

# Sanitation, Hygiene And Water (SHAW) Programme for East Indonesia

Review of Monitoring Systems and Practices  
March 2012



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Prepared for

**simavi**  
MET MOEDERS WERKEN AAN GEZONDHEID





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The findings, interpretations, comments and conclusions contained in this report are those of the author and may not necessarily reflect the views of either Simavi or the partner NGOs.

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### **Websites of participating partner NGOs**

<http://diandesa.org/Home.html>

<http://www.rumsram.org>

<http://cdbethesda.org/index.php>

<http://plan-international.org/where-we-work/asia/indonesia>

<http://www.simavi.nl>

### **Materials and documents on the SHAW Programme can be found on**

<http://www.irc.nl/page/53746>

## Contents

1. Introduction .....	1
1.1 Background .....	1
1.2 Introduction to monitoring .....	1
1.3 Monitoring within the SHAW programme .....	2
1.4 Review of existing monitoring systems .....	4
2. Review findings .....	6
2.1 Introduction .....	6
2.2 Scale of operations .....	6
2.3 Sampling design .....	8
2.4 Data collection methodology .....	11
2.5 Data collection tools .....	13
2.6 Progress on baseline data collection and performance monitoring .....	15
2.7 Database and data entry details .....	17
2.8 School sanitation and hygiene component .....	19
2.9 Involvement and role of sub-districts and districts .....	20
2.10 Problems, constraints or challenges faced during 2011 .....	21
3. Ideas about a generic monitoring system .....	23
3.1 Introduction .....	23
3.2 Initial comments and ideas .....	23
3.3 Specific requirements or wishes .....	24
4. Conclusions and recommendations .....	26
4.1 Conclusions .....	26
4.2 Recommendations .....	29

## Appendixes

Appendix 1: Questionnaire to review the monitoring practices of SHAW Partner NGOs	34
Appendix 2: Scale of programme operations .....	37
Appendix 3: Sampling design and data collection methodology .....	38
Appendix 4: Data collection tools .....	39
Appendix 5: Baseline data collection and progress on performance monitoring.....	40
Appendix 6: Database software, functionality and data entry details .....	41
Appendix 7: Monitoring of school sanitation and hygiene component.....	42
Appendix 8: Role and involvement of sub-districts and districts .....	43
Appendix 9: Problems, constraints or challenges faced during 2011 with regards to the monitoring systems.....	44
Appendix 10: Initial comments and ideas about a generic monitoring system .....	45
Appendix 11: Specific requirements or wishes for the new monitoring system .....	46

# 1. Introduction

## 1.1 Background

During the period 2010 to 2014 a five-year Sanitation, Hygiene and Water (SHAW) programme will be implemented in nine districts in Eastern Indonesia. The programme is coordinated by Simavi and implemented by five Indonesian NGOs (Yayasan Dian Desa, PLAN Indonesia, CD-Bethesda, Rumsram and Yayasan Masyarakat Peduli). Other partners including UNICEF, IRC, and WASTE are supporting the implementation of the programme in their specific areas of expertise.

The overall goal of the programme is to reduce poverty by improving the health status of rural communities in Indonesia and by doing so enhance sustainable and equitable rural development. This is to be achieved by providing support to communities and (sub) districts in their effort to establish and implement effective, sustained services for improved sanitation, water use and hygiene on a (sub) district-wide level. The programme will be implemented in accordance with the STBM (Sanitasi Total Berbasis Masyarakat) approach which was adopted by the Ministry of Health as the national sanitation strategy in 2008.

The overall objective of the programme is that by 2014, an enabling environment exists for communities in nine selected districts in East Indonesia, to realise a sustainable healthy living environment through coordinated action to promote sanitation and hygiene and to increase access to safe drinking water and school sanitation. This will be monitored and shared at district, provincial and national level to reinforce sector management and for replication. The specific objectives of the programme at the different levels are:

1. Community and sub-district level: STBM principles applied at community level and in schools. Schools will be used as resource centres on STBM, and different governmental agencies coordinated through the POKJA AMPL at district level will facilitate and coordinate efforts at community level.
2. District level: Strengthened sector management and an enabling environment at district level.
3. National and Programme level: Strengthened sector management and an enabling environment at national level.

## 1.2 Introduction to monitoring

Monitoring is the systematic collection and analysis of information. It is aimed at improving the efficiency and effectiveness of a project or programme. It is based on targets set and activities identified during the planning phase. It helps to keep the work on track, and can inform management when things are going wrong. It enables an organisation to determine whether the available resources are sufficient and are being used well. It also helps an organisation to determine whether the capacity it has is sufficient and appropriate, and whether it is doing what it planned to do.

Monitoring is geared towards learning from what you are doing and how you are doing it, by focusing on efficiency, effectiveness and impact. Through monitoring you can:

- Review progress;
- Identify problems in planning and/or implementation;
- Make adjustments so that you are more likely to “make a difference” and achieve your objectives.

**Efficiency** tells you that the input (money, time, staff, equipment, etc.) into the work is appropriate in terms of the output (results). It is very important to get the efficiency element right when you are concerned about replicating or going to scale with your project.

**Effectiveness** is a measure of the extent to which a project or programme achieves the specific objectives it set. If, for example, you set out to create open defecation free villages, did you succeed?

**Impact** tells you whether or not what you did made a difference to the problem situation you were trying to address. In other words, was your strategy useful? Before you decide to replicate the project, you need to be sure that what you are doing makes sense.

Often monitoring is seen as a donor requirement rather than a management tool. Donors are certainly entitled to know whether their money is being properly spent, and whether it is being well spent. But the most important use of monitoring should be for the project or programme itself to see how it is doing against objectives, whether it is having an impact, whether it is working efficiently, and to learn how to do it better.

### 1.3 Monitoring within the SHAW programme

According to the October 2010 Inception Report, monitoring and evaluation is not solely aiming at collecting data but also at raising awareness and sharing information about programme developments. The sharing of progress and information is used to continuously improve the programme as well as to find solutions in support of problematic cases. The sharing of information therefore will not only be among the implementing partners, but will include governmental organisations, in particular the POKJA, and other stakeholders outside the community (“upward” accountability), and will explicitly target the community members (“downward” accountability).

The monitoring and evaluation framework developed for the programme<sup>1</sup> consists of the following elements:

- Baseline surveys: partner NGOs will conduct participatory and gender segregated baseline surveys in a selected number of villages in the programme districts at the start of the programme to provide a baseline against which the progress of the programme will be monitored.
- Performance monitoring: partner NGOs will conduct community-based monitoring exercises on a regular basis for programme steering and reporting.
- Annual stakeholder coordination meetings: stakeholder coordination meetings will be organised to review and interpret the data obtained for monitoring and to review overall programme performance. Lessons learned will be the drive to make modifications in the programme, if necessary.
- Mid-term review: an external mid-term review is scheduled for 2012 to review the progress to date made towards the programme objectives and to come up with recommendations for programme modifications.
- Final evaluation and impact analysis: outcomes and impact of the programme will be assessed through an end-of-programme evaluation at the end of the five year programme period consisting of a quantitative and qualitative impact analysis.

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<sup>1</sup> For details reference is made to Chapter 6 on Monitoring, Evaluation and Impact Measurement of the original programme proposal dated 31 March 2010.

The original programme Logframe<sup>2</sup> – included as Annex 8 in the March 2010 Original Programme Proposal – was updated and harmonised during the September 2010 Inception Workshop. The revised Logframe, including the result indicators, is attached as Annex 3 in the Inception Report.

To kick off the SHAW programme a monitoring workshop was conducted in May 2010. The workshop organised by CD Bethesda and IRC was attended by the initial four partner NGOs as well as representatives from UNICEF, POKJA Nasional and the Ministry of Health. The workshop was meant to give an introduction about the programme and to develop and agree on programme performance monitoring indicators and on the outline of a monitoring system as a first step to start preparations for a mutual baseline and monitoring system for the SHAW programme. A draft monitoring toolbox prepared by IRC was shared with the partner NGOs in August 2010.

During the Inception Period, the partner NGOs developed an initial baseline for the SHAW programme intervention areas on the basis of secondary data obtained from either district studies or earlier studies carried out by the partner NGOs. The baseline data, and an overview of geographical information and updated planned targets, was presented in Annex 4 of the Inception Report.

Although it was originally the intention that IRC together with the partner NGOs would elaborate on their earlier work and jointly develop a generic monitoring system this never materialised. Instead towards the end of 2010 it was decided that the partner NGOs would develop their own monitoring systems. After a successful mission in December 2010, IRC continued to provide technical support on a range of issues, including monitoring, to the partner NGOs during 2011. Monitoring and related issues were part of the following missions<sup>3</sup> conducted during 2011:

- **Mission of April 2011:** this mission focused solely on developing a better understanding of the monitoring systems under development by the partner NGOs. All four partner NGOs were visited to review their monitoring systems, to develop monitoring protocols<sup>4</sup> and to discuss and suggest improvements to their monitoring tools.

A **monitoring protocol** is a detailed study plan that explains how data are to be collected, managed, analysed, interpreted and reported. Monitoring protocols are a key component to assure quality of monitoring and they are necessary to ensure that changes detected by monitoring are actually occurring and not simply a result of measurements taken by different people or in slightly different ways. The basic purposes are to:

- Identify what kind of information would be required to assess the progress, performance and effectiveness of the programme;
- Specify the procedure and the process that would be followed to gather this information; and then
- Define the method as to how this information would be stored, analysed and managed.

A good monitoring protocol will include a process for extensive testing and evaluation of the effectiveness of the procedures before they are accepted for long-term monitoring.

A monitoring protocol outlines the rationale, sampling design and methods for monitoring the performance and achievements of the SHAW programme and provides information on the following:

1. Background and objectives

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<sup>2</sup> The **Logframe** (Logical Framework) is a management tool mainly used in the design, monitoring and evaluation of international development projects. In essence, the Logical Framework is a “cause and effect” model of project interventions to create desired impacts for the project beneficiaries.

<sup>3</sup> Detailed reports were written for all the IRC missions and these will be uploaded on <http://www.irc.nl/page/53746>.

<sup>4</sup> The individual monitoring protocols are included as appendixes to the April 2011 mission report.

2. Sampling design
3. Survey methodology
4. Data handling, analysis, and reporting
5. Personnel requirements and preparations

- **Mission of June 2011:** the main purpose of this mission was to facilitate a multi-stakeholder programme review workshop in Yogyakarta. Monitoring issues were discussed during the fifth and final day of the workshop. Furthermore, one day was spent on finalising the database for Rumsram and separate meetings were held with CD Bethesda and YDD to review and discuss their monitoring systems and tools.
- **Mission of September 2011:** the main purpose of this mission was to facilitate an internal sharing and learning workshop with programme coordinators in Biak. Following the workshop one day was spent with the Rumsram SHAW staff to review and discuss their monitoring system. Thereafter meetings were held with CD Bethesda and YDD in Yogyakarta to review and discuss their monitoring systems.

In addition to the above three missions – including face-to-face meetings with partner NGOs individually – in Indonesia, support was also provided in between the different missions from IRC’s office in The Hague, the Netherlands. Given the fact that the partner NGOs were in charge or in the driving seat – as they were responsible for developing functioning monitoring systems – the support provided by IRC was basically in the form of providing advisory services. Most of the IRC efforts during the April and June 2011 missions focused on simplifying and improving the quality of the monitoring tools (e.g. limiting the number of indicators, limiting the sample size, improving the quality of the data collection cards and questionnaires, etc.) and on developing a simple but functioning database for Rumsram.

## 1.4 Review of existing monitoring systems

During the course of 2011 it became evident that it was more difficult than expected to develop and apply four functioning monitoring systems. Although it was initially thought that the partner NGOs would be able to adopt and where necessary modify their existing monitoring systems, it was discovered early in the year that the specific monitoring requirements of the SHAW programme warranted the development of completely new monitoring systems. For most of the partner NGOs this meant enormous investments of limited resources. In October 2011 it was decided that it would be opportune to undertake a quick and dirty review of the existing monitoring systems and to assess whether it would make sense to develop a generic monitoring system with the main aim to harmonise monitoring practices across the partner NGOs.

The overall objective of the review was “to evaluate the appropriateness (suitability) and functionality of the existing monitoring systems developed and applied by the partner NGOs”. The following are the specific objectives:

- To review and document the current set up and experiences with the different monitoring systems and to assess whether these systems are able to come up with adequate information necessary to review the progress and overall performance of the SHAW programme;
- To come up with a set of recommendations to improve the monitoring practices of the partner NGOs and to assess whether there are sufficient reasons and interest by the partner NGOs to develop a generic monitoring system.



This review is based primarily on information provided by the partner NGOs and consists of three components:

1. A preparatory component during which the methodology and tools were developed.
2. A research component during which the monitoring tools were studied and information was obtained from the four partner NGOs through a standard review questionnaire<sup>5</sup>.
3. An analysis component which included the writing up of the review findings.

The review was designed and implemented to obtain a quick and dirty overall impression of the appropriateness and functionality of the existing monitoring systems. It was never meant to provide a complete and detailed insight into all the problems and constraints that partner NGOs were facing with their own individual monitoring systems by carrying out a rigorous analysis of their monitoring systems.

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<sup>5</sup> The review questionnaire developed for this review is provided in Appendix 1.

## 2. Review findings

### 2.1 Introduction

This chapter summarises and compares the differences between as well as the experiences with the current monitoring systems developed and applied by the partner NGOs. Where possible and relevant the modifications made by the partner NGOs to the monitoring systems during the past year will be highlighted. Hence, this chapter brings together the experiences and lessons of the different monitoring systems so as to assist in methodological strengthening before any future scaling-up.

