



# “Green Factories for Myanmar Refugees and IDPs”

## Proposal for Fund Raising with Global Giving



Partnership Project between  
Karen Return & Reestablishment Committee (KRRC) and Mae Kala Khee Co. Ltd. (MKK)

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## 1. Organizational Details

Name of lead organisation: Karen Return & Reestablishment Committee (KRRC)

Address: Community Resources Centre (CRC), General Saw La Pwe Street,  
Sone See Myaing, Myawaddy, Kayin State.

Website: [www.krrc-mm.org](http://www.krrc-mm.org)

Contact Name: Dr. Thiha Maung Maung

Contact Position: Executive Director

Years of operation: 1 (4 year if considered works before registration)

Annual revenue/turnover: Registered in December 2019

Description of Organization: Karen Return & Reestablishment Committee (KRRC) is registered not for profit organization which is working for refugees and IDPs return processes. KRRC has been helping refugees and IDPs, especially for housing issues since 2017 but got registration status only in 2019 December. It has 3 governing body members, 6 steering committee members, 24 sub-committee members and 4 staff. KRRC is trying to provide employment opportunities for refugees/IDPs.

Our Vision: All ethnicities living in refugee camps and Internally Displaced Persons (IDP) in Myanmar are protected, integrated, embraced and empowered in an area of friendly and welcoming communities.

Our Mission: Creating Mae Kala Khee area to be a hub where Myanmar refugees and Internally Displaced Persons (IDP) are treated with dignity, respect, warm welcome, belonging and life opportunities.

Our Values: **Non-discriminatory:** Everybody must have equal rights and opportunities; in collaboration with local communities, we will not discriminate on the basis of race, color, national or ethnic origin, ancestry, age, religion, disability, sex, military or veteran status.  
**Respect:** Opinion of both existing communities who are living in Mae Kala Khee area and new settlers who are going to reside in this area are respected.  
**Stabilization:** New settlers independently meet their basic needs through access to information and resources.  
**Integration:** Newcomers belong to and are reciprocally engaged with Mae Kala Khee communities. Healthy integration encompasses strong social connections and opportunities for economic success.

Name of Project: Green factories for Myanmar refugees and IDPs

Duration of Project: 5 months

Project Leaders: Dr. Thiha Maung Maung, MBBS, MPH (Simon Fraser University)  
Dana McCartney, BA, MA (University of British Columbia)  
Dr. Tun Myint, MBBS, MBA, MPH, PhD (University of California, Los Angeles)

Description of the Project: Economic consequences of Covid-19 pandemic hardest hit refugees/IDPs, for both current and future survival. Due to international funding cuts, they are almost starving in camps, their future return plan is uncertain. But they can return and do agribusiness in their homeland, manufacturing [exotic disposable plates](#) (export) from leaf waste. Kayin State has superabundant areca plants. Together with our social business company, Mae Kala Khee Co. Ltd., KRRC is starting a prototype factory for manufacturing areca leaf disposable plate as domestic business in Kayin State. KRRC want to upgrade domestic level to industrial level production, so that many refugees/IDPs families get employment opportunities. Profit from this project will use for housing and more income generation programs for returnees.

About our social business: Mae Kala Khee Co. Ltd, (MKK) is registered for profit company, but all of its profit if for KRRC fund. Currently, MKK is implementing low cost refugee / IDPs housing project in Mya Waddy district of Kayin State, donated by The Nippon Foundation of Japan. Current operating budget of MKK is over 1,100,000 USD. MKK, together with KRRC is setting up a prototype areca leaf plates manufacturing factory in Kayin State.

## 2 Approach and methodology

Economic consequences of Covid-19 pandemic seriously hit the poorest of [the most disadvantaged population](#), such as [refugees](#) and [Internally Displaced Persons \(IDPs\)](#). In Thailand and in Eastern Myanmar, most of them are ethnic minority Karen. Not only their currently survival in the camps become harder because international funding cuts, but their dreams of returning homeland become next to impossible because of decline in job market. In fact, it is possible to help their current and future situations, if they can receive small amount of seed funding for an agribusiness. This is because their homeland has plenty of Areca palm trees ([Areca catechu](#)).

