“DRR: The Re-greening St. Maarten Project”

Project Proposal

Ernika van Putten

Project Lead

The Netherlands Red Cross in collaboration with Nature Foundation St. Maarten

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1. General Information

1.1. Project title	DRR@SXM: Re-greening SXM
1.2. Project Number	PRJ13-021-0016
1.3. Project area	Sint Maarten (Dutch side)
1.4. Start date of Implementation	2020-01-01
1.5. End date of Implementation	2020-12-31

2. Introduction

The Re-greening SXM Project was created to aid in building environmental resilience on St. Maarten so that the island may be better adapted to withstand future hazards and disasters. The Netherlands Red Cross is collaborating with the Nature Foundation St. Maarten for the execution of this project. The collaborative efforts aim to reduce the risk of disasters by restoring vegetation, organizing reforestation campaigns and environmental protection, a Technical Assessment has been conducted to assist in the proper implementation of the Re-greening project. The project's Technical Assessment assisted in understanding the communities' present conditions, determining community needs, and identifying available space and opportunities for tree planting. The assessment's results recommended twelve communities for the Re-greening project's implementation; these communities include Madame Estate, Philipsburg, Over the pond, Cole Bay, Bush Road, Dutch Quarter, Pelican Key, Saunders, Cay Bay, Vineyard, Indigo Bay hilltop and Little Bay.

The project's initial focus was placed on all land within the communities that were not yet developed. Most of the undeveloped land is privately owned and would have needed permission from the landowners for project execution. Nevertheless, after speaking to key informants it became clear that this idea might not have worked since property owners might not have allowed for vegetative restoration on their property or landowners might be hard to reach. Besides, it is their land so they can decide at any time to remove the vegetation again which defeats the purpose of the project. Eliminating this idea significantly narrowed down the spaces available for the project's execution. On the other hand, since space is limited and a large portion of flooding on the island congregates on or near roadsides, this project will be focused on vegetative restoration based around sidewalks and roundabouts. Trees planted near roadsides will be able to absorb the water and trap the soil which will mitigate flooding and reduce the possibility for drainage systems to become blocked, evidently reducing the risk disasters may have on the environment.

An ecosystem's reaction to future disasters determines just how resilient an environment is. The Re-greening project is vital for St. Maarten as it will restore and build environmental resilience amongst communities on St. Maarten. Presently, St. Maarten is not resilient as massive amounts of vegetation, organic soil, biodiversity, and natural resources is lost all of which plays an important role in building and maintaining resilience for disaster risk reduction. Overall, environmental stressors may be revealed, monitored, and dealt with for future mitigation.

Goals for the project include the following:

- Community environments are better adapted to withstand future hazards.
- Parts of vegetation is restored increasing environmental resilience against disasters.
- Students in schools will have access to knowledge and tools for tree planting and maintenance, with greater understanding of preparedness for disaster risk in the environment.
- Generally, reduce the risk of disasters.

The objectives of the Re-greening project are to plant a minimum of 500 trees throughout the different communities, get involved with at least two schools reaching a minimum of 150 students from different grades, and execute six clean-ups, one every month starting in the month of July. Due to current condition with the COVID-19 outbreak, clean-up intentions are set to as many as possible with the time left after the crisis is over; meaning that clean-ups can be less than six depending on conditions.

3. Project Location

The Re-greening project is taking place on Dutch side, Sint Maarten. Figure 1 is a map of the entire Dutch side; the Dutch side is depicted on the bottom half of the island below the white line. As seen in the Technical Assessment, there were 17 communities considered to be at high risk in terms of having low resilience against natural hazards and disasters environmentally. A conclusive list of these communities containing space for tree planting recommended to be targeted in this project are the following:

1) Madame Estate
2) Philipsburg
3) Over the pond
4) Cole Bay
5) Bush Road
6) Dutch Quarter
7) Pelican Key
8) Saunders
9) Cay Bay
10) Vineyard
11) Indigo Bay hilltop
12) Little Bay

Based on the technical assessment, each community was recommended. Though all these communities are suitable to plant in Cole Bay is the best recommended community to plant in due to having the best soil. However, four communities such as Little Bay, Philipsburg, Madame Estate, and Indigo Bay roundabout will be prioritized seeing that they need the most assistance having the most factors that influence their community structure.