The majority of the findings included in this review report are based on primary information obtained from the completed review questionnaires provided by the four partner NGOs. The findings presented in this chapter will follow the same sequence as the questions included in the review questionnaire. Comparisons and details are given in Appendix 2 to 9.

### 2.2 Scale of operations

The scale (or size) of operations has a major influence on the type and scope of a monitoring system. This relates in particular to the size of the sample that can be handled cost-effectively by the implementing organisations. Details of the existing as well as future scale of the SHAW programme is given in Appendix 2, which is summarised in the table below.

	Plan	YDD	CD Bethesda	Rumsram	Totals	% of intended results
<b>Scale in 2012</b>						
# of districts	2	2	2	2	<b>8</b>	100%
# of sub-districts	49	19	9	6	<b>83</b>	82%
# of villages	358	126	61	44	<b>589</b>	65%
# of sub-villages	1,178	336	187	111	<b>1,812</b>	
Estimated # of houses	117,280	94,080	8,415	3,330	<b>223,105</b>	147%
<b>Intended results 2010-2014</b>						
# of districts	2	2	2	2	<b>8</b>	
# of sub-districts	56	40	7	6	<b>109</b>	
# of villages	415	410	70	42	<b>937</b>	
# of households	48,218	77,890	20,400	5,000	<b>151,508</b>	
Estimated # of people	191,498	348,046	122,404	22,999	<b>684,947</b>	

Table 2.2.1: Current and future scale of operations

In relation to the above table a number of observations need to be made. Firstly the above table does not include the details for the fifth partner NGO – the East Lombok based NGO Yayasan Merah Putih (YMP) – that has only recently joined the SHAW programme as information on their scale of operations is not yet known. Secondly, the number of estimated houses in the top part of the table appears to be somewhat unreliable particularly if the numbers for Plan Indonesia and Yayasan Dian Desa are compared with the total number of households that are expected to benefit from the SHAW programme.

The correctness of the information provided in the above table and illustrated in Figure 2.1 – both in relation to the baseline data and the information provided by the partner NGOs in the review questionnaires – needs to be checked and verified.

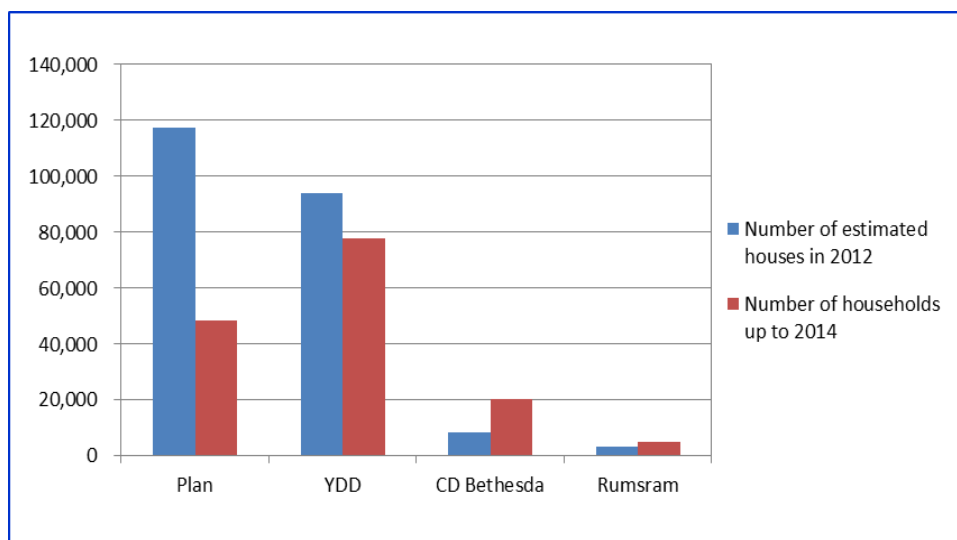


Figure 2.1: Houses (2011-2012) versus intended households (2010-2014)

A comparison of two other dimensions (sub-districts and villages in 2011-2012 versus the intended targets) is shown in Figure 2.2 below.

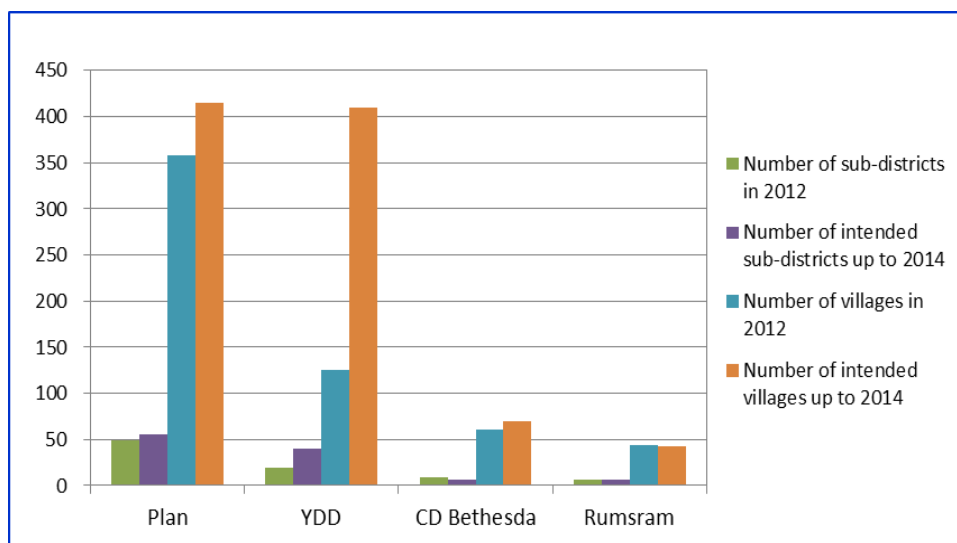


Figure 2.2: Sub-districts and villages (2011-2012) versus intended targets (2010-2014)

For expressing the magnitude of the future monitoring tasks the data given in the following table, and in particular the total number of houses, are the most relevant.

	Plan	YDD	CD Bethesda	Rumsram	YMP	Totals
<b>Intended results 2010-2014</b>						
# of villages	415	410	70	42		<b>937</b>
Estimated # of sub-villages	1,245	1,230	210	126		<b>2,811</b>
Estimated # of houses	41,900	67,700	17,700	4,300		<b>131,600</b>
# of houses as % of total	32%	51%	13%	3%		<b>100%</b>

Table 2.2.2: Intended scale of operations

As illustrated in the pie chart below, Plan Indonesia (32%) and Yayasan Dian Desa (51%) in particular are responsible for the major share of the intended number of houses that are expected to benefit from the SHAW programme. This obviously means that the scale of monitoring for these organisations is also much larger than that for CD Bethesda and Yayasan Rumsram. This is something we may need to keep in mind when designing a monitoring system in future.

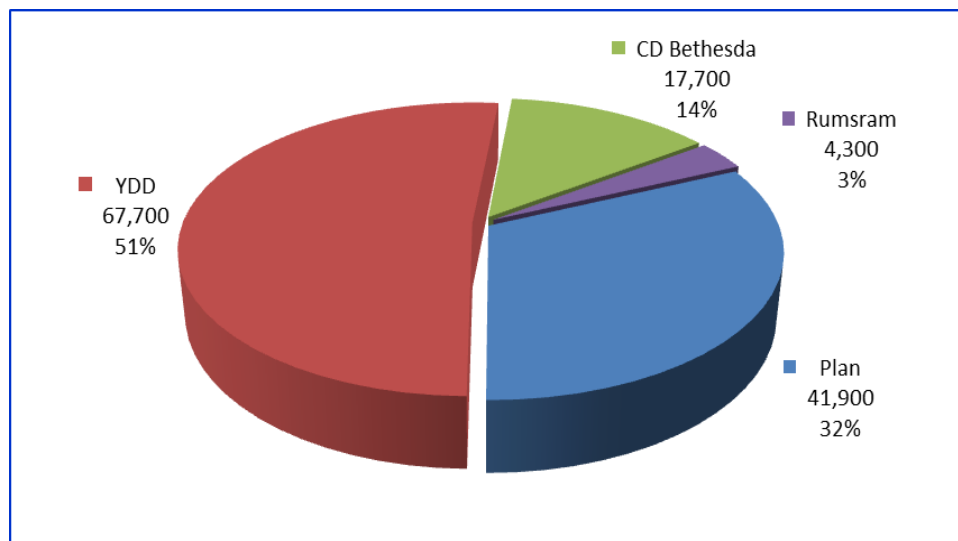


Figure 2.3: Estimated number of intended houses (2010-2014)

## 2.3 Sampling design

Sampling is the tool used to select part of a population for data collection and analysis. This selection, the sample, is then used as a manageable number of people to then form the basis for analysis. In many cases, collecting data for the entire target population would be too expensive in terms of time and resources, as well as too challenging logistically. A sample that is fully representative of the population from which it is drawn is called a **representative sample**. The sample needs to be representative in order to infer the results from the sample back to the whole population. Statistical analysis can only be used on representative samples; otherwise nothing can be said about the total population.

There are a number of steps to enable inference from a representative sample.

1. Clearly define the target population from which the sample is to be selected;
2. Clearly define the **basic sampling unit**;
3. Define the **sample size**; and
4. Ensure that each sampling unit has an equal or known chance of being selected into the sample.

A comparison of review outcomes with regards to the sampling designs applied by the partner NGOs is given in Appendix 3 and this is discussed in more detail in the following sections.

### Basic sampling unit

In much of the sampling undertaken in the WASH sector, the **basic sampling unit** is the house or household. This is because all of the members of the household are likely to use the same water source. However, this is perhaps slightly less true for sanitation, where some house members, such as infants, children or elders, may not use the same sanitation facility as other household members.

During the April 2011 monitoring support mission it was established that different sampling units were used by the partner NGOs and even where the same term was used (e.g. household) definitions

or interpretations differed. This was brought up during the June 2011 review workshop and an agreement was reached that the same sampling unit with the same definition was to be used by all partner NGOs. This to make sure that programme achievements are reported in the same manner and to allow for making comparisons between the partner NGOs. After lengthy discussions it was decided that the (physical) house would be used as the basic sampling unit for SHAW programme progress and result monitoring purposes. All organisations have now implemented that decision and are using the “house” as the basic sampling unit.

	Plan	YDD	CD Bethesda	Rumsram
Basic sampling unit				
■ Start of 2011	House/Household	Family	House	House/Household
■ Second half 2011	House	House	House	House
■ 2012	House	House	House	House

Table 2.3.1: Basic sampling unit 2011 and 2012

The review also revealed that the same sampling units (the same houses) are monitored throughout the duration of the programme. It was believed that this would simplify the sampling methodology but also because it would enable the monitoring of change in the same houses over time. However, this may need to be reconsidered in future, as it has been brought to the attention of the author that carrying out repeated performance monitoring in the same houses can have a negative effect on the programme’s overall performance measurement. It is assumed that continuous changing of houses that are included in the sample, on the basis of random sampling<sup>6</sup>, will avoid bias and the possibility that as a consequence of extra attention and intensive monitoring these houses will perform better than other houses.

### Sample size

The larger your **sample size**, the more sure you can be that their answers truly reflect the total population. This indicates that for a given confidence level<sup>7</sup>, the larger your sample size, the smaller your confidence interval<sup>8</sup>. However, the relationship is not linear (i.e., doubling the sample size does not halve the confidence interval).

As the table below shows, sample sizes differ between the partner NGOs. Except for Plan Indonesia, all other partner NGOs have decided to include only a certain percentage of all the houses in a sub-village in the sample. During the April 2011 monitoring support mission it was established that a sample that includes the total population (100%) would be impossible to execute at regular intervals for the simple reason that it would require too many scarce resources, particularly in relation to the

<sup>6</sup> **Random sampling** is the purest form of probability sampling where each member of the population has an equal and known chance of being selected. This minimises bias and simplifies analysis of results. The variance between individual results within the sample is a good indicator of variance in the overall population, which makes it relatively easy to estimate the accuracy of results.

<sup>7</sup> The **confidence interval** (also called margin of error) is the plus-or-minus figure usually reported in newspaper or television opinion poll results. For example, if you use a confidence interval of 4, and 47% of your sample picks an answer you can be "sure" that if you had asked the question of the entire relevant population between 43% (47-4) and 51% (47+4) would have picked that answer.

<sup>8</sup> The **confidence level** tells you how sure you can be. It is expressed as a percentage and represents how often the true percentage of the population who would pick an answer lies within the confidence interval. The 95% confidence level means you can be 95% certain; the 99% confidence level means you can be 99% certain. Most researchers use the 95% confidence level.

When you put the confidence level and the confidence interval together, you can say that you are 95% sure that the true percentage of the population is between 43% and 51%. The wider the confidence interval you are willing to accept, the more certain you can be that the whole population answers would be within that range.

amount of data entries this would entail. Throughout 2011 Plan continued to use the 100% sample size as they have not made any efforts to enter the data collected at house level in a database.

	Plan	YDD	CD Bethesda	Rumsram
Sample size in 2011	100%	25-100%	25-100%	100%
Sample size in 2012	100%	30%	25%	25%

Table 2.3.2: Sample size 2011 and 2012

It will be necessary to revisit the sampling methodology, including the sample size, when we decide to develop a generic monitoring system. Although the SHAW programme is neither an academic research project nor a monitoring project, the performance monitoring system needs to be methodologically sound. Sample sizes must be sufficiently large to capture the variation in the overall programme population<sup>9</sup>. Although this does not necessarily imply a very large sample, it does mean that samples need to differentiate according to the overall size of the communities. The fixed percentage applied during 2011 may not be sound enough, particularly when this is applied in smaller communities<sup>10</sup>. Ideally the sample size must be proportional to the size of the community. Basically this means that the smaller the number of houses in a community from which the sample is drawn, the larger the number of houses that need to be included in the sample. But it also means that the larger the number of houses from which the sample is drawn, the smaller the sample size that is needed.

