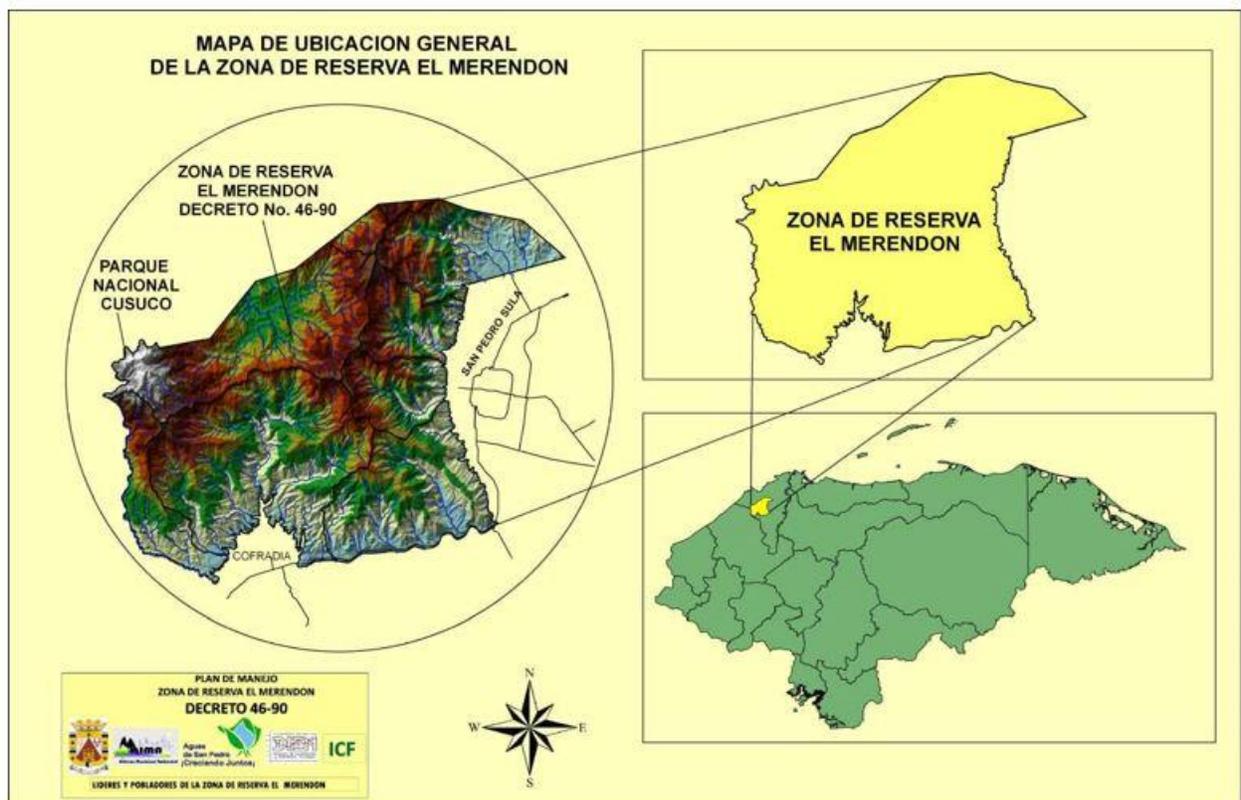


# SANITATION SOLUTIONS & EDUCATION FOR THE MERENDON RESERVE ZONE SAN PEDRO SULA, HONDURAS



A Report by the WASRAG/TRF PPP Team under the RI PEP Pilot Program

**PROJECT NO. 30013      ROTARY CLUB USULA,  
SAN PEDRO SULA, HONDURAS**

**SUBMITTED TO: ROTARY INTERNATIONAL**

**SUBMITTED BY: PPP TEAM**

**18 SEPTEMBER, 2014**

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**Merendón hills, near San Pedro Sula, Honduras**

## PROJECT INFORMATION

|                                |   |
|--------------------------------|---|
| PPP Team Number:               | 30013   |
| Project Title                  | Sanitation Solutions & Education for the Merendón Reserve   |
| Description:                   | <b>Program to Determine the Best Sanitation Solution for each of the Communities in the Merendón Reserve Zone, and build and Install the required facilities in conjunction with education and community development programs to ensure long term sustainability.</b> |
| Location<br>(Country/District) | Municipality of San Pedro Sula, Cortez, Honduras  |
| Host Club/District             | Rotary Club Usula, D-4250   |
| International<br>Club/District | D-6600 and D-5020   |
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| Dates of Visit:                | 3 August, 2014 to 13 August, 2014   |



**City of San Pedro Sula Viewed from the Merendón Hills**

# **EXECUTIVE SUMMARY**

## **Background**

The Merendón Reserve Zone (Zona de Reserva El Merendón, **ZRM**) is a ~16 sq. mile mountainous area with ~45,000 inhabitants in ~65 communities west and north of the city of San Pedro Sula. Four rivers flow from the ZRM toward the city which, along with ground water also originating in the ZRM, provide water for the ~1.5 million people living below.

The Usula Rotary Club of San Pedro Sula has long been active with a variety of projects in the Merendón. In 2011 the club completed a large multi-year 3-H (Health, Hunger, Humanity) project in which they planted trees, installed wood saving stoves, organic waste composting units, bio-sand filters, biogas-digesters, and organized medical brigades in many communities in the ZRM.

In late 2013, RC Usula requested Rotary International for a PPP team to help develop a follow-up project, similar to the previous 3-H project, but with the primary objective of protecting water supplies for San Pedro Sula. In August, a five member PPP team arrived and with club leaders and members met with regional authorities and other NGO's active in the ZRM, as well as with ~95 leaders and residents from about 35 of the largest communities within the zone. Among the very wide range of community needs discussed with these leaders, the most consistent needs brought up were water, education and sanitation - latrines. These leaders indicated a shortage of at least 600 latrines within their communities, however regional environmental authorities indicated that perhaps as many as 2000 latrines are needed in the entire Merendón Reserve.

## **Proposed Project Program**

Given the clear alignment between the club's goals to serve ZRM communities while protecting city water sources, and the expressed need for sanitation in the ZRM; the PPP team and RC Usula started planning a program focused on sanitation solutions and environmental and hygiene education. The program is to be carried out in three stages:

1. Complete a detailed Baseline Needs on-site survey to elaborate current sanitation practices and installations and local physical/geological conditions that affect suitability of technical solutions in each community in the ZRM. Co-current with the needs assessment, complete a technical/engineering study to evaluate appropriate sanitation solutions for the various local conditions found in the ZRM.
2. Select 'pilot' communities and install sanitation facilities in a pilot project to: demonstrate selected technologies; initiate sanitation promotion programs for residents; generate acceptance and enthusiasm; develop detailed specifications, selection criteria, design criteria, and actual cost projections.
3. With social and technical experience gained from the first two stages, implement sanitation solutions, sanitation education and promotion, and monitoring and evaluation programs throughout the entire Merendón zone. As this is a very large undertaking, it is envisioned that several subsequent Global Grants will be needed to complete the program to serve all ~45,000 residents.

## ACRONYMS

|        |   |
|--------|---|
| 3H     | Health, Hunger, and Humanity Project                                      |
| DIMA   | Municipal Environmental Division (Dirección Municipal Ambiental)          |
| MGD    | Million Gallons per Day   |
| PEP    | Project Enhancement Program   |
| PPP    | Project Planning and Performance  |
| RI     | Rotary International  |
| TRF    | The Rotary Foundation   |
| UANH   | Universidad Autonoma Nacional, National Autonomous University of Honduras |
| UDDT   | Urine Diversion Dry Toilet  |
| WaSH   | Water Sanitation and Hygiene  |
| WASRAG | Water and Sanitation Rotarian Action Group                                |
| ZRM    | Merendón Reserve Zone   |



**PPP Team: Bob Ruehl, Prakash Tata, Maria Inestroza, Amada Martin, Greg Bucove**

## GENERAL OVERVIEW AND BACKGROUND

### RECENT CHANGES IN ROTARY HUMANITARIAN PROJECT PLANNING

#### FUTURE VISION, WASRAG, & PROJECT ENHANCEMENT PROCESS (PEP)

In 2010, Rotary International (RI) and the Rotary Foundation (TRF) started to initiate a major new strategy, the **Future Vision Program**, with the goal to re-shape and improve the humanitarian efforts of the ~1.2 million Rotarians and the ~34,000 Rotary clubs around the world. Reviews of Rotary project work had shown RI that far too many humanitarian projects had resulted in disappointingly small and short term benefit, for the intended recipients. Indeed the results of many projects were impossible to measure just one year after a Rotary intervention, in part because many projects were poorly focused, small in scope, did not take advantage of best or most appropriate technology, and/or lacked sufficient education and community development work to ensure long term benefits or sustainability.

