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VIETNAM LOCAL WORKS FOR ENVIRONMENTAL HEALTH STUDY

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ABSTRACT

Clean water and environmental sanitation remain a challenge in rural areas in Vietnam. The USAID-funded Local Works for Environmental Health activity implemented by the Institute of Population, Health, and Development (PHAD) has been working since 2018 to address environmental health challenges in local communities in Ha Nam and Thanh Hoa provinces through empowered local capacity and strengthened partnerships among local organizations. This study explores PHAD's process of engaging partners to make water works more locally owned and sustainable and presents recommendations to be adapted into current activities and new designs.

The study team reviewed implementer reports and conducted KIIs with 34 respondents, four FGDs with 25 participants, and four site visits to water plants. The study found that PHAD has succeeded in establishing a Vietnam Water Health Alliance (VIWHA) with 35 members. PHAD conducted surveys and workshops at the central, provincial, and commune levels in implementation areas to disseminate information about water health issues and successfully built five water treatment systems in Yen Son commune. However, PHAD could better mobilize VIWHA members and other local actors to act collectively by better specifying governing members' duties and engaging their common interests. Whereas PHAD remains the leading implementer, it should instead adopt a coordinator role, connecting local actors to promote locally led, community-driven development. To do this, it needs to adapt to local working environments. PHAD's water works activities have not fully achieved their expected results; PHAD should strengthen its personnel with water and environmental expertise as it expands these activities.

VIETNAM LOCAL WORKS FOR ENVIRONMENTAL HEALTH

Study

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ACRONYMS

CDC	Center for Disease Control and Prevention
CSO	Civil Society Organization
DARD	Department of Agricultural and Rural Development
DOC	Department of Construction
DOH	Department of Health
DONRE	Department of Natural Resources and Environment
FGD	Focus Group Discussion
GVN	Government of Vietnam
HUPH	Hanoi University of Public Health
ISMS	Institute of Social and Medical Study
KI	Key Informant
KII	Key Informant Interview
LWP	Local Works for Environmental Health Project
MET	Mechanical Energy Technology
MOC	Ministry of Construction
MONRE	Ministry of Natural Resources and Environment
MSD	Management and Sustainable Development Institute
NGO	Non-Governmental Organization
NGO-IC	Non-Governmental Organization Information Center
ODA	Official Development Assistance
PHAD	Institute of Population, Health, and Development
PPC	Provincial People's Committee
PUSTA	Province Union of Science and Technology Associations
USAID	United States Agency for International Development
VIWHA	Vietnam Water and Health Alliance
VNHELP	Vietnam Health, Education, and Literature Project
VUSTA	Vietnam Union of Science and Technology Associations
WSP	Water Safety Plan

EXECUTIVE SUMMARY

BACKGROUND AND PURPOSE

The Vietnam Local Works for Environmental Health Project (LWP) is an activity implemented by the Institute of Population, Health, and Development (PHAD) to strengthen partnerships among local organizations to sustainably address environmental health challenges through a learning-by-doing model.

The activity is at its midpoint, Year 3, with scheduled completion in 2022. Over the last two years, PHAD has addressed water-related health issues in two provinces: Ha Nam and Thanh Hoa. In Year 3, PHAD plans to scale up best practice models to other provinces.

This study explores PHAD's process of engaging partners during Years 1 and 2 to make water works more locally owned and sustainable, identifying potential gaps and the overall appropriateness of PHAD's approach. The study offers recommendations for both current and new USAID activities.

METHODS

This study applied a predominantly qualitative approach, with semi-structured key informant interviews with 34 respondents, four focus group discussions with 25 participants, four site visits to water plants in Ha Nam and Thanh Hoa provinces, and a data validation session with PHAD and USAID. The study team also reviewed secondary quantitative data from contextual literature, other studies, and implementer reports.

RESEARCH QUESTIONS

The study's research questions were to:

1. Identify principal challenges associated with the timeliness and reported effectiveness of activities since the start of implementation.
   - 1.1 What has been the process to develop a network for collective action?
   - 1.2 What have been the external and internal challenges associated with engaging and connecting local actors?
2. Based on identified challenges and lessons learned, outline all practical recommendations which ought to be adapted into current activities and considered ahead of any future expansion into new areas.
   - 2.1 What role should/could PHAD play in connecting local actors to expand the network and provide capacity building?
   - 2.2 What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should adapt into current activities and consider ahead of any future expansion into new areas?

FINDINGS AND CONCLUSIONS

PROCESS TO DEVELOP A NETWORK FOR COLLECTIVE ACTION

PHAD selected appropriate provinces, as Ha Nam and Thanh Hoa have urgent water supply needs. PHAD began by conducting workshops and seminars at the national and provincial levels to disseminate information about water health issues. At the commune level, PHAD conducted a baseline survey on clean water and sanitation, as well as needs assessments, in eight communes of four districts in Ha Nam and

Thanh Hoa. However, the activity's government counterpart, the Center for Disease Control and Prevention, was not an appropriate match for the planned interventions. According to its mandate, respondents pointed out that the Center of Rural Water Supply and Environmental Sanitation under the Department of Agriculture and Rural Development (DARD) would have been a better fit, as the Center of Rural Water Supply and Environmental Sanitation is responsible for managing the rural water supply.

PHAD successfully established the Vietnam Water and Health Alliance (VIWHA). However, the members of VIWHA primarily work in policy advocacy, development, education, and health, with only a few members from the water sector. VIWHA still has no clear rules governing members' duties and interests, so members are passive in supporting LWP's initiatives. PHAD coordinated with several VIWHA members to implement activities, and other members indicate enthusiasm to support activities related to their professional fields. Under the collective action framework, communication and coordination among provincial departments, local actors, VIWHA, and LWP could be improved by sharing annual work plans and implementation mechanisms more clearly, thereby empowering actors to identify opportunities for collective action. Moreover, at the time of this study, local actors at the commune level often lacked understanding regarding which activities LWP will implement and how they would be engaged in the process. Some activities are still pending implementation.

As to LWP's advocacy efforts, the Water Ambassador Campaign organized by the Management and Sustainable Development Institute had impressive results for teachers and pupils at Ha Lam Commune. This sort of activity should be replicated at more schools.

EXTERNAL AND INTERNAL CHALLENGES ASSOCIATED WITH ENGAGING AND CONNECTING LOCAL ACTORS

Challenges outside PHAD's control include organizational cultures, the capacity and commitment of local authorities, and state administrative structures, including top-down management and bureaucratic financial disbursement procedures for official development assistance. PHAD's commitment to work with the Vietnam Union of Science and Technology Associations and other state administrative ministries prevented LWP from adopting an entirely locally led approach.

Challenges inside PHAD's control include increasing its capacity in water supply management and technology and adapting LWP's engagement strategy to local working styles with increased transparency. Currently, there is little evidence of successful collective action at the provincial or commune levels.

PHAD has limited human resources, with just a few staff members carrying out many activities. If PHAD adequately delegated responsibilities to provincial coordinators, they could be better informed about and in charge of activities in their localities to speed up implementation progress. The current workload may already be too heavy for LWP's management, and expansion to new provinces will only increase the burden. Thus, the engagement of more VIWHA members and local actors in LWP activities would support locally led development.

PHAD'S ROLE CONNECTING LOCAL ACTORS

In Thanh Hoa and Ha Nam provinces, PHAD has worked to connect local actors with technical companies, involve more local actors by providing small grants, and build capacity on WSPs for rural areas. However, there is room to grow PHAD's role as a facilitator and coordinator. Information on available small grants

could be distributed more effectively at local levels, especially among schools and communes in implementation areas, to increase potential changes in commune social associations, local schools, and others that induce community-driven actions. Capacity development initiatives can serve as opportunities to engage the wider actors in identifying training needs, developing tailored workshops that match the audience, and sharing the expertise of relevant members to facilitate connections and sustained engagement.

LESSONS LEARNED

PHAD staff members are dynamic and investing significant time and effort to implement project activities. However, the success of LWP in the experimental phase is still limited, particularly as locally led collective action. PHAD could improve this by investing additional resources in technical expertise, operations, and monitoring of water works. Also, PHAD could improve local empowerment, communication, and participation among stakeholders through a clear activity plan (preferably aligned with the provincial plan) disseminated among stakeholders. Information and guidance on financial mechanisms, administrative procedures, and roles and responsibilities of different stakeholders available regularly on websites and through meetings could also increase participation from local actors and community members.

RECOMMENDATIONS

The study team has the following recommendations:

For USAID:

1. Reevaluate whether collective action is the right approach for this development challenge.
2. The requirement to establish a Water Health Alliance to initiate collective action seems misguided. It is better to promote cooperation among local actors for specific activities in each intervention area.
3. Require that PHAD implement a feedback process for local stakeholders and that PHAD take action based on local feedback.

For PHAD:

4. Study local situations carefully to select the right counterparts.
5. Develop a clear engagement process for VIWHA members and local actors to encourage them to be proactive in implementation.
6. To promote locally led development, adopt a coordinator role to connect local actors to implement community-driven activities and adapt to the working environment at the provincial level.
7. Consider shifting activities to cover small-scale solid waste and wastewater treatment at the commune level and sanitation issues in schools.
8. Improve staff capacity on water works and engage VIWHA members or consultants with water treatment and environmental sanitation expertise

INTRODUCTION

CONTEXT AND BACKGROUND

Despite remarkable strides in both economic and health metrics over the past few decades, Vietnam's development continues to be challenged by many issues. Among these challenges, water pollution is a common and serious problem, negatively impacting the health of the Vietnamese population.

Research has shown that water pollution is harmful to the health of humans, especially after long-term exposure.[1] Heavy metals from industrial processes are toxic to aquatic life such as algae, fish, and shellfish,[2] which, when consumed by humans, result in slow development, cancers, and congenital disabilities.[3] Moreover, some of the toxins in industrial waste are known to cause immunosuppression,[4] adverse reproductive effects,[5] birth defects, cancer, neurotoxic disorders, and other diseases.[6] Pathogenic agents from sewage often result in infectious and water-borne diseases, cholera, or typhoid in people who drink polluted water.[7]

Groundwater in Hanoi and its surrounding region is contaminated by high arsenic concentrations in the Holocene and Pleistocene aquifers.[8] In Ha Nam, the groundwater, which serves as raw water for many water supply treatment plants, causes health risks due to arsenic contamination.[9] Water samples from the Yen, Bang, Chu, Ma, Hoat and Len rivers over the years have shown that the water sources of Thanh Hoa's rivers have been polluted; many chemical, physical, and biological parameters exceed surface water standards and even industrial wastewater standards. In particular, the middle and lower parts of the Chu and Yen Rivers are on par with untreated industrial wastewater, exceeding permitted levels of chemical oxygen demand, Coliform, sulfide, ammonium, phosphorus, and turbidity.[10] More seriously, water resources in lakes, rivers, and canals have been polluted by the overuse of pesticides, affecting community health. The Ministry of Natural Resources and Environment (MONRE) recently announced a list of 10 "cancer villages" caused by deadly polluted water sources, including Hanoi, Bac Ninh, Thanh Hoa, Ha Nam, and others. Thus, water supply quality is becoming more of a concern among the population.

The Institute of Population, Health, and Development (PHAD) has experience implementing environmental health interventions through empowered local capacity and strengthened partnerships among local organizations. Therefore, USAID chose PHAD to lead its Vietnam Local Works for Environmental Health Project (LWP). This activity aims to strengthen local capacity to practically and sustainably address developmental challenges through a learning-by-doing model. The objectives of LWP are to (1) build a network of diverse local actors with strong ties in an environment conducive to sharing best practices; (2) increase the network's capacity to seek out and adaptively respond to local challenges;

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[1] Saha et al., 2016; Wang et al., 2016.
[2] Rastogi, 2015.
[3] Tchounwou, 2012; N. Saha and M. R. Zaman, 2013; Saha et al., 2016.
[4] Szczeklik et al., 1994.
[5] M. Cohen, 2007.
[6] R. Premaratna, 2002.
[7] U. J. Blumenthal and A. Peasey, 2002; J. H. J. Ensink, 2006; P. Drechsel et al., 2010.
[8] Tran Le Luu, 2019.
[9] Tung Bui Huy et al., 2014.
[10] Nguyen Dung, Anh Tu, 2015.

and (3) increase the network's capacity to maintain sustainable projects. The activity's model involves a network of local organizations and a supportive ecosystem for network members. The ecosystem includes several components, including small grant provisioning and a database of local actors and needs based on community assessments, all to help the network and its members carry out impactful, best practice activities to address critical local issues sustainably. One essential tenet of LWP is to empower local communities through participatory engagement with community constituents.

Implementation, which is set to run from 2018 to 2022, is currently at its midpoint. Over the past two years, PHAD implemented water-related health activities in two provinces: Ha Nam and Thanh Hoa. In each province, PHAD worked in four communes, for a total of eight communes. In Year 3, PHAD plans to scale up best practice models to An Giang, Ha Giang, Lao Cai, Yen Bai, Vinh Phuc, and Nghe An provinces.

PURPOSE

The purpose of this study is to explore PHAD's process of engaging partners in Years 1 and 2 to make water works more locally owned and sustainable, including the effectiveness of the process, potential gaps, and the overall appropriateness of the approach. With its analysis of locally led development, this study aims to identify lessons learned regarding supporting local actors to set their own development agendas, develop solutions, and leverage the capacity, leadership, and resources to make those solutions a reality. The study presents recommendations to be adapted into current and new USAID activities. The primary audiences for this report are USAID, PHAD, Vietnam Water and Health Alliance (VIWHA) members, and others piloting locally led development and collective action approaches.

