

Amigos por Agua

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ABSTRACT

The role of non-profit organizations in outfitting the developing world with clean water has become more extensive as the world's population grows, especially in places such as Nicaragua, the second poorest country in the western hemisphere. Nicaraguans suffer high rates of kidney disease, respiratory illnesses and parasites as a result of water borne diseases. NGOs such as Amigos for Christ are stepping in to fill the void in Chinandega where the local government lacks the financial wherewithal to provide a basic WASH infrastructure to its inhabitants. It is the goal of Amigos for Christ to bring water to every household in Chinandega thereby improving the health, education and welfare of the populace. This article is based on transcripts from an interview on how this NGO accomplishes their work.



Happy faces when drilling was successful

In the place where most people in the developed world unpack their lives, there sits a mix of work, family, play and voluntarism, a smorgasbord of job-centric activity with work taking up the biggest slice, and time for family, play, and volunteering generally following in descending order. It's not that we don't want to spend more time on the other things, but if you live in the modern world, work comes first and after adding in all your ADLs — activities of daily living — things like laundry, groceries, cleaning the house, servicing the car, and the dozens of other chores that prop up our lives, there's little time left for focusing on what your heart desires.

Some people try a different strategy, mixing their J.O.B. with their passion:

Figure 1: A screenshot of the United Nation Sustainable Development Goals

Sustainable Development Goals



working for a non-profit to save the whales; a local shelter that feeds and houses the homeless; a governmental agency or commission that deals with city zoning or planning so they can save farms and open spaces; work that supports the community mission and keeps it humming along. But there's a third group that smooshes it all together — and by far, the smallest percentage of people inhabit this sphere — mixing work, life, and community with the sole purpose of bringing their passion not just *into* their lives, but *to life*.

Before I tell you about two of those people, John and Sabrina Bland, and their organization, *Amigos for Christ*, let me give you a bit of background about the United Nations sustainable development goals (SDGs), a group of 17 goals designed to “transform our world” by 2030 (UN SDGs).

The SDGs address inequality across the spectrum and put the five Ps, people, planet, prosperity, peace, and partnership, at the forefront of all its actions. The Sustainable Development Goals are:

1. End poverty in all its forms everywhere
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Ensure healthy lives and promote well-being for all at all ages
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower all women and girls
6. Ensure availability and sustainable management of water and sanitation for all
7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10. Reduce inequality within and among countries
11. Make cities and human settlements inclusive, safe, resilient and sustainable

12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

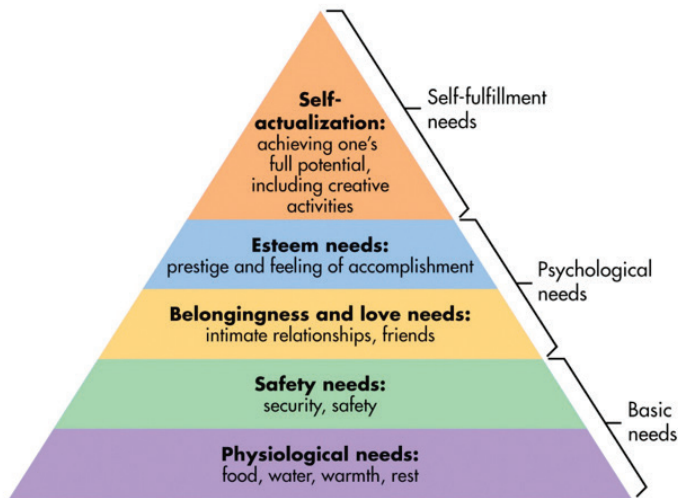
All 17 goals are noteworthy and necessary, but as an environmental attorney whose focus is on water, my favorite is SDG number 6: clean water and sanitation, also known as WASH, or water, sanitation and hygiene, for all. There are many organizations worldwide [water.org, charitywater.org] and in our own backyard the Global Water Alliance (GWA), including this Journal (wH2O, the J of Gender and Water) that are working to ensure the success of SDG 6 where all people will have access to clean water and sanitation, not an easy task when approximately 2 billion people are water compromised.