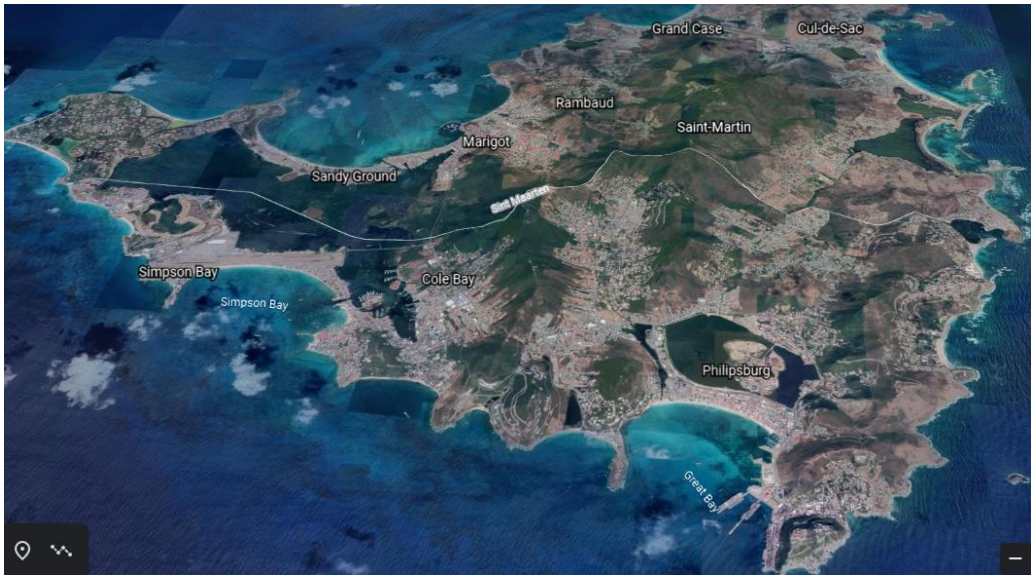

Figure 1. Google Earth aerial view of the island St. Maarten/St. Martin, focussing on the Dutch side of the island.

Proposed Plan

The goals and objectives will be accomplished by a series of tree planting in communities, community clean-ups, and through outreach and education. Also, greater awareness will be brought to the community on the value of nature regarding resilience to disasters.

3.1. Tree Planting in communities

Trees will be purchased and nursed before transferred into the communities. It is decided that these trees will be planted into communities beginning late August through December. According to Stewart K.K. (2015), the best time of the year to plant a tree is from June through December because the air and soil temperature is warm, and the rainy season returns. Upon receiving further information of "planting seasons" on St. Maarten from Mr. Touzah Jah-Bash the humanitarian gardener, the project will plant the trees in late August/early September, as this will be the best time to begin transferring plants purchased and from the nursery into the environment. Mr. Jah-Bash has ample experience with planting on the island, which means that his feedback was credible and appropriated.

First, trees will be planted in the four priority communities, followed by the other 8 recommended communities for tree planting. For each roundabout in the selected communities, the plan is to have medium sized trees in the centre of the roundabout, screw pines on the perimeter, and the lantana-yellow sage (national flower) in between the two plants previously mentioned. Having Lantana's planted in such visible areas will allow citizens to familiarize themselves with our national flower. On roundabouts with small spaces and shallow grounds, like the one in Dutch Quarter, Bush teas, medicinal bush, herbs, and small vegetables like seasoning peppers will be planted. As for the roadsides, trees planted will depend on which tree grows best where. At least one food tree is to be planted in each location for civilian convenience.

3.1.1. Tree Species to be planted

Below, different tree species are described; the selection of tree species is based on the trees found best to plant from the technical assessment and the tree species that are also being proposed to plant alongside plants that are already surviving in the areas. These are some of the plants that are proposed for planting.

- **Monkey Tamarind *(Leucaena leucocephala)***: Based on the technical assessment Monkey Tamarind is a very recommended tree to plant on the island, it is deemed to have a high survivability and is found in almost all communities naturally. Monkey Tamarind is also a native tree which is a plus for surviving in St. Maarten's different soil qualities, see image 1.

Image 1. Example of a Monkey Tamarind tree, source: www.shutterstock.com

- **Dwarf screw pine (*Pandanus veitchii)*:** These plants would do great in communities that have poor drainage systems and often flood. From speaking with the owner and green thumb expert of Green Fingers, screw pine is a great water absorber that slows run-off by capturing and holding loose soil between its tightly packed leaves. The roots of these plants are short which is perfect to plant in the communities with clay soil seen in the Technical Assessment, see Image 2.

