



NICK FOX / ALAMY STOCK PHOTO

AFRICA, WASH, AND THE MILLENNIUM DEVELOPMENT GOALS

A Local Systems Case Study of How Ethiopia Achieved MDG Target 7c

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development of the United States Government.

Project Title:	Water for Africa through Leadership and Institutional Support (WALIS)	
Sponsoring USAID Office:	Bureau for Africa's Office of Sustainable Development	
Contract Number:	AID-OAA-I-14-00049	
Task Order Number:	AID-OAA-TO-15-00034	
Period of Performance:	September 25, 2015–September 24, 2020	
Contracting Officer:	Jamie Raile	
Contracting Officer's Representative:	Amanda Robertson	
Ceiling Price:	\$12,383,704	
Obligated Amount:	\$7,900,000	
Contractor:	DAI Global, LLC	
Date of Publication:	November 2017	
Authors:	Christopher McGahey	
Editors:	Benjamin Mann and Richard Rapier	
Images:	Young Ethiopian Girl Going for Water in Addis Ababa, Ethiopia Nick Fox / Alamy Stock Photo	

Submitted	by:

Richard Rapier, Chief of Party

WALIS

DAI Global, LLC

7600 Wisconsin Ave, Suite 200

Bethesda, MD, 20814, USA

richard_rapier@walis.org

Telephone: 301-771-7600

www.dai.com

CONTENTS

FOREWORD	I
ACKNOWLEDGMENTS	2
ABBREVIATIONS AND ACRONYMS	3
SUMMARY	5
CHAPTER I: BACKGROUND	8
VALUE OF APPRECIATIVE INQUIRY IN ETHIOPIA CASE STUDY METHODOLOGY	
RESEARCH QUESTIONS	
CASE STUDY ORGANIZATION	
CHAPTER 2: MDG ERA IN ETHIOPIA	12
ROAD TO 1990 AND A FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	12
THREE PHASES OF ADVANCEMENT TOWARD MDG TARGET 7C	13
PHASE I: 1990-2005-OBTAINING SKILLS AND SETTING THE STAGE FOR GROWTH	13
PHASE 2: 2006–2009—EXPANDING DECENTRALIZATION, PLANNING UNIVERSAL ACCESS, AND ESCALATING MAJOR DONOR INVESTMENTS	16
PHASE 3: 2010-2015-HARMONIZATION OF VISION, ORGANIZATION, AND OPERATIONS	
CHAPTER 3: LESSONS FROM THE MDGS	25
LESSON I: USE NATIONAL GOALS, STANDARDIZE INDICATORS, DOCUMENT, THEN DO	25
LESSON 2: LOCALIZE DEVELOPMENT GOALS AND CLIMB THE WASH LADDER INCREMENTALLY	26
LESSON 3: SYNCHRONIZE TECHNOLOGIES AND DIGITIZE DATA	
LESSON 4: BALANCE LEADERSHIP AND OWNERSHIP	
LESSON 5: CONSOLIDATE FUNDING	27
LESSON 6: ALLOW ACCESS FLEXIBILITY	27
LESSON 7: SYSTEMS HAVE POLITICS	
LESSON 8: "ONE SYSTEM" NEEDS INCENTIVES	28
CHAPTER 4: TRANSITION TO THE SDGS	29
GTP II AND SDGS 2016–2030	
ANTICIPATE MORE CHALLENGES	32
CHAPTER 5: CONCLUSIONS	35
ETHIOPIAN ALIGNMENT WITH THE 5RS	35
PAST AND FUTURE ROLES OF "NEW OPPORTUNITIES" AS LOCAL SYSTEM TACTICS	37
BIBLIOGRAPHY	38

ANNEX A: GTP II POLICY MATRIX EXCERPT FOR SDG ANNUAL TARGETS 6.1 AND 6.2

TABLES AND FIGURES

Tables

I: Summarized Access Numbers and Quantifying Ethiopia's MDG Achievements	
2: Phase I—Key Challenges	I 5
3: Phase 2—Key Challenges	18
4: CWA Fund Distribution	21
5: Phase 3—Key Challenges	22
6: Pivoting Early Phase Lessons Toward the SDGs	29

Figures

I: Ethiopia Map	9
2: Ethiopia Drinking Water Trends 1990–2015	.
3: Ethiopia Drinking Water Trends 1990–2005	.14
4: Ethiopia Drinking Water Trends 2005–2010	.17
5: Ethiopia Drinking Water Trends 2010–2015	.19

FOREWORD

The world was successful in meeting Millennium Development Goal (MDG) Target 7c for water by 2015, reducing the population without access to improved water systems by half. This success was largely driven by a few high-achieving countries and was not universally achieved by all countries, particularly by poverty-stricken and fragile states. In reflecting on the progress of the MDGs, a key observation made by many agencies is that success in water and sanitation service delivery and hygiene behavior change requires the development of robust local systems. They can operate at all levels from small, rural communities to national programs.

"Local system refers to those interconnected sets of actors—governments, civil society, the private sector, universities, individual citizens, and others—that jointly produce a particular development outcome."



Local water, sanitation, and hygiene (WASH) country systems can include a wide range of components that allow it to function and thrive, including policy development; planning; financing, expenditure, and cost-recovery; implementation; service maintenance and management; and monitoring. Having effective country system components can drive a virtuous cycle of achievement. Understanding and adopting effective systems can assist countries in the transition to the era of the Sustainable Development Goals (SDGs) and the specific WASH targets in Goal 6. The USAID Water for Africa through Leadership and Institutional Support (WALIS) project undertook a review of successful countries in Africa to uncover the combination of pathways, processes, policies, and people that improved WASH access and services sufficient to meet its MDG targets at a national scale. The review analyzed four countries in Sub-Saharan Africa—Ethiopia, Rwanda, Senegal, and South Africa. These countries developed country system components, which helped make far-sighted policies, develop excellent plans, adopt effective financing strategies, and build innovative monitoring systems that resulted in evidence-based decisions and helped WASH leaders to lead. The review used the "Appreciative Inquiry" methodology. Appreciative Inquiry is a method that:

- Sets out to discover the elements and factors in an organization or system that enabled it to achieve success in the past.
- Builds on those elements and factors to help the organization or system create a positive future.

The authors of each case study evaluated the outstanding country systems and key driving factors that led to the national government's ability to reach their MDG Target 7c. Each case study breaks down the country's WASH sector into individual system components, based on the USAID Local Systems Framework and the 5Rs (relationships, resources, roles, rules, and results), to capture how each component contributed to the system's success as a whole. The Local Systems Framework will also allow for cross-country comparison and determine if there is one or many critical paths to streamline WASH service improvement.

¹ USAID. (2014). Local systems: A framework for supporting sustained development.

ACKNOWLEDGMENTS

We would like to thank the following people who provided insights and value to the report:

Ababu Tadesse of the Ministry of Finance and Economic Cooperation (MOFEC), Government of Ethiopia; Mesfin Mulugeta, Nuredin Mohamed, and Tamene Hailu of the Ministry of Water, Irrigation, and Energy (MOWIE), Government of Ethiopia; Haile Yessu of the National WASH Coordination Office (NWCO); Dagnew Tadesse and Wondayehu Wube of the Ministry of Health (MOH), Government of Ethiopia; Teferi Menkir of the African Development Bank (AfDB); Gulilat Birhane and Oliver Johns of World Bank; Ali Regah and Gezahegn Lemecha of the United Nations International Children's Emergency Fund (UNICEF); Arto Suminen of the Community-Led Accelerated Water, Sanitation, and Hygiene (COWASH) Project; Eyob Defere Debrework and John Butterworth of IRC WASH; Getachew Abdi Zerefu of the One WASH National Program (OWNP) of Ethiopia; Kebede Ayele of iDE; Eric Viala and Petros Birhane of the USAID/Ethiopia Lowland Water, Sanitation, and Hygiene Activity; and, Desta Dimtse who's considerable contributions were key to completing the field work and report.

ABBREVIATIONS AND ACRONYMS

_	
AfDB	African Development Bank
AMCOW	African Ministers' Council on Water
CDF	Community Development Fund
CMP	community-managed project
COWASH	Community-Led Accelerated Water, Sanitation, and Hygiene
CSA	Central Statistics Agency
CSO	civil society organization
CWA	Consolidated WASH Account
DFID	U.K. Department for International Development
DHS	demographic health survey
EMIS	Education Management Information System
GPS	global positioning system
GTP	Growth and Transformation Plan
HMIS	Health Management Information System
IRC WASH	International Water and Sanitation Centre
JMP	Joint Monitoring Programme
JTR	Joint Technical Review
km	kilometer
KPI	key performance indicator
M&E	monitoring and evaluation
MDG	Millennium Development Goal
MIS	Management Information System
MOE	Ministry of Education
MOFEC	Ministry of Finance and Economic Cooperation (formerly Ministry of Finance and Economic Development)
MOFED	Ministry of Finance and Economic Development
MOH	Ministry of Health
MOU	memorandum of understanding
MOWIE	Ministry of Water, Irrigation, and Energy
MSF	Multi-Stakeholder Forum
NGO	nongovernmental organization

NPC	National Planning Commission
NWCO	National WASH Coordination Office
NWI	National WASH Inventory
OWNP	One WASH National Program
POM	Program Operations Manual
PRSDS	Poverty Reduction and Sustainable Development Strategy
PRSP	Poverty Reduction Strategy Program
SDG	Sustainable Development Goal
UAP	Universal Access Plan
UNDP	United Nations Development Programme
UNICEF	United Nations International Children's Emergency Fund
WALIS	Water for Africa through Leadership and Institutional Support
WASH	water, sanitation, and hygiene
WHO	World Health Organization
WIF	WASH Implementation Framework
WMP	woreda-managed project
WSP	Water and Sanitation Program
WSSP	Water Supply and Sanitation Project
WWT	woreda WASH team

SUMMARY

Ethiopia met the MDG target for drinking water access with a unique and high degree of success. Its development approach was informed (and still is today) by successful transformations in the "Asian Tigers" of Malaysia, Vietnam, Singapore, South Korea, Thailand, and Taiwan between the 1960s and 1980s. The magnitude of the country's success in providing improved drinking water to nearly half of its population in 25 years despite its diversity, size, and challenges cannot be overstated.

This case study documents the progress of the Ethiopian WASH sector from 1990 to 2015, and analyzes the impact of local systems created in Ethiopia to respond to water and sanitation challenges. It identifies four periods in the development of the sector:

- Pre-1990: The road to 1990 and a Federal Democratic Republic of Ethiopia.
- 1990–2005: Obtaining skills and setting the stage for growth.
- 2006–2009: Decentralization, universal access, and major donor investments.
- 2010–2015: Harmonization of vision, organization, and operations.

Following four years of transitional government in the early 1990s, today's Ethiopian Government was proclaimed after national elections in 1995, following two decades of profound political, economic, and social change, frequently accompanied by conflict and hardship. During this transitional phase of the early 1990s and up to 2005, Ethiopia focused its WASH sector improvements by acquiring the basic skills and expertise to build capacity in the sector. In parallel, Ethiopia worked with core donors under several programs to steadily improve access to basic water supplies while creating a WASH sector that was defined by discipline and the capability of managing major investments.

The 2005–2006 launch of the Universal Access Plan (UAP) (conceptually linked to its 2005 Poverty Reduction and Sustainable Development Strategy [PRSDS] and 2006 WASH Memorandum of Understanding [MOU]) paved the way for significant scale-up in sector investments while decentralization efforts were underway. As investments grew, Ethiopia's first Multi-Stakeholder Forum (MSF) was held in 2006, which was a key mechanism to facilitate regular and substantive coordination between the government and donors in the sector. Yet, to "bend the curve" toward achieving the UAP's targets much more would be needed.