According to the Center for Disease Control (CDC), 790 million people don't have access to an improved water source¹ while an additional 2.5 billion people (out of 7.8 billion) lack access to improved sanitation (Source, CDC)² and another 1.1 billion practice open defecation as a result of having no access to facilities (Source, WHO). In most developing countries, the burden of providing water is a gender burden as typically it is women who must fetch the water needed to feed the family, wash the clothes, and provide for the family's sanitation needs. Moreover, the lack of indoor plumbing puts women at risk to their persons for they must go in search of an open field in order to relieve themselves, often in the middle of the night, resulting in violent abuses such as rape and in some instances, death (The Guardian). The need to improve our WASH situation worldwide is both acute and chronic.

¹ Improved water sources are defined as ones that protect water from contamination such that it comes through a pipe, borehole, well, protected spring or a rainwater catchment system, but even these do not always ensure clean water.

² Improved sanitation is one that ensures hygienic separation of human excrement from human contact.

Figure 2: Maslow's hierarchy (Source: <https://www.simplypsychology.org/maslow.html>)



Much like Maslow, my mother-in-law has always stressed to our kids how they need to place their *needs* before their *wants* as in homework before television, cleaning up your room before going out to play, or eating your vegetables before you can have dessert. They balked, of course, because they were kids, but as any adult knows, without first satisfying the needs, you will never enjoy the wants, which brings us back around to *Amigos for Christ*. I'm always enchanted by people who have managed to bridge the worlds of needs and wants, of combining an honest day's work with a lifelong heart's desire, so I was fascinated by the story of John and Sabrina Bland who did just that with the formation of *Amigos for Christ*.

The Bland's first connection with Nicaragua came through a priest who visited their church in Buford, Georgia, asking for help on behalf of Nicaraguans who, as it was relayed, had next to nothing. The Blands had spent time working with the Peace Corps in Paraguay and, recognizing this struggle, were so moved that they rose to the challenge, organizing their church's Youth Group and raising the necessary funds.

From that first small step, *Amigos for Christ* was born, a Nicaraguan-based organization that brings clean water, among other things, to thousands of people who would otherwise be without. When they started *Amigos for Christ*, John and Sabrina had three small children and one income from John's small software company. Today, they have a staff of 123, including two of their grown children and their spouses, all of whom live with them in Nicaragua with the mission of bringing clean water, sanitation, education and a list of other ADLs to communities that previously had no access to such necessities, important work by any measure.

I asked John if he would answer a few questions and maybe give up some of his secrets so the rest of us might learn. Here is the substance of our virtual conversation. I hope you will be as fascinated by his answers as I was.

How and when did this all get started?

It started in 1997 when a priest came to our parish, Prince of Peace, in Buford, GA. He spoke of the severe poverty that existed in Nicaragua and asked for help with a specific project in Chinandega.³ Because Sabrina and I had been in the Peace Corps together in Paraguay and had lived the life he was describing, we were moved to help. We enlisted our Youth Group at the church to raise the money for a local feeding center so children wouldn't have to scavenge from the Chinandega garbage dump. The Youth Group responded very well, and we were able to raise the funds. In February of 1998, I had a chance to visit the project and the missionary in charge. It was a moving trip. Then in October of 1998, Chinandega was devastated by Hurricane Mitch, leaving 3,000 people buried in a mudslide. Thousands more lost everything. Again, our church responded and 38 of us (19 from the Youth Group and 19 adults) went down in April 1999 to help rebuild. On the flight back, four of us felt God calling us to do more and we legally formed *Amigos for Christ*, as an international 501(c)(3) non-profit corporation; its purpose is strictly charitable.

Did you do this alone or was your wife with you at the time you started?

