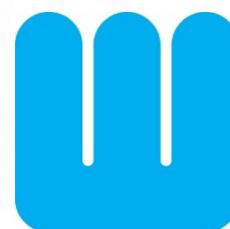
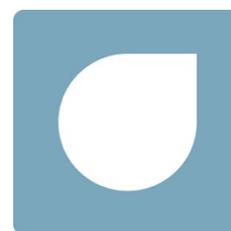
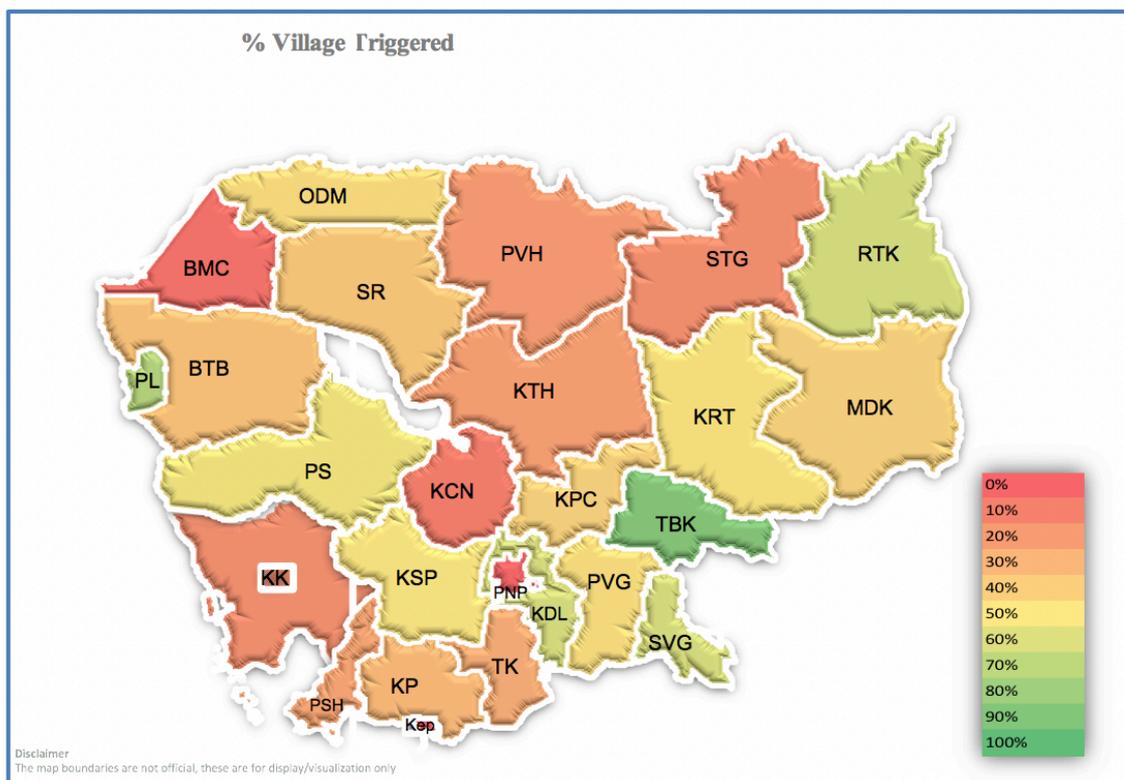


Reflection Note

Government-led Rural WASH Management Information System (MIS)



WaterAid

Reflections on contributing to collaborative efforts to strengthen Cambodian rural WASH monitoring

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I. Introduction

Under the leadership of the Ministry of Rural Development (MRD), the Cambodian rural water, sanitation and hygiene (WASH) sector has long recognized the need for a comprehensive system to collect, manage and share information about the progress of WASH in the rural Cambodian context. Since 2013, there have been multiple rounds of discussion on such a monitoring system, culminating in a 2015 proposal for a comprehensive IT-based system which was ultimately deemed too technically complex, expensive and dependent on consultants for MRD to adopt.

The National Action Plan 1 (NAP) for RWSSH 2014-2018 presents the first roadmap towards universal, sustainable WASH services in Cambodia. At the beginning of the NAP1, there was no comprehensive database from which to set a baseline for the plan's indicators. The NAP1 also called for the establishment and regular updating of a Management Information System (MIS) as a tool to support planning, decision making and investment. In 2016-17, as MRD and sector partners began looking to the review of the NAP1 and developing NAP2, the MIS was once again proposed as a credible means of monitoring the status of rural WASH services and tracking progress towards NAP targets. Led by MRD, a collaborative sector working group developed and implemented Phase 1 of the MIS in 2018.

