

# **APPENDIX I:**

## **PROVINCIAL**

**Water and Sanitation Needs Assessment**

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## PROVINCIAL OFFICE / DDPM

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**Province:** Satun

**Date:** 17<sup>th</sup> July 2006

**Location:**

Provincial Office and DDPM

**GPS Coordinates:** 47N 0617993

**UTM** 0732234

**Name and Title of Person Interviewed:**

Somkiat Intarakum, Head of DDPM

**Phone:**

074 722050, 09 9696774

**Email:**

[dpm12\\_satun@hotmail.com](mailto:dpm12_satun@hotmail.com)

**Questions:**

	Yes	No
Do they have a printout of general statistics on their tsunami-affected district?	<b>X</b>	
<b>A. Population Affected:</b>		
• Number of families	3,028 families	
• Male / Female breakdown		
• Age breakdown		
• Affected sub-districts and villages	17 sub-districts 70 villages	
• Number of deaths	6 people in whole province 4 people in La Ngu District 2 people in Thung Wah District	
• Number of injuries	21 people	
• Number of missing persons		
<b>B. Livelihoods Affected:</b>		
• Fisheries (crab, shrimp, farms)	1,653 fishing equipment damaged, destroyed or lost 1,182 floating fish pens	
• Boats	680 damaged	
• Agriculture (farming, crops affected)	582 Rais of farm land got affected	

• Tourism	4 sight-seeing boats	
• Other	-	
<b>How has the province been handling general long-term tsunami relief and redevelopment within their jurisdiction? (Ex. Do they have recovery programs, projects?)</b>		
<ol style="list-style-type: none"> <li>1. DDPM provided training to the villagers to help educate them about the tsunami</li> <li>2. Evacuation drills take place at least twice a year.</li> <li>3. Warning systems: 14 early warning system towers were installed</li> <li>4. Training: to prepare villagers in case of another disaster. The idea being that next time they can help each other / volunteer</li> <li>5. Communication system (radio)</li> </ol>		
<b>What Tsunami-Affected Areas are Still in Need of Water and Sanitation Assistance:</b>	<b>Water</b>	<b>Sanitation</b>
Villages	Visit the Water Resource Department for further information	
Temporary camps		
New permanent housing		
Schools	Visit the Education Office for further information.	
Preschools / Kindergarten	Visit the Education Office for further information.	
Health facilities	Visit the Public Health Office for further information.	
<b>Do you have any of the following groups within your jurisdiction? If so, can you provide their location?</b>		
<b>Muslim committees</b>	The province is 90% Muslim	
<b>Migrants</b>	-	
<b>Sea Gypsies (Moken)</b>	Koh Li Beh, Moo 7, Koh Sah Rai, Muang Satun	
<b>Slum-dwellers</b>	-	
<b>Burmese</b>	-	
<b>Other</b>	-	
<b>Out of the groups mentioned above, are any considered "vulnerable" and currently experiencing poor water and sanitation conditions in their communities?</b>		
-		
<b>Do affected villages have water committees?</b>	<b>Yes</b>	<b>No</b>
		<b>X</b>
<b>Who is the key contact for committee? (Ex. village headman)</b>		

Some families use municipal water, some families use wells and boreholes.

**Are village households required to pay monthly water tariffs?**  
(Ex. Does each household pay for metered water consumption on top of flat rates for well / borehole electricity?)

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**How many children attend each affected school?**  
(Remember – can be “affected” if children’s homes were lost, parents’ livelihoods affected, or one or both parents died in tsunami, etc)

Visit the Education Office or schools for further information.

**How many toilets and sinks are in each affected school?**

Visit the Education Office or schools for further information.

**Does DDPM know of other aid organizations already working in the water / sanitation sector in their District?**

**French Red Cross**  
**Swedish Red Cross**  
**Korean Red Cross**  
(DDPM could not remember what they provided.)  
**FAO** helped with agriculture.

**Do you know of any local Thai NGOs active within your jurisdiction? If so, can you provide their names and contact information?**

**Chai Pattana Foundation** provided 6 fiberglass boats (including engines) and provided financial assistance to villagers who work on fish farms.

	Yes	No
<b>Are SAOs or other Government Agencies</b> (Ex. MENR, provincial authorities working in the water /sanitation sector in tsunami-affected districts?)	<b>X</b>	

**Govt. agencies: names, projects, locations?**

No information but the interviewee thinks that that the individual SAOs helped with water and sanitation.

**Notes and observations**

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## PROVINCIAL EDUCATION OFFICE

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**Province:** Satun

**Date:** 17<sup>th</sup> July 2006

**Location:**

Amphur Muang Satun

**GPS Coordinates:** 47N 0619121

**UTM** 0735141

**Name and Title of Person Interviewed:**

Jetsada Toa Palad, Accountant

**Phone:**

074 721380 extension 18, 09 8762817

**Email:**

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**Questions:**

Do They Have a Printout of General Statistics on Their Tsunami-Affected District?	Yes	No
		<b>X</b>
<b>A. Population Affected:</b>		
• Number of families	-	
• Male / Female breakdown	-	
• Age breakdown	-	
• Affected sub-districts and villages	3 districts Some children lived in another district, but their parents worked in the 3 affected districts.	
• Number of deaths	-	
• Number of injuries	-	
• Number of missing persons	-	
<b>B. Livelihoods Affected:</b>		
• Fisheries (crab, shrimp farms)	-	
• Boats	-	
• Agriculture (farming, crops affected)	-	

• Tourism	-	
• Other	5,399 children got affected	
<b>How has the district been handling general long-term tsunami relief and redevelopment within their jurisdiction? (Ex. Do they have recovery programs, projects?)</b>		
Information at another department, not enough time to interview with them.		
<b>What Tsunami-Affected Areas are Still in Need of Water and Sanitation Assistance:</b>	<b>Water</b>	<b>Sanitation</b>
Villages	<a href="#">See report (S7.1B on page 100)</a>	<a href="#">See report (S7.1B on page 100)</a>
Temporary camps		
New permanent housing		
Schools	87 schools	<a href="#">See report (S7.1B on page 100)</a>
Preschools / Kindergarten		
Health facilities		
<b>Do you have any of the following groups within your jurisdiction? If so, can you provide their location?</b>		
<b>Muslim committees</b>	More than 90%	
<b>Migrants</b>	-	
<b>Sea Gypsies (Moken)</b>	-	
<b>Slum-dwellers</b>	-	
<b>Burmese</b>	-	
<b>Other</b>	-	
<b>Out of the groups mentioned above, are any considered “vulnerable” and currently experiencing poor water and sanitation conditions in their communities?</b>		
Mosques don't have enough water or toilets (but they weren't tsunami-affected).		
<b>Do affected villages have water committees?</b>	<b>Yes</b>	<b>No</b>
		<b>X</b>
<b>Who is the key contact for committee? (Ex. village headman)</b>		
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<b>Are village households required to pay monthly water tariffs? (Ex. Does each household pay for metered water consumption on top of flat rates for well / borehole electricity?)</b>		

Ask the individual schools		
<b>How many children attend each affected school?</b> (Remember – can be “affected” if children’s homes were lost, parents’ livelihoods affected, or one or both parents died in tsunami, etc)		
7 People		
<b>How many toilets and sinks are in each affected school?</b>		
See report (S7.1B on page 100)		
<b>Does the Education Office know of other aid organizations already working in the water / sanitation sector in their District?</b>		
UNICEF will help with Sanitation issues (not known when or where)		
<b>Do you know of any local Thai NGOs active within your jurisdiction? If so, can you provide their names and contact information?</b>		
Thai Red Cross (but don’t know what they did.)		
<b>Are SAOs or other Government Agencies</b> (Ex. MENR, provincial authorities working in the water /sanitation sector in tsunami-affected districts?)	<b>Yes</b>	<b>No</b>
	<b>X</b>	
<b>Govt. agencies: names, projects, locations?</b>		
Not known. Visit the Schools directly		
<b>Notes and observations</b>		
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# **APPENDIX I:**

## **SUPPORTING DOCUMENTS**

**Water and Sanitation Needs Assessment**

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## REFERENCE: S7.1B

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**Source:** Education Office

**Translated from:** ประมาณการค่าใช้จ่ายงบประมาณโครงการ

**Estimated Budget for School Sanitation Improvement Projects within the Satun Educational Office**

No.	School Name	District	List
1	Wat Nah Muang	Muang Satun	- Restroom
2	Ban Gah Lan Bah Du	Muang Satun	- Sink for men's restroom - Pump and drainage pipe Outdoors - Garbage Pit (square) with 2 wheeled garbage bins
3	Ban Tah Hin	Muang Satun	- Improve restrooms - Improve cafeteria
4	Wang Pa Niad	Muang Satun	- Restroom with 4 toilets - Water pump
5	Ban Kok Pradu	Muang Satun	- Restroom
6	Ban Koh Sah Rai	Muang Satun	- Restroom - Plastic bins (120 Liters)
7	Ban Gah-Neh	Muang Satun	- Toilet - Improving restrooms
8	Ban Pa Dae	Muang Satun	- Restroom - Septic Tank - Sink - Drainage ditch
9	Ban Ra Ya Dod Nui	Muang Satun	- Restroom
10		Muang Satun	- Toilet - Improving restroom - Improving cafeteria
11	Ban Khao Jeen	Muang Satun	- Improving restroom
12	Ban Khuan Khan	Muang Satun	- Restroom

No.	School Name	District	List
13	Ban Khuan	Muang Satun	- Restroom
14	Ban Dan Yong Umah	Muang Satun	- Cement water tank - Storm Sewer - PVC pipe, Tap
15	Ban Nah Lan	Muang Satun	- Restroom
16	Ban Koh A Dang	Muang Satun	- Fixing toilet - Fixing water supply - Improving cafeteria - Improving storm sewer
17	Ban Gah Lan Yee Dan	Muang Satun	- Restroom with 4 toilets - Improving toilets - Sink - Urinal - Drainage and 2 septic tanks - Drainage canal around the school - Borehole with pump and piping - Garbage Pit, square - Restroom Accessories
18	Ban Dan Yong Po	Muang Satun	- Restroom
19	Ban Ket Ri	Muang Satun	- Bathroom, 10 toilets - Urinal - Sink - Improving toilets - Fiberglass water tank
20	Ban Chalung	Muang Satun	- Drainage canal
21	Ban Dan Yong Gling	Muang Satun	- Restroom, 4 toilets
22	Ban Koh Yao	Muang Satun	- Restroom, 4 toilets - Improving toilets - Sink - Sewer - Pump, piping and sink - 2 wheeled garbage cans

