

Myanmar

Water Supply, Sanitation and Hygiene Sectoral and ORR (Thematic) Report

January to December 2018



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List of Acronyms

CATS	Community Approach to Total Sanitation
CLTS	Community-Led Total Sanitation
CSO	Civil Society Organization
DACU	Development Assistance Coordination Unit
DBE	Department of Basic Education
DDM	Department of Disaster Management
DPH	Department of Public Health
DRD	Department of Rural Development
GoM	Government of Myanmar
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
ILE	International Learning Event
MOALI	Ministry of Agriculture, Livestock and Irrigation
MOE	Ministry of Education
MOHS	Ministry of Health and Sport
MSDP	Myanmar Sustainable Development Plan
NGO	Non-governmental organization
ODF	Open defecation free
SDGs	Sustainable Development Goals
UNICEF	United Nations Children's Fund
WASH	Water, sanitation and hygiene
WFP	World Food Programme
WHO	World Health Organization
WinHCF	WASH in Health Care Facilities
WinS	WASH in schools
WMC	Water Management Committee

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Executive Summary

This progress report presents the achievements of the UNICEF Myanmar WASH programme during the reporting period January – December 2018. The contribution from Thematic Funding for UNICEF together with other donors' funding have enabled UNICEF Myanmar to address the water, sanitation and hygiene needs of vulnerable families, schools and healthcare facilities in 5 States (Rakhine, Chin, Kachin, Shan and Kayin) and Magwe Region. Project Activities supported equitable access to and utilization of sustainable, universal, safe, adequate and affordable WASH services.

UNICEF's technical assistance is linked to Sustainable Development Goal (SDG) and Myanmar Sustainable Development Plan (MSDP) 2018-2030. During the period, UNICEF supported the sector in initiating national Sanitation Policy development, development of Thant Shin Star guidebook for WinS and water supply guidelines. Focus was on strengthening institutional and human resource capacity of government partners to fulfil sector roles and responsibilities. Training was imparted to the Department of Rural Development (DRD) engineers, Department of Basic Education (DBE) staff, and Basic Health Staff (BHS).

Summary of progress of WASH programme is given below:

Rural water supply sub sector: With direct support from UNICEF, 110,000 people have gained access to basic water supply facilities through the construction of community managed piped water supply systems. With support from UNICEF, DRD used the same approaches to independently implement activities in additional 1,269 communities covering more than one million people using government funds. In 2017/2018, approximately US\$ 9.69 million were allocated to rural water supply. DRD has allocated US\$17.52 million for 2018/2019 to cover 1.5 million people from 2,169 communities. They have also recognized UNICEF for its support in developing rural water supply implementation modalities being currently scaled up.

Rural sanitation sub sector: With the approval from Ministry of Health and Sports (MOHS), the National Sanitation and Hygiene Policy development process has started in partnership with the World Health Organization (WHO) and the Department of Public Health (DPH). A new open defecation free (ODF) campaign modality has been developed and is being demonstrated in Southern Shan State in collaboration with MOHS. In this new modality, the Basic Health Staff and Rural Health Centres are the centre points for leading the open defecation free (ODF) campaign initiatives. It was also agreed with MOHS to move from Community Led Total Sanitation (CLTS) to Community Actions for Total Sanitation (CATS) approach which encompasses demand creation and supply chain strengthening works. Mainstreaming of CATS works within the MOHS system has started. Through direct support from UNICEF, 214 villages have become ODF resulting in 151,018 people living in clean environment. Implementing partners ensured women and school children participation in every stage of open defecation campaigns. For the first time in Myanmar, an entire township (Myinmu, Sagaing Region) consisting of 84 villages has been declared ODF.

WASH in institution sub sector: Activities in support of Policy development, , capacity building and strengthening of national monitoring systems were undertaken with the Ministry of Education (MOE) and MOHS. Efforts were also made to embed relevant SDG indicators into respective ministry information management systems. Innovative approaches to delivering WASH in schools directly through the DBE and parent teacher associations is delivering promising results. Through UNICEF direct support, 37,642 children from 304 schools and 27,079 households served by 34 health centres were supported to access

basic WASH facilities. WHO and WaterAid have been notable supporters of WASH in health care sector development and have played a key role in supporting the establishment and functioning of technical working groups.

Government monitoring systems were strengthened to facilitate Gender analysis including collection and analysis of sex disaggregated data. Few initiatives taken to strengthen gender focus include inclusion of Gender sensitive indicators in the WASH in school guidelines and establishment of menstrual hygiene management (MHM) rooms in project schools.

Humanitarian response and cluster coordination: UNICEF continued partnerships with national and international NGOs for humanitarian assistance in conflict and disaster affected areas. As cluster lead, UNICEF continued to provide WASH cluster leadership and coordination support at the national and subnational levels, covering inaccessible areas and coordinating with cluster partners to achieve the cluster targets.

Multiple protracted and complex humanitarian crises continued to impact Myanmar's WASH sector in 2018 affecting more than 941,351 people (26% IDPs). UNICEF directly and through WASH Cluster partners continued to support activities to enhance coordination, service delivery, preparedness, advocacy, capacity development and knowledge management. Humanitarian responses were largely delivered by government and local NGOs in Kachin and Northern Shan. Nevertheless INGOS remained main responders in Rakhine. Hygiene supplies as part of humanitarian response included appropriate menstruation management materials for targeted girls and women. Sanitation facilities in IDP camps included clean, safe and sex-segregated latrines with doors and locks, and place for sanitary pad disposal.

The Government of Myanmar (GoM) at the national and sub national levels provided leadership during flood related natural disaster. In conflict-affected states, the government has taken leadership under the WASH Cluster co-leading the Faecal Sludge Management (FSM) Technical Working Group in Kachin. Market analysis of the FSM system in Kachin was conducted and informed system strengthening to improve sanitation in humanitarian and development in Kachin. In Rakhine, the cluster to government strategy has been challenged by the political context. UNICEF and the WASH Cluster partners provided capacity building support to key government partners which contributed to preparedness and timely and efficient humanitarian action. UNICEF reached around 333,910 people with humanitarian WASH responses through Civil Society Organisation (CSOs), GoM counterparts and direct implementation across seven states and regions covering protracted IDP emergencies and monsoon floods. Protracted crisis has resulted in programming around activities that link humanitarian and development initiatives.

1. Strategic Context in 2018

The WHO/UNICEF Joint Monitoring Programme (JMP) 2017 report shows that nationally 66% of people are using basic drinking water services, while the population using basic sanitation services is 65%. The open defecation rate is 5%. Myanmar has aligned national monitoring systems with new SDG indicators, but data is not yet available for safely managed water and sanitation services. In rural areas 59% of the populations has access to basic sanitation, with open defecation at 7%. There are nevertheless wide disparities in access between different locations.

The Myanmar National WASH Strategy (2016-2030) aims to achieve universal access to water and sanitation for all by 2030. Community-Led Total Sanitation (CLTS) has been included in the National WASH Strategy and recently adopted by the Department of Public Health. To address the sanitation and hygiene issues, UNICEF is working with WHO and Ministry of Health and Sports to develop National Sanitation and Hygiene Policy and costed implementation plan.