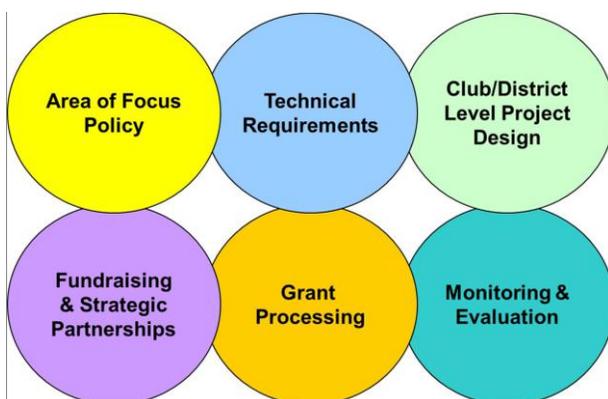
The current Global Grant initiative has six Areas of Focus:

- Disease Prevention
- Child and Maternal Health Care
- Education and Literacy
- Economic Development
- Water, Sanitation & Hygiene (**WaSH**)
- Peace and Conflict Resolution.



As a start, TRF chose to work first with Water, Sanitation & Hygiene, WaSH, and in 2012, joined with the Water and **Sanitation Rotarian Action Group (WASRAG)** to develop a pilot program for the Future Vision strategy in ten selected districts in the world, including District 4250 covering Guatemala, Belize, and Honduras.

Together, TRF and Wasrag developed the **Project Enhancement Process (PEP)**, to make Rotary International WaSH projects more sustainable, with better assessment, planning, and management within the Water and Sanitation Area of Focus.



PEP contains six key components. Through PEP, Rotary intends to encourage clubs to sharpen the focus, enhance technical quality and long term results - the sustainability - of Rotary project work.

An important part of the Wasrag PEP approach is project planning that considers the impact an entire watershed or region, not just a single home, village, or community. Too many previous WaSH projects concentrated on small, uncoordinated interventions - such as a single latrine or well - without taking into consideration how that latrine or well might impact another water source downstream, or impact another land use.

The new process also increases emphasis on Monitoring and Evaluation (M&E) over at least a 5 year period, as well as inclusion of education, training, and community development to assure sustainability. This Project Enhancement Process, which includes the formation of **Project Planning and Performance Teams (PPP Teams)** to help clubs and districts plan projects, aspires to produce larger, better planned projects, with wider and longer lasting benefits.

The Usula Rotary Club in San Pedro Sula, Honduras was selected as one of the 10 TRF pilot districts, and in early 2014 the club asked TRF and Wasrag for a PPP Team to assist in the development of a Rotary program to address needs in the ZRM near San Pedro Sula.

## **SAN PEDRO SULA CITY, AND THE MERENDON RESERVE ZONE**

### **POTABLE WATER SOURCE FOR THE REGION**

The Municipality of San Pedro Sula covers 1010Km<sup>2</sup> (about 400 Sq. miles), and includes the metropolitan area of San Pedro Sula city, the second largest city in Honduras, which with its several suburbs has a population of roughly 1.5 million people. It is the fastest growing city in Honduras and is the base for much of the industrial, financial, and commercial activity in the country.



It has an international airport with several direct international connections daily, good restaurants and hotels, eight universities, and an active arts and cultural life. San Pedro Sula has a tropical savanna climate, with year-round moderate to high temperatures and plentiful rainfall all year. The city has experienced hurricanes and tropical storms and is prone to them during the hurricane season usually when the storms form in the southern part of the Caribbean or Western Africa.



To the west of San Pedro lies the Merendón, a mountainous region that stretches into neighboring Guatemala and covers more than 70,000 ha (~27 sq. miles).

Within that region is the Merendón Reserve Zone, (ZRM) a 35,000 ha (~14 sq. mile) ecological reserve created in 1990 by Honduran federal law. The Reserve borders both the

city and the Cusuco National park further west. Elevations in the reserve zone range up to 2242m (7400 ft.), with a core zone above 1,800m (6000 ft.).

Roughly 45,000 inhabitants live in the ZRM in 65 small communities: road access is poor, as are communication and basic services. Although these communities have been 'grandfathered' in by the 1900 federal law that created the zone; new construction, deforestation, and any other land use activity is controlled and regulated by the Municipality of San Pedro Sula through the Municipal Environmental Division (División Municipal Ambiental) or DIMA. Each community in the reserve has a leader, the 'Patronato', and the ZRM has a loose confederation with elected Patronatos representing various areas within a 'Federation of Patronatos'.

Even though the zone is the regional 'bread basket' with agricultural activity that provides most of the fresh vegetables for San Pedro Sula, there remains a sense among part of the city population that the rural community residents are squatting on the Reserve land and destroying the environment. Honduran news sources and the national popular press occasionally report on the ZRM in terms of increased population, pollution, agricultural chemical runoff, poor land use practices, deforestation, and land 'invasions' in the reserve. However the current mayor (who is a regional political leader since Honduran municipalities cover extensive areas) has given strong indications that his administration will assist and promote educational and sanitation development work in the reserve. The mayor has gained strong political support within the reserve, and some residents of the ZRM claim that the mayor won the election due to their voting power.



San Pedro Sula depends directly on the Merendón for its entire potable water supply. The municipal water supply company, Aguas de San Pedro ( a privately held company), relies on several major surface

water and groundwater sources, all of which originate in the Merendón Reserve. These include two deep well fields (Chamelecón and Sunceri), as well as the Santa Ana, Piedras and Zapotal Rivers, which serve the northern metropolitan sectors, and also the Manchagua River, which is the primary source for the city's southern sectors.

In normal year as much as 70% of the city's water comes from groundwater systems - pumped wells - and roughly 18.6 to 29.7 MGD (Million Gallons per Day), equivalent to 814L/s - to as high as 1,300L/s, comes from the rivers. At times, especially during heavy rains, the river water is 'enriched', i.e. contaminated, with organic content from the hills (from both agricultural activity

and human contamination), as well as with minerals, particularly Iron and Manganese, which can give an unpleasant taste and orange-brown color to the water. Heavy rains can increase turbidity or 'muddiness', due to sediment runoff from the hills, and the rivers can have a pH as low as 3 to 4 (as acidic as coffee) due to mineral rich deposits that were exposed following the torrential rains of Hurricane Mitch (1998). Aguas de San Pedro operates several treatment facilities to treat this surface water before distribution.