Box 1: Is it really an MIS if it doesn't monitor service coverage?

An MIS is a system used for coordination, management, analysis, visualisation and use of information. The first two phases of the Cambodian MIS for RWSSH gather information about the progress of outputs (activity results) within the NAP, but not about progress towards achievement of the outcomes (service coverage increases). This has been a source of confusion, with some external parties (WASH sector actors from other countries, and Cambodian WASH sector actors who are less involved in the MIS) questioning whether it should be considered an MIS if it doesn't monitor service coverage.

The vision for the MIS development was to start simple, collecting only six indicators available from secondary data, and then to build on the early successes. All of the indicators in Phase 1 and Phase 2 measure progress towards output targets in the NAP (Table 2) and without the MIS there was no system for gathering this information.

Currently the only consistent and regularly updated tools and methods for gathering outcome-level data come from the Cambodian Socio-Economic Survey, run by the Ministry of Planning, which covers only a sample of villages each year and takes 1-2 years to be published, and the Commune Database, which is a 600-indicator long database completed annually by village leaders and with known reliability issues,

especially for water supply. Neither of these sources can be customised for WASH as they are outside the authority of the MRD.

There is still a need for service coverage monitoring in Cambodia. Eventually indicators for these outcomes may be included into the MIS once systems, processes and capacity developed for MRD to regularly consolidate it from village-level logbooks which are currently being piloted.

II. Summary of MIS Development

Phase 1 of the MIS (2018) included development of standard data entry templates, coordination structures, data validation and review processes, data analysis, data visualisation through maps and graphs, and reflection with MIS participants and users. This is represented as a flow chart in Figure 1.

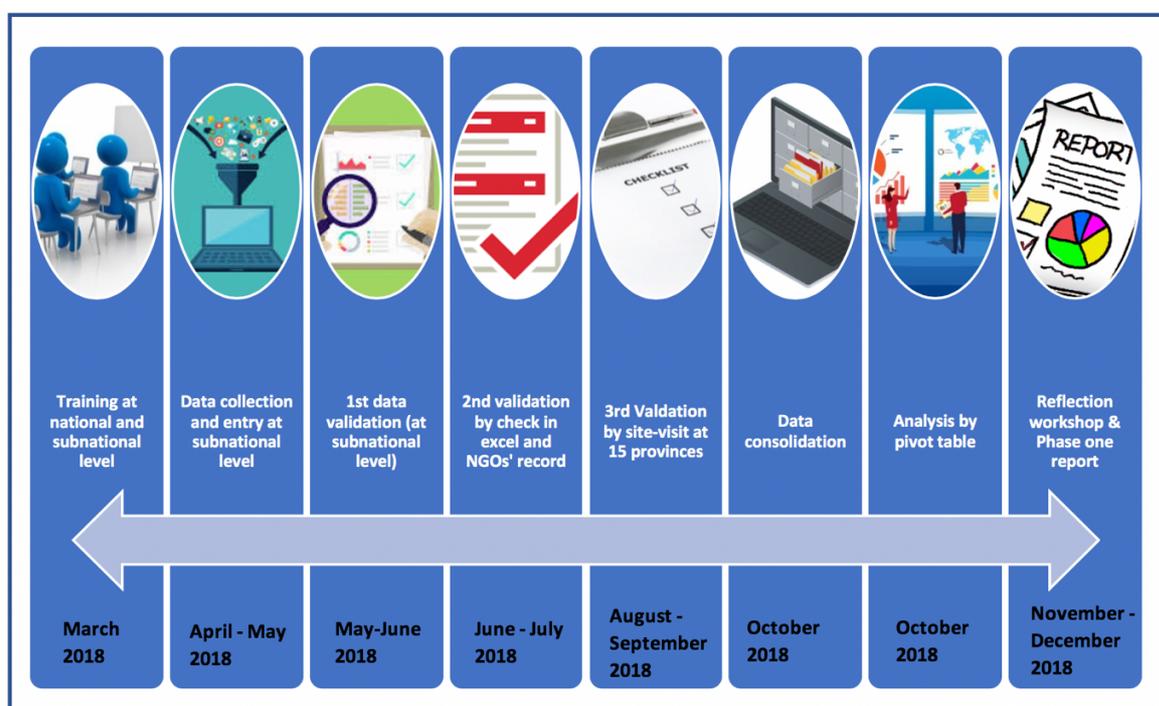


Figure 1: Key MIS Phase 1 activities and milestones

The MIS was developed as a collective effort by government and non-government organisations (NGOs) and development partners (DPs) in the rural WASH sector. The efforts were led by the MRD's Department of Rural Healthcare (DRHC), with some input from MRD's Department of Rural Water Supply (DRWS). The roles of the sector actors are shown in Table 1.

