



Proposal Submission

06 April 2009

1.0 GENERAL PROJECT INFORMATION

1.1 Project Title, Location and Timing

<b>Project Name</b>	Community Health Centre Safe Water Project on Atauro Island
<b>Country/Region/ Province/ Specific Location</b>	Timor-Leste, Dili District, Atauro Island
<b>Project Commencement</b>	1 Sep 08

1.2 Agency Details

<b>Principal contact</b>	Frank Tyler
<b>Position</b>	Director of Operations
<b>Telephone number</b>	M: (+61) (0) 418348077 Australia
<b>Fax number</b>	M: (+670) 734 2140 Timor-Leste
<b>Email address</b>	<a href="mailto:ftyler@aai.org.au">ftyler@aai.org.au</a>
<b>Bank Account Details</b>	
<i>Account Name</i>	Australian Aid International
<i>Bank Account Number</i>	Account No. : 101-115524S-001 (USD)
<i>Bank Name</i>	ANZ Bank Timor-Leste
<i>BSB Code</i>	BSB No. : 018950
<i>SWIFT Code</i>	ANZBTLDI
<i>Bank Address</i>	PO Box 264 Dili Timor-Leste



**International Headquarters**  
 PO Box 6086  
 St Kilda Road  
 Melbourne Victoria  
 Australia 3004  
 T: + 61 3 8625 0005  
 E: info@aai.org.au  
 www.aai.org.au

Australian Aid International Ltd.

**Timor-Leste Field Office**  
 JL Mocambique  
 Block D/6  
 Palapaso, Motael  
 Dili  
 T: 3310289

## BACKGROUND

Atauro Island is located 30 kilometres off the coast of Dili, Timor Leste. The island is home to approximately 10,000 inhabitants, the majority of whom are farmers or fishermen. Atauro is quite isolated, with ferry service between the island and the capitol city of Dili operating only once per week.



*The remote Atauro Island*

The Community Health Centre (CHC) is the only provider of health services for the population of Atauro Island. The CHC is located in the town of Villa, and began in 1991 under the direction of the Indonesian government. The clinic contains nine inpatient beds, a laboratory, and a pharmacy and is staffed by occasionally one Cuban doctor, eight nurses, three midwives, and one lab technician. The CHC is supervised by the Health Coordinator, Senor Lucas, who is also a registered nurse and began working at the CHC in 1999.



*The Community Health Centre*

Australian Aid International (AAI) has been working in conjunction with the Ministry of Health to support and supervise programs at the Atauro CHC since 2006. AAI currently provides outreach and mobile medical clinical services to clinics on Atauro Island. AAI are also working with the WHO to capacity build local healthcare staff and by providing training and support to remote area nurses. Many of AAI's health services to rural communities are only accessible by boat. AAI assists in transporting severely ill patients from their rural communities to the CHC in Villa.



*AAI treating patients at rural clinics*

## **PROPOSED BENEFICIARIES**

The CHC holds open clinic hours Monday to Saturday and the clinic consults to more than 700 patients per week. The clinic also serves as an inpatient facility and has many patients, patient families and staff members staying on location. The CHC is the island's only provider of emergency health services, and is often forced to coordinate helicopter evacuations for critically ill patients. Primary health care is a top priority for the CHC and it provides a variety of services to the local population, such as childhood immunizations, pre-natal care and child delivery. The clinic also attends to those seeking diagnosis and treatment for the most serious health problems facing the country such as malaria, tuberculosis, dengue fever, and leprosy. The CHC, in partnership with AAI, participates in many mobile clinics in remote and often-neglected areas, and receives patients from all over the island.

Inadequate hygiene within the local population and a lack of clean water are leading factors in water related diseases such as diarrhoea, pneumonia and skin infections.