The National WASH Strategy and Investment Plan highlights that current levels of investment are insufficient to make a significant impact on access to improved services in rural areas, schools and health facilities. Available funds are limited compared to estimated requirements and a strategy to drastically increase financing for the sector is urgently required if targets are to be met. Tracking of WASH sector financing remains challenging due to limited delineation of WASH budget lines under different Ministries.

Minimal information exists on how water and sanitation budgets are currently planned and managed at different administrative levels within Myanmar. Notably in 2018, the World Bank (WB) has commissioned studies to look at public expenditure within the WASH sector and Asian Development Bank (ADB) has committed more than US\$ 80 Million for urban WASH development through the Ministry of Construction.

Major donors working through government ministries within the WASH sector are the WB, JICA, AFD and ADB with the latter two focusing significantly on urban WASH programming. SDC, Denmark, UK and OFDA support both humanitarian and development WASH programmes. Many other donors and funds contribute significantly to the WASH sector through community development and livelihood programming, but it remains difficult to track expenditure under different ministries and departments for these multisectoral initiatives. Similarly, for WASH in Schools and Healthcare facilities available finances remain very unclear and likely far below requirements. Currently Myanmar has not been able to develop sufficient monitoring mechanisms to be able to report to the JMP and track progress on WASH in Institutions.

The Government of Myanmar has formed the Development Assistance Coordination Unit (DACU) and 10 Sector Working Groups were created. WASH is included under the Rural Development Sub Working Group which is chaired by the Secretary of Ministry of Agriculture, Livestock and Irrigation (MoALI). With UNICEF advocacy and support, the WASH Sector Working Group at the national level has been established which is chaired by the Director General of the Department of Rural Development and co-chaired by UNICEF.

Specific challenges and issues faced by the Sector

Key challenges facing Myanmar WASH sector include lack of adequate human resource capacity and associated weak sector governance which is to a large extent due to the WASH sector being spread across multiple Ministries with overlapping responsibilities.

Gender bottlenecks particularly affecting women and girls include; limited participation in WASH Management Committee (WMCs), governance and decision-making forums. The recent situation analysis has revealed that children with disabilities are less likely to access health and education services and that their voices are rarely heard in society. Some other challenges faced in WASH sector are summarized below:

Vulnerable children without safe water and sanitation services: An estimated 5 million children do not have access to improved water sources and 1.4 million children are practising open defecation¹. These children are not spread equally and typically those with the lowest access to improved water and sanitation are those situated in areas that are exposed to the highest conflict and natural disaster risks.

Schools and health centres with poor WASH facilities: Limited studies to date suggest that 50% of schools¹ and more than 50% of health facilities have severe deficits in WASH

¹ According to the Myanmar WASH Sector Situation Analysis Final Draft, 8/7/14, only 23 % of schools meet the international benchmark of 1 toilet per 25 students, while 51% achieve 1:50, with the designs being not generally child-or-disability friendly

services. Gender segregated facilities are often not available in schools which is especially important for girls who have reached menarche.

Need for focussing more on long term sustainability of WASH services: There is recognised need for investment in better planning to ensure sustainable water supply in communities, schools and health facilities are delivered as long-term services where accountabilities for operation and maintenance costs are properly defined, budgeted for and supported. To make the transition to a more sustainable service delivery model significant legislation and policy work is required to put in place that can harmonize approaches, reduce risks for larger external donors and encourage greater participation of private sector investment.

Strengthening of sector coordination: The Myanmar WASH sector is fragmented across multiple ministries with many overlaps in roles and responsibilities for provision of water, sanitation and hygiene services. Although WASH sector has been recognised a sub sector under the Rural Development Sub Sector Working Group, there is need for further strengthening sector coordination between departments and between levels of government such as Union, State and Region, District, and Township.

Advocating for increased investment in the WASH sector: UNICEF has supported the GoM to develop a costed investment plan for rural WASH between 2016-2030, which highlights chronic underinvestment in the rural WASH sector and need for massive long-term investment if SDG targets are to be reached. Myanmar is one of a few countries in ASEAN where the percentage of the urban population without access to improved water sources has increased over the past two decades².

UNICEF position to engage or addresses the issues and challenges

UNICEF has long-term experience in providing technical and policy support to the DRD, DPH and DBE, striking a balance between technical assistance (upstream work) and work on the ground (downstream work/service delivery). There is a unique opportunity for the UNICEF WASH section to promote greater coordination between ministries and support the development of new initiatives that put child rights, gender equity and social inclusion at the centre of a growing WASH sector.

Long term support has already been provided for rural WASH, WASH in schools and strengthening of enabling environment works with more recent support includes on SDG monitoring, urban WASH issues, climate change, public financial management and WASH in health care facilities. UNICEF also maintains strong partnerships with national and international CSOs.

2. Results in Outcome Areas

Outcome: Outcome Statement 4: Sustained use of safe water and sanitation services, and adoption of hygiene practices and strengthened systems for a clean and safe environment for all children, women, girls and boys, particularly the most disadvantaged and those affected by humanitarian situations.

2.1 Safe drinking water services in communities

(Output statement 4.a: Countries have implemented programmes to increase equitable access to safe and sustainable drinking water services in communities)

² Asian Development Bank, Myanmar unlocking potential: Country diagnostic study, ADB, 2014 (available at [Myanmar unlocking potential](#))

In 2018, 53,899 people have access to sustainable drinking water services (basic water supply) through UNICEF support. Details are as follows:

- Under the climate resilience WASH project in Rakhine, construction of 23 community managed and climate resilient water supply systems were completed to provide basic water supply to 29,967 people.
- From other 4 Regions and States, construction of 19 community managed piped water supply systems were completed to provide basic water supply to 23,932 people.

In addition to this, after renovation of existing ponds and construction of new ponds in Rakhine, 45,989 vulnerable rural people (52% women) from 13,525 households have access to upgraded water sources. Similarly, 18,878 rural



Figure 1. A girl collecting water from her household connection in Natmauk township in Magwe

people from 4,066 households in Bogalay township of Ayeyarwaddy Region have access to upgraded water sources. These communities cannot be considered as having access to 'safe' water supply as per UNICEF/WHO joint monitoring project definitions but remains an achievement in improving people's resilience to both drought and floods through increased storage capacity and raised embankments.

In Southern Shan State and Magwe Region, 94 rural villages were selected for installation of community managed water supply systems of which 71 villages have already formed Water User Committees. Feasibility surveys, technical designs and procurement of pipes have already started.



Figure 2. Newly built water supply system in Rakhine

As part of capacity development, technical training mainly on surveying

and designing of water supply system was provided to 95 (35 females) engineers and technicians of DRD in Southern Shan and Magwe. After attending the training, DRD staff have started assisting Water User Committees for planning and designing of water supply systems. Water Safety Planning (WSP) approach training was organized jointly with DRD officials in which 154 participants (113 women) attended. Effective implementation of WSP trainings by the DRD engineers remains challenging due to weak facilitation skills. Due to limited number of water supply engineers at township level DRD, it is challenged to ensure effective technical support to Water User Committees (WUCs).

Community managed household water connection system has been replicated and scaled up by DRD to 1,269 communities covering more than 1 million people in 2017/2018 for

which US\$9.69 million was spent. Similarly, DRD has allocated US\$17.52 million for 2018/2019 to cover more than 1.5million people from 2,169 communities.