Image 2. Example of a Dwarf screw pine plant, source: www.mybageecha.com

- **Green and Silver Buttonwood (*Conocarpus erectus)*:** The Buttonwood would do great in communities that have large masses of water nearby, like Cole Bay, Cay Bay, Philipsburg, and Little Bay. Buttonwood is native and performs well on the island, their roots grow deep enough for them to survive a natural hazard. Buttonwood can be constantly pruned for ornamental control, see Image 3.

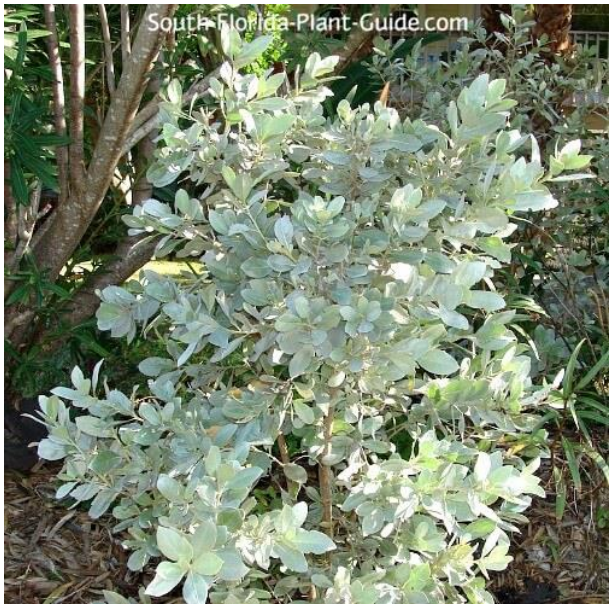

Image 3. Example of a Silver Buttonwood tree, source: www.southfloridaplantguide.com

- **Pigeon peas (*Cajanus cajan)*:** This plant can survive arid conditions; it also bears food in which residents of the community can harvest. The pigeon pea tree would be great to plant in communities that are directly exposed to sunlight even though it is not native to this island, see Image 4.

Image 4. Example of a Pigeon pea tree.

- **Jamaican capers *(Quadrella cynophallophora):*** This is a native plant that is great with water absorption while handling arid environments. Jamaican caper provides food for local birds as they love feeding on the seeds in the caper's pods, see Image 5.

Image 5. Example of a Jamaican caper tree, source: www.Plantcreations.com

- **Yellow sage (*Lantana*):** The yellow sage is St. Maarten's national flower and would be great to plant on or around roundabouts where they are most visible. This plant would not obstruct the view in roundabouts because its mature form is a small shrub that can be pruned to one's liking. This plant would be beneficial to the island as citizens would have constant access to viewing the national flower since it is hardly seen on the island, see Image 6.

Image 6. Example of a Yellow sage plant, source: www.Tomato.to

- **Herbs *(Lamiaceae)*:** In areas such as Dutch Quarter roundabout where the soil is shallow and Illidge road where the soil quality is clay, herbs would be great to plant as roots don't grow too deep. Herb water absorption stands as another favourable quality, see Image 7.

Image 7. Example of a collage of different herbs, source: www.123RF.com

- **Food Trees**: These tree species include a multitude of tree species that provide some form of food, whether that be fruits, legumes, or provision. Each food tree species has not yet been decided but will be once the project obtains food tree's availability for purchase around the time for planting. All food trees will be chosen based on the tree's water-holding capacity and functionality within each location against disasters.

A slightly more detailed plan on approximately how many and which tree species will be planted at each location is shown in Table 1. As mentioned above, a minimum of 500 plants is aimed to be planted across the 12 locations. Each quantity total approximates how many of a particular tree species is estimated to be planted across locations. The "X" identifies the locations that each tree species will be expectedly planted in. Plant availability, plant season and such will be taken into consideration during this time. The plant species listed are not limited to this project therefore plants can eventually be added to list or removed based on previous considerations, this means that approximations can change.

Table 1 depicts the total quantity of tree species that are expected to be planted and the locations they are expected to be planted in represented by "X". The blank spaces indicate that said tree species is not expected to be planted in that location.

