



Rotary
District 9800

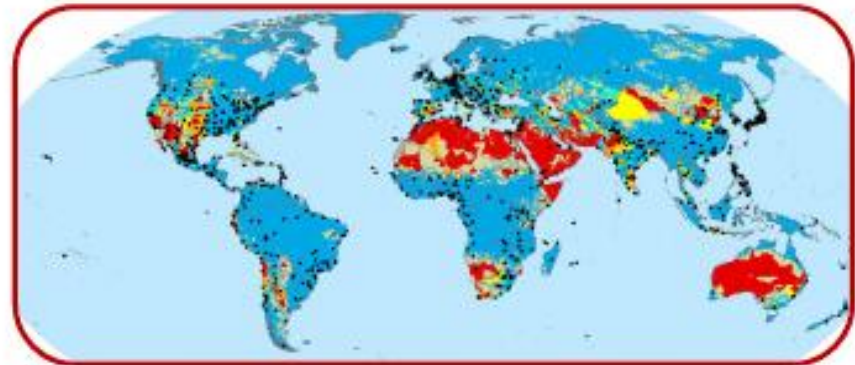


WATER & SANITATION Make a Difference Towards Positive Change

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Rotary Australia World Community Service

Water is Biggest Part of Our Supply Chain and it is Under Growing Stress

- Physical availability – surface or groundwater – and the sustainability of those sources
- Infrastructure existence, pressure, service area, metering
- Pricing – too cheap or too expensive
- Droughts
- Competing use and increased demand from more people and increased GDP
- Climate change
- Regulatory limits
- Social acceptance



Total Water Withdrawals as a Percentage of Renewable Supply

Color	Percentage of Renewable Supply
Blue	Less than 10%
Green	10% to 20%
Yellow	20% to 30%
Orange	30% to 40%
Red	40% to 50%
Dark Red	50% to 60%
Grey	60% to 70%

Water Risks in Manufacturing Locations



Water Risks in Agricultural Supply Chain

The Facts on Water Scarcity

- Water scarcity affects more than 40 percent of people, an alarming figure that is projected to rise as temperatures do.
- Since 1990, 2.1 billion people have improved water sanitation however, dwindling drinking water supplies affect all.
- In 2015, 4.5 billion people lacked safely managed sanitation services (with adequately disposed or treated excreta) and 2.3 billion lacked even basic sanitation.
- By 2030, safe and affordable drinking water for all requires we invest in adequate infrastructure, provide sanitation facilities, and encourage hygiene. Protecting and restoring watershed water-related ecosystems is essential.
- By 2050, it is projected that at least one in four people will suffer recurring water shortages.