2.2 Sanitation and hygiene

(SP Output Statement 4.b: Countries have implemented programme to increase equitable access to sanitation and hygiene and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations)

WASH in Schools (WinS): Designing and editing of Minimum Requirements for WinS and Thant Shin Star Guidebooks based on field testing has been undertaken. Final consultation with concerned ministers and endorsement of the guidebooks is being discussed with the DBE and the MoE. The 6th WASH in Schools International Learning Event (WinS ILE) report was finalized and shared with key commitments being incorporated into government planning.

UNICEF has worked closely with multiple departments and ministries to build capacity in WinS programming with a focus at state and township levels. Synergy has been built between different departments and Ministries for their available resources, knowledge, support and collaboration. Training of trainer course was delivered to total of 252 (54% female) cluster head teachers and other government officials from state and township level at Kachin, Kayah, Chin and Rakhine States. This has been cascaded to more than 937 teachers and parents at school level.



Figure 3. Newly built handwashing station in a school in Kachin State

Through UNICEF direct support, activities to improve access to school WASH facilities has been completed in 304 out of 376 targeted schools covering 37,642 school children (51% girls) across 13 townships in five states. Implementation in 72 schools is ongoing and an additional 157 schools are at planning stages for 2018-2019.

Mobile WinS data collection tools have been tested by 65 cluster members. The field testing has helped in developing appropriate questions for national and localized WinS surveys. Furthermore it has helped to shape question formatting for inclusion within the Education Management Information System (EMIS) which is currently being developed with the support of UNESCO. UNICEF has advocated strongly for inclusion of at least core WinS SDG questions into the EMIS system.

WASH in Healthcare Facilities (WinHCF): This new activity has been challenged by limited funding and fragmented leadership within MOHS. Despite the issues, 85% of the 40 targeted health centres at Kayah, Shan and Rakhine have received direct UNICEF support to implement WASH activities in 2018 covering an estimated 27,079 households. Through the WaterAid supported partnership, a research study was completed to explore the status of WASH in different level healthcare facilities across three regions. After an extensive government review process the report is due for publication in early 2019 and is expected to reignite the WinHCF technical working group which was restructured at the end of 2018.

Both WASH in Schools and Healthcare facility indicators have successfully been incorporated into the Myanmar Sustainable Development Plan (EMIS) which is under the oversight of the Central Statistics Office (CSO). This puts in place a strong nationally led foundational requirement to link local level indicators to global indicators.

Sanitation and hygiene in communities:

As part of the establishment of a national CLTS training resource centre, UNICEF together with the Environmental Sanitation Division of the Department of Public Health (DPH) have supported master trainers at the national level. The master trainers have been providing training to the State and Regional level government officials, and Rural Health Centre (RHC) staff. A series of CLTS facilitator training were organized in three townships of Southern Shan in which 185 Basic Health Staff (BHS) participated. On the last day of the training, the participants developed plan for open defecation campaign (ODF) campaign activities and household sanitation data (baseline) collection before starting triggering activities. It was also agreed that triggering and post-triggering monitoring activities will be conducted by Basic Health Staff (BHS) with the support of UNICEF and NGO partners.



Figure 4. Basic Health Staff attending CLTS training in southern shan

In the past, UNICEF implemented ODF campaign activities directly through local NGOs. From this year, it was agreed with the Ministry of Health and Sports (MOHS) to implement ODF campaign initiatives and hygiene promotion using CATS approach through MOHS structure. In the 1st quarter of 2018, more focus was given to define implementation approach and modality as well as defining roles and responsibilities of the Department of Public Health (DPH), State Health Department (SHD), Township Medical Office and Rural Health Centre (RHC) in ODF campaign activities.

Summary of achievements in 2018 is as follows:

- 324 communities triggered covering 212,987 people.
- Out of 324 triggered communities, 214 (66%) were certified as ODF by which 151,018 people are living in a clean environment.
- Within triggered communities, 126,555 people have gained access to basic sanitation services with direct support of UNICEF.
- All 84 villages in Myinmu Township of Sagaing Region have been declared ODF.

2.3 Enabling environment

(SP Output Statement 4.c: Countries adopt policies, strategies and programme that address risks related to disasters, conflict and public health emergencies)

Participation of the Union Minister of MOHS in the Mahatma Gandhi International Sanitation Convention (2018) in India has created a momentum to scale up sanitation initiatives. With the approval from MOHS, the National Sanitation and Hygiene Policy and costed Implementation Plan development process has started.

Under the Agriculture and Rural Development Sector Coordination Group of the Development Assistance Coordination Unit (DACU), the Rural Development Sub Sector Working Group was formed, and WASH is included under this sub-sector. UNICEF successfully advocated DRD to re-activate WASH Sector Working Group and the first coordination meeting was held in December 2018.

Together with the Central Statistics Office, UNICEF provided technical support to DRD, DPH and DPH for monitoring and updating the progress of SDG indicators. Clarification of global indicator definitions in local context and identification of data gaps for defining baseline was completed. It was agreed to use JMP methodology for estimating baseline of SDG 6.1 and 6.2. However, baseline data on WASH in schools and health care facilities are still not available. UNICEF provided technical assistance and advocated to align SDG 6 indicators with the WASH indicators of Myanmar Sustainable Development Plan (MSDP). Now the indicators and targets of National WASH strategy, SDG 6.1 and MSDP are fully aligned which has created consistency in WASH sector planning, monitoring and reporting. Although WASH sector goals and targets for achieving SDG 6.1 and 6.2 have been set up, equity-based SDG monitoring system is yet to be developed.

2.4 Urban WASH

(Output statement 4.d: Countries have initiated action towards ensuring that urban settings are child responsive)

In Yangon an integrated multi-sectoral survey (nutrition, food security and WASH) was conducted together with World Food Programme (WFP). This survey is led by the National Nutrition Centre of the Department of Public Health and WFP. UNICEF WASH section has taken the responsibility for WASH component and provided financial and technical support to carry out the survey work and data analysis. The survey findings will provide a good understanding of WASH situations of urban people in Yangon and development of subsequent programming.

2.5 Adolescent participation in WASH programme

Adolescent participation in WASH activities has taken place mainly within school WASH activities, open defecation free campaigns (ODF) and as part of humanitarian WASH support. Together with Ministry of Education and Ministry of Health and Sports, UNICEF drafted "Minimum Requirements for WASH in schools" document and school WASH guidebook has included consideration of adolescent girls needs around menstrual hygiene management (MHM).

In 2018, through direct support of UNICEF, 88 secondary schools have been supported to improve their WASH facilities by which 18,346 (51% girls) schoolchildren benefited. Improved WASH facilities that include adequate menstrual hygiene management have supported increased dignity for girls and understanding and respect from boys.

Within crowded IDP camp situations, including short term displacements due to floods or conflicts, the dignity and safety from violence/harassment of adolescent girls is an area of critical importance that is being addressed through humanitarian WASH interventions. All family hygiene kits provided to IDPs include sanitary pads and underwear as per cluster standard and toilets are either gender disaggregated or managed by small groups of families. The WASH Cluster is supporting ongoing research into MHM improvements including innovative small-scale incinerators to provide effective disposal of used sanitary pads. During the ODF campaign activities, especially at the triggering stage, separate groups of adolescents were formed and involved in planning and implementation.