With the advent of Ethiopia's Growth and Transformation Plan (GTP) in 2010, self-supply, focused nongovernmental organization (NGO) contributions, bilateral actions, and major consolidation of funding for infrastructure were further accelerated. To optimize these high levels of sector investment, cross-governmental operational harmonization was needed. This led to development of the 2011 WASH Implementation Framework (WIF), the One WASH National Program (OWNP) in 2013, and the Program Operations Manual (POM) for the Consolidated WASH Account (CWA) in 2014. Finally, the National WASH Inventory (NWI) was initiated, which collected the data to satisfy the Ethiopian Central Statistics Agency (CSA) and World Health Organization (WHO)/United Nations International Children's Emergency Fund (UNICEF) Joint Monitoring Programme (JMP) needs to certify Ethiopia's attainment of MDG Target 7c.

A confluence of deliberately planned elements and local action allowed Ethiopia to overcome key challenges to scale up water access at a national scale. To develop this report, lessons were drawn from

research and interviews. The insights and willingness to examine the 25 years of the MDG era were organized into the following eight lessons:

- Lesson I: Use national goals, standardize indicators, document, and then do.
- Lesson 2: Localize development goals and climb the WASH ladder incrementally.
- Lesson 3: Synchronize technologies and digitize data.
- Lesson 4: Balance leadership and ownership.
- Lesson 5: Consolidate funding.
- Lesson 6: Allow access flexibility.
- Lesson 7: Systems have politics.
- Lesson 8: "One System" needs incentives.

Viewed through the lens of USAID's Local Systems Framework and the authors' qualitative assessment of the MDG era in Ethiopia, a more nuanced perspective emerges, which will be key to Ethiopia's progress on the SDGs.

- The Government of Ethiopia has consistently provided the bulk of funding to the CWA. These resources drove output delivery and, when operated in a disciplined and transparent approach, drew in pooled sectoral funding from donors.
- The Government of Ethiopia and its development partners involved all actors, defining the role of each and clearly outlining accountability to deliver. The local system of actors was openly and actively engaged, with the expectation that they accommodate individual objectives and processes.
- The Government of Ethiopia neither hides nor denies that its state-directed approach to economic growth to move more than 100 million people toward middle-income status is via an "authoritarian developmentalism" model. The government maintained its focus, engaged its population in planning, and had high expectations of its citizenry and held them accountable. The change was rapid and dynamic and inevitably created winners and losers, leading to political struggles that are playing out in the country today. However, the approach is believed to have led to Ethiopia's achievement of MDG Target 7c.
- An authoritarian approach promulgated the "rules"—policies, strategies, action plans, guidelines, and investment plans—that governed Ethiopia's WASH sector development. This approach was largely accepted by civil society and bought into by development partners, leading in part to the country meeting MDG Target 7c.
- Although conventional quantitative results have been and will remain at the core of measuring
 outputs for Ethiopia's WASH sector development, the functionality of local systems has taken on a
 special significance in measuring the overall strength of results. All actors that worked in Ethiopia's
 WASH sector during the MDG era were made keenly aware of the importance of the ongoing
 functionality of local systems.

The Government of Ethiopia is already highly focused on making progress toward meeting the SDGs. In its second year of a five-year planning period under the Growth and Transformation Plan II (GTP II), it has made its focus in the water sector more than infrastructure. The country is localizing the SDGs with

emphasis on aspects of service delivery (rather than solely access to infrastructure) to drive quality and continuity of WASH services to all. This is a marked step up in emphasis on the importance of WASH to the country's economic development, given that the first GTP was largely focused on trade and devoted only a single paragraph to WASH. Now, under the GTP II, and through the institutional leadership and operationalization of its objectives (e.g., OWNP, WIF, POM), Ethiopia's systems are more aligned with the methods that will be effective in achieving SDG 6 - "ensure availability and sustainable management of water and sanitation for all."

CHAPTER I: BACKGROUND

INTRODUCTION

The world was successful in meeting MDG Target 7c for water by 2015, reducing the population without access to improved water systems by half. This success was largely driven by a few high-achieving countries and was not universally achieved by all countries, particularly by poverty-stricken and fragile states. There were significant exceptions, and their stories—to inform and instruct others—form the core of this case study series.

In reflecting on the progress of the MDGs, a key observation made by many agencies is that success in establishing access to WASH behavior change requires the development of robust local systems. As defined in the USAID Local Systems Framework, "Local system refers to those interconnected sets of actors—governments, civil society, the private sector, universities, individual citizens, and others—that jointly produce a particular development outcome." They can operate at all levels from small, rural communities to national programs.

A local WASH country system includes a wide range of components that allow it to function and thrive, including policy development, planning, financing, expenditure and cost-recovery, implementation, service maintenance and management, and monitoring. Having and activating effective country system components can drive a virtuous cycle of achievement. Understanding and adopting effective systems can assist less-successful countries in the transition to the era of the SDGs and the specific WASH targets in Goal 6.

The USAID WALIS project conducted a review of countries in Africa that were successful in the MDG era for WASH to uncover the combination of pathways, processes, policies, and people that resulted in success. The review provides insights on how lessons from the MDG era are influencing country approaches toward the SDGs and improving WASH service delivery at a national scale.

VALUE OF APPRECIATIVE INQUIRY IN ETHIOPIA

Utilizing the Appreciative Inquiry approach, the WALIS team examined four countries in Sub-Saharan Africa that have developed excellent country system components, which have helped countries make and operationalize far-sighted policies, develop excellent plans, adopt effective financing strategies, and build innovative monitoring systems that resulted in evidence-based decisions and helped WASH leaders to lead. Through in-country interviews and extensive document review, the team identified and described the components of the systems that enabled Ethiopia to deliver rural water supply access to an estimated 51.6 million people between 1991—when the country was a devastated, failed state—and 2015—when it entered its second five-year phase toward its goal of lower middle-income status.

An enormous volume of literature has been written on the WASH sector in Ethiopia, but knowledge and insights remain unpublished in the minds of some remarkable individuals. Through Appreciative Inquiry, the team took a different approach to this well-documented sector. The authors not only reviewed the breadth of available literature, but also spent time with those individuals who led the national effort and have been stewards of the Ethiopian WASH sector. By doing this, the team aims to educate a wide and varied audience on the actions, decisions, and mistakes that were made in Ethiopia.

FIGURE I: ETHIOPIA MAP



This report is intended to give full credit to those who generated the Ethiopian success. An Appreciative Inquiry approach enabled the authors to coax the story of challenges met and incremental successes achieved from those who made it happen. Interviewees uniformly acknowledged that completing this achievement was a messy and complex process that has not delivered everything that people and organizations may have wanted. But, as a government-led process maintaining consistent leadership, priorities, initiative, and focus, its overall achievement is stunning and a success story from which others can learn.

CASE STUDY METHODOLOGY

Appreciative Inquiry is a research method that:

- Sets out to discover the elements and factors in an organization or system that enabled it to achieve success in the past.
- Builds on those elements and factors to help other organizations or systems create a positive future.

Appreciative Inquiry was used to evaluate outstanding country systems and key driving factors that led to the national governments' ability to reach MDG Target 7c. Appreciative Inquiry is an approach that allows investigators to move beyond the simple and all-too-common identification of challenges to success or achievement. A much more vital effort, Appreciative Inquiry does not stop at describing the challenges, which is simple to do and not particularly beneficial. Instead, Appreciative Inquiry captures how challenges were met, how messy and complex conditions were addressed, and how lessons learned from success and failure were adapted into new efforts and management approaches.

RESEARCH QUESTIONS

Any story of national achievement, and the system of actors that generated the achievement, is multifaceted and potentially complicated if a wide reaching, multisectoral, holistic description is attempted. Yes, all things are connected, but at the operational core of a holistic view are the pathways, processes, policies, and people who advanced each component of the whole. For the effort described in this case study, the authors focused on two primary research questions and four supplemental questions to clearly understand core achievements.

PRIMARY RESEARCH QUESTIONS

- 1. What are the country systems and/or innovations that were most effective in pushing the country toward success during the MDG era?
- 2. What are the self-identified key changes or shifts within the local country system that must be made to achieve SDGs 6.1 and 6.2?

SUPPLEMENTAL RESEARCH QUESTIONS

- I. How did the progress to achieve MDG Target 7c change over time?
- 2. Was there a tipping point or watershed moment during the process?
- 3. What role did technology systems or technological innovation play in the success of the local system?
- 4. What contributing factors or processes can be replicated by other countries to support progress toward SDG 6 targets?

CASE STUDY ORGANIZATION

For Ethiopia, the MDG era covered 25 years during which the Government of Ethiopia worked closely with a handful of key external donors. Their work was supported by a wide variety of less-important actors to develop, discipline, and operationalize a local country system that provided 51.6 million people with access to improved drinking water supplies. This case study will review the events that led to this significant achievement.

This case study is organized into five chapters and is focused on Ethiopia's achievement of its MDG target for water access. It does not include information related to sanitation except insofar as it concerned or was related to its achievement of its MDG target for water access. Chapter 1 presents the research methodology used to complete the case study and how the rest of the case study is organized. Chapter 2 describes the sequence of incremental events and interrelated components (i.e., "the system") that made achievement of the target possible. The chapter is further divided into the phases that capture the most salient events that ultimately led to Ethiopia achieving the MDG for access to water. At the end of each phase, a table captures key challenges and the sector's response to the challenges. Chapter 3 presents the lessons that key actors learned between 1990 and 2015. Chapter 4 contains a description of how the Government of Ethiopia is translating these lessons toward achieving SDGs 6.1 and 6.2. Chapter 5 presents the conclusions drawn from this case study in the language of USAID's Local Systems Framework.



FIGURE 2: ETHIOPIA DRINKING WATER TRENDS 1990–20152

TABLE I: SUMMARIZED ACCESS NUMBERS AND QUANTIFYING ETHIOPIA'S MDG ACHIEVEMENTS³

Beginning and End of the Ethiopian MDG Era	1990	2015
Total population	~50,000,000	~102,000,000
Rural population	~43,800,000	~81,000,000
Total improved water access	13%	57%
Rural improved water access	3%	49%
Number of people with improved water access	6,500,000	58,100,000
Number of rural people with improved water access	I,300,000	39,700,000

² WHO/UNICEF JMP. (2015). Progress on sanitation and drinking water: 2015 update and MDG assessment. (Note: This report was created using the 2015 JMP Country Files, and does not reflect the updates released July 12, 2017.)

³ Ibid.

CHAPTER 2: MDG ERA IN ETHIOPIA

Ethiopia achieved a unique and high degree of success by surpassing the MDG target for access to water. But, success in the Ethiopian WASH sector can only be understood when compared with the size, suffering, and complexity of the country. Ethiopia's population is more than 100 million people—roughly one-third the population of the United States. In 1990, 17 years of war had left political and economic systems in catastrophic disarray. In addition, the country's population is highly diverse, containing more than 80 ethnic groups. The magnitude of the country's success in providing drinking water to nearly half of its national population in 25 years despite this diversity, its size, and war cannot be overstated.

The steps taken to accomplish this achievement need to be viewed within the overall goals of national development pursued by the Government of Ethiopia. Its development approach is informed by successful transformations in the "Asian Tigers" of Malaysia, Vietnam, Singapore, South Korea, Thailand, and Taiwan between the 1960s and 1980s. These countries made the transition from being poor agrarian societies to respected participants in the global economic system and producers of high technology and high value-added goods while expanding institutional capacity to meet governmental responsibilities to their citizens. The Government of Ethiopia's vision is to join the league of lower middle-income countries globally by 2035 by emulating the "Asian Tiger" model with its incumbent risks and gains.