Tree Species to be Planted		Location to Plant Tree Species											
Common Name	Total Quantity of trees to be planted (in approximation)	Over the pond	Dutch Quarter	Madame Estate	Philibsubrg	Indigo bay roundabout	Colebay	Cay Bay	Bush road roundabout	Little Bay (Link One)	Vineyard	Pelican Key	Saunders (M.A.C. School)
Monkey Tamarind	50							X			X	X	
Dwarf Screw Pine	100	X	X	X	X	X		X		X			X
Buttonwood	50-75	X			X		X			X		X	X
Pigeon Peas	20			X	X		X	X					X
Jamaican Capers	50			X	X		X			X	X	X	X
Yellow Sage	100		X	X	X	X		X	X		X		X
Herbs	75	X	X	X		X	X	X	X	X	X	X	X
Food Trees	100	X	X	X	X	X	X	X	X	X	X	X	X

3.2. Tree Maintenance

Tree maintenance in the nursery and after plant transference, is an outstandingly important aspect of this project. The maintenance process will ensure long term survival of the trees that will be planted. Water maintenance will be done via drip irrigation for planted trees, the use of pesticide sprayers, cup and water system, traditional plant waterer, and the water bottle system. Drip irrigation is the process of a water and fertilizer mixture slowly dripping systematically across a specific area. Water bottle systems function in the same way except without the use of fertilizer. Such systems are efficient, less dependent upon weather, lower risks of drying, and it provides consistency. The drip irrigation and water bottle systems can and will be built with water bottles and recycled material by using the DIY (Do it yourself) method.

For drip irrigation and water bottle systems to work they will need to be refilled. How often, will be determined by how much water runs out per hour. This will be monitored by measuring the amount of water in each bottle initially. Then, water volume will be measured after 10 minutes. This measurement will be multiplied by 6 to obtain the water volume approximation after one hour, this way revisiting the area for results after an hour or more would be unnecessary. If the volume obtained after one hour is then multiplied by 24(since there is 24 hours in one day), one will know how many days or hours the volume of water initially placed in each bottle will last. The number of days or hours achieved will be a rough estimate due to other factors such as high and low temperatures. Physical

maintenance requires time, care and patience. Some trees demand trims for a healthy lifestyle, and some trees are trimmed for manageability and presence.

Physical maintenance will take place every other day visiting multiple communities in one day, the exact amount of communities will be determined at a later time. There is also maintenance of overexposure. Overexposure of sunlight can cause some plant species to dry out and wilt, sometimes it can even cause death. To combat this, a larger tree that can handle more sun will be planted near these plant species. If this option is not possible, a covering will be built out of fallen palm trees collected from different areas on the island.

Soil maintenance is another focal point in managing tree health. To avoid the growth stunting effects caused by a surplus of inorganic fertilizer (Liu, Cheng-Wei, et al.2014), compost will be purchased from the French side's dump. Compost will be purchased by the ton, which is 55 euros per ton, a truck will be needed to deliver the soil. Initially, the project was going to use truck vehicles available for use by both Red Cross and the Nature Foundation St. Maarten to make several round trips in collection of the soil. Due to the COVID-19 crisis, the project might have reallocated funds from the budget that can go into these deliveries. This option has not been finalized yet, but it can be a possibility depending on conditions after this crisis.

3.2.1. Conservation Responsibility

The first 5 ½ - 6 months of maintenance will be carried out with the assistance of the Nature Foundation St. Maarten, during this time drip systems and physical maintenance will take place. In the Saunders location, members of the school including the students will carry out the upkeep as this has already been agreed upon by school members. There will also be regular school check-ups to ensure that maintenance is running smoothly in this area. After these 5-6 months of maintenance, trees should have reached a stage of maturity where they can self-sustain. Moving forward the St. Maarten government will be contacted in regard to gaining assistance where necessary from road upkeep staff for the maintenance of trees that are not mature enough to self-sustain.

3.3. Plant Purchase Options

These companies are located on St. Maarten and sell nursed plants of all sizes.

- **Green Fingers:** This company sells seeds, immature plants, and mature plants. The options in this company is more abundant than that of the other mentioned companies. Green Fingers offer a wider variety of plants in larger stocks. Plant pricing ranges from USD 17.95- USD 89.00 and higher, the seed pricing ranges from USD 2.00- USD 6.00. Plants like the dwarf screw pine, herbs, lantana, and Buttonwood will be purchased here.
- **Caribbean Palms:** This company offers a limited variety of ornamental plants with a larger stock of massive trees like Palms. Plant pricing ranges from USD

22.75- USD 300.00 and higher, there are no seeds present here but they do sell mulch and fertilizer. Based on the plant varieties offered here, trees might not be purchased here but they do offer planting assistance which is something that will be taken into consideration.