2.6 Humanitarian assistance works

(S.P. Output d: Increased country capacity and delivery of services to ensure girls, boys and women have protected and reliable access to sufficient safe water, sanitation and hygiene facilities in humanitarian situations)

Preparedness capacity has been supported through trainings, in collaboration with other UNICEF sections and the WASH Cluster, covering several technical topics. Six contingency stock warehouses have been constructed in high disaster risk locations. Through UNICEF support, Department for Disaster Management (DDM) has been supported to review its human resource (HR) scale up planning and develop trainings on contingency warehouse management. Hygiene kit LTAs have been updated to more effectively cover both short and long-term emergencies. Due to fragmentation of WASH sector challenges remain in definition of clear preparedness roles and responsibilities between ministries, between national and state/regional government and between agencies supporting the GoM.

Coordination has been led by WASH Cluster nationally and concentrated on Kachin, Northern Shan and Rakhine States. The focus is on core WASH Cluster deliverables around supporting service delivery, advocacy, preparedness, monitoring, reporting, capacity development and knowledge management. Specifically, advocacy on need for improved living conditions in Rakhine IDP camps, durable solutions for Rakhine IDPs, camp closure guidelines and improved menstrual hygiene management support needs. Extensive work has been done to strengthen capacity through technical working groups. Preparedness has been supported through timely Information Management (IM) products, regular meetings and maintaining a comprehensive cluster website. Studies have been identified to deepen WASH knowledge and evidence in specific areas with one joint publication with the Centres for Disease Control and Prevention (CDC) on Ceramic Water Filters use in Rakhine State including IDP camps. Outside of Humanitarian Response Plan (HRP) areas humanitarian coordination is led by the government except for the activation of the WASH Cluster for the flood response in the south-east. There are challenges with limited GoM human resources at state/regional level and functionality. During monsoon floods the Cluster was informally activated to provide data management support and 3W development for responding agencies.

Response: As part of the ongoing humanitarian response UNICEF continues to fulfil its cluster role as provider of last resort and support WASH partners in some of the hardest to reach IDP camps in Myanmar.

UNICEF supported 8 CSO partnerships in Rakhine and 4 CSO partnerships in Kachin/Northern Shan. Response was also delivered through WFP, Government of Myanmar and direct implementation to reach 260,747 people with humanitarian WASH activities in areas covered by HRP. Widespread monsoon flooding had a heavy impact in the south-east and UNICEF together with partners was able to provide a significant immediate response to 60,496 people with lifesaving WASH supplies and services. Overall UNICEF response has been constrained by lack of humanitarian access, funding gaps and a complex transition processes to streamline some partnership arrangements in both Kachin and Rakhine.

2.7 Results Assessment Framework

The outcome result for WASH under the country programme (2018-2022) states “**By 2022, families and institutions in seven high burden states and regions have equitable access to and utilize safe, affordable, adequate and equitable WASH services across the lifecycle, especially the most vulnerable children and women**”. The results achieved by December 2018 compared to the baseline and targets are as follows:

Outcome/ Output	Outcome Result Indicators	Baseline 2017	Target (year)	Status Dec 2018	Primary Source
202	Proportion of population using basic water service	63%	75 (2022)	63 (updated data not available)	JMP report
202	Proportion of the population practising open defecation	19%	12% (2022)	19% (updated data not available)	JMP report
202/002	Number of people accessing a sustainable drinking water service in the reporting year only	0	100,000 (2018)	114,364	Programme Annual Report 2018
202/003	Number of men and women, girls and boys, who gained access to basic sanitation services in the reporting year only, as a result of UNICEF direct support	0	150,000 (2018)	126,555	Programme Annual Report 2018
202/004	Number of schools that practice daily group handwashing in the reporting year only, as a result of UNICEF direct support and/or leveraged through national programmes.	0	300 (2018)	304	Programme Annual Report 2018

3. Financial Analysis

Table 1: Planned budget by outcome area
Outcome Area 4: WASH
Myanmar 0600

Planned and Funded for the Country Programme 2018 (in US Dollar)

Intermediate Results	Funding Type ¹	Planned Budget ²
24-01 Water	24-01 Water	9,347,285
	Other Resources - Emergency	6,928,292
	Other Resources - Regular	2,025,594
	Regular Resources	393,400
24-02 Sanitation	24-02 Sanitation	5,617,049
	Other Resources - Emergency	2,224,690
	Other Resources - Regular	2,531,571
	Regular Resources	860,787
26-07 Operations support to programme delivery	26-07 Operations support to programme delivery	547,333
	Other Resources - Emergency	267,018
	Other Resources - Regular	185,428
	Regular Resources	94,887
		15,511,668

1 RR: Regular Resources, ORR: Other Resources- Regular (add ORE: Other Resources-Emergency, if applicable)

2 Planned budget for ORR (and ORE, if applicable) does not include estimated recovery cost.

Table 2
Country-level Thematic contributions to thematic pool received in 2018

Outcome Area 4 : WASH

Thematic Contributions Received for Outcome Area 4 by UNICEF Myanmar 2018
(in US Dollars)

Donors	Grant Number	Contribution Amount	Programmable Amount
French Committee for UNICEF	SC1899060047	446,726.00	425,453
Total		446,726.00	425,453

Table 3**Expenditures in the Thematic Sector****Thematic Sector: WASH****Myanmar****2018 Expenditures by Key-Results Areas (in US Dollars)**

Organizational Targets	Expenditure Amount			
	Other Resources - Emergency	Other Resources - Regular	Regular Resources	All Programme Accounts
24-01 Water	2,786,506	1,969,470	687,560	5,443,536
24-02 Sanitation	870,019	1,716,036	999,807	3,585,862
24-03 Disaster Risk Reduction	17,028	1,021	-33	18,016
24-04 Children in Urban Setting/Local Governance	3	-258	86,324	86,069
Total	3,673,556	3,686,269	1,773,658	9,133,483

Table 4: Thematic expenses by Results Area

Fund Category All Programme Accounts
 Business Area Myanmar - 0600
 Prorated Goal Area 4 Safe and Clean Environment
 Donor Class Level Thematic
 Year 2018

Expense Row Labels	Column Labels Other Resources - Emergency	Other Resources - Regular	Grand Total
24-01 Water	83,018	16,855	99,873
24-02 Sanitation		308,397	308,397
24-03 Disaster Risk Reduction	11,204		11,204
Grand Total	94,222	325,252	419,474

2018 Expenses by Specific Intervention Codes

Fund Category

Year

Business Area

Prorated Goal Area

Fund Sub-Category

All Programme
Accounts

2018

Myanmar - 0600
24 Safe and Clean
Environment

(Multiple Items)