### Sampling cluster

Geographical cluster sampling - clusters consisting of geographical areas such as a country, district, city or village – is an often used sampling technique in which the survey population is subdivided into naturally occurring sub-groups called clusters so that there is small variability within clusters and large variability between clusters. For structured observations of health behaviour, the lowest levels are the most important ones.

All four partner NGOs have taken the sub-village (dusun) as the smallest geographical cluster unit. To date all targeted villages and sub-villages are included in the monitoring sample (100% sample). This is an issue that requires attention and careful consideration in future. Especially the size of operations of Plan and YDD, expressed by the total number of villages and sub-villages they have targeted, may require a different, more cost-effective, monitoring approach in future.

### Sample methodology

As the table below shows, most partner NGOs have put measures in place to obtain disaggregated data using sampling methods that are based on socio-economic status or wealth rankings. The main reason for using wealth ranking – because this variable was found to be the most relevant factor that separates individual houses in rural communities – has been to establish representative samples by ensuring that the sample reflects the socio-economic status of the communities.

	Plan	YDD	CD Bethesda	Rumsram
Sample methodology	N/A	Based on wealth classification reflected in dusun social maps	Based on socio-economic status of the house, family size and toilet ownership	Based on socio-economic status of the house

Table 2.3.3: Sample methodology 2011 and 2012

<sup>9</sup> The sample needs to be representative of the target population so that the information derived from the sample is expected to be the same had a complete census of the target population been carried out.

<sup>10</sup> It is likely that in very small villages the number of sample households will become too small to be meaningful.

Collecting disaggregated data has the additional advantage that the information shows if access and behaviour changes are equal for all, and if not if special measures need to be put in place and implemented to reduce the inequalities. Although, it should be no problem for most computerised data bases to create reports with disaggregated information, so far no separate reporting and analysis for the different socio-economic groups has been carried out.

As the table below shows, the sampling units (houses) to be included in the monitoring sample are selected by the partner NGOs, in two cases in consultation with village STBM teams or cadres.

	Plan	YDD	CD Bethesda	Rumsram
Sampling units are selected by	N/A	Team SHAW YDD together with Team STBM Dusun	Team CD Bethesda together with Team STBM Desa	Team SHAW Rumsram

Table 2.3.4: Selection of sampling units 2011 and 2012

## 2.4 Data collection methodology

The following sections will provide information on the data collection methodology applied by the partner NGOs and in particular on the data sources used and data collection techniques applied at the level of the smallest sampling unit (house).

A comparison of review outcomes with regards to the data collection methodologies is given in Appendix 3 and this is discussed in more detail in the following sections.

### Data sources

Not surprisingly, the review revealed that all partner NGOs collect primary data at the level of the house. At this moment no secondary data is collected or used by the partner NGOs for performance or impact monitoring purposes. However, it must be mentioned that the initial baseline was developed on the basis of secondary data collected by the partner NGOs and included in the SHAW programme Inception Report of October 2010.

### Frequency of data collection

As the following table shows, the frequency of data collection as part of regular programme performance monitoring has changed over time. Whereas both Plan and Rumsram were collecting data on a monthly basis during 2011, they have now decided to reduce the data collection frequency to a three-monthly sequence during 2012. YDD and CD Bethesda already followed a three-monthly data collection frequency during 2011 and will continue to do so during 2012. It must be mentioned though that YDD on top of the detailed three-monthly performance monitoring frequency also applies an alternative scaled-down monthly data collection system that is used as input for the monthly reports. What also becomes clear is the fact that data collection frequencies remain the same even when villages have reached STBM status after verification and declaration

		Plan	YDD	CD Bethesda	Rumsram
2011	Frequency				
	▪ Before verification	Monthly	Monthly/3 monthly	3 monthly	Monthly
	▪ After verification	Monthly	3 monthly	3 monthly	Monthly
2012	Frequency				
	▪ Before verification	3 monthly	Monthly/3 monthly	3 monthly	3 monthly
	▪ After verification	3 monthly	3 monthly	3 monthly	3 monthly

Table 2.4.1: Data collection frequencies 2011 and 2012

The frequency of data collection is another issue that may need to be reconsidered. Although the three-monthly monitoring cycles may be adequate for reporting purposes it is questionable whether this provides sufficiently timely information for programme steering purposes. More periodic information will be helpful to monitor progress and take remedial action, particularly in the early stages of programme implementation immediately after demand creation triggering. It is for that same reason that YDD has established an alternative (and supplementary) monitoring system to monitor progress on a monthly basis.

On the other hand the three-monthly frequency of collecting data after STBM verification appears to be rather high. Although post-STBM declaration monitoring is necessary to assess whether villages remain 100% STBM and villagers do not relapse into old sanitation and hygiene behaviours and practices, frequencies could possibly be reduced to limit the overall scale of monitoring activities.

### Data collectors

During 2011 the primary data, obtained for regular performance monitoring at house level in the sub-villages, is collected by the villagers. In most cases these are trained village cadre. For 2012 a number of changes are foreseen. Although the exact reasons are not known it is expected that these changes are made to improve the completeness and quality of data collection. The underlying reasoning needs to be understood and analysed to be able to assess whether the proposed changes will overcome the data collection problems encountered during 2011.

		Plan	YDD	CD Bethesda	Rumsram
2011	Data collectors				
	▪ Monthly	Village volunteers (Relawan desa)	YDD STBM team		All trained dusun cadre
	▪ 3 monthly		Dusun STBM team	Dusun cadres and head/village officer	
2012	Data collectors				
	▪ Monthly		YDD team & Desa STBM team or sanitarian/Promkes		
	▪ 3 monthly	Head of neighbourhood group (Ketua RT)	YDD team & Desa STBM team or sanitarian/Promkes	Dusun cadres and head/village officer	Trained and active dusun cadre (volunteers)

Table 2.4.2: Individuals responsible for data collection 2011 and 2012

### Payment for data collection

According to the completed review questionnaires only YDD and CD Bethesda provided financial benefits to the villagers responsible for collecting monitoring data. However, during the June 2011 workshop it was revealed that also Plan had been providing financial incentives to the village cadres.

A quick and dirty calculation carried out during the June 2011 workshop exposed that if all the village cadres who are involved in household monitoring were to be provided with an incentive (average of IDR 50,000 per two months to eventually cover a total of 4,000 sub-villages), this would cost some €100,000 per year.



		Plan	YDD	CD Bethesda	Rumsram
2011	Payments for data collection	No	Yes	Yes	No
	If yes, how much	N/A	IDR 1,000 per questionnaire, with a min of IDR 20,000	IDR 10,000 per house card	N/A
2012	Payments for data collection	No payment	Not yet decided	No	No
	If yes, how much	N/A	?	N/A	N/A

Table 2.4.3: Payment for data collection 2011 and 2012

## 2.5 Data collection tools

The following section will provide information on the tools used for data collection by the partner NGOs. It must be noted that the information provided in this section reflects what was in place at the end of 2011 and that there is no detailed overview of all the changes made during 2011. Quite a number of improvements and simplifications were made during 2011 that will not be discussed in this section.

A comparison of review outcomes with regards to the data collection tools is given in Appendix 4 and this is discussed in more detail below.

### Tools used for data collection

Except for YDD, the three other partner NGOs have developed and applied a house-level data collection card that can be used for one whole year irrespective of the data collection frequencies. YDD instead makes use of detailed questionnaires that can be used only one time.

		Plan	YDD	CD Bethesda	Rumsram
2011	Tools used	House card	Questionnaire	House card	House card
			HH card for self-monitoring by HH		
	Used how many times	One house, one card, one year	One time	One house, one card, one year	One house, one card, one year
2012	Tools used	House card	Questionnaire	House card	House card
			HH card for self-monitoring by HH		
	Use how many times	One house, one card, one year	One time	One house, one card, one year	One house, one card, one year

Table 2.5.1: Data collection tools (#1) 2011 and 2012

The amount of data collected, expressed by the number of indicators in use, differs quite a lot between the partner NGOs. During 2011 the number of indicators ranged between a low of 10 used by Plan and a high of 24 used by YDD. Whereas YDD, CD Bethesda and Rumsram are using the same number of indicators – and the same house cards or questionnaires – during 2012, Plan indicates that they have increased their number of indicators to a total of 29 (from the 10 indicators used during 2011)!

Plan has made an attempt to reconcile the monitoring tools with the official verification tools by including in the monitoring cards the same indicators used during STBM verification. This means for example that there are a total of 12 indicators just for pillar 1.

		Plan	YDD	CD Bethesda	Rumsram
2011	# of indicators				
	■ Baseline data	10	24	20	14
	■ Monitoring	10	24	20	14
	Same for baseline and monitoring	Yes	No	Yes	Yes
2012	# of indicators				
	■ Baseline data	29 (11)	24	20	14
	■ Monitoring	29 (11)	24	20	14
	Same for baseline and monitoring	Yes	Yes	Yes	Yes

Table 2.5.2: Data collection tools (#2) 2011 and 2012

Although YDD used a different data collection questionnaire for their establishing the baseline during 2011, all partner NGOs now use the same house card or questionnaire for both baseline and performance monitoring data collection purposes. This is a good development and means that performance monitoring information can now be compared with the original baseline.

Except for Plan, all other partner NGOs themselves collect the monitoring cards or questionnaires from the village cadres at regular intervals similar to the monitoring frequencies. This for the simple reason that YDD, CD Bethesda and Rumsram require the cards or questionnaires for data entry purposes. Plan is the only organisation that so far has not entered the monitoring data in a database. Instead, data collected at individual houses is summarised or tabulated by the villagers in sub-village and village level overviews.

		Plan	YDD	CD Bethesda	Rumsram
2011	Tools are collected by	Village volunteers	Team YDD	Team CD Bethesda	Team Rumsram
	Tools are kept by	Village volunteers	YDD office	After data entry cards are returned to village cadres	After data entry cards are returned to village cadres
2012	Tools are collected by	Ketua RT	Team YDD	Team CD Bethesda	Team Rumsram
	Tools are kept by	Ketua RT	YDD office	After data entry cards are returned to village cadres	After data entry cards are returned to village cadres

Table 2.5.3: Data collection tools (#3) 2011 and 2012

Following the data collection and data entry systems in place, and the number of times a house card or questionnaire can be used, the data monitoring tools are either kept in the villages or in the offices of the partner NGOs. For self-monitoring purposes by the villagers it would be best if the data monitoring tools could be kept in the villages. YDD is the only partner NGO that keeps the completed house questionnaires in their office.

As shown on the right, YDD is so far the only organisation that developed a house card (poster) that uses the QIS<sup>11</sup> methodology for self-monitoring purposes by individual houses.

Rumsram is using a very simple system for self-monitoring by individual houses consisting of simple green stickers to show STBM achievements.



Self-monitoring by villagers can be an extremely effective instrument for changing sanitation and hygiene behaviours and practices.



## 2.6 Progress on baseline data collection and performance monitoring

The following sections will provide information with regards to baseline data collection and the progress made to date on performance monitoring. A comparison of review outcomes with regards to these two subjects is given in Appendix 5 and this is discussed in more detail below.

### Baseline data collection timing and progress to date

Except for YDD, collection of baseline data was somewhat problematic for the other partner NGOs during 2011. Whereas Plan and Rumsram were not systematically collecting baseline data during part of 2011, CD Bethesda started the collection of baseline data much too late due to a number of constraints and were still collecting baseline data months after triggering events had taken place. In 2012 all partner NGOs will be collecting baseline data prior to triggering (demand creation).

		Plan	YDD	CD Bethesda	Rumsram
2011	Timing of data collection				
	▪ Before triggering		After STBM training to village cadres		After June 2011 before triggering
	▪ After triggering	First month after triggering		Yes	Before June 2011 after triggering
	Progress to date	Completed in all 182 dusun	Completed for all dusun	Completed in all 94 dusun	Completed in all 34 dusun
2012	Timing of data collection				
	▪ Before triggering	Yes	Yes	Yes	Yes
	▪ After triggering				
	Progress to date	Completed in 17 dusun	?	Not yet started	Not yet started

Table 2.6.1: Baseline data collection 2011 and 2012

<sup>11</sup> Known as a quantified Qualitative Information System (QIS), the methodology was developed by IRC and WSP as a comparative evaluation methodology at the end of the 1990s.

All partner NGOs have now been able to complete the collection of baseline data for all sub-villages triggered during 2011. However, it must be noted that some of the baseline data was collected after triggering and might therefore not reflect the real status as would have been observed if data collection had taken place before village level programme interventions had commenced.