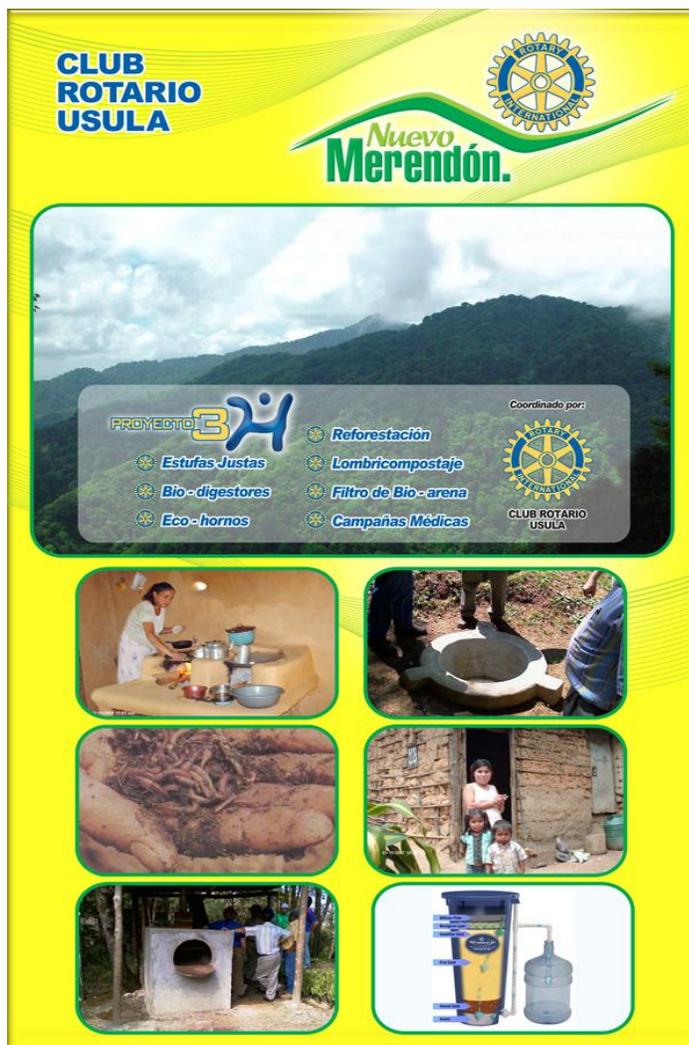
## RC USULA'S PREVIOUS & CURRENT PROJECT WORK IN THE MERENDÓN

The Usula RC is a very active club and has completed numerous projects over the years, including dental and optical clinics operated and managed by club member professionals, as well as several school and water supply projects. One of the Usula club members, Dr. Max Morales, is the head of the Engineering Department at UNAH, the National Autonomous University in San Pedro, and with the help of engineering students enrolled in their year of

public service, has provided excellent detailed design and specification for water tanks and water distribution systems.

Between 2008 and 2011, the Usula RC completed a very large (over \$300,000) **3-H project** (Health, Hunger, and Humanity) in the Merendón - The Nuevo Merendón Project, 3-H 62898. That project employed a variety of different interventions to help protect water sources and to serve needy people in the reserve.

With the cooperation of DIMA and several NGO's, the club installed 900 'Justa' wood saving ecological stoves (and another 49 for micro-businesses), planted 50,000 trees for reforestation, installed 270 waste composting units, installed 798 bio-sand filters, 52 biogas-digesters, and organized 9 medical teams to reduce respiratory and gastrointestinal diseases.



**3-H Project. Rotary and Partner Organizations**

The club presently has two Global Grants in progress and is developing several more. The Global Grants (size range \$20 to \$50K) include improvements for the community water system serving 650 people in El Gallito Este in the Merendón, with a dam and reservoir improvements, a tank, and distribution lines. Also underway is a Global Grant for 842 inhabitants of the Aldea La Cumbre in the Merendón, with reconstruction of a dam, channel protections, pressure relief tanks, and distribution.

Other Usula RC projects in the ZRM include: construction of 100 latrines for the Corredor Peñitas-Gallito community, a kindergarten school for the Aldea La Virtud, a retention wall and sport field for the community of El Gallito, and a water filter project for 345 additional water filters.



**RC Usula GG Project Work in Progress on a Water Storage Tank in the Merendón**

## **BACKGROUND OF THE PROPOSED GLOBAL GRANT PROGRAM**

In late 2012, club members started thinking about a large project to follow up on the success of the 3-H 62898 project that generated a great amount of enthusiasm among the residents of the Merendón reserve. The 3-H project resulted in very favorable publicity for Rotary and the Usula club, and generated within the club an even greater sense of responsibility to work in the Merendón. Initial contacts with the Rotary clubs and districts that had supported the 3-H project indicated that future support would be possible, and District 6600 facilitated relationship building for the Usula club through zone communications.

Initially, club members proposed a project that would essentially replicate and expand the original project, to provide a similar range of interventions throughout the reserve to "finish the job". During the 3-H project, even with a budget of over \$300,000, the interventions had to be spaced around the Merendón, with some communities receiving a single intervention (for example water filters) while some received multiples (health brigade treatments plus latrines and a bio-digester). However at the conclusion of the 3-H project, there were still some communities, especially those in the poorest and remote, hardest to reach areas, that had not been beneficiaries of the project. Thus there was an understandable enthusiasm to complete the work.



#### **Flooded School Latrine in the Merendón**

In the meantime however, Rotary International and the Rotary Foundation had implemented the Future Vision initiative, and funding for projects like the 3-H had been replaced with the Project Enhancement Process. So the club asked RI for a PPP team to help conceptualize and plan a new approach for a large project.

After several communications with Team members prior to the PPP visit, the club expressed their objectives in an e-mail as follows:

The interest of the Usula RC is defined as follows:

1. "To get adequate support for the planning and implementation of a Project for the Environmental Protection of the Merendón Reserve, the productive watershed, to ensure security of the water supply for the city of San Pedro Sula;
2. Sustainability and effectiveness of a program for environmental protection is only possible if it includes answering the needs of the citizens in the area of interest, those who are economically disadvantaged;
3. Participation of women (as a key element of the nuclear family), will be included along with young people and teachers to technology transfer programs (education) that promote the socio-economic development of people in the area of interest -. This has been one of the strengths in the development of the 3H project, and the various projects undertaken by the club in the area, therefore we count on their participation;
4. We hope that the help from the PPP team will allow us to adopt new technologies, to improve service delivery, and to offer solutions to the problems of water, sanitation, and economic development that are consistent and strengthen the Environmental Protection Program; and also to help with oversight, audits and monitoring of projects to be developed in the area.

We understand that the Environmental Protection Project that we yearn for is enormous, and for that reason its planning should include implementation in stages, and for us, the prioritization is consistent with the RI and Foundation areas of focus: Water and sanitation, education and health. We expect from the PPP team, assistance for planning the project and its management, and assistance for the socialization of this project in the Rotary world to obtain the financial resources needed.

It's possible to add that that the objectives of our proposal do not constitute an extension of the 3H project carried out successfully. But that project was instrumental for the members of our club and other donors to develop awareness of what needs to be done to protect the environment, ensure the future welfare of our town, and promote socio-economic development that can provide sustainability to the effort to make."

## **PPP TEAM MISSION, AND TRF GUIDLINES FOR RC USULA**

With the Future Vision initiative, RI had clear guidelines for the PPP team. PPP Teams are formed as part of the Project Enhancement Program with TRF and WASRAG, and their scope is limited to WaSH - Water, Sanitation, Hygiene, and associated Educational and Community Development activities. Thus our PPP Team's mission was to help RC Usula conceptualize a Global Grant project with a focus on WaSH, that could be funded by TRF, that would include a strong component of education and community development to ensure sustainability, and that would also include Monitoring and Evaluation systems.

The guidelines given to us by RI were that:

TRF will be looking for the following in a Global Grant submission from RC of Usula:

1. Evidence that they are trying to address weaknesses from their 3H grant addressed in their cadre review;
2. Evidence that the project scope was decided using results from a recent (post-3H grant) participatory community needs assessment (the club has to demonstrate how feedback from beneficiaries, including women and youth, was collected);
3. Participation of cooperating organizations;
4. Central focus on WASH (necessary for a PPP Team visit);
5. The project has clear objective/s, and the project activities are directly linked to stated project objective/s;
6. The club has established baseline data (measures of the situation in proposed location and amongst target audience before project begins), tools to measure impact created, and a monitoring plan to measure impact throughout the life of the project.

**Water Stream in  
the Merendón**



**Effects of deforestation in  
the ZRM**

**Medical 'Brigade' visits in  
the ZRM during the 3-H  
Project**



# METHODOLOGY & FINDINGS

## INFORMATION GATHERING

With the guidelines from RI clearly defined, the club and PPP Team created an agenda with meetings and field visits to gather current information to create a sustainable project proposal.