Row Labels	Expense
24-01-01 WASH - Enabling environment (policies/strategies, coordination, regulation, financing, planning-monitoring-review, sector capacity development and professionalization)	618,209
24-01-02 Water - climate resilience and environmental sustainability	27,825
24-01-03 WASH - risk informed programming including climate resilience disaster and conflict	1,075,891
24-01-04 Water supply - sustainability checks	1,044
24-01-06 Water supply - rural communities service delivery	1,053,578
24-01-08 Water supply - safety/quality/treatment (including household treatment and safe storage)	387,304
24-01-09 Water supply in emergencies - improving water supply services communities	1,527,719
24-01-99 Technical assistance - Water	251,544
24-02-01 Hygiene - handwashing with soap in communities	10,256
24-02-03 Hygiene promotion activities in communities	44,502
24-02-04 Sanitation and hygiene - eliminating open defecation in rural communities	479,728
24-02-08 Sanitation and hygiene - institutions (schools, health carefacilities, ECD centres) including menstrual hygiene management	823,239
24-02-10 Sanitation in emergencies - improving sanitation services in communities	734
24-02-11 WASH humanitarian cluster/humanitarian sector coordination	58,402
24-02-99 Technical assistance - Sanitation	1,730,130
24-03-02 Disaster risk reduction (including linkage to climate change)	15,107
24-04-02 Urban/local policy, planning and budgeting	60,845
26-01-01 Country programme process (including UNDAF planning and CCA)	2,707
26-01-02 Programme reviews (Annual, UNDAF, MTR, etc.)	48,801
26-02-01 Situation Analysis or Update on women and children	1,109
26-02-04 Stimulating demand for and capacity to use data	2,922
26-02-05 Administrative data, registers and non-MICS household surveys and censuses	2,097
26-02-08 Programme monitoring	4,421
26-02-09 Field monitoring	5,823
26-03-02 Capacity and skills development for social behaviour change	3,041
26-03-04 Community engagement, participation and accountability	2,922

26-04-01 CO/RO Supply - technical assistance and collaboration in supply chain, procurement of goods and services, and logistics	4,145
26-05-01 Building evaluation capacity in UNICEF and the UN system	777
26-05-03 Country Programme evaluations (including UNDAF evaluations)	482
26-06-01 Parliamentary engagement for policy advocacy	763
26-06-04 Leading advocate	56,443
26-06-08 Emergency preparedness (cross-sectoral)	18,757
26-07-01 Operations support to programme delivery	758,868
27-01-06 HQ and RO technical support to multiple Goal Areas	104,469
28-07-04 Management and Operations support at CO	-51,125
Grand Total	9,133,483

Table 6: Planned Budget for 2019

Thematic Pool Area: WASH

Myanmar

Planned Budget and Available Resources for 2019 (in US Dollar)

Result	Funding Type	Planned Budget ¹	Funded Budget ¹	Shortfall ²
24-01 Water	24-01 Water	23,120,820	5,092,636	18,028,184
	Other Resources - Emergency	20,680,377	2,576,287	18,104,090
	Other Resources - Regular	2,039,556	1,736,044	303,512
	Regular Resources	400,887	780,304	-379,417
24-02 Sanitation	24-02 Sanitation	10,066,708	4,704,308	5,362,400
	Other Resources - Emergency	6,640,517	827,252	5,813,265
	Other Resources - Regular	2,549,021	2,169,694	379,327
	Regular Resources	877,170	1,707,362	-830,192
26-07 Operations support to programme delivery	26-07 Operations support to programme delivery	1,080,425	446,420	634,005
	Other Resources - Emergency	797,026	99,291	697,735
	Other Resources - Regular	186,707	158,922	27,785
	Regular Resources	96,693	188,207	-91514
	Sub-total Regular Resources	1,374,750	2,675,873	-1301,123
	Sub-total Other Resources - Regular	4,775,284	4,064,661	710,623
	Sub-total Other Resources - Emergency	28,117,920	3,502,830	24,615,090
Total for 2019		34,267,954	10,243,364	24,024,590

1 Planned and Funded budget for ORR (and ORE, if applicable) excludes recovery cost. RR plan is based on total RR approved for the Country Programme duration.

1 GE grant was included under RR funded Amount

4. Future work plan

UNICEF will focus on the following key areas in 2019:

Enabling environment

- Development of National Sanitation and Hygiene Policy, and costed Implementation Plan
- Strengthening sector coordination and institutional arrangement that allow for participation of a broad range of stakeholders. UNICEF will continue to co-chair WASH sector working group at the national level.
- Technical assistance for long-term human resource capacity building to ensure roles and responsibilities for effective WASH service delivery can be achieved at scale through both government and private sector actors.
- Continue to support the government for strengthening national sector monitoring **systems** that are integrated with broader management information systems already established or being established within key ministries. This will include establishment of SDG monitoring system as well.
- Introduce sustainability checks and Value for Money concept in ASWAI project with support from RO and HQ.

Rural water supply sub sector

- Capacity development of service providers and communities for effective and sustainable service delivery while mainstreaming gender into every aspect: This includes water safety plan development, establishing water quality monitoring system at the community level, strengthening mechanism for better operation and maintenance (O&M), strengthening development of equitable tariff systems, private sector engagement in water supply services.
- Developing advocacy paper and tools for scaling up community managed water supply systems including water safety planning and water quality monitoring.
- Partnership with private sector and civil society organisations to trial and develop new technological solutions rural water supply.
- Evaluation of rural water supply programme with focus to community managed household water metering system

Rural sanitation and hygiene sub sector

- Review and development of manuals and guidelines for effective planning, implementation and monitoring of ODF campaign works.
- Working with small scale private sector in to strengthen sanitation markets in targeted areas.
- Continue to support the government to develop Rural Health Center (RHC) as "sanitation and hygiene promotion hubs".
- Capacity development of Basic Health Staff for facilitation of ODF campaigns, information management and ODF monitoring works.
- Increase emphasis on C4D initiatives.

WASH in Schools and Health Care Facilities

- **Finalize the Minimum Requirements for WASH in Schools and Thant Shin Star Schools (TSS) Guidebook:** The National Standards and Guidebook have already been drafted and submitted to MOE for final review and finalization. Once these are approved, UNICEF will support the government for dissemination.

- **Guidelines for WASH in Health Care Facilities:** UNICEF together with MOHS, WHO Water Aid conducted WinHCF assessment. Based on the findings and recommendations, UNICEF, WHO and will support for developing WinHCF guidelines.

Service delivery

- **Rural water supply, sanitation and hygiene promotion, and WASH in institutions:** Together with government line ministries, UNICEF will continue service delivery of these sub sectors focusing in dry zone areas, Shan, Kayin, Chin, Kachin and Rakhine. Focuses will be more on demonstration and scaling up of successful interventions.

Humanitarian assistances and cluster coordination:

- Humanitarian assistance works will continue in Rakhine, Kachin and Northern Shan in alignment with the Humanitarian Response Plan.

5. Expression of thanks

UNICEF Myanmar would like to thank the French Committee for UNICEF for providing much needed financial support to provide access to improved WASH facilities for Myanmar's most vulnerable children and improve their participation in school and their communities. Similarly, the fund has allowed UNICEF to provide technical assistance in humanitarian assistances, WASH cluster leadership and coordination.

As a result of Thematic Fund critical support more children in Myanmar, and in particular more girls and boys from disadvantaged groups, have been able to improve their participation in school and their communities fulfil their potential for a brighter future. UNICEF would also like to acknowledge the Department of Basic Education, the Department of Public Health, the Department for Rural Development, the national NGOs and local authorities for their collaboration, which is key to achieve these results for children.

Annexes

Annex 1. Human Interest Story



January 2019 - Solar Powered Water
Human Interest Story Systems Field Note - I

Annex 2: [Online donor feedback forms: English version](#)



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Myanmar WASH Human Interest Story

Solar Energy Brings Safe Water to Drought-Prone Communities in Rural Myanmar

Myaing township, 30 November 2018 –Nyaung Pin Teik is a village located in central Myanmar. The region, located in Myanmar's "dry zone," is prone to extreme drought. For many years, the village had struggled to access safe water, relying on a handpump which would run dry during the summer months.