Areca palm leaves can use to manufacture disposable table wares, and replace currently using single use plastic disposable plates. Disposable single use plastic and Styrofoam are harmful not only to human health but also for environment. Many governments around the world have banned the use of such disposables in their country, there is limitless international market demand. Besides, the waste products of this manufacturing process, including QC failed end products, can use as raw material for [domestic bio-briquette industry](#). KRRC has a plan to set such factory, once we can start areca leaf factory at industrial level.

We would like to start up one Areca leaf disposable plate factory in Kayin State, at an industrial level. This project will create employment opportunity for more than 70 refugee families in the line of production and additional 50 IDPs families for collection of raw materials, transporting Areca leaves and bio-briquette industry. The products of this first factory will export to USA and Canada, where [the use of disposable plastic wares has prohibited](#). We will sell our final product through [Amazon](#) and [Walmart](#). Selling products with those online and retail companies is easy and simple. With the production rate of 1,000,000 disposable plates/bowls a month, KRRC will have a lot of funding for housing and other income generation programs for refugees / IDPs.

The **objectives** of this project are:

- (1). To create employment opportunities for refugees and IDPs during covid-19 era
- (2). To develop more and more employment opportunities and housing projects for returnees from the profit of this factory
- (3). To provide the end users with continuous supply of environmentally friendly disposable products

### 3. Implementation Plan and Timeline

The factory will compose of three units:

- 1) Pre-manufacturing unit, where area leaves will stock pile,
- 2) Manufacturing unit, where pressing and sanding machine will install, and
- 3) Post-manufacturing unit, where final products will assess for QC, pack for shipping and stored until shipped out.

During construction phase, we will focus on workplace safety for factory workers, minimizing the possibility of covid-19 transmission. Every machine will install at least 6 foot away from each other, and we will make sure the building is well ventilated at all time. We will manufacture only 2 different type, 8" square plates and 6" rounded soup bowls. It is estimated that this factory can manufacture over 1,000,000 plates/bowls every month.

To have an export quality product, we would like to modify currently using areca leaf pressing machines in the following ways:

1. Manual to Hydraulic Powered – Current machines give pressure on leaves manually, physically exhausting process. The result, slow production and low-quality products because manual pressure is low and uneven.
2. Single mould per machine to multiple moulds per machine. This is for more efficient production. Only machines with hydraulic power make this modification possible.
3. Gas heating system to electric thermostat heating system – Currently, most domestic pressing machines are heating the moulds with gas fire. So, the heat cannot control evenly and some plates has burnt spots in some areas. This will not happen if we install thermostat which can maintain constant temperature and generate heat electrically.
4. The use of sanding machines – in domestic manufacturing factories, they don't use sanding machine to make rims smooth. We would like to sand the rims of our products so that we can have a higher quality end product.
5. Currently domestic manufacturing process, we are using Aluminum moulds. To be able to withstand higher pressure to get final products with more precise shape, we will use Stainless Steel moulds, which is also more durable.

We have designed the machines and discussed with mechanics from Dagon Industrial Zone, Yangon. Local machines and engineers will manufacture Dagon Industrial Zone, so the price will be cheaper and after sales maintenance services are guaranteed. Machines with all abovementioned upgrades can manufacture and install readily in Dagon Industrial Zone, Yangon, expect Stainless Steel moulds.

Month	Activity	Remark
1	1. Start construction of factory and residential houses for management	Priority is given to pre-manufacturing unit to stockpile Areca leaves, raw material.
	2. Discussion with pressing machine manufacturer and mechanics	At Dagon Industrial Zone, Yangon - types, pros and cons, after sale services, prices etc.
	3. Placing an order for 20 hydraulic pressing machines	
2	1. Keeping construction of factory, finalizing pre-manufacturing unit.	
	2. Setting up procurement and logistic systems for Areca leaves	Kyar Inn Seik Kyi, Kayin State
	3. Start locating local distributors in Yangon, Mandalay and Bagan.	