2020: Water Megatrends and Effects



MEGATRENDS

POPULATION GROWTH

Expected to increase by
1.5 - 8 billion by 2020

CLIMATE CHANGE

0.8°C temperature
increase by 2020

GLOBAL DEVELOPMENT

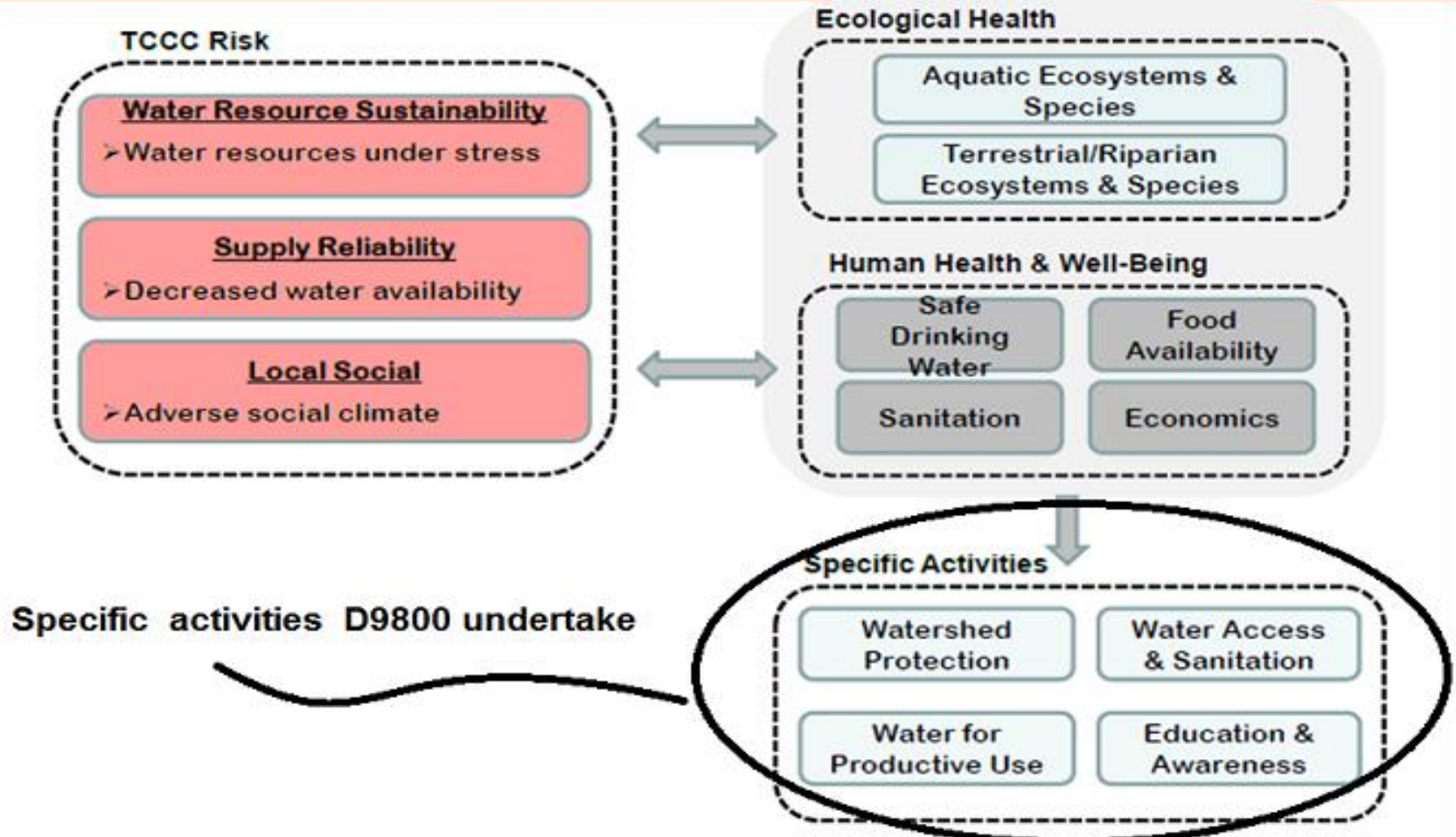
Dramatic increase in
number of developed
economies

EFFECTS

1. 2/3 of world population in severe water stress
2. 1/3 of world land area in severe water stress
3. Significant water quality degradation
4. Precipitation patterns change: more droughts and floods
5. Significant increase in competition for freshwater
6. More aggressive allocation , increased prices, conflict potential
7. Two billion more urban residents by 2030
8. Variable adaptation by public sector
9. Water infrastructure needs require \$1 trillion+ between now and 2025