Social Impact conducted this study under USAID/Vietnam Learns, a five-year activity to support USAID/Vietnam staff and partners to implement more efficient, effective, and transparent programs by improving (1) USAID and implementing partners' capacity to achieve expected results, (2) USAID's understanding and tracking of project performance, and (3) collaboration, learning, and adapting.

RESEARCH QUESTIONS

This study addresses the following research questions:

1. **Identify principal challenges associated with the timeliness and reported effectiveness[11] of activities since the start of implementation.[12]**
   - 1.1 What has been the process to develop a network for collective action?
   - 1.2 What have been the external and internal challenges associated with engaging and connecting local actors?

[11] "Effectiveness" here is not defined as effective delivery but rather emphasizes how PHAD is engaging partners in making water works more locally owned and sustainable. Analysis should explain the effectiveness of the process. PHAD's role is to connect technical suppliers to local actors.

[12] Key findings and conclusions to be disaggregated by: (a)Those deemed outside of USAID & PHAD's control or unlikely be overcome over the remaining period of implementation; and (b) Those that PHAD has already addressed or should actively attempt to address during the remaining period of implementation.

2. **Based on identified challenges and lessons learned, outline all practical recommendations which ought to be adapted into current activities and considered ahead of any future expansion into new areas.**
   2.1 What role should/could PHAD play in connecting local actors to expand the network and provide capacity building toward locally led development?[13]
   2.2 What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should adapt into current activities and consider ahead of any future expansion into new areas? Consider approaches, engagement strategies, and structural changes.

[13] Locally led development: Local actors setting their own development agendas, developing solutions, and bringing the capacity, leadership, and resources to make those solutions a reality (USAID, 2020 Local Works Guidance).

METHODOLOGY

OVERVIEW

This study used a mixed-methods approach, with primary data collected via key informant interviews (KIIs), participatory focus group discussions (FGDs), and site visits to water plants. The study team interviewed a variety of respondents, including national and local Government of Vietnam (GVN) representatives, civil society leaders, non-governmental organizations (NGOs), private sector representatives, USAID/Vietnam, and PHAD.

The study team also conducted a desk review of implementer reports, independent research on water pollution in Ha Nam and Thanh Hoa provinces, and environmental health issues related to water pollution and water-borne disease in Vietnam. Finally, the team examined secondary quantitative data, including implementer baseline data on water use and sanitation in the surveyed communes and Center for Disease Control and Prevention (CDC) data on water quality from LWP water treatment plants.

The study team visited three locations: Hanoi, Ha Nam, and Thanh Hoa. In Hanoi city, the team only conducted KIIs, and in Ha Nam and Thanh Hoa provinces, the team conducted both KIIs and FGDs. The team chose locations for focus groups based on how many activities were implemented at each site, with Trang An commune of Binh Luc District selected because it has few implemented activities and Ha Lam commune (now renamed to Yen Son commune) and schools selected because they have many implemented activities.

RESEARCH DESIGN

The research design for this study, including data collection tools, data sources, and analysis focal points, is summarized in Table 1.

TABLE 1. RESEARCH DESIGN

RESEARCH QUESTION	TOOLS	POTENTIAL DATA SOURCE	CONTENT ANALYSIS FOCUS
1. What are the principal challenges and barriers associated with the timeliness reported effectiveness of activities since the start of implementation?	Desk Review	PHAD quarterly, semiannual, annual reports, training/dissemination reports, small grant procedures; minutes of annual VIWHA strategic planning meetings, USAID documentation	To identify the process to develop a network for collective action (the fulfillment of three stages of collective action). To find the challenges associated with engaging and connecting local actors, both those deemed outside of USAID and PHAD's control and those that PHAD has already addressed or should actively attempt to address.
	KII	PHAD, USAID, Local Government (Provincial/District People Committee) District Health Center; Core Partners; VIWHA Members	
	FGD	Local citizens, Women's Union, Farmers' Union, Fatherland Association; Schools	
2. Based on identified challenges and lessons learned, outline all practical recommendations which ought to be adapted into current activities and considered ahead of any future expansion into new areas.	Desk Review	PHAD quarterly, semiannual, annual reports, training/dissemination reports, small grant procedures; minutes of annual VIWHA strategic planning meetings, needs assessment reports, stakeholder analysis reports, baseline survey report, water quality assessments, and water quality analysis report; template of workshop/training report; data collection form for local events Small grant program for water and health activities mechanism/procedure; USAID documentation	To discover the role PHAD should or could PHAD play in connecting local actors, regarding (1) the approach applied to identify potential VIWHA members and to expand/build the network and (2) what support related to capacity building PHAD should provide to local actors to achieve locally led development To draw lessons from Ha Nam and Thanh Hoa provinces that PHAD should adapt to current activities and consider ahead of future expansion regarding approaches, engagement strategies, and structural change To identify good examples of collective action and operation/management of water plants
	KII	PHAD, USAID, Local Government (Provincial/District People Committee), province points of contact, District Health Center, Core Partners, VIWHA members, private companies	
	FGD	Local citizens, Women's Union, Farmers' Union, Fatherland Association	
	Direct Observation	Water purification system for drinking water at Trang An secondary school in Ha Nam, Ha Vinh water treatment plant in Thanh Hoa	

DOCUMENT REVIEW

The study team reviewed secondary qualitative and quantitative data. The documents included implementer reports, VIWHA meeting minutes, USAID documentation, and independent research on water pollution in Ha Nam and Thanh Hoa provinces and environmental health issues related to water pollution and water-borne disease in Vietnam. The study team examined quantitative data from the implementer's baseline report on water use and sanitation, needs assessments of the surveyed communes, and CDC data on water quality from LWP water treatment systems. The full list of documents reviewed is in Annex 1.

DIRECT OBSERVATION

Works Constructed by LWP

In Thanh Hoa, the study team visited two of the five water treatment systems constructed by LWP. The team selected the water treatment system in Chue Cau hamlet because the system uses mechanical energy technology (MET) to treat underground water to provide clean water to 110 households (see Annex IV, Figure 1 for a picture of the system). The team visited the water system for the Ha Lam commune primary school because this system is supposed to provide drinking water for students directly from the tap (see Annex IV, Figure 2 for a picture). LWP has not constructed water systems in Ha Nam, so site visit samples were not possible there.

Works Not Constructed by LWP

During KIIs and FGDs, respondents invited the study team to visit some local water systems. These illustrative examples provided insight into different aspects of collective action, such as coordination and management at local levels. The purpose of these examples is not to contrast against LPW activities; they operate under different contexts but offer experiences and models that are valuable for learning.

In Ha Nam, the team visited the Doi Son water treatment plant as an example of effective operation and good customer service[14] (see Annex IV, Figure 3 for a picture). The team also visited the water purification system for secondary schools in Trang An commune of Binh Luc District as an example of good coordination among the school management board, parent association, and local supplier of water purifying solutions to provide quality drinking water to students (see Annex IV, Figure 4 for a picture).

In Thanh Hoa, the team visited the Ha Vinh water treatment plant as a good example of local engagement (see Annex IV, Figure 5 for a picture). This water treatment plant is sponsored by Vietnam Health, Education, and Literature Projects (VNHELP) and managed by the East Meets West Organization. Local people helped to dig the channel for the main water pipes and bought water meters and small pipes to connect water from the main pipe to houses. The Agricultural Cooperative runs this plant, which serves 1,400 households with good water quality at a reasonable price, as stated by the head of the Water Management Team.

KEY INFORMANT INTERVIEWS

The study conducted KIIs to understand the perspectives of different stakeholders and beneficiaries. Key informants (KIs) reflected a range of experiences with LWP. Targeted informants included implementers, donors, government representatives (at the provincial, district, and commune levels), NGOs, civil society, and local and private sector stakeholders. Most of the selected KIs were or have been involved in implementing LWP activities and represent different levels of engagement in implementing activities and

[14] Effective operation is reflected by the water plant requiring only five workers to serve 6,500 households in five communes. The current unit price is around 5,000–6,000 VND/m3. Good customer service is illustrated by their use of software to manage their client database, where clients can log in and monitor consumption levels and other bill details, make payments, and file queries or complaints.

management. The study team also met with some VIHWA members that specialize in water and health but have not participated in the activities of LWP. The interviewed key informants are listed in Table 2.

TABLE 2. KEY INFORMANT INTERVIEWS

RESPONDENT CATEGORY	# OF RESPONDENTS
National Level/Hanoi	
Implementers: PHAD, Non-Governmental Organization Information Center (NGO-IC), Institution of Social and Medical Study (ISMS), and Management and Sustainable Development Institute (MSD)	6
Donors: USAID	2
GVN: Ministry of Construction (MOC)	2
VIWHA Members: Hanoi University of Public Health (HUPH), TA Water Treatment Technology Company, Center for Research and Development of Clean Water and Environmental Sanitation (CEWASS), and EnviTech Company	5
Thanh Hoa Province	
GVN: Department of Agricultural and Rural Development (DARD), Provincial Coordinator, two Commune People's Committees (CPCs; Yen Son and Te Thang), Center for Clean Water and Sanitation of Thanh Hoa Province, and Preventive Medicine Center	6
VIWHA Member: Hiep Phat Company	1
Private Enterprises: Ha Vinh Cooperative	1
Ha Nam Province	
GVN: DARD, Department of Construction (DOC), Provincial Coordinator, CDC, two CPCs (Binh Nghia and Trang An), and Center for Clean Water and Sanitation of Ha Nam Province	9
VIWHA Member: Ha Nam Province Union of Science and Technology Associations (PUSTA)	1
Private Enterprises: Doi Son Water Supply Joint Stock Company	1
TOTAL	**34**

FOCUS GROUP DISCUSSIONS

The study team organized four FGDs at the commune level with the participation of local citizens and members of the Women's Union, Farmers' Union, Fatherland Association, and others. The school FGD included Principal and Vice-Principal participants. The selected FGD participants were or have been involved in implementing LWP activities, benefited from LWP activities, or were involved in the LWP needs assessment.

The FGD participants are listed in Table 3.

TABLE 3. FOCUS GROUP DISCUSSION PARTICIPANTS

RESPONDENT CATEGORY	# OF PARTICIPANTS
Thanh Hoa Province	
Local Organizations: civil society leaders, unions, associations, and residents of Chue Cau hamlet, Yen Son commune	14
Schools: Ha Lam kindergarten, primary, and secondary school leadership	3
Ha Nam Province	
Local Organizations: civil society leaders, union and association members of Trang An commune	6
School: Trang An secondary school leadership	2
TOTAL	**25**

ANALYSIS AND REPORTING

The team collected, organized, and analyzed data to identify evidence-based findings to address the research questions. The primary form of analysis for this study was qualitative content analysis, which Hsieh and Shannon (2005) describe as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns." The team conducted internal debriefing and brainstorming sessions regularly during fieldwork to identify, develop, and revisit the findings, conclusions, and recommendations in a matrix format. Through this process, findings related to each research question emerged from the data. Findings were then filtered to ensure they remained relevant to LWP, although this report also covers general themes connected to LWP's activities.

VALIDATION WORKSHOP

USAID/Vietnam Learns facilitated a validation workshop on August 10, 2020, in Hanoi to (1) validate initial study findings, (2) discuss ways to integrate lessons learned into PHAD's work planning, and (3) discuss implications for current and future collective action efforts.

This validation workshop was internal to the implementer (PHAD), donor (USAID), and USAID/Vietnam Learns, allowing for targeted discussion around which activities to continue, adapt, discontinue, and initiate. Notes from this workshop are in Annex V.

LIMITATIONS

RESPONDENT AVAILABILITY

In the process of scheduling interviews, the team encountered some difficulties reaching key informants and had to repeatedly follow up to secure interviews. Government agencies required official dispatches to meet with the team. The study team could not meet with the Department of Natural Resources and Environment of either Ha Nam or Thanh province because they were busy and did not know enough about LWP.

To address these limitations, the team was flexible, making appointments for new meetings when planned meetings fell through. In Ha Nam, because the Department of Natural Resources and Environment (DONRE) was unavailable, the team immediately contacted the Department of Construction (DOC) to secure an interview. Moreover, some of the commune chairs working during the implementation period changed jobs or retired, so the study team could not interview the chair or vice-chair of the commune but instead interviewed the head of the health station and the officer in charge, who were both involved in LWP activities.

In addition, based on information from interviews, the study team identified and visited the sites of effective water works, such as the Trang An Ha Nam secondary school drinking water filtration system and the Ha Vinh Thanh Hoa water treatment plant.

RESPONSE AND SAMPLING BIAS

The study relied extensively on qualitative data, to which respondents may have introduced response biases. Interview results may be flawed or skewed because the respondents experienced implementation at different stages, they may not be up-to-date about changes made by local authorities, or they may be unaware of results achieved that are broader than the respondent's experience. Since each interviewee can only provide information related to their activities with LWP, the interviewed results may only partially reflect the activities of LWP. The study mitigated these biases by triangulating data sources wherever possible. The study did this by employing multiple qualitative methods—KIIs, FGDs, and direct observation—in addition to secondary quantitative data from the desk review to draw on multiple sources of evidence to draw conclusions. The study team then facilitated a validation workshop with USAID and PHAD to further improve the accuracy and contextual framing of information.

The overall qualitative sample is still small compared to LWP's reach and cannot be considered statistically representative. As such, the study does not attempt to assign attribution at the population or outcome level to LWP. The study captures insights from KIs at the time of data collection. Therefore any changes in implementation after the study are not fully captured.

