

# TOP 3 LESSONS

## FROM AN ENTREPRENEUR RECYCLING ORGANIC WASTE INTO ENVIRONMENTAL & SOCIAL GOOD IN JAMAICA

WRITTEN BY CAROL LUE

Founder & Executive Director, CaribShare Biogas

For almost three years, my start-up company, CaribShare has been collecting and recycling food waste daily from 8 hotels in Montego Bay, Jamaica: Sandals Montego Bay, Sandals Royal, RIU Montego Bay, RIU Reggae, RIU Palace, Hyatt, Half Moon and Iberostar Resorts.

*COVER PHOTO* Sponsoring farmers in Braco, Trelawny with free organic fertilizer: Lue featured with one of CaribShare's benefiting farmers.

*DESIGN/LAYOUT* by Kimberley Wilmot

CaribShare's Hotel  
Beneficiaries



Sandals



Our committed team of 6 persons operates a large-scale digester plant that through the natural process of anaerobic digestion turns the food waste into biogas (type of biofuel) and organic fertilizer for sale. We also share excess food waste with several pig farmers to help feed their animals. Prior to CaribShare, no other organic waste recycler existed to serve the local tourism sector. As a result, we have initiated a food waste recycling culture within these businesses. Every day we collect over 60 bins of food waste from the kitchens of the various hotels. Once transported to our digester facility, the waste is sorted, shredded, and fed to the digester for immediate processing.

By diverting tremendous quantities of food waste from landfills through our service, these hotels have been minimizing their environmental footprint and greenhouse gas emissions, while helping to directly achieve the UN Sustainable Development Goals on Climate Action and Responsible Consumption and Production. In acknowledgement of our model solution, I gladly shared the Virgin Unite platform with Sir Richard Branson at the launch of the UN Sustainable Development Global Goals in New York City in September 2015.

Thankfully, I had entered the proposal for CaribShare in the Inter-American Development Bank's IDEAS Energy Innovation Contest in 2012. As one of the eight winners out of a competitive pool of over 3000 proposals, I received a \$200,000 USD grant as seed funding, allowing me to return to Jamaica to develop CaribShare. Up to that point, I had achieved a multifaceted career in international development consulting, environmental sustainability, and corporate business in the U.S. and Canada.

I had left Jamaica initially to undertake my undergraduate studies at Clark University in Massachusetts, U.S. After being away from nearly 15 years, I was elated to return to both instill organic waste recycling as a viable climate change solution and to contribute to creating social good in rural communities.



CLOCKWISE FROM TOP LEFT: (1) Lue receiving funding from the Environmental Foundation of Jamaica in 2017 (2) Lue receiving award after winning \$1M JMD grant for best social enterprise in Made of More Guinness Foundation/Branson Center pitch competition in Sept 2016 (3) Lue after sharing the Virgin Unite platform with Sir Richard Branson at the launch of the UN Sustainable Development Goals in 2015.

“... I feel that these communities that once nurtured me are now becoming increasingly disfranchised and left behind due to inequitable access to resources.”

Growing up in Jamaica, I had spent most of my childhood in rural farming communities. However, I feel that these communities that once nurtured me are now becoming increasingly disfranchised and left behind due to inequitable access to resources. And so, I envisioned CaribShare to be a social enterprise, and as such, it is a registered charity.

Currently, we have been achieving our social mission of strengthening rural livelihoods by sponsoring the small farming community of Braco, Trelawny.

Increasingly confronted by droughty conditions, these small farmers have benefitted from receiving our premium organic fertilizer free of charge. Its application is a vital climate smart technique for restoring and sustaining soil fertility in an environmentally-safe way. The Braco area is currently cultivated by 15 active farmers. These farms, consisting of 5 acres or less, seek to supply the neighboring hotels with their produce but have marketing challenges due to their low volume.

As a result, the long-term vision of CaribShare is to strengthen small farmers' access to the tourism market by acting as a marketing cooperative and intermediary. We are essentially aiming to close the recycling loop and to establish and grow a circular economy in this way. This vision defines my mission as a social entrepreneur, and has motivated me to keep going and to persevere.

As for all entrepreneurs, the start-up experience has been highly risky, unpredictable, challenging, and immensely rewarding. Fortunately, my passion and determination have propelled me to deliver our organic waste recycling solution, when some before have shied away. Hoping to inspire others to start their own businesses, here are my top 3 lessons from my entrepreneurial journey to date.

### CaribShare's Funding Partners



**Development Bank of Jamaica Limited**  
Facilitating Economic Growth & Development



**UKaid**  
from the British people



**USAID**  
FROM THE AMERICAN PEOPLE



**THE ARTVARK FOUNDATION**



**JAMAICA CONSERVATION PARTNERS**



**Environmental Foundation of Jamaica**

Preserving the Future... Today!

