

Scope of Work

Enhancing Capacity Building for Sanitation through E-learning

June – November 2021

A. Background

The USAID Indonesia Urban Water, Sanitation and Hygiene, *Penyehatan Lingkungan Untuk Semua* (IUWASH PLUS) program is a five year-and-eight-month initiative designed to assist the Government of Indonesia (GOI) in increasing access to water supply and sanitation services as well as improving key hygiene behaviors among urban poor and vulnerable populations. USAID IUWASH PLUS works with governmental agencies, the private sector, NGOs, communities and others to achieve the following "high level" results:

1. An increase of 1,100,000 people in urban areas with access to improved water supply service quality, of which at least 500,000 are from the poorest 40% of the population (also referred to as the "Bottom 40%" or "B40"), vulnerable groups or Indonesia's eastern provinces; and
2. An increase of 500,000 people in urban areas with access to safely managed sanitation.

To ensure that improvements in access to WASH services are sustained, USAID IUWASH PLUS is guided by a development hypothesis that focuses on strengthening service delivery systems, so they can more effectively reach the poorest and most vulnerable segments of the population. In order to achieve this at scale, the program undertakes activities through four interrelated components, including: 1) improving household WASH services; 2) strengthening city WASH institutional performance; 3) strengthening the WASH financing environment; and 4) advancing national WASH advocacy, coordination and communication. In support of these components, USAID IUWASH PLUS also implements a Local Sustainability and Innovation Component (LSIC) that is designed to stimulate WASH innovations that strengthen community, private sector and government WASH service provision.

B. Activity Background

Improving the capacity building for sanitation operators is a critical part. This capacity building is especially for personnel who interact in sanitation operator. The sanitation operator could be as UPTD Pengelola Air Limbah Domestik or as a PDAM/PERUMDA. By implement the capacity building, it also support indirectly achieved SPM (Standard Pelayanan Minimal) or Minimum Standard Requirement on sanitation in each cities.

USAID IUWASH PLUS support the capacity building to the sanitation operators. However, many sanitation operators still have limited access to capacity building programs due to several constrains, among them there are still a few institutions that provide training programs designed specifically for sanitation operators. Balai Teknologi Sanitasi (BTS) under the Directorate General of Human Settlements, Ministry of Public Works and Housing (MPWH) is one of the institution that provide such training, design specifically for sanitation operators and focus on technical aspects of sanitation services.

BTS has many training program on sanitation sector. The training is divided majority in design, operation and maintenance, and also management. However, BTS has limitations to serve a significant number of participants due to most of the comprehensive training program requires substantial face-to-face time to deliver, the duration of different training module is ranging from 5 up to 10 days, thus maximum participants in each class training are only 25 – 30 person.

While, the total personnel in sanitation operators in Indonesia are more than 1,000 personnel and it will increased as SPM implemented. Therefore, to increase number of personnel in sanitation operators that can receive training from BTS, a new methodology for providing the training program is necessary, such as combining the e-learning and face-to-face method to reduce the duration. BTS and Directorate of Sanitation, MPWH request USAID IUWASH PLUS assistance to develop the e-learning concept, structure, and develop example of e-learning modules.

Therefore, USAID IUWASH PLUS will hire multimedia company to develop the Learning Management System (LMS) and e-learning modules from selected 1 modules/training. The multimedia consultant will conduct the development of e-learning starting from the concept, storyboard, LMS and modules development, conduct trials, evaluate results, and adjust when needed.

C. Objective

This proposal aims to support Balai Teknologi Sanitasi (BTS) in expanding the training methodology through online training/e-learning. The online training will become prerequisite to the face-to-face training. To be eligible for face to face training, the participants need to take the online training and pass the minimum score in the post test. The online training will mostly cover the basic knowledge/theory or introduction, while the more detail material will be done by face-to-face. By combining the two training methodology, BTS is expected to be able to increase the number of training participants.