No.	School Name	District	List
23	Ban Nang Pu Lao	Muang Satun	<ul style="list-style-type: none"> <li>- Incinerator</li> <li>- Improving restroom</li> </ul>
24	Ban Sai Ngam	Muang Satun	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Sink and toothbrushes</li> <li>- Can and incinerator</li> </ul>
25	Ban Dan Yong Gah Boi	Muang Satun	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Sink</li> <li>- Incinerator</li> </ul>
26	Ban Nuan Soong	Muang Satun	<ul style="list-style-type: none"> <li>- Improving restroom</li> <li>- Improving student tooth brushing area</li> </ul>
27	Ban Jeh Bi Lang	Muang Satun	<ul style="list-style-type: none"> <li>- Restroom</li> </ul>
28	Ban Thung	La Ngu	<ul style="list-style-type: none"> <li>- Sink</li> <li>- Septic Tank with cover</li> <li>- Drainage canal</li> </ul>
29	Ban Lah Nga	La Ngu	<ul style="list-style-type: none"> <li>- Drainage canal</li> <li>- Restroom</li> </ul>
30	Ban Thuang Mai	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Drainage canal</li> <li>- Improving cafeteria</li> </ul>
31	Ban Go Da	La Ngu	<ul style="list-style-type: none"> <li>- Sink</li> <li>- Incinerator</li> </ul>
32	Ban Son Klang	La Ngu	<ul style="list-style-type: none"> <li>- Improve restroom, 3 toilets</li> <li>- Improve water supply system</li> </ul>
33	Ban Dah Lam	La Ngu	<ul style="list-style-type: none"> <li>- Improve restroom</li> <li>- Improve sink</li> </ul>
34	Ban Bah Fang	La Ngu	<ul style="list-style-type: none"> <li>- Septic Tank</li> <li>- Water supply system</li> <li>- Restroom, 4 toilets</li> <li>- Improve restroom 3 toilets</li> <li>- Incinerator</li> </ul>
35	Ban Pi Yai	La Ngu	<ul style="list-style-type: none"> <li>- Restroom, 4 toilets</li> <li>- Garbage can with cover</li> <li>- Grease Trap with equipment</li> <li>- Sink / Toothbrush station</li> </ul>

No.	School Name	District	List
36	Ban Khok Payom	La Ngu	<ul style="list-style-type: none"> <li>- Restroom, 4 sinks</li> <li>- Stainless water tank with the stand</li> <li>- Pump ( Benzine type)</li> </ul>
37	Ban Koh Bu Lorn	La Ngu	<ul style="list-style-type: none"> <li>- Restroom, 4 toilets</li> <li>- Plastic bin</li> <li>- Stainless water tank with the stand</li> <li>- Pump (Benzine type)</li> </ul>
38	Ban Bah Gan Doh Tid	La Ngu	<ul style="list-style-type: none"> <li>- Restroom, 6 toilets</li> <li>- Sinks</li> <li>- Stone water tank</li> <li>- Garbage can</li> <li>- Water tank</li> </ul>
39	Ban Du Daeh Lum	La Ngu	<ul style="list-style-type: none"> <li>- Improving cafeteria</li> <li>- Sink</li> <li>- Improving restroom</li> <li>- Improving drainage canal</li> <li>- Garbage can</li> </ul>
40	Ban Su Ngai Mu So	La Ngu	<ul style="list-style-type: none"> <li>- Restroom, 4 toilets</li> <li>- Large plastic garbage can</li> <li>- Stainless water tank with the stand</li> <li>- Stainless sink</li> </ul>
41	Ban Da Loh Sai	La Ngu	<ul style="list-style-type: none"> <li>- Improving restrooms by laying tiles on the floor and the wall</li> <li>- Concrete drainage canal</li> <li>- Sink</li> </ul>
42	Ban Thung Samet	La Ngu	<ul style="list-style-type: none"> <li>- Improving canal</li> <li>- Improving restroom</li> <li>- Improving internal water supply</li> <li>- Sink</li> </ul>
43	Ban Nah Paya	La Ngu	<ul style="list-style-type: none"> <li>- Building restroom</li> <li>- Building incinerator</li> <li>- Constructing drainage canal</li> </ul>

No.	School Name	District	List
44	Ban Bak Bah Rah	La Ngu	<ul style="list-style-type: none"> <li>- Adjusting toilet</li> <li>- Building canal</li> <li>- Sink</li> </ul>
45	Ban Bak Bing	La Ngu	<ul style="list-style-type: none"> <li>- Improving restroom</li> <li>- Concrete drainage canal</li> <li>- Incinerator</li> <li>- School water supply</li> </ul>
46	Ban Khuan Fa Laeb	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> </ul>
47	Ban Bak La Ngu	La Ngu	<ul style="list-style-type: none"> <li>- Improving cafeteria</li> <li>- Improving restroom</li> </ul>
48	Ban Thung Nang Kaew	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Improving drainage canal, concrete canal</li> </ul>
49	Ban Nai Muang	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Sink</li> <li>- Septic tank equipment</li> <li>- Improving toilet</li> </ul>
50	Ban Nong Hoi Kong	La Ngu	<ul style="list-style-type: none"> <li>- Improving toilet</li> </ul>
51	Ban Bu Boi	La Ngu	<ul style="list-style-type: none"> <li>- Drainage canal</li> </ul>
52	Ban Tah Payom	La Ngu	<ul style="list-style-type: none"> <li>- Improving restrooms</li> <li>- Sink counter with grease trap</li> </ul>
53	Ban Tah Lae Lah	La Ngu	<ul style="list-style-type: none"> <li>- Drainage canal</li> <li>- Improving cafeteria</li> </ul>
54	Ban Wang Sai Thong	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Improving restroom</li> </ul>
55	Ban Tah Cha Muang	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> </ul>
56	Ban Sai Yai	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Improving cafeteria with grease trap</li> </ul>
57	Ban Hua Khuan	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Garbage can</li> <li>- Cooler No.28</li> <li>- Cooler No.30</li> <li>- Drainage canal</li> </ul>

No.	School Name	District	List
58	Ban Nah Kha	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Improving restroom</li> <li>- Garbage can</li> <li>- Cooler No.28</li> <li>- Improving water supply system</li> <li>- Building the stand for water tank</li> </ul>
59	Ban Baw Hin	La Ngu	<ul style="list-style-type: none"> <li>- Sewer</li> <li>- Drain water pipe</li> <li>- Restroom</li> </ul>
60	Ban Gah Baeng	La Ngu	<ul style="list-style-type: none"> <li>- Improving restroom</li> <li>- Grease trap</li> <li>- Sink</li> <li>- Drainage canal</li> </ul>
61	Ban Bow Jed luuk	La Ngu	<ul style="list-style-type: none"> <li>- Drainage Canal</li> <li>- Storm Sewer</li> <li>- Incinerator</li> <li>- Waste water treatment system</li> <li>- Water supply system</li> <li>- Improving restroom</li> </ul>
62	Ban Klong Nam Khem	La Ngu	<ul style="list-style-type: none"> <li>- Sink</li> <li>- Door</li> </ul>
63	Ban Koh Yuan	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> </ul>
64	Ban Tah Yang	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> </ul>
65	Thung Wa Nursery	La Ngu	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Toothbrush/ hand washing Sink</li> <li>- Canal and Grease trap</li> </ul>
66	Ban Kee Ree Wong	La Ngu	<ul style="list-style-type: none"> <li>- Sewer</li> <li>- Drain water pipe</li> <li>- Restroom</li> </ul>

No.	School Name	District	List
67	Wattanasarn	La Ngu	<ul style="list-style-type: none"> <li>- Sink</li> <li>- Drainage anal</li> <li>- Restroom</li> <li>- Cement water tank</li> </ul>
75	Ban Tah Kam Kwai	Thung Wah	<ul style="list-style-type: none"> <li>- Sink</li> <li>- Drainage canal</li> <li>- Water tank</li> </ul>
76	Ban Bah Ra Yi	Thung Wah	<ul style="list-style-type: none"> <li>- Restroom</li> <li>- Borehole</li> <li>- Pump, fiberglass water tank</li> </ul>
77	Wat Chompoo Nimit	Thung Wah	<ul style="list-style-type: none"> <li>- Drainage canal</li> </ul>
78	Ban Thung Bu Lang	Thung Wah	<ul style="list-style-type: none"> <li>- Constructing restroom</li> </ul>
79	Ban Bah Gae Baw Hin	Thung Wah	<ul style="list-style-type: none"> <li>- Restroom</li> </ul>

There was a gap in this document we received from the Education Office. Schools 68-74 are missing.

# **APPENDIX II:**

## **MUANG SATUN DISTRICT**

**Water and Sanitation Needs Assessment**

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## MUANG SATUN DISTRICT OFFICE

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**Province:** Satun

**Date:** 17<sup>th</sup> July 2006

**Location:**

Amphur Muang Satun

**GPS Coordinates:** 47N 0619986

**UTM** 0735199

**Name and Title of Person Interviewed:**

Somchai Yothathip, Deputy

**Phone:**

074 711073-4 / 01 7079321

**Email:**

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**Questions:**

Do They Have a Printout of General Statistics on Their Tsunami-Affected District?	Yes	No
		<b>X</b>
<b>A. Population Affected:</b>		
• Number of families	2,258 families	
• Male / Female breakdown	-	
• Age breakdown	-	
• Affected sub-districts and villages	6 Sub-districts	
• Number of deaths	-	
• Number of injuries	-	
• Number of missing persons	-	
<b>B. Livelihoods Affected:</b>		
• Fisheries (crab, shrimp farms)	552 floating fish pens were damaged 58 shellfish farms were damaged	
• Boats	138 boats were damaged	
• Agriculture (farming, crops affected)		
• Tourism		