### **Usula Club members organized meetings as follows:**

1. Twice daily meetings with club leaders and club members, including constant communication between PPP and RC Usula to keep all information and schedule changes current.
2. Municipal Government officials: Mayor's offices with national press coverage and participation of high municipal authorities including the head of DIMA, the Municipal environmental department responsible for the ZRM . Meetings with other governmental and non-governmental agencies working in the Merendón to share information on current ZRM programs, populations served, resources and challenges..
3. Specific meetings with DIMA managers to determine cooperation and to coordinate efforts in the Merendón.
4. Visits to former work sites and current RC Usula project sites (projects with schools, stoves, filters, and water systems).
5. Group and individual meetings over three days with ZRM community leaders and Patronatos to highlight the needs of residents in the ZRM.

**PLEASE NOTE: In addition to the above, the Usula Club members helped the team with very favorable hotel and rental truck rates, and hosted the PPP team nearly every night for receptions and dinner at one or another of the club members houses. Even more, they arranged every other activity requested, including a visit to an artisanal market and the beaches up on the coast. The hospitality of the Club was superb. Club members even suctioned diesel from their trucks to top up the tank of the PPP rental truck when we were low on fuel. A more attentive host club would be hard to imagine.**

## MEETING WITH MUNICIPAL LEADERS

As noted in the Overview section above, municipalities in Honduras are perhaps more analogous to states in the US or Mexico, or provinces in Canada. Mayors, exercise political control over large areas of Honduras, and in this specific case, over the entire metropolitan region of San Pedro Sula including the ZRM.

The Mayor, Sr. Armando Calidonio, received the PPP team members and leaders of the Usula club in his audience chamber on Monday, 4 August, 2014. He was accompanied by the Chief

Executive of DIMA, the Municipal Environmental Division charged with control of the ZRM, as well as several other officials. Moisés Torres, President of the Usula club introduced the team, and spoke about our visit. Team members had the opportunity to talk and explain our purpose and goals.

The Mayor and his staff offered their support for development project work in the reserve, and promised the service of DIMA. The Director of DIMA followed up by specifically promising his departments support to carry out detailed baseline surveys in the ZRC.

The visit was reported in both national newspapers as well as on television that evening.



National Honduran Newspaper headline on the RC Usula and PPP Team meeting with the Mayor and Municipal leaders. The headline reads: Rotarian Experts Will Define Viable Projects for the Merendón. The Municipality offers to work hand in hand with the Volunteers.

## MEETING WITH OTHER NGO'S AND AGENCIES

On Tuesday, 5 August, the team and Usula club leaders met with several other governmental and non-governmental organizations that work in the Merendón. The objectives were to learn about each organization's plans and activities, to see points of common interest, and areas of potential cooperation; as well as to assure that there would be no potential overlapping or repetition of activity, nor any potential points of conflict or interference depending on how the Usula club decided to proceed.



**Meeting in DIMA offices with PPP Team, DIMA and Usula Club leaders and Mayor's Assistant**

**DIMA, Dirección Municipal Ambiental** This semiautonomous governmental agency - Municipal Environmental Division of San Pedro Sula - is responsible for the environmental control, water and sanitation, and environmental impacts in the SPS municipality. DIMA is specifically responsible for environmental impact licensing as well as granting permission for all development and economic projects in the ZRM. One of the Usula club leaders, Mr. Fausto Bogran (seated on the right in the photo above) was recently named as the Director de Protección y Control Ambiental (Director of Environmental Protection and Control) at DIMA. This nomination has greatly facilitated the club's relationship with the agency. In addition both the mayor (whose assistant is second from the left in the photo) and the chief administrator of DIMA have pledged full support to the clubs activities in the zone. Participation of DIMA will be crucial to this project success and DIMA will conduct the baseline survey as a first step.

DIMA was represented by Roberto Dias and Fausto Bogran.

**FEDERACIÓN DE PATRONATOS** The federation of community leaders of all the communities in the Merendón Reserve. These leaders represent the residents living in the reserve, and are

organized to promote education, security, environmental protection, and relationships with government agencies. The federation has supported the current mayor politically and plays a strong role in the region. They organized meetings over three days with 65 leaders representing most of the communities to discuss needs and plans with the Usula club and PPP team.

The federation was represented by Sr. Valentine, the Vice President of the Federation.

**CARITAS** A Catholic non-profit organization that operates 10 schools in the reserve, as well as an agricultural research training/ retreat center in the ZRM. Caritas has built several water systems, provided vocational and agricultural training, and supported 'quality of life' learning programs in the Merendón.

Caritas' retreat center located in the center of the ZRM can provide housing and facilities for training operations. No potential overlap or interference is expected. Caritas hosted the team and club for meetings in the zone and offered to collaborate with the projects.

Caritas was represented by Manual Rosa and Fausto Castillo.

**FHIA Fundación Hondureña de Investigación Agricola** This organization provides research and development in agriculture and provides extension services for re-forestation projects. FHIA has worked with the water supply company, Aguas de San Pedro on some projects in the Manchagua river watershed, but has no projects presently in progress. They could help with agricultural research if requested.

**Fundación Merendón** This organization was one of the primary cooperating organizations during the Usula clubs 3-H project and helped build and install 250 latrines. The foundation is dedicated to improving the ecology and the quality of life for residents of the Merendón. They have several projects planned and some already functioning for re-forestation, plant nurseries, and school repairs and education. The foundation has worked collaboratively with Rotary, DIMA, Aguas de San Pedro and several other companies in partnership, and is willing to entertain future inquiries as well. The foundation faces economic challenges.

**FINTRAC** A consulting company based in the US Virgin Islands that provides agriculture solutions in developing regions. FINTRAC collaborated in the previous 3-H project with teaching materials. They are a US AID contractor, and can provide technical assistance, and manuals for education. FINTRAC works with health projects in other areas of the country, but not currently in the Merendón.

**Water for People** This NGO is active in the region promoting water and sanitation work with filters and other related technologies. They partner with funding organizations and carry out project work. WFP has good relationships with the regional government, and one of their major goals is to make their projects self supporting financially and sustainable, but have found that the lack of water and sanitation creates a "vicious circle" of poverty. Water for People is a potential partner for Rotarian work in the Merendón.

Water for People was represented by Diana Betancourt.

**Aguas de San Pedro, ASP** Since 2001 this private company has been responsible for the supply of potable water to the city and environs of San Pedro Sula under a 30 year contract. The company supplies water to 97% of the area's residents, and has sanitation connections for 87% of the homes, expanding each year with 3500 new connections. They have 5 water treatment plants, but to date have not completed a waste treatment facility due to a variety of political and financial issues.

ASP was a cooperating partner in the 3-H project, and has contributed greatly to reforestation projects, health brigades, and economic development training for women. The company is very willing to cooperate in future project work in the Merendón, especially as it relates to water and sanitation projects. ASP has capability to perform lab and quality tests, and employs 11 workers in the Merendón in reforestation work.

ASP was represented by Nelson Caballo

**EDAMH, Asociación Educación Ambiental de Honduras** This foundation works in the Merendón and other nearby regions to promote environmental education and rehabilitation. It is a potential resource for Rotary project work, but unfortunately its representative was unable to attend this meeting.



"Before & After" Slide from PPP Team Member Amanda Martin's presentation on Ecological Latrine 2014 construction project in Bolivia

## FINDINGS

Notes from meetings and discussions with ~65 community leaders on Thursday, 7 August, and another group of ~30 residents and leaders on Friday the 8th, representing ~35 of the ~65 communities in the Merendón Reserve.