I certainly did not do this alone. Members of our Youth Group and the leadership of our church were all involved. I was self-employed at the time and had the most opportunity to volunteer. A gentleman from our church came to me and gave me enough money to live on for six months so I could leave the software business to my buddies and become the first official paid employee of *Amigos for Christ*. That money allowed me to get things started. Today, my girls, Annie, 29, and Nidia, 27, and their spouses all work for *Amigos* here in Nicaragua. Annie has two kids of her own. We all live in Nicaragua full-time with the exception of my son, Robert, 25, who travels the world teaching English. We had traveled back and forth for several years, spending our summers in Nicaragua when the kids were out of school with me traveling here once every six weeks. Once the kids were in college, Sabrina and I moved here for good. The *Amigos* office in Buford only has seven people working there mostly on fundraising, marketing, and financial administration. Our team in Chinandega has 116 full-time employees: 95 Nicaraguans and 16 U.S. citizens.

How did your background prepare you for the work you are doing today?

Although I studied Industrial Systems at Georgia Tech, I worked as a computer programmer for years, but it was my two years in the Peace Corps as a Water and Sanitation engineer that really prepared me for this work. Now that we have grown over the last 20 years, my college studies are finally paying off as we replicate and systematize some of our infrastructure projects.

³ Chinandega is the 5th largest city in Nicaragua, a municipal seat that boasts beaches, historic towns, ancient churches, and a volcano, among other things; it is an agricultural center.

What event or person in your life prompted you to start such an ambitious undertaking?

I would never have thought we would have grown like we have. It started only as a reaction to tragedy. I think the Peace Corps prepared us well because we lived the life of the people we now serve. We first learned how to build a water system when we lived in Paraguay. With *Amigos*, God guided us each step of the way, providing people, year after year, that know more about certain subjects like well drilling and solar energy, for example, than we do. They teach us and then we try to teach others and everyone ends up doing it better than we ever did. Our biggest job became helping people to realize their dreams. I think God has infused me with a spirit of seeing the best in people, even things they themselves do not see, so I just became a cheerleader — that's my superpower.

How did you initially leave friends and family behind and go off to start this organization?

Fortunately, most of my family lives and works here with me so moving here was not difficult, but I certainly miss my friends. I do have a chance to travel to the states for Board meetings and to see my mom.

Something I'm sure she appreciates! How many people does it takes to run Amigos, to manage the fundraising, the mission trips, the construction, and getting the word out?

Our staff is 123 strong. We share fundraising duties among several of us. We host mission trips for a very cheap price, \$275 for a week, and the folks that come down become our supporters. We have a philosophy of never asking for money until someone sees and feels what we do, and if they like it, we ask them to help. We average about 1500 people a year coming down, from churches to schools to families and individuals just interested in helping. Churches from all denominations are welcome, and people with a strong faith, no faith, or somewhere in between are welcome as well.

Walk me through a typical day in Nicaragua? In the U.S.?

I spend Mondays with the groups that come down either building water lines or bathrooms. Tuesdays are devoted to communicating plans and gratitude to those who support us. Wednesday is spent meeting individually with the people I lead. They are eight people that form our leadership team at *Amigos*. Their teams are the ones that train the leaders in the communities to manage the water and sanitation systems. A total of 30 staff members are dedicated to training leaders in the communities along with the families that live there. Thursday, I take groups to do farming projects, and Fridays are spent at a Dragon Fruit farm, doing all that is necessary to produce this awesome fruit. Saturdays, Sabrina and I go to the Chinandega open-air market to buy fruits and veggies and hang out with our friends and family. Sundays are for

chilling out. Monday through Friday mornings are spent running or biking with a group of people that have similar interests. Any time spent in the U.S. is for board meetings or meeting with supporters.



John and Sabrina planting dragon fruit



Candido in dragon fruit farm

Let's talk about the water supply systems. What is it that you actually build? Is it a one-size-fits-all schematic or does it require completely different engineering for each project?

We learned early on that a well with a hand pump does not get the job done as most people still have to haul water for long distances, and their buckets always re-contaminate the water. So, we drill deep wells, pump the water via solar or electricity if available to a storage tank, then gravity feed to each home via 2-3" pipes. Each community is different, so we do have to create plans, but the basic idea is always the same: build a system that provides clean water 24/7 and a modern bathroom that has a flush toilet, sink, shower, and a septic tank.