• Other	28 fish nets were damaged	
<b>How has the district been handling general long-term tsunami relief and redevelopment within their jurisdiction? (Ex. Do they have recovery programs, projects?)</b>		
Muang Satun has been cooperating with DDPM and the Sub-district Administration Office on evacuation drills and planning escape routes.		
<b>What Tsunami-Affected Areas are Still in Need of Water and Sanitation Assistance:</b>	<b>Water</b>	<b>Sanitation</b>
Villages	<b>Koh Sah Rai Sub-district</b>	-
Temporary camps	<b>Ra Ya Dod Nui, Moo 4, Koh Sah Rai</b> lacks water and water tanks. For more information, visit Koh Sah Rai SAO.	-
New permanent housing	-	-
Schools	For more information go directly to the schools or visit the Education Office	-
Preschools / Kindergarten	-	-
Health facilities	<p>There are 3 health centers in <b>Koh Sah Rai Sub-district:</b></p> <ul style="list-style-type: none"> <li>- Dan Yong Gling health center (Moo 3)</li> <li>- Koh Sah Rai Health center (Moo 5)</li> <li>- Koh Li Beh health center (Moo 7)</li> </ul> <p>There is a lack of water after the Tsunami.</p> <p>There are 2 health centers in <b>Pu You Sub-district:</b></p> <ul style="list-style-type: none"> <li>- Koh Yao health center (Moo 1)</li> <li>- Pu You health center (Moo 3)</li> </ul>	-
<b>Do you have any of the following groups within your jurisdiction? If so, can you provide their location?</b>		
<b>Muslim committees</b>	80 % on the mainland 90 % on Koh Sah Rai Sub-district 100 % in Pu You Sub-district	
<b>Migrants</b>	-	
<b>Sea Gypsies (Moken)</b>	On Koh Li Beh, Moo 7, Koh Sah Rai, Muang Satun	
<b>Slum-dwellers</b>	Sala Gan Dong at Moo 3, Klong Khut, Muang Satun	

<b>Burmese</b>	-	
<b>Other</b>	-	
<b>Out of the groups mentioned above, are any considered “vulnerable” and currently experiencing poor water and sanitation conditions in their communities?</b>		
-		
<b>Do affected villages have water committees?</b>	<b>Yes</b>	<b>No</b>
		<b>X</b>
<b>Who is the key contact for committee? (Ex. village headman)</b>		
. -		
<b>Are village households required to pay monthly water tariffs?</b> (Ex. Does each household pay for metered water consumption on top of flat rates for well / borehole electricity?)		
-		
<b>How many children attend each affected school?</b> (Remember – can be “affected” if children’s homes were lost, parents’ livelihoods affected, or one or both parents died in tsunami, etc)		
Visit the Education Office or schools for further information.		
<b>How many toilets and sinks are in each affected school?</b>		
Visit the Education Office or schools for further information.		
<b>Does the District Office know of other aid organizations already working in the water / sanitation sector in their District?</b>		
<ul style="list-style-type: none"> <li>- Water resource Department</li> <li>- Irrigation Department</li> <li>- Governor’s Office</li> </ul> They don’t have any records. Visit the Water Resources Department for further details.		
<b>Do you know of any local Thai NGOs active within your jurisdiction? If so, can you provide their names and contact information?</b>		
<b>Rak Thai Foundation</b> <b>Thai Red Cross</b> <b>Mercy foundation</b> (They may be more but most NGOs go directly to the affected areas without notifying the District Offices.)		
<b>Are SAOs or other Government Agencies</b> (Ex. MENR, provincial authorities working in the water /sanitation sector in tsunami-affected districts?)	<b>Yes</b>	<b>No</b>
	<b>X</b>	
<b>Govt. agencies: names, projects, locations?</b>		
District Office and Sub-district Administration Office provided food and water for villagers after the Tsunami.		

**APPENDIX III:**  
**TAHPAE DISTRICT**  
Water and Sanitation Needs Assessment

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## TAH PAE DISTRICT OFFICE

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**Province:** Satun

**Date:** 17<sup>th</sup> July 2006

**Location:**

Tah Pae District, Satun

**GPS Coordinates:** 47N 0607214

**UTM** 0750602

**Name and Title of Person Interviewed:**

Akaradetch Opyanang, Volunteer Soldier

**Phone:**

074 787 071 / 06 961 0787

**Email:**

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**Questions:**

Do They Have a Printout of General Statistics on Their Tsunami-Affected District?	Yes	No
		<b>X</b>
<b>A. Population Affected:</b>		
• Number of families	230 Families	
• Male / Female breakdown		
• Age breakdown		
• Affected sub-districts and villages	4 villages affected Thung Rin, Moo 1, Sah Korn Sub-district Sah Korn, Moo 2, Sah Korn Sub-district Klong Li Kee, Moo 3, Sah Korn Sub-district Rai Ton, Moo 3, Tah Rua Sub-district	
• Number of deaths	2 people who died in Phuket, none in local area.	
• Number of injuries	-	
• Number of missing persons	-	
<b>B. Livelihoods Affected:</b>		
• Fisheries (crab, shrimp farms)	Visit the Fishery District Department for information.	
• Boats	Visit the Fishery District Department for information	

• Agriculture (farming, crops affected)	-										
• Tourism	-										
• Other	-										
<b>How has the district been handling general long-term tsunami relief and redevelopment within their jurisdiction? (Ex. Do they have recovery programs, projects?)</b>											
1. Evacuation drills and rescue for natural disaster. 2. Warning system; cooperating with DDPM they have constructed 2 warning system towers. The towers have not been completed in Thung Rin, Moo 1 and Sah Korn, Moo 2, Sah Korn Sub-district.											
<b>What Tsunami-Affected Areas are Still in Need of Water and Sanitation Assistance:</b>											
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Preschools / Kindergarten		<b>Tah Pae Kindergarten's</b> drains don't drain well and sometimes overflow.
Health facilities	Visit the Health Office for information	
<b>Do you have any of the following groups within your jurisdiction? If so, can you provide their location?</b>		
<b>Muslim committees</b>	The district is 95% Muslim	
<b>Migrants</b>		
<b>Sea Gypsies (Moken)</b>	Koh Li Beh, Moo 7, Koh Sah Rai, Muang Satun	
<b>Slum-dwellers</b>		
<b>Burmese</b>	-	
<b>Other</b>	-	
<b>Out of the groups mentioned above, are any considered "vulnerable" and currently experiencing poor water and sanitation conditions in their communities?</b>		
<b>Thung Ran, Moo 1, Sah Korn, Tah Pae</b> <b>Sakorn, Moo 2, Sah Korn, Tah Pae</b> <b>Klong Li Kee, Moo 3, Sah Korn, Tah Pae</b>		
3 villages in Sah Korn Sub-district request sanitation assistance; no garbage truck, some villagers drain their waste and throw their garbage into the sea.		
<b>Do affected villages have water committees?</b>	<b>Yes</b>	<b>No</b>
	<b>X</b>	
<b>Who is the key contact for committee? (Ex. village headman)</b>		
Village Head in Thung Rin, Moo 1, Sah Korn Sub-district Village Head in Sah Korn, Moo 2, Sah Korn Sub-district Village Head in Klong Li Kee, Moo 3, Sah Korn Sub-district		
<b>Are village households required to pay monthly water tariffs?</b> (Ex. Does each household pay for metered water consumption on top of flat rates for well / borehole electricity?)		
Yes		
<b>How many children attend each affected school?</b> (Remember – can be "affected" if children's homes were lost, parents' livelihoods affected, or one or both parents died in tsunami, etc)		
Visit the Fishery District Department for further details because they gave the scholarship to schools in the area.		
<b>How many toilets and sinks are in each affected school?</b>		
Visit the Education Office for more information		
<b>Does the District Office know of other aid organizations already working in the water / sanitation sector in their District?</b>		

No.		
<b>Do you know of any local Thai NGOs active within your jurisdiction? If so, can you provide their names and contact information?</b>		
Most Thai NGOs assist the province by providing funds, clothes and first aid. These NGOs go through the District Offices.		
<b>Are SAOs or other Government Agencies</b> (Ex. MENR, provincial authorities working in the water /sanitation sector in tsunami-affected districts?)	<b>Yes</b>	<b>No</b>
	<b>X</b>	
<b>Govt. agencies: names, projects, locations?</b>		
<b>Notes and observations</b>		
There is standing water in the following villages:		
<p><b>Tah Pae Sub-district</b>  Tah Nam Khem, Moo 1  Tah Pae Glang, Moo 2  Mud, Moo 3  Blak Wah, Moo 4  Dah Lam, Moo 8  Nah Kaew, Moo 9  Khuan Bi Lai, Moo 10</p> <p><b>Pair Ra Sub-district</b>  Khuan Gay, Moo 1  Khuan Toh, Moo 2  Koh Sai, Moo 3  Bae Rah Nua, Moo 4</p>		

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## VILLAGE: THUNG RIN, MOO 1

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**Province:** Satun  
2006

**Date:** August 1,

**Location:** Thung Rin, Moo 1, Sah Korn Sub-district, Tah Pae, Village Headman's House

**Village Name:** Thung Rin

**GPS Coordinates** - 47 N 0603298

**UTM** - 0747004

**Name and Title of Person Interviewed:** Mr. Sata Ann Deawahmalai, Village Headman

**Phone:** 0-1898-8586

**Email:**

### Questions:

**How did the tsunami affect your village? Were homes or fisheries destroyed? Did villagers lose their jobs?**

This village was affected by the tsunami in that the fishing equipment was damaged, therefore hurting the livelihoods of families in the village. The fishing equipment damaged includes fishing pens and nets. Three boats were spoiled. There was no housing damage. Approximately 40 families were affected.

**What is your source of water? Well, mountain, borehole, SAO? Explain.**

Currently, the village gets its water from a reservoir, rainwater catchment tanks, and public wells. There are twenty wells in the village. The reservoir is about 1 rai large and the water level is currently at 2 meters. The water from the reservoir is pumped up to a water purifier and is then stored in a water tank. Water must be rationed so that it does not run out.

**Do village homes use rainwater catchments? Water storage containers?**

Yes, village homes use rainwater catchments. In most homes, one is set aside for drinking while the other(s) is set aside for dishes and bathing. During the dry season, the SAO will come three to four times a week to fill four large water tanks in town. These tanks, which are located near the mosque, are in need of repair. The tanks have cracks in the cement and the pipes carrying the water are leaking.

**Are there any broken water pumps, wells, pipes, etc, that are preventing you from having a reliable source of water?**

In general, the reservoir system is not big enough. The motor used to run the system often has problems. The electricity costs for running the system are also very high. The village headman says that everything from the pipes, motor, and water tank need to be of higher capacity. Right now, water is rationed so that it is only turned on for 3 to 4 hours in the morning and 3 to 4 hours at night. Also, the rainwater tanks, which receive water from the SAO, are cracked in the cement and their pipes are leaking.