To fully appreciate the importance of the vision, comprehend the magnitude of the sectoral achievement during the MDG era, and understand the actors in the local system of WASH service delivery, it is important to fully appreciate the national condition in 1990.

ROAD TO 1990 AND A FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

In early 1974, Ethiopia entered a 17-year period of profound political, economic, and social change, frequently accompanied by violence. Confrontation between traditional and modern forces erupted and changed all aspects and levels of the Ethiopian state. The initiation of a military-led revolution in 1974 led to riots in the capital, a military mutiny, and the resignation of Prime Minister Aklilu. By June, Major Mengistu Haile Mariam had been elected chairman of what came to be called the *Derg*. This group of men would remain at the forefront of Ethiopian political and military affairs for the next 13 years.

In March 1975, the Derg adopted the Land Reform Proclamation that nationalized all rural land, abolished tenancy, and put peasants in charge of enforcement. All urban land, rentable houses, and apartments were also nationalized with the 3 million urban residents organized into urban dwellers' associations, or *kebeles*. From 1977 into 1978, government security forces systematically hunted down and killed members of opposition groups and their supporters. Mengistu and the *Derg* eventually won control of the revolution, at a cost to the opposition of thousands of members and supporters imprisoned, dead, or missing.

In the 1980s, several crises, including famine, economic collapse, and military setbacks in Eritrea and Tigray confronted the *Derg*. By mid-1984, the almost total failure of crops in the north was compounded by fighting in and around Eritrea, which hindered the passage of relief supplies. By early 1986, the famine had spread to parts of the southern highlands, with an estimated 5.8 million people dependent on relief food. The combined effects of famine and internal war collapsed the nation's economy. The *Derg* regime fell in May 1991. Opposition forces took control of the government, led by Meles Zenawi.

In the previous 17 years, the Ethiopian army had deliberately killed and wounded tens of thousands of citizens, and the air force bombed civilians and civilian targets. It is not possible to produce an accurate estimate for the number of innocent people killed over the decades, but it undoubtedly exceeds 150,000.⁴ This legacy made the transition process very difficult for the new government that came to power in 1991. A threefold transition had to be mastered: 1) a transition from civil war to peace; 2) a transition from totalitarian dictatorship to multiparty democracy; and 3) a transition from a socialist planned economy to a capitalist market economy.

The military was disintegrated and law and order were in question. The new government had to grapple with a maze of urgent tasks all at once: getting transport moving, restoring communications within the country and with the outside world, getting schools ready to open, obtaining medical supplies, and restoring rudimentary social services, including water supply. The country began to open up to the world. Following four years of transitional government, the Federal Democratic Republic of Ethiopia was proclaimed after elections in the middle of 1995, and Ethiopia's progress toward the MDGs escalated.

THREE PHASES OF ADVANCEMENT TOWARD MDG TARGET 7C

The history of Ethiopia's progress in the WASH sector can be categorized in four sequential phases of advancement. The first three generated the achievement of the water supply portion of MDG Target 7c. The fourth phase is ongoing. It is the next step toward institutionalizing sustainable delivery of water and sanitation services for all by 2035, and is described in Chapter 3.

PHASE I: 1990-2005-OBTAINING SKILLS AND SETTING THE STAGE FOR GROWTH

During Phase I, the Government of Ethiopia, realizing its limited capacity in all aspects of WASH program design, management, implementation, and monitoring, made a conscious commitment to support the acquisition of basic skills and expertise that would be needed to build the country's devastated institutions and functions. Technical training obtained in Russia in the 1980s was augmented by newer information obtained by sending talented students to India while expanding the depth and substance of master's degree programs at in-country universities. In support of higher education, doctorate and post-doctorate candidates were sent to Europe by the government.

Donor-funded WASH projects during this period were steadily providing basic water supplies and sanitation facilities across wide swatches of the country. These did not provide access to a large percentage of the tens of millions in need, but they did contribute two significant program aspects to the sector that became the foundation of later, more focused national efforts: 1) systematic use of participatory techniques to establish community management systems; and 2) standardization of engineering and operations and maintenance systems.

⁴ Africa Watch. (1991). Evil days: 30 years of war and famine in Ethiopia.

Access to rural water supply increased by small amounts due to these efforts. In 2003, following the lead of the Government of Finland, the Community Development Fund (CDF) was established (the predecessor to the Community Management Program). Its main contribution to the national sector was development of detailed methodologies to deliver drinking water infrastructure in response to community demand and capacity. Also in 2003, the Government of Ethiopia and core donors established a parallel and complementary WASH-focused *woreda*-managed project (WMP). This program augmented the CDF and increased sector investment by creating an option for Government of Ethiopia-managed delivery of water infrastructure accompanied by decentralization of authority from the zonal to the *woreda* level.

While these regional infrastructure delivery and learning programs continued, the Government of Ethiopia dedicated several years to creating a WASH sector enabling environment that was defined, disciplined, and capable of managing major investments. The process began in 1998 with the adoption of the first Ethiopian Water Resources Management Policy, followed by an accompanying Water Sector Strategy in 2001. The policy documented water sector objectives, established alignment of multiple sector policies, and launched a Water Commission under the Ministry of Agriculture. The strategy provided a road map to attain the principles and objectives of the policy. Together, these documents require that local governments plan, implement, and maintain their water supply and sanitation programs.⁵

A National Water Sector Development Program was also developed in 2002 to guide investment and monitoring from 2002 to 2016. This program contained, for the first time, short-, medium-, and long-term targets for water supply and sanitation, irrigation, and hydropower, as well as investment requirements to achieve incremental targets in each sub-sector.

FIGURE 3: ETHIOPIA DRINKING WATER TRENDS 1990–2005



By 2004, the government had finalized a National Water Supply

and Sanitation Master Plan for the country that accomplished two primary objectives. First, it extended governmental reach from population centers into more rural areas, placing accountability with *woredas* and codifying community management. Second, it supported a culture of construction using village-level technologies. Civil society organizations (CSOs) contributed significantly to developing and establishing methods for operation and maintenance and associated capacity building.

⁵ African Ministers' Council on Water (AMCOW) and World Bank Water Supply and Sanitation Project (WSSP). (2006). *Getting Africa on track to meet the MDGs on water and sanitation: A status overview of 16 African countries.*

By the end of Phase I, Ethiopia still had the eighth-lowest human development index of 177 reporting countries, 44 percent of its population was living below the national poverty line, and repeated droughts continued to contribute to regular food shortages and famine. Also, HIV/AIDS was an emerging threat. Despite these challenges, Ethiopia had successfully made the transition to a federal democratic state with a free market economy. Its institutions were still relatively new and constrained by low domestic revenues. Its prospects were poised for change: 2000 witnessed a preliminary peace agreement with Eritrea, and policy frameworks were in place along with actions to address capacity needs. These factors contributed to establishing a supportive international aid environment.⁶

In 2005, the Government of Ethiopia completed its first national PRSDS, presenting its plan on how it would use savings from reduced debt service and gain increased external aid to achieve the MDGs. The stage was set for significant escalation of WASH access during Phase 2 of the process.

KEY CHALLENGES: PHASE I	MEETING THE CHALLENGES		
Disconnects between Government of Ethiopia planning and control and donor activities	 Poverty Reduction Strategy Program (PRSP) preparation laid the foundation for subsequent collaboration around the MDGs. The Ministry of Finance and Economic Development (MOFED) led a preparatory process, chairing the inter-ministerial PRSP steering and technical committees and duplicating this structure at the sub-national level, where regional planning bureaus were responsible for coordination. A pooled fund supporting research, consultations, and projects was central to enhancing donors' sense of purpose and impact, and timely and proactive disbursement. 		
Managing more transparent planning and prioritizing poverty reduction	 Through regional secretariats, the PRSP Secretariat organized district, regional, and national consultations with villagers, religious leaders, civil society, women's groups, and local officials. Above all, the many Ethiopian NGOs, including the umbrella organization Christian Relief and Development Association, established an NGO Task Force for the PRSP to coordinate their input. The Ethiopian Chamber of Commerce organized the private sector. Donors provided money and technical assistance to facilitate participation. 		
Valuing the MDGs as tools for focus and investment	 Africa's first MDG Action Forum held in Addis Ababa in 2002 to plan actions, policies, and programs to achieve the MDGs. The government established an MDG Task Force to coordinate campaigning and preparation of an MDG report, co-chaired by MOFED's Director of Planning and United Nations Development Programme (UNDP). In late 2002, the MDG Task Force launched a public MDG campaign with an Amharic slogan, "<i>Yichalal</i>." (It is possible!), with famed Ethiopian runner Haile Gebreselassie as a spokesman, who advocated for the possibilities of reaching the MDGs and focusing on making stakeholders aware of their potential roles and obligations.⁷ 		

TABLE 2.	PHASE	I_KFY	CHALLENGES

⁶ UNDP. (2005). Linking the national poverty reduction strategy to the MDGs: A case study of Ethiopia.

⁷ Ibid.

KEY CHALLENGES: PHASE I	MEETING THE CHALLENGES
Establishing unified Government of Ethiopia, donor, citizen emphasis on development priorities	• At the December 2002 Consultative Group Meeting, the Government of Ethiopia articulated its commitment to base the PRSP on the MDGs, referring to the PRSP as "the primary development program for Ethiopia providing a shared platform to achieve accelerated growth to overcome the country's pervasive poverty and food insecurity and for reaching the MDGs." ⁸
Unaligned data collection and use	 A Policy Matrix was prepared to link each of the 100 PRSP indicators to one or more of the MDGs. The Government of Ethiopia aligned the timing of MDG reporting with the PRSP's Annual Progress Report to encourage application of MDG-related findings into the PRSP.⁹

PHASE 2: 2006–2009—EXPANDING DECENTRALIZATION, PLANNING UNIVERSAL ACCESS, AND ESCALATING MAJOR DONOR INVESTMENTS

Significant and successful advancement toward MDG Target 7c gained structure and momentum in 1998 with the passing of the national Water Resources Management Policy and the subsequent collaborative effort to prepare the PRSDS. But, Ethiopia still lacked specific, scalable actions to achieve the WASH MDGs by 2015. It was only the 2005–2006 launching of the UAP for water and sanitation with goals of 98 percent access to rural, improved water supplies; 100 percent urban access; and 100 percent access to both urban and rural sanitation that provided the multi-channel focus necessary to achieve the MDG target.¹⁰

The UAP was conceptually linked with the PRSDS and a 2006 WASH MOU. The WASH MOU established an integrated institutional framework across the ministries of water, health, and education for WASH service delivery at federal, regional, *woreda*, and *kebele* levels.¹¹ In 2006, the Government of Ethiopia developed its National Hygiene and Sanitation Strategy. The vision of the strategy was "100 percent adoption of improved (household and institutional) sanitation and hygiene by each community"¹² to be achieved on three "Strategic Pillars": 1) an enabling environment focused on scale; 2) participatory promotion of sanitation and hygiene to create demand and behavior change; and 3) improved access and the engagement of local producers and artisans.

These collaborations and national programmatic guidelines directly supported decentralization efforts, which began nationally in 2004, with responsibilities for basic service delivery being devolved and assigned across ministries and mostly to the *woreda* level, with zonal government providing technical support, especially for more complex technologies.

The Government of Ethiopia's funding for the water sector as a whole increased significantly during Phase 2, growing by more than 400 percent in nominal terms between the 2003–2004 and 2007–2008 fiscal years. This increase was augmented by an initial round of funding for the World Bank's five-year

⁹ Ibid.

⁸ UNDP. (2005). Linking the national poverty reduction strategy to the MDGs: A case study of Ethiopia.