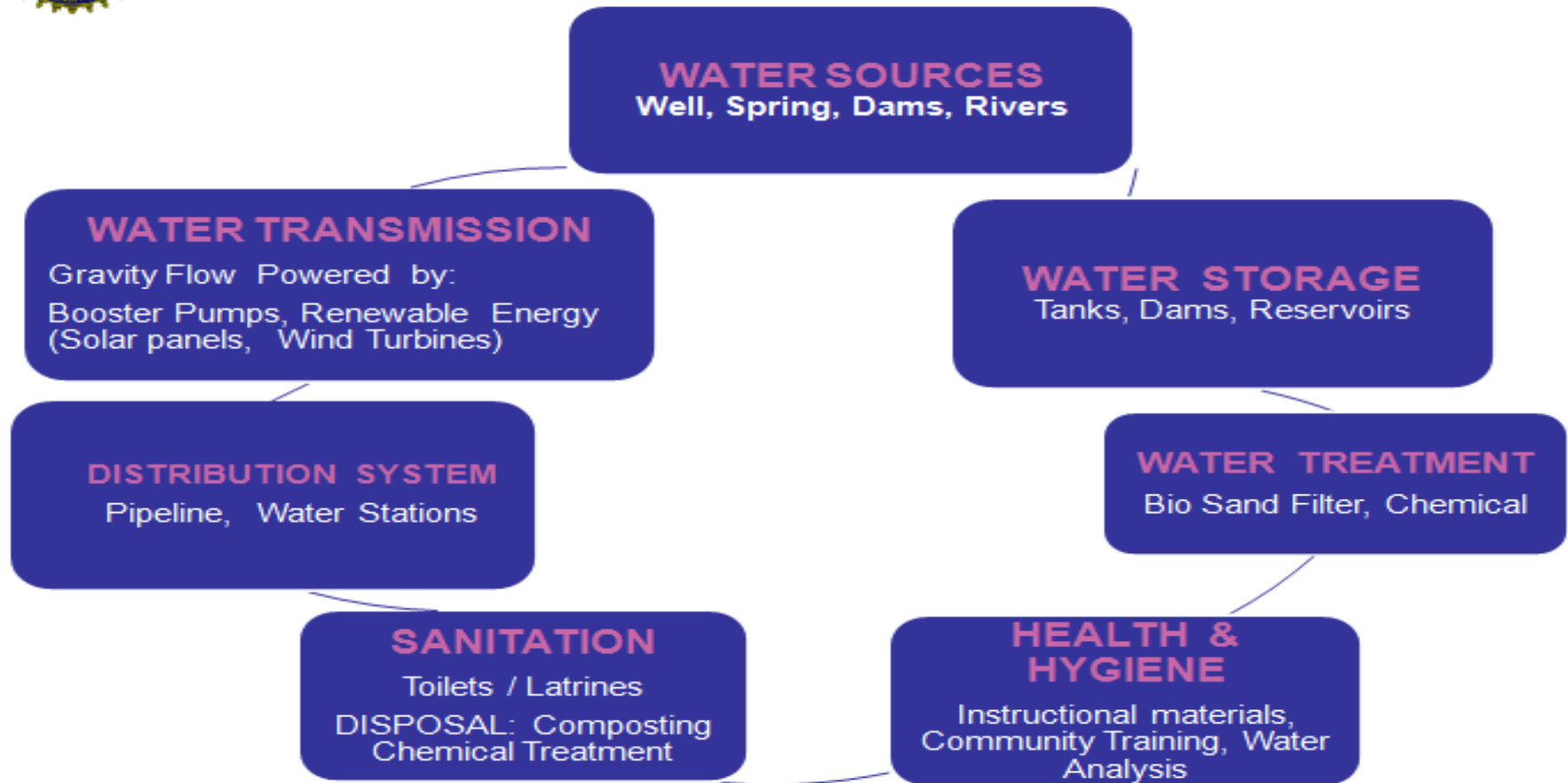
What is being done ?