FINDINGS AND CONCLUSIONS

QUESTION 1: CHALLENGES WITH THE TIMELINESS AND EFFECTIVENESS OF ACTIVITIES

Question 1.1 What has been the process to develop a network for collective action?

QUESTION 1.1 FINDINGS

LWP aimed to create an alliance of water and health organizations—VIWHA—by uniting networks at the central, provincial, district, and communal levels.[15] VIWHA members would then coordinate with local actors to implement collective action. The three-stage process of collective action includes (1) the trigger/initializing stage, when the need for collective action to address an issue emerges; (2) the convening stage, when different stakeholders meet, identify their common interests, and discuss solution priorities; and (3) the implementation/transforming stage, when actions are implemented on the ground and bring about the changes. The findings for this sub-question are organized below under each of these three stages.

Trigger/Initializing Stage

PHAD's process for selecting provinces and communes for the water network was appropriate. Based on previous research,[16,17] water testing results, and information from the media,[18] PHAD selected provinces with water quality problems. In Ha Nam, the groundwater is contaminated with arsenic, while in Thanh Hoa, the water in some places is contaminated with asbestos. Both provinces have seen increases in cancer cases. Two KIs explained that PHAD followed appropriate engagement channels by approaching officials of Ha Nam province through the former Chairman of the Ha Nam Provincial People's Committee (PPC), who was an acquaintance of PHAD leadership and was a former director of the Department of Health (DOH). The Ha Nam PPC assigned the province CDC as a project coordinator for LWP. The CDC then introduced LWP to communes with water and health problems. In Thanh Hoa, PHAD approached the PPC to present the LWP objective and activities, and the PPC also introduced LWP staff to the province CDC.

The directors of each CDC introduced LWP staff to four commune people's committees (CPCs) from two districts of each province (Ha Trung and Nong Cong in Thanh Hoa, and Kim Bang and Binh Luc in Ha Nam). According to PHAD reports and four KIs from the communes, LWP staff then held community meetings to verify people's needs for water, sanitation, and health.

PHAD organized a conference at the central level to disseminate information on water and health issues. PHAD, together with the Non-Government Organization Information Center (NGO-IC), first conducted a survey using information sheets and in-depth interviews to collect information about

[15] The district level here served as a connecting unit. CDC from the provincial level connected LWP with the Commune People Committee and Commune Health Center through the District Health Center, which had some involvement in LWP activities.
[16] P. S. Ngan, 2015.
[17] Doi Song va Phap Luat, 2015.
[18] VietnamNet, 2015.

activities, agencies, and organizations interested in increasing access to clean water. Then, PHAD organized a conference at the central level with the goals of (1) sharing information for potential organizations to join a water health alliance and (2) developing ideas for establishing and operating this alliance. This conference was a preparatory step for the launch of VIWHA, discussed in more detail below.

PHAD conducted many activities at the commune and provincial levels to disseminate information on LWP objectives and select provincial project coordinators and communes to conduct baseline surveys and needs assessments. At the commune level, according to four KIs, PHAD, together with the Institute of Social and Medical Study (ISMS), a core member of VIWHA, carried out a baseline survey[19] to collect basic economic and social information and other secondary data on water, health, and environmental activities from local authorities and commune health stations. From March through July 2018, PHAD conducted a participatory rural appraisal (PRA) to understand water supply sources, waste management, and other environmental issues. The PRA combined many research tools, including in-depth interviews, group discussions, observations, seasonal calendars, and community mapping. They then conducted a needs assessment[20] in Thanh Hoa and Ha Nam provinces from June 26 through 29, 2018, in the same communes where they conducted the baseline survey. Through these research activities, PHAD identified, validated, and prioritized local water-related diseases and water health issues. The CPCs and social organizations such as Youth Unions, Women's Unions, Farmers' Unions, the Fatherland Fronts, etc., actively participated in these activities.

At the provincial level, PHAD conducted stakeholder mappings,[21] local actor mappings, and analysis with NGO-IC in 2018 through seminars and workshops. The main objective of the survey was to discover and analyze potential stakeholders, creating a foundation for the mobilization of resources to increase access to clean water for people in two provinces and four districts participating in LWP through the establishment of VIWHA.

DARD might be a more appropriate government counterpart than CDC for LWP. Though the CDC is responsible for inspecting and testing water supply quality, it was less appropriate for LWP interventions relating to constructing water treatment systems (as planned during the first two years of implementation). Respondents pointed out that the Center of Rural Water Supply and Environmental Sanitation under DARD would be a better local counterpart from a functionality and management perspective: according to its mandate, it is responsible for constructing, operating, and managing rural water supply works.

The CDC should have been consulted, but, as one KI acknowledged, the CDC is not appropriate as the coordinating agency, because it can only support LWP on the health, hygiene, and water testing fronts, not on other technical areas. In addition, because CDC operates under DOH, it does not have the authority to assign other line departments to work on activities, making its coordination role difficult.

[19] PHAD, ISMS, 2018. Baseline Summary: of Initial Results of Local Issues and Needs
[20] PHAD, ISMS, 2018. Needs Assessment report on Water Health and Sanitation in communes of Local Work Project in Ha Nam and Thanh Hoa Province.
[21] PHAD, NGO-IC, 2018. Báo cáo Kết quả khảo sát, phân tích các bên liên quan (Report on survey and stakeholder analysis).

After its first year, LWP redirected its partnership strategy and started to connect to Thanh Hoa DARD for activities, with DARD leaders assigned to the Water Resource Division (now called the Legal and Inspection Division) to coordinate support. The leaders of the Water Resource Division support LWP by introducing the activity to communes and inviting relevant agencies to participate.

LWP has not yet established a connection to the Ha Nam DARD. DARD leadership was not aware of LWP activities in the province as of July 2020, when the study team visited Ha Nam for data collection. DARD is a GVN department with a mandate covering the rural water supply. DARD has experience in the development and construction of rural water supply works. It can cooperate with district and commune people's committees and residents to implement locally led activities. In addition, DARD has experience mobilizing counterpart contributions.

Convening Stage

PHAD successfully established VIWHA. Water pollution and diseases related to polluted water are of great concern in Vietnam, especially to social organizations, health study institutions, water treatment engineering companies, and others. This creates an excellent opportunity to establish a water health alliance in Vietnam. The establishment of VIWHA is one of the LWP's goals, in which it aims to build members' capacities to actively participate in water health activities. VIWHA operates independently of LWP and should continue to function and expand after LWP ends.

A KI from PHAD shared that PHAD's process to establish VIWHA relied on using a range of available channels and networks. PHAD approached existing partners and held discussions to identify recommended additional partners. Strategies included:

- sharing the purpose of meetings and events (e.g., annual meeting of Vietnam Social Organizations) to attract and engage potential members and
- approaching companies working in the areas of water technology, where PHAD assessed each company's willingness, the suitability of its technical solutions, capacity, and potential for cooperation.

VIWHA has developed a Working Charter[22] and workplan priorities for 2018–2020.[23] One of the priorities in its workplan is "implementation of community intervention supported by USAID." The first five local and core partners of VIWHA signed memorandums of understanding (MOUs) and contracts between June and August 2018. These partners were NGO-IC, ISMS, the Hanoi University of Public Health (HUPH), and the two CDCs from Ha Nam and Thanh Hoa.

A KI from PHAD also emphasized that PHAD facilitated social networking by holding meetings with different members of VIWHA. These meetings kept members engaged, increased membership, provided updates on progress, and served as a platform to collectively discuss and decide on actions toward the network's objectives.

[22] VIWHA, PHAD, 2018. VIWHA Working Charter.
[23] Working plan-priorities during period 2018–2020.

The members of VIWHA primarily work in the policy advocacy, development, education, and health sectors; only a few members specialize in the water sector. PHAD is a large national NGO with many years working in the health sector, having coordinated activities with many organizations in different fields. PHAD began by inviting social and research organizations well suited to the first phase of LWP, which is water health dissemination and needs assessments. The core members of VIWHA are PHAD, NGO-IC, ISMS, MSD, HUPH, and the Research and Training Center for Community Development. Additional technical members include EnviTech, a company providing wastewater treatment systems. TA Company, which consulted with PHAD on appropriate water supply treatment technologies, also joined VIWHA.

However, NGO-IC's method for finding and approaching potential members meant that VIWHA members are mostly from the Vietnam Union of Science and Technology Associations (VUSTA), with only a few members from water supply plants or water research institutes. As of July 2020, only five out of 35 members work in water-related fields, according to the list of VIWHA members. In addition, there are still only a few members from Ha Nam (one out of 35), Thanh Hoa (one out of 35), and other provinces (eight out of 35).

There are no clear rules governing members' duties and interests, so members are still passive in supporting LWP's initiatives. Collective action is sustained when stakeholders are aware of and commit to the tasks for which they are responsible and drive agendas and timelines. Interactive communication helps exchange information among stakeholders, elicit feedback, and support learning, as opposed to one-way, linear communication.[24] PHAD coordinated with several VIWHA members to implement activities. Results of interviews with several VIWHA members indicated that members are enthusiastic about implementing activities in their professional fields. However, most activities have not been in their areas of expertise. If there were clear guidelines on proposing and implementing activities and financial mechanisms, VIWHA members would be better able to propose activities in line with LWP and the desired collective action.

While PHAD and EnviTech have an agreement detailing roles and responsibilities, EnviTech has not yet supported activities within the scope of LWP in Ha Nam or Thanh Hoa because EnviTech does not specialize in water supply treatment systems, which are prioritized under the first phase of implementation.

PHAD engaged ISMS to conduct a baseline survey and needs assessments in four communes in each province. ISMS also developed a logical framework for LWP and designed activities to achieve the framework's objectives. PHAD and ISMS also signed an MOU to implement an M&E training program. However, according to one KI, M&E stalled because LWP changed its activities. This KI pointed out that when M&E is not performed, it becomes difficult to assess an activity's success.

MSD is working to develop the capacity of CSOs to raise awareness, network with the private sector, communicate with communities, and educate youth and children. Under LWP, MSD conducted a Water Ambassador Campaign at schools in Ha Lam commune. TA Company contributed by recommending a

[24] CEO Water Mandate. "Guide to Water Related Collective Actions." https://ceowatermandate.org/collectiveaction/.

technical solution, Mechanical Energy Technology (MET), for water treatment plants in Ha Lam commune but is not informed about other LWP activities.

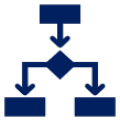
PHAD approached HUPH in mid-2017 to conduct a survey (as an M&E activity) to assess the rate of water-borne diseases before, during, and after implementation in Ha Nam and Thanh Hoa. As reported by one KI, PHAD only shared minimal background information about the expected outcomes and objectives of LWP and still has not replied to deny or approve the study proposal.

Most of PHAD's activities to this point have involved commissioning VIWHA members to perform work (such as ISMS's surveys and needs assessments and MSD's dissemination campaign) and recommending that members construct water works, but the roles of local authorities and communities are not clear—they passively receive what LWP suggests.

A relatively effective convening action took place in Yen Son Commune for the construction of water treatment plants, where all the stakeholders discussed and agreed on a working agenda. Three KIs discussed the local engagement, which was created by cooperation among local actors. The commune authority organized a community meeting to communicate with residents about LWP, agreed on the activities to be implemented, and selected a construction site. The commune chose a village (Village 5) for construction and agreed on financial contributions. LWP provided technical and financial support and mobilized TA Company for water treatment technology, and a local construction company (Hiep Phat) supported constructing water treatment systems for the commune's schools.

Though PHAD has established networks at the central, provincial, and commune levels, network members would be able to cooperate more effectively if they knew about LWP's objectives or planned activities. The VIWHA charter states that organizations and individuals participating in the alliance are entitled to the following benefits: to participate in the alliance's activities and events, to participate in capacity development training activities carried out by the alliance or in cooperation to support the alliance, to share information and results of activities of the alliance as well as in fields related to water and health, and to enjoy spiritual and material benefits resulting from the alliance's activities. The obligations of members are to participate in the planning and implementation of the alliance's activities and to contribute to building and developing the alliance in terms of engineering, human resources, and finance. Furthermore, the VIWHA workplan for 2018–2020 states that VIWHA's primary activity is "implementation of intervention activities in the community with the support of USAID." However, few members (five out of 35) have participated in LWP activities because there is limited information about LWP's work. Six KIs from VIWHA members and eight local actor KIs in the provinces and communes did not know about LWP's objectives or planned activities.

Implementation/Transforming Stage



Limited communication and coordination throughout the implementation stage resulted in an unclear collective action approach. Local actors often took a passive role, only implemented what LWP requested, and were unaware of the scale or budget of activities.

Some members of VIWHA have been actively involved in LWP activities. PHAD should work with these members to support collective action through LWP's expanded activities. The members of VIWHA that have been actively involved in LWP activities have at least been partially communicating and coordinating with LWP management. These members have improved their knowledge

and capacity to engage in water health activities. For example, one KI stated that MSD has been able to integrate LWP resources into its own activities. Though MSD is not an awardee, after working with PHAD, it plans to invest more in a water-related activity (the Water Ambassador Campaign). MSD plans to develop a package of materials to be used at schools where LWP is being implemented.

TA Company joined VIWHA out of corporate social responsibility. TA Company is charging PHAD below-market rates and offers support throughout the activity's lifecycle. Because of TA Company's technology and discounts, PHAD covered 60–70 percent of the total costs for a construction project out of local contributions (including labor and construction and operational costs). PHAD reported that other local companies also contributed to the development of clean water systems. An illustrative example of collective action is PHAD's facilitating coordination between TA Company and Hiep Phat Company. As shared during interviews, Hiep Phat Company constructed water tanks for four schools, and TA installed the filtering systems. Generally, the company has worked smoothly with LWP regarding procedures, reimbursement, and communication. TA Company provided technical support to Hiep Phat Company, helping Hiep Phat Company learn and benefit from this cooperation.