**How do you get water in the dry season?**

The SAO fills the tanks three to four times a week during dry season.		
<b>Do you have a water committee?</b>	Yes	No
	X	
<b>Who is the committee's contact person? (Ask if we can speak to him/her.)</b>		
The village headman says that he gets in touch with the water committee; however, he was not willing to go into details about who is in the water committee. It is unclear as to why he would not give this information.		
<b>Are households required to pay monthly water tariffs (fees)?</b>	Yes	No
	X	
<b>If Yes, how do they pay? Ex. Each household pays for metered water consumption on top of flat rates for well/borehole electricity.</b>		
Each household pays for metered water. On average, a household pays 150 Baht per month.		
<b>Do you know how deep your well is?</b>		
Wells in the village are about five to six meters deep. The reservoir is about 15 meters deep.		
<b>What is the well's water table?</b>		
The well's water table varies. Sometimes at 4 to 20 meters deep, one will not hit water due to the underlying bedrock.		
<b>How much deeper do you have to dig to reach water?</b>		
This depends on where one's house is located.		
<b>What do you need to improve the village or school's water system? Ex. – pipelines, water tanks, wells, boreholes, etc?</b>		
The village headman suggested a bigger reservoir which would also need larger pipes, a larger water tower, and better motor. Also, the bottom lining needs to be repaired so that the reservoir is better prepared to hold water. The town rainwater tanks which are also filled by the SAO in the dry season should be repaired. Houses could be given more rainwater catchment tanks.		
<b>Which school do the children attend?</b>		
The students attend Ban Thung Rin School. The school includes preschool through sixth grade.		
<b>How many students and teachers are at the local school?</b>		
There are 130 students, nine teachers, and one principal at the school.		
<b>How many toilets and sinks does the school currently have?</b>		
There are four bathrooms, but only two of them work. Students wash their hands at the one functioning faucet in the school.		
<b>Where are the toilets located? Sinks located?</b>		
The toilets are located about 10 meters behind the school. The faucet is located in the cafeteria which is about 30 meters from the bathrooms.		
<b>Is there standing water in the village? Ex. – puddles, pools of water</b>		

Standing water is not a problem in the village as it seeps through the sand. The government has come to spray the area in order to reduce vector born illnesses; therefore, diseases like malaria and Dengue are not a problem.
<b>Are storm-water drains kept clear?</b>
There are none.
<b>Do homes, paths or roads experience flooding?</b>
No.
<b>Is drainage water polluting existing surface/groundwater or causing erosion?</b>
No; however, in the dry season water becomes brackish.
<b>Where does wastewater go and is it treated in any way?</b>
Waste water runs to the canal.
<b>Where does solid waste go? How is it managed?</b>
Most homes have septic tanks. The poor people of the village use their backyard areas to deposit solid waste. The village headman said that attempts are being made to create regulations which would stop the poorer villagers from doing this.
<b>Does the village have access to incinerators or does it have a garbage pickup?</b>
There is no public system. Villagers will either burn or bury their garbage.
<b>Does the village have a recycling program?</b>
No.
<b>Have any other organizations provided water and sanitation assistance for the school? Have they provided toilets, water tanks, sinks, a drainage system, etc? Has anything else been donated?</b>
NGOs have come to do surveys but so far there has been no action taken. The village headman could not remember any names. Another village headman came into out meeting midway through and asked if we were with World Vision, however.
<b>Notes and Observations</b>
This village headman said that Sah Korn is in the driest sub-district and is the last area to receive rain.

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## SCHOOL: THUNG RIN, MOO 1

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**Province:** Satun

**Date:** August 1, 2006

**Location:** Thung Rin, Moo 1, Sah Korn, Tah Pae, Satun

**School Name:** Ban Thung Rin School

**GPS Coordinates -** 47N 0601663, UTM 0745974

**Name and Title of Person Interviewed:** Mr. Sunun Vijitraitkarn, Principal

**Phone:** 074-720172

**Email:** hasun\_2548@hotmail.com

### Questions:

**How many children attend the school? How many boys, girls, teachers? What are their ages?**

There are 125 students at the school. There are 62 females and 63 males. There are also nine teachers, one Principal, one religion teacher, and one janitor. The school has two years of pre-school and goes through the sixth grade.

**How did the tsunami affect the school? Were children's homes damaged or parents' livelihoods affected? Explain.**

Some areas of employment suffered as a result of the tsunami. There was a loss of fishing equipment. Five students received aid from the government in the form of a school scholarship, which was granted for one year.

**What is your source of water? Well, borehole, rainwater catchments, SAO deliveries? Explain.**

The school's water source is the town reservoir. In addition, the school also has 11 rainwater catchments.

**Are there any broken water pumps, wells, pipes, etc, that are preventing you from having a reliable source of water?**

Three rainwater catchments are damaged. Also, the gutter system around the building feeding the tanks is inadequate. Over the years it has sustained damage and therefore is not operating at maximum efficiency. Water from the reservoir is brackish, especially during the dry season. Overall, there is not enough water.

**How do you get water in the dry season?**

During the dry season the SAO will come about 2 times a week to fill the water tanks so that the school has drinking water.

**Do you know how deep your well is?**

There is no well at the school.

**What is the well's water table?**

-

<b>How much deeper do you have to dig to reach water?</b>
-
<b>How many toilets and sinks does the school currently have? What is the condition of the facilities?</b>
The school has four functioning toilets. Two toilets are used by male students. One toilet is used by female students, and the last toilet is for faculty members. The male students also have a urinal. There are four functioning toilets for 140 people.
<b>Where are the toilets located? Sinks located?</b>
The toilets are located about 10 meters behind the school. There is one faucet on the school grounds, but it is located in the cafeteria which is about 30 meters from the bathrooms.
<b>Do the toilets, sinks, and pipes work? Anything broken or need replacing?</b>
The toilets work when there is enough water. As described by the village headman, water is often rationed, and therefore turned off during the day. Furthermore, during the dry season, rainwater tanks are more prone to go dry; therefore, the villagers are dependant on the free water from the SAO.
<b>What do you need to improve the school's water system? Ex. – pipelines, water tanks, wells, boreholes, etc?</b>
The school needs more bathrooms. Currently the ratio is 140 people to 4 toilets. Also, the school needs more sinks, and drinking water. In order to improve the drinking water system the gutter system could be improved to go around the building rather than half the building, which is the case right now. The school could also be given more rain water catchments, which could carry the school further into the dry season.
<b>Are storm-water drains kept clear?</b>
None
<b>Do buildings, paths or roads experience flooding?</b>
No
<b>Is drainage water polluting existing surface/groundwater or causing erosion?</b>
Water from reservoir is brackish.
<b>Where does wastewater go and is it treated in any way?</b>
Waste water is deposited into the ground, and travels into the canals.
<b>Where does solid waste go? How is it managed?</b>
Solid waste decomposes in the septic tanks. There is no bottom to the tanks.
<b>Does the school have access to incinerators or does it have a garbage pickup?</b>
The school's trash is burned.
<b>Does the school have a recycling program?</b>
No.
<b>Have any other organizations provided water and sanitation assistance for the school? Have they provided toilets, water tanks, sinks, a drainage system, etc? Has anything else</b>

**been donated?**

UNICEF has come and donated kitchen supplies.

**Notes and Observations**

This school was very adamant about needing more room. Currently, each room is shared. For example, the pre-school levels share a room. The first grade shares a room with the nurse's office. The third grade shares a room with the library. The fourth grade shares its room with the principal. Also the fifth grade splits its room with storage supplies. The Principal would like for the school to be made bigger so that the children will have more learning space.

**APPENDIX IV:**  
**LANGU DISTRICT**  
Water and Sanitation Needs Assessment

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## LA NGU DISTRICT OFFICE

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**Province:** Satun

**Date:** 18<sup>th</sup> July 2006

**Location:**

La Ngu District, Satun

**GPS Coordinates:** 47N 0588657

**UTM** 0758798

**Name and Title of Person Interviewed:**

Boonpob Madua, Deputy

**Phone:**

01 8973309 / 074 781903

**Email:**

-

**Questions:**

Do They Have a Printout of General Statistics on Their Tsunami-Affected District?	Yes	No
		<b>X</b>
<b>If not, ask the following:</b>		
<b>A. Population Affected:</b>		
• Number of families	3,919 families	
• Male / Female breakdown		
• Age breakdown		
• Affected sub-districts and villages	4 Sub-districts 23 villages  <b>Laem Son Sub-district</b> has 6 affected villages. <b>Bak Nam Sub-district</b> has 7 affected villages. <b>La Ngu Sub-district</b> has 8 affected villages. <b>Gum Paeng Sub-district</b> has 2 affected villages.	
• Number of deaths	4 people	
• Number of injuries	24 people	
• Number of missing persons	7 people, but they are missing in other provinces.	
<b>B. Livelihoods Affected:</b>		
• Fisheries (crab, shrimp farms)	184 stake traps were damaged. 20,115 crab-traps were damaged. 11,609 squid-traps were damaged.	

	7, 638 floating fish pens were damaged. 1 net was damaged.
• Boats	15 big boats were damaged (longer than 15 meters) 369 long tail boats were damaged.
• Agriculture (farming, crops affected)	102 Rais were affected (Rice fields) 301 Rais were affected (Watermelon fields)
• Tourism	-
• Other	-

**How has the district been handling general long-term tsunami relief and redevelopment within their jurisdiction? (Ex. Do they have recovery programs, projects?)**

1. Evacuation drills; The District Office worked with the Provincial Office and SAOs to plan and organize evacuation drills in affected areas.
2. Installed warning systems at:
  - **1 Bow Jed Luuk, Moo 1, Bak Nam Sub-district**
  - **1 Bak Bah Rah, Moo 2, Bak Nam Sub-district**
  - **1 Bu Boi, Moo 3, Laem Son Sub-district**
  - **1 Koh Bu Lorn, Moo 3, Bak Nam Sub-district**
3. TOT provided an SMS sender for emergency disaster warning alerts.