### COMMUNITY LEADERS MEETING IN A SCHOOL ROOM WITH USULA RC & PPP TEAM



### COMMUNITY LEADERS MEETING AT THE MERENDON REFORESTATION NURSERY



**FINDINGS** Community meetings August 7<sup>th</sup> and 8<sup>th</sup>, 2014

| <b>Community</b>                                  | <b>Name of representative</b>                                       | <b>Needs Discussed</b>   |
|---|---|--|
| <b>Naranjito</b><br>(102 families and homes )     | <b>Juan Jose Flores Diaz ,</b><br><b>president of the Patronato</b> | <ol style="list-style-type: none"> <li>1. Community center</li> <li>2. Kindergarten and school</li> <li>3. Water system needs repairs.</li> <li>4. Need many latrines</li> </ol>   |
| <b>Aldea el Triunfo</b><br>( 28 homes)            | <b>Javier Galdamez</b>  | <ol style="list-style-type: none"> <li>1. School, and teaching staff</li> <li>2. 28 homes need latrines</li> <li>3. Water system in poor condition.</li> </ol>   |
| <b>La Fortuna</b>                                 | <b>Mateo Enamorado:</b><br><b>Presidente del Comité de Agua</b>     | <ol style="list-style-type: none"> <li>1. Water system needs treatment additions, education on contamination prevention.</li> <li>2. latrines</li> </ol>   |
| <b>Buenos Aires</b>                               | <b>Marco Antonio y Alvarenga</b>                                    | <ol style="list-style-type: none"> <li>1. Have filters. want retraining on filters and more filters</li> <li>2. Water access</li> <li>3. Health Center</li> <li>4. High cases of diarrhea</li> <li>5. Environmental education</li> </ol> |
| <b>El Porvenir</b>                                | <b>Arriaga</b>  | <ol style="list-style-type: none"> <li>1. Need school and teacher, kids have to walk 2 hours to La Fortuna</li> <li>2. Water system inadequate, needs upgrades.</li> <li>2. Latrines in bad condition, need more latrines.</li> </ol>    |
| <b>Aldea Flores de Rio Frio</b><br>( 60 homes)    | Nery Carranza- presidente del Patronato.                            | <ol style="list-style-type: none"> <li>1. Need a water tank; there is a lot of turbidity in the water.</li> <li>2. When it rains their pipes break</li> <li>2. 20 homes do not have latrines</li> </ol>                                  |
| <b>Guadalupe Bañaderos</b><br>(69 homes in total) | Oscar Mejia Navarro- (Presidente de Patronato):                     | <ol style="list-style-type: none"> <li>1. The water system is obsolete</li> <li>2.20 Latrines in bad conditions</li> </ol>   |

|   |  |   |
|---|--|---|
| <b>San Antonio</b><br>( 65 homes)   | <b>Jose Margarito Paz</b>  | <ol style="list-style-type: none"> <li>1. Need Fence for the school</li> <li>2. Latrines (also in schools)</li> <li>3. need filters</li> </ol>  |
| <b>Santa Margarita de Guanales</b>  | <b>Jose Dolores Hernandez: ( President)</b>  | <ol style="list-style-type: none"> <li>1. School repair</li> <li>2. Potable water ,houses are very disperse and far away</li> <li>3. electricity</li> <li>4. 30 families do not have a latrine</li> </ol>   |
| <b>Miramar del Merendón uptown from La Fortuna</b>                          | <b>Joaquin</b>   | <ol style="list-style-type: none"> <li>1 Water system with dam and tank, needs repairs.</li> <li>2. Need to replace water delivery hoses with pvc piping.</li> <li>3. There is no teacher for the school</li> </ol>   |
| <b>Peñitas Arriba</b><br>( 80 families)                                     | <b>David Aldana</b>  | <ol style="list-style-type: none"> <li>1. The school needs a roof</li> <li>2. 1 km of piping needs repair.</li> </ol>   |
| <b>Berlin</b>   | <b>Allan Alexis Urraya</b>   | <ol style="list-style-type: none"> <li>1. 20 year old obsolete water system that needs to be amplified and repaired.</li> <li>2. Need latrines.</li> </ol>  |
| <b>Santa Marta</b>  | <b>Jesus Martinez</b>  | <ol style="list-style-type: none"> <li>1. Need to expand water distribution to more homes</li> <li>2. repair the kindergarten</li> <li>3. 40 homes need latrines</li> </ol>   |
| <b>Santa Elena Zona Baja,</b><br><br><b>A zone with several communities</b> | <b>Jose Antonio Rogel-</b><br><br><b>Representing 9 communities ( Gracias a Dios, Santa Elena Vieja, San Antonio Merendon, Buena Vista , and San Jose de Machaguala area with other small communities)</b> | <p><b>a. Gracias a Dios: Francisco Marquez,</b><br/><b>48 homes</b></p> <ol style="list-style-type: none"> <li>1. Construction of a school because kids walk 2 km to reach the nearest school</li> <li>2. Need about 10 more filters</li> <li>3. Aguas of San Pedro Sula will construct their water system</li> <li>4. Need 20 latrines.</li> </ol> |

**Santa Elena Zona Baja,  
Continued**

**b. Santa Elena Vieja**

**70 homes**

1. 40 students at the school, only one classroom, no desks for students
2. of the 70 homes he considers that 35 do not have a latrine
3. Have no water system.
4. Need latrines for the school

**c. San Antonio Merendon:**

Juan Carlos Madrid

**40 homes**

1. the gravity fed system they have is obsolete ( built 25 years ago)
2. 10 homes need a latrine

**d. Nueva Santa Elena: Pedro**

Juan Escobar,

**45 homes**

1. Have 3 tank water system by need water system improvements, need new water source, more water.
2. At least 3-5 homes do not have a latrine
3. 5 families need Biosand filters
4. they have ecostoves that Agua de SPS provided.
5. more training on the good use of water. They consider important to unite the water systems into one for all the 7 communities.

**Santa Elena Zona Baja,  
Continued**

**e. Buena Vista:** Victor Manuel Enamorado

**65 homes**

1. .Need School utilities ( desk , blackboards etc) for ~70 students

2. The 25-30 year old water system collapsed. Has been repaired it several times, needs reconstruction.

3. 25 houses need latrines

4. houses are very disperse.

**f. Monte Alegre:** Alfonso Reyes,

**34 homes**

1. The school needs desks for 35 students

2. Need 12 sanitary facilities

3.They have some washable latrines but do not have water

4. the water source is below them so they have to carry water

5. the homes are concentrated by sectors

**g. Machaguala:**

**70 homes**

1. Need health center, have filters

3.Need 10 latrines. Homes are disperse and have water by hose.

**h. Mayen, 40 homes and Montañita, 26 homes**

Santos Rivera

1. They don't have water, they carry it from Penitas. They would like a well.

|   |                                    |  |
|---|------------------------------------|--|
| <p><b>Santa Elena Zona Baja,</b><br/><b>Continued</b></p>   |                                    | <p>2. Montanita has 10 year old water system, need a tank</p> <p>3. They need a teacher and a school as kids walk 2 km to attend school</p> <p>4. 20 latrines are needed 10 in each community</p> <p>5. They need Biosand filters.</p> <p>Note: One resident mentioned that in the past there was a prohibition to excavate wells. They don't have a market to sell their products at a good price, they have a cooperative of producers. To certify growers is very expensive. Women would like to start a chicken, flower or sewing microfinance business.</p> |
| <p><b>Vegas de Rio Frio</b><br/><b>32 homes</b></p>         | <p><b>Edi Rivas</b></p>            | <p>1. Caritas has a water project, need, need training on water source protection and environment for adults</p> <p>2. 20 homes need latrines in the cerro gacho and 9 homes in the sector of San Lucas.</p>   |
| <p><b>Remolino El Invernadero</b><br/><b>(25 homes)</b></p> | <p><b>Miguel Angel Sanchez</b></p> | <p>1. Dima built a water system 20 years ago that needs to be improved as they need more water.</p> <p>2. have bought the land to have the right for a passage of water.</p>   |
| <p><b>Pita Arriba</b></p>                                   | <p><b>Abel Villeda</b></p>         | <p>1. School Fence</p> <p>2. 20 homes need a latrine</p> <p>3. Do have water</p>   |
| <p><b>Remolino 2 El Merendon</b></p>                        | <p><b>Jose Marquez</b></p>         | <p>1. Potable Water</p> <p>2. Build a school and hire a teacher</p> <p>3. 20 Latrines are needed</p>   |