¹⁰ Ethiopia Ministry of Water, Irrigation, and Energy (MOWIE) (2016). *Water sector policy*.

¹¹ Ethiopia MOWIE in Cooperation with the Ministry of Health (MOH). (2011). Summary of the UAP in four parts.

¹² Ethiopia MOH. (2005). National hygiene and sanitation strategy.

Water Supply and Sanitation Project (WSSP) in 2004—a combination of a \$25 million grant and a \$75 million credit for infrastructure development. Implementation manuals for the overall project and for each region were developed. These spelled out institutional and implementation arrangements for the project and outlined the rules of engagement for planning, appraisal, contracting, and implementation that would become the foundation of national programming.

This significant and foundational investment initiated the process by which two of Ethiopia's largest development partners—the U.K. Department for International Development (DFID) and the African Development Bank (AfDB)—joined with World Bank to harmonize their WASH investments under a single financing modality. This new combined water account channeled donor and Government of Ethiopia funds through MOFED, using a single national program implementation manual and a financial manual.¹³ DFID started supporting the program in 2008, contributing \$82.5 million between 2008 and 2013, through its trust fund arrangement with World Bank. An additional International Development Association credit of \$80 million was provided in 2010.¹⁴

SELF-SUPPLY IN THE ETHIOPIAN CONTEXT

The Government of Ethiopia has defined self-supply as "Improvement to water supplies developed largely or wholly through user investment by households or small groups of households." The lowtech approach was not new to the country. Centuries old "Ela "in low lands of Oromiya, Somali, and Tigray are the best examples in which nomadic Borani people established systems of construction, maintenance, and control to ensure water availability for humans and livestock."

As investment began to grow, 2006 saw the first WASH MSF, which continues in 2017. The MSF facilitates regular and substantive coordination between government and donors. In 2008, the biannual Joint Technical Reviews (JTRs) were initiated, led by the National WASH Coordination Office (NWCO). JMP data at the time indicated a notable increase in access for more than I million people per year from 1990 through 2008.





Piped Onto Premises

Data sourced from the WHO/UNICEF JMP.

However, given the size of the population, it was clear that insufficient progress was being made toward achieving the UAP's universal access targets by 2012. The UAP was therefore revised by the Government of Ethiopia to better align with JMP definitions, with no change in timeframe or targets, but with a much-increased emphasis on mass mobilization of low-cost technologies, and in particular,

¹³ AMCOW and World Bank WSSP. (2011). Water supply and sanitation in Ethiopia: Turning finance into services for 2015. An AMCOW country status overview.

¹⁴ Ross, I., & Marie-Alix, P. (2015). Value for money analysis of the WSSP in Ethiopia (2008–2013).

unsubsidized so-called "self-supply" or family wells to achieve the ambitious UAP targets in a financially constrained environment.¹⁵ Phase 2 work resulted in a comprehensive enabling environment that gave major players in development assistance the confidence to significantly invest in the WASH sector. But, a further leap in infrastructure delivery was still needed to "bend the curve" toward the revised UAP targets and those of the MDGs. During Phase 3, the first phase under the structure of growth and transformation planning, self-supply, focused NGO contributions, bilateral actions, and major consolidated funding would need to significantly accelerate access if MDG targets were to be reached.

KEY CHALLENGES: PHASE 2	MEETING THE CHALLENGES
Integration of WASH into overall decentralization due to split of responsibilities between the Ministry of Water, Irrigation, and Energy (MOWIE) (water supply) and the Ministry of Health (MOH) (sanitation, hygiene).	Realization of the need for collaboration and benefits from a disciplined OWNP.
MOH had a focus on awareness and extension only—not direct contributions to MDGs.	Initiated preparation of MOUs between MOWIE and MOH, Ministry of Education (MOE), and MOFED.
MSF and JTR found that MOWIE struggled to manage funds.	•
Desire by donors to bring efficiency to sectoral expenditure.	Collective decision by four key donors (World Bank, AfDB, DFID, and UNICEF) to develop a facility to channel sectoral funds through MOFED and adhere to standardized program procedures.

TABLE 3: PHASE 2—KEY CHALLENGES

PHASE 3: 2010-2015—HARMONIZATION OF VISION, ORGANIZATION, AND OPERATIONS

"During the first three years of the GTP (2010–2012), more than 22.2 million people across the country were able to get access to clean water."¹⁶

Phase 3 responded to the achievements and gaps identified during the previous phase and the need to accelerate access by defining systems of actors and factors necessary to ensure consistency of structure, discipline, and accountability. These were introduced into the country's GTP I—a document prepared with clear objectives and targets derived from wide public participation at federal, regional, and community levels.¹⁷ In the WASH sector, GTP I accomplished three key objectives: I) established a high-priority line item in the national budget specifically targeting the MDGs; 2) dedicated the country to a coordinated sector-wide approach; and 3) placed an emphasis on achieving MDG Target 7c by focusing on the provision of infrastructure.

¹⁵ AMCOW and World Bank WSSP. (2011). Water supply and sanitation in Ethiopia: Turning finance into services for 2015. An AMCOW country status overview.

¹⁶ Ethiopia MOWIE, Water Supply and Sanitation Directorate. (2014). *Manual for accelerating the self-supply program*.

¹⁷ Ethiopia MOFED. (2010). Growth and transformation plan (GTP) 2010/2011–2014/2015. Volume I: Main text.



Photo I: Young Ethiopian Boy at Water Pump (Nicholas Parkinson/DAI)

HARMONIZATION THROUGH WIF, OWNP, POM, AND MOWIE

In order to optimize the high levels of investment in the sector, particularly the consolidated funding being provided by World Bank, AfDB, DFID, and UNICEF, the Government of Ethiopia operationalized cross-government harmonization of efforts through three national systems: I) the WIF (2011); 2) the OWNP (2013); and 3) the POM for the CWA (2014). Each element of the system is described in the boxes on the following pages. The WIF operationalized the WASH portion of GTP I, clarified the function of a sector-wide approach, defined the OWNP, and initiated collective transition toward it. It essentially defines the roles and

FIGURE 5: ETHIOPIA DRINKING WATER TRENDS 2010–2015



Piped Onto Premises

responsibilities of the full set of actors in the local country WASH system in Ethiopia. It is equally directive to the four signatory ministries—MOWIE, MOH, MOE, and MOFEC—and gives definition to the workings of harmonization, alignment, partnership, and coordination. Signatories also included representatives of the Development Assistance Group donors and CSO implementers.

Data sourced from the WHO/UNICEF JMP.

One WASH National Program (OWNP)

- Formalized in 2013, the OWNP is the Government of Ethiopia's main instrument for achieving the WASH goals set
 out in the GTP. It was developed to operationalize the multi-ministry MOU and the WIF. The OWNP was designed
 to be implemented in two phases: Phase I from July 2013 to June 2015 and Phase 2 from July 2015 to June 2020.
 Phase I was designed to increase harmonization and alignment among and between development partners and the
 Government of Ethiopia. During this phase, WASH organizations and procedures were established and made
 operational, and partners were expected to align their targets, plans, and activities with the program. Ministerial
 responsibilities were clarified in the document, and the NWI was introduced.
- The OWNP program document is not a detailed handbook, but provided conceptual guidelines for sector actors to follow and an investment plan to achieve and move beyond the MDGs. It reiterates the modalities and responsibilities defined in the WIF, but—for the first time—it provides service standards and energizes the Health Development Army in support of improvements in sanitation and hygiene behaviors at the household and community levels. OWNP activity sequences are presented, and programmatic implementation steps are defined for sanitation, sanitation marketing, pastoral WASH, urban water supply, institutional WASH, self-supply, and water quality. For each topic, accountability structures are presented from the federal to the household level.
- For the Government of Ethiopia, the OWNP defines staffing positions and levels, comprehensive key performance indicators (KPIs) for all aspects of sectoral implementation and corresponding systems for reporting and documentation, a listing of priority areas for future investment, and a region-by-region presentation of investment needs to achieve the KPIs nationally.

The concept of the OWNP, along with an initial draft of the WIF, was first presented at the third WASH MSF in October 2009.¹⁸ A second draft of the WIF, incorporating stakeholder input, was produced and presented at the fourth WASH MSF in April 2011. The Government of Ethiopia acknowledged at its creation that "Movement toward this idea will be incremental. It will provide many challenges and lessons to be learned. Nevertheless, the transition has begun and, in partnership, government and development partners have agreed to work toward:

- One planning system—with linked strategic and annual WASH plans at each level.
- One budgeting system—reflecting all WASH-related investments and expenditures.
- One financial management system—with consolidated accounting and reports.
- One procurement system—with common standards and procedures aligned to the government system.
- One information system—with essential data updated and accessible at each level.
- One monitoring and evaluation (M&E) system—with common indicators and consolidated analysis.
- One CWA—into which all development partners' contributions are deposited and from which WASH activities and investments are supported."

The POM¹⁹ is specific to this final bullet as it serves as the implementation guide for the CWA, which contains pooled finances from the Ethiopian treasury, World Bank, AfDB, DFID, and UNICEF. CWA funds are provided directly to MOFEC to support one dedicated portion of the OWNP. Table 4 shows how funds are distributed.

¹⁸ Federal Democratic Republic of Ethiopia. (2013). WASH implementation framework (WIF).

¹⁹ Federal Democratic Republic of Ethiopia. (2014). One WASH national program (OWNP): Program operations manual (POM) for the consolidated WASH account (CWA).

TABLE 4: CWA FUND DISTRIBUTION

MINISTRY	PERCENTAGE OF CWA FUNDS
MOWIE	70
МОН	17
MOE	12
MOFEC	I

Program Operations Manual (POM)

- The POM is the guiding document for the Government of Ethiopia and the development partners pooling funds into the CWA to support implementation of the OWNP. The POM provides common and practical planning, implementation, administration, and operational guidance on the management of CWA finances. This includes steps and procedures to be adopted in the planning, budgeting, disbursement, procurement, supervision, financial management, safeguards management, and M&E of the program that would be financed through the CWA and a Code of Conduct that outlines roles and responsibilities of all coordinating parties.
- The 163-page POM addresses the following topics in fiduciary detail: 1) implementation arrangements of CWA-supported programs; 2) financial management and disbursement; 3) procurement; 4) fiduciary assessment and risks; 5) fraud and corruption; 6) administration; 7) partnership and pool fund management; 8) M&E; 9) environmental and social management framework; and 10) resettlement policy framework.

WASH Implementation Framework (WIF)

- The WIF was issued in 2013 as the definitive document establishing the leadership role of the Government of Ethiopia in the WASH sector. It was widely circulated among stakeholders for comment and input before finalization. The objective of the WIF is to serve as a guiding document for all WASH implementation in the country. Of particular importance, the WIF set out four guiding principles intended to govern the implementation of a national WASH program: 1) integration of the water, health, education, and finance sectors; 2) alignment of partners' activities with those of the Government of Ethiopia; 3) harmonization of partners' approaches and activities; and 4) partnership between implementing parties at all levels.
- The WIF includes: 1) institutional arrangements; 2) implementation modalities; 3) financial management and procurement;
 4) planning; 5) capacity building; and 6) M&E. It defines duties and responsibilities for all government actors in the national WASH system, including the national WASH steering committee, national WASH technical team, WASH program management units, national WASH coordination office, regional WASH steering committees, regional WASH technical teams, regional WASH program management units, regional WASH program management units, regional WASH program management units, regional WASH coordination offices, and *woreda* WASH teams (WWTs). It also provides definitions and components for each of the accepted rural WASH implementation modalities:
 1) community-managed projects (CMPs); 2) WMPs; 3) NGO-managed projects; 4) self-supply projects; and 5) pastoral WASH. It also introduced the structure of the CWA, as well as timelines for annual planning.