What Tsunami-Affected Areas are Still in Need of Water and Sanitation Assistance:	Water	Sanitation
Villages	<p><b>Bak Nam Sub-district:</b></p> <p><b>Koh Bu Lorn, Moo 3</b> has a small reservoir. In this village there are 3 water tanks per family. They drink rain water. Although this village doesn't have any fresh water, overall they don't suffer from water shortages.</p> <p><b>Bow Jed Luuk, Moo 1</b> use water from wells – which are brackish.</p> <p>All of <b>Laem Son Sub-district</b> uses water from wells and boreholes. Some have brackish water.</p>	
Temporary camps		
New permanent housing		
Schools	<p><b>Bu Lorn Don School on Koh Bu Lorn, Moo 3, Bak Nam Sub-district</b> doesn't have enough water, but for more information visit the school.</p>	

	<p><b>Bow Jed Luuk School</b> in Bow Jed Luuk, Moo 1, Bak Nam Sub-district suffers form water shortages in the dry season.</p> <p><b>Baan Bu Boi School</b> in Bu Boi, Moo 3, Laem Son Sub-district never has enough water.</p> <p><b>Prakan Ou Tid School</b> in Bah Gan Toh Tid, Moo 7, La Ngu Sub-district doesn't have enough water.</p>	
Preschools / Kindergarten		
Health facilities	They have no information. Visit the Health Clinics directly for more information.	
<b>Do you have any of the following groups within your jurisdiction? If so, can you provide their location?</b>		
<b>Muslim committees</b>	This district is 80% Muslim	
<b>Migrants</b>		
<b>Sea Gypsies (Moken)</b>		
<b>Slum-dwellers</b>		
<b>Burmese</b>	-	
<b>Other</b>	19% Buddhist 1% Christian	
<b>Out of the groups mentioned above, are any considered "vulnerable" and currently experiencing poor water and sanitation conditions in their communities?</b>		
No		
<b>Do affected villages have water committees?</b>	<b>Yes</b>	<b>No</b>
		<b>X</b>
<b>Who is the key contact for committee? (Ex. village headman)</b>		
-		
<b>Are village households required to pay monthly water tariffs?</b> (Ex. Does each household pay for metered water consumption on top of flat rates for well / borehole electricity?)		
-		

<b>How many children attend each affected school?</b> (Remember – can be “affected” if children’s homes were lost, parents’ livelihoods affected, or one or both parents died in tsunami, etc)							
Visit the Education Office or schools for further information.							
<b>How many toilets and sinks are in each affected school?</b>							
Visit the Education Office or schools for further information.							
<b>Does the District Office know of other aid organizations already working in the water / sanitation sector in their District?</b>							
Most organizations went directly to the affected areas immediately after the tsunami but it is not known which ones.							
<b>Do you know of any local Thai NGOs active within your jurisdiction? If so, can you provide their names and contact information?</b>							
<b>Chai Pattana Foundation</b> provided money to assist which career training sessions. They also provided boats and fishing equipment. <b>Fishery Department</b> repaired boats and fishing equipment.							
<b>Are SAOs or other Government Agencies</b> (Ex. MENR, provincial authorities working in the water /sanitation sector in tsunami-affected districts?)	<table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>X</b></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Yes	No	<b>X</b>			
Yes	No						
<b>X</b>							
<b>Govt. agencies: names, projects, locations?</b>							
The Public Health Department cleaned the wells after the tsunami							
<b>Notes and observations</b>							
-							

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## BAK NAM SUB-DISTRICT OFFICE

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**Province:** Satun

**Date:** 18<sup>th</sup> July 2006

**Location:**

Bak Nam Sub-district Administration Office

**GPS Coordinates:** 47N 0579773

**UTM** 0758376

**Name and Title of Person Interviewed:**

Bosakorn Hnusoemkeaw, Plan and Policy Analyzing Officer

**Phone:**

074 783373 / 09 4090198

**Email:**

-

**Questions:**

Do They Have a Printout of General Statistics on Their Tsunami-Affected Sub-district?	Yes	No
A. Population Affected:		
• Number of families		
• Male/Female breakdown		
• Age breakdown		
• Affected villages	7 villages <b>Bak Bah Rah, Moo 2</b> was the most affected in the area.	
• Number of deaths	4 people	
• Number of injuries		
• Number of missing people		
B. Livelihoods Affected:		
• Fisheries (crab, shrimp, shellfish farms)	303 floating fish pens were damaged 24 fish nets were damaged 39 fish/squid traps were damaged 6 crab-traps were damaged 5 stake traps were damaged 2 rafts were damaged 1 fish pond was damaged	

1. Boats	178 boats were damaged
• Agriculture (farming, crops affected)	40 watermelon and cucumber plantations were damaged 10 cows were injured
2. Tourism	-
3. Other	2 bicycles were damaged 11 houses were damaged 74 other equipments were damaged

**How has the sub-district been handling general long-term tsunami relief and redevelopment within their jurisdiction?**

(Ex. Do they have recovery programs, projects)

The Sub-district Office has been cooperating with DDPM and the Social Development and Human Security Office to plan and implement evacuation drills and routes.

What Tsunami-Affected Areas are Still in Need of Water / Sanitation Assistance:	Water	Sanitation
• Villages	<p><b>Bow Jed Luuk, Moo 1</b> doesn't have enough water or water tanks.</p> <p><b>Koh Bu Lorn, Moo 3</b> doesn't have a fresh water source but Bak Nam Sub-district Administration Office provides water to the villages during the dry season.</p> <p>Overall the village still needs water because the water in village is brackish and even though there is municipal water it still is not able to reach every village.</p>	<p><b>Bu Lorn Don, Moo 3</b> only has 3-4 public toilets for the whole village to use. Not every house has its own private toilet. Most villagers use the sea to go to the toilet.</p>
• Temporary camps		
• New permanent housing		
• Schools	<p><b>Bu Lorn La and Bu Lorn Don Schools</b> don't have enough water tanks or water.</p>	<p>The schools in the villages don't have their own toilets. Students still need to use the public toilets.</p>
• Preschools / Kindergarten	<p><b>Bak Bah Rah and Bow Jed Luuk Kindergartens</b> don't have a fresh water source.</p> <p><b>Dah Loh Sai Mosque</b> Preschool also doesn't have a fresh water source.</p>	
• Health facilities	<p><b>Bow Jed Luuk and Bak Nam Health Centers</b> don't have clean water to use (probably brackish). For further information, visit the health center.</p>	<p>There is normally a garbage truck service for health center but no information about infected garbage. For further information, visit the health centers.</p>

<b>Do you have any of the following groups within your jurisdiction? If so, can you provide their location?</b>			
<b>Muslim committees</b>	94.32%		
<b>Migrants</b>	-		
<b>Sea Gypsies (Moken)</b>	Bu Lorn, Moo 3, Koh Bu Lorn		
<b>Slum-dwellers</b>	Bak Bah Rah, Moo 2		
<b>Burmese</b>	-		
<b>Other</b>	5.63% Buddhist Ban Bu Lorn Don, Moo 3 doesn't have any religion.		
<b>Out of the groups above, are any considered "vulnerable" and experiencing poor water and sanitation condition?</b>			
Bow Jed Luuk Mosque needs more toilets. Kurusampan School needs more toilets and suffers from water shortages			
<b>Do affected villages have water committees?</b>	<b>Yes</b>	<b>No</b>	
	<b>X</b>		
<b>Who is the key contact for committee?</b> (Ex. Village Head)			
Bak Nam Sub-district Administration Office			
<b>Are village households required to pay monthly water tariffs?</b> (Ex. Does each household pay for metered water consumption on top of flat rates for well/borehole electricity?)			
Yes			
<b>How many children attend each affected school / pre-school</b> (Remember – can be "affected" if children's homes were lost, parents' livelihoods affected, or one or both parents died in tsunami, etc)			
Try visiting the following schools: Bow Jed Luuk School, Moo 1 Bak Bah Rah School, Moo 2 Koh Bu Lorn Don School, Moo 3 Koh Bu Lorn La School, Moo 3 Dah Loh Sai School, Moo 4 Tah Yang School, Moo 5 Tah Payom School, Moo 7			
<b>How many toilets and sinks are in each affected school / pre-school? Are they in working order?</b>			
Visit the schools directly for more information			
<b>Does the Sub-district Office know of other aid organizations already working in the water / sanitation sector in their district?</b>			

No, because most organizations go directly to the affected areas without notifying the SAO.
<b>Aid organizations: names, projects, locations?</b>
No
<b>Is there standing water in the villages?</b> (i.e. puddles, pools of water)
Yes, in <b>Bow Jed Luuk, Moo 1, Bak Bah Rah, Moo 2</b> and <b>Dah Loh Sai, Moo 4</b> because of the heavy rain and poor drains.
<b>Are storm-water drains kept clear in villages / schools / pre-schools?</b>
No, storm water drains are blocked in <b>Bak Bah Rah, Moo 2</b>
<b>Do homes / school grounds, paths or roads experience flooding?</b>
Yes, in <b>Bow Jed Luuk, Moo 1, Bak Bah Rah, Moo 2</b> and <b>Dah Loh Sai, Moo 4</b> because of the heavy rain and poor drains.
<b>Is drainage water polluting existing surface / groundwater or causing erosion in villages, around schools?</b>
No
<b>Where does waste-water from villages / schools go and is it treated in anyway?</b>
The wastewater from villages is drained in to the sea and isn't treated in any way first. Visit the individual schools for further information about wastewater.
<b>Notes and Observations</b>
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## VILLAGE: KOH BU LORN LA, MOO 3

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**Province:** La Ngu

**Date:** July 31, 2006

**Location:** Koh Bu Lorn La, Koh Bu Lorn, Moo 3, Bak Nam Sub-district, La Ngu District, Satun

**Village Name:** Koh Bu Lorn La

**GPS Coordinates -**

**Name and Title of Person Interviewed:** Mr. Manut Tahjeen, fisherman

**Phone:** 06-965-1952

**Email:**

### Questions:

#### How did the tsunami affect your village? Were homes or fisheries destroyed? Did villagers lose their jobs?

The tsunami affected this village in that people's homes and employment were either damaged or destroyed. Five to six houses were destroyed. Those people rebuilt their homes further up the mountain in their village. Five to six boats were damaged and fishing equipment was destroyed. Every family on the island was affected in one way or another. One NGO did give aid which amounted to 2000-3000 Bhat in order to fix boats. No help has been provided to repair or replace fishing supplies. There are also five resorts on the island, which have received fewer tourists in the past two years.

#### What is your source of water? Well, mountain, borehole, SAO? Explain.

There are wells and rainwater catchments used as a source for water on the island. All but one well has a motor. The other wells are operated manually. People also buy their drinking water. The water they buy is imported from the mainland. A one liter bottle of water on the island costs 10 Baht, whereas on the mainland, they can get the same bottle of water for 3 Baht.