*(AAI teaching personal hygiene)*

*(A patient with a skin infection)*

## EXISTING WATER SUPPLY

Historically the residents of Atauro Island relied on deep bore wells for their supply of water. Recently, the Timorese government installed an intricate water pipeline which is fed from a series of fresh water springs and lakes in the mountains. The water that is fed to the CHC comes from two sources. The main source is an underground freshwater spring that is located approximately 1.6 kilometres away and is 300 meters of elevation above the clinic. There are significant numbers of people and animals living in the area of the source, and undoubtedly contaminating the water. The secondary source is a large lake that is located approximately 20 kilometres away from the CHC. The water is gravity fed from its source through a series of storage tanks, and delivered to various towns on the island. The CHC gets its water from the pipeline, but the water must be boiled before drinking to avoid illness. The water that gets to the CHC from the pipeline is stored in a reserve tank at the clinic. Due to the location and small size of the reserve tank, the clinic water pressure is not adequate, and often the clinic runs out of usable water. The lack of available water frequently prohibits the clinic lab from functioning. A larger reserve tank, mounted at a greater height would increase the quantity of water available and would allow for the water to be delivered with greater pressure.



*(Site of proposed SkyHydrant project)*



*(CHC open water source)*

## PROPOSED SAFE WATER PROJECT

This report recommends constructing a SkyHydrant water filtration system

The most sustainable solution is to install a water filtration unit at the clinic in the location of the existing CHC reserve tank, making it easy to feed the filtered water into the existing piping for the clinic. A water tower will be constructed in the vicinity of the existing reserve tank, and a new 1000 liter plastic water tank will be placed on top. A small water pump will be required to pump the water to this header tank. The CHC does have electricity, but it is unreliable and usually only available for a couple of hours per day. A solar panel will be installed to provide the necessary electricity to operate the water pump. Water from the header tank will then gravity feed through the SkyHydrant filter and into a new 1200 liter plastic distribution tank that will be mounted on top of the existing concrete reserve water tank. This system will supply the clinic with a greater supply of clean water and increase the pressure at which the water is delivered.

With AAI's Community Engagement process and the use of SkyHydrant™ water filtration units, SkyHydrants™ can be installed and maintained by the community to provide the beneficiaries with a safe and clean water supply even though the central supply system remains contaminated.

The SkyHydrant™ water filtration unit utilises a unique low cost Australian design (manufactured in Sydney) that delivers safe potable water which exceeds WHO safe water standards. SkyHydrants™ are economical, compact, robust, easy to transport and ideal for remote locations. The filtration process does not require chemicals or power and there are no moving parts during the filtration process – therefore there are virtually no ongoing costs. Notionally, the SkyHydrant will produce up to 1000 litres of safe water per hour depending upon the feed water, which will be abundant for the communities' requirements.



A SkyHydrant™ water filtration system

#### **Outcomes:**

The Safe Water Project will supply not only the CHC but the surrounding community with safe potable water. Access to safe potable water can dramatically reduce the incidence of water borne illnesses and respiratory related problems.

AAI will participate with the community to develop a community action plan to provide safe water to selected villages. The community will select a community water management committee in the village. The committee will be trained by AAI staff in the installation, operation and maintenance of the SkyHydrant™ water filtration unit. With a suitable Community Engagement process a water management committee will be able to sustainably maintain the system. Adequate maintenance in accordance with the manufacturer's instructions will ensure that the SkyHydrant™ will operate efficiently for the optimum period of up to 10 years.

This simple process of providing SkyHydrant™ water filtration, with an accompanying Community Engagement initiative, will provide a sustainable water solution to many families and will offer safe water to communities who are currently living without the benefits of access to a safe and sustainable water supply.



*Children having access to safe drinking water*

**BUDGET:**

The budget includes the cost of the water filtration unit and all other costs of ancillary equipment, maintenance, training, education, support and management by AAI. As AAI have significant long term projects in the area we will be able to provide follow up support and supervision to ensure that communities continue to maintain the safe water project and to ensure sustainability.