Digging water lines to homes



Juanquito and Jilmer Serrano happily holding cups of clean water

My house has well water and when we moved in, we found we needed a water filtration system to manage errant hits of *E. coli* and other bacteria. Do you put water filtration systems in each home or manage it at the source?

We put chlorinators at the well head before sending all the water through the pipes to the individual homes. We want to maintain a certain level of chlorine to kill bacteria like *E. coli* because we are still trying to help family's break the habit of storing water in barrels once it gets to their house. We want them to drink it only right out of the tap. It's a hard habit to break though. We have a team that tests all the water supplies on a frequent basis to make sure everything is working properly.

Describe the process, the cost to build, the cost to residents, whether the water is treated, how long the system lasts, what type of training program you offer so the residents can take it over after you demobilize, and how you ensure continued operation?

Water and Sanitation is one of five goals of our *Community Development Plan*. We call it "Plan 7" because we commit to a seven-year partnership with the community. We first

evaluate all the communities that have come to us asking to be partners and evaluate their basic needs and leadership capabilities. We spend one year with community leaders to develop their leadership skills. Water comes next and the community pays for 10% of the cost of the entire system. They also provide 100% of the labor required to dig the ditches for installation of the distribution pipes. *Amigos for Christ* provides 90% of the funds and the experts to drill the wells, build the tanks, and lead the distribution system work. A Community Water and Sanitation committee is formed; they will become owners of the system. Meters are installed at each house and people are charged based on their usage. A chlorinator is installed in the pump house. The system is designed to grow and last well into the future and funds collected for usage are used for repairs, maintenance, and system expansion. *Amigos* is only the guide; the community is the owner and operator.

The third goal of Plan 7 is the reduction of three preventable diseases: intestinal parasites, chronic kidney issues, and respiratory problems due to kitchen smoke inhalation. The fourth goal is that every kid aged 5-17 has the opportunity to go to school. The fifth goal is a 10% increase in family income every year so as to reach \$15/day. This is done through micro-loans, financial training, and farming projects.

You give people from the states and other parts of the world interested in community service a meaningful opportunity to help others, a safe place to land, a lifelong experience creating much needed improvements in people's lives, and a camaraderie that they may not have gotten with other service projects all in the space of, what, a week, ten days? How important is this aspect of your work? Other than through the *Amigos in Christ* website, how do you cultivate it?

Inspiring transformation is a huge part of our work whether it's for a rural Nicaraguan family with nothing, or someone from the states who comes from a much better financial background but is looking for something that maybe service work can help them to find. Our staff is dedicated to serving the people that come so that they have that incredible, life-changing experience they are looking for. Most people come by word of mouth from previous trips. Most of the trips are approximately 40% returning people and 60% new people. The website is our vehicle for letting folks know about the program, how it works and what it looks like, at least we hope!

From where does the money come? Individual donations? Do you have a patron? Do you write grants?

All of our money comes from private donations from individuals or organizations that have come to Nicaragua or are closely related to our work. We do not receive any government funding.

How does word spread throughout the various communities about what you do? Is it word of mouth or do you actively go from village to village?

Definitely word of mouth. Everyone has a cousin living in a community where we have worked.

This lifestyle must be quite busy, going back and forth from Nicaragua to Georgia? Have you considered scaling up your operation by partnering with any other organizations or would that be too much?

Great question! Fortunately, the pace of life here is slow and very relational so my life is not too hectic. We have such a great team that the work gets delegated really well so no one is overburdened. We do partner with other organizations here in Nicaragua and are lucky in that we all have similar goals. Since we've been here the longest, other organizations look to us for leadership. *Amigos'* current goal is to service the state of Chinandega, an area about the size of Delaware with a population approaching 500,000 people. Our 10-year goal is to make sure everyone in this state has clean water and a bathroom.

How much of the physical labor do you do and how strenuous is the work? Do you employ people to help with well construction or is it all handled by the people benefitting from the water system?

It is definitely shared. We love to work hard physically, but the communities work even harder. We have drillers on our staff that have a lot of experience, and they also rely on community members to help with some of the physical labor that drilling requires.

Water aside, tell me about the other undertakings of *Amigos in Christ*.