3	1. Start stockpiling of Areca leaves	In factory, pre-manufacturing unit.
	2. Keep constructing factory, final stage.	
	3. Two days workshop for returnee selection, return plan, job training, hire/fire policies etc.	KRRC and Karen Refugee Committee (KRC) hold 2 days' workshop. Hundreds of refugee families are waiting to return, selection process must be fair and transparent.
4	1. Installation of 20 hydraulic pressing machines and 2 sanding machines	Kyar Inn Seik Kyi, Kayin State
	2. Job training for workers by machine manufacturer and mechanics	
	3. Start manufacturing of disposable areca leaf plates	Two different types, 8" square plates and 6" soup bowls
	4. Prepare to ship to distributors	USA / Canada
5.	1. Shipping, distribution and Marketing	Amazon and Walmart (USA / Canada)

Table – 1: Table showing timeline for the green factories project

#### 4. Limitations

1. Weather can delay construction timeline and procurement of Areca Leaves; construction project should not start during rainy seasons when there can be a lot of logistic issues. (June to September)
2. We will use Stainless Steel moulds so that the moulds can withstand higher pressure and end products will have a better shape. Currently, only one steel factory in Myanmar can manufacture Stainless Steel moulds, the government steel factory in Pyin Oo Lwin. Therefore, delivery of stainless-steel mould may delay. We can use Aluminium moulds temporarily.

#### 5. Monitoring and Evaluation

The KRRC management team will continually monitor the implementation and production processes. KRRC management team will submit the following reports to donor organizations and KRRC governing Board of Directors:

No.	Type of Report	Time Period
1.	Final Report on Factory Establishment	After six months
2.	Project Financial Statement	Monthly (Every month)
3.	Project Activity Report	Annually (Every year)
4.	External Audit Report	Annually (Every year)

Table – 2: Table showing different types of reports which KRRC will prepare and submit

## 6. Budget

<b>Programmatic Activities</b>			
Main Factory Building (stock piling, washing, pressing)	20,000	1	20,000
Hydraulic leaf pressing machines	2,000	20	40,000
Initial stockpiling of raw materials	20,000	1 <sup>(1)</sup>	20,000
Sanding Machines (rimming)	500	3	1,500
Houses for project management staff	12,000	1 <sup>(2)</sup>	20,000
<b>Overhead</b>			
Accounting / Logistics	500	10 <sup>(3)</sup>	5,000
Job training for refugees / IDPs, Work shop	1,500	1 <sup>(4)</sup>	1,500
<b>Total Projected Expenses</b>			<b>100,000</b>

Table – 3: Table showing overall budget for the green factories project

### Remarks:

- (1). Area leaves are not available in rainy season, so need to stockpile
- (2). 6 Bachelor rooms, in row for project management staff
- (3). 1 manager and 1 accountant hire for 5 months,
- (4) 2 days' KRRC and Karen Refugee Committee (KRC) workshop on returnee selection, return plan, workforce regulations, hire and fire policies etc.

<b>Item</b>	<b>Cost per unit</b>	<b>Quantity</b>	<b>Total USD</b>
Salary for Factory Workers	200	72 <sup>(1)</sup>	14,400
Salary for Management / Admin Staff	500	3 <sup>(2)</sup>	1,500
Areca Leaf (raw material) purchase	0.02 <sup>(3)</sup>	600,000 <sup>(4)</sup>	12,000
Land rental, heat and hydro, machines maintenance	2,000	1	2,000
Shipping (Importing) into USA/Canada	1,500	5 <sup>(5)</sup>	7,500
<b>Total monthly expenses</b>			<b>37,400</b>