|   |   |   |
|---|---|---|
|   |   |   |
| <b>Berlin 2</b><br><b>30 families</b>         | <b>Angel Perez Gonzales, vice president of El Patronato</b> | <ol style="list-style-type: none"> <li>1. Repair the water systems in needs more capacity</li> <li>2. 30 homes need latrine</li> </ol>  |
| <b>Bañaderos</b><br><b>57 homes</b>           | <b>Oscar Reyes</b>  | <ol style="list-style-type: none"> <li>1. All 57 homes need a latrine</li> </ol>  |
| <b>Tomala</b>                                 | <b>Rodolfo Diaz ( fito)</b>                                 | <ol style="list-style-type: none"> <li>1. A water project for the 5 communities that form part of Tomala.( Nuevo Eden, Brisas, Union)</li> <li>2. Retraining on Biosand filters, stoves</li> </ol>  |
| <b>Comunidad del Peru</b>                     | <b>Mario Roberto</b>  | <ol style="list-style-type: none"> <li>1. There are 4 villages in the region.</li> <li>2. Need electrical power in Berlin 1, Berlin 2 and La Pita</li> </ol>  |
| <b>La Virtud</b>                              | <b>Evertto Portillo</b>                                     | <ol style="list-style-type: none"> <li>1. Kindergarten</li> <li>2. Water distribution for all homes</li> </ol>  |
| <b>Nuevo Eden</b>                             | <b>Orlando Garcia</b>                                       | <ol style="list-style-type: none"> <li>1. Energy, they have the study and can participate in costs</li> </ol>   |
| <b>Santa Teresa</b><br><b>56 homes</b>        | <b>Maria Silva Bonilla</b>                                  | <ol style="list-style-type: none"> <li>1. School needs a fence and repairs</li> <li>2. Need 25 latrines</li> </ol>  |
| <b>Juntas de Bañaderos</b><br><b>25 homes</b> |   | <ol style="list-style-type: none"> <li>1. Fence for the school</li> <li>2. Water contamination education</li> <li>3. They need retraining on Biosand filters</li> <li>4. Need of a school and payment for the teacher</li> <li>5. 10 families do not have latrine</li> <li>6. Repair of the road</li> </ol> |

|   |                        |  |
|---|------------------------|--|
| <b>Union Rio Frio</b><br><b>45 homes.</b> | <b>Virginio Euceda</b> | <ol style="list-style-type: none"> <li>1. Kindergarten</li> <li>2. 15 latrines for homes</li> <li>3. Improve their water system</li> </ol> |
|---|------------------------|--|

**Additional notes:** Jose Carlos Reyes the health promoter for the 3 health centers reported that water is very contaminated causing many cases of diarrhea. He would like hipo-chloranators built into all water systems even though many people do not like the residual taste. The health center facilities need fencing and a place for maternity ( birthing room). They also need more health promoters and a motorcycle.

Waldina Batrez expressed the need of more training for Biosand filters and ecostoves to assure continued use of the units previously installed in the ZRM..

### Priorities Summary

19 communities need repair or expansion of their water systems, 15 communities need schools repairs , fences around schools and a kindergarten.

**Of the 35 communities whose leaders met with the PPP team, 23 communities reported needing roughly 600 LATRINES.**

Most of the other ~30 communities are more remote and less served by government and NGO activities. The upper area of the Santa Elena Zona Baja doesn't have enough water. All communities need education on hygiene, water contamination prevention and a hygienic environment to make them aware of the benefits for better health and productive lives of community members.



**Installation in the Merendón of a pour flush toilet with laundry and shower connected to a soak away septic pit. Toilet flush is done with a small bucket.**

# CONCEPT FOR PROPOSED GLOBAL GRANT PROGRAM

## SANITATION SOLUTIONS & EDUCATION FOR THE MERENDON RESERVE ZONE (ZRM)

As noted above, the Usula Rotary Club has been active with humanitarian project work for many years, planning and completing an impressive number of small to medium (\$5,000 to \$60,000USD) projects and one large (~\$303,000USD) 3-H project. In late 2012, members started talking among themselves about beginning a new large scale project to follow up on their successful 3-H project, to provide benefits to a greater number of residents in the Merendón reserve. The club's vision for the proposed project has gone through several concepts, with some club members envisioning a project like the 3-H with multiple interventions including water filters, latrines, stoves, medical teams, bio-digesters, etc. as before. Other ideas included focusing on a smaller number of unmet needs throughout the ZRM.

From the beginning of this period though, it was clear from the communications, e-mails, and discussions between the Usula RC and RI (and with the PPP Team), that the club always had a consistent goal and desire to protect the environment of the reserve, and the quality of water which flows from the reserve to the city of San Pedro Sula.

In late 2013 the club requested assistance from RI in the form of a PPP Team to help conceptualize this new large project in line with the new Rotary Future Vision Initiative. To that end, club members and the PPP team met with residents, community leaders, and regional authorities in early August 2014. Those discussions left no doubt that there are substantial unmet needs in the Merendón zone. In addition to the specific list of needs noted in the previous section, other conversations in the ZRM with women's groups and individuals indicated desire for help to support small businesses and job growth, establish microenterprises, improve roads and communication, education, and agricultural practices. But the most repeated needs involved water supply, education, and sanitation, i.e. latrines.

### **Need for latrines was the most often repeated need discussed during PPP meetings in the ZRM.**

Discussion results tabulated above from meetings with community leaders and residents from 35 of the ~65 ZRM communities, indicate an immediate need for roughly 600 toilets (i.e., latrines, septic tanks, or other sanitary 'point of contamination' solutions) just in those 35 communities. Since the PPP team did not have time to adequately survey the entire ZRM population, it must be assumed that the total need is even greater. In point of fact, Mr. Fausto Bogran, one of the club leaders and an executive with the Municipal Environmental Division (División Municipal Ambiental, DIMA), indicated that the total need could reach as high as 2000 when all the poorly constructed, and inadequate existing latrines are included.

**Therefore, given the clear alignment between the club's goal to protect the ZRM environment and the city's water supply, and the great need within the reserve for sanitation;** the Usula club and the PPP team decided to focus this next large Global Grant program directly on sanitation rather than to design another program addressing a variety of different needs. It was decided to evaluate and select the best sanitation solutions for the Merendón communities, and to include a strong educational and community development component related to sanitation as envisioned in the Rotary International Future Vision initiative. The need for sanitation in the ZRM is extensive, and a project conceived to fill that need alone will be a very large and serious undertaking. However, a preliminary step for any proposed sanitation program would have to be an extensive and detailed sanitation needs survey covering the entire zone.

**Club leaders and the PPP team chose to plan a large multi-year program in stages that could be financed with multiple Global Grants as the program proceeded. The program stages would include:**

- 1. Baseline needs assessment, and engineering/technology research on appropriate technology in the ZRM.**
- 2. Pilot installations of sanitary solutions & education programs in selected communities**
- 3. Implementation of appropriate sanitation solutions and environmental and sanitation/hygiene education programs in the entire reserve zone**

**STAGE 1.** The program will start with a focused base-line sanitation needs survey coordinated by Rotarian José Interiano, with help from medical students from the Catholic University, and with cooperation and logistic support from DIMA. The survey will be completed prior to application for a Global Grant and will establish the scope and preliminary cost and timing estimates to carry out the large program throughout the Merendón Zone. It is anticipated by DIMA that the survey could be completed within 3 to 4 months of questionnaire design.

At the same time as the needs assessment, a technology/engineering research and review program will be carried out to evaluate potential alternative sanitation technology solutions. Historically, the only widely used sanitation solution in the reserve is the pit latrine, although some pour flush toilets, and toilets connected to water piping and septic soak-away pits exist. Other solutions that might be applicable include dry or UDDT latrines, flush toilets, pour flush toilets, fossa alterna, arborloo, single home septic systems and small community multiple house septic systems (**please visit the [WASRAG.org](http://WASRAG.org) website for details on each of these technologies**).

Each alternative technology has characteristics and requirements which might make that solution the most suitable, or desirable, for specific conditions within the Merendón. For example in locations where the water table is high, pit latrines can fail during rainy seasons and a dry latrine installation might be more suitable. In other cases individual septic systems, or arborloos might be best. For some communities - situated where houses are close enough together to make pipe connections possible, and where the soil is appropriate and slopes are sufficient for gravity drainage - a small community septic tank system could be feasible and cost effective. A small communal system using either connected flush toilets or 'dip and pour' hand flush toilets installed inside a residence could be an especially attractive solution, particularly in those ZRM communities with residents who do not desire a remote 'out house'.