This all changed in 2015, when UNICEF, in partnership with Myanmar's Department of Rural Development (DRD), teamed up with the community to install a solar powered water system. The system was jointly funded by the community (41%) and UNICEF (59%).

The community carried out all construction (under supervision of DRD) including well drilling, pipe fittings, installing water meters and a 1500 gallon water storage tank, which provides a "water buffer" for the evenings, or during cloudy days.

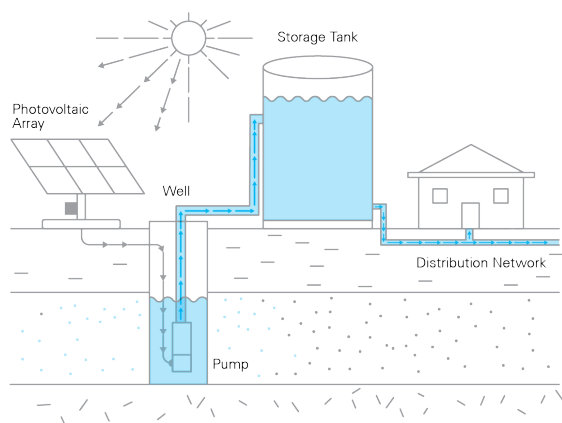


Fig.1 Example of solar powered water system design



U Aung Thin and Daw Aye Than, stand beside their community's solar powered water system together with Daw Aye Aye Thant (the lady with glass and uniform), head of Township DRD

The solar system required around 150m² of unshaded land for construction. Most community members only own small plots of land so finding space could have been a challenge. However, Daw Aye Than, 77 and her husband U Aung Thin, 82 kindly donated the land required to support the project.

"We wanted to help improve water access for the community," explains Daw Aye Than. "It was so hard for all of us before, we had to carry water by

hand every day from the handpump outside the village.”

The couple is now able to access water easily, as it is piped directly to their home. This has allowed them to upgrade their latrine (to a flush latrine with running water for handwashing) and create a garden where they grow vegetables such as string beans.

The system is now providing safe piped water to all 33 households in the community. User fees are collected monthly (around \$0.10 per m³) and calculated based on household water meter readings. The funds are then used to support the costs of any repairs and system maintenance that is required. Any surplus funds are used for community development projects.

The community decided to give U Aung Thin and Daw Aye Than a discounted rate for water use as they kindly donated land for the project. “It’s a nice bonus” they explain, “but we’re just so happy we can play a role in helping the community.”

The SPWS is just one of 36 systems that have been installed as a result of the UNICEF-DRD-community collaboration programme. In 2019, UNICEF will add a further 10 systems to their programme, in collaboration with DRD.



U Aung Thin and Daw Aye Than stand beside the string bean patch in their vegetable garden.

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Using Solar Powered Water Systems to Improve Climate Resilience in Rural Myanmar

SUMMARY BOX

- Since 2012 UNICEF Myanmar has been working with the Department of Rural Development, to construct Solar Powered Water Systems (SPWS) in rural, off-grid communities.
- Communities contribute up to 60% of system costs and are solely responsible for system management which creates a strong sense of ownership and financial sustainability.
- The community-based management model and user fee collection system has been successful because of strong community cohesion and supervision from DRD.
- Major challenges for scale up include the initial high cost of investment, weak local markets and the availability of trained technicians in rural areas.

Introduction

Myanmar is located the monsoon region of Asia, between Bangladesh and Thailand (Fig.1). The country's climate is significantly impacted by its geographic position and its topological relief. The north-south alignment of the country's mountain ranges and valleys creates a pattern of alternate zones of heavy and scarce precipitation. The west coast is subject to tropical cyclones and sea level rise.

The Climate Risk Index ranks Myanmar as the third most vulnerable country to the impacts of climate change, based on extreme weather events, including flooding, droughts and cyclones (Fig.1). Observed evidence of climate change over the past 60 years has included a nationwide increase in temperature of on average around 0.08°C per decade and an increase in total rainfall (29-215 millimetres per decade), leading to increased flooding.



Mother and child stand beside their flooded village in southern Myanmar

Changes in the duration of the monsoon season have been observed as well as the recurrence and severity of extreme weather events. At the same time, increased water scarcity is occurring, particularly in the central regions, leading to recurring drought. These impacts are undermining the safe provision of WASH services and are expected to intensify further in the coming years unless urgent action is taken.

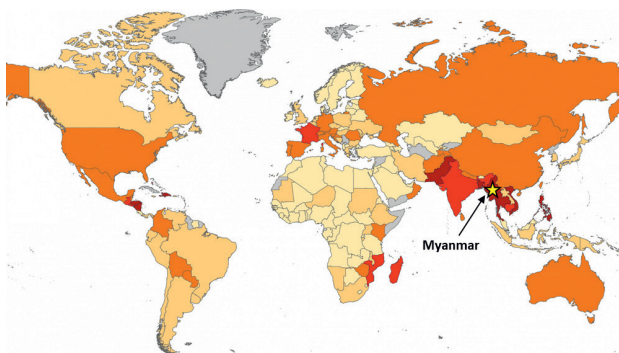


Fig.1 World Map of the Global Climate Risk Index¹

Description of Intervention

Overview

In order to address the impacts of climate change, UNICEF and the Department of Rural Development (DRD) are working together on drought resilience programming in rural areas. Efforts have focussed on increasing year-round access to safe water supply and increasing water storage in dry-zone regions.

UNICEF Myanmar and Rural Water Supply Division (RWSD), the former government department responsible for rural water supply, first began piloting the use of Solar Powered Water Systems (SPWS) for off-grid communities in 1989. The systems back then only point of source. The efficiency and durability of solar powered water systems has increased significantly over the past 20 years. Starting in 2012, around 36 new systems with pipe network and water meters have been installed in rural areas (Fig.2).

UNICEF Myanmar is prioritising the installation of SPWS for those communities with the worst water access – for example, those communities

KEY POINTS

- Myanmar has recently been ranked as being the “third most vulnerable country to climate change” in the world.
- These impacts of climate change are set to worsen in the coming decades, undermining the provision of WASH services.
- Solar powered water systems are an effective method of ensuring safe, climate resilient water supply to off-grid rural communities and avoid the carbon emissions associated with a diesel pump.
- In Myanmar, the systems are being used to replace unimproved water sources, providing a higher level of service to communities, as outlined in the SDGs.

relying on untreated surface water sources and living far away from the national grid.

The systems are also being used to replace traditional, hand-dug wells which are vulnerable to both flooding and drought (they often dry up during the dry season). SPWS also, importantly, offer a higher level of service to communities, through the use of piped water, as stipulated in the Sustainable Development Goals (SDGs).

Diesel-generator based water pumping systems are not considered a sustainable option as they are costly to maintain. They also break down frequently and have expensive fuel requirements, which emit greenhouse gases, such as CO₂. Additionally, they are noisy and are prone to damage from heavy rain and flooding.