Linking WRS and Replenish Programs





SAFE WATER, HEALTH HYGIENE & SANITATION SAVE LIVES



- Starting a Water and Sanitation Project
- Choose location - developing country - dire need.
- Ocular Review – Define Needs _Assessment Report

**PROJECT TYPES - SAFE WATER, HYGIENE AND SANITATION SAVE LIVES (SWHSSL)
DISTRICT 9800 / through ROTARY FOUNDATION**

Legend: Black – completed/application; Grey – not applied

WATER		HEALTH & HYGIENE	SANITATION
1. Sources <ul style="list-style-type: none"> ➤ Ground Water <ul style="list-style-type: none"> • Springs • Drilled Wells • Boreholes • Hand Drilled • Dug wells ➤ Surface Water <ul style="list-style-type: none"> • Rivers/Streams • Lakes/Ponds • Canals • Dams ➤ Rainwater/Harvesting 2. Transmission <ul style="list-style-type: none"> ➤ Pipelines <ul style="list-style-type: none"> • Gravity Flow • Booster Pumps ➤ Storage <ul style="list-style-type: none"> • Tanks • Elevated • Surface • Reservoir 3. Treatment <ul style="list-style-type: none"> ➤ Disinfection ➤ Central System <ul style="list-style-type: none"> • Media Filtration • Metal Removal 4. Distribution <ul style="list-style-type: none"> ➤ Kiosks/Stations ➤ Household 5. Irrigation <ul style="list-style-type: none"> ➤ Recycled Wastewater ➤ Composting 	APPLICATION Finished/ Year / Country/ MG (Matching)-GG(Global)	i. Handwashing – /08 – 2013/Phils/ MG-GG Through Instructions, Materials, Community Training, NGO and Dept of Health follow ups. ii. Open Defecation iii. Household Sanitation - Instructions, Materials, Community Training	a. Public or Private <ul style="list-style-type: none"> • Toilets ----- • Latrines----- b. Disposal <ul style="list-style-type: none"> • Composting ----- • Burial ----- c. Central Treatment <ul style="list-style-type: none"> • Treatment ----- • Recycled Water - • Sludge ----- d. Composting ----- e. Other
OTHER			

Avenues of Service Addressed	Project Partners: Rotary Clubs Districts, NGO's	Population Size Impacted by headcount	Status
Water & Sanitation	14 Rotary clubs, 8 Districts, Ausaid Subsidiary, USaid subsidiary, US Peace Corp, World Vision, UNESCO, Coca Cola Foundation; FEMSA Mexico; Phil Red Cross Engineers W/O Borders-UK 16 - private Phil – NGOs 14 - Provincial health offices, Phil Dept of Social Welfare	Clean Water – after 850,000 population /recipients, stopped counting in barangay /village level, municipalities, provinces Sanitation – 5,800 school children, teachers	Completed
Literacy & Basic Education		183,000 children: elementary, high school, vocational schools	Completed
Maternal Child Health		45,000 from island rural health centers hospitals	Completed
Livelihood-Poverty Alleviation		Bio sand water filtration, fish pen-fingerling propagation, boat construction, food prep	Completed
Disaster Response	9 Typhoons, cyclone disasters	258,000 affected by disasters in Phils.	Completed
Human Trafficki/Peace	Police force, Orphanages, municipal health officers	82,000: Creating awareness and prevention of human	Completed

Humanitarian projects – key fundamentals

- **Preparation, Assessment, Fellowship**
- **Define Responsibilities, Targets, Timelines in developing projects: pre, during and post**
- **Partnerships**
- **Sustainability – Pillars for success**
- **Holistic approach - ATM - *Aid to Municipalities***

PROGRAMS NOT PROJECTS

Long term sustainability

Communities take the lead and need to involve community based organisations, NGO's, the private sector, government. Other stakeholders effectively used were:

- Plan International
- Red Cross
- UNDP
- Peace Corps

Engineers Without Borders – UK



Sustainability – Five elements for success

You can ensure that your project is sustainable by keeping these five steps in mind:

1

Conduct a local needs assessment. It is critical for the community to help identify the problem and solutions for solving it.

2

Make use of local resources and funding, regional input, and indigenous knowledge as much as possible.