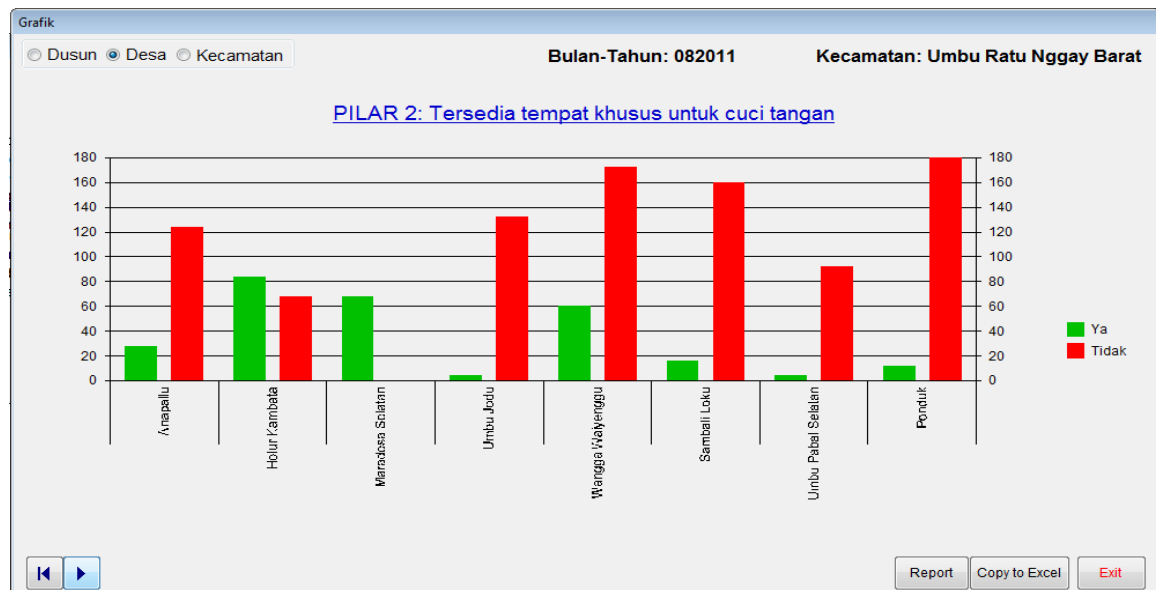


Figure 2.4: Baseline information on Pillar 2 in several villages in Sumba Tengah (Source: CD Bethesda)

### Progress on performance monitoring

Except for YDD, the other partner NGOs have been able to complete the data collection and data tabulation for all the sub-villages triggered during 2011. At the time of this review, YDD was still in the process of collecting the questionnaires and data tabulation for the period October to December 2011. Although Plan did not have a database during 2011, they did indicate that they had compiled the data in an Excel worksheet.

		Plan	YDD	CD Bethesda	Rumsram
2011	Max # of monitoring rounds made	At least 9 times	2 times	2 times	More than 6 times
	Progress to date	Completed up to end 2011 for all 182 dusun	Not yet completed for 2011	Completed up to end 2011 for all triggered dusun	Completed up to end 2011 for all 34 dusun)
	Progress on data tabulation	?	Data up to September 2011 has been entered	All data collected in 2011 has been entered	All data collected in 2011 has been entered
2012	Progress to date	Will start in May 2012	?	?	Will start in March 2012
	Progress on data tabulation	Plans to develop a new database			

Table 2.6.2: Baseline data collection 2011 and 2012

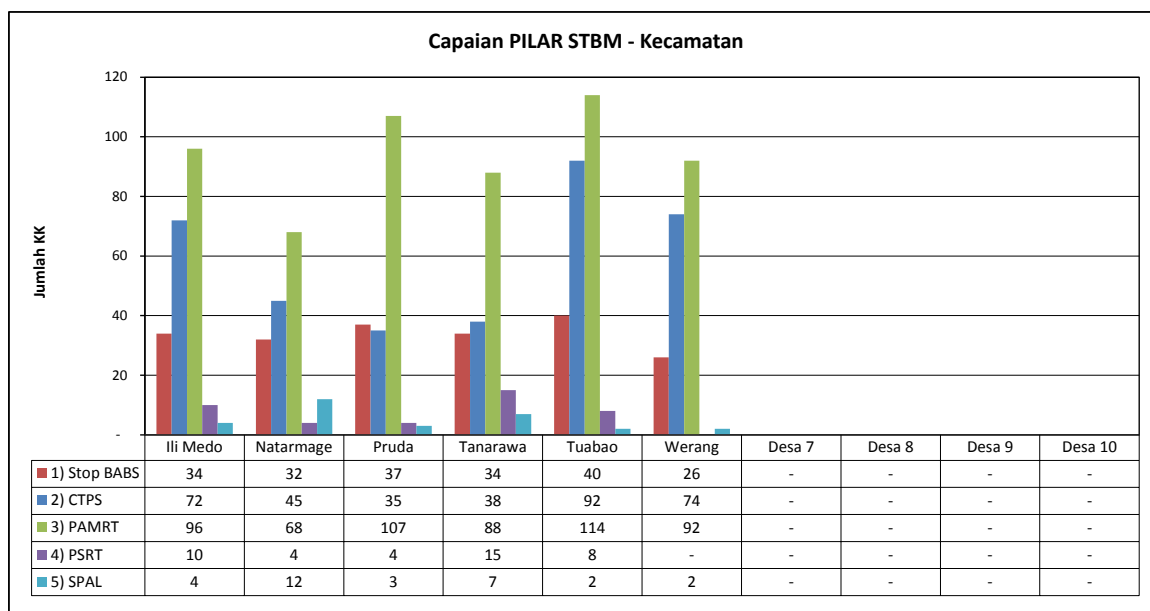


Figure 2.5: Progress monitoring information on several villages in Waiblama, Sikka (Source: YDD)

As 2012 had just started at the time of the review, not much information is available for 2012. Plan indicated that they will start data collection in May 2012 which is somewhat surprising as they indicated earlier that they will collect performance monitoring data on a three-monthly basis. Plan also mentioned that they are considering developing a performance monitoring database during the first half of 2012.

## 2.7 Database and data entry details

The following sections will provide information on the databases in place and the data entry procedures of the partner NGOs. A comparison of review outcomes with regards to this subject is given in Appendix 6 and this is discussed in more detail below.

### Database software and functionality

Although most partner NGOs encountered numerous problems in the process, all of them were able to develop some sort of functioning database during 2011. Even so the quality and level of functionality differs substantially between the partner NGOs.

		Plan	YDD	CD Bethesda	Rumsram
2011	Software	Microsoft Excel	Microsoft Access	Microsoft Visual FoxPro	Microsoft Excel
	Developed by	?	Anton Sudjarwo	Consultant	Erick Baetings
	Functioning since	April 2011	August 2011	July 2011	July 2011
2012	Software	A new Microsoft Access database is planned for 2012	Same	Same	Same
	Functioning since	Not yet functional	N/A	N/A	N/A

Table 2.7.1: Database software and functionality 2011 and 2012

There is still a huge problem with most if not all of the databases, and that is that the information provided by the automated databases does not match one to one with the information to be included in the monthly, three-monthly and six-monthly reporting formats developed by Simavi. This means that a lot of hand work remains to be done to complete the reporting formats.

## Data entry details

Except for YDD, the other partner NGOs were able to complete the data entry for the baseline for all triggered sub-villages during 2011. Due to the lack of all completed questionnaires, YDD was only able to complete 379 out of the total of 454 sub-villages, equal to 83%, during 2011.

The situation with regards to entering the performance monitoring data is basically the same as explained for the baseline. Again Plan, CD Bethesda and Rumsram have been able to complete all data entries for data collected during 2012. YDD on the other hand was only able to complete the data entries for data that represents the outputs and outcomes achieved during the third quarter of 2011 (July to September 2011). YDD explained that they have run in to delays as the village cadres are taking more time than expected to complete the data collection questionnaires.

		Plan	YDD	CD Bethesda	Rumsram
2011	Data entry				
	▪ Baseline data	Completed for all 182 dusun	Completed for 379 out of 454 dusun <sup>12</sup>	Completed for all 30 desa in Jan 2012	Completed for all 14 kampung
	▪ Monitoring	Completed for all 182 dusun in Dec 2011	Completed for data up to Sep 2011 in Jan 2011	Completed for all 30 desa in Jan 2012	Completed for all 14 kampung in Jan 2012
	Time required				
	▪ Baseline data	?	About 4 months	?	?
	▪ Monitoring	Not clear	About 1 month	About 10 days	About 1 week by 2 persons in Dec 2011
	Data entry done by	Plan SHAW field facilitator	YDD SHAW team	CD Bethesda information & communication staff	Rumsram SHAW staff
	Data tabulation <sup>13</sup> by		Special data processing person		

Table 2.7.2: Data entry progress and responsibilities 2011

During 2011 the amount of time it required to complete the data entries for performance monitoring varied between a minimum of one week for Rumsram (30 sub-villages) to one month for YDD (141 sub-villages). The time it will take to carry out performance data entries in 2012 is expected to increase proportionally with the expected increase in target villages. Hence, if nothing changes YDD might spend almost two and a half months per monitoring round during 2012 as a consequence of a more than doubling of the number of targeted sub-villages (141 to 336). In this simple calculation the alternative monthly data collection system put in place by YDD has not even been taken into consideration.

Database management and data entries are carried out by (field) staff of the partner NGOs. Plan has decided to hire a special person by 'Job Order' in 2012 who will be solely responsible for data entries.

<sup>12</sup> Baseline was supposed to cover 454 dusun but 75 dusun did complete or return the questionnaires.

<sup>13</sup> The process of placing classified data into tabular form (tables) is known as tabulation. A table is a symmetric arrangement of statistical data in rows and columns. The process of tabulation often includes cross-tabulation of a multitude of data variables.

## 2.8 School sanitation and hygiene component

The following section will provide information on the monitoring aspects of the school sanitation and hygiene component of the SHAW programme. A comparison of review outcomes with regards to this subject is given in Appendix 7 and this is discussed in more detail below.

### Monitoring of the school sanitation and hygiene component

The school sanitation and hygiene component is lagging behind the other village-level SHAW programme activities. Only YDD started the school sanitation and hygiene component during 2011. Consequently they are the only partner NGO who have started the systematic and regular monitoring of progress and results at the schools focusing on the school facilities as well as improved practices on the five STBM pillars. CD Bethesda and Rumsram have indicated that they will start working on the school sanitation and hygiene component during 2012. At the time of report writing it was not clear what Plan's intentions are with regards to this component.

		Plan	YDD	CD Bethesda	Rumsram
2011	School S&H component started	No	Yes	No	Yes
	Are results regularly monitored	N/A	Yes	N/A	N/A
	Indicators used	N/A	School facilities and practices on 5 STBM pillars	N/A	N/A
2012	School S&H component started	?	Yes	Expected to start in 2012	Expected to start in June 2012
	Indicators used	?	See above	5 STBM pillars	?

Table 2.8.1: School sanitation and hygiene monitoring 2011 and 2012

It is obvious that the school sanitation and hygiene component, and its associated monitoring topic, requires more attention from all during 2012. To be really effective any rural sanitation and hygiene programme, focusing on behaviour change and improved hygiene practices, must concentrate on the entire community (including schools and other institutions) rather than on some isolated segments of the community.

The **school sanitation and hygiene component** should be used to support the SHAW activities in the communities. The challenge is to make best use of the interrelationship between the school and the community. Links with the community are important for many reasons:

- Improving household and community sanitation and hygiene makes no sense if most children cannot practice improved sanitation and hygiene at the school<sup>14</sup>.
- Children are in general highly motivated to improve conditions and practices at home and in their communities and can be excellent catalysts for positive change.
- School events and students' assignments (e.g. simple surveys in their homes and community) are excellent opportunities to raise awareness and initiate community action on subjects as improved water supply, sanitation and hygiene.
- Schools need the assistance of parents and local administrations and organisations to establish and sustain good facilities.

<sup>14</sup> Some people even argue whether a community can be declared truly 100% STBM if schools (and other village-based institutions and facilities) are not an integral part of the movement and drive towards 100% Total Sanitation and Hygiene.

The school sanitation and hygiene component is an integral part of igniting a change in sanitation and hygiene behaviour and practices in communities and should be seen as an integral part of the 100% STBM movement introduced in the communities.

## 2.9 Involvement and role of sub-districts and districts

The following section will provide information on the level of involvement of the sub-district and district institutions in the monitoring of the SHAW programme. A comparison of review outcomes with regards to this subject is given in Appendix 8 and this is discussed in more detail below.

### Involvement in monitoring by sub-districts and districts

Although there are some variations, the involvement of sub-district and district government departments and institutions in monitoring and steering the SHAW programme is still rather limited. Because of the fact that the partner NGOs have taken up the responsibility for performance monitoring, the involvement of the sub-districts and districts have in general been restricted to sharing and discussing the monitoring results. The involvement of the sub-districts and districts appears to be highest in the Plan districts and this is an immediate result of how Plan has organised performance monitoring where results of sub-villages are reported to the village authorities, results of villages are reported to sub-district authorities and subsequently results of sub-districts are reported to district authorities including the Bupati<sup>15</sup>, POKJA AMPL<sup>16</sup>, DINKES<sup>17</sup> and BAPPEDA<sup>18</sup>. CD Bethesda is also involving the PUSKESMAS<sup>19</sup>, DINKES and POKJA AMPL wherever possible.