One of the Usula RC leaders, Max Morales, is the head of the Civil Engineering Department at the National University (UNAH), and with the help of students completing their required civil service obligation, he has completed detailed engineering design for several RC Usula water projects in the past. It is anticipated that Dr. Morales and his students, with financial and technical support from Rotary clubs and WASRAG, and with cooperation and logistical support from DIMA, could complete this research program within roughly the same time period as the sanitation needs baseline survey.

**STAGE 2.** With the needs assessment and engineering study completed, the club will apply for a Global Grant and select small number of 'pilot' communities to install the most appropriate sanitation technologies in locations with different conditions of terrain and slope, geology, water table depth, population concentration, etc.

At the time of this writing, the club's preliminary decision is to select the villages of Peñitas Arriba, San Antonio, El Gallito, and La Virtud.

These 'pilot' installations will demonstrate the most appropriate sanitation technologies in locations with different conditions throughout entire reserve (different terrain and slopes, geology, water table depth, population concentration, etc. ). This stage is to educate residents, and generate and gain acceptance and enthusiasm for the project. Performance of the pilot stage installations will be monitored and evaluated resulting in development of detailed engineering and site specific specifications, site selection criteria, and actual cost estimates for the larger, more widely based stage 3 program to follow.

The pilot program will include educational and community development programs including Health Promoters and Sanitation Promoters. These programs will have the goal of making residents not only aware of the benefits of using the sanitation systems for health, esthetic, and environmental improvement, but also to make them partners in the long term proper use, maintenance, and expansion of the systems. During the PPP Team visit, Amanda Martin and Maria Inestroza gave Ususla Club members presentations on their education and community development programs currently being used in Bolivia and Honduras. Educational material and assistance to develop specific programs in the ZRM will be available from both these ongoing existing programs.

The estimated cost of the pilot phase building several different types of demonstration latrines, one or two each of single family and community septic tank systems, and/or other technologies as determined in stage one, plus the costs to develop educational materials, and conduct educational programs should be within the range of between US \$40,000 and \$100,000 depending on the number of installations.

This stage could very easily take longer than a year to complete, especially considering that environmental impact reports will be required by DIMA for any community sanitation systems. Stage 2 will only be complete when enough data on costs, usage, operational issues, educational and social issues, and maintenance is gathered so that stage 3, below, can be properly planned with accurate cost and timing schedules.

**STAGE 3.** With social and technical experience, and accurate cost estimates in hand, the club can plan the third stage of the project - **to implement sanitation solutions throughout the Merendón reserve**. Since the need for sanitation is so extensive, and the cost and time required is very large, it is anticipated that the third stage will have to be completed in several steps. For the first step, the club will select as many communities as it can with a scope based on the financial limits of a Global Grant (GG)- at this time roughly \$400,000USD. TRF approval for this size grant requires \$200,000 in donations, and approval from a TRF Trustee.

Using the criteria developed in the 'pilot' stage - i.e. where each selected technology is the best sanitary solution for a specific location with its unique problems and characteristics - and with the engineering design specifications from stage 2, the club will select communities to construct and install solutions for that entire community. Where it is possible, and where conditions warrant, small community combined sewer systems might be the best solution. In many areas the standard and well understood pit latrine will still be the best solution. As noted above, in many areas, the dry or UDDT latrine design may be indicated. The grant application will state how communities are chosen and why, and will have detailed estimates of the technical work and cost projections.

Each of the chosen communities will be expected to provide some financial or material support toward the cost of the project. Non-technical materials and labor will be supplied by the community, and community leaders will be expected to choose residents for training as health and sanitation promoters as part of the education and community development components of the project. Club members, very likely with the assistance of DIMA, will be involved in the monitoring and evaluation for at least 5 years following construction.

Then, when that first stage 3 project step is complete, and with solid monitoring and evaluation data in hand, subsequent Global Grants will be requested to complete the program throughout the entire zone.

The club expects that it can take advantage of the large scale of this project to apply manufacturing engineering skills to the design and construction of latrines and other solutions and thus reduce the individual unit costs for each installation, and increase the speed and efficiency of those installations.

**Initial response from RI was very enthusiastic about this project concept.** Erica Gwynn, the RI Water and Sanitation Area of Focus Manager, told the club and PPP Team that TRF strongly supports phased projects like this. She indicated that the Global Grant process is flexible, and even if the stage 2 'pilot' phase results were to cause major changes in the scope, technology, or even in the financial projections for the subsequent project phases, Rotary is flexible and encourages such developmental steps.

Ms. Gwynn further stated that TRF believes that as much as 60% of the long term success and sustainability of a sanitation project depends on education and community development and the participation of local women, and so the Foundation looks very favorably at project concepts with strong education, development, and monitoring and evaluation components.



**PPP TEAM AT THE END OF THE VISIT**

Top row, left to right - Amanda Martin,  
Greg Bucove, Maria Inestroza  
Bottom row, left to right - Prakash Tata,  
Bob Ruehl, and RC Usula President, Moises  
Torres

## **NEXT STEPS**

- Detailed design of Project. Scope, timeline, participants, support clubs and districts.
- MOU with DIMA
- MOU with the Catholic University
- MOU with the National University Civil Engineering Dept.
- MOU with supporting clubs and districts
- Sanitation Needs Base Line Data. Design of questionnaire: Objectives, survey questions, field surveys.
- Engineering/Technical studies to determine appropriate sanitation solutions and their criteria for selection: Design of study scope, collection of available geological and terrain data. Criteria for Selection of solutions - geographic, soil type, slope, population density, resident preferences, costs.
- Criteria to select target communities
- Cost estimates, time estimates

# APPENDICES

**PPP TEAM MEMBERS BIOGRAPHIES**

**NOTES ON RC USULA GLOBAL GRANT ADMINISTRATION**

**OTHER DOCUMENTS - Available upon request from team members at the coordinates listed on page three, or from WASRAG or RO. These include:**

BASELINE SURVEY QUESTIONS

MOU DRAFTS

DRY LATRINE (UDDT) PROGRAM NOTES

SANITATION PROMOTION PROGRAM NOTES

HEALTH PROMOTION PROGRAM NOTES

CIRCUIT RIDER SUMMARY NOTES

MONITORING AND EVALUATION NOTES AND TOOLS

## PPP TEAM MEMBER BIOGRAPHIES

**Maria Regina Inestroza Mejia.** Maria, a graduate Environmental Engineer and a Public Accountant with degrees from the Catholic University of Honduras and the Sacred Heart Institute, has extensive experience in environmental and sanitation practices. She is presently the Central American Director of Pure Water for the World, an NGO which operates water filter and sanitation programs for underserved populations in Honduras, and develops and implements education and community development programs to support health and sanitation practices in the region.

Maria formerly was the Health and Environmental Coordinator for the Fundación Calentura y Guamoreto where she implemented and directed health and hygiene education programs, and organized water boards among other responsibilities. Previous to that Maria worked as an environmental engineer with the Ecológic Services Co, in Tegucigalpa, Honduras.

Maria is fluent in English and Spanish and is a member of the Nueva Tegucigalpa Rotary Club. She lives in Tegucigalpa with her husband and son.

**Amanda Martin.** Amada has broad experience in the areas of human rights, disease prevention and health programs in impoverished regions - the design, management, evaluation and implementation of programs - as well as their advocacy and policy promotion. She received an honors B.A. in Communication from Penn State University, studied at the University of Manchester, UK, and earned Master's degrees in both Social Work and in Public Health at the University of South Carolina. Recently, Amanda was a Rotary Peace Fellow studying Conflict Resolution and Peace at the Chulalongkorn University in Bangkok, Thailand.

Amanda is presently the Director of Etta Projects, an NGO in Montero, Bolivia, where she manages operations and programs to improve lives with access to clean water, sanitation, and healthcare in rural Bolivia. These include programs for ecological latrines and sanitation promotion education. She previously ran the Public Health Institute in a refugee camp on the Thailand/Myanmar border, training public health workers, developing public health education programs, and leading training and workshops for human rights advocacy. During that period, Amada was the Rotary Plenary Speaker at the 2012 Rotary International Peace Conference in Bangkok, Thailand. Amanda's earlier career includes direction of the Guatemalan Human Rights Commission in Washington, DC. , policy analysis and field investigations with Witness for Peace in Bogota, Colombia, work with the Peace Corps in Guatemala, and a teaching post in Guangdong, China, among others.