Communication and coordination among provincial departments, local actors, and LWP could be improved to better align with a collective action approach. Local actors were not empowered to implement activities, even though they have the capacity for locally led development. LWP is testing a new approach of collective action toward locally led development. This entails local actors setting their own development agendas; developing solutions; and bringing the capacity, leadership, and resources to make those solutions a reality. The collective action approach shifts to implementing activities based on the community's needs rather than merely carrying out planned activities. According to PHAD, during its first two years, PHAD piloted activities to improve local capacity and gradually transfer responsibilities to the locality in the following years.[25] LWP members have actively connected with local departments and agencies, but communication and coordination could be improved to fit the local working style. According to interviews, local actors wish to be authorized to conduct LWP activities because they have the capacity for locally led development**.** Eight KIs reported that they would prefer to be assigned responsibilities with clear requirements and a budget for them to coordinate with local actors to implement the work, with LWP serving as a facilitator while inspecting and monitoring performance and results.

In Ha Nam province, the study team conducted interviews with CDC and DOC. KIs from both departments identified challenges in communicating and coordinating with LWP. According to two KIs, the role of CDC is still passive, as it only issues official documents to help LWP facilitate work with local departments and communities. CDC and the Provincial Coordinator could not participate in activities as co-implementers because they were not informed about or invited to LWP activities implemented in the province. Similarly, DOC respondents did not find cooperation with LWP to be an interactive process. The DOC respondents stated that PHAD staff did not have enough expertise in Water Safety Plan (WSP) development for them to help DOC prepare a WSP. In fact, a draft WSP had been prepared by DOC

[25] This was further discussed during the study's validation workshop with PHAD and USAID. Because PHAD is responsible to USAID and the GVN for LWP's activities, PHAD had to act more as a coordinator than faciltator during first two years. In the next phase of LWP, PHAD plans to empower local actors with more responsibilities to follow the collective action approach.

staff a few years earlier, and they now wanted to issue it and expected LWP's support. LWP helped DOC organize meetings and workshops for the Steering Committee on the WSP, but DOC KIs found the contents of these events not particularly helpful and somewhat repetitive.

According to PHAD, LWP has three consultant groups, including policy advocacy and resource mobilization, water treatment solutions, and water safety planning. The experts assist the Project Management Board in evaluating and selecting technology solutions for clean water supply systems for residential clusters and schools, policy advocacy, and supporting the Ha Nam Construction Department to develop the WSP. PHAD reports conducting WSP activities with technical support from WSP experts who work with WHO and the Ministry of Construction (MOC). A KI from MOC confirmed that the Department of Infrastructure Engineering supports the idea of WSP development for provinces and has provided LWP with technical assistance. The KI also said that the Department of Construction has all the information for the Ha Nam WSP, and LWP only needs to assist in drafting the plan (Plan No. 1538/KH-UBND).

In Thanh Hoa province, the study team conducted interviews with CDC. CDC was engaged at the beginning during household surveys and meetings with commune authorities to assess local needs for water and other environmental hygiene issues. CDC reported monthly to PHAD and received payments for transportation, stationery items for the survey, and a daily allowance, but no salaries. According to two KIs, LWP should engage provincial authorities and communities in concert. So far, LWP has not yet successfully engaged all parties in the process because no common working agenda was discussed and agreed upon among stakeholders. CDC confirmed that agencies like CDC can lead some local activities and be accountable for outcomes. This would also allow them to be more flexible in planning and implementing.

In the communes where LWP conducted needs assessments, the commune authorities and citizens still expect LWP to fulfill the needs they proposed. Due to government regulations and USAID consensus, LWP will not be able to address all needs. However, at the time of this study, PHAD had not yet given clear feedback to the authorities and citizens of the communes to explain which activities will be implemented. For example, four KIs at the commune level and five participants in one FGD said that LWP does not provide concrete direction for its activities or convene activities within the targeted communities, leaving commune residents unaware of what PHAD might do in their localities.

At the commune level in Ha Nam, two KIs from CPCs said that even though there were some meetings organized at the CPC hall to disseminate information regarding water health issues, LWP did not discuss activities to be implemented or share survey results, which community members would like to know about, especially regarding safe sources of water.

PHAD explained at the validation workshop that LWP would focus more on the water supply and health issues, but most of the surveyed communes had access to clean water already. The implementation strategy in Ha Nam changed from community interventions to policy advocacy on the Water Safety Plan, with agreement from USAID.

In Thanh Hoa, a KI in Te Thang commune shared that LWP held a meeting with the commune and promised to fund 5 billion VND (about 250,000 USD) to build water works for the commune because water in this commune is infected with asbestos, causing cancer. People were committed to contributing money for the activity. However, the province did not allow construction of this water plant in the

commune because of duplicated resource planning by the local authorities and a complicated local context. Specifically, the PPC already approved for a water supply company to build a water plant serving the commune's needs. There is no sign that the water plant construction will start soon, but, because of this approval, LWP could not implement its promised intervention in this commune. Te Thang commune still wants LWP to support livestock waste treatment, sanitation works in schools and the Commune Health Center, and other environmental sanitation works to reduce the negative impact on water sources.

Communication and coordination with Thanh Hoa DARD and its sub-units brought useful information and more relevant activities to LWP. Two KIs shared that the Center of Rural Water Supply and Sanitation supported LWP in Yen Son commune to build a water treatment system (filtering well water) for household use and water filtration systems for schools. The Center supported LWP, advised on the local context for obtaining approvals (introducing LWP staff to DONRE), and organized a training on water quality control for Yen Son commune. The Center proposed a project to support the expansion of the water supply system in Nga Truong commune of Nga Son district. In Nga Truong commune, LWP contributed 1.5 billion VND (about 75,000 USD) to support households to connect to a water treatment plant. After connecting Nga Truong, this water treatment plant now serves ten communes. The financial support connected a total of 1,057 households to the main pipe providing clean water. Residents were satisfied and understood that funding came from the USAID-funded LWP activity.

MET (Mechanical Energy Technology):

MET was invented by TA Company, a Vietnamese start-up that has been granted the exclusive patent certificate by the National Office of Intellectual Property and has received many awards from international organizations such as the silver medal at The Japan Design, Idea & Invention Expo in 2018, the gold medal for industrial wastewater treatment technology at the Kaohsiung International Invention & Design Expo 2018 (Taiwan), and an award from the Vietnam Climate Change Innovation Center under the Ministry of Science and Technology in June 2019. MET has been promoted on TV with the copy: "*Not only able to treat underground water, MET system can also treat domestic waste water, wastewater from industrial factories, hospitals, and lakes. The most outstanding characteristic of the system is that it is a 'three-no system': no filter cartridge, no chemicals, and no electricity.*"

During the technical selection of water treatment systems, LWP compared several options but found it too difficult (and inefficient) to ask the local community to propose a technical solution. As a result, LWP decided on MET from TA Company. While MET is certified by the Ministry of Science and Technology, the system may not treat water to meet national standards as demonstrated by the water quality tests in Chue Chau Hamlet and four schools (QCVN 01/2009/BYT – national technical regulation on drinking water quality; and QCVN 6-1:2010/BYT – national technical regulation on natural mineral water and bottled drinking water). Therefore, LWP should still consult with the Center of Rural Water Supply and Sanitation.

Thanh Hoa currently has difficulties supplying water to rural and mountainous areas and hopes to learn appropriate models from development projects. The Water Resource Division consulted with LWP on project planning and supported the construction of a water treatment plant to hand over to the local community for operation and maintenance in Yen Son commune. DARD raised concerns about the sustainability of this model because local community members are not technical professionals. DARD appreciated LWP's work in 2019, especially its financial support for work in Nga Truong commune that helped reduce the work's financial burden. DARD encouraged LWP to continue supporting these sorts of activities, since there are several favorable conditions: significant local needs for clean water, transparency about contributions from the state budget and the community, and a recently

constructed water plant that needs expansion (so there is no need for the large initial investment required for a new plant). This support to Nga Truong commune was not only effective but also efficient in terms of time and effort required.

PHAD has conducted infrastructure interventions in only one commune, even though the needs assessments from all eight communes identified critical water and sanitation issues that LWP could support. In Ha Nam, two KIs explained that the only LWP activity in Trang An and Binh Nghia communes was the baseline survey, despite both communes having water health issues. According to a KI from Binh Nghia commune, the CPC proposed the construction of a water processing system (whether supply or wastewater treatment), but LWP has not yet responded clearly. CPCs expected LWP to help connect them to relevant technical companies to address water issues. The commune leaders and communities would support the activities, and residents would contribute money if needed.

In Thanh Hoa, a KI from Te Thang commune also stated that no activities had been implemented since the survey of water and sanitation issues in 2018. The commune expects LWP to still carry out activities in the commune because it needs water purification equipment to provide drinking water at schools, kindergartens, and health stations, septic toilets for schools, support for household wastewater treatment, livestock wastewater treatment, and domestic solid waste treatment. The KI also said that if LWP could not continue in the commune, the CPC or health center would like funding from a small grant program to address these local water and health needs.

LWP built a community water supply system to provide clean water for 110 households in Chue Cau Village.[26] **However, problems with water quality and system operation persist.** A focus group discussion with 14 participants from the commune Women's Union, Farmers' Union, Youth Union, Fatherland Front, village heads, and household representatives found that each household contributed 200,000 VND (about 10 USD) for water pipe connection and 300,000 VND (about 15 USD) for the household metering device. FGD participants said that LWP did not make it clear to residents why they needed to contribute to construction or what the fee collection mechanism would be. Villagers were unhappy because LWP did not involve community members in the process or ask for their opinions about what to do or where to construct the supply system.

Community members are concerned that this station will be abandoned if they cannot find a way to manage it sustainably. Since it was not clear whether LWP or the village should pay the electricity bill, the village head collected 16,500 VND (about 0.83 USD) per cubic meter of water from water users to pay the bill. Later, LWP informed residents that the project would pay the electricity bill until the water supply system is officially handed over. According to FGD participants, the fee was refunded to villagers, and people began overusing water because it was free. Community members were also unhappy because they had to cover expenses for monitoring and supervising the construction, which LWP had not made clear to them. At the time of evaluation, 61 households (out of 110 targeted households) were connected to the water piping system, and just over 40 households were using tap water from the new system. The villagers voiced concerns about how they would continue operating this system once LWP hands it over to them. Moreover, KIs from the village reported that the construction work ruined the village road and

[26] Ha Lam commune, Ha Trung District, Thanh Hoa province.

that rehabilitation was not performed properly. The area where the water system had been constructed was still not adequately cleaned up.

The high electricity consumption incurred during the trial operation period was one of the biggest concerns shared by the KIs from Chue Cau Village, as the unit price per cubic meter may become unaffordable. However, as explained by PHAD during the validation event, this is because, during startup, the electricity consumption of the system was abnormally high because the system needed to rinse the filter material, and this expense was covered by LWP. After the system is cleaned and the system operation is stabilized, the amount of electricity needed will decrease significantly, and the unit price per cubic meter of water should be around 2,500–3,000 VND (0.13–0.15 USD). Regarding the road damage, the contractor has repaired the road but has not yet repaved it. PHAD confirmed that the rehabilitation of the road was complete, with the details of the rehabilitation signed off on by all involved parties, though there might be a misunderstanding by villagers who were not fully informed about the repairs.

Regarding water quality, community members visually observed high turbidity and unusual color of tap water. However, according to Notification No. 921/KSBT-SKMT&YTTH of CDC Thanh Hoa to LWP about water quality testing results, three samples taken from the water treatment system in Chue Cau village met national technical regulation on drinking water quality (QCVN 01/2009/BYT). The reason may be that observations and quality tests occurred at different times during water plant operation.

LWP led the construction of water treatment systems for four schools in Ha Lam commune but could have improved communication or coordination with local actors to achieve sufficient capacity and better water quality. Four school water supply systems were built and launched in Ha Lam commune, Ha Trung District, Thanh Hoa Province to provide clean water for 654 pupils and teachers in two kindergartens, one primary school, and one secondary school. The schools welcomed the support, contributed land to build the water treatment system, and generally confirmed that the systems partly helped address their needs by having water for washing, cleaning, and drinking.

However, according to three KIs, school leaders were unaware of the scale and details of the construction. Respondents shared that the capacity of the system is not nearly enough to meet demand, the supply is unstable, and there was no clear communication about the overall plan. LWP did not consult with schools in the planning and design process. Schools proposed that LWP drill a new well to supply water for the filter system, but instead, LWP decided that the system would take water from the kindergarten's well. This well has enough groundwater reserves during the monsoon season but will not suffice for both schools during the dry season. PHAD explained during the validation workshop that, because of the geological structure of the area, a new well would have severely affected the existing one. Both LWP and the school agreed not to drill the new well.

At the beginning of water system operation, the water quality was not stable yet. Initial results from CDC[27] at the time of this study showed that 30 percent of tested water samples (three out of nine) from the water treatment systems at four schools did not meet standards (QCVN 01/2009/BYT). Those parameters included pH, turbidity, nitrite, iron, and excess chlorine. Regarding reverse osmosis filtered water samples intended for direct drinking, 75 percent (three out of four) did not meet standards (QCVN

[27] Water testing report No. 921/KSBT-SKMT&YTTH dated 09 July 2020 from CDC Thanh Hoa, Appendix 1.