		Plan	YDD	CD Bethesda	Rumsram
2011	Sub-districts				
	▪ Data collection	✗	✗	✗	✗
	▪ Data entry	✗	✗	✗	✗
	▪ Data analysing	✓	✗	✓	✗
	▪ Reporting	✓	✗	✓	✗
	▪ Sharing & discussing	✓	✓	✓	✓
	Districts				
	▪ Data collection	✗	✗	✗	✗
	▪ Data entry	✗	✗	✗	✗
	▪ Data analysing	✗	✗	✓	✗
	▪ Reporting	✓	✗	✓	✗
	▪ Sharing & discussing	✓	✓	✓	✓

Table 2.9.1: Involvement of sub-districts and districts 2011

The involvement of sub-district and district level departments and authorities is another issue that requires our full attention in the coming year(s). Firstly, because the government expects that the SHAW programme will contribute to a different and better kind of monitoring for rural sanitation and hygiene. This is articulated in the third objective<sup>20</sup> which focuses at the national and programme

<sup>15</sup> Bupati: District Governor

<sup>16</sup> POKJA AMPL: Inter-departmental working group on water and sanitation

<sup>17</sup> DINKES: District Health Agency (Dinas Kesehatan)

<sup>18</sup> BAPPEDA: District Planning Board (Badan Pembangunan Daerah)

<sup>19</sup> PUSKESMAS: Primary Health Centre (Pusat Kesehatan Masyarakat)

<sup>20</sup> The first result area under this third objective reads: "Monitoring systems are developed (at community, district and national level) and functioning, with special attention to gender and poverty, and are used to direct



level: “Strengthened sector management and an enabling environment”. Secondly for the simple reason that the strengthening of sub-district and district actors is an integral part of the SHAW programme. This is expressed to some extent in the first objective, focusing at the community and sub-district level, but particularly in the second objective which focuses at the district level: “Strengthening sector management and enabling environment at district level”.

Similarly the October 2010 Inception Report highlights the importance of involving district authorities when it states: “the result monitoring will (should) not stop after programme closure and the POKJA will be included in monitoring activities to guarantee sustainable services at district and community level.”

## 2.10 Problems, constraints or challenges faced during 2011

The following section will provide an overview of problems, constraints or challenges faced during 2011 in relation to the monitoring tasks. An overview of review outcomes with regards to this subject is given in Appendix 9 and this is discussed in more detail below.

To be able to make sense of the problems, constraints or challenges mentioned by the partner NGOs, an attempt has been made to group them under the following sub-headings:

- 1) Functioning of village cadres responsible for data collection
- 2) Development of a functioning database
- 3) Government policies related to sector monitoring

### Functioning of village cadres responsible for data collection

At the beginning, all partner NGOs planned and took steps to ensure that the village cadres would become responsible for monitoring and data collection. But as Plan highlighted in the review “the fact is that only few of the volunteers can do the monitoring”. All partner NGOs mentioned some kind of problems related to the functioning of the village cadres, these can be summarised as follows:

- **Motivation and availability of village cadres**

Plan found that village cadres were not able to perform the tasks as they are too busy with other household related duties and because some village cadres have joined other village level programmes (e.g. PNPM, PAMSIMAS and others). YDD mentioned that village cadres are slow and are not able to complete their monitoring tasks in time. Rumsram faced many problems (among which timeliness) as a consequence of unmotivated village cadres.
- **Quality of monitoring data**

CD Bethesda mentioned that they were concerned about the quality of the data collected by the village cadres as mistakes are being made by them when completing the monitoring cards. CD Bethesda also mentioned that the reliability of the data is being compromised in some villages as people there are ashamed to reveal the true situation. Rumsram also questioned the reliability of the completed monitoring cards. That was the reason why they developed and carried out an alternative data collection system themselves.
- **Remuneration of village cadres**

Village cadres in the YDD areas complained about the small remuneration they received and as a consequence some did not want to carry out monitoring tasks. CD Bethesda faced the same problem as village cadres were demanding higher remuneration.

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programme management as well as strengthen upward and downward accountability and learning. This includes strengthening the national M&E database for Water and Sanitation.”

It is not a surprise to see these issues come up during the review, as most of them were discussed to different degrees during the support missions carried out by the author in 2011. The need for adequate training and coaching of village cadres and the steps the partner NGOs should take to improve the completeness and reliability of data were already discussed at length in the April 2011 mission report<sup>21</sup>. The motivation of village cadres was one of the main topics discussed and dealt with during the support visit to Rumsram in September 2011. Furthermore, the remuneration of village cadres was discussed in detail during the June 2011 SHAW programme review workshop and again during a support visit to CD Bethesda in September 2011. Consequently the issue of selection and training of village cadres will need to be addressed during 2012.

### Development of a functioning database

During the inception phase in 2010 it was decided that the partner NGOs would develop their own monitoring system including a functioning database as the latter would make it easier to tabulate and analyse the data collected in the target villages and to come up with reliable information for programme steering and reporting purposes. However, most organisations found it rather difficult to develop a functioning database. By the end of 2011, Plan was the only organisation that had not yet developed a database.

Plan and CD Bethesda mentioned some kind of problems related to this issue and these can be summarised as follows:

- **Functioning database**

Plan mentioned that they have not yet developed a monitoring database for use at the sub-district and district level. They also mentioned that they are not sure who will be responsible for procuring the hardware (computers) to be used at sub-district and district level and for data entry. Finally they mentioned that they are not sure how the data collected for measuring the performance of the SHAW programme will be used or matched with the existing monitoring system managed by the PUSKESMAS. CD Bethesda explained that the development of a functioning database software program took more time than expected.

Although not specifically mentioned by YDD and Rumsram, these organisations also faced a number of problems when developing and using their databases. Most of these problems were related to the fact that they lacked sufficient staff with adequate computer software knowledge and competences.

### Government policies related to sector monitoring

One additional and extremely relevant issue that was brought up by Plan relates to the lack of a clear policy regarding monitoring of the WASH sector (why, what, who, when, etc.) in the districts the SHAW programme is being implemented. Plan mentioned that at this moment it is not clear who is responsible for monitoring progress of water and sanitation programmes. Is it the POKJA, BAPPEDA or the Health Department? According to Plan so far only the sanitarian of the PUSKESMAS is responsible for quarterly monitoring in relation to Environmental Health (Penyehatan Lingkungan).

This is another issue that needs to be clarified in the near future as the current ambiguity might influence future SHAW programme initiatives.

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<sup>21</sup> Baetings, E. (April 2011) Sanitation, Hygiene and Water (SHAW) Programme for East Indonesia – IRC Mission Report; Section 2.4 'Other monitoring related issues', pages 14-18.

## 3. Ideas about a generic monitoring system

### 3.1 Introduction

As part of the review of the existing monitoring systems the partner NGOs were asked to express their initial feelings and ideas about the possibility of developing a generic monitoring system that would be applied universally by all the five organisations. The following two questions were included in the review questionnaire:

- 1) What are your initial comments and ideas about the generic monitoring system?
- 2) What are your specific requirements or wishes for the new monitoring system?

The following sections will provide an overview of the outcomes in relation to the development of a generic monitoring system. An overview of review outcomes with regards to this subject are given in Appendix 10 and Appendix 11 and these are discussed in more detail below.

### 3.2 Initial comments and ideas

All partner NGOs reacted positively towards the idea of developing a generic monitoring system as shown in Appendix 10. This is how the organisations reacted:

- Plan: suggested that all NGO partners use the same system and the same indicators. They mentioned that a generic monitoring system would make it easier to compare and analyse progress and challenges between the partner NGOs as well as to share results.
- YDD: it would be good to have one system as long as the monitoring system involves government officers at the village, sub-district or district level.
- CD Bethesda: principally it is ok, as long as this system can be applied before triggering commences in new villages.
- Rumsram: a good idea because it will be easier to monitor and compare progress across the different partners if the same indicators and data collection frequencies are used. They also thought that it would be good for Rumsram as they would be able to contact their colleagues when they face problems or difficulties.

Most of the partner NGOs also expressed some initial concerns. Plan mentioned that the indicators should correspond with the STBM verification format developed by the Ministry of Health. They explained that this is a must since, to maintain STBM status in the villages, District officers are expected to repeat the verification process at least once every two years. Finally they suggested combining specific SHAW indicators with government indicators.

YDD mentioned that the effective application of a new system will depend on the interest and willingness of the SHAW programme's government partners. They explained that this is important considering the problems they are facing at the moment with mobilising the village cadres to work on monitoring.

CD Bethesda suggested that the new system should make use of the same Microsoft Visual FoxPro software that they are using now, for the simple reason that this type of software is easy to use and accommodates all of their needs.

### 3.3 Specific requirements or wishes

All partner NGOs came up with some valuable ideas and specific requirements which any new monitoring system should meet. The issues presented in Appendix 11 can be summarised as follows.

- **Indicators and data collection tools**

Plan stressed again the need to use simple indicators that correspond with the STBM verification system developed by the Ministry of Health<sup>22</sup>. YDD hopes that the new system is based on only a minimum set of indicators so that it will require less time to complete the data collection questionnaires. CD Bethesda hopes that the new system will include indicators and data collection questionnaires that will be easier to understand and to use by the village cadres. Rumsram expressed the same wish and hopes that the data collection tools will indeed be simpler to use for the village cadres. Rumsram also suggested that the data collection tool (house card) should have space to indicate changes in house compositions (e.g. when the head of the household passes away it should be possible to indicate this on the house card).

- **Simple-to-use databases**

Plan stressed that a simple data entry system should be put in place so that it can even be used by sanitarians with basic computer skills (e.g. Microsoft Excel). According to Plan the database must be able to aggregate sub-district overviews in district overviews and generate automatic overviews and reports. CD Bethesda expects that the new database is easier to understand and easier to apply by the partners.

- **Data collection frequencies**

On the basis of the challenges they have faced during 2011, YDD suggested reducing the data collection frequency from the present three-monthly sequence (4 times per year) to a six-monthly sequence (2 times per year). They think this should be possible as they themselves, sometimes together with the sanitarian and PROMKES<sup>23</sup>, also collect data on a monthly basis to monitor progress when supervising SHAW implementation in the villages.

- **Additional requirements expressed by Rumsram:**

As the review questionnaire was completed by Rumsram after they had analysed and discussed the problems and shortcomings of the existing database in detail during a meeting with the author of this report in January 2012, a number of very specific and detailed issues were brought up.

The new system and in particular the new data monitoring tools should include:

- A range of technology options for STBM pillar 2 to ensure that handwashing facilities meet certain minimum requirements.
- The issue of animal waste in pillar 4 or to add a new pillar (#6). Simple questions that could be added are: "Do you have pigs or cows near your home?", "If yes, where do you keep the pigs or cows?"
- A wealth ranking (socio-economic status) system that comprises of three categories (High, Middle and Low) instead of the present two categories (Low and High).
- A question about illnesses. For example "Did any family member get sick during the reporting period?" "If yes, what kind of sickness did he/she suffer from?" Options: 1) diarrhoea; 2) malaria; 3) intestinal worms; 4) skin disease; 5) acute respiratory disease; 6) others.

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<sup>22</sup> According to Plan the STBM verification formats have been finalised by the MOH, but that they still need to be printed.

<sup>23</sup> PROMKES: sub-district health staff responsible for health promotion (Promosi Kesehatan)

- The new database should generate reports or overviews that show progress towards achieving the different pillars. Similar to what was done for pillar 2 in the Rumsram database, shown in the following figure.

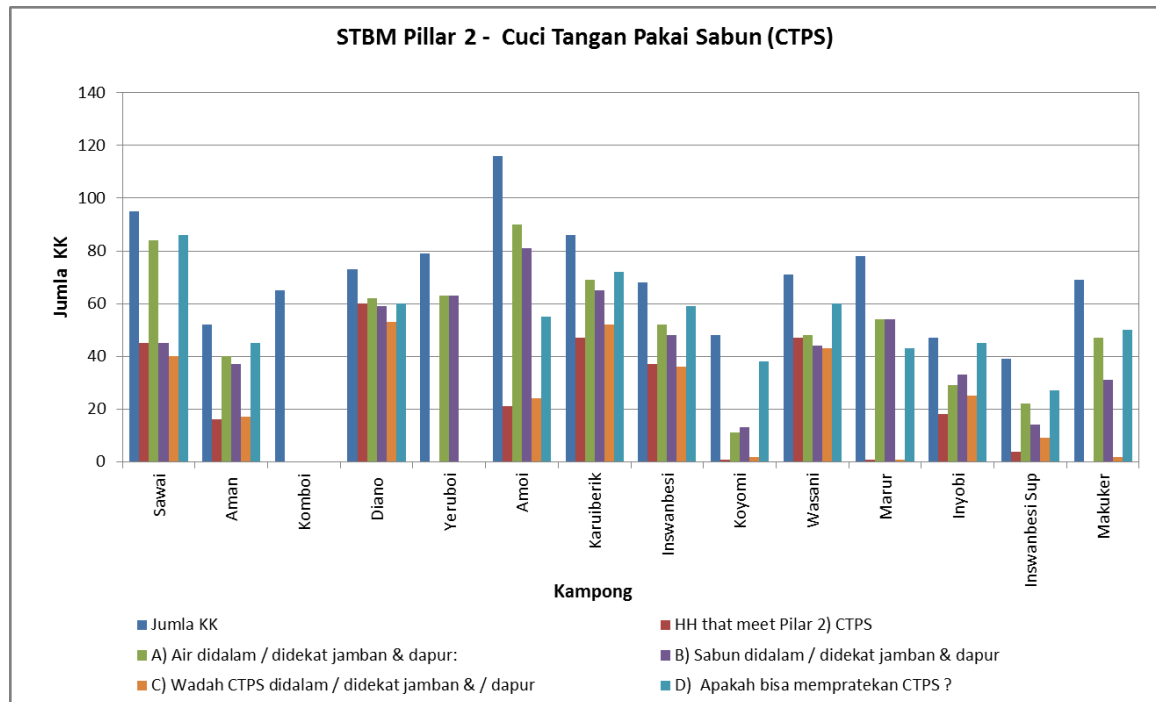


Figure 3.1: Progress in achieving Pillar 2 (Source: Rumsram database)

## 4. Conclusions and recommendations

### 4.1 Conclusions

Bearing in mind that the 2008 STBM strategy had never been implemented in Indonesia, Simavi and its local partners took a brave decision to adopt and pilot this approach. With nowhere in the country to look for best practices and with sometimes limited in-house experience and expertise, the decision that the four partner NGOs would be responsible for developing their own monitoring systems was a brave one. Except for Plan, who was able to adopt the monitoring system developed by them for the AusAID funded Grobogan rural sanitation and hygiene programme, the other partner NGOs had to start from scratch. Consequently the partner NGOs had to invest a lot of time, effort and resources in developing their own monitoring systems.