3

Determine the most appropriate technology to address the issue. Simpler is often better.

4

Provide for ongoing maintenance.

5

Teach the community how to operate the equipment, and share business skills to help community members set up a committee or agency to collect fees that can cover operations and repairs.

Examples

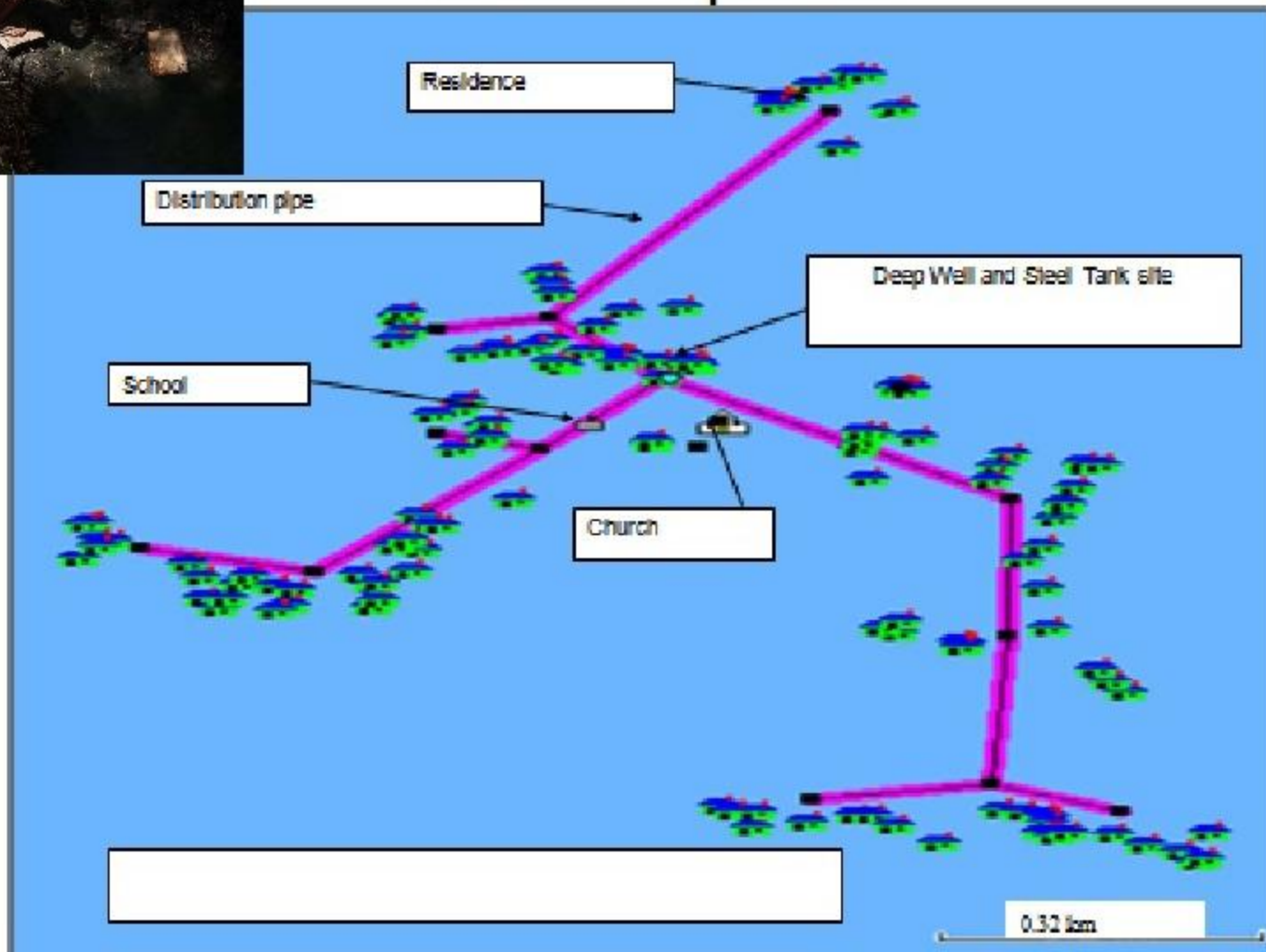
- Clean water and sanitation program using bio sand water filtration.