06-1/2010/BYT) because they were contaminated with *Pseudomonas aeruginosa*.[28] Thus, CDC requested: "The project needs to coordinate with the supplier of the clean water supply system and the reverse osmosis water purifier system to find out the cause and to treat it to have a stable output water source and meet the Vietnamese standards: QCVN 01/2009/BYT and QCVN 06-1/2010/BYT."

The Water Ambassador Campaign at schools brought good results. LWP rolled out a Water Ambassador Campaign at schools in far and isolated areas to teach students how to wash their hands properly. The campaign was well received; students demonstrated interest in and remembered the campaign's content.

QUESTION 1.1 CONCLUSIONS

PHAD selected appropriate provinces, as Ha Nam and Thanh Hoa have urgent water supply needs. PHAD began by conducting many workshops and seminars at the national and provincial levels to disseminate information about water health issues. At the commune level, PHAD conducted a baseline survey on clean water and sanitation, as well as needs assessments, in eight communes of four districts in Ha Nam and Thanh Hoa. However, the activity's government counterpart, CDC, might not be an appropriate match for the planned interventions. According to its mandate, the Center of Rural Water Supply and Environmental Sanitation under DARD would be a better fit because it is responsible for managing the rural water supply.

PHAD successfully established VIWHA. However, the members of VIWHA primarily work in policy advocacy, development, education, and health sectors, with only a few members from the water sector. VIWHA still has no clear rules governing members' duties and interests, so members are still passive in supporting the activity's initiatives. PHAD coordinated with several VIWHA members to implement activities, and other members indicate enthusiasm to support activities related to their professional fields. Communication and coordination among provincial departments, local actors, VIWHA, and LWP could be improved by sharing annual work plans and implementation mechanisms more clearly, thereby empowering actors to identify opportunities for collective action. Moreover, at the time of this study, local actors at the commune level often lacked understanding regarding which activities LWP will implement and how they would be engaged in the process. Some activities are still pending implementation.

As to LWP's advocacy efforts, the Water Ambassador Campaign organized by MSD had impressive results for teachers and pupils at Ha Lam Commune. This sort of activity should be replicated at more schools.

[28] Water testing report No. 921/KSBT-SKMT&YTTH dated 09 July 2020 from CDC Thanh Hoa, Appendix 2.

Question 1.2 What have been the challenges associated with engaging and connecting local actors?

QUESTION 1.2 FINDINGS

Challenges Outside USAID's and PHAD's Control

The organizational culture of some organizations made collaboration difficult. For example, some organizations prefer working with existing partners rather than new ones, making it hard to involve new organizations.

The commitment of VIWHA members is limited. The strength of VIWHA depends on the commitments of its members. For example, according to one KI from PHAD, some organizations joined the network but did not have strong commitments to the network. Results from five KIIs showed that the VIWHA Management Board had organized a meeting every six months where no clear working plan was presented. The strategic plan was also not yet approved. This makes it difficult for organizations to participate in VIWHA or LWP activities.

Success depends on the knowledge and willingness of local authorities. For local works, the willingness and commitment of local authorities are important to creating an enabling environment, but this remains the biggest challenge. Notably, one KI explained that direct support to households, such as building toilets or providing water containers, is normally appreciated, but this is not the case for support on public construction works, such as building facilities for schools or community houses, because of the "other people's money" problem: people tend to think they are public property and will be taken care of by public entities or government agencies.

One KI expressed that difficulties include the complexity of the local context, low awareness about water health and water pollution, and limited willingness of not only local communities but also authorities at all levels from province to district. Since authorities were busy with their own tasks, they could not devote time to LWP activities. The human factor, largely depending on who was in charge, resulted in some collaborators being knowledgeable, helpful, and active, while others were resistant to change. During interviews in implementation areas, the study team also found that local authorities and citizens are eager to participate in project activities if mobilized and if the activities benefit them.

State administrative requirements slow down implementation. The current disbursement procedures for activities funded by official development assistance (ODA) sources are complicated, needing approval from the Ministry of Finance on down to the provincial or district level. In addition, a new ODA procedure requires that disbursements go through the State Treasury. This administrative requirement led to implementation delays.

Another KI reflected that the locally led collective action approach may not fit with Vietnam's traditional top-down hierarchy, leading to certain constraints and an inability to fully execute all factors that support collective action. In this KI's view, any activities conducted at the commune level should first be cleared by higher levels. Then, the process can continue at the commune level by assessing local needs. This is a more effective approach than starting first at the commune level because management capacity at lower levels is limited, and commune authorities are hesitant to commit to or be responsible for activities not approved by higher-level authorities. In fact, PHAD has followed this procedure by approaching provincial or district authorities before being introduced at the commune level.

PHAD's commitment with the project approval organization (VUSTA) and other state administrative ministries meant that it did not fully follow a locally led model. As PHAD stated during the validation workshop, PHAD has committed to be responsible for all LWP activities. Therefore, PHAD cannot fully empower local actors, nor can it sign contracts with local actors to perform project works. Instead, PHAD must still be the coordinator to be able to control LWP activities, as PHAD reports to VUSTA and the Interior Ministry about activities and must ensure that they comply with Vietnamese laws. Thus, in LWP, PHAD will act as a coordinator rather than a facilitator.

Challenges Inside PHAD's Control

If LWP expands, PHAD may need to improve its organizational capacity in water supply management and technology. PHAD acknowledged that it took considerable time and effort to improve its organizational capacity to comply with USAID's standards for implementing partners, while USAID performed a multiple-layer check and scrutinized PHAD's organizational structure to assess its organizational capacity. The current project structure includes one director, one vice director, one technical director (knowledge manager), one accountant, one project coordinator, and two provincial coordinators. However, there is no member with technical expertise on water supply/drainage, policy advocacy, or environmental technology and management (LWP may end up addressing environmental sanitation issues). As stated under Question 1.1. PHAD relies on consultants for this expertise. Since the LWP team is more specialized in public health, it needs to involve more subject matter experts, particularly water-related ones, to support the implementation of water treatment systems.

The mobilization of VIWHA members and local actors was not sufficient. LWP staff will be overloaded if LWP expands into new areas. When expanding into new areas, the workload will multiply. LWP will not have enough staff to implement all activities because there are only four key staff members who are actively involved in LWP activities at the implementation sites, according to local respondents. LWP plans to expand into at least two more provinces. A KI from PHAD expressed that it has two options to reduce its workload. One option is to assign a province point of contact in charge of all activities; the other is to assign a management role to local partners (PUSTA or companies). According to this PHAD KI, PHAD currently provides only technical assistance and coordination, along with M&E, in new provinces (Ha Giang and An Giang). The KI reported that this model is generally working well, though KIs in Ha Nam and Thanh Hoa provinces did not report observing either option. According to eight KIs, PHAD has not provided detailed LWP objectives or an overview of activities to VIWHA members or local actors and has only informed them about outputs (e.g., construction of water works). VIWHA members demonstrated interest in knowing more about the technical elements of activities. Some members proposed to visit project sites for field observation one year ago, but this has not happened. KIs from CDC suggested that LWP should let CDC lead activities related to its mandate, that is, public health surveys, water quality analysis, and environmental sanitation, as CDC has more experience in the local context. A KI from PHAD reported that PHAD has played a leading role during the first two years of implementation and plans to transition this role over to local actors (enterprises, local authorities). PHAD confirmed during the validation workshop that they are handing over responsibilities for implementing activities in Ha Giang and An Giang. In those provinces, PHAD already plays the coordinator and facilitator roles.

QUESTION 1.2 CONCLUSIONS

Challenges outside PHAD's control include organizational cultures, the capacity and commitment of local authorities, and state administrative structures, including top-down management and bureaucratic financial disbursement procedures for ODA. PHAD's commitment to work with VUSTA and other state administrative ministries prevented LWP from an entirely locally led approach.

Challenges inside PHAD's control include increasing its capacity in water supply management and technology and adapting LWP's engagement strategy to local working styles with increased transparency. Consequently, collective action is not fully implemented at the provincial or commune levels. PHAD has limited human resources, with just a few staff members carrying out many activities. If PHAD adequately delegated responsibilities to provincial coordinators, they could be better informed about and in charge of activities in their localities to speed up the progress of implementation. The current workload may already be too heavy for LWP's management, and expansion to new provinces will only increase the burden. Thus, the engagement of more VIWHA members and local actors in LWP activities would support locally led development.

QUESTION 2: RECOMMENDATIONS FOR CURRENT AND FUTURE ACTIVITIES

Question 2.1 What role should/could PHAD play in connecting local actors to expand the network and provide capacity building?

QUESTION 2.1 FINDINGS

PHAD has worked to connect local actors with technical companies, involve more local actors through the provision of small grants, and build capacity on WSPs for rural areas. However, there is room to grow PHAD's role as facilitator and coordinator. For example, two KIs said that PHAD connected some technical companies (e.g., TA and EnviTech) that provide water treatment technologies and sanitation facilities to commune, district, and provincial authorities. However, PHAD still plays a leading role, and its coordination and communication with local authorities and actors are not yet strong enough. According to three KIs from VIWHA, PHAD could do more to mobilize VIWHA members to participate in LWP activities. For example, LWP opened small grants opportunities in May–June 2020 and advertised them on the VIWHA and PHAD websites. Although LWP has received applications from local actors all over Vietnam, information about the grants has not effectively reached VIWHA members and local actors in the provincial and commune implementation areas. Respondents shared that four schools and four communes in the implementation areas in Ha Nam and Thanh Hoa were interested in benefiting from activities under these small grants, but LWP has not informed them about the scope of these grants. These organizations are confident that they can manage funds from these grants to solve urgent water works challenges. They said that if LWP would provide information about these grants and help local actors prepare applications, this would be one way to promote locally led development at the commune level. By facilitating linkages between local actors benefiting from water works (schools and communes) and the local actors getting paid to construct them, the grants would stimulate locally led development.

LWP has organized only one capacity building activity, a training workshop on WSPs for maintenance groups at Chue Cau and schools in Ha Lam communes, in 2019. Reported limitations included that some lectures focused on large-scale centralized water supply models (such as management and operation of

water supply works or water treatment techniques), which are in-depth and more suitable for professional staff at water supply works and water supply stations. The impact of the training was limited because the training content was too technically advanced, and most members from the Chue Cau water system maintenance groups were not present for the training. At the commune level, PHAD reported that it has facilitated the establishment of water management boards, built capacity to hand over control to these water management boards, and facilitated the establishment of a safe water supply group, system descriptions, and risk assessments.

QUESTION 2.1 CONCLUSIONS

In Thanh Hoa and Ha Nam provinces, PHAD has worked to connect local actors with technical companies, involve more local actors through the provision of small grants, and build capacity on WSPs for rural areas. However, there is room to grow PHAD's role as facilitator and coordinator. The information on available small grants could be distributed more effectively at local levels, especially among schools and communes in implementation areas, to increase potential changes in commune social associations, local schools, and others that induce community-driven actions. Capacity development initiatives can serve as opportunities to engage the wider actors in identifying training needs, developing tailored workshops that match the audience, and sharing the expertise of relevant members to facilitate connections and sustained engagement.

Question 2.2 What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should adapt regarding approaches, engagement strategies, and structural changes?

QUESTION 2.2 FINDINGS

Approaches

During the first two years, PHAD was still involved in all LWP activities, and approaches to engage VIWHA members and local actors in the interventions are not yet defined. Four KIs from VIWHA said that, for VIWHA or any network to run well, members must share a defined goal, know their roles and responsibilities, and decide how best to contribute. For LWP, coordination and allocation of work are important. The coordinating agency (PHAD) should manage the portfolio of activities and respective resources, instead of being deeply involved in the implementation of every activity. Although PHAD conducted a stakeholder mapping exercise to divide members into subgroups based on interests and expertise, two KIs emphasized that PHAD should also categorize network members into different components (such as technical or social) so it can link organizations working in the same province to leverage their respective expertise to mainstream activities into LWP's objectives.

Four KIs suggested that CDC and LWP need to communicate better so CDC can integrate LWP activities into its plans. Six KIs said that PHAD staff directly implement, supervise, and monitor activities, while CDC and the Center of Rural Water Supply and Sanitation only provide support when requested. This means that when there are any issues, local actors are not empowered to promptly address them, and PHAD does not have the level of provincial presence needed to facilitate timely feedback loops.

In the opinion of a KI from PUSTA, LWP should propose an activity plan (including a timeline) aligned with the provincial planning timeline, so LWP activities can better integrate with local socioeconomic

development plans (the provincial plan is typically available by November). LWP could then send its activity plan to DOH, allowing DOH to integrate LWP activities into its annual plan.

PHAD and local actors' working approaches were not well aligned, causing difficulties during implementation. In Ha Nam province, two KIs expressed that CDC/DOH are flexible and willing to advise LWP about regulations and the local context. They emphasized that LWP must adapt to the local context. From their perspectives, LWP is currently too rigid, getting stuck by simple barriers that it could solve through emails or phone calls. Instead, LWP issues documents, calls for time-consuming meetings with participants from multiple agencies, and fails to arrive at solutions. LWP does consult with CDC on local needs, and LWP and CDC formulate plans jointly. However, the activities ultimately approved by LWP still fail to address local needs because LWP's priorities do not match the activities CDC proposes. From PHAD's perspective, LWP is flexible and ready to share information through annual activity reports, work plans, emails, and telephone exchanges. However, the locality does not want to share information because of security concerns. These different perspectives demonstrate an opportunity to collaboratively develop joint work approaches and better communication.