NATIONAL WASH INVENTORY

To advance the concept, a National WASH Inventory (NWI) was initiated by the Government of Ethiopia, as defined in the OWNP program document. A similar effort had been conducted in 2009 and 2010 in the southern region. In 2010, the head of the southern region WASH bureau was appointed Minister of Water, Irrigation, and Energy, and discussion began on conducting a national inventory to serve as data input to assessment of achievements against the MDGs.

The NWI was planned in collaboration with key donors, because of discrepancies between national and JMP statistics and federal concerns about results from regional inventories held at different times using diverse methods.²⁰ One key objective of the NWI was to determine access figures in a way that would withstand international scrutiny. NWI data were verified by the CSA and WHO/UNICEF JMP specialists to serve as the basis for the conclusion that MDG Target 7c had been met in Ethiopia. The results of NWI were officially released by MOWIE to WASH stakeholders in April 2013. The benefits of the exercise were in creating, for the first time, a common data set that is well understood, and providing a learning experience for future data collection initiatives in the sector.

The NWI project office at MOWIE implemented the NWI. Implementation required more than 65,000 people and cost approximately US\$12 million. The effort was funded by federal and regional offices of the Government of Ethiopia, as well as UNICEF and World Bank, with in-kind field support from CSOs. A multisectoral task force coordinated over two years by MOWIE developed and piloted questionnaires, and delivered training of trainers at national, zonal, regional, and local levels for enumerators.

The NWI included data collected from users and service providers through household surveys and a water point census. The NWI used a paper-based documentation system to cover more than 92,000 rural water supply systems; 1,600 small-town systems; 50,000 schools and health institutions; and 12 million households. The effort was massive, and all data have not yet been tabulated. In one typical example, central level sent five truckloads of forms for data collection—enough to cover only 150 *woredas* in interviews by health extension workers. Paper forms were eventually collected at the regional level. In this example, approximately 25 people were employed full time for data entry at the regional level. All regions and cities were included in the NWI, except for the Somali region, which was inventoried in 2014 by MOWIE using mobile phones to transmit and collect information.²¹ As a result of this investment, data collected were sufficient to satisfy the CSA and JMP, and Ethiopia's achievement of the MDG target for drinking water was certified.

At the completion of Phase 3, all institutional structures were defined, a significant scale-up of national and donor investments was completed and accounted for, and MDG Target 7c was met. In the first three phases of incremental policy, planning, and operationalization, millions of people per year were provided with access to improved drinking water supplies across the country. Using JMP data, 40 million people received access from 2009 to 2015, more than 6.5 million people per year.

KEY CHALLENGES: PHASE 3	MEETING THE CHALLENGES
Program delays due to paper-based management and	 Digitized inventory information for subsequent surveys. Engaged local consultant to design WASH Management
encoding; time for procurement of computers, recruitment	Information System (MIS) to echo the Health
of temporary encoders, and validation of data not	Management Information System (HMIS) and Education
anticipated at the launch.	Management Information System (EMIS).

TABLE 5: PHASE 3—KEY CHALLENGES

²⁰ IRC WASH & Coffey. (2015a). Diagnostic review report: Technical and managerial support for strengthening the monitoring and evaluation (M&E) system of the OWNP of Ethiopia.

²¹ AguaConsult. (2014). Sector status and trends framework, desk review: Ethiopia.

KEY CHALLENGES: PHASE 3	MEETING THE CHALLENGES
Multi-stakeholder input to data collection in NWI without filtering of requests and without preparation of use cases for outputs.	 Filtered data after collection to establish a core of reliable, basic information. Ignored wasted effort generated, particularly at the household level—12 million households (50 million people) were surveyed on sanitation and hygiene topics. No data was used.
Data generated by NWI not readily aligned with information required by JMP.	 Extensive analyses and selective ground truthing required by JMP team before gaining confidence in accuracy of data. JMP team worked with CSA staff and the regional WASH bureaus to analyze the demographic health survey (DHS), a USAID-led "mini-DHS," government plans and functionality, and NWI data.
Somali region unreachable due to drought, refugees, and I.7 million in need.	• Inventory delayed until political situation became conducive. Three-year time interval used to establish data filters and digitize process for data collection and analysis.
Matching capacity and decentralization authority and decision-making power.	 Mobilized significant funding to directly support capacity building.
Need for defined roles, responsibilities, and commitment of local system actors in the OWNP.	• WIF launched as detailed implementation framework.
MOFED brought in late to development of the WIF roles and responsibilities drafting.	 Required alignment of ideas proposed by the WIF developers with existing systems and staff of the MOFED before their signing in 2013.
Ministry of Women's Affairs and Ministry of Urban Development not included in coalition leading the OWNP.	• Ministry of Women's Affairs collaborates with each ministry through coordination offices at <i>kebele</i> and <i>woreda</i> levels. Urban services not included in the OWNP.
Establishing alignment with MOH strategies and rural health package.	• Still allowing siloed delivery of comprehensive health package (personal hygiene, water quality and safety (water safety planning), food hygiene and safety, solid and liquid waste management, excreta management, vector control, housing) by MOH, but coordinating efforts at <i>kebele</i> level and data collection as part of JMP reporting.
Expenditure was affected by high inflation of the Ethiopian birr (peak of 44 percent in 2008) and significant variation in its exchange rate with the U.S. dollar. Construction and labor costs increased dramatically during the course of the WSSP in the last 3–4 years, due to inflationary pressure. This was combined with procurement issues, particularly at project start-up.	• Maintained focus of project and intentionally incorporated flexibility in both timelines and management planning.
Low capacity in the private sector limited competition and drove up costs. Weak performance of contractors and inadequate supervision from consultants contributed to delays in implementation caused by lack of funds and capacity building, as well as low experience levels of the water boards and implementing agencies.	

KEY CHALLENGES: PHASE 3	MEETING THE CHALLENGES
Decentralization of procurement increased capacity of <i>woredas</i> to manage budgets, but reduced possibilities for economies of scale.	
Eliminate inefficiencies and repetition seen in first phase of NWI in second phase conducted in Somali region.	 Move totally away from paper-based data management. Improve data quality by eliminating sequential transcription for paper systems to Microsoft Excel to Microsoft Access to proprietary MIS. Focus only on water supply and institutional WASH (schools, health centers).
Maximize digitization.	Initiate dashboards for data aggregation.
Limited data availability.	 MOWIE dictated security levels of access to make data publicly available.
Establishing roles and responsibilities among four collaborating ministries in the CWA.	• Six months to one year needed to negotiate individual program operational agreements between the three partner ministries (MOH, MOE, MOFEC) and MOWIE.
Human resource capacity and capability at all levels.	• Long-term vision and consistency for unavoidable turnover and low capacity at starting point—still unresolved and no clear endpoint in sight.
	• Well-resourced external technical assistance in capacity building.
	• Well-resourced supply of physical needs of decentralized operational entities.
Low fund usage at decentralized levels	• Forced increased awareness with annual monitoring by World Bank and AfDB and joint reviews at the <i>kebele</i> level.

CHAPTER 3: LESSONS FROM THE MDGS

The case study team did not independently create any of the lessons presented in this chapter. Each was collected from those the team met with in Ethiopia who had been part of the phases of progress toward the MDGs. Their insights and willingness to examine the 25 years of the MDG era made this section possible, and the authors hope that their ideas are described accurately in the following sections.

LESSON I: USE NATIONAL GOALS, STANDARDIZE INDICATORS, DOCUMENT, THEN DO

SET, MAINTAIN, AND SOCIALIZE AMBITIOUS NATIONAL GOALS

National goals on WASH were initiated in the UAP and later refined into the access goals of GTP 1. They were not just goals on paper they were the focus of investment. They were known to leading actors in the local country WASH system. They were used to measure progress and hold those responsible for its achievement accountable. Setting, maintaining, and socializing UAP and GTP 1 goals for the sector played a guiding role in the achievement of MDG Target 7c. As a result of this achievement, the Ethiopian WASH sector now has the confidence that ambitious goals can be used to provide focus and are achievable.

STANDARDIZE INDICATORS AND ACCOMPANYING DEFINITIONS TO KNOW WHAT IS MEASURED, WHY, AND HOW

Ethiopia and international colleagues struggled through Phases 2 and 3 of the MDG era to generate and use comparable data. This was the case all the way through completion of the NWI and certification of its data and findings by the CSA and JMP. Because of this challenge, indicators were standardized, and accompanying definitions agreed to in policy matrices accompanying GTP documentation. For GTP II, these are shown in an excerpt from the Policy Matrix in Annex A.

GETTING MASTER DOCUMENTS RIGHT

Experience and evidence from multiple global program reviews indicate a logical sequencing of interventions when building a national WASH sector, which begins with policy and then moves through corresponding strategy, frameworks and guidelines, and investment plans.²² The Government of Ethiopia followed this sequencing by demonstrating successful models of implementation, completing the master documents to guide implementation across a sector, presenting support options, and holding themselves and development partners accountable for alignment.

The first phase included developing country-specific models by examining the successful aspects of bilateral WASH programs across the country in the 1990s. Having this foundation of core success gave the Government of Ethiopia and World Bank the confidence to invest in the WSSP and create a more robust evidence base and local political commitment. These were used to influence regional and central decision makers to adopt the program approaches more widely and improving policy, strategy, and direction accordingly.

²² Rosensweig, F., Perez, E., & Robinson, A. (2012). *Policy and sector reform to accelerate access to improved rural sanitation*.

LESSON 2: LOCALIZE DEVELOPMENT GOALS AND CLIMB THE WASH LADDER INCREMENTALLY

TAKE ADVANTAGE OF GLOBAL DEFINITIONS, BUT ENSURE THAT PLANNING OBJECTIVES ADDRESS LOCAL DEVELOPMENT NEEDS

During Phase 2, the Government of Ethiopia adapted its universal access goals to the language of the MDGs. They took a strict interpretation of "access;" interpreting it as an engineering and technologydriven goal and proceeding to invest in infrastructure and technical knowledge in order to achieve the immediate, national goal of providing minimum access to the greatest number of people. The MDGs referred to a "safe" supply of drinking water, but did not define it. In localizing the MDGs into GTP I, the Government of Ethiopia ignored this part of the MDG, focusing rather on their critical need for nationwide provision of "improved" infrastructure. The letter of the MDG Target 7c was met.

BALANCING STAFF EXPERTISE WITH INCREMENTAL MOVEMENT UP THE WASH LADDER

Ethiopia cannot be expected to make an immediate leap to a level of state-of-the-art sector operation. It has only been functioning according to its current structure since 2008 (nine years). GTP I was focused on infrastructure, and technical skill sets were acquired by government staff accordingly. These were focused on engineering, hydrology, data collection, reporting, and planning and budgeting to fill the critical gaps in talent identified at that time—fundamental skills to address fundamental needs. In the latter years of the MDG era, the Government of Ethiopia—in line with the needs of decentralization—focused on supporting regions, zones, towns, *woredas, kebeles*, and communities to establish effective procurement, contract management and supervision procedures, and robust monitoring, information management, and reporting systems.

LESSON 3: SYNCHRONIZE TECHNOLOGIES AND DIGITIZE DATA

ENSURE COMPATIBILITY OF DATA TECHNOLOGY APPLICATIONS

Previous WASH MIS data management systems were developed as a standalone source of information and analytics. During the NWI, this lesson was learned as that data collected were either not used or used only to validate achievement of MDG Target 7c. The data management system applied in that effort was not compatible with that used in the well-established HMIS (MOH) and EMIS (MOE).