D. Tasks

In general, the tasks and responsibilities of the consultant will include, but not limited to:

1. Preparation
 - Identification of e-learning users.
 - Identifying e-learning needs such as participant registration, discussion, tests and certificates.
 - Identification of e-learning infrastructure requirement.
 - Conduct regular discussion with USAID IUWASH PLUS and relevant stakeholders at Ministry of Public Works and Housing
2. Development of Learning Management Systems
 - Identification of features required to operate e-learning (for instance: content management, registration, forum and/or video call/conf., testing and assessment, reporting and tracking, etc)
 - Based on the agreed features, develop the LMS concept and design
 - Develop the learning management system

Note: the LMS is planned to be integrated with SIPANDU (Sistem Layanan Terpadu) that developed by Subdit Data dan Informasi, Dit. Keterpaduan Infrastruktur Permukiman, Kem. PUPR

3. Development of E-learning 1 modules/material from selected topic training.
 - Development of conceptual design and outline content (story board).
 - Mockup development which is a visual sketch of the e-learning display.
 - Prototype development which is a system or platform design that will be used.
 - Development of e-learning modules.
4. Trial e-modules
 - Integration program with SIPANDU SATU (Sistem Pelayanan Terpadu Satu Pintu)
 - Conduct application pen test with Pusdatin of Ministry of Public Works and Housing
 - Conduct E-learning trial
 - Evaluate of e-learning trial results
 - E-learning improvement or adjustment
5. Support for e-learning management
 - Development of Standard Operational Procedure (SOP) for BTS to operate e-learning (backend, participant and instructor manual)
 - Provide training to operate and manage e-learning to relevant stakeholders (mainly BTS and Pusdatin)

During the implementation, the consultant at least minimum 3 times have to conduct event offline activity meeting/training with BTS-Surabaya and relevant stakeholder. The event activity are as follow: on development LMS and E-Learning, at trial of e-modules, and training BTS to support e-learning management. Due to limitation of personnel on the offline meeting/training, it could be combination with online.

After completion, the LMS and e-learning modules will be managed by Balai Teknologi Sanitasi (BTS). However, the programs (LMS and e-learning modules) will be stored in the Pusdatin of MPWH server. Therefore, close communication with these institutions are critical to ensure compatibility and ease of management. The Consultant have to service maintenance of the E-learning program at least 6 month after the contract finished.

E. Deliverables

- Concept and design of Learning Management Systems Brief and e-learning modules
- Learning Management System (LMS)
- 1 modules of e-learning
- SOP for managing e-learning (video for participant, and PDF for backend and instructor)
- Brief report on trial process and key points for improvement
- Source code program

F. Contribution to IUWASH PLUS Outcomes

The above proposed activities will contribute to the following IUWASH PLUS outcomes:

HR 2: People gaining access to safely managed sanitation services.

- C2-3: Local sanitation management units with improved service delivery performance.
 C2-4: Local governments with improved WASH service delivery performance.
 C4b: Number of knowledge products

G. Posting & Reporting Relationships

The multimedia company will work out of the IUWASH PLUS office in Jakarta, and report directly to the septage management specialist and/or sanitation coordinator component 2. The multimedia company also will work closely with e-learning development individual consultants. These individual consultants will provide significant support in implementing the tasks, especially in concept development, facilitate discussion and agreement of the concept, and scheme for LMS and E-Learning with BTS, Dit. Sanitasi, and other relevant stakeholders. Also the individual consultants will provide support on different aspects on development e-Learning modules, such as the use of effective media, animation, user interface, etc.

H. Schedule

This activity will be implemented for 6 months from June to November 2021, with the detail schedule as follow:

No	Tasks	Jun	Jul	Aug	Sep	Oct	Nov
1	Inception Report						
2	LMS development						
3	Development of E-learning modules						
	• Story board development						
	• Modules/HTML5 development						
4	Integration program at SIPANDU SATU						
5	E-learning trial and improvement						

I. Estimated Budget and Payment Schedule

The budget for this activity is around IDR 550.000.000,- for development of Learning Management System (custom) and 1 module/material of e-learning modules. The budget include meeting/training event cost (offline), travel to Surabaya (include health test as prerequisite for travel), accommodation, and material kit. Payments will be made in 4 stages after the submission of the deliverables for each stage is received and approved by the USAID IUWASH PLUS and other key stakeholders (mainly BTS) in accordance with the tasks that must be carried out.