¹

<https://www.germanwatch.org/sites/germanwatch.org/files/publication/20432.pdf>

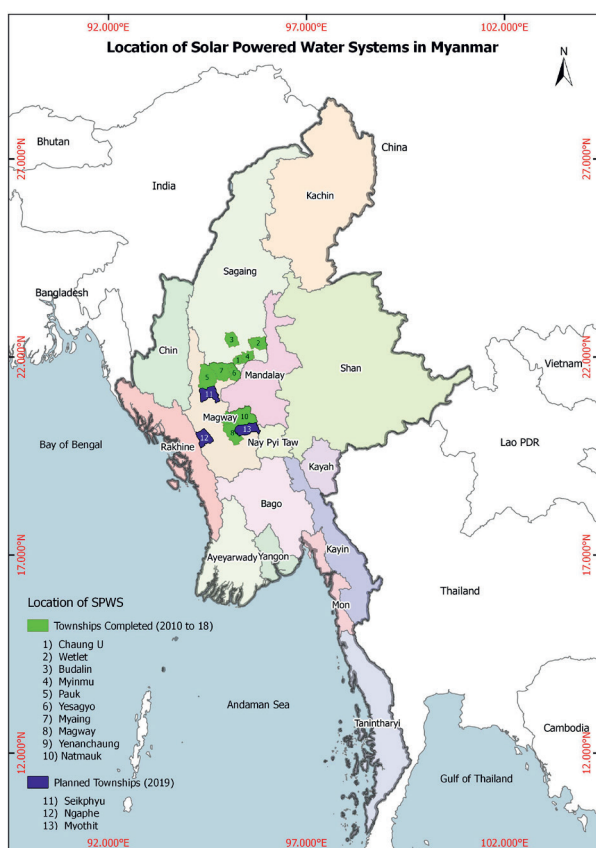
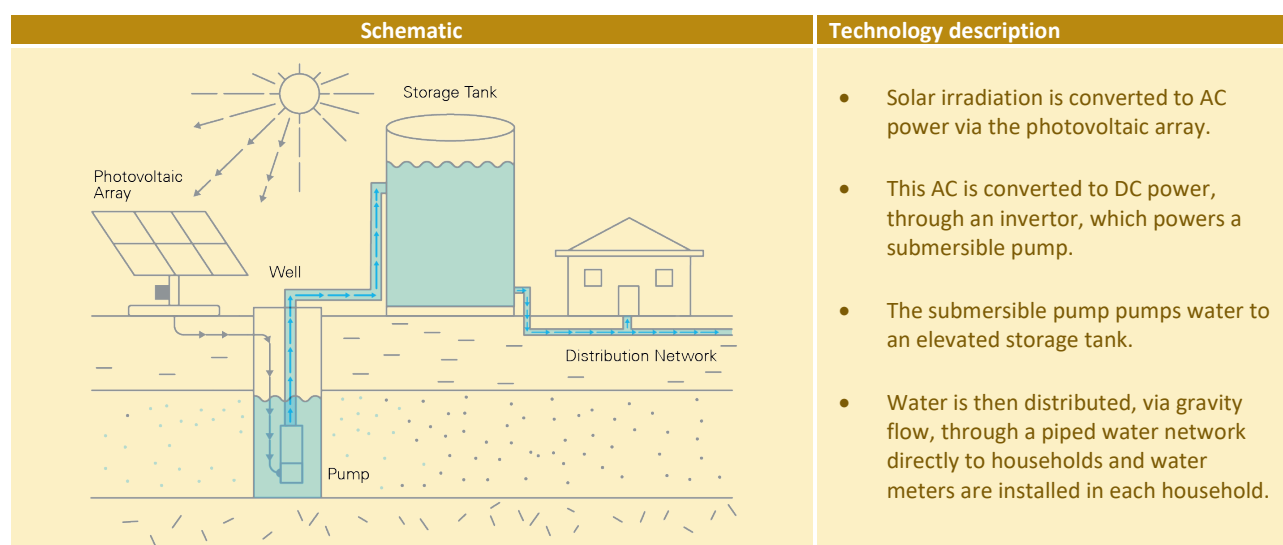


Fig.2 Map showing locations of UNICEF-DRD supported Solar Powered Water Systems

System Design

A typical system design consists of a solar array, submersible pump, control panel and storage

Fig.3 A Typical Solar Powered Water System



tank (Fig.3). Systems are designed according to the needs of the population and environmental factors such as solar irradiation and water depth.



A Solar Powered Water System in Natmauk Township

Wherever possible, agricultural and livestock needs are also taken into consideration (allowing the SPWS, furthermore, to be classified as Multiple Use Systems).

Costing

Myanmar's National WASH Strategy (2016-2030) states that communities should provide up to 40% of initial system installation costs.

Table.1 gives a breakdown of the average cost of a solar powered water system in Myanmar.

Table.1 Average cost break down for a UNICEF-DRD Solar Powered Water System in Myanmar (funded by DfID)

Activity	MMK	USD
UNICEF Contribution	9,374,000	5,874
i) Solar Pumping System Installation	4,915,000	3080
ii) Spare parts kit	2,115,000	1326
iii) Pipes and fittings	2,344,000	1469
Community Contribution		
i) Cash	6,298,025	3947
a. Construction of overhead tank	2,000,000	1253
b. Tube well drilling	3,068,500	1923
c. Water meter	189,000	118
d. Pipe fittings	570,525	358
e. Foundations of support structure and fencing	350,000	219
f. Transport Charges	120,000	75
ii) Labour contribution	381,000	239
a. Digging of trench line	231,000	145
b. Plumbing	150,000	94
TOTAL	16,053,025	
Cost Per Beneficiary	85,845	53.80

System Management

Once the system has been successfully constructed, the community is responsible for all aspects of system management, including O&M, repairs and the collection of user fees. DRD provides supervision and coordination with technicians as required. WUCs have direct access to township DRD office, and the collaboration between the local government and community is strong.

Water User Committees (WUCs) oversee the day-to-day management of the water systems. Water meters are used to monitor household water consumption and fees are collected each month by WUC members based on usage. These fees range from 100-300 Kyat (MMK) per m³ (\$0.06-\$0.20), with the average household paying 1500 kyat (\$1.00) per month. This is approximately half the price of a diesel generator based water pump.

User fees are agreed upon democratically by the community during the project's inception phase in order to ensure that they are affordable for all (including the poorest households).

Willingness to pay is high, due to a higher level of service provision (water is now piped directly to households) and appreciation that fees will be used to maintain the system and potentially fund other community projects.

Depending on date of construction, most communities have now amassed savings exceeding a thousand dollars. In many cases, these excess savings are being used to fund other community projects ranging from road construction, electricity generation to garbage disposal systems.



A girl collects water from her household connection to the SPWS



Water user displays her payment receipt in Pauk Township.

Outcomes

A Higher Level of Service

Around 40 systems have now been completed through the UNICEF-DRD SPWS programme. The programme has allowed 40,000 people, living in off-grid communities, to gain access to safe water.

SPWS have allowed them to gain a higher level of service – with safe water being piped directly to households. This has led to multiple time-saving benefits (people now have more time to engage in economic and social activities). Having water located closer to home has also many households to upgrade their traditional latrines to an improved pour-flush design with a running water taps now being available for handwashing.

Strengthened Community Management Structures

The initiation of WUCs has helped to strengthen existing community management structures. The participation of women in the committees has been strong, many also work as tariff collectors, meaning they are able to earn additional months source of income.