The main considerations which influenced the MIS approach included:

- **Strengthen government systems** rather than develop parallel structures. A formal *Prakas* proclamation was written which gave the MRD-led MIS team the authority and legitimacy to

develop the MIS. Templates were designed to gather existing information already collected by PDRD and local authorities.

- **Appropriateness of technology** for Provincial Department of Rural Development (PDRD) staff to use. Despite many NGOs in Cambodia using software such as mWater or Akvo, in the short-term the MIS team decided to design the template for MIS data collection in MS Excel and with future potential to integrate more complex technology.
- **Realistic indicators** based on the availability of primary and secondary data and the capacity of people collecting them. For the first year, only secondary data was collected. Indicators related to service levels and equity of access are better collected through occasional surveys or existing census surveys.
- **Limit the indicators.** To avoid confusion and delays to the process, only six indicators from the NAP were collected in Phase 1 with the intention to scale up in future phases.
- **Piloting the MIS process nationwide.** This aimed to collect nationwide data for the NAP1 review but also ensured the process could be sustained at national scale. Feedback and reflections were scheduled with MIS users and the sector throughout the year to identify areas for improvement in future phases of the MIS. These were documented in the MIS report and are being used to improve Phase 2.

Table 1: Organisations involved in the development of the MIS and their roles

Organisation	Role
MRD DRHC	<ul style="list-style-type: none"> • Lead indicator selection, tool development and process design • Coordinate national and subnational training • Coordinate and lead data validation and consolidation • Lead reporting • Lead process review/reflection
MRD DRWS	<ul style="list-style-type: none"> • Input to tool development • Provide training to Provincial MIS teams • Support data validation and spot checking
NGOs and DPs in MIS working group (UNICEF, Plan International CRSHIP Programme, WaterAid)	<ul style="list-style-type: none"> • Input to tool development, orientation, data analysis and reporting • Technical support and training on managing database and analysing data • Technical support and training on Excel-based mapping and dashboard for data visualisation • Reporting • Financing
Other non-government actors (Plan International besides CRSHIP, SNV, WaterSHED, World Bank, World Vision)	<ul style="list-style-type: none"> • Input to indicator selection and MIS process

III. Results

The results of the first year of the MIS included:

1. Results on six indicators were gathered and used to inform the review of the NAP 1 (see Table 2)
2. A report outlining the methodology, process, full data analysis, and reflections and feedback from MIS users and team has been prepared and shared with the rural WASH sector
3. An interactive MS Excel dashboard enables national and subnational WASH sector actors to access the results (tabular, graph and map) of each indicator by province and district

Table 2: Summary of the results from the six indicators in MIS Phase 1

Output indicators	Baseline	Target 2018	Achievement 2018
No. of villages having CLTS triggered	1,900	5,460	5,669
No. of villages certified as ODF	600	1,460	1,785
No. of ODF villages that sustain their status for at least 3 years after certification	600	1,300	N/D
No. of Communes which allocate budget for RWS in commune investment plans	60	300	405
No. of Communes which allocate budget for rural sanitation and hygiene in commune investment plans	60	300	408
Number of districts with number of businesses/suppliers that provide affordable sanitation products and services	N/D	80	177

Box 2: Cambodian MIS as an example of a Collective Action initiative

The current work on the MIS has had a long association with principles of Collective Impact (referred to in Cambodia as collective action). MIS planning meetings during 2017 included representatives from the rural sanitation collective action programme led by WaterSHED, and the programmes of WaterAid (SusWASH), UNICEF and Plan (CRSHIP) have elements of collective action in their design. Below are some reflections on how the MIS development has embodied Collective Action principles.

Common Agenda:

- The MIS grew from a shared vision between government and non-government to have a system which regularly documents progress towards the National Action Plan targets. This vision was itself an acknowledgement of the common understanding among WASH sector actors that lack of a data collection system was a problem affecting rural WASH programming
- MRD and NGO supporters did not always agree – for example at times many NGOs felt a small pilot in two or three provinces followed by national scale up would be preferable to the government proposal to begin nation-wide data collection. However, through discussion and iterative debate, the MIS working group were able to resolve differences such as these to progress the work.