Amanda is fluent and is a certified interpreter in English and Spanish. She lives and works in Montero, Bolivia.

**Prakasam Tata Ph.D., BCES (AAEES) QEP (Emeritus).** Dr. Tata is an internationally recognized environmental scientist, engineer, and expert in water, wastewater treatment, and water quality. He earned his B.S. at the Vizianagaram, Andhra University and his M.S. at Nagpur University, both in India, and his Ph.D. at Rutgers University, New Brunswick, NJ, USA. Over his career, Prakash has worked on several continents for organizations including the UN, the World Bank and the US Academy of Sciences, and has won numerous national and international academic and technical awards and honors. He has written 4 technical books and over 160 scientific and engineering publications.

Highlights of his career include university professorships at the Illinois Institute of Technology, and the Maharajah Institute of Medical Sciences in India. He is serving as the Executive Director of the Center for Transformation of Waste Technology at Naperville, IL, as head of Environmental Monitoring and Research at the Chicago, IL Metropolitan Water Reclamation District, among others, and has consulted via Tata Associates on dozens of projects and issues dealing with environmental engineering and waste treatment technology.

In addition to his professional career, Prakash has worked as a volunteer on many development projects and programs both in the United States and in India. These have included projects to treat effluents which previously had polluted large sections of the environment in the area of his birth in India.

Prakash is fluent in English, Telugu, Bengali, and Hindi, and was Rotarian of the Year for 2009-10, and 2012-2013 at his Rotary Club in Naperville, IL, where he lives with his wife and family.

**Robert Ruehl.** Bob trained as an Economist at the University of Cincinnati where he earned his B.A. After serving in the US Army he joined the Ford Motor Company as a young man, and over a career of 38 years with several companies, rose through plant management roles to several executive management positions. He had engineering and management assignments with engine and transmission manufacturing, including responsibilities at three Ford plants where he gained a reputation as an experienced turnaround manager. At Ford, he was responsible for the Engine Manufacturing plant in Lima Ohio, which covers 312 acres and during his time employed over 3000 workers.

While pursuing his corporate career, Bob was also for 16 years a Director of the ArtSpace Lima, an arts organization devoted to fine arts and sculpture, and has also been a dedicated Rotarian. Bob was the International Service Chair for his Lima OH Rotary Club, he was the Foundation Chair for D-6600 District from 2010 to 2014. For many years, he has supported and participated in Resource Centers International, is a graduate of the RLI, has been a Planning Council member and Volunteer for Rotary Service with Uniendo America for 4 years, and has been recognized for his energetic support of MESA, the D-6600 Medical Equipment and Supplies Abroad Committee. He is a life member of Wasrag and RAGM. He has cooperated with and supported several other US Rotary Districts on projects in the Far East, India as well as Kenya, Uganda, Nigeria and most recently in Ghana (street girls) in Africa. His project and fundraising work with the Rotary Club Usula in San Pedro Sula has spanned the last 10 years, and he has been pivotal in the success of their many water and education projects. Bob's international project activity has involved all countries from Mexico to Panama, and he is an Honorary Member of the Club Rotario Usula. He has received many Club and District Service Awards and Recognition. He has received one of Rotary's highest awards in The Rotary Foundation Citation for Meritorious Service.

Bob has two married daughters and two grandchildren. Bob and his wife Ann are Major supporters of TRF, and are retired now and live in Lima, OH.

**Greg Bucove**, Team Leader. Greg studied Oceanography at the University of Washington and worked in the north and central Pacific Ocean on biological research programs before joining the Peace Corps to teach commercial fishing technology in Central America. He returned to the U of W to complete degrees in Chemical Engineering and in Fisheries and Food Engineering, followed by work as a project engineer designing and building process plants in Alaska, Mexico, USSR, and Japan. Greg continued to pursue international management assignments, eventually working in 48 countries running several domestic and overseas divisions and subsidiary companies for European and US multinationals, as well as some entrepreneurial outfits in which he was an owner. His responsibilities have included negotiating and managing large engineering and construction projects and serving as CEO for multiple plant equipment manufacturing and engineering companies.

Greg is fluent in Portuguese and Spanish, but is pretty poor with Russian and several other languages. A member of the Olympia Rotary Club for almost 3 years, Greg has worked with the Wasrag Technical Committee to write and edit several sections of the Wasrag Technical Manuals, has worked on Rotary water projects in Malawi, and also with the recent PPP team to develop a water program for small communities in Mexico. Greg is a Director with ZMark Enterprises, an international business development consulting firm; and with Energy Scienomic, Inc, a non-profit energy research group. He in lives with his wife in Olympia WA.

### **Maria Inestroza and Amanda Martin with a Woman's Focus group in the Merendón**



# **NOTES ON RC USULA GLOBAL GRANT ADMINISTRATION**

**by Robert Ruehl, PPP Team Member and PDRFC D-6600**

## **Background of Grant Preparation by Usula**

Usula Rotario has been a very well managed and active club for many years and successfully, produced beneficial projects in their chosen communities in and around San Pedro Sula. The club's success in the past was due to two issues: the club decided and matched the local needs of residents in the Merendón, and mastered the process and structure of small grant applications of between \$10K to \$30K USD. Club leaders and members made a conscious and dedicated effort to encourage the upmost involvement their members and of all visiting Rotarians who could be supporters for their grants. This involvement included bringing visitors to Usula family homes, and treating all visitors as honored guests. As a result, RC Usula enjoyed a continuous line of USA District support with funding.

The current desire to reproduce a grant similar to the 3H project which the club completed with considerable success was developed during the change in grant processes by the TRF. The club was, and is, in transition from established leaders to a new generation of members. All the more 'senior' leaders had already had their turn as president. The new generation received continuing advice to maintain their training and keep up to date on the requirements of grant writing.

While discussing the current grant activity some misunderstandings due to language became apparent. Within the present project initiative, TRF uses terms like beneficiaries and needs analysis. While these terms are readily translatable in to Spanish, they are not common vernacular terms in everyday use in. Use of the word 'beneficiaries' instead of 'people' sounds legalistic to Rotarians who are unfamiliar with that use. Discussions during our PPP team visit indicated that a better expression to use instead of “a needs analysis” would be “talk to the people to determine what they want or need.” Unfamiliarity with terms was an inhibitor to understanding the specifics of measurements and the importance of these issues. During the daily summations which we conducted, discussions took an extended period of time to reach common understandings, by the end of the team visit, the Usula club members had a clear understanding of current global grant requirements. RC Usula made a specific expression of this understanding.

Each meeting with the club produced an improving attitude from members. The PPP Team defined again what participation means, for members, the people they proposed to help, and NGOs. The concept of data and 'needs surveys' and how to use that information was detailed. Sustainability issues were covered.

The realization that their project had to be community driven was a subtle change in culture for the membership. To have a project driven by data which was documented and accumulated had not been a part of their previous project activity. The club members grasped the necessity and became determined to accomplish what was necessary.

Further discussion produced agreement on priorities, and productive involvement of more member's. The club indicated that they were of one mind through their current president, that they could produce the proper documents for a global grant following most of the guidelines from the PPP Team.

In my work as the TRF Chair for a district of 62 clubs, as well as with project work with an additional 13-18 clubs in the US and with clubs from Mexico through Central America with multiple districts, RC Usula is one of the best - if not the best - club which I have had the fortune to work with, and be associated with. They are a smart professional group of men running their own businesses for the most part and are highly independent and proud. They really do want to do "good". I am very proud to work with this club and will return in February to assist them if requested. This project effort has funding waiting from several districts for a properly formed global grant request.

Our PPP Team with their unique skills patiently explained in detail what is required and how to accomplish the various steps in project approval. We emphasized "First Steps" Our leaving was met with great expressed appreciation and follow up phone calls here in the US.

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