Clinton Foundation, DFID and the United States AgencyforInternationalDevelopment(USAID) provided targeted support (notably technical assistance for M&E and the procurement and supply chain, and the HIV and malaria control efforts) and assisted the public health sector generally (via a fund basket arrangement).

The way in which human resources were managed also proved important:

- Long-term tenure for PEU staff forged cohesion and enabled staff members to retain the practical knowledge acquired during the unit's work. Job descriptions and reporting lines were clear.
- Compensation packages were strong enough to attract and retain highly qualified staff, including in the MOH&SW and national control programmes.¹⁹ This made it possible to safeguard the considerable investments that were made in recruitment, training and compensation.

The following important lessons can inform the ongoing attempts to rebuild health systems in Liberia and elsewhere:

- The PCU's design boosted knowledge and expertise, and shared it widely within the MOH&SW (see box). But there is a view that this also carried the risk of a trade-off with programme efficiency. There remained an underlying tension between quick, efficient implementation and longer-term capacity development. One way of resolving that tension would be to underpin an initiative of this sort with a separate, strong and ongoing capacity-development drive.
- · Liberia has reached the stage where the

capacity-development gains of the past few years now have to penetrate more deeply into systems and institutions. The capacity gains made at central levels need to be emulated at other levels – especially those of county health teams, many of which still struggle to manage their operations.

- The Capacity-Building Plan was vital, but it lasted one year, and subsequent investments in capacity development have been sparse (even though UNDP continues to provide some support). Maintaining the kind of momentum built in Liberia requires adequate funding that is earmarked for capacity development. In Liberia, that funding does not yet approach the scale of need. There is an opportunity and need for the Global Fund, UNDP and others to earmark and mobilize more funding for capacity development in Liberia.
- There is a general need for capacity development to be more explicitly woven into Global Fund grant-making and management processes. The Global Fund could mandate capacity assessments and capacity-development plans as part of its grant programmes. The capacity-development effort should have clear milestones and indicators, as well as dedicated staff and budget. It should be based on a comprehensive capacity assessment that clearly identifies priorities that pertain to implementation of the grants.
- Even as UNDP prepared to hand over the PR role for the TB and malaria grants, it remains well placed to assist the MOH&SW in devising a longer-term national capacity-development plan to further strengthen national systems and programme implementation capacity of the health sector.

¹⁹ The MOH&SW was able to negotiate with donors a five-year commitment to support competitive compensation packages for targeted staff, which gave it time to begin absorbing staff costs into the Ministry budget.

Beyond that, other forms of improvement and consolidation are required:

- Both the implementation and capacity gains are highly dependent on a single source of funding: the Global Fund. Supplementary and back-up funding strategies are needed – partly so that the MOH&SW can absorb the key new staff and units into its own budget.
- The public health system is starved of qualified personnel. There is a limit to what capacitydevelopment support can achieve if human resources are not grown systematically, and if health education continues to be neglected. Remedial efforts should span the health and education sectors, with guidance from the MOH&SW.
- Taking on new grants or expanding activities periodically involves adjusting staffing skills and numbers (which UNDP's PEU sometimes was a little late in achieving). Logistical hitches (such as contract lapses or prolonged recruitments) sometimes leave core positions empty for too long, overburdening other staff and creating bottlenecks. Getting the staffing right and maintaining team continuity is vital, but not easy. Keener anticipation and more responsive administrative systems could prevent the problem.
- Disease-control activities are not yet adequately supported by diagnostic or laboratory services, particularly outside the main urban areas. Even matters as elementary as the timely payment of salaries occasionally still pose problems and affect staff morale, while transport problems hinder distribution and other logistical systems.
- There is top-level support for accountability and transparency, but it is not yet reflected consistently in everyday work. Accountability mechanisms need to be strengthened all the way down the management chain. The

Ministry's performance measurement strategy can help achieve that, as could stronger internal control frameworks. UNDP should also continue to support the strengthening of the Ministry's M&E strategy and systems.

- The impressive accomplishments on the procurement front need to be extended and consolidated. One starting point would be to clearly define the roles of the various procurement actors. Currently, a dedicated unit in the MOH&SW deals with nonhealth procurement, the NDS is responsible for procuring and distributing medical commodities and equipment, while the Global Fund's Voluntary Pooled Procurement section also plays a role.
- The LCM is a vital part of Global Fund grant implementation. There is a great opportunity to translate some of the past six years' experiences into its organizational design. The time seems ripe for a functional review and for support that is tailored to upgrade its capacity to advocate, develop strategies, and monitor projects.

Six years of partnership between UNDP, Liberia and the Global Fund have brought Systems for improvements. remarkable managing and monitorina the main disease-control efforts are now functioning. Standard operating procedures have been introduced, and appropriate diagnostic and treatment protocols are being applied. Intensive formal training and mentoring, as well as the recruitment of key staff, have boosted human resource capacities. Many of the systems, processes and skills needed to efficiently and effectively run Liberia's disease-control programmes are in place.