In Thanh Hoa, two KIs shared that LWP needs to develop workplans further in advance to allow more time for implementation. CDC often receives short notice (LWP sometimes requests CDC action with two days' notice). Thus, local staff are passive and do not have enough time to adapt LWP to their plans. Normally, CDC finalizes weekly planning for the next week on Fridays, but LWP has not aligned with CDC's approach. CDC and LWP even have a joint workplan, but LWP often changes activities, causing uncertainty and limiting CDC's flexibility to contribute to implementation.

Engagement Strategies

More frequent and transparent information sharing and awareness raising could improve PHAD's engagement procedures. Local engagement requires local financing and local commitment, so PHAD must provide guidance on financial mechanisms, management, engagement, monitoring, and sustainability. One KI emphasized that PHAD has not yet provided this sort of guidance, and another four KIs said that PHAD needs to share information on available resources and a strategy to allocate these resources effectively. This information could be posted to the VIWHA website or provided at meetings with provincial and commune authorities.

PHAD's engagement strategy should focus on categorizing VIWHA members and local actors into groups according to their expertise and interests. At the same time, young people are also a force that deserve attention within LWP activities. The increasing awareness about water health actions should be crucial to PHAD's engagement strategy. To develop VIWHA members' capacity, PHAD should: (1) conduct a needs assessment to identify capacity shortfalls, (2) identify common interests to engage members in VIWHA's shared objectives, and (3) disseminate information about these common interests through social media and other channels. PHAD also needs to target youth, who are well placed to change water health-related behavior, by conducting outreach to students and children to raise awareness about water health issues. For example, one KI said that youth unions and students could be encouraged to participate in advocacy and dissemination activities on water health and environmental protection. This KI added that PHAD should focus more on advocacy and disseminating information toward behavior change in response to environmental sanitation and public health issues. MSD could be a potential partner to support LWP communication and networking, given its strength in this area.

LWP can mobilize local contributions if it follows proper engagement and administrative procedures. The mobilization of local counterpart funds could increase beneficiary stewardship of implementation efforts, making it an essential strategy for LWP. To do this, PHAD needs to provide information on how much LWP can provide financially for an activity and how much local actors and community members must contribute. PHAD should also develop transparent procedures and cooperation mechanisms. For example, two KIs commented that PHAD's engagement procedures are not yet clear, which may be why engagement and commitment from local authorities in Ha Nam and Thanh Hoa are limited. Collaboration with local actors is a critical factor in the success of collective action. Many localities have needs and are willing to contribute their labor and financial resources if a project addresses these needs. Two KIs stated that, to engage local actors, PHAD must survey commune-level needs and propose interventions to match. Then, local authorities, LWP, and the donor (USAID) must agree on these interventions in an official document, with a point of contact appointed to develop the relationship. Local funds can come from several sources, such as state budgets, civil/household contributions, and state rural development funds. Civil/community contributions would improve accountability and local ownership over the works.

Structural Change

PHAD staff members are dynamic and investing great effort in project implementation, but they lack capacity in technical aspects, proper operations, and monitoring of water works. LWP staff devoted time and effort to coordinate local stakeholders to build water treatment systems in Yen Son commune, Thanh Hoa province. LWP expects to transfer the ownership of these water works in August or September 2020. Four KIs commented that, despite PHAD's efforts, they lack technical expertise, making it difficult for them to assess water treatment plants. This would not require highly specialized expertise, but at least enough knowledge to understand standard water treatment technologies and coordinate actors. PHAD should engage, discuss, and consult more with technical companies and VIWHA in the process.

Two KIs emphasized that PHAD staff need capacity development: they are enthusiastic and active but need to gain experience. LWP staff need not be specialists in assessing or monitoring water treatment technology. However, to increase local ownership, they need more capacity covering technical aspects, operations, and monitoring of water works.

PHAD must improve how it communicates and coordinates with localities. One KI shared that LWP promised to support Ha Nam CDC to formulate local standards on clean water, which is required by GVN. There are ongoing communications about this, but it is still on hold. During the validation workshop, a PHAD representative said that PHAD is waiting for a request from CDC, while CDC is waiting for PHAD. This miscommunication left the activity unimplemented. Discussion at the validation workshop also revealed that PHAD staff still does not know how to directly inform people from communes where LWP has stopped conducting its operations. Although PHAD staff stated that they had sent a letter to CPCs informing them that the project was discontinued, neither KIs nor FGD participants said they knew this information. Therefore, LWP staff need to change how they communicate with localities so necessary information can promptly reach beneficiaries.

QUESTION 2.2 CONCLUSIONS

PHAD staff members are dynamic and investing significant time and effort to implement project activities. However, the success of LWP in the experimental phase is still limited, particularly as locally led collective action. PHAD could improve this by investing additional resources in technical expertise, operations, and monitoring of water works. Also, PHAD could improve local empowerment, communication, and participation among stakeholders through a clear activity plan (preferably aligned with the provincial plan) disseminated among stakeholders. Information and guidance on financial mechanisms, administrative procedures, and roles and responsibilities of different stakeholders regularly available on websites and through meetings could also increase participation from local actors and community members.

RECOMMENDATIONS

FOR USAID

USAID should reevaluate whether collective action is the right approach for this development challenge.

Implementation during the first two years has not resembled a collective action activity. Collective action works best when there is a long-standing, highly complex challenge that requires the actions of multiple stakeholders. LWP's interventions focus largely on a technical problem around the community not having clean water, which is difficult to address through collective action.

The requirement to establish VIWHA is not very relevant to LWP's aims. It would be better to promote cooperation among groups of local actors for specific project activities in each project area.

Typically, in collective action, a group of actors comes together to solve a problem jointly. VIWHA does not cooperate closely and does not align actors at the local level. Without LWP's engagement and financing, VIWHA is not sustainable.

USAID should require that PHAD institute regular processes to obtain feedback from local stakeholders so feedback loops are routinized and PHAD can adapt based on local feedback.

Many KIs and FGD participants shared critical feedback about PHAD. There should be some way for PHAD to collect this feedback regularly so that it can make changes immediately when stakeholders raise issues instead of waiting for an external evaluation.

FOR PHAD

PHAD should study the local situation carefully to select appropriate counterparts.

PHAD should carefully assess the local situation and engage with local actors to create a network for collective action before supporting locally led activities to avoid conflict with the local context.

If LWP continues water supply interventions, it should work with DARD and its subdivision responsible for the rural water supply. Because DARD manages all water treatment plants providing clean water for rural areas, it has a wide network and experience in rural clean water.

For other activities, PHAD should carefully compare each activity's objective with the mandate of each GVN department to select the appropriate counterpart. To coordinate across multiple stakeholders, a steering committee with heads of different provincial departments could support implementation. This would lead to more locally led activities.

PHAD should have clear engagement procedures for VIWHA members and local actors to encourage them to be proactive in implementation.

PHAD needs to clearly define the responsibilities and benefits of VIWHA membership so members can be proactive in contributing to activities. VIWHA's leadership should engage more members that are

competent in water treatment technology and WSP preparation from each implementation province to promote locally led development. VIWHA can find these members by seeking recommendations from local departments and organizations responsible for water-related issues or local professional networks. PHAD should work to make its membership more diverse, with outreach to more water supply companies, private companies, and local social organizations both in provinces and at the national level.

To promote locally led development, adopt a coordinator role to connect local actors to implement community-driven activities and adapt to the working environment at the provincial level.

PHAD should empower local actors to lead activities by assigning a GVN point of contact for each province and then engaging or sub-awarding local actors (PUSTA, companies) for new activities. When initiating engagement, PHAD should raise the issue so service providers (or VIWHA members) can come in and provide technical solutions. PHAD should also connect technical suppliers or companies providing water treatment technologies to commune, district, or provincial authorities to implement locally led development.

To better support GVN stewardship, PHAD should adapt its approach and adjust its working attitude to adapt to the provincial environment. LWP should explain more clearly to provincial coordinators about project objectives and details, such as their scope, duration, and anticipated system capacity, since effective coordination requires understanding LWP's objectives and activities. LWP should improve its planning to inform CDC far in advance of implementation. LWP should prioritize activities proposed by CDC, since it understands local needs.

PHAD could connect local actors by expanding access to grants to schools, communes, and other local actors who are less aware of the grants' availability. Through small grants, local actors could address needs according to their priorities. Regarding capacity building, PHAD could advise grantees about water system maintenance and financial management and then monitor grantees' activities. More training workshops and seminars should be delivered to local actors. However, the content of the training workshops should match the knowledge levels of participants. PHAD should build capacity and provide knowledge on water health issues for local actors that lead local works so they can accomplish activities effectively and on time.

PHAD should organize meetings with community members, sharing information about the supply system's scale, technology, location, environmental impacts, mitigation measures, and operational and maintenance needs. The problems that occurred in four schools in Ha Lam commune and the water supply system in Chue Cau village were caused by a lack of communication and a centrally led development process. By providing more information, LWP can generate local buy-in. Some good examples of this are the purification water system in Trang An secondary schools, the support connecting to the water treatment plant in Nga Truong commune, and the effective management and operation of the water treatment plant in Ha Vinh commune.

PHAD should consider shifting its activities to cover small-scale solid waste and wastewater treatment at the commune level and sanitation issues in schools.

Due to water quality and feasibility issues experienced when constructing clean water works, LWP could shift its activities to cover small-scale treatment or management of domestic wastewater and solid waste,

as well as waste from agricultural production. The results of needs assessments in the four communes in each province and feedback from KIIs show that these environmental sanitation issues are urgent.

LWP should consider partially supporting schools to build rainwater storage tanks, drill wells for groundwater, or install drinking water treatment systems. These activities could leverage the relationships LWP has already built locally through its current water treatment activities, such as those with DARD and local community leaders, using these relationships to facilitate planning and implementation (and possibly even partial funding) of these newer initiatives.

PHAD should improve its technical capacity related to water works and engage VIWHA members or consultants that have water treatment or environmental sanitation expertise.

PHAD should, in general, play the role of coordinator instead of active implementer, with a clear procedure for financing and engaging technical suppliers. PHAD should strengthen the capacity of local communities, providing good examples of locally led construction, such as the water pipe household connection in Nga Truong commune, so that local communities in new provinces can themselves implement community-led activities.

PHAD should mobilize a technical expert on water supply and drainage and an environmental expert. As LWP's activities focus on these aspects, having experts would help PHAD assess and supervise local actors and choose the most appropriate technology for local works. PHAD should change its management approach to involve VIWHA members with expertise in water supply and communications to manage and monitor these activities. The technical content of capacity building workshops should be tailored to the knowledge and experience of each group of participants. PHAD should recruit water supply experts to develop appropriate training content for different groups of participants. In addition, those experts should author a template WSP to help water treatment plants develop their WSPs.

UTILIZATION PLAN

This study's findings, conclusions, and recommendations will contribute to LWP's future implementation in Thanh Hoa, Ha Nam, and other expansion areas during the remaining three years of LWP's implementation. At the validation event, USAID/Vietnam Learns shared a selection of preliminary findings with the implementer (PHAD) and donor (USAID). The study team provided evidence for each finding and conclusion. The participants discussed what actions and activities should continue, what should continue with adjustments, what needs to stop, and what new activities need to begin. Stakeholders will use this evidence on the collective action process, challenges related to connecting and engaging local actors for locally led development, and lessons learned to adjust current activities and any future expansion into new areas. After reflecting on the feedback shared at the validation event, USAID/Vietnam Learns will present recommendations to support a utilization workshop aligned with USAID's decision making needs. This study will also inform the design of new USAID local works activities.

ANNEX I: FULL LISTING OF REFERENCES AND REPORTS UTILIZED

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ANNEX II: FULL LISTING OF PERSONS INTERVIEWED

The full listing of persons interviewed was submitted separately in line with data de-identification policies. Please contact Phuong Pham, phuong.pham@socialimpact.com, to request the data.

ANNEX III: DATA COLLECTION TOOLS

Interview Guides

The study team designed a generic interview guide to collect data from key informants. For each group of key informants, a generic interview guide was tailored to suit the needs of individual key informant groups and individuals listed in the research plan (e.g., expert, government officer, and corporate stakeholders). Researchers selected and/or modified a sample of appropriate questions from each section. Key questions were highlighted in the interview guide alongside a set of standardized questions that explored specific topics to collect information about individual experiences, opinions, suggestions related to the study's research questions.

LWP STUDY GENERIC INTERVIEW GUIDE

This generic interview guide should be tailored to suit the needs of individual key informant groups listed in the research plan by selecting and/or modifying a sample of appropriate questions from each section. Investigators should aim to keep discussions to 60 minutes in length.

INTRODUCTION
Researchers introduce themselves and read informed consent language.
Researchers share a little about the purpose of their study: 1. To identify the principal challenges associated with the timeliness and reported effectiveness of activities since the start of implementation. Disaggregate identified challenges by: a. Those deemed outside of USAID & PHAD's control or unlikely be overcome over the remaining period of implementation; and b. Those which PHAD has already addressed or should actively attempt to address during the remaining period of implementation. 2. Based on identified challenges and lessons learned, outline all practical recommendations which ought to be ADAPTED into current activities and considered ahead of any future expansion into new areas.
Researchers ask the interviewee(s) to introduce themselves and share about his/her position/duty and also his/her involvement or understanding of the project

The following are set of questions specific developed based on research questions for each category of stakeholders.