#### Do village homes use rainwater catchments? Water storage containers?

Rainwater tanks have been issued by the SAO to the island. They are used for dishes, bathing, and drinking (sometimes) but, according to the interviewee, who is a fisherman, and another key informant on the island, the rainwater tanks have been distributed unfairly. Within this sub-district, the SAO office is located on a neighboring island, and is supposedly issuing these tanks in an unequal manner. In walking around the village, some homes had up to four tanks, while others, like the fisherman, had only one. It should be noted that sub-district funds are split forty-sixty with the other island. This island, because it is smaller, receives 40 percent of the funding. Essentially, Koh Bu Lorn brings in more money due to the resorts but they have less control in how the money is allocated.

#### Are there any broken water pumps, wells, pipes, etc, that are preventing you from having a reliable source of water?

There is simply not enough water on the island. During the dry season, many villagers will ride their boats to the front of the island where there is one electrically motored pump. This well does not go dry; therefore, the villagers will fill a box of water and bring it back to their home. It is unclear as to whether this well is the same well as the school's well (which runs on an electric

motor).		
<b>How do you get water in the dry season?</b>		
People get by on rain water, the water from the well in the front of the island, or they buy their water.		
<b>Do you have a water committee?</b>	Yes	No
		X
<b>Who is the committee's contact person? (Ask if we can speak to him/her.)</b>		
<b>Are households required to pay monthly water tariffs (fees)?</b>	Yes	No
		X
<b>If Yes, how do they pay? Ex. Each household pays for metered water consumption on top of flat rates for well/borehole electricity.</b>		
<b>Do you know how deep your well is?</b>		
The wells in the village are about 10 meters deep. They do not dig deeper in fear of reaching salt water.		
<b>What is the well's water table?</b>		
About ten meters.		
<b>How much deeper do you have to dig to reach water?</b>		
Just over ten meters.		
<b>What do you need to improve the village or school's water system? Ex. – pipelines, water tanks, wells, boreholes, etc?</b>		
The simplest solution is to distribute more rainwater catchments, but in a fair manner so that people who need the tanks are receiving them first. The fisherman also brought up the idea of a reservoir, which was attempted on the neighboring island. On that island the reservoir did not work because the water would sink through the sand. If a reservoir is built, a bottom layer must first be created to prevent the water from seeping through the ground. Finally, the fisherman gave the idea of a gravity fed water system. At this point the island has six million Baht saved up. It would cost about 10 million Baht to complete the project.		
<b>Which school do the children attend?</b>		
Ban Koh Bu Lorn.		
<b>How many students and teachers are at the local school?</b>		
Information on the following survey.		
<b>How many toilets and sinks does the school currently have?</b>		
Information on the following survey.		

<b>Where are the toilets located? Sinks located?</b>
Information on the following survey.
<b>Is there standing water in the village? Ex. – puddles, pools of water</b>
When it rains, water will collect in the front of the island; however, the village has no problems with this issue.
<b>Are storm-water drains kept clear?</b>
There are none. There is a natural flow into the island.
<b>Do homes, paths or roads experience flooding?</b>
No.
<b>Is drainage water polluting existing surface/groundwater or causing erosion?</b>
During the dry season, there is the smell of natural water and rotting vegetation; however, this seems to be a natural occurrence.
<b>Where does wastewater go and is it treated in any way?</b>
Each house has a tank for waste water, which is about two meters deep. It is not treated.
<b>Where does solid waste go? How is it managed?</b>
Solid waste is deposited in a septic tank. The fisherman claims that they are not emptied; therefore, the waste must decompose into the ground. The fisherman claims that this does not affect the drinking water.
<b>Does the village have access to incinerators or does it have a garbage pickup?</b>
The SAO does issue garbage bags which are collected for free; however, some trash is buried.
<b>Does the village have a recycling program?</b>
Glass is thrown away, paper is burned, but plastic is kept to sell.
<b>Have any other organizations provided water and sanitation assistance for the school? Have they provided toilets, water tanks, sinks, a drainage system, etc? Has anything else been donated?</b>
No other organizations have come to the island; however, the Thai government has created a rural electrification program on the island. The villagers received solar cells, which are supposed to enable up to one television set and two lights per household. According to the fisherman, the reality is that one two lights will run off of the solar panels. Also, one NGO did give aid which amounted to 2000-3000 Bhat in order to fix boats.
<b>Notes and Observations</b>
The island has medical supplies stored. The most common illnesses are cold / mild flu, occasional malaria, and diarrhea.  A conversation with a key informant gave information regarding the bathroom situation on the island. We spoke with a woman who ran the market on the island and cared for one of the resorts. She said that bathrooms are a huge problem, but the government has tried many times to fix this problem. She said that bathroom supplies have been given to the island about ten times. While some people have assembled these bathrooms, others have not. She blames this on laziness, while the fisherman says that not all the right supplies were given.

The woman who ran the market also said that the villagers use salt and vinegar in the wells to maintain purity of the water.

This water should be tested as villagers bury trash and use septic tanks, which decompose into the ground. Cross-contamination between solid waste, garbage and well water seems likely. Possible solutions – A public toilet or a solar power well pump.

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## SCHOOL: KOH BU LORN, MOO 3

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**Province:** Satun

**Date:** July 31, 2006

**Location:** Koh Bu Lorn La, Koh Bu Lorn, Moo 3, Bak Nam Sub-district, La Ngu District, Satun

**School Name:** Ban Koh Bu Lorn

**GPS Coordinates -**

**Name and Title of Person Interviewed:** Mrs. Donlada Kerdsi, teacher

**Phone:** 04-3907377

**Email:**

**Questions:**

**How many children attend the school? How many boys, girls, teachers? What are their ages?**

There are 30 children at this school. 12 of the students are female and 16 are males. The school goes from pre-school to ninth grade.

**How did the tsunami affect the school? Were children's homes damaged or parents' livelihoods affected? Explain.**

The parents of the students suffered in terms of their livelihoods. In all, however, the tsunami did not have a large affect on the school. The fisherman mentioned that one teacher was too frightened to come back but this is untrue. That teacher had to move and was replaced.

**What is your source of water? Well, borehole, rainwater catchments, SAO deliveries? Explain.**

The school receives its water from a motorized well system, three rainwater catchment tanks, and bottled water that they buy. The teacher's house has two rainwater catchments.

**Are there any broken water pumps, wells, pipes, etc, that are preventing you from having a reliable source of water?**

The motorized pump that runs the water system at the school only works sometimes. The oil does not work to lubricate the parts, and to fix this problem the motor must be brought to La Ngu, which is on the mainland. In addition, there is no gasoline to run the well. It is unclear as to why they are not receiving more funds from their sub-district to run the well. We are unsure as to whether they are not being vocal about their need for money, or if the sub-district is not allocating the necessary funds.

The school owns a few bungalows, which they rent to tourists. During the dry season, the tourists that visit the island and stay in the school's bungalows, must share the bathrooms with the students. During dry season there is more money coming into the school, and motor can be fixed; therefore water is not as much of a problem.

During the rainy season, the motor cannot be maintained or run for lack of money, the well system does not work, and therefore the school has to rely on the rainwater tanks. The children must carry buckets of water to the bathroom toilets in order to flush waste down. As a result, the teachers are buying their drinking water.

The school also needs more rainwater catchments.  
The water tanks are collecting roof sediments.

<b>How do you get water in the dry season?</b>
The gravity fed water system is used in the dry season because the tourists are around.
<b>Do you know how deep your well is?</b>
About six meters.
<b>What is the well's water table?</b>
She was unsure.
<b>How much deeper do you have to dig to reach water?</b>
She was unsure.
<b>How many toilets and sinks does the school currently have? What is the condition of the facilities?</b>
There are two bathrooms for the students; one for the males and one for the females. There is teacher housing which provides a bathroom for the teachers.
<b>Where are the toilets located? Sinks located?</b>
The toilets are located about ten meters from the school. The sinks do not work right now because the pump is not feeding water through the pipes.
<b>Do the toilets, sinks, and pipes work? Anything broken or need replacing?</b>
The water system is not working right now because the well's motor is not functioning. As a result the pipes cannot feed any water to the toilets or sinks. Currently, the students must bring buckets to school with them that they fill using the rainwater tank behind the teacher's house to flush waste down the toilets. At present, even if the water system was functioning, the toilets would not work. The trough used to hold the water in the children's bathroom is leaking.
<b>What do you need to improve the school's water system? Ex. – pipelines, water tanks, wells, boreholes, etc?</b>
The teacher recommended a deeper well and more tanks to store water.
<b>Are storm-water drains kept clear?</b>
There are none. Water sinks into ground naturally.
<b>Do buildings, paths or roads experience flooding?</b>
No.
<b>Is drainage water polluting existing surface/groundwater or causing erosion?</b>
No.
<b>Where does wastewater go and is it treated in any way?</b>
Waste water goes into a septic tank which is not emptied.
<b>Where does solid waste go? How is it managed?</b>
Solid waste goes into a septic tank, which tends to overflow during the tourist season. When this happens, the school will close the toilets until the problem subsides. When the toilets are closed

the students must defecate in the woods..
<b>Does the school have access to incinerators or does it have a garbage pickup?</b>
Paper is burned, glass is thrown away in government bags, and plastic is collected to be resold.
<b>Does the school have a recycling program?</b>
Plastic is resold.
<b>Have any other organizations provided water and sanitation assistance for the school? Have they provided toilets, water tanks, sinks, a drainage system, etc? Has anything else been donated?</b>
The Mercy Foundation gave bags and uniforms to the students.
<b>Notes and Observations</b>
The school needs more rainwater catchment tanks that will last throughout the rainy season. The water in this area should be tested because of the overflowing septic tanks. The school also needs more toilets, which they should not be sharing with the resort guests.