Payment will be carried out in 4 stages, as follows:

Reporting	Time Schedule	Payment
Inception report including detailed methodology, work plan, schedule, and personnel mobilization	June 2021	15%
Draft of LMS and draft of e-learning modules	August 2021	30%
Final LMS, draft of SOP for LMS, E-learning modules ready for trial	September 2021	35%
<ul style="list-style-type: none"> Final E-learning modules Final SOP for managing e-learning (hardcopy & video animation) Source Code 	November 2021	20%

J. Proposed Mechanism

This activity will be implemented through fixed-price purchase order.

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Attachment

E-learning Materi

No	Topik	Sub Topik	Materi Pokok	JP
1	IPLT	<ul style="list-style-type: none"> Definisi IPLT Sumber limbah IPLT 	IPLT dan sumber limbah IPLT	1,5
	Karakteristik Lumpur Tinja	<ul style="list-style-type: none"> Kandungan Lumpur Tinja Kandungan Lumpur Tinja dan Unit Pengolahan 	Karakteristik Lumpur Tinja	
	Tahapan Pengolahan di IPLT	<ul style="list-style-type: none"> Pengolahan Pre Treatment <ul style="list-style-type: none"> Fungsi dan Proses Pre Treatment Contoh Unit Pengolahan Pemekatan <ul style="list-style-type: none"> Fungsi dan Proses Pemekatan Contoh Unit Pengolahan Lumpur <ul style="list-style-type: none"> Fungsi dan Proses Pengolahan Lumpur Contoh Unit Pengolahan Cairan <ul style="list-style-type: none"> Fungsi dan Proses Pengolahan Cairan Contoh Unit 	Fungsi Fasilitas/Prarana Utama IPLT	
	Rangkaian unit pengolahan di IPLT	<ul style="list-style-type: none"> Rangkaian unit pengolahan Contoh Rangkaian Unit Pengolahan **) <ul style="list-style-type: none"> Pre Treatment, SSC, Drying Area, kolam Anaerobik, kolam Fakultatif, kolam Maturasi, Wetland Pre Treatment, SSC, Drying Area, Anaerobik Baffle Reactor, kolam Fakultatif, kolam Maturasi, Wetland Pre Treatment, thickener, SDB, kolam Anaerobik, kolam Fakultatif, kolam Maturasi, Wetland 	Rangkaian unit pengolahan dan contoh rangkaian unit pengolahan	
2	Pengolahan Pre Treatment	<ul style="list-style-type: none"> Unit Screen, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 	Fungsi, Operasional dan Pemeliharaan bangunan/unit pengolahan Pretreatment IPLT	0,5
		<ul style="list-style-type: none"> Unit Grit Chamber, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 		0,5
		<ul style="list-style-type: none"> Unit Grease Trap, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 		0,5
3	Pengolahan Pemekatan	<ul style="list-style-type: none"> Unit Sludge Separation Chamber (SSC) Fungsi, Proses, Operasi, Pemeliharaan 	Fungsi, Operasional dan Pemeliharaan bangunan/unit pengolahan Pemekatan IPLT	1,5
		<ul style="list-style-type: none"> Unit Gravity Thickener, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan, 		1
		<ul style="list-style-type: none"> Unit Pompa (Peralatan Pendukung) Fungsi, Operasi, Pemeliharaan 		
4	Pengolahan Lumpur	<ul style="list-style-type: none"> Unit Sludge Drying Bed (SDB), pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 	Fungsi, Operasional dan Pemeliharaan bangunan/unit pengolahan Lumpur IPLT	1
		<ul style="list-style-type: none"> Unit Drying Area (DA), pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 		0,5

5	Pengolahan Cairan	<ul style="list-style-type: none"> • Unit Kolam Anaerobik, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 	Fungsi, Operasional dan Pemeliharaan bangunan/unit pengolahan Cairan (Biologi) IPLT	0,5
		<ul style="list-style-type: none"> • Unit Kolam Fakultatif, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 		0,5
		<ul style="list-style-type: none"> • Unit Kolam Maturasi, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 		0,5
		<ul style="list-style-type: none"> • Anaerobik Baffle Reactor (ABR), pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 		1
		<ul style="list-style-type: none"> • Wetland, pembahasan: Fungsi, Proses, Operasi, Pemeliharaan 		0,5

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