IMPROVE DATA EFFICIENCY BY DIGITIZING DATA COLLECTION AND MANAGEMENT

The first and major portion of the NWI was conducted using a paper-based system that was unwieldy and costly in terms of logistics and data management. The data needed to certify meeting MDG Target 7c was available and of sufficient accuracy, but the lesson was learned not to repeat this effort when the NWI was completed later in the Somali region. There, digitized data collection and management systems were employed, along with a more focused set of questions. This adaptation optimized efficiency of the effort, and improved accuracy of the data and expanded flexibility of its analysis.

LESSON 4: BALANCE LEADERSHIP AND OWNERSHIP

EQUALLY COMBINE CONSISTENT LEADERSHIP AND LOCAL OWNERSHIP

Since 1995, Ethiopia has followed an "authoritarian developmentalism" model, prioritizing above all else state-directed economic growth. This development-before-democracy strategy provided consistent leadership that played a key role in establishing and maintaining a focus on MDG Target 7c, and implementation of the OWNP and GTP I. In the Ethiopian context, leadership begins with collaboration and directives from the top. Consistency and a long-range vision made federal commitments possible during Phases I through 3. Federal commitment made political commitment at all levels possible. In these phases, socialization of priorities came from the authorities to citizens through a variety of participatory and communication channels.

LESSON 5: CONSOLIDATE FUNDING

SUSTAIN AND SHARE FINANCIAL COMMITMENT AS LEVERAGED INVESTMENT

The transformational financing that made achievement of MDG Target 7c possible came initially from the consolidation of funds from the Ethiopian treasury and World Bank. When success of this shared investment emerged from the WSSP, funding from UNICEF, AfDB, and DFID were leveraged into the CWA. The substantial five-year tranches of support to the CWA made possible a progressive shift— albeit incomplete—from bilateral support provided outside the Ethiopian Government's core systems, to multilateral funding harmonized under a single financing window and channeled through MOFEC.

LESSON 6: ALLOW ACCESS FLEXIBILITY

RECOGNIZING AND ALLOWING MULTIPLE APPROACHES TO ACCESS

In the first phase of advancement toward achieving MDG Target 7c, the Government of Ethiopia followed a pathway of piloting a variety of implementation mechanisms—community management, village-level operations and maintenance, *woreda* management, and self-supply—to develop the core components of its sector-wide approach. The Government of Ethiopia learned from internal practice and from informational visits to other countries—principally the "Asian Tigers"— how they transitioned to become respected service providers to their citizenry and participants in global markets. Through this effort, they identified a handful of implementation mechanisms that were given structure in the WIF and therefore in the OWNP.

LESSON 7: SYSTEMS HAVE POLITICS

POWER RELATIONSHIPS WITHIN LOCAL COUNTRY SYSTEMS MUST BE APPRECIATED AND UNDERSTOOD

The system of actors described in the WIF is only recently in place and is not yet fully operational. It is working well at the *woreda* level, but MOWIE and the NWCO are not yet viewed as the leadership of the OWNP. This is due to three primary reasons: 1) the staff of the four ministry-specific project management units control sector funding rather than the NWCO; 2) political tensions exists due to the exclusion of the Ministry of Urban Development from the OWNP and the weak presence of the national steering committee and technical committee; and 3) no actors in the local country system

benefit from a strong NWCO—a weak entity made weaker by its lack of legal standing. Ceding authority to the NWCO would result in one or more of the actors losing power. The organization most at risk of losing power if the NWCO were stronger would likely be MOWIE. As a result, the structural arrangement of the OWNP is handicapped from full functionality.

LESSON 8: "ONE SYSTEM" NEEDS INCENTIVES

COLLABORATION RESPONDS TO FUNDING

MOWIE and MOFED are well supported by the CWA and the OWNP. Even though the MOH has lead responsibility for achieving SDG Target 6.2, it remains underfunded and with limited capacity to fulfill its mandate. The environmental health staff at MOH is challenged in achieving behavior change in use of hygienic facilities, personal hygiene, and household hygiene due to limited resources and skilled staff that do not have the capacity to fulfill the SDG mandate.

MOH specialists indicated to the authors a significant disconnect between mandate and resources. The MOH has a small sanitation budget augmented by 17 percent of the CWA contribution to the OWNP. With this, the MOH is asked to deliver institutional latrines, incinerators, and institutional water supplies, and is in need of operational costs, environmental health specialists at the *woreda* level (backed up by zonal-level expertise), and highly qualified regional professionals.

Coordinating various task forces and specialist groups across the four ministries involved in the OWNP presents one difficulty, while coordinating across all funding channels of the CWA compounds the challenge. For example, the MOH's internal hygiene and environmental health task



force and its accompanying technical working group need increased collaboration with the NWCO to ensure balanced investment in SDGs 6.1 and 6.2, but the resources are not available. In addition, the development of the WASH MIS has suffered from delays, and hygiene and environmental health performance indicators have yet to be incorporated into the HMIS.

These lessons were learned the "hard way" by those who committed energy and intellect to the achievements of the 25-year long MDG era. Ethiopia is fortunate in that many of these actors are still part of the national WASH sector. The lessons they learned and communicated to the authors have not been lost as the country pivots toward achieving the SDGs. The next chapter demonstrates how each lesson documented here has been considered and incorporated into Phase 4 of WASH sector performance in Ethiopia.

CHAPTER 4: TRANSITION TO THE SDGS

The Government of Ethiopia is currently in the second year of its second five-year planning period, GTP II. GTP II has a focus on more than just the infrastructure featured in GTP I. The major objective of GTP II is to maintain progress toward the national vision of becoming a lower middle-income country by 2025²³ and align with the SDGs. Regarding water supply, the country is localizing the SDGs with emphasis on aspects of service delivery rather than access to infrastructure: I) number of hours of operation; 2) per capita availability; and 3) an emphasis on on-plot supply. Regarding sanitation, GTP II has included indicators on latrine use and local achievement of open defecation-free status (see Annex A). Both of these are viewed as significant advancements from the WASH content in GTP I (a single paragraph in a document focused on trade).

GTP II is the core of the Ethiopian WASH sector's advancement toward the SDGs. In fact, every objective of GTP II is correlated with SDG Goal 6. An excerpt of the GTP II Policy Matrix can be found in Annex A.

GTP II AND SDGS 2016-2030

In interviews with system actors and a review of system documents and factors, the authors worked to identify the ways in which each lesson from the MDG era (as documented in Chapter 3) has been incorporated into the documentation, planning, and action under GTP II and its five-year horizon, which ends in 2020. Each lesson and its corresponding application is presented in Table 6.

LESSON	SDG APPLICATION
Use national goals, standardize indicators, document, then do	Ethiopia's goal of becoming a lower middle-income country is front and center in GTP II. Socializing this began through the engagement of local system actors at the community level. Input in the development of the GTP II began below the <i>kebele</i> level in small groups of households. Face-to-face discussion was conducted in households. Every five households chose a leader to contribute at the <i>kebele</i> level. Television, radio, religious leaders, and each local meeting made reference to the GTP structure. As a result, the federal-level program was developed and all citizens down to the <i>kebele</i> know about it. National goals emerged from these discussions and have been incorporated into GTP II as fairly rigid guides to prioritization and resource commitment. In the Policy Matrix, near-term objectives contribute directly to these goals, and through the local system structure defined by the WIF, actors are held accountable for their achievement.
	Indicators are much stronger and more uniformly applied in GTP II, but work is not completed. GTP II expanded the infrastructure-focused indicators of GTP I to include new national water supply indicators based on regularity of delivery, volume of delivery, and distance of water source from households:
	• Rural water supply: 25 liters/capita/day within a 1 kilometer (km) radius.
	 Urban water supply—based on demand categories of 100, 80, 60, 50, and 40 liters/capita/day from the highest to the lowest level.
	Future efforts will need to resolve true service delivery indicators and locally define "safe" and "safely managed" as stipulated in SDG Target 6.1.

TABLE 6: PIVOTING EARLY PHASE LESSONS TOWARD THE SDGS

²³ Federal Democratic Republic of Ethiopia. (2016a). Growth and transformation plan II (GTP II) (2015/2016–2019/2020). Volume I: Main text.

LESSON	SDG APPLICATION
	The national strategic plan, institutional arrangements to encourage leadership and coordination, and capacity development plans to fill gaps and strengthen weaknesses—were put into place, particularly in the WIF, OWNP, and POM. These clear master documents are now field proven and provide the foundation for action and investment toward SDGs 6.1 and 6.2.
Localize development goals and climb the WASH ladder incrementally	In a similar way as they responded to the MDGs, the Government of Ethiopia is using the SDGs as a wide-reaching, but insufficient guide to their national goal of becoming a lower middle-income country by 2025. The GTP II Policy Matrix ²⁴ does not hesitate to make clear that "the globally agreed Agenda 2030 for Sustainable Development and Agenda 2063 of "the Africa We Want" have been taken as the basis for the formulation of GTP II." Each of the 175 objectives the Government of Ethiopia has established for GTP II originated from identified national needs. Each was then identified with linkages to one or more of the SDGs. In this way, local development goals were identified first, and the SDGs were used as a confirmation that local goals were consistent with global guidance.
	During GTP II, the Government of Ethiopia maintains capacity for facility construction, but its focus has expanded to include equity, functionality, and monitoring. New weaknesses at all levels must be met. Government of Ethiopia officials acknowledge the limited capacity and difficulties in retaining talented staff at the zonal, <i>woreda</i> , and <i>kebele</i> levels. In response, both the OWNP and CWA have capacity development plans that aim to, for example, establish skilled water technicians at the <i>kebele</i> level to support operational sustainability of infrastructure, maintain the newly established cadre of 34,000 health extension workers to promote hygiene and improved sanitation, and support the training of front-line technical professionals and Government of Ethiopia staff by sending them to in-country higher education institutions and abroad for long-term and short-term skill development. In these ways, the skill base will grow incrementally in synch with the needs of the new mandates of GTP II and continue the country's advancement toward global standards of sustainable service delivery.
Synchronize technologies and digitize data	Ensuring compatibility of MIS technologies is critical given national prioritization of water supply, school WASH, and health center WASH. As described above, organizations with a long history at all levels in the sector, IRC WASH and Coffey, are currently managing a bidding process within MOWIE for a 3.5-year project to establish and socialize a synchronized WASH MIS.
	Lessons from data management challenges overcome in the NWI have been incorporated into the preparation for NWI 2. For this effort, government and donors will be covering 100 percent of the costs and have agreed to make this an asset inventory, thereby reducing the time and effort required by household surveys. At this time, NWI 2 is expected to focus on global positioning system (GPS) location of assets, asset type, management system, functionality, water quality at the source, number of users, and WASH committee presence and composition.
	Final definitions of criteria and data collection and management systems are currently underway, but all will be digitized. The sequence of tasks to be completed is: 1) definition of indicators; 2) development of associated data collection tools; 3) procurement and creation of software for data collection and management; 4) data collection and management; and 5) data analytics. NWI 2 is scheduled for completion, including data analytics and findings, by the end of November 2017—the completion of the Ethiopian fiscal year.
	During the NWI, efforts were made through an external contract to create an MIS that could be used for data storage, access, and sharing with other ministry information systems. The MIS proved inadequate for use by the local national WASH system actors, and it has been scrapped. Plans for a new MIS are underway through a DFID-funded project providing Technical and Managerial Support for Strengthening the Monitoring and Evaluation (M&E) System of the OWNP of Ethiopia, implemented by Coffey and IRC WASH. An Inception Report ²⁵ and a

²⁴ Federal Democratic Republic of Ethiopia. (2016b). Growth and transformation plan II (GTP II) (2015/2016–2019/2020). Volume II: Policy matrix.

²⁵ IRC WASH & Coffey. (2015b). OWNP inception report volume 1: Technical and managerial support for strengthening the M&E system of the OWNP of Ethiopia.