# **APPENDIX V:**

## **THUNG WAH DISTRICT**

**Water and Sanitation Needs Assessment**

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# THUNG WAH DISTRICT OFFICE

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**Province:** Satun

**Date:** 18<sup>th</sup> July 2006

**Location:**

Thung Wah District, Satun

**GPS Coordinates:** 47N 0584784

**UTM** 0783783

**Name and Title of Person Interviewed:**

Jatuwit Thipwasri, Legal Advisor / PR

**Phone:**

074 789109 / 09 4634952

**Email:**

[wit0852@hotmail.com](mailto:wit0852@hotmail.com)

**Questions:**

Do They Have a Printout of General Statistics on Their Tsunami-Affected District?	Yes	No
	X	
<b>A. Population Affected:</b>		
• Number of families		
• Male / Female breakdown		
• Age breakdown		
• Affected sub-districts and villages	4 sub-districts 16 villages	
• Number of deaths	2 people died in <b>Khon Klan Sub-district</b> .	
• Number of injuries		
• Number of missing persons		
<b>B. Livelihoods Affected:</b>		
• Fisheries (crab, shrimp farms)	Fishing equipment. Visit the Fishery Department for specific information.	
• Boats	53 boats were damaged. In <b>Khon Klan Sub-district</b> 46 boats were damaged. In <b>Thung Bu Lang Sub-district</b> seven boats were damaged.	
• Agriculture (farming, crops affected)	Visit the Agriculture Department for more information. They may have records.	
• Tourism	Rawai public park is located in <b>Khon Klan Sub-district</b> and Thung Bu Lang beach is located in <b>Thung Bu Lang Sub-</b>	

	<b>district.</b> Both were destroyed.	
• Other	-	
<b>How has the district been handling general long-term tsunami relief and redevelopment within their jurisdiction? (Ex. Do they have recovery programs, projects?)</b>		
Evacuation drills are held every year; at least once a year. The district office also worked with the Provincial Office to install two early warning systems in affected areas: one in <b>Thung Bu Lang Sub-district</b> and one in <b>Khon Klan Sub-district</b>		
<b>What Tsunami-Affected Areas are Still in Need of Water and Sanitation Assistance:</b>	<b>Water</b>	<b>Sanitation</b>
Villages	<p><b>Thung Bu Lang Sub-district</b>  Ma Ngang, Moo 1  Thung Sa Bo, Moo 2  Thung Tanan, Moo 3  Thung Nah, Moo 4  Thung Bu Lang, Moo 5  The above villages suffer from water shortages in the dry season.</p> <p><b>Khon Klan Sub-district</b>  Khon Klan Tawanaok, Moo 1  Rah Wai Dai, Moo 2  Khon Klan, Moo 3  Rah Wai Nua, Moo 4  The above villages don't have enough water in the dry season.</p> <p><b>Nah Thon Sub-district</b>  Wang Dong, Moo 4  Tah Sila, Moo 5  Tah Kham Kwai, Moo 6  Barayee, Moo 7  The above villages suffer from water shortages in dry season.</p> <p><b>Thung Wah Sub-district</b>  Tah Aoy, Moo 1  Tah Rua, Moo 2  Tah Kham, Moo 6  The above villages don't have enough water in dry season.</p> <p>It is not known whether these sub-districts have brackish water but they don't have access to municipal water. All of these sub-districts use</p>	

	water from wells and boreholes.	
Temporary camps		
New permanent housing		
Schools	<p><b>Thung Bu Lang Sub-district</b> has three schools that are in need of water assistance:</p> <ul style="list-style-type: none"> <li>- <b>Ma Ngang school, Moo 1</b></li> <li>- <b>Thung Sa Bo school, Moo 4</b></li> <li>- <b>Thug Bu Lang school, Moo 5.</b></li> </ul> <p>For more information please visit schools directly.</p> <p><b>Khon Klan Sub-district</b> has two schools in need of water assistance:</p> <ul style="list-style-type: none"> <li>- <b>Rah Wai Dai school, Moo 2</b></li> <li>- <b>Khon Klan school, Moo 3</b></li> </ul>	
Preschools / Kindergarten	Children's Center, Moo 3 in <b>Thung Bu Lang Sub-district</b> and Children's Center, Moo 3 in <b>Khon Klan Sub-district</b> don't have enough water. Please visit these Children's Centers for more information.	
Health facilities	<b>Thung Bu Lang Health Center, Moo 5</b> does not have enough water.	
<b>Do you have any of the following groups within your jurisdiction? If so, can you provide their location?</b>		
<b>Muslim committees</b>	92% of this District is Muslim	
<b>Migrants</b>	-	
<b>Sea Gypsies (Moken)</b>	-	
<b>Slum-dwellers</b>	-	
<b>Burmese</b>	-	
<b>Other</b>	7 % Buddhist 1 % other	
<b>Out of the groups mentioned above, are any considered "vulnerable" and currently experiencing poor water and sanitation conditions in their communities?</b>		
No.		

Do affected villages have water committees?	Yes	No
		X
Who is the key contact for committee? (Ex. village headman)		
-		
Are village households required to pay monthly water tariffs? (Ex. Does each household pay for metered water consumption on top of flat rates for well / borehole electricity?)		
-		
How many children attend each affected school? (Remember – can be “affected” if children’s homes were lost, parents’ livelihoods affected, or one or both parents died in tsunami, etc)		
Visit the Education Office or schools for further information.		
How many toilets and sinks are in each affected school?		
Visit the Education Office or schools for further information.		
Does the District Office know of other aid organizations already working in the water / sanitation sector in their District?		
Thai Red Cross provided water tanks for villagers in Thung Bu Lang and Khon Klan Sub-districts.		
Do you know of any local Thai NGOs active within your jurisdiction? If so, can you provide their names and contact information?		
No.		
Are SAOs or other Government Agencies (Ex. MENR, provincial authorities working in the water /sanitation sector in tsunami-affected districts?)	Yes	No
	X	
Govt. agencies: names, projects, locations?		
SAOs and the District Office work together to provide water for the villages every dry season, in particular to villages in <b>Thung Bu Lang Sub-district</b> and <b>Khon Klan Sub-district</b> who have brackish water and can not drink the water available to them. Most villagers buy drinking water.		
Notes and observations		
-		

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## THUNG WAH PUBLIC HEALTH OFFICE

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**Province:** Satun

**Date:** 18<sup>th</sup> July 2006

**Location:**

Thung Wah District Health Office

**GPS Coordinates:** 47N 0583096

**UTM** 0785482

**Name and Title of Person Interviewed:**

Awut Phokaew

**Phone:**

074 789014 / 09 9786293

**Email:**

<http://st.satunweb.net/tdho.net>

**Questions:**

**How did the tsunami affect the Province's health facilities? Were the facilities directly or indirectly affected by the tsunami?**

**Directly**

Khon Klan and Thung Bu Lang Health Centers: The buildings were split in two, but were repaired soon after. Medical equipment was not damaged or destroyed.

**How is the general condition of the district's health facilities? Do the Clinics have any problems such as broken water pumps, polluted water, water shortages, etc? Explain.**

Khon Klan health center has water tanks but they are old. They use water from the wells but the water is brackish because the facilities were directly affected by the Tsunami.

**Have any organizations (government or non-government) provided water and sanitation assistance for the district's health facilities? If yes, which ones?**

Yes. The District Office worked together with the Sub-district Administration Office to help improve matters.

**What have they provided (toilets, water tanks, sinks, a drainage system, etc)? Has anything been donated?**

The District Office worked together with the Sub-district Administration Office to provide water to villagers and health centers in the dry season or when they suffer from water shortages.

Thai Red Cross provided water tanks (1,500 liters capacity)

**What are the clinic's sources of water? Wells, boreholes, rainwater catchments, SAO deliveries? Explain.**

Wells, rainwater, District Office and SAO delivery. But well water is brackish.

Khon Klan and Thung Bu Lang health centers don't have water in the dry season; the District Office and SAOs deliver water for usage during this time.

<b>How do they get water in the dry season?</b>
The District office and the Sub-district Administration Office deliver water.
<b>Is water available all of the time at the health facility?</b>
Yes, except in the dry season.
<b>What do you need to improve health facilities' water systems? Ex. – pipelines, water tanks, wells, boreholes, etc?</b>
Need an automatic pump and need water tanks 2-3 per health center.
<b>Are the toilets sufficient for the number of patients and staff?</b>
Yes.
<b>How many toilets?</b>
5 toilets in total: <ul style="list-style-type: none"> <li>– 2 toilets for patients on first floor;</li> <li>– 2 toilets for patients on second floor;</li> <li>– 1 toilet for staff.</li> </ul>
<b>Where are they located?</b>
In the health center.
<b>Are toilets at least 30 meters from any drinking water source?</b>
No.
<b>Are there separate toilet facilities for male and females?</b>
Yes.
<b>Are hand-washing facilities with soap available?</b>
Yes.
<b>Where does the trash go?</b>
Some trash is burned in a cement receptacle on the grounds of the health facility. Some trash is picked up by the garbage truck. But there isn't a proper system in place to dispose of hazardous waste.
<b>If it is buried on the grounds of the facility, what is the relation of the trash pit to the water source?</b>
About 15 meters.
<b>Which illnesses are the most prevalent among those who come to the clinic?</b>
Respiratory illness Diarrhea Conjunctivitis - it's contagious right now, and the health centers do not at present have enough medicine to cure this illness.
<b>How have these illnesses been addressed?</b>

Investigate why and how they got ill Cure with the appropriate treatment Control disease Educate them about how to treat and prevent the disease from returning	
<b>Please indicate which villages are experiencing the following vector-born diseases within their communities by providing the specific disease and the village or school it is present in:</b>	
<b>Mosquito-born diseases:</b>	Four people in Khon Klan Sub-district were infected with Dengue fever. Three people in Thung Wah Sub-district were infected with Dengue fever.
<b>Rodent (mice/rat)-born diseases:</b>	-
<b>Fly-born diseases:</b>	-
<b>What steps have been taken to prevent vector-born diseases from spreading?</b>	
Investigate why and how they got ill Cure with the appropriate treatment Take steps to control disease Educate them about how to treat and prevent the disease from returning	
<b>Notes and observations</b>	
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## THUNG BU LANG HEALTH CENTER

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**Province:** Satun

**Date:** August 1, 2006

**Name of Health Station:** Thung Bu Lang Health Center, Thung Wah, Thung Bu Lang Sub-district, Thung Wah District, Satun

**Location:** Tung Wah Sub-district Health Station

**GPS Coordinates -** 47 N 0575773, UTM 0777677

**Name and Title of Person Interviewed:** Mr. Pracha Noomad, Public Health Staff

**Phone:** 01-7989230

**Email:**

### Questions:

**How did the tsunami affect the health facility? Was the facility directly or indirectly affected by the tsunami?**

The tsunami had a major psychological effect on the people in Thung Wah. Two people in the area died. Approximately 50 boats in the sub-district were either damaged or destroyed. Villages 1, 2, 4, and 5 lost fishing equipment in the sub-district.