Considering the following aspects, the partner NGOs have done extremely well in developing and applying monitoring systems and practices that were used to monitor programme performance during 2011.

- The skills and competences to plan, implement and monitor the ambitious and complex SHAW programme were often not embedded in the partner NGOs. Except for Plan the other partners had no, or only limited, experience in implementing rural sanitation and hygiene programmes and no experience in adopting and applying the STBM policy. A lot of energy had to be spent on understanding and getting up to speed on the different components of the SHAW programme.
- The scale of the SHAW programme was in general also much bigger than the partner NGOs were used to. For that reason a relatively high number of new and inexperienced staff had to be recruited and trained to implement the programme.
- The novelty of the SHAW programme and the STBM approach – for which to date no government guidelines have been issued – coupled with the lack of a common understanding and a common language meant that some partner NGOs had insufficient ideas how the programme was to be implemented. Without a clear understanding of how the programme is to be implemented and what results are to be achieved it is almost impossible to develop an appropriate monitoring system.
- The assumption that the partner NGOs would be able to adopt or modify their own existing Management Information Systems proved to be too optimistic. Except for Plan all other partner NGOs had to develop their monitoring systems from scratch. Most organisations had no experience in developing and applying community-based monitoring systems.
- The lack of a clear government policy regarding monitoring of the WASH sector (why, what, who, when, etc.) in the districts the SHAW programme is being implemented is creating a lot of ambiguity. At this moment it is not clear who is responsible for monitoring progress of water and sanitation programmes.
- The timing and intensity of support made available by IRC to the partner NGOs was insufficient to support the development of the monitoring systems and practices. After the initial kick-off workshop conducted in May 2010, the first monitoring related support mission was conducted in April 2011 only. It is not clear why the draft monitoring toolbox developed by IRC in August 2010 was not used to develop a generic monitoring system<sup>24</sup>.

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<sup>24</sup> In a first response to the draft version of this report, Martin Keijzer reacted as follows: “I had hoped IRC realised the reason behind it: no good quality intervention by IRC. That is, workshop too difficult to understand, plus no-follow up to analyse a) if the message had been understood and b) what happened with the tool?”

The development of suitable and functioning monitoring systems and practices took more time and cost more headaches than expected. The lack of experience with working at scale, the expertise to develop community-based monitoring systems and the aspiration to be perfect, meant that some of the partners were way too ambitious in the beginning. This can best be demonstrated by the large number of indicators, the high data collection frequencies and the considerable size of the monitoring sample that were included in the initial designs of some of the monitoring systems.

In hindsight, knowing what we know today, things should have been done differently. Considering the quality and status of the current monitoring systems, it would have been better if all the energy and efforts of the individual partners had been combined to develop a generic monitoring system. This would have saved the investment of scarce resources and would have ensured that all partners would now be monitoring the performance of the SHAW programme on the basis of a similar set of indicators<sup>25</sup>. This would also have made it easier to allow comparison and learning among the partners.

The main constraints and challenges with the existing monitoring systems can be summarised as follows:

- ☒ Bearing in mind that the scale (or size) of programme operations has a major influence on the type and scope of a monitoring system, this has not been sufficiently taken into consideration. This has proven to be in particular a huge challenge for YDD.
- ☒ The sample sizes, reduced during the course of 2011 to make the monitoring work doable, may not always be sufficiently large enough to capture the variation in the overall programme population and as a result be sufficiently representative for the smallest sampling cluster (sub-villages).
- ☒ Disaggregated data is either not collected (gender data) or not used (poverty data) to analyse the performance of the programme. Consequently no information is available to assess whether access to improved sanitation and changes in sanitation and hygiene behaviour and practices are equal for all, and if not if special measures need to be put in place and implemented to reduce the inequalities.
- ☒ The frequency of data collection (three-monthly) and the type of data collected are often not compatible with the SHAW programme reporting cycle (monthly) and reporting requirements. Therefore a number of partners – noticeably YDD and Rumsram – have put in place alternative monitoring systems. Furthermore, it is questionable whether the three-monthly data collection frequencies provide sufficient and timely information to review progress and take remedial action in those cases where progress is behind schedule.
- ☒ On the other hand, the three-monthly frequency applied to collect data in villages that have been declared 100% STBM appears to be rather high and could possibly be reduced over a period of time to limit the overall scale of monitoring activities.
- ☒ The practice of using (trained) village cadres to collect data in the participating (sub) villages has not been without problems. Among others these problems relate to the lack of sufficient time to undertake the monitoring tasks, the lack of quality, and the expectation to receive some kind of financial compensation for the work done.

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<sup>25</sup> There needs to be a general agreement on a minimum set of indicators that is universally applied by the five partner NGOs. Depending on the specific interest or needs of the individual partners and the amount of flexibility possible within a generic performance monitoring system and in particular the database, extra indicators could be added.

- ☒ It is not clear how monitoring is organised outside the formal progress or result monitoring practices discussed in this report. So far YDD is the only partner that has developed a card (poster) that uses the QIS methodology for self-monitoring by individual houses.
- ☒ The data collected by the partners is not identical (no uniform or harmonised set of indicators) and therefore it is difficult or even impossible to prepare aggregate reports and compare results among the partner NGOs. This because the amount of data collected differs quite substantially between the partners. The number of indicators on which data is collected ranges from a minimum of 11 (Plan) to a maximum of 24 (YDD).
- ☒ Not all partners were systematically collecting baseline data during 2011. This will make it difficult to measure the actual performance of the programme if the pre-programme status of the villages is not known. Although end-of-programme results can and will be measured it will be impossible to attribute these results to the programme interventions.
- ☒ For some partners it takes too much time to collect data in the target villages, to enter the data in the databases and to tabulate and analyse the data. This means that information for programme steering and reporting purposes is not available in time.
- ☒ The time it will take to carry out performance data entries in 2012 is expected to increase proportionally with the expected increase in target villages. Hence, if nothing changes YDD might spend almost two and a half months per monitoring round during 2012 as a consequence of a more than doubling of the number of targeted sub-villages.
- ☒ Although most partner NGOs have now been able to develop some sort of functioning database during 2011, there are still problems and challenges with most if not all of the databases. The information provided by the databases does not match one to one with the information to be included in the monthly, three-monthly and six-monthly reporting formats developed by Simavi. This means that a lot of time-consuming hand work is required to complete the progress reports.
- ☒ The implementation of the school sanitation and hygiene component is lacking behind the other village-level SHAW programme activities. So far only YDD has started to implement the school sanitation and hygiene component and consequently started the systematic and regular monitoring of progress and results at the schools focusing on the school facilities as well as improved practices on the five STBM pillars.
- ☒ Although improvements are being made, the involvement of sub-district and district government departments and institutions in monitoring and steering the SHAW programme is still rather limited and likely to be insufficient to prepare them – by building their capacities – to take over the role and responsibilities of the partner NGOs in future.

Although different arguments were used, all partner NGOs reacted positively towards the idea of developing a generic monitoring system. Most thought that it would be a good idea as it will be easier to monitor and share programme results and to compare and analyse progress and challenges between the partners if the same indicators and data collection frequencies are used. Concerns expressed by the partner NGOs focused primarily on ensuring the compatibility of any new monitoring system with government policies, strategies and practices (e.g. STBM verification guidelines) and with the interest and willingness of local government partners.

The partner NGOs also came up with some valuable ideas and specific requirements for the new monitoring system. Most expressed the wish to develop a limited set (minimum number) of indicators that would require less time (data collection and data entry) and that are simple to understand and use by village cadres. Similarly any new database should be simple to use and be able to generate automatically all the required tables, reports and overviews required for



programme steering and reporting purposes. This should ideally include reports or overviews that show progress towards achieving the different STBM pillars.

## 4.2 Recommendations

Following the constraints and challenges described in the previous section as well as the interest expressed by the partner NGOs, there is only one way forward and that is to

### **‘Develop one performance monitoring system to be used by all’**

On the basis of the review of the current monitoring systems a number of specific recommendations have been set out in this section. It is expected that these will be useful to develop a new generic monitoring system that is to be universally applied by all five partners.

#### Detailed recommendations:

##### On the size and scope of the monitoring system

1. There is a need to be less ambitious and more realistic when developing the new monitoring system. Nobody is perfect so we should not try to develop the most perfect or most ideal monitoring system and then find out later that we tried to achieve the impossible. It makes sense to follow the KISS<sup>26</sup> principle.
2. The monitoring system should reflect that while SHAW programme has a strong learning component, its main task is to support the implementation of government policies and strategies. It is not an academic research project or a monitoring programme. Therefore, it is important to keep the system and tools as simple as possible so that they can be applied successfully and with minimum effort by all relevant actors. Nevertheless, the performance monitoring system and practices should be methodologically sound.
3. The complexity (or better simplicity) and scope of the monitoring system should reflect the size of the monitoring tasks. Considering that Plan and YDD are expected to target 41,900 and 67,700 houses respectively up to end 2014, this scale needs to be taken into account when developing the new monitoring system. As the SHAW programme is not a monitoring project, the sample size needs to be realistic and doable.
4. To meet both programme steering and progress reporting requirements, there is a need to consider three separate but mutually reinforcing monitoring systems, namely:
  - **Progress self-monitoring at house level** by individual houses with the support of trained village cadre and village authorities. The main purpose would be to encourage self-monitoring by individual houses and village authorities to ensure that progress is being made and to enhance local ownership. A simplified version of the self-monitoring house cards put in place by YDD could be used for this purpose.
  - **Basic progress monitoring on outputs** on a monthly basis on a minimum number of quantitative physical indicators for a limited number of key STBM pillars (e.g. number of toilets for pillar 1, number of handwashing devices for pillar 2). The main purpose would be to measure programme outputs necessary for timely programme monitoring and steering. Consider a 100% sample size: all villages, all sub-villages, and all houses. This information can then also be used for monthly reporting purposes.
  - More in-depth **programme performance monitoring on behaviour change outcomes** on a 3- or 6-monthly basis using the quantified Qualitative Information System (QIS) system

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<sup>26</sup> Three know acronyms of **KISS** are: Keep It Simple, Stupid; Keep It Short and Simple, and Keep it Simple & Straightforward.

covering all five pillars. The main purpose would be to measure programme outcomes and then in particular changes in sanitation and hygiene behaviour and practices. Consider a representative sample size per sub-district, meaning a sample of villages, and a sample of houses in these villages. This information can then be used for biannual (6 monthly) reporting purposes.

5. If the programme wants to measure attribution, it could use a batch-wise approach. For example the batch that serves as control group during the first year will get the programme one year later. From the first batch on, each next batch thus serves first as control group. This makes it possible to monitor change in a methodologically more robust double difference model.
6. The post STBM declaration behaviour change monitoring frequencies should reflect the potential risks of possible relapses in sanitation and hygiene behaviours and practices. It is expected that when villages are left to their own following STBM declaration the risk of relapse is high. So monitoring frequencies immediately following STBM declarations might have to be higher than monitoring frequencies after one or two years. The continuous interest shown by partner NGOs and PUSKESMAS will be a stimulus and incentive to the villagers to continue their healthier behaviours and practices.
7. Systems and practices need to be put in place so that data collection, data entry, data tabulation, data analysis and reporting take less time. Information must be available in a timely manner so that it can be used for programme steering and reporting purposes. Programme interventions such a post-triggering support need to be flexible – reflecting the status and progress in each village – and should therefore be based on hard facts that come out of a reliable monitoring system.

### On the sample size

8. The sample size for the performance or outcome monitoring system needs to be representative<sup>27</sup> for the programme population and should therefore be sufficiently large enough to capture the variation in the overall programme population. Some considerations:
  - As STBM verification and declaration is done at village level, there is no need to use the sub-village as the smallest sample cluster. Instead it is proposed to use the village as the smallest sample cluster. Therefore the sample size should be selected such to be representative for the total population in a village.
  - With a total of more than 900 villages (and more than 2,800 sub-villages) it will not be realistic to include all sub-villages and villages in the sample. It is therefore proposed to include only a sample of all villages so as to come to a representative sample for each targeted sub-district.
  - Considering that the scale of operations for CD Bethesda and Rumsram is much smaller than that for Plan and YDD and because they are not expected to cover all villages in their target sub-districts, it needs further exploration to ascertain whether they can include all their target villages in the monitoring sample.

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<sup>27</sup> A sample that is fully representative of the population from which it is drawn is called a **representative sample**. The sample needs to be representative in order to infer (extrapolate) the results from the sample back to the whole population. Statistical analysis can only be used on representative samples; otherwise nothing can be said about the total population. There are a number of steps to enable inference from a representative sample.

1. Clearly define the target population from which the sample is to be selected.
2. Clearly define the basic sampling unit.
3. Ensure that each sampling unit has an equal or known chance of being selected into the sample.

9. For good quality sampling, more time must be spent on training, guiding and coaching of partner NGO staff. This should be supplemented with technical reviews and discussions of the sampling design.