KEY IMPLEMENTER KII GUIDE

Name of Facilitator	
Name of Note Taker	
Name of the KII	
Location of the KII	
Date of the KII	
Attached List of Participants + Contact + Gender	

Process	
Sub-R.Q. 1.1	***What has been the process to develop a network for collective action?***
Q.1.1.1	Describe the process to develop a network for collective action.
Q1.1.2	Describe the process to engage and connect Local Actors.
Challenges	
Sub-R.Q. 1.2	***What have been the challenges associated with engaging and connecting Local Actors?***
Q1.2.1	What are examples of ways in which you have adapted to improve local buy in?
Q1.2.2	What PHAD's internal structures have been adapted to better engage partners and stakeholders?
Q 1.2.3	How are partners demonstrating commitment to local water works? (For example on financial commitment or other ways to measure commitment)
Q 1.2.4	What resources are in place – or if not, would you need – to bring about more sustainability?
Recommendations	
Sub-RQ 2.1	What role should/could PHAD play in connecting Local Actors?
Q.2.1.1	What approach could PHAD apply to identify potential VIWHA members and to expand/build the network?
Q.2.1.2	What support related to capacity building, co-creation (local ownership), managerial/technical guideline, sustainable management of local works and others should PHAD provide to Local Actors to achieve Locally Led Development?
Sub-R.Q. 2.2	What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should ADAPT into current activities and consider ahead of any future expansion into new areas?
Q.2.2.1	What are approaches? *Discuss specific issues like*: • Launch new programming with local partners that tests approaches to locally led development; • Adapt existing programming to be more locally led and sustainable.

Q.2.2.2	What are engagement strategies? *Discuss specific issues like*: • Develop and test flexible approaches to acquisition and assistance to facilitate partnerships with local and non-traditional organizations; • Troubleshoot management and operational challenges to locally led development through creative solutions (e.g., staffing, financial/technical support, and event logistics).
Q.2.2.3	What are structural changes? *Discuss specific issues like*: • Build strong relationships and promote collaboration with and among local actors; • Empower local networks of community centered actors to initiate and lead development efforts.

CORE MEMBER KII GUIDE

Name of Facilitator	
Name of Note Taker	
Name of the KII	
Location of the KII	
Date of the KII	
Attached List of Participants + Contact + Gender	

Process	
Intro Question 1	Which project activities has your organization been implementing (or implemented)?
Sub-R.Q. 1.1	***What has been the process to develop a network for collective action? What has been the process to engage and connect Local Actors?***
Q.1.1.1	Has your organization participated in the process to develop a network for collective action? What your opinion about this process?
Q1.1.2	Has your organization participated in the process to engage and connect Local Actors? If yes, in what way? If no, give a reason.
Challenges	
Sub-R.Q. 1.2	***What have been the challenges associated with engaging and connecting Local Actors?***
Q1.2.1	What are examples of ways in which you have adapted to improve local buy in?
Q1.2.2	In your opinion, what PHAD's internal structures should be adapted to better engage partners and stakeholders?

	How does your organization collaborate with other stakeholders, especially with PHAD?
Q 1.2.3	How are partners demonstrating commitment to local water works? (For example on financial commitment or other ways to measure commitment)
Q 1.2.4	What resources are in place or not, would you need to bring about more sustainability?
Recommendations	
Sub-RQ 2.1	What role should/could PHAD play in connecting Local Actors?
Q.2.1.1	What approach could PHAD apply to identify potential VIWHA members and to expand/build the network?
Q.2.1.2	What support related to capacity building, co-creation (local ownership), managerial/technical guideline, sustainable management of local works and others should PHAD provide to Local Actors to achieve Locally Led Development? What support has your organization contributed in?
Sub-R.Q. 2.2	What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should ADAPT into current activities and consider ahead of any future expansion into new areas?
Q.2.2.1	What are approaches? *Discuss specific issues like*: • Launch new programming with local partners that tests approaches to locally led development; • Adapt existing programming to be more locally led and sustainable.
Q.2.2.2	What are engagement strategies? *Discuss specific issues like*: • Develop and test flexible approaches to acquisition and assistance to facilitate partnerships with local and non-traditional organizations; • Troubleshoot management and operational challenges to locally led development through creative solutions (e.g., staffing, financial/technical support, and event logistics).
Q.2.2.3	What are structural changes? *Discuss specific issues like*: • Build strong relationships and promote collaboration with and among local actors; • Empower local networks of community centered actors to initiate and lead development efforts.

GVN KII GUIDE

Name of Facilitator	
Name of Note Taker	
Name of the KII	
Location of the KII	
Date of the KII	
Attached List of Participants + Contact + Gender	

Process	
Sub-R.Q. 1.1	***What has been the process to develop a network for collective action? What has been the process to engage and connect Local Actors?***
Q.1.1.1	What is your opinion on the process to develop network for collective action of PHAD? How PHAD has developed a network for collective action in your area?
Q1.1.2	Describe the process that PHAD applies to engage and connect Local Actors. Give example of Locally Led Development in your area. What instruction has the Provincial department provided about its expertise, implementation of approval procedures, and selection of appropriate activities as well as candidates for applying to the project's Small Grant?
Challenges	
Sub-R.Q. 1.2	***What have been the challenges associated with engaging and connecting Local Actors?***
Q1.2.1	What are examples of ways in which PHAD has adapted to improve buy in from your Departments/Organizations?
Q1.2.2	Are your Departments/Organizations willing to participate in or support Local Works activities? What are obstacles/challenges your Departments/Organizations needs to address in order to implement the Local Works activities as planned and effectively?
Q 1.2.3	What does your Department/Organization commit to local water works? (For example on financial commitment or other ways to measure commitment)
Q 1.2.4	What resources are in place or not, would you need to bring about more sustainability?
Recommendations	

Sub-RQ 2.1	What role should/could PHAD play in connecting Local Actors?
Q.2.1.1	In your opinion, what approach could PHAD apply to identify potential VIWHA members and to expand/build the network?
Q.2.1.2	In your opinion, what supports related to capacity building, co-creation (local ownership), managerial/technical guideline, sustainable management of local works and others should PHAD provide to Local Actors to achieve Locally Led Development? For the Local Actors implementing (or implemented) some Local Works: What support in implementation process has PHAD provided for your organization?
Sub-R.Q. 2.2	What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should ADAPT into current activities and consider ahead of any future expansion into new areas?
Q.2.2.1	What are approaches? *Discuss specific issues like:* • Launch new programming with local partners that tests approaches to locally led development; • Adapt existing programming to be more locally led and sustainable
Q.2.2.2	What are engagement strategies*? Discuss specific issues like:* • Develop and test flexible approaches to acquisition and assistance to facilitate partnerships with local and non-traditional organizations; • Troubleshoot management and operational challenges to locally led development through creative solutions (e.g., staffing, financial/technical support, and event logistics).
Q.2.2.3	What are structural changes? *Discuss specific issues like:* • Build strong relationships and promote collaboration with and among local actors; • Empower local networks of community centered actors to initiate and lead development efforts.
Q.2.2.4	For Department of Infrastructural Technical Department (MOC): do you think the development and implementation of Water Safety Plans (WSP) have a good and effective impact?

WATER HEALTH ALLIANCE (VIWHA) MEMBER/PRIVATE ENTERPRISES KII GUIDE

Name of Facilitator	
Name of Note Taker	
Name of the KII	
Location of the KII	
Date of the KII	
Attached List of Participants + Contact + Gender	

Process	
Sub-R.Q. 1.1	***What has been the process to develop a network for collective action? What has been the process to engage and connect Local Actors?***
Q.1.1.1	Why and how did your organization/company join the VIWHA or Local Works network? What are your functions and duties in the VIWHA?
Q1.1.2	How do you view PHAD'S process to engage and connect Local Actors? Has your company/organization participated in some Local Work led by commune/District Actors? If Yes it was through PHAD connection?
Challenges	
Sub-R.Q. 1.2	***What have been the challenges associated with engaging and connecting Local Actors?***
Q1.2.1	What are examples of ways in which you have adapted to improve local buy in? Is your company/organization willing to participate in activities in the small grant fund?
Q1.2.2	In your opinion, what PHAD's internal structures have been adapted to better engage partners and stakeholders? What are the difficulties and obstacles in the process of implementing Local Works? (Regarding administrative procedures, financial disbursement, financial and human resources mobilization, local regulations and others.)
Q 1.2.3	How are you demonstrating commitment to local water works? (For example on financial commitment or other ways to measure commitment) What are the difficulties/obstacles in implementing small fund activities related to local authorities/community? Why?
Q 1.2.4	What resources are in place or not, would you need to bring about more sustainability? How has PHAD assisted the company in the implementation of Local Works activities (e.g. resources, finance, capacity building, advocacy, coordination)? Are these supports effective?

Recommendations	
Sub-RQ 2.1	What role should/could PHAD play in connecting Local Actors? Discuss specific issues like: • Connecting technical suppliers or companies providing water treatment technology to commune/district/provincial authorities to initiate locally led development
Q.2.1.1	In your opinion what the best approach could PHAD apply to identify potential VIWHA member and to expand/ build network? What approach did PHAD used to invite your company/organization to join the VIWHA?
Q.2.1.2	Has your company/organization been given access to mechanisms and procedures for applying for funding for water and sanitation activities? Are the procedures easy to follow? What support related to capacity building, co-creation (local ownership), managerial/technical guideline, sustainable management of local works and others should PHAD provide to Local Actors to achieve Locally Led Development?
Sub-R.Q. 2.2	What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should ADAPT into current activities and consider ahead of any future expansion into new areas?
Q.2.2.1	What are approaches? *Discuss specific issues like*: • Launch new programming with local partners that tests approaches to locally led development; • Adapt existing programming to be more locally led and sustainable.
Q.2.2.2	What are engagement strategies? *Discuss specific issues like*: • Develop and test flexible approaches to acquisition and assistance to facilitate partnerships with local and non-traditional organizations; • Troubleshoot management and operational challenges to locally led development through creative solutions (e.g., staffing, financial/technical support, and event logistics); What are the difficulties/obstacles in applying for a small grant? Explain?
Q.2.2.3	What are structural changes? *Discuss specific issues like*: • Build strong relationships and promote collaboration with and among local actors; • Empower local networks of community centered actors to initiate and lead development efforts.

LOCAL COMMUNITIES FGD GUIDE

Name of Facilitator	
Name of Note Taker	
Name of the Focus Group	
Location of the Focus Group	
Date of the Focus Group	
Attached List of Participants + Contact + Gender	

Process	
Sub-R.Q. 1.1	***What has been the process to develop a network for collective action? What has been the process to engage and connect Local Actors***
Q.1.1.1	Do you know about the purpose of the Local Works for Environmental Health project implemented by PHAD and funded by USAID?
Q1.1.2	Has PHAD conducted a local needs assessment for environmental issues? Have you been consulted? And if so, in what way? Have you participated in training courses / seminars on clean water and environmental health organized by PHAD? Has your knowledge on water issues increased through these activities? How has PHAD assisted Local Community in the implementation of Local Works activities (e.g. resources, finance, capacity building, advocacy, coordination)? Are these supports effective?
Q1.1.3	Do you understand what is a Locally Led Development? (*which means Local Actors setting their own development agendas, developing solutions, and bringing the capacity, leadership, and resources to make those solutions a reality*) Based on local work conducted in your commune, do you think that the process is following the guidance of Locally Led Development?
Challenges	
Sub-R.Q. 1.2	***What have been the challenges associated with engaging and connecting Local Actors?***
Q1.2.1	Are you willing to participate/contribute in Local Works funded by the small grant fund?
Q1.2.2	Do you prefer to have locally led development or not? If yes, what support do you need to increase your capacity to implement locally led development?

Q 1.2.3	How are you demonstrating commitment to local water works? (For example on financial commitment or other ways to measure commitment) Are you able or willing to contribute human and financial resources to build clean water, wastewater treatment facilities or hygienic latrines?
Q 1.2.4	What resources are in place or not, would you need to bring about more sustainability?
Recommendations	
Sub-RQ 2.1	What role should/could PHAD play in connecting Local Actors? Discuss specific issues like: • Identify local need; • Connecting technical suppliers or companies providing water treatment technology to commune/district/provincial authorities;
Q.2.1.1	What support related to capacity building, co-creation (local ownership), managerial/technical guideline, sustainable management of local works and others should PHAD provide to Local Actors to achieve Locally Led Development Has your commune / organization been given access to mechanisms and procedures for applying for funding for water and sanitation activities? Are the procedures easy to follow?
Sub-R.Q. 2.2	What are lessons learned from Ha Nam and Thanh Hoa provinces that PHAD should ADAPT into current activities and consider ahead of any future expansion into new areas?
Q.2.2.1	What are approaches? *Discuss specific issues like*: • Community consultation, assessment of local needs; bottom-up process • Empower local networks of community centered actors to initiate and lead development efforts.
Q.2.2.2	What are engagement strategies? *Discuss specific issues like*: • Early planning, timely resource and financial mobilization • What are the difficulties/obstacles in applying for a small grant? Explain?
Q.2.2.3	What are structural changes? *Discuss specific issues like*: • Collaboration among stakeholders

ANNEX IV: SITE VISIT OF WATER TREATMENT SYSTEMS

WORKS CONDUCTED BY LWP

In Thanh Hoa Province, the study team visited works constructed by LWP.