# 01 EMBRACING UNCERTAINTY & THE UNKNOWN

When I started operating CaribShare, our Canadian biogas engineering partner, ChFour Biogas, assured us that the biological activity to process and turn the waste into biogas and fertilizer would take no more than 6 months to be established. Those 6 months in actuality, however, became 2+ unpredictable and trying years before biogas production finally began. The necessary requirement for establishing the biological activity is the efficient mixing of the food waste with cow manure. However, the performance of the specified mixer equipment was poor and insufficient for handling our digester size. Unfortunately, this was not apparent initially, and it took some time to come to this realization . . . and to admit that the design was a bit experimental. As a result, the digester instead experienced significant solid-build up and retardation for a prolonged period.

Consequently, the planned timeline and financial projections were significantly off. Understanding then that all outcomes cannot be possibly predicted or controlled and contingencies cannot always be estimated, I had to evolve from being a project manager to being an entrepreneur. And so, I became adept at minimizing cost, building relationships, and constantly fundraising to maintain operations during this prolonged and uncertain period. I was able to do so and to embrace the unknown from knowing that solutions often arise when they are not planned and are least expected.

Believing that abundant possibilities and sufficient resources would avail if I searched for them, my focus has been

to constantly advocate for CaribShare and seek collaborations with parties who support or share our mission both locally and internationally. And so, I have been lucky to receive funding and assistance through volunteerism, donations, and barter for CaribShare at crucial times.

When our plant was being constructed; Jason Taylor, the VP of Environmental Fabrics from South Carolina, the supplier of the digester's liner material, volunteered his time to help with its installation. Later on when the cover of the digester had gotten excessively greasy and had to be replaced, Jason unexpectedly donated the material because he understood our challenges and supported our work. Last year, thanks to the American Geophysical Union's Thriving Earth Exchange, Dr. Wale Adewunmi, a soil scientist based in New Jersey, spent 2 weeks with us, volunteering his time to meet with regulators and laboratory officials at the Bureau of Standards of Jamaica, an agency that sets product labeling requirements and provides testing services needed to assess the fertilizer's safety and nutrient composition. He determined the fertilizer's Nitrogen - Potassium - Phosphorus (NPK) rating for product labelling purposes, and has remained as our resident fertilizer specialist.

When the biological activity of the digester was retarded, we were unsure of how to fix the problem as well as when it would be fixed as months past. ChFour Biogas had visited our site on a few occasions, but for the most part was based remotely in Canada. And so, our team through our own trial and error found ingenious ways to aid the mixing by adding recirculation and agitation to the digester. Then, just as ChFour Biogas was prepared to empty the digester and start the biological development from scratch, the biology miraculously awoke and stabilized shortly after.

Undoubtedly, embracing the unknown in this case allowed us to develop our unique and necessary competency in operating and maintaining digesters.

**Lesson #1:**  
Confronting uncertainty and the unknown is inevitable and constant in entrepreneurship. Embrace it by taking the life perspective that abundant possibilities and sufficient resources are available and by building the mindset and confidence to access the necessary ones.



CLOCKWISE FROM LEFT: (1) CaribShare's biodigester (2) Biogas production (as illustrated by gas puffs) (3) New Jersey-based soil scientist, Dr. Wale Adewunmi, harvesting fertilizer.

## 02 BUILDING INTANGIBLE RESOURCES AS BINDING FOUNDATIONS FOR YOUR BUSINESS

Tangible resources, such as cash, land, equipment, and contracts are often considered and valued as the more important business components. After all, bankers, investors, and financial analysts typically consider only these assets when assessing and valuating a business. Yet equipment depreciates and becomes outdated, and contracts end and can be broken.

However, as an entrepreneur, the relationships you develop can be more important than your tangible assets. Mutual interest with long-term commitment and cooperation amongst parties involved has been CaribShare's essential intangible and binding asset that has transcended contracts and other tangible resources. With minimal funding, I have been able to maintain operations through a cooperative and unwritten agreement with several large pig farmers.

Prior to CaribShare, these 10+ farmers were accustomed to collecting food waste from the hotels to feed their animals. At the time, however, some of the hotels were hesitant to allow pig farmers to come on their property. A few farmers had been caught conspiring with the hotel staff to steal goods. As a result, the hotels preferred and were happy for CaribShare, as one dedicated and trusted party, to collect their food waste.

Initially, the farmers felt threatened about losing direct access to the food waste. However, as CaribShare's social mission is to help farming livelihoods, I decided to share the food waste. And so, for the first two years of operations, the pig farmers came directly to our site to collect some food waste. In exchange, they would bring barrels of pig or cow manure which were needed to help develop the biological activity of the digester.