LESSON	SDG APPLICATION
	Diagnostic Review Report ²⁶ have been completed, but no significant progress has been made to date on either developing the data collection tool or the MIS.
	In the immediate future, the project lead will finalize definitions, engage a subcontractor to prepare associated questionnaires, plan for and collect digital data using an adapted version of the digital tool used to complete the NWI in the Somali region, initiate construction of the WASH MIS, synchronize the WASH MIS with other available databases containing inventory/HMIS/EMIS data, and complete analytics of NWI 2 data.
Balance leadership and ownership	In moving toward the SDGs, decentralization of decision making, budget management, and power have strengthened local ownership of the operational details of federally led planning and directives. For example, the preparation of GTP II began in households and <i>kebeles</i> and made its way upward through tiers of governance, resulting in the integration of ministries and top-to-bottom harmonization with the GTP II.
Consolidate funding	The Government of Ethiopia prefers that funding move through the CWA, but it acknowledges that water sector development partners will continue to wish to control their funds outside of the CWA. The Government of Ethiopia allows other actors, NGOs, and remaining bilateral donors to move their funds through one of several "channels" that MOFEC monitors separately. By accommodating this, MOFEC is positioned to ensure that each supports the common WIF and a jointly agreed approach to monitoring, even though they may fund discrete WASH projects.
	Under this arrangement, sectoral investments are funded and accounted for in four channels:
	• Channel I : Includes finance managed through the government's core budget and expenditure system and allocated to regions through block grants (on-budget, on-treasury).
	• Channel 2: The CWA. Money is managed by MOFEC through a cascade of special accounts at federal, regional, and <i>woreda</i> levels (on-budget, on-treasury).
	• Channel 3: External funding directly through line ministries to spending units in regions or directly to regional bureaus (on-budget, off-treasury).
	• Channel 4 : Finance allocated by donors and CSOs directly to implementers and service providers (off-budget, off-treasury). ²⁷
Allow access flexibility	The Government identified and described in the WIF and OWNP the multiple, but still limited, ways in which water supply and sanitation access can be provided. Urban WASH programs are to be implemented through town water boards with procedures outlined in the OWNP. Rural WASH programs are allowed more flexibility as four alternative mechanisms are permitted: 1) CMPs; 2) WMPs, including regionally managed projects of the WWT; 3) NGO-managed projects; and 4) self-supply projects.
	By moving in a coordinated way toward the SDGs, all projects are to be implemented consistent with the four pillars of the OWNP (integration, alignment, harmonization, and partnership) and with the directives of the WIF. This form of controlled flexibility is made possible by national stability and political consistency.
Systems have politics	The current political challenges described in Chapter 3 should be expected to continue under GTP II. It is important that external donors are aware of the existing dynamics and make all efforts to engage with the proper authority and power center within the existing system.

²⁶ IRC WASH & Coffey. (2015a). Diagnostic review report: Technical and managerial support for strengthening the M&E system of the OWNP of Ethiopia.

²⁷ Calow, R., Ludi, E., & Tucker, J. (Eds.). (2013). Achieving water security: Lessons from research in water supply, sanitation, and hygiene in Ethiopia.
LESSON	SDG APPLICATION
"One System" needs incentives	Under GTP II, there is no indication of adjustment of CWA resources to better align with the needs to meet both SDG Target 6.1 (focused on water supply) and Target 6.2 (focused on sustainable sanitation). In the Government of Ethiopia's incremental development of GTP priorities, it is recommended that more equitable incentives toward each target are part of GTP II. The positive step of the inclusion of two indicators—one on latrine use and one on open defecation—in the GTP II Policy Matrix (see Annex A) demonstrates heightened prioritization of sanitation on the Government of Ethiopia agenda.

GTP II is another incremental step toward state-of-the-art sector performance in Ethiopia. During field work, the authors noted a variety of viewpoints regarding this incremental approach to water service delivery. Official government documents discuss service delivery, but service indicators consistent with those advocated for by the implementers of the Sustainable Services at Scale (Triple-S) project, and particularly by IRC WASH through their presence in Ethiopia have not been adopted by the government. This generated some dismay among those who felt the Government of Ethiopia should be moving farther faster on this topic. GTP II, like GTP I, does not provide each system actor with all they might wish. It has no clear focus on service delivery indicators as per Triple-S, but the Government of Ethiopia maintains a long-term acknowledgment of genuine commitment to sustainable service delivery, which should be expected to become more visible in subsequent GTP documents.

ANTICIPATE MORE CHALLENGES

As the Government of Ethiopia turns its WASH MDG achievements into a trajectory toward SDGs 6.1 and 6.2, it needs to begin to plan how it will address several challenges that have not yet been prioritized, but must be part of the sectoral functioning of a lower middle-income country. Items that are as yet missing from the planning and dialogue include the following:

- **Post-construction support.** GTP I focused on getting infrastructure constructed and operational. GTP II emphasizes improvements in the performance and convenience of infrastructure. While skills training is taking place for cadres of water technicians, the significant effort that went into the WIF to define systems and guidelines for achievements to date has not been applied to the support structures—both public and private—needed to ensure sustainable operation of more convenient and capable infrastructure being built under GTP II.
- Asset management. The Government of Ethiopia does not yet have full knowledge of the existence, status, and management structure of each of its water supply (or sanitation) infrastructure investments. This information began to be captured in the portion of NWI conducted in the Somali region where data was digitized. It is hoped that NWI 2 and the eventual creation of a WASH MIS will enable the government to adequately manage its WASH infrastructure assets.
- Water quality. Microbiological water quality and fluoride concentrations are threats across Ethiopia that are not regularly or uniformly monitored by all WASH implementers. A National Drinking Water Quality Monitoring and Surveillance Strategy is in place with monitoring a responsibility of the MOH—a marginalized entity under the current operations of the OWNP and CWA. A Rapid Assessment of Drinking Water Quality study found that only 68 percent of water samples taken from improved water sources in Ethiopia met the national water quality standards. Compliance varied significantly by technology. Utility-piped supplies had the highest number of compliant samples (80 percent) followed by boreholes (66 percent), protected dug wells

(55 percent), and protected springs (44 percent).²⁸ In addition to microbial contamination; chemical contamination, particularly fluoride, poses a threat to public health. The main geographic areas affected by excessive fluoride concentrations in drinking water are the East Shewa Zone and some areas in the Somali region.

- Limited capacity of the private sector and ability of the Government of Ethiopia to oversee the private sector. Suppliers, contractors, and designers are all in limited supply and are mostly small-scale operators in Ethiopia. Means for technical training are in place and producing talent, but not at the pace required to meet the SDGs. UNICEF has worked to mitigate this issue with the introduction of turnkey contracts for common services. Division of responsibilities is increasingly taking shape as government leads design efforts and develops standard designs while the private sector is involved less in design and primarily in construction. Private sector incentives have begun to generate compromised quality of construction, limited regulations government, their ability to provide regulatory oversight of the quality of contracted construction needs significant improvement.
- **Procurement of goods and services.** This was cited as a constraint to implementation of the WSSP nearly 20 years ago, and it has not yet been streamlined. Bureaucratic time and systems remain significant obstacles to efficient procurement of goods and services from outside of Ethiopia. For example, international procurement of goods to support wider-scale service delivery still requires passage through MOFEC and the National Bank.

The Government of Ethiopia has laid out its way forward in the following excerpt from a recent public presentation.

WAY FORWARD²⁹

- Revising/updating One WASH document to align with GTP II and SDG definitions and measures.
- Improving and strengthening integration, alignment, harmonization, and partnerships.
- Conducting NWI 2; finalizing and implementing WASH M&E MIS.
- Creating enabling environment for private sector participation in water supply and sanitation.
- Strengthening the CSO Water and Sanitation Forum.
- Establishing a regulatory organ for WASH services.
- Improving operations and maintenance in WASH sectors.
- Pulling more finance/funds.
- Strengthening capacity of both supply and demand sides.

Not all the omitted areas presented above appear to be included in this Way Forward, but opportunities exist. The Government of Ethiopia is currently revising the OWNP for the next 15-year horizon. Delivery of this updated document is expected by the end of 2017.

²⁸ Tadesse, D., Desta, A., Geyid, A., Girma, W., Fisseha, S., & Schmoll, O. (2010). Rapid assessment of drinking water quality in the Federal Democratic Republic of Ethiopia: Country report of the pilot project implementation in 2004–2005.

²⁹ Gedefa, T. (2016). Overview of Ethiopia's "One WASH" plan and contribution of CSOs and private sector.

The most significant revisions anticipated are: 1) addressing sanitation as per GTP II, particularly urban sanitation; 2) creation of new service levels; and 3) environmental aspects focusing on groundwater management and application of water safety planning (including water quality). The authors hope that the information presented in this document will be of use to the Government of Ethiopia to address not only the anticipated revisions, but also, at least incrementally, the challenges that remain unaddressed.

CHAPTER 5: CONCLUSIONS

In this chapter, we will qualitatively assess the WASH systems of Ethiopia against the components of USAID's Local Systems Framework and provide thoughts on the utility of each component to analytic efforts of the type described in this document. The section is organized according to the "5Rs" presented in the framework document and the "new opportunities" USAID identified to make systems thought and action most relevant to current trends in international development.

ETHIOPIAN ALIGNMENT WITH THE 5RS

In this section, the key information gleaned from the discussion of WASH sector achievements in Ethiopia are discussed in the context of USAID's 5Rs Local Systems Framework rubric.

RESOURCES: "LOCAL SYSTEMS TRANSFORM RESOURCES—SUCH AS BUDGETARY ALLOCATIONS OR RAW MATERIALS OR INPUTS—INTO OUTPUTS"

The Government of Ethiopia and its WASH sector partners have shown a strong ability to transform resources into outputs. The Government of Ethiopia has consistently provided the bulk of funding to the CWA, which has been the main driver of output delivery. The efficiency and effectiveness of the Government of Ethiopia's ability to utilize a transparent system of funding documentation and accountability were a key reason that the four most important sector donors in the country (World Bank, AfDB, DFID, UNICEF) agreed to pool their sectoral funding under the CWA. This was made possible by the discipline of the OWNP and POM in defining roles, responsibilities and accountability networks to ensure that a transparent auditable system of resource management was put in place to satisfy significant donor investments.

Regarding non-monetary resources, the system is less productive or conducive to outputs. The extreme bureaucratic bottlenecks to procurement of materials from outside of Ethiopia, as documented in Chapter 4, were a hindrance to infrastructure construction during the MDG era and should be expected to be a similar hindrance until in-country production aligns with demand or access to markets is made more flexible as the Government of Ethiopia explores ways to govern and simultaneously open up the WASH sector to private sector involvement.

ROLES: "MOST LOCAL SYSTEMS INVOLVE A NUMBER OF ACTORS WHO TAKE ON VARIOUS DEFINED ROLES—PRODUCER, CONSUMER, FUNDER, AND ADVOCATE"

As reflected in the discussion particularly on Phase 3 of the MDG era, the Government of Ethiopia and its development partners have been extremely strong in involving all actors, defining the roles of each, clearly placing expectations on each, and holding each accountable for delivery of its contribution. On a national scale, the local system of actors is openly and actively engaged, and they are expected to accommodate individual processes and objectives to those established by the Government of Ethiopia as governance guidance for the entire sector. It is clear and has been stated multiple times that this aspect of system engagement was critical to Ethiopia's achievement of the MDG for drinking water.