The 5 goals of Plan 7 are:

1. Leadership – The community owns and operates all their projects.
2. Water and Sanitation – Clean water 24/7 in every home, along with a Modern Bathroom consisting of a flush toilet, a sink, a shower, and a septic tank.
3. Health – 10% yearly reduction of intestinal parasites, kidney disease, and respiratory disease.
4. Education – Every child 5-17 is going to school
5. Economic Development – A 10% yearly increase in daily family income that will reach \$15/day.

Each of these goals has several activities to get us there, from testing people's poop and pee, lung capacity, urine density, etc. Our team of promoters are out spending their days working directly with community members. This partnership with communities lasts for 7 years which gives the community plenty of time to assimilate and take these projects over.



Modern bathroom in El Pedregal



Family happy with great sanitation

In addition, we are in the process of working with *Chosen Eye Mission* from Texas to build a state-of-the-art eye surgery center that will be the best one in all of Nicaragua. We also host surgery teams from the U.S. for knee and hip replacements, as well as urology, gynecology, and general surgeries.

Wow, that is not only amazing but very forward-thinking since access to water without education, economic development and general health would only solve part of the problem so kudos to you for trying to address the community as a whole. Where do you see *Amigos for Christ* in ten years? How about yourself?

Our vision has always been to become a model cross-cultural community development organization that shares everything. We have learned a lot, most of it the hard way, and we want to share with other organizations that have not been at it so long.

Personally, I will be working on farms, helping them get irrigation and teaching them to earn more money through advanced farming practices.

A laudable goal. What kinds of jobs are available to Nicaraguans? Do they have any industry? Are they farmers? How fertile is the land?

In our part of the country, farming is the industry. Sugar cane, rice, beans, sesame, citrus, avocados. The land here is incredibly fertile. Only 1% of the world has the type of soil we have in Chinandega and it is the most fertile in the world due to the volcanos. Our challenge is year-round farming because it does not rain for 6 months and this is the hottest place in all of Central America. Our efforts to create irrigation systems is a huge undertaking and will allow different farming practices, like organic, which is the way we do it.



Little Casey holding an avocado

Is that organic in the way we generally think about it as in no chemicals or pesticides or is it capitalized for another reason?

[Laughs] I capitalized it on accident because I have been developing one of our brands of products called 100% Organic. Yes, it is organic the way we all know it. No chemicals, only natural fertilizers, pesticides, and fungicides, and we develop our own so we know exactly what is going into those fruits and vegetables.

You mentioned teaching organic farming practices. Can you explain exactly what you teach and how that ties into the water filtration piece? It makes a difference, no, if you don't have to filter out so many chemicals?

Great question. We follow the international guidelines for organic certification and teach and monitor these practices. Regarding irrigation water, we drill deep wells to provide water for the farms. If any farm uses ground water that has been tested and chemical residue is found, they cannot be certified organic and are classified as traditional.

Nicaragua is a very Catholic country. I assume you are also Catholic? Would you say that your faith is at the center of all you are doing in Nicaragua? Do you feel you've been able to do greater work than some others simply because of the connection in faith?

I am Catholic, but more importantly, I have a strong desire to unite people of all faiths. Trying, very imperfectly, to imitate Jesus' example is the very reason I live and work, and working alongside God's creations is an absolute blessing.

I just read Melinda Gates' book, "The Moment of Lift." Melinda Gates is also a Catholic, but she and her husband are promoting family planning and birth control as a way to lift families out of poverty which is contrary to the teachings of the Catholic church. Would you ever go against the church's teachings to do the work you are doing and, if so, how would you resolve it in your mind?

Personally, I try only to stick to Jesus' final command to his disciples, 'love as I have loved'. Everything falls under that. I am comfortable there.

What are your interests outside of your work? What do you do to relax?

My interests mostly revolve around sports. I do long distance trail running, mountain biking, basketball, and softball. To relax, I like to work on a farm, play sports, and hang with my family. We are blessed to live a very easygoing lifestyle.