Shared measurement systems:

- The MIS is itself an example of developing a shared measurement system for the larger collective action project of implementing the National Action Plan
- However, a shared framework for measuring the success or effectiveness of the MIS has been limited to the generation of indicator results only (i.e. no shared indicators about the MIS's efficiency, quality, cost-effectiveness)

Mutually reinforcing activities:

- The members of the MIS working group and the MIS teams have contributed to the MIS development according to their own strengths. For example, MRD staff coordinated subnational efforts across the country through their Ministry structure, UNICEF staff ran training on using Excel-based mapping based on their existing tools, WaterAid staff who were native English speakers finalised the English report.

Continuous communication:

- Trust and shared vocabulary among the MIS working group was built through regular meetings – during busy periods there were up to two meetings per month
- Continuous communication was strengthened through the use of online platforms. A Messenger group was used for communicating among national-level government and non-government working group members. The Telegram application was used by MRD to regularly update and share documents between national and subnational levels.

Backbone support organisation:

- While not an independent backbone organisation, MRD's DRHC played a very similar role of managing the development of the MIS, facilitating input and deliverables from various sector actors, reporting MIS progress to the broader sector.
- The DRHC ensured decisions were made to move the process forward, and in situations where an executive decision needed to be made this was typically by the DRHC Director

IV. Challenges

As with all collaborative activities, the MIS development process encountered several challenges, which could be broadly grouped as procedural, strategic and technical.

Strategic Challenges

- Linking the MIS to the review of the NAP1 provided incentive for the its development, but added a tight deadline for the final deliverable. Ultimately, the results from the MIS were not available in time for the NAP1 review and to inform development of NAP2 target setting, though were presented in the final MIS report.
- It has sometimes been difficult to engage the broader sector and demonstrate the value of the MIS. Some NGOs which use web-based or smartphone monitoring systems for programme monitoring may have seen the Excel-based system as a technological step backwards. The decision to begin with six easily-measurable indicators was realistic and enabled the system and processes to be developed without the burden of too much data. However, the usefulness of the system and results by the sector, and therefore its perceived value, has been correspondingly limited. This is reflected at the subnational level; at the end of year reflection workshop 29% of PDRDs reported that they had not used the MIS results. As more indicators are added its perceived value will also likely increase.

Procedural Challenges

- Coordinating the various stakeholders while maintaining momentum was a constant challenge. The DRHC overcame this by forming a smaller working group led by the Director and deputy director, which met regularly and made decisions when wider consultation was not required. The DRHC Director and Deputy Director invested considerable time following up contributions from each group member and coordinating meeting times.

- The MIS remains dependent on donor funding. In-kind support for the MIS was provided by both MRD and NGOs/DPs in terms of staff and time. However, the financial cost to provide training to each province and to conduct spot checks and reflection workshops amounted to US\$25,780.10 for Phase 1. Activity-level expenditure was reported in the final MIS report to be shared with the sector. This cost was fully covered by the non-government members of the MIS working group: UNICEF, Plan International (CRSHIP Programme) and WaterAid. Longer-term sustainability of the MIS will depend on MRD mobilising finance through their annual budget.

Technical Challenges

- Due to the historical experience of consultants proposing a high-tech MIS which would depend on consultants for operation and maintenance, MRD's vision was to develop the MIS with appropriate technology that could be kept 'in-house', an achievement of which they are proud. However, much of the technical input such as database management, data analysis and data visualisation was provided by the non-government MIS working group members. Throughout MIS Phase 1, there has been a significant increase in MRD staff capacity in these areas but MRD will require technical support for this work for at least the next two phases before they are able to run the MIS fully independently.
- Conflicting data sources presented challenges but also highlighted the value of the sector MIS. When data provided by PDRDs was consolidated at the national level and shared with NGO stakeholders for verification there were many examples of conflicting records (e.g. CLTS triggering or ODF verifications) between the NGOs and the government records. These were resolved on a case-by-case basis by DRHC staff which caused significant delays to the finalisation of the results.
- Data consolidation and version tracking presented issues throughout the MIS. MS Excel templates were shared to each province through the Telegram application and then consolidated through manually 'copying and pasting' into a master spreadsheet held by the DRHC. However, during data validation and analysis period, data from some provinces was updated several times which meant that various versions of analysis and results files were shared by email. There was no documentation or version tracking during this time which adds risks to data reliability.