The health center also withstood damage from the tsunami. Currently the back wall has cracks.

**What is your source of water? Well, borehole, rainwater catchments, SAO deliveries? Explain.**

There is no city water system; only rainwater catchments. The area is too swampy to dig wells and the water would be too brackish. During the dry season the SAO provides water. There is no cost for this service.

**Are there any broken water pumps, wells, pipes, etc, that are preventing you from having a reliable source of water?**

The rainwater tank is currently damaged. The cement tank holding the water is beginning to crack. There is also no gutter system used to collect water.

**How do you get water in the dry season?**

The SAO fills the water storage tanks.

**Do you know how deep your well is?**

**Is water available all the time at the health facility?**

During the dry season, water is scarcer.

**What do you need to improve the health facility's water system? – pipelines, water tanks, wells, boreholes, etc?**

The cement tank used to hold rain water should be repaired so that water does not leak out. Also, a gutter system would increase the amount of water that is stored.

**How many toilets and sinks does the health facility currently have? What is the condition of the facilities?**

There are 4 toilets; however only 2 work. The two broken toilets have not worked in 5 years.
<b>Where are the toilets located? Sinks located?</b>
Two toilets are located on the upper level, and the two non-working toilets are on the lower level. There are three sinks with faucets at the health center.
<b>Do the toilets, sinks, and pipes work? Anything broken or need replacing?</b>
Two toilets do not work. Often the faucets do not work either as the pump used to carry water from the storage tank is not on. It is unclear as to why this is not turned on all the time.
<b>Are toilets at least 30 meters from any drinking water sources?</b>
No. Because all water is provided from rainwater catchments and the bathroom operates via a septic tank, there is no-cross-contamination.
<b>Where does solid waste go and is it treated in any way?</b>
Septic tanks are used for the bathrooms. These systems, however, are 20 years old.
<b>Are there separate toilet facilities for male and females?</b>
No, because two toilets are broken. One toilet is used for the staff and one for the patients.
<b>Where does the trash go?</b>
All trash is burned. No trash is buried.
<b>If it is burned or buried on the grounds of the facility, what is the relation of the trash pit to the water source?</b>
Because trash is burned, and water is collected in rainwater catchments, there is no cross-contamination.
<b>Which illnesses are the most prevalent among those who come to the clinic?</b>
Influenza, diarrhea, and digestive problems (food poisoning) are the most common illnesses at the health center.
<b>How have these illnesses been addressed?</b>
Medicine is available at the health center. If a patient's condition gets worse, they are sent to the hospital.
<b>Please name specific illnesses/ diseases that are prevalent throughout the village community (mosquito born diseases, rodent born diseases, fly born diseases)</b>
Vector-born illnesses are not a problem.
<b>What steps have been taken to prevent vector-born diseases from spreading?</b>
Chemicals have been sprayed in the area to prevent eggs from hatching.
<b>Have any organizations (government or non-government) provided water and sanitation assistance for the health facility?</b>
Thai government offices and the Thai Red Cross have come with medicine and an extra rainwater storage tank.
<b>If yes, which ones?</b>
Thai government offices and the Thai Red Cross.
<b>Extra Information</b>

Approximately 30 people come to the health center every day. The health center requested more supplies: They need medical furniture for female examinations, as well as other medical supplies.

During our interview with the public health staff, the appointed SAO was present and answered a few questions about the Thung Wah sub-district. According to him, there are 500 families (2000 people) living in the sub-district.

The water source for the sub-district includes one reservoir and water storage containers. A 40 kilometer canal brings water from a waterfall. The water storage containers collect rainwater, but in the dry season when water is scarce, the SAO delivers water to these tanks. The people of Thung Wah do not need to pay for this service.

The area of Thung Wah does not experience flooding.

The bathroom situation at local schools is good. There are enough toilets, but not always enough water. More rainwater tanks were requested.

According to the appointed SAO, there is a septic tank for every house. A recycling system is also in place, where a truck will come to purchase recycles from people.

**APPENDIX V:**  
**SUPPORTING DOCUMENTS**  
**THUNG WAH DISTRICT**  
**Water and Sanitation Needs Assessment**

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## REFERENCE: S1.1B

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**Source:** Thung Wah District  
**Translated from:**

### Summary of population and public facilities in the tsunami risk area, Thung Wah District

Thung Wah District has 4 sub-districts in the tsunami risk area. Each of the 4 sub-districts is outlined below.

**Thung Bu Lang Sub-district** has 5 villages in the tsunami risk area.

Village Name	Village Number	Population
Ma Ngang	1	660
Thung Sa Bo	2	363
Thung Tanan	3	473
Thung Nah	4	280
Thung Bu Lang	5	439

### Thung Bu Lang Public Utilities in the Risk Area

Category of Public Utility	Location
4 schools	1) Baan Ma Ngang school, Moo1 2) Baan Thung Sa Bo school, Moo2 3) Baan Thung Bu Lang school, Moo 5 4) Child development center, Moo 3
4 mosques	1) Ma Ngang Mosque, Moo 1 2) Thung Sa Bo Mosque, Moo 2 3) Thung Tanan Mosque, Moo 3 4) Thung Bu Lang Mosque
2 Temples	1) Thung Tanan Temple 2) House of priest
1 health station	1) Thung Bu Lang health station

**Khon Klan Sub-district** has 4 villages in risk area.

Village Name	Village Number	Population
Khon Klan Tawanaok	1	362
Rah Wai Dai	2	603
Khon Klan Tawandok	3	673
Rah Wai Nua	4	682

**Khon Klan Public Utilities** in the Risk Area

Category of Public Utility	Location
3 schools	1) Baan Rah Wai school, Moo 2 2) Baan Khon Klan school, Moo 3 3) Child development center, Moo 3
3 mosques	1) Rah Wai Dai Mosque, Moo2 2) Rah Wai Nua Mosque, Moo 4 3) Ban Nah Sa Mosque, Moo 3
1 health station	1) Khon Klan health center

**Nah Thon Sub-district** has 4 villages in tsunami risk area, some villagers were affected by the tsunami.

Village Name	Village Number	Population
Wang Dong	1	697
Tah Silah Bum Rung Rad	2	637
Tah Kham Kwai	3	656
Bah Rah Yee	4	933

**Thung Wah Sub-district** has 3 villages in the tsunami risk area, and some villagers were affected by the tsunami.

Village Name	Village Number	Population
Tah Aoi	1	405
Tah Rua	2	1,151
Tah Kham Kwai	3	435

# **C O N T A C T I N F O R M A T I O N**

**Water and Sanitation Needs Assessment**

## CONTACT INFORMATION

### Satun Province

#### Provincial

No.	Office / Organization	Location	Contact Information	Contact Person	GPS Coordinates
1	Provincial Office / DDPM	Amphur Muang, Satun Province	Office: 074 722 050 Mobile: 09 969 6774 Email:dpm12_satun@hotmail.com	Somkiat Interakum, Head of DDPM	47N 0617993 UTM: 0732234
2	Provincial Education Office	Amphur Muang, Krabi Province	Office: 074 721 380 Ext. 18 Mobile: 09 876 2817	Jetsada Toa Palad, Accountant	47N 0619121 UTM: 0735141

#### Amphur Muang

No.	Office / Organization	Location	Contact Information	Contact Person	GPS Coordinates
3	Muang Satun District Office	Amphur Muang, Satun Province	Office: 074 711073-4 Mobile: 01 7079321	Somchai Yothathip, Deputy	47N 0619986 UTM: 0735199

#### Tah Pae

No.	Office / Organization	Location	Contact Information	Contact Person	GPS Coordinates
4	Tah Pae District Office	Tah Pae District, Satun Province	Office: 074 787 071 Mobile: 06 961 0787	Akaradetch Opyanang, Volunteer Soldier	47N 0607214 UTM: 0750602
5	Thung Rin Village	Thung Rin, Moo 1, Sah Korn Sub-district, Tah Pae District, Satun Province	Mobile: 0-1898-8586	Mr. Sata Ann Deawahmalai, Village Headman	47 N 0603298 UTM: 0747004
6	Thung Rin School	Thung Rin, Moo 1, Sah Korn Sub-district, Tah Pae District, Satun Province	Office:: 074-720172 Email: hasun_2548@hotmail.com	Mr. Sunun Vijitraitkarn, Principal	47N 0601663 UTM: 0745974

## La Ngu

No.	Office / Organization	Location	Contact Information	Contact Person	GPS Coordinates
7	La Ngu District Office	La Ngu District, Satun Province	Office: 074 781 903 Mobile: 01 897 3309	Boonpob Madua, Deputy	47N 0588657 UTM 0758798
8	Bak Nam Sub-district Administration Office	Bak Nam Sub-District, La Ngu District, Satun Province	Office: 074 783373 Mobile: 09 4090198	Bosakorn Hnusoemkeaw, Plan and Policy Analyzing Officer	47N 0579773 UTM: 0758376
9	Koh Bu Lorn La Village	Koh Bu Lorn La, Bak Nam Sub-district, La Ngu District, Satun Province	Mobile: 06-965-1952	Mr. Manut Tahjeen, fisherman	
10	Koh Bu Lorn School	Koh Bu Lorn, Moo 3, Bak Nam Sub-district, La Ngu District, Satun Province	Mobile: 04-3907377	Mrs. Donlada Kerdsi, teacher	

## Thung Wah

No.	Office / Organization	Location	Contact Information	Contact Person	GPS Coordinates
11	Thung Wah District Office	Thung Wah District, Satun Province	074 789109 / 09 4634952 Email: <a href="mailto:wit0852@hotmail.com">wit0852@hotmail.com</a>	Jatuwit Thipwasri, Legal Advisor / PR	47N 0584784 UTM: 0783783
12	Thung Wah District Health Office	Thung Wah District, Satun Province	074 789014 / 09 9786293 Email: <a href="http://st.satunweb.net/dho.net">http://st.satunweb.net/dho.net</a>	Awut Phokaew	47N 0583096 UTM: 0785482
13	Tung Wah Sub-District Health Station	Thung Bu Lang Sub-District, Thung Wah District, Satun Province	Mobile: 01-7989230	Mr. Pracha Noomad, Public Health Staff	47 N 0575773 UTM: 0777677