Turn into a livelihood program for long term sustainability and measurability





Water Pipeline



Disaster Assistance – Rotary in Action at Typhoon Site



Literacy - Curbs Poverty



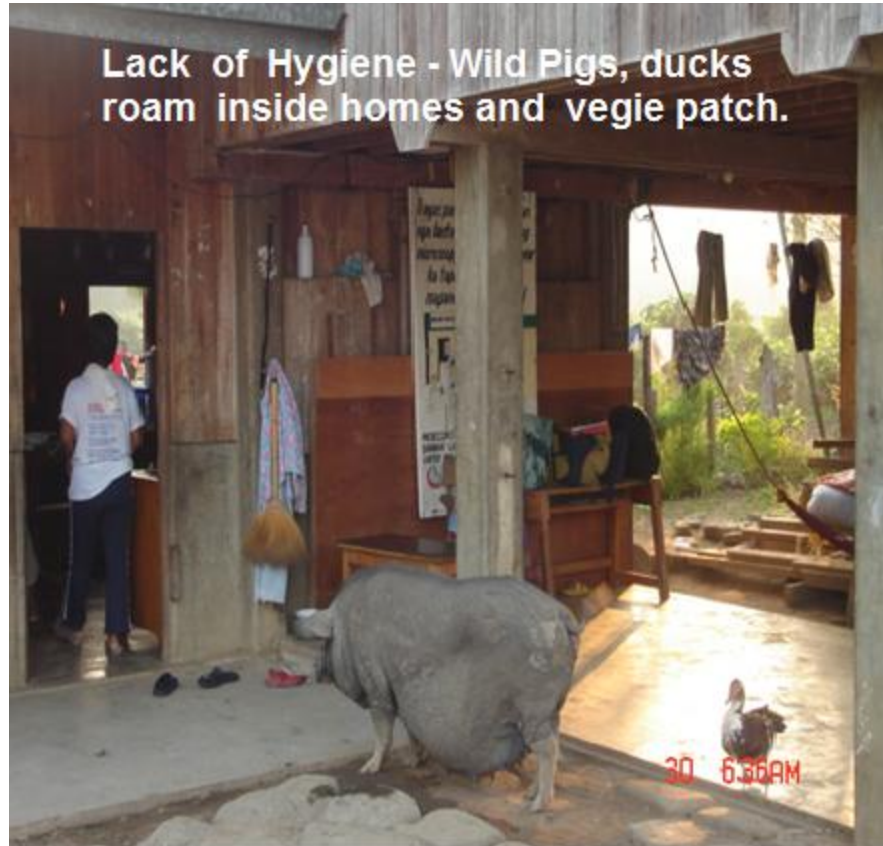
SANITATION and HYGIENE

A VERY STRONG BASIC NEED
Basic Sanitation & Hygiene
Sad Example of Two Villages

Pantikian -----Guinaang-----



HYGIENE - The Need



Delivery of materials on foot through rugged roads and construction



Community Awareness, Mobilisation, Training



Schoolchildren participate from start