The challenge now is to consolidate and deepen these gains, which requires greater investment in capacity development.

4 - CONSOLIDATING GAINS, GOING FORWARD

REFERENCES

This document is based on interviews with 23 officials from the Global Fund, Light Association, MOH&SW, NAC, NACP, NDS, NLTCP, NMCP, PriceWaterhouseCoopers, UNAIDS and UNDP, as well as on a large body of internal reports and evaluations produced by the MOH&SW, the NLTCP and UNDP.

Other materials consulted include:

Downs, C.

2008 Strengthening national capacity to become principal recipient for the Global Fund to Fight AIDS, TB and Malaria: Issues and Recommendations Based on Current UNDP Practice as GFATM PR in the Africa Region. Research report. UNDP, New York.

Global Fund to Fight AIDS, Tuberculosis and Malaria

2010 The Global Fund 2010: Innovation and Impact – Progress Report. Global Fund, Geneva. Available at: <u>http://www.theglobalfund.</u> org/documents/replenishment/2010/Progress_Report_ Summary_2010_en.pdf_

Government of Liberia

2008a Liberia: Poverty Reduction Strategy Paper. Government of Liberia, Monrovia. Available at: <u>http://planipolis.iiep.unesco.</u> <u>org/upload/Liberia/Liberia_PRSP.pdf</u>

Government of Liberia

- 2008b Liberia UNGASS Country Progress Report, 2008. Presented at the United Nations High-level Meeting on HIV and AIDS, New York, 10–11 June 2008.
- Liberia Institute of Statistics and Geo-Information Services et al.
- 2007 Liberia Demographic and Health Survey 2007. Liberia Institute of Statistics and Geo-Information Services (LISGIS) and ICF Macro, Monrovia.

Ministry of Health and Social Welfare (Liberia)

2007 HIV Sentinel Survey among Pregnant Women Attending Antenatal Care, 2006. Ministry of Health and Social Welfare (Liberia) (MOH&SW), WHO, UNDP/Global Fund, Monrovia.

Ministry of Health and Social Welfare (Liberia)

2008 HIV Sentinel Survey among Pregnant Women Attending Antenatal Care, 2007. MOH&SW, WHO, UNDP/Global Fund, Monrovia.

Ministry of Health and Social Welfare (Liberia)

2009 HIV Sentinel Survey among Pregnant Women Attending Antenatal Care, 2008. MOH&SW, WHO, UNDP/Global Fund, Monrovia.

National Malaria Control Programme

2006 Liberia Malaria Indicator Survey 2005. National Malaria Control Programme (NMCP), Monrovia.

National Malaria Control Programme et al.

2009 Liberia Malaria Indicator Survey 2009. National Malaria Control Programme (NMCP), Liberia Institute of Statistics and Geo-Information Services (LISGIS) and ICF Macro, Monrovia and Calverton.

UN

2009 Millennium Development Goals Indicators Database, United Nations, New York. Available at http://mdgs.un.org

UNAIDS

2004 Report on the global AIDS epidemic. Joint United Nations Programme on HIV/AIDS (UNAIDS), Geneva.

UNAIDS

2008 Report on the global AIDS epidemic. UNAIDS, Geneva.

UNDP

2006 Liberia National Human Development Report 2006: Mobilizing capacity for reconstruction and development. United Nations Development Programme (UNDP), Monrovia.

UNDP

2007a LBR-304-G03-M: Malaria Control and Prevention through Partnership, Final Report. UNDP, Monrovia.

UNDP

2007b LBR-202-G02-T: Strengthening of Tuberculosis Control and the Managing of People with TB/HIV Co-infection, Final Report. UNDP, Monrovia.

UNDP

2007c LBR/202-g01-H: Strengthening of HIV and AIDS Prevention, Care and Treatment. Final Report. UNDP, Monrovia.

UNDP

2009a Report of the evaluation of HIV phase 1 of Global Fund round 6 grant: Strengthening and scaling up HIV prevention and control in Liberia, May 2007 to December 2009. UNDP, Monrovia.

UNDP

2009b Human Development Report 2009, UNDP, New York.

USAID

2009 President's Malaria Initiative: Malaria operational plan FY 2010. Draft. United States Agency for International Development (USAID), Monrovia. Available at: <u>http://www.fightingmalaria.</u> <u>gov/countries/mops/fy10/liberia_mop-fy10.pdf</u>

WHO

2008 TB Country Profile: Liberia. World Health Organization (WHO), Geneva.

WHO

2010 Global Tuberculosis Database. World Health Organization (WHO), Geneva. Available at <u>http://www.who.int/tb/country/</u> <u>global tb database/en/index2.html</u>

World Bank

2009a World Development Indicators 2009. World Bank, Washington.

World Bank

2009b Worldwide Governance Indicators, World Bank database, World Bank, Washington, DC (www.govindicators.org)

World Bank

2010 National accounts data, World Bank database. World Bank, Washington.