### On the sampling methodology

10. For the selection of villages to be included in the sample, stratified<sup>28</sup> proportional sampling is best, preferably through a simple and very broad differentiation to get two or three major groups of villages. For example: villages near a road, villages near a river or along the sea shore, villages in remote areas, etc. A proportional 'random' sample of villages that meet certain criteria is drawn up. This allows the assessment of how the approach impacts on better and worse off areas, and what the effects are of a more tailored approach to help disadvantaged areas catch up.
11. From the field experience in particular by YDD, the selection of houses to be included in the sample should be done on the basis of social village maps that correctly reflect the socio-economic status (wealth ranking) of the houses. A proportional 'random' sample of houses is drawn up on the basis of the village map with some reserve houses in each category in case of absentees. The advantage of this approach is that the village maps can be shared and discussed with villagers to enhance transparency and accountability (e.g. by inviting corrections from the villagers and/or village authorities).

### On the indicators

12. Develop a uniform set consisting of a minimum number of quantified Qualitative Information System (QIS) indicators to measure changes in sanitation and hygiene behaviours and practices for the performance or outcome monitoring system. Some considerations:
  - The indicators must reflect the intention of the five STBM pillars and should follow where possible and where available the official government policies, strategies and guidelines developed by the Ministry of Health and others. In particular the STBM verification and declaration guidelines and criteria.
  - Where possible and desired – and with extreme caution – create flexibility and space for individual partner NGOs to add extra indicators to the standard set of indicators.
13. The same set of indicators is to be used for collecting baseline data and regular programme performance data. Only in this way will it be possible to compare post-programme outcomes with the status found prior to programme interventions.
14. Disaggregated data reflecting gender and poverty differences must be collected and used to analyse the performance of the programme so that information becomes available to assess whether access to improved sanitation and changes in sanitation and hygiene behaviour and practices changes are equal for all.
15. Quantification of qualitative indicators should be done with the help of modified Likert scales. For scale scoring, the emerging advice from recent field experience is to use 0-4 scores instead of the 0-100 scores. All QIS scales should have five levels (0-4) for consistency to enhance internal consistency and to facilitate scoring and analysis. Furthermore, it is advised to use the same descriptions when making the different scales, adding one

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<sup>28</sup> **Stratified sampling** is used when monitoring is to focus on particular population segments ('strata'). A stratum is a subset of the population that share at least one common characteristic, for example males and females, or different socio-economic, social, ethnic or religious groups. Each stratum is then sampled as an independent sub-population, out of which individual elements can be randomly selected. It is a technique used when comparisons are needed between different groups, as well as requiring estimates about the total population.

incremental step to the preceding description (score option) until arriving at the ideal (level 4). Pay special attention to get discriminating improvements for levels 3 and 4.<sup>29</sup>

A **Likert scale** is a psychometric<sup>30</sup> scale commonly involved in research that employs questionnaires. It is the most widely used approach to scaling responses in survey research, such that the term is often used interchangeably with *rating scale*, or more accurately the Likert-type scale, even though the two are not synonymous. The scale is named after its inventor, psychologist Rensis Likert<sup>31</sup>.

With Likert scales, observers or participants can rate a particular condition or practice from 0 (lowest) to 4 (highest). Each scale (or “ladder”) has five descriptions, or “mini-scenarios” which describe the situation for a particular score. These are factual statements that describe the absence of an indicator at the bottom (level 0) and the ‘ideal’ situation at the top (level 4). In this way, for example houses that are at the lowest levels at the start of an intervention can climb to a higher level on each indicator scale. Typically, scores are structured as follows:

- The score 0 indicates a situation in which the particular facility, condition, behaviour or practice is absent;
- The scores 1 and 2 indicate the benchmark situation, or minimal scenario that the programme wants to achieve programme-wide; and
- The scores 3 and 4 indicate the ideal situation, which possibly none or only a few houses, schools or villages can achieve.

An example of a possible QIS scale is given below.

Description	Score
No latrine or latrine without rings and slab	0
Latrine with (1) rings and slab, but no or broken water seal	1
BENCHMARK: latrine with (1) ring and slab + (2) has intact water seal	2
Latrine with (1) rings and slab + (2) has intact water seal + (3) no faeces visible on pan, slab, water seal and walls	3
IDEAL: Latrine with (1) ring and slab + (2) has intact water seal + (3) no faeces visible on pan, slab, water seal, and walls + (4) safe excreta management (composting/emptying with safe disposal)	4

Example of a QIS indicator: Use of sanitary and hygienic household latrines<sup>32</sup>

<sup>29</sup> Source: Sybesma, C. (February 2012) Review of Methodology for Performance Monitoring in the Sustainable Sanitation and Hygiene for All (SSH4A) Programme in Five Asian Countries

<sup>30</sup> **Psychometrics** is the field of study concerned with the theory and technique of psychological measurement, which includes the measurement of knowledge, abilities, attitudes, personality traits, and educational measurement. The field is primarily concerned with the construction and validation of measurement instruments such as questionnaires, tests, and personality assessments. It involves two major research tasks, namely: (i) the construction of instruments and procedures for measurement; and (ii) the development and refinement of theoretical approaches to measurement.

<sup>31</sup> **Rensis Likert** (5 August 1903–3 September 1981) was an American educator and organisational psychologist best known for his research on management styles. He is also famous for developing the Likert Scale.

<sup>32</sup> QIS indicator #4 developed for BRAC WASH II Programme. Source: Sijbesma, C and Verhagen, J. (March 2012) QIS Monitoring Guidelines; IRC International Water and Sanitation Centre, The Hague, the Netherlands (Published March 2012). Note that this QIS indicator is used here only as an example to show what a possible Likert scale could look like. As can be seen from the description of the different scores, BRAC has set the pour-flush toilet as the ‘standard’ for a sanitary and hygienic toilet.

## On the involvement of local partners

16. Village authorities should be made responsible for output and outcome monitoring in the villages. With the proposed reduction in indicators and a simplification of the monitoring tools, the workload is expected to reduce noticeably. The selection, training and continuous coaching of villagers responsible for village level programme implementation monitoring is key. The field staff of partner NGOs need to put this on the top of their agenda.
17. Sub-district and district authorities need to take more responsibility and ownership for programme monitoring and steering. Capacity building of key sub-district and district actors is crucial to ensure continued monitoring of sanitation and hygiene behaviours and practices after village STBM verification and declaration. Partner NGOs will have to play a larger role in advocating local ownership and in enhancing capacities by providing adequate training opportunities.

## On the monitoring of other SHAW programme components

18. The performance or outcome monitoring system should ideally include a number of indicators that will reflect progress and performance of non-STBM programme components (e.g. school sanitation and hygiene component, sanitation marketing component, strengthening of (sub) district authorities).

Description	Score
No SME involved in sanitation hardware and/or services at the district level	0
SME involved in (1) sanitation hardware and/or services at the district level	1
SME involved in (1) sanitation hardware and/or services at district level, and (2) marketing sanitation	2
SME involved in (1) sanitation hardware and/or services, (2) marketing sanitation, and (3) outreach to communities	3
SME involved in (1) sanitation hardware and/or services, (2) marketing sanitation, (3) outreach to communities, and (4) reaching the poor	4

Example of a QIS indicator: Progress on SME's engaged in sanitation related business and marketing activities<sup>33</sup>

<sup>33</sup> QIS indicator #6 developed for the SNV Laos Sustainable Sanitation and Hygiene for All Programme. Source: SNV Laos (January 2012) End of Phase Performance Monitoring Report. Note that this QIS indicator is used here only as an example.

## Appendix 1: Questionnaire to review the monitoring practices of SHAW Partner NGOs

<b>Questionnaire completed by</b>	
<b>Date</b>	

<b>Name partner NGO</b>	
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Issues	Situation regarding coverage during 2011	Additional coverage planned for 2012
<b>Scale of operations</b>		
<b>Intervention areas</b>	<b>All programme implementation locations during 2011</b>	<b>Only new locations (2012 targets)</b>
Number of districts		
Name of districts		
Number of target sub-districts		
Number of target villages		
Number of sub-villages (dusun)		
Average number of houses in target dusuns		

Issues	Monitoring setup during 2011	Monitoring setup for 2012
<b>Sampling design</b>		
Basic sampling unit House or what?		
Sample size (% of houses that are included in the sample)		
Sampling methodology: How are sampling units selected if sample size is less than 100%?		
Who determines or selects the sampling units if sample size is less than 100%?		
Are the same sampling units (e.g. the same houses) monitored throughout the programme duration?		
If not, how often do you select new sampling units?		
Survey clusters: What is the smallest survey cluster (e.g. dusun or desa)?		
<b>Survey methodology</b>		
Data sources		
Frequency of data collection for regular monitoring		
▪ Before verification		
▪ After verification		
Data is collected by whom?		
Is any payment made for data collection?		
If yes, how much		
<b>HH card / questionnaire</b>		
What is used for data collection? Card or questionnaire?		
Is the same tool used for baseline data collection?		

Issues	Monitoring setup during 2011	Monitoring setup for 2012
One tool can be used for how many times?		
Number of indicators on the card/questionnaire?		
▪ For baseline data collection		
▪ For regular monitoring		
Throughout the year the completed tools are collected by whom?		
The tools are kept where?		
<b>Baseline data</b>		
When is baseline data collected?		
▪ Before triggering		
▪ After triggering		
▪ No fixed time, whenever possible		
Progress made to date		
<b>Progress in data collection</b>		
What was the max nr of monitoring rounds that were made during 2011?		
Progress on regular monitoring		
Progress on data tabulation (inputting data in databases)		
<b>Database</b>		
Software and functionality		
Data entry		
How much time does it take for entering data in the database?		
Data entry is carried out by whom?		
<b>School sanitation &amp; hygiene programme</b>		
Has the school sanitation & hygiene component started?		
If yes, are the results being systematically and regularly monitored?		
What is being monitored? Number and type of indicators used for school monitoring		
How often is data collected at the school?		
Who is responsible for data collection at schools?		
How and for what purpose are the monitoring results used?		
<b>Role sub-district / district</b>		
<b>Sub-district</b>		
▪ Data collection		
▪ Data tabulation		
▪ Data analysis		
▪ Reporting		
▪ Sharing/discussing monitoring results		
<b>District</b>		
▪ Data collection		
▪ Data tabulation		

Issues	Monitoring setup during 2011	Monitoring setup for 2012
▪ Data analysis		
▪ Reporting		
▪ Sharing/discussing monitoring results		

Problems, constraints or challenges faced during 2011 with your monitoring system
1) 2)

Comments and ideas about have one generic monitoring system to be used by all SHAW partners
<b>What are your initial comments and ideas about the generic monitoring system?</b>
1) 2)
<b>What are your specific requirements or wishes for the new to be developed monitoring system?</b>
1) 2)



## Appendix 2: Scale of programme operations

SHAW Programme Intervention Areas and Scale of Operations														
	Plan			YDD			CD Bethesda			Rumsram			Totals	% of intended results
	Timor Tengah Selatan	Timor Tengah Utara	Sub-totals	Sikka	Flores Timur	Sub-totals	Sumba Tengah	Sumba Barat Daya	Sub-totals	Biak Numfor	Supiori	Sub-totals		
<b>Scale of operations in 2012</b>														
Number of districts	1	1	2	1	1	2	1	1	2	1	1	2	8	100%
Number of target sub-districts	29	20	49	11	8	19			9	5	1	6	83	76%
Number of target villages	209	149	358	48	78	126			61	37	7	44	589	63%
Number of target dusun	686	492	1,178	141	195	336			187	93	18	111	1,812	64%
Average number of houses in target dusuns	100-120	80-90				60-500			45			30		
Estimated number of houses	75,460	41,820	117,280			94,080			8,415			3,330	223,105	147%
<b>Intended results 2010-2014</b>														
Number of districts	1	1	2	1	1	2	1	1	2	1	1	2	8	
Number of target sub-districts	32	24	56	21	19	40	5	2	7	4	2	6	109	
Number of target villages	240	175	415	160	250	410	42	28	70	36	6	42	937	
Number of benefiting households	30,443	17,775	48,218			77,890	8,600	11,800	20,400	4,286	714	5,000	151,508	
Average number of people per household	4	4	4			4	6	6	6	5	5	5	5	
Estimated number of people	119,058	72,440	191,498			348,046	51,604	70,800	122,404	19,714	3,285	22,999	684,947	
Estimated number of sub-villages			1,245			1,230			210			126	2,811	
Calculated average # of people per house			4.6			5.1			6.9			5.3	5.2	
Estimated number of houses			41,900			67,700			17,700			4,300	131,600	
Estimated number of houses as % of total			0			1			0			0	100%	