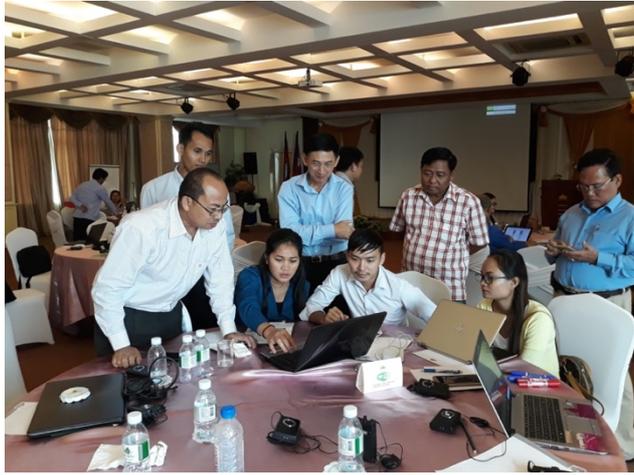


Figure 2: National-level MIS trainers reviewing the template (WaterAid/Fraser Goff)

V. Learning

The following are learnings from WaterAid Cambodia from being involved in the MIS development and intended as general guidance for others intending to support collective efforts of this nature.

- NGOs and DPs have an important role to support government-led systems:
 - The NGO and DP members of the working group provided much technical input to the MIS system to refine the templates, check and analyse data.
 - Having diverse group members with varying skills sets and from different organisations added depth of experience and ideas.
 - NGO and DP staff were able to remind and motivate the group when progress seemed to have stalled.
- Collective action takes time
 - It took two years from the first meeting in May 2017 until the final report of Phase 1 was submitted to MRD leadership. Future phases can build on this foundation and will be faster.
 - The time for data validation and reporting was particularly underestimated. It took approximately six months from the first submission of data until the first draft results were shared at the reflection workshop and a further six months of drafting and review before the final report was completed.
 - Staff and personnel contributions for collective action are significant and must be included in programming and planning. During MIS Phase 1, the WaterAid staff in the MIS working group spent approximately four weeks full-time equivalent on meetings, preparation, data analysis and reviewing tools and reports. Other NGO and DP staff spent at least the same amount of time. For all of the non-government

staff involved in the MIS this was a secondary part of their role, and often had to fit in around commitments within their own organisation. Support and flexibility for their involvement from line managers and senior leaders were essential.

- Collective action needs focal points
 - The role of DRHC, and especially the Deputy Director, was essential as the backbone to convene, organise and keep all working group members accountable
 - Within each NGO and DP, having one focal point to attend MIS activities ensured consistency of knowledge and avoided delays to actions
- Scaling up is more than just geographical
 - Despite initial hesitation from NGOs and DPs, MRD pushed ahead with their plan to 'pilot' the MIS in every province. Their plan to begin the first phase of the MIS in every province with a small number of indicators was not only successful, but the second MIS phase is now able to focus on adding indicators and improving the data reliability rather than introducing the idea to new provincial stakeholders.
- Collective sector work is not the place for perfectionism
 - Different opinions among stakeholders are inevitable and must be resolved through compromise and collaboration.
 - With 8-10 people reviewing the data that was submitted, there could have been endless revisions to the data and the report. DRHC had to make a judgement call to finalise and disseminate the results on the principle that it is better to share good data for timely decision making than to share perfect data after decisions are made.

VI. Next steps

Under the leadership of MRD, the rural WASH sector are building on the MIS Phase 1 success:

MIS development

- MIS Phase 2 (2019 update) is underway already. This Phase introduces additional indicators to scale up from six to 32 indicators, representing 51% of the NAP2 indicators.
- Phase 2 will be further digitised by submission and automatic consolidation of data online through Google spreadsheets.
- MRD intend to engage a software consultant to develop a simple web portal so that after Phase 2 the MIS can be embedded in MRD's website. The previous concerns about reliance on complex, technical, expensive and consultant-dependent software are still valid

and discussion between MRD and the NGOs and DPs in the MIS working group are ongoing about how technology can enhance the MIS function while maintaining simplicity.

What is still needed

- A clear financing strategy to show how future MIS phases will be paid for without dependence on NGO and DP funding. This would be enhanced by MRD leadership and the sector seeing value in the MIS
- Broader use of the MIS information for decision-making and planning. The expanded number of indicators in Phase 2 will go some way to making this possible.

Sanitation and Water for All (SWA)

- In April 2019 the Minister for Rural Development and MRD participated in a global SWA event for the first time. While Cambodia has not yet signed up as a SWA partner, the ongoing MIS development was one of two commitments made by MRD at this event. The MIS development also strongly reflects the SWA collaborative behaviours (Figure 3).



Figure 3: Sanitation and Water for All collaborative behaviours