RELATIONSHIPS: "IN A SIMILAR FASHION, THE INTERACTIONS BETWEEN THE ACTORS IN A LOCAL SYSTEM ESTABLISH VARIOUS TYPES OF RELATIONSHIPS—SOME MAY BE COMMERCIAL, OTHERS MORE ADMINISTRATIVE AND HIERARCHICAL"

The Government of Ethiopia follows an "authoritarian developmentalism" model, prioritizing above all else state-directed economic growth. There is no surprise in the observation, and the Government of Ethiopia neither hides nor denies this. The Government of Ethiopia is moving a country of more than 100 million people from devastation to global status in roughly 40 years. It maintains its focus, engages its population in planning, and has high expectations for its citizenry and holds them accountable. This approach inevitably creates winners and losers, and change is rapid and dynamic. These dynamics have created political struggles that are currently playing out in the country. An authoritarian, but participatory approach led to the achievement of MDG Target 7c. It remains to be seen how relationships will change and support or detract from national goals and progress toward the SDGs.

RULES: "AN IMPORTANT FEATURE OF LOCAL SYSTEMS IS THE SET OF RULES THAT GOVERN THEM— THESE RULES DEFINE OR ASSIGN ROLES, DETERMINE THE NATURE OF RELATIONSHIPS BETWEEN ACTORS, AND ESTABLISH THE TERMS OF ACCESS TO THE RESOURCES ON WHICH THE SYSTEM DEPENDS"

As referenced above and throughout the documentation of Phase 3 of the MDG era, the Government of Ethiopia and its development partners took the time—before acting—to developing the set of rules that would govern WASH sector investments. These included policies, associated strategies and action plans, guidelines, and investment plans. An authoritarian approach used by the government and largely accepted by civil society promulgated these sets of rules, ensured their widespread socialization, and monitored compliance. 51.6 million people would not have received access to drinking water during the MDG era without the thoughtful development of and investment in the package of sector rules.

RESULTS: "THE CONCEPT OF 'RESULTS' IS EXPANDED TO INCLUDE MEASURES OF THE OVERALL STRENGTH OF THE LOCAL SYSTEM, AS WELL AS TRADITIONAL OUTPUTS AND OUTCOMES"

Conventional quantitative results have been—and remain—at the core of the Ethiopian WASH sector. But, key actors in the sector are keenly aware of the importance of the ongoing functionality of the entire local system. As just one example, the Government of Finland has been a leading supporter of the sector since the beginning of the MDG era. They have been instrumental in supporting the participatory processes by which the OWNP and WIF were created. They were the originators of the CMP approach and a key advocate for the importance of stakeholder analysis and engagement as reflected in their recent report documenting each stakeholder's importance, contribution, and web-page link "to ease the reader to find more information on the specific stakeholder."³⁰ The functionality of the local system is deeply appreciated and accepted as the norm, but no effort, other than this effort by WALIS, has been made to qualitatively describe the overall operation and strength of the local system.

³⁰ COWASH Project. (2012). Effective and sustainable WASH services: Stakeholder analysis.

PAST AND FUTURE ROLES OF "NEW OPPORTUNITIES"³¹ AS LOCAL SYSTEM TACTICS

COMMUNICATION TECHNOLOGIES

These are only beginning to become important to the sector. Under GTP II, it remains to be seen how data management will be augmented through the application of communication technologies and accompanying digitized information management systems.

GLOBAL PHILANTHROPY

Global philanthropy has not played a significant role in the Ethiopian success story. It is unclear why this is the case.

NEW PUBLIC-PRIVATE PARTNERSHIPS AND MULTI-STAKEHOLDER ALLIANCES

The Government of Ethiopia has only begun to invite opportunities for significant external engagement with non-traditional partners. These did not play a significant role in the MDG era, but the Government of Ethiopia is a learning entity and has begun to create a pro-government enabling environment that will encourage broader application of non-traditional partnerships and alliances to support achievement of national goals.

ENTREPRENEURSHIP

Entrepreneurship has played an indirect role in the progress achieved, but it is not actively promoted as a solution to challenges. The local private sector played a significant role in driving the creation of water sector supply chains. Flourmill operators required a regular and reliable water supply that needed a regular supply of spare parts. Their need forced a supply chain to develop that is still in operation across the country.

At the same time, the Government of Ethiopia has created bottlenecks to expanded entrepreneurship in the sector. There is an obvious national need for an expanded cadre of water supply contractors and engineers. But, private sector capacity is limited by unusually high costs of capital for business expansion. The Government of Ethiopia is reluctant to allow hard currency payments for the importation of large-scale goods and equipment for use by entrepreneurs.

³¹ USAID. (2014). Local systems: A framework for supporting sustained development.

BIBLIOGRAPHY

- Africa Watch. (1991). Evil days: 30 years of war and famine in Ethiopia. Washington, DC: Human Rights Watch.
- African Ministers' Council on Water (AMCOW) and World Bank Water Supply and Sanitation Project (WSSP). (2006). Getting Africa on track to meet the MDGs on water and sanitation: A status overview of 16 African countries.
- AguaConsult. (2014). Sector status and trends framework, desk review: Ethiopia.
- AMCOW and World Bank WSSP. (2011). Water supply and sanitation in Ethiopia: Turning finance into services for 2015. An AMCOW country status overview.
- Butterworth, J., Katharina, W., Tamene, H., Kristof, B., & Florian, S. (2013). Monitoring access to rural water supplies in Ethiopia: A background paper to the national WASH inventory seminar. IRC WASH.
- Calow, R., Ludi, E., & Tucker, J. (Eds.). (2013). Achieving water security: Lessons from research in water supply, sanitation, and hygiene in Ethiopia. Warwickshire, United Kingdom: Practical Action Publishing.
- Community-Led Accelerated Water, Sanitation, and Hygiene (COWASH) Project. (2012). Effective and sustainable WASH services: Stakeholder analysis. Federal Democratic Republic of Ethiopia.
- Ethiopia Ministry of Finance and Economic Development (MOFED). (2010). Growth and transformation plan (GTP) 2010/2011–2014/2015. Volume I: Main text.
- Ethiopia Ministry of Health (MOH). (2005). National hygiene and sanitation strategy.
- Ethiopia Ministry of Water, Irrigation, and Energy (MOWIE), Water Supply and Sanitation Directorate. (2014). *Manual for accelerating the self-supply program*.
- Ethiopia MOWIE (2016). Water sector policy. Retrieved from: http://www.mowr.gov.et/ index.php?pagenum=2.4.
- Ethiopia MOWIE in Cooperation with the MOH. (2011). Summary of the UAP in four parts.
- Federal Democratic Republic of Ethiopia. (2013). WASH implementation framework (WIF).
- Federal Democratic Republic of Ethiopia. (2014). One WASH national program (OWNP): Program operations manual (POM) for the consolidated WASH account (CWA).
- Federal Democratic Republic of Ethiopia. (2016a). Growth and transformation plan II (GTP II) (2015/2016– 2019/2020). Volume I: Main text. National Planning Commission (NPC).
- Federal Democratic Republic of Ethiopia. (2016b). Growth and transformation plan II (GTP II) (2015/2016–2019/2020). Volume II: Policy matrix. NPC.

- Gedefa, T. (2016). Overview of Ethiopia's "One WASH" plan and contribution of CSOs and private sector. Sweden: Stockholm International Water Institute.
- IRC WASH & Coffey. (2015a). Diagnostic review report: Technical and managerial support for strengthening the monitoring and evaluation (M&E) system of the OWNP of Ethiopia. DFID. United Kingdom: Berkshire.
- IRC WASH & Coffey. (2015b). OWNP inception report volume 1: Technical and managerial support for strengthening the M&E system of the OWNP of Ethiopia. DFID. United Kingdom: Berkshire.
- Lane, J. (2002). Blue gold: Building African solutions for water, sanitation, and hygiene. Washington, DC: World Bank WSSP.
- Rosensweig, F., Perez, E., & Robinson, A. (2012). Policy and sector reform to accelerate access to improved rural sanitation. Washington, DC: World Bank.
- Ross, I., & Marie-Alix, P. (2015). Value for money analysis of the WSSP in Ethiopia (2008–2013). World Bank. United Kingdom: Oxford.
- Tadesse, D., Desta, A., Geyid, A., Girma, W., Fisseha, S., & Schmoll, O. (2010). Rapid assessment of drinking water quality in the Federal Democratic Republic of Ethiopia: Country report of the pilot project implementation in 2004–2005. Geneva, Switzerland: WHO and UNICEF.
- United Nations Development Programme (UNDP). (2005). Linking the national poverty reduction strategy to the MDGs: A case study of Ethiopia.
- USAID. (2014). Local systems: A framework for supporting sustained development.
- USAID. (2016). Baseline assessment report for USAID lowland water, sanitation and hygiene activity—final report. AECOM International Development and Deep Dive Research and Consulting PL.
- World Health Organization(WHO)/United Nations International Children's Emergency Fund (UNICEF) Joint Monitoring Programme (JMP). (2015). Progress on sanitation and drinking water: 2015 update and MDG assessment.

ANNEX A: GTP II POLICY MATRIX EXCERPT FOR SDG ANNUAL TARGETS 6.1 AND 6.2

From Table 9: Potable Water and Sanitation.

LINKS WITH SDGS	OBJECTIVES	ουτρυτ	INDICATOR	BASE YEAR	ANNUAL TARGETS					AGENCY	MEANS OF VERIFICATION
Goals 3.9, 6.1, 6.4, and 9.1	Increase the quality and access to safe drinking water and improving sanitary services.	and access to safe o safe drinking water g water roving	Rural potable water supply coverage in standard of GTP II (25 liters/capita/ day within 1 km radius) (%)	59	64	69	75	80	85	MOWIE MOH	MOWIE MOH and NPC Report
			Rural potable water supply coverage in standard of GTP II (by pipe) (%)	-	4	4	4	4	4		
			Urban potable water supply coverage in standard of GTP II (%)	51	55	60	65	70	75		
			National potable water supply coverage by GTP II standard (pipe) (%)	58	63	67	73	77	83		
			Total (urban and rural) potable water supply coverage by GTP II standard (pipe) (%)	-	6	6	6	6	6		

LINKS WITH SDGS	OBJECTIVES	Ουτρυτ	INDICATOR	BASE YEAR	ANNUAL TARGETS					AGENCY	MEANS OF VERIFICATION
	Improve the quality, sustainability, and supply of drinking water	Reduced number of dysfunctional rural water stations	Rural malfunction stations	11.2	11	10	9	8	7		
Goals 3.9, 6.1, and 11.1	Improve urban and rural water supply	Increased number of rural water supply institutions	Number of newly constructed stations	238,370	42,308	43,485	54,811	48,020	49,745	MOWIE MOH	MOH MOWIE and NPC Report
		Increased number of urban water supply institutions	Number of newly constructed stations	400	90	90	90	70	60	-	
Goals 6.2 and 11.6	Improve urban waste management and sewerage system	Strengthened urban waste management and sewerage system	Number of surveys conducted on urban drainage management and sanitation (number)	36	18	18				-	
			Number of urban sanitation systems constructed	6			3	3		-	
	Develop surface and underground water hydrological information	Developed surface and underground hydrological information	Coverage of ground and surface water hydrological information (%)	89.8					95	MOWIE MOH	MOWIE MOH and NPC Report

LINKS WITH SDGS	OBJECTIVES	Ουτρυτ	INDICATOR	BASE YEAR	ANNUAL TARGETS					AGENCY	MEANS OF VERIFICATION
Goals 2.3 and 2.6	Improve environmental sanitation	Clean and healthy environment	Proportion of households using latrines (%)	<28		60			82		
			Proportion of open defecation- free and verified <i>kebeles</i> (%)	18		50			82		

U.S. Agency for International Development 1300 Pennsylvania Avenue, NW Washington, DC 20523 Tel: 202-712-0000 Fax: 202-216-3524 www.usaid.gov