Households appear more willing to pay for the higher level of service they receive and user fee savings are being used to effectively sustain systems and fund other community-based projects (such as road construction and electrification).

The project has also further strengthened the relationship between WUCs and the DRD, without the need for private contractors, allowing UNICEF to effectively hand over projects to communities once construction is completed.

The strong relationship between DRD and the communities has meant that any technical issues are addressed in a timely manner.

However, it is important to note, that despite the strong relationship with the Government, communities retain full ownership and responsibility for their systems. This has been reinforced by the community contribution mechanism (for both installation and user fees).

Climate Change Resilience

The systems are improving drought resilience in rural communities, particularly those located in dry zone areas. The systems are mostly replacing hand-dug wells or stream water (which dry up during the dry season), providing water to communities 365 days a year. The design of the system (water storage tanks) ensure SPWS have a “water buffer” for cloudy days.

At the same time, user fee collection ensure that water is effectively conserved at the household level.

The systems have proven to be flood resilient, particularly in the southern states which experience heavy rainfall during the rainy season (see picture below). The systems also provide enough water for livestock, strengthening livelihoods, reducing poverty and improving overall community climate resilience.



A functioning SPWS is resilient to the impacts of rising flood waters during the rainy season.

Challenges and Mitigation Measures Applied

Supply Constraints

The main factor currently inhibiting the further scale-up of SPWS by DRD in Myanmar is cost. In Myanmar, the market for SPWS remains weak and there is poor availability of system components and spare parts locally.

It not currently possible to purchase higher quality SPWS brands, such as Lorentz and Grundfos, locally as the companies do not have a strong official presence in Myanmar. Solar panels are available locally, but their quality remains low (most have lifespans of 10 years or less). Major barriers for private sector expansion include the

need for import licenses and other lengthy process which leads to higher transaction costs for the private sector.

The presence of poor quality components (including imitation products) and spare parts, often imported from China, ultimately leads to issues with durability and overall confidence in the scale-up of SPWS.

Because of these challenges, UNICEF currently procures from their Supply Division in Copenhagen, which remains costly in terms of transport. The higher costs associated with these SPWS limits the number of communities both UNICEF and DRD can support with the systems. Opening up local markets would allow both UNICEF and DRD to really take the systems to scale.

Capacity Constraints

Local capacity to carry out both major and minor repairs is limited. Technicians are therefore sourced from Yangon to make required repairs. This is both costly and can increase repair times. More training is required for local technicians to address the current capacity gaps in rural areas.

Environmental Constraints

SPWS are not suitable for all locations. In the dry zone in particular, water depth can often exceed 300m. Solar powered systems which use a DC/AC converter are much higher in cost. Surface water solar pumps are now also being piloted in some regions as an alternative.

Once completed, it is vital that solar panels are cleaned regularly, particularly in the dry zone where dust rapidly accumulates. Vegetation growth can also shade panels if not adequately maintained.

Both these factors have the potential to significantly reduce system output and must be an important component of O&M plans.

Equity Constraints

The National Water Strategy states that communities must be willing to contribute up to 40% of system costs to be eligible for a SPWS. This means that the poorest communities are often unable to afford to participate in SPWS project and are instead left with tube wells and other unimproved sources. However, it is important to note, that due to the relatively low (democratically-decided) water tariffs, every household within the water supply project villages has access to safe, piped water supply.

The DRD currently provides alternative water sources to unserved communities. However, this represents a missed opportunity for DRD and UNICEF to significantly reduce water equity gaps, by providing the poorest communities with access to a safely managed water system. In addition, it is vital that solar powered water systems are prioritized for districts with the worst WASH and poverty indicators to maximise their health and poverty reduction impact at the regional level.



Water User Committee members stand beside their SPWS in Pauk Township.

Lessons Learned

The community-based management model for solar powered water systems works well in Myanmar, arguably better than in many other countries, because of the country's very specific social and political context. Myanmar has very high levels of social capital, a limited history of dependence on external agency's support and significant Government capacity to monitor and support communities. If these attributes are not present in other countries, a private utility-based model may perhaps be a more effective option for system management.

The strength of the relationship between UNICEF and DRD and DRD's subsequent relationship with communities, has been a key driving force in the success of the project. This relationship, which excludes the need for a private contractor, ensures a real sense of community ownership and responsibility. This is reinforced by the fact that communities also contribute towards the cost of the project and also pay user fees.

It is important that the Government creates a supportive enabling environment for the SPWS private sector and support the expansion of local markets to reduce costs and increase the availability of quality products and spare parts.

Following system installation, it is vital that regular follow up occurs with communities, to ensure that effective O&M is being consistently practiced. Panels must be cleaned regularly (particularly in the dry zone, which are prone to high levels of dust) and vegetation must be cleared to prevent shading. Not doing this, can lead to major reductions in system output. The township DRD offices have committed to provide technical assistance to the WUCs, to help overcome such challenges moving forward.

Water demand is particularly high during the dry season. Communities also require water for their agricultural and livestock needs, something which

is vital for resilience and poverty reduction. Wherever possible, the future dimensioning of systems should take these needs into account (i.e. creating Multiple Use Systems).

Next Steps

In 2019, UNICEF will continue to scale up the use of solar powered water systems to an additional 10 communities.

DRD has a target of ensuring improving water supply for 2000 communities each year. For the most remote, off-grid rural communities, it is hoped that a significant number of these will be solar powered water systems.

UNICEF will work to ensure that priority is given to the poorest, off-grid communities, particularly those currently relying on untreated surface water sources.

In order to achieve SPWS results at scale, it is vital that local markets are expanded. The policy environment must be strengthened to allow reputable SPWS companies to enter Myanmar. This will ultimately lead to an increased availability of supplies and a reduction in overall programming costs. The private sector could also play an important role in training and certifying technicians in SPWS technology and will be vital in improving WASH sector capacity around SPWS in the future.

UNICEF and DRD are currently working with the private sector to develop a list of certified, trusted, locally available technicians who can fix systems as required. This would help reduce repair time frames and improve the capacity of communities to manage their own systems (without relying on DRD to facilitate).

In order to improve the efficiency and accountability of user fee collection further, mobile payment technology options could also be explored, in collaboration with the major mobile

phone companies in Myanmar. The technology is already successfully being used in other countries.

UNICEF and DRD will also explore the potential for joining forces with other agencies currently involved in rural electrification programmes. This makes sense because all the SPWS communities are also off-grid, so also desperately need electricity (which can also in turn be used for water supply). There is real potential for the use of micro-grids in these areas. As such, partnerships could be formed with the World Bank, UNDP or other agencies, along with major donors such as the Green Climate Fund in order to combine resources and implement joint programming at scale.

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About the Series

UNICEF's water, sanitation and hygiene (WASH) country teams work inclusively with governments, civil society partners and donors, to improve WASH services for children and adolescents, and the families and caregivers who support them. UNICEF works in over 100 countries worldwide to improve water and sanitation services, as well as basic hygiene practices. This publication is part of the UNICEF WASH Learning Series, designed to contribute to knowledge of best practice across the UNICEF's WASH programming. The documents in this series include:

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WASH Diaries explores the personal dimensions of WASH, and remind us why a good standard of water, sanitation and hygiene is important for all to enjoy.

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