Water plants in Chue Cau Village

FIGURE 1. WATER PLANTS IN CHUE CAU VILLAGE

Water treatment system in Chue Cau village, Ha Lam commune, Thanh Hoa province

Filtration pipe system inside a filtration tank

FIGURE 2. WATER TREATMENT IN PRIMACY SCHOOL OF YEN SON COMMUNE

Water treatment system in Ha Lam Primary school, Ha Lam commune, Thanh Hoa province

Reverse osmosis filtration machine for directly drinking from the tap

One of LWP's expected outcomes is to provide safe drinking water directly from the tap for students in three schools. This outcome, however, has not yet been realized. Water supply facilities for schools, particularly Ha Lam primary school, have not produced the desired results because underground water treated by MET technology and reverse osmosis filtration still does not qualify for pupils to drink directly from the tap. Even if the water quality meets standards for drinking water, the supply capacity of only one household-size purifying device will not be enough to provide for a school with hundreds of pupils. The current water source is sufficient for pupils' handwashing and school toilets. In Ha Lam secondary school, the school does not have its own well; it shares a well with the kindergarten. During the dry season, there will not be enough water for both schools. Although the school asked for support to drill a well, a new well would have severely affected the existing well due to the geological structure of the area. Both LWP and the school agreed not to drill the new well.

WORKS NOT CONDUCTED BY LWP

In Ha Nam, the study team visited two works not constructed by LWP. The first was the Doi Son Water treatment plant (Figure 3). The Doi Son water treatment plant provides an example of effective water plant operations. Currently, the Vietcom Construction Joint Stock Company, the owner of the plant, uses surface water from the Chau Giang River, but it will switch to use the Red River for better source water. CDC also tests the water source, and if the river water quality is low, the plant has to cease intake. The plant has a storage lake of around 60,000 cubic meters for this emergency case. This lake also serves as a filter layer before processing. The plant supplies water for 6,500 households in five communes of Duy

Tien district. The current unit price is around 5,000–6,000 VND (about 0.25–0.30 USD) per cubic meter. Water consumption has been modest because households still use rainwater for cooking and tap water only for cleaning and bathing. However, the situation is improving because the plant has maintained good water quality. The director receives complaints directly from community members (via phone or in-person visits) and visits households to communicate about the plant's commitment to water quality. The company supports households in financial difficulty and pagodas and churches by reducing the installation fee (900,000–1 million VND, or about 40–50 USD, instead of the normal fee of 3 million VND, or about 150 USD) so they can access the clean water supply. The supply capacity had been insufficient, but Vietcom recently increased the plant's capacity, and it can now fully serve its clients.

Vietcom is building a client database using software bought from CTWORLD, where clients can log in and monitor their consumption levels and other bill details, make payments, and file queries or complaints. This will reduce labor costs for the company. The plant has only five workers, who are responsible for the entire plant. Vietcom has a close relationship with local authorities and the community. They provide the monthly water testing data to the commune and communities, and they also post this data publicly on site. This ensures transparency and gives Vietcom a strong reputation in the community. In addition, Vietcom staff showed the study team several handbooks and operational manuals they prepared to support water plant operations.

FIGURE 3. DOI SON WATER TREATMENT PLANT

Expanded water filtration tanks (to increase the treated water capacity)

The second water work visited by the study team is a water purification system at secondary schools in Trang An commune, Binh Luc district, Ha Nam province (Figure 4).

The school management board, parent association, and (local) supplier of water purifying solutions and equipment have cooperated well. The school supplies rainwater from the school's tank, electricity for the water purification system, and land for the filtration system. The company installed water purification equipment and maintains its machinery and equipment. The parent association, with the consent of all parents, collects a fee of VND 10,000 (about 0.50 USD) per month per student, excluding the summer vacation months. The money collected from pupils has been paid to the supplier. The school assigns one staff member to be responsible for monitoring water quality. The school committed to allowing the company to operate the purifier at the school for five years, provided that the drinking water remains of good quality.

In this way, the school does not have to invest too much in a water treatment system and does not have to maintain the machine, the company gradually collects money for the filtration equipment, and students are assured that they will have quality water. If LWP supports schools to build rainwater tanks (where they do not already have them), they would also be eligible to implement this model.

WATER QUALITY STANDARDS FOR DRINKING WATER

QCVN 01-2009/BYT (National technical regulation on drinking water quality):

This technical standard applies to agencies, organizations, individuals and households that exploit and trade in drinking water, including concentrated water supply facilities for domestic purposes. capacity of 1,000 m3/day and night or more (hereinafter referred to as water supply facilities). It has109 Parameters divided into A, B, C categories corresponding for water quality testing 1/week. 1/6 month; 1/2 years.

QCVN 02: 2009/BYT National technical regulation on domestic water quality)

This Regulation applies to: 1. Agencies, organizations, individuals and households that exploit and trade daily-life water, including concentrated water supply facilities for daily-life activities with a capacity of under 1,000 m3/day (hereinafter referred to as water supply establishments). 2. Individuals and households exploit water for their own daily use. It has14 Parameters divided into A, B categories

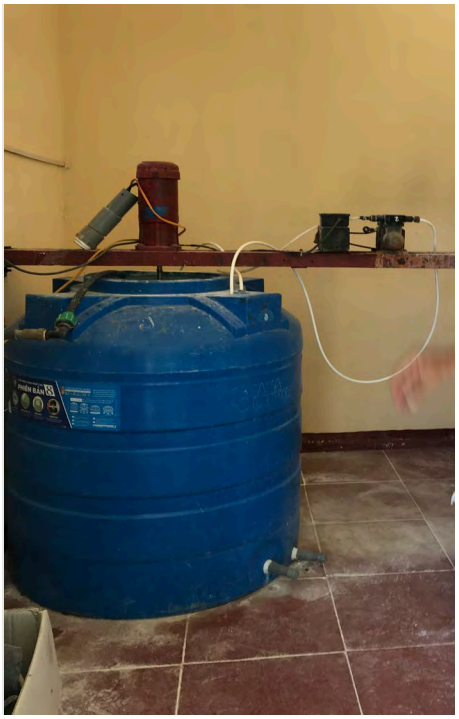
QCVN 01-1: 2018/BYT National technical regulation on Domestic Water Quality

National technical regulation QCVN 01-1: 2018/BYT replaces the national technical regulation on drinking water quality QCVN 01: 2009/BYT, and the national technical regulation on domestic water quality QCVN 02: 20Q9/BYT was issued in line with Circular No. 04 / 20Q9/TT-BYT and Circular No. 05/2009/TT-BYT, dated June 17, 2009, of the Minister of Health.

FIGURE 4. WATER PURIFICATION PLANT IN TRANG AN COMMUNE

FIGURE 5. HA VINH WATER TREATMENT PLANT

Water treatment tower consists of (from top to bottom: (1) clean water distribution tower, (2) water spraying area to oxidize Fe^{2+} to Fe^{3+}, which is to be removed from groundwater by the (3) filtration and sedimentation tank



Chlorine injection system

The Ha Vinh water treatment plant (Figure 5) is sponsored by VNHELP and managed by the East meets West Organization. The total funding was 3.9 billion VND (about 195,000 USD), and community members

contributed to digging the channel for the main water pipes. Clients pay for water by the cubic meter and must also pay for the small pipes that connect their houses to the main pipe. The construction took one year, from March 2015 to March 2016. The treatment technology is a common technology used for groundwater treatment. Groundwater is pumped into the storage tank, followed by air stripping to remove smells and oxidized iron, a quartz sand filter tank, chlorine injection, a clean water storage tank, and a water tower for distribution to houses. The water treatment plant also has a wastewater tank and sludge from the sedimentation tanks. This technology is suitable for ward conditions, while still meeting the standards of QCVN 02/BYT for clean water

The plant can treat 400 cubic meters of water per day. CDC takes water samples every three months for water supply works below 1,000 cubic meters per day. The CPC has assigned the Agricultural Cooperative to manage the plant. This cooperative has one staff member guarding and operating the water treatment plant, one water treatment technician, and three to four workers maintaining the water pipeline. All workers receive a monthly salary. In the first three years (2016–2019), the cooperative only collected 5,000 VND (about 0.25 USD) per cubic meter of water. Since March 2020, due to the payment of taxes and the use fee for underground water, the price of water has increased to 6,000 VND (about 0.30 USD). There are currently 1,400 households out of a total of 1,800 households connected to the water line. The remaining 400 households are not connected because they are too far from the main pipe, making it difficult to connect because of the high cost. The cooperative provides free water for schools, public offices, and churches. There is enough water during the winter but not enough during the summer months. Thus, people still use three water sources: rainwater, bore water, and tap water. Poorer households only use 5–6 cubic meters per month.

ANNEX V: VALIDATION WORKSHOP REFLECTIONS

During the validation workshop, participants agreed that:

- It would be good for PHAD to continue to play a facilitator/coordinator role in Ha Giang and An Giang, as well as new provinces.
- PHAD should continue other activities, but change its approach:
    - Local communication must be consistent and well-rounded; stakeholders should be thoroughly informed about PHAD's plans to wrap up its activities in an area.
    - Strategic planning and workplan development must follow local government timelines, strategically addressing local needs while accommodating the local context.
    - Engagement procedures should be more explicit, mobilizing more local actors.
    - PHAD should become more of a facilitator and less of an implementer.
- PHAD should stop being the leading implementer of LWP activities.
- As LWP expands into new areas, PHAD should adopt a new approach of conducting more strategic system analyses and stakeholder mappings (which it has done to some extent in Ha Giang and An Giang, as well as in new provinces like Hoa Binh and Vinh Phuc).

ANNEX VI: STUDY STATEMENT OF WORK

Vietnam Local Works for Environmental Health

STUDY BACKGROUND

The Vietnam Local Works for Environmental Health project is implemented by Institute of Population, Health and Development (PHAD) with the aim to strengthen partnerships among local organizations to sustainably address environmental health challenges through a learning-by-doing model.

Currently, the project implementation is at mid-point (Year 3 and scheduled through 2022). For the past two years, PHAD have been addressing water-related health issues in two provinces: Ha Nam and Thanh Hoa. In Year 3, the best practice models from this project will be scaled-up to other locations including: An Giang, Ha Giang, and others such as Lao Cai, Yen Bai, Vinh Phuc.

At the request of USAID/Vietnam Local Works Initiative (LWI) team, USAID Learns is conducting a special study to review the implementation in Y1 and Y2 to identify the existing challenges and barriers, as well as potential gaps or the overall appropriateness of the approach when expanding to new locations for the remaining duration of the project. This study covers two provinces: Ha Nam, Thanh Hoa. The consultant should note that a special area of interest is how to use the findings and lessons learned to help inform more effective project implementation toward its objectives, current and future expansion.

ACTIVITY OBJECTIVES

Based on relevant document review, interviews with Key Informants and observations, this study will seek to achieve the following:

1. Identify principal challenges associated with the timeliness and reported effectiveness of activities since the start of implementation. Disaggregate identified challenges by
    a. Those deemed outside of USAID & PHAD's control or unlikely be overcome over the remaining period of implementation; and
    b. Those which PHAD has already addressed or should actively attempt to address during the remaining period of implementation.
2. Based on identified challenges and lessons learned, outline all practical recommendations which ought to be ADAPTED into current activities and considered ahead of any future expansion into new areas.

Notes:

1. It may become necessary to integrate questions on new factors outside of PHAD and USAID's control, such as the COVID-19 pandemic, might impact programming and what hedging measures could be made in advance to minimize negative impact or risks. At the current time, this remains a secondary priority, but the consultant should be prepared to incorporate this into the planning (and associated level of effort may be adjusted if necessary).

2. The depth and scope of this study is not intended to match the rigor of an evaluation, and as as such is also not intended to evaluate PHAD's performance. USAID hopes above all to use this study to draw lessons learned in support to the next phase of expansion.

POSITION DESCRIPTION

Activities:

SI is seeking a competent consultant to act as Team Leader to conduct this study, with specific activities include, but are not limited to

1. A plan that principally identifies qualitative assessment tools and key stakeholders
2. Desk research of existing planning and MEL documents.
3. Key informant interviews with stakeholders, including but not limited to: USAID, PHAD staff, provincial government partners, private sector stakeholders and other local actors in the Water Health Network);
4. Focused group discussions with (direct) current and future beneficiaries of the project intervention (while remaining adaptive to health-related restrictions and COVID-19-related conditions at the time of the study); and
5. Analysis and Report writing.

Desired deliverables:

1. Kickoff meeting with USAID and PHAD (post document review) supported by:
    - Outline of the special study plan,
    - Confirmed research scope/questions (including agreed changes/adjustments)
    - Confirmed list of anticipated Key Informant Interviews.
2. Top-Line Findings (Validation event)
    - PowerPoint presentation outlining key preliminary findings based on field research
3. Draft Report:
    - Complete draft report submitted to USAID in line with the research scope of work.
4. Reflection Event (facilitated with the support of Learns):
    - Summary notes on key recommendations emerging from USAID-IP reflection event focused on the recommended way forward.
5. Final report (including USAID/IP recommendations on way forward and USAID comment on the Draft Report)
    - Final copy-edited report, approved by USAID.

Qualifications: *Team Leader (* with the possibility of complimentary STTA support if required)*

- Expertise in environmental pollution, preferably water-related health issues required.
- Experience in local actor networking and policy advocacy desired.
- At least five years of experience in evaluation for development projects, specifically in conducting assessments or special studies, and familiarity with related compliance.
- Must have experience coordinating with GVN to implement USAID programs.
- Fluency in Vietnamese required.
- Fluency in English with demonstrated excellent writing skills required.

- Familiarity with USAID funding mechanisms desired.
- Experience working at project sites is a plus.

(*) While the recruitment process is ongoing, Learns will continue to ascertain whether an additional team member might be required to compliment his/her skill set.

Expected timeline (subject to change due to current COVID-19 situation): May 11 – July 16, 2020

United States Agency for International Development
Hanoi, Vietnam