Table – 4: Table showing projected monthly expenses for the green factories project

### Remarks:

- (1). 20 pressing machine and 3 sanding machines = 23 workers, 5 workers for washing leaves, 2 security, 2 QC, 4 packaging, total of 36 workers per a shift, for 2 shifts 72 workers.
- (2). 1 manager, 1 accountant and 1 logistic,
- (3). Local price of Areca leaf is 2 cents per a leaf (CIF),
- (4). 1 leaf can give 2 plates, each machine can manufacture 2,000 plates per a day. Each machine needs 1,000 leaves per a day. So, 20 machines need 200,000 leaves a day. For 1 month, we need 20,000 X 30 days = 600,000 leaves a month.
- (5) 5 shipments of 40" X 40" containers to USA/Canada via Thailand

<b>Item</b>	<b>Amount USD</b>
Total Projected Monthly Income	300,000
Total Projected Monthly Expenses	37,400
Projected Monthly Net Profit	<b>262,600</b>

Table – 5: Table showing projected monthly net profit from the green factories project

### Remarks:

- (1). 12,000,000 plates in the pack of 12 = 100,000 packs X 3 USD per pack = 300,000 USD/month  
3 USD per a pack of 12 is reasonable online price. For current price, please [click here](#).

No.	Source of Funding	Percentage	Amount USD
1.	Local Community Donations	20%	20,000
2.	KRRC Social Business Contribution	30%	30,000
3.	Global Giving Fund Raising	50%	50,000
<b>Total</b>			<b>100,000</b>

Table – 6: Table showing required funding for the project

## 7. Marketing and Distribution in North America

KRRC has a distribution company in Canada. We will distribute our products through online market ([Amazon](#)) and [Walmart](#) retail stores. The reason we choose them is that it is easy to register with those companies and distribution, selling processes are fast.

## 8. Results and learning

[Gender based violence](#), [drug abuse](#) and [domestic violence](#) issues are highly prevalent in refugee / IDPs settings. Lack of self-identity, future and income are all underlying causes. They need a place to call home and a job to make a living. This project will incrementally solve issues facing by refugees/IDPs. Each factory can directly employ more than refugee/IDP families, in the line of production, leaf collection, logistic and bio-briquette production. With more and more factories are established from the profit of previous factories, more and more families will get jobs. Traditionally, women have to collect leaves from forest and wash clothes at home. So, women get more employment opportunities for area leaf collection and areca leaf washing in this project.

Here are project's results in summary:

- 1).** More than 70 [Refugee](#) families from Thailand refugee camps and 50 local [IDPs](#) families will get direct employment (manufacturing and raw material collection) during Covid-19 era
- (2).** More and more employment opportunities will evolve with the profit from this factory
- (3).** Girls and women will get more employment opportunities in collection of raw materials (area leaves), washing the leaves before pressing, QC sorting and packaging
- (4).** Creating job opportunities can reduce socioeconomic consequences in this disadvantaged population
- (5).** Domestic level business will transform into industrial level business with high quality end products (Export Quality)
- (6).** Environmental wastes will transform into [exotic disposable products](#)
- (7).** Waste products of this business (cut areca leaves wastes and QC failed products) will become raw material for [domestic bio-briquette industry](#)
- (8).** Other parts of Myanmar, e.g., [Tanintharyi Region](#), can take this eco-friendly business model, and set up similar factories in their region
- (9).** End users can enjoy healthy and environmentally friendly disposable products
- (10).** [KRRC](#) will have sustainable funding source for refugee/IDPs return processes and other local development projects





Picture – 1: Areca leaf waste on the ground



Picture – 2: Piles of Areca leaves waste



Picture – 3: Washing Areca leaves before molding  
(We will build concrete tank)



Picture – 4: Molding washed leaves with high pressure and temperature (We will upgrade)





Picture – 5: Final produces, disposable Areca leaves utensils