At times, the arrangement got a bit contentious. A few farmers felt that the more waste that was added into the digester for our production purposes, the less that would be available to them. Each farmer was scheduled to receive food waste 2-3 times per week, but a few farmers wanted more days at the expense of the others. However, for the most part, the arrangement worked well. The majority of the farmers' appreciated the inclusion as many offered in-kind assistance, such as helping with construction and maintenance work when it was needed. They understood that if CaribShare does well, their access to the food waste would be secure. They also appreciated that I have stronger access to hotel management and would be in a better position to manage these relationships and to advocate on their behalf.

As I had handled our cooperative arrangement fairly during those 2 years, they also trusted and felt my genuine interest in helping them.

As a result, when we were still struggling to revive the biological activity of the digester and our grant funding was running dry, I was able to call on our mutual interest to secure the food waste supply. Previously, CaribShare had contracted a trucker to collect the food as we did not own a vehicle. I explained to the farmers that CaribShare would no longer be able to subsidize this cost for the collection of the waste as had been done for the past 2 years. I further explained that any future entrants and CaribShare competitors would not be likely to maintain our collaborative

arrangement of sharing the food waste. And so, collectively, we would now all need to work together to continue servicing the hotels.

Most of the pig farmers had pickup vehicles that could only transport a few bins at a time. But, fortunately, one farmer owned a truck that could facilitate waste collection from all the hotels. So, for almost a year, the farmers who had proven to be the most cooperative collected the waste on behalf of CaribShare. This new arrangement has been imperfect in providing reliable service due to frequent issues related to vehicle breakdown. However, until CaribShare is able to acquire its own truck, it is and has been the best way for us to maintain our relationships with the hotels.

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## Lesson #2: Focus on building your intangible assets as they can ensure continuity when the tangibles are lacking or end.



CLOCKWISE FROM TOP LEFT: 1) CaribShare's team in action (2) Site visit from Sandals Montego Bay's Environment, Health and Safety (EHS) Manager, Haniff Richards and Sandals Royal's EHS Manager, Selois Archer (3) Lue pictured with Sandals Montego Bay's EHS Manager, Haniff Richards and Sandals Royal's EHS Manager, Selois Archer (4) Site visit from the Hyatt's EHS Manager, Romona Davis.

# 03

## FOSTERING & PRESERVING THE SOUL OF THE BUSINESS

Thanks to the generosity of our funders and supporters, our cooperative agreement with the pig farmers, and the tireless commitment of our 6 member staff, I have kept CaribShare on its mission.

My staff, consisting of 4 men and 1 woman, especially has great loyalty to CaribShare. They, who some may consider “un-skilled labor,” showed immense grit in confronting our steep and unpredictable learning curve. They labored in extreme messy, stinky, and unpleasant conditions to become skilled in improvising and solving issues with few resources. And, on many occasions, my staff worked overtime unrequested. I have always shown appreciation for their work and have been authentic in the fight for CaribShare.

As a result, they have supported me, knowing that once CaribShare does well, our source of livelihood would be secured.

Mindful of their financial circumstances, my staff is also paid well above minimum wage and what other larger established companies pay their workers. Lunch is always provided, and lunch time is also usually used for team sharing and for harvesting their input in solving current operational issues. This family-like camaraderie, grounded in the values of fairness, consideration, respect, and gratitude, is the soul of CaribShare. The grassroots bottom up nature to CaribShare that grew organically from working cooperatively with the farmers also embodies the soul of our enterprise, and is what makes it distinctive and special.

**Lesson #3:** The soul of a business is what cultivates the spirit and energy to overcome challenges. Foster and preserve it by remaining in touch with your staff and by nurturing values that resonate with their well-being.



## FINAL NOTE

At this junction, I am now developing a new and complementary spin-off venture, **AgriShare**, that will primarily focus on recycling organic waste from cruise ships docking in Jamaica. Cruise tourism is the fastest growth sector in the industry and continues to be a major source of marine pollution. AgriShare will join CaribShare in continuing the mission of engaging the tourism and farming sectors in a circular economy to deliver meaningful climate change action. Gladly, good judgement about changing situations, tireless work commitment, an ability to negotiate well with people of all sorts, and luck have and will continue to help me best navigate this entrepreneurial journey.

In an inaugural initiative, I have launched a donation campaign to raise \$20,000 USD to fund the purchase of a truck and other essential items to aid AgriShare’s mission. I encourage readers to join me and AgriShare in our mission to convert organic waste into environmental and social good!

To support, donate and learn more about AgriShare visit, [www.agrishareja.com](http://www.agrishareja.com) or email [clue.agrishare@gmail.com](mailto:clue.agrishare@gmail.com)

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