All that training probably helps when you have a lot of ditches to dig, eh? What are your thoughts about alternative sources of power? How about using solar panels to power a Waste Water Treatment Plant?

Yes. We are heavy on Solar power. Our waste though is done with small septic systems for each home as we work in very rural areas where homes/farms can be far apart.

Given that in-situ units are easier to manage and maintain, solar may be the wave of the future. My feeling is that developing economies will never evolve to the level of developed economies without first figuring out their waste and water issues. Describe the empowerment that comes

to a village once these basic necessities are met and, other than the obvious, how it changes their lives.

This question is a great one for Sabrina to answer, as women are the most impacted. This is from Sabrina:

‘No one really considers the impacts on women and children beyond the obvious — they find and carry the water. The children are sick — a LOT — and the women must stop to care for them, but the unknown impact is this: 51% of the world is female. If women are focused on the day-to-day survival of their family, the world misses the gifts they could be bringing to their communities. If women have the freedom to move beyond hauling water, they can become entrepreneurs. They can challenge their children to become dreamers in school. They can impact the fate of their communities and their countries. And women care. They want what is best for their children and grandchildren. If they are free to search for this type of future, instead of just searching for water, what a change we will see in communities and countries.

Amen to that! Do you or Sabrina use any specific educational or other tools to ease the water burden on woman that Sabrina speaks of, and if so, can you elaborate?

Yes. For one, we moved completely away from drilling and installing hand pumps so women no longer have to walk for water. Every system we develop pipes water directly to the home, thus eliminating any need to haul water for both women and children. This has been the biggest game-changer in regards to time for women and allows them to gain all the time back that they used to use for hauling water. This also allows children to go to school instead of fetching water.

That’s terrific and very forward thinking. Our friend, Gemma Bulos runs an organization called *A Single Drop* in east Africa. They build low-tech catchment basins with sand and gravel purification systems built-in which is a huge improvement over women walking miles to collect water from contaminated watering holes or rivers, and then walking back home with a jerry can on their head that weighs 40 lbs. full and that can lead to spinal, head and neck issues. Bulos teaches them how to build and be responsible for the system and how to train other women in neighboring villages. The trained women get together at least once a year to swap stories and trade information. Women have been the water keepers for eons. Since they now have the training and know-how, something their husbands and brothers do not, they can also earn some money which gives them a seat at the table during important village discussions and a say that they may not have had otherwise. Studies show that gender equality improves everyone’s life, not just that of the women. That was a long lead-in to the question: Once you have constructed your water system, who do you leave in charge and how do you ensure it’s sustainability?

Another great question. Before we ever start a water system, there is a community wide election for the water and sanitation committee, which becomes a legal body in charge of running the system. It consists of 5 - 7 members whose job

is to organize the labor to build the system, install meters at each home, bill and collect users, ensure the chlorinating system is always functioning, make repairs, do maintenance, and expand the system as new users come around. They also manage the bank account funds here and help create monthly financial reports to ensure transparency. Our role is to provide the education and encouragement that goes into making this happen. It really works. When you empower people, especially people the community has elected and trusts, amazing things can happen.

It sounds like amazing things are already happening. One more question. To me, life without literature would be monochromatic indeed, but there are some who think that all we need is math and science, STEM not STEAM. Do you think engineering can save the world, meaning, if we just put the right systems in place to meet the basic needs of each individual would that add sufficient value to our lives so we wouldn’t need much else, or do you think we’d be missing out on some bigger meaning?

You are absolutely right. Life is about relationships. Engineering cannot save the world, but great relationships can. Systems have their place, but people are way more important and much more complex. God created us to love and serve each other, and when we get that right, then most systems can and will work so much better. As for books, we are all big consumers here and we will continue to grow in that area.

Good to know. I hope to come and work one day, and when I do I’ll bring all the materials to build a free little library and stock it with books.

I love that! You would be most welcome.

Thanks so much, John! Best of luck to you and your organization in meeting not only your goals, but many of the SDGs as well.

If you would like to learn more about Amigos for Christ, participate in a mission trip, or make a donation so *Amigos* can continue this important work, please visit their website at <https://amigosforchrist.org/>

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