### Appendix 3: Sampling design and data collection methodology

	Sampling Design & Data Collection Methodology							
	Plan		YDD		CD Bethesda		Rumsram	
	2011	2012	2011	2012	2011	2012	2011	2012
<b>Sampling design</b>								
Basic sampling size	"House"	"House"	Baseline: "Family" Monitoring: "House"	"House"	"House"	"House"	"House"	"House"
Sample size (% of houses that are included in the sample)	100%	100%	Baseline: 100-25% Monitoring: 30%	30%	100-25%	25%	100%	25%
Sampling methodology	N/A	N/A	Based on dusun social map; 30% of each wealth classification		Based on socio-economic status of house, family size and toilet ownership		Representative sample based on socio-economic status of HH	
Who determines or selects the sampling units if sample size is less than 100%?	N/A	N/A	Team SHAW YDD together with Team STBM Dusun		Team CD Bethesda and STBM cadres at desa		Team SHAW Rumsram	
Are the same sampling units monitored throughout the programme duration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
If not, how often do you select new sampling units?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
What is the smallest survey cluster?	All targeted dusun	All targeted dusun	All triggered dusun	All triggered dusun	Dusun	Dusun	All targeted dusun	All targeted dusun
<b>Data collection methodology</b>								
Data sources	Primary data collected at the level of the house		Primary data collected at the level of the house		Primary data collected at the level of the house		Primary data collected at the level of the house	
Frequency of data collection:								
▪ Before verification	Once a month	Once every 3 months	Once a month	Once a month	Once every 3 months	Once every 3 months	Once a month	Once every 3 months
▪ After verification	Once a month	Once every 3 months	Once every 3 months	Once every 3 months	Once every 3 months	Once every 3 months	Once a month	Once every 3 months
Data is collected by whom?	Relawan desa (village volunteer)	Ketua RT (head of neighbourhood group)	Monthly: YDD STBM team 3 monthly: Dusun STBM team to YDD STBM team	Monthly: YDD team & Desa STBM team or sanitarian/promkes 3 monthly: YDD team & Desa STBM team or sanitarian/promkes	Cadres and dusun head/village officer	Cadres and dusun head/village officer	All trained dusun cadre	Trained and active dusun cadre (volunteers)
Is any payment made for data collection?	No payment	No payment	Yes	Not yet decided	Yes	No	No	No
If yes, how much	N/A	N/A	IDR 1,000 per questionnaire, with a minimum of IDR 20,000	?	IDR 10,000 per house card	N/A	N/A	N/A

## Appendix 4: Data collection tools

	Data Collection Tools							
	Plan		YDD		CD Bethesda		Rumsram	
	2011	2012	2011	2012	2011	2012	2011	2012
<b>Data collection tools</b>								
Tools used for data collection	House card	House card	Questionnaire HH card for self-monitoring by HH	Questionnaire HH card for self-monitoring by HH	House card	House card	House card	House card
Same tools used for baseline and performance monitoring	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Tool can be used how many times	One house, one card, one year	One house, one card, one year Cards are compiled in a book at RT	One time	One time	One house, once card, one year	One house, one card, one year	One house, once card, one year	One house, one card, one year
Number of indicators								
▪ For baseline data collection	10	29	24	24	20	20	14	14
▪ For performance monitoring	10	29	24	24	20	20	14	14
Monitoring tools are collected by whom	Village volunteers	Ketua RT	Team SHAW YDD	Team SHAW YDD	Team CD Bethesda	Team CD Bethesda	Team Rumsram	Team Rumsram
Monitoring tools are kept where / by whom	Village volunteers	Ketua RT	YDD office	YDD office	After data entries cards are returned to village cadres	After data entries cards are returned to village cadres	After data entries cards are returned to village cadres	After data entries cards are returned to village cadres

## Appendix 5: Baseline data collection and progress on performance monitoring

	Base Line Data Collection and Progress in Performance Monitoring							
	Plan		YDD		CD Bethesda		Rumsram	
	2011	2012	2011	2012	2011	2012	2011	2012
<b>Baseline data collection</b>								
Timing of baseline data collection								
▪ Before triggering		Before triggering, after village socialisation	After STBM training to village cadres	After STBM training to village cadres		Yes	After June 2011 before triggering	Yes
▪ After triggering	The first month after triggering				Yes		Before June 2011 after triggering	
Progress to date	Completed in all 182 dusun	Completed in 17 and ongoing in 75 dusun			Completed in all 94 dusun	Not yet started in new dusun	Completed in all 34 dusun	Not yet started in new dusun
<b>Performance monitoring</b>								
Maximum number of monitoring rounds made during 2011?	?		2 times		2 times		?	
Progress on regular monitoring	Completed up to December 2011 for all 182 dusun (59 desa)	Will be done in May 2012 for all sub district in TTS and TTU	?	?	Continuing for villages triggered in 2011		Completed up to December 2011 for all 34 dusun (14 kampung)	Will start in March 2012
Progress on data tabulation	?	Plans to develop a new database	Data up to September 2011 has been entered; ongoing for Oct-Dec 2012		All data collected in 2011 has been entered		All data collected in 2011 has been entered	

## Appendix 6: Database software, functionality and data entry details

	Database Software, Functionality and Data Entry Details							
	Plan		YDD		CD Bethesda		Rumsram	
	2011	2012	2011	2012	2011	2012	2011	2012
<b>Database</b>								
Software	Simple Microsoft Excel database	A new Microsoft Access database is planned for 2012	Microsoft Access		Microsoft Visual FoxPro		Microsoft Excel	
Functionality	Functioning since April 2011	Not yet functioning	Functioning since August 2011		Functioning since July 2011		Functioning since July 2011	
Data entry								
▪ Baseline data	Data entry for all 182 dusun completed		Data entry for 379 dusun completed (baseline was supposed to cover 454 dusun but 75 dusun did complete the questionnaires)		Data entry for all 30 desa completed in January 2012		Data entry for all 14 kampong completed	
▪ Performance monitoring	Data entry for all 182 dusun completed in December 2011		Data entry up to September completed in January 2011		Data entry for all 30 desa completed in January 2012		Data entry for all 14 kampong completed in January 2012	
Time required for data entries								
▪ Baseline data	?		About 4 months		?		?	
▪ Performance monitoring	Not very clear; part-time job of SHAW field facilitators		About one month		3 villages in one day by one person; about 10 days in total		By the end of 2011 it took about one week for two people	
Data entries carried out by	Plan SHAW facilitators	Special person will be hired in 2012	YDD SHAW team		CD Bethesda info communication staff		Rumsram SHAW staff	
Data tabulation carried out by			Special data processing person					

## Appendix 7: Monitoring of school sanitation and hygiene component

	School Sanitation & Hygiene Component							
	Plan		YDD		CD Bethesda		Rumsram	
	2011	2012	2011	2012	2011	2012	2011	2012
<b>Monitoring the school S&amp;H component</b>								
School sanitation & hygiene component started	No	?	Yes		No	Will start in 2012	No	Expected to start in June 2012
Are the results being systematically and regularly monitored?	N/A		Yes		N/A	Yes	N/A	
Number and type of indicators used for school monitoring	N/A		School S&H facilities and the practices on the 5 STBM pillars		N/A	Five STBM pillars	N/A	
Data collection frequency	N/A		Monthly		N/A	3-monthly	N/A	
Data collectors	N/A		YDD SHAW team		N/A	School Sanitation Team (teachers, chairperson, school committee)	N/A	
How and for what purpose are the monitoring results used?	N/A		To discuss progress and conditions related to STBM with teachers and village team		N/A	To discuss progress with Kecamatan team to manage school sanitation better	N/A	

## Appendix 8: Role and involvement of sub-districts and districts

	Roles of (Sub) Districts							
	Plan		YDD		CD Bethesda		Rumsram	
	2011	2012	2011	2012	2011	2012	2011	2012
<b>Role of sub-districts and districts</b>								
<b>Sub-district</b>								
▪ Data collection	Not actively involved	N/A	No		Not actively involved	Not actively involved	Not actively involved	
▪ Data entry and tabulation	Not actively involved	Yes	No		Not actively involved	Not actively involved	Not actively involved	
▪ Data analysis	Yes, every two months	Yes	No		Yes, Puskesmas officers are involved	Yes, Puskesmas officers are involved	Not actively involved	
▪ Reporting	Yes, report result of verification to POKJA, Dinas Kesehatan, BAPPEDA, and BUPATI	Yes	No		Yes, Puskesmas officers are involved	Yes, Puskesmas officers are involved	Not actively involved	
▪ Sharing and discussing of monitoring results	Yes, every two months. After verification, sub-district shares and discusses results with POKJA	Yes	Yes		Yes, Puskesmas officers are involved	Yes, Puskesmas officers are involved	During 2011 two sharing and discussion sessions were organised	
<b>District</b>								
▪ Data collection	N/A	N/A	No		Not yet involved	Not actively involved	Not actively involved	
▪ Data entry and tabulation	Not actively involved	Yes	No		Not yet involved	Not actively involved	Not actively involved	
▪ Data analysis	Not actively involved	Yes	No		Yes, Dinkes officers are involved	Yes, POKJA and Dinkes officers are involved	Not actively involved	
▪ Reporting	Yes, POKJA presents progress and verification results to Bupati	Yes	No		Yes, Dinkes officers are involved	Yes, POKJA and Dinkes officers are involved	Not actively involved	
▪ Sharing and discussing of monitoring results	Yes, POKJA participates in sub-district progress meetings	Yes	Yes		Yes, Dinkes officers are involved	Yes, POKJA and Dinkes officers are involved	District Health Office staff participated in the two sub-district progress meetings	

## Appendix 9: Problems, constraints or challenges faced during 2011 with regards to the monitoring systems

Plan	At the beginning, we planned that data collection and monitoring is part of the village volunteer's job, but the fact is that only few of the volunteers can do the monitoring job, since they have other daily activities to perform. We also found that several volunteers are joining other project (e.g. PNPM, PAMSIMAS and others). After discussing with the kepala desa, we decided that the Ketua RT will become responsible for monitoring. So far, it is working in our areas.
	We have not yet developed a monitoring database for use at the sub district and district level. We are not sure who will be responsible for data entry, the type of hardware (computer), and how to match the data with their own quarterly monitoring system (sanitarian Puskesmas), etc.
	There is no policy regarding monitoring at district level. Example: who is responsible for monitoring water and sanitation? BAPPEDA or Health Department or POKJA or who? So far only the Puskesmas (Sanitarian) has the responsibility for quarterly monitoring on Environmental Health (Penyehatan Lingkungan).
YDD	Village cadres are slow in working on the questionnaires and are not able to complete the work within the given time frame.
	Village cadres complained about the small remuneration they receive for completing the questionnaires and some even did not want to work on it.
CD Bethesda	Village cadres made mistakes when completing the house cards
	House cards were not distributed in time to the village cadres
	The development of the database software program took more time than expected
	Village cadres demanded a higher remuneration to collect the monitoring data
	Some communities were ashamed to tell the true situation, and village cadres had to obey them
Rumsram	Problems with unmotivated village cadres
	Reliability of completed house cards is questionable
	An alternative data collection system was put in place to ensure reliable information for reporting purposes



## Appendix 10: Initial comments and ideas about a generic monitoring system

Plan	We suggest that all the SHAW partners use the same indicators and the same system. The indicators must correspond with the STBM verification format developed by the Ministry of Health. This is a must, since at least once in two years, the verification process is repeated by District officials to maintain the STBM status in the villages.
	The indicators we use should be a combination of SHAW indicators and government indicators.
	A generic monitoring system makes it easier to compare the progress and challenge between the SHAW partners.
	A generic monitoring system should be useful to analyse progress of each SHAW partner.
	Better for sharing results between the SHAW partners.
YDD	It is good to have one monitoring system if the monitoring system involves government officers at the village, sub-district or district level.
	The effectiveness of the implementation of the system will very much depend on the willingness of the government partners. This is actually already an issue in YDD project areas where cadres do not want to work on data collection or are too slow.
CD Bethesda	Principally it is ok, as long as this generic monitoring system could be applied soon before triggering in new villages.
	CD Bethesda has developed a database using FoxPro software. This software is easy to use and accommodates our needs. Any new system should not change the software, since it has been appropriated with general and agreed indicators and questionnaires.
Rumsram	This is a good idea because from reporting perspectives it will be easier for Simavi to monitor progress across the different partners. Easier to compare progress between partners if the same indicators and data collection frequencies are used.
	This is good for Rumsram because if we come across problems or difficulties we can ask other partners and share experiences among partners.

## Appendix 11: Specific requirements or wishes for the new monitoring system

Plan	Very simple indicators that automatically link to the Ministry of Health STBM verification format. We noticed that the softcopy is final, but not yet printed by the MoH.
	Use a very simple system which can even be used by a sanitarian with basic Microsoft Excel skills.
	Automatic systems to sum all sub-districts into district data
YDD	Monitoring is still one of our headaches. Based on the 2011 experience, the monitoring by questionnaires every 3 months are somewhat too close because not all questionnaires of the first three months were collected or completed by the cadres and the next round had to be done again. Most cadres at the dusun complained and partly because of the small remuneration. So, if it can be done every six months and the remuneration is doubled, we think it may work better. It should be noted that YDD also have monthly monitoring through visit to the dusun and schools (sometimes together with the sanitarian and Promkes) to monitor progress and supervise the STBM implementation in the respective dusun.
	More simple questionnaire or minimum monitoring indicators required that will be faster and requires less time to complete.
CD Bethesda	Generic monitoring system could help the analysis to come up from existing conditions.
	New generic software program should be easier to understand and apply by the partners.
Rumsram	Easy to operate: questionnaires should be easy to understand and easy to use by village cadres.
	Include technology options for pillar 2.
	Develop overviews that show progress towards achieving the different pillars. Like we did for pillar 2 in the Rumsram database.
	Data collection (house) cards: they should have space to indicate changes in the house composition (e.g. when the head of the household passes away this should be indicated on the card).
	Data collection (house) cards: do you have pigs or cows near your home? If yes, where do you keep the pig / cows? Suggest to include animal waste in pillar 4 or to add a new pillar (#6).
	Wealth ranking (socio-economic status): there should be three categories (High, Middle and Low) instead of the present two categories (Low and High).
	Could the data collection (house) card include a question about if any family member got sick during the reporting period? If yes, what kind of sickness he/she suffered from? Options: 1) diarrhoea; 2) malaria; 3) intestinal worms; 4) skin disease; 5) acute respiratory disease; 6) others.