Training schoolchildren on handwashing

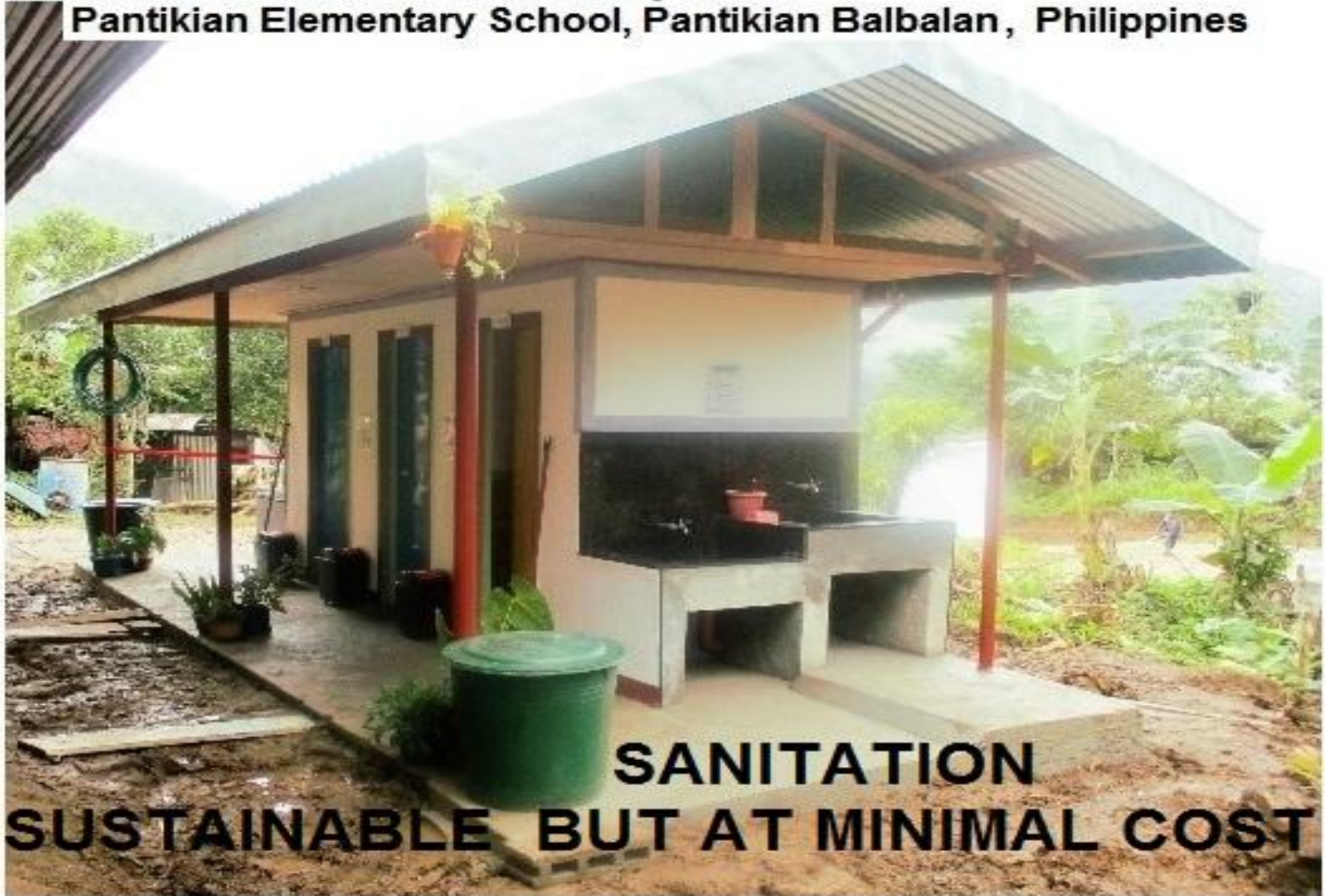


Sanitation & Hygiene

Rotary Club of Hawthorn

Toilet Block of Three Cubicles with Handwashing station.

Pantikian Elementary School, Pantikian Balbalan, Philippines



SANITATION

SUSTAINABLE BUT AT MINIMAL COST



Safe Water Sanitation Save Lives

- **Access to adequate safe water is probably the most important thing in life. Everyone deserves this, but for millions of people this is still a dream.**
- **Your Rotary Club can get involved in this area and change peoples lives.**