- **The Rasta Garden (on Bellevue, French side):** This plantation is owned by Mr. Jah-Bash, the gardener humanitarian. In the plantation there is a small shop where different plant grown on the plantation can be purchased. Fruit trees are mainly sold here, a great deal of these fruits is native to the island which is always a plus. Price ranges here are currently unknown, but some trees sold are of interest to the project. Native fruit trees will be purchased here, which fruit trees will be decided upon later based on availability.

For the Re-greening project, plants will be purchased locally from abovementioned companies based on availability of trees, price, and stock. Some trees will be planted in the nursery from seeds and nursed to maturity.

3.4. Authorization for tree planting:

To gain authorization to plant trees and vegetation on roadsides, roundabouts, and beaches, the Ministry of VROMI will have to get involved as they determine whether this project will gain approval for planting in such locations. Therefore, the first step of this project will be the communication and involvement with the Ministry of Vromi in order to receive authorization for the different locations for planting, starting in May 2020. As for privately owned land, special permission will have to be given from the property owners themselves. A series of visitations will be carried out so that property owners may better understand the project and be more likely to grant planting approval. The cadaster's office shows who owns the privately-owned land and who might be contacted for gaining approval if necessary, at any time.

3.5. Community Involvement:

A digital and paper version of a document will be created in such a way that the community or persons in the community are informed about the project and what they will be seeing in their community, in terms of changes with the planting of trees and flowering plants. This is to give the community a sense of involvement in the changes occurring in their environment. It also allows them to become aware of the purpose of the changes in their environment and how they could get involved if they want to. This would quicker get the community's approval, as well as less issues of having complaints brought to the project about the work being done. The project will try to work on planting not only to build the environment's resilience but to plant what may be beneficial to the community. For instance, planting only flowering plants may not be feasible as they might not absorb as much water as a larger or more compact tree/plant would. The community will contain food

bearing trees that the citizens may prefer, but only to a certain extent. The most feasible options will take preference over any of the others.

3.5.1. Clean-ups:

Clean-ups assist in further building resilience as drainages and drainage systems tend to get blocked and soil becomes contaminated by pollution. During the month of March, the first clean-up was supposed to be occurring with one following every month but due to the COVID-19 crisis plans have been placed on hold. Based on current conditions, the first clean-up will be rescheduled for a time after July 1st, the exact date have not been finalized yet, but it will be accordingly. There will be one clean-up planned every month after that. Initially the goal was to have at least eight different community clean-ups throughout the year, but the new goal is set to six clean-ups. If all goes well, clean-ups will occur in a different community every month hosting small groups, based on the progression and regulation regarding COVID-19. Clean-ups are going to be kept for a maximum of one and a half hours so that volunteers do not experience burn-out. Since each clean-up is happening near the roads, it is important to ensure the safety of everyone especially since the youth will be encouraged to volunteer, and youth groups will be approached. If necessary, during the clean-ups, the authorities will be contacted in advance to see if they can assist with safety for the community. Also, to allow others to realise that there are volunteers working ahead there will be high visibility t-shirts provided for everyone to wear. Regardless the time of day, water and snacks will always be provided. Volunteers will be encouraged to bring a reusable water bottle with them, reusable garbage bags and gloves will be provided by the Nature Foundation.

3.5.2. Drainage capacities and systems

Infrastructural drainage capacities on St. Maarten are generally low, this is due to road and drainage blockage from a build-up of unattended debris, unlevelled and crater roads, and development activities. Apart from carrying out clean-ups to aid in reducing part of the flood persistence problem, ground works such as directing water flow have been considered. Now, all ideas were examined thoroughly leading to conclusions that opposes getting into drainage improvement. Firstly, the authorization process may be too timely and may not even be possible as this would no longer be within the teams' field of expertise. Secondly, it can become too technical as in order to direct the water flow from a hill, that hill would have to be excavated in some way. This would defeat the purpose of the project by removing more trees whilst our aim is to add trees to communities. Also, to understand exactly how water flow can be directed from the bottom of the hill into the drainages, rainy season would be necessary. Observation of a rainy season would display how excessive amounts of rainwater would flow down each hill, further indicating where and what kinds of systems would be imperative for directing water flow into drainages. In cases like this, trees in specified areas might absorb much more water much faster causing less water to flow from such areas into the roadways; this may yield faulty results. Lastly, if authorization is possible in a timely manner, the project's budget would not be sufficient to fix or alter each road to solve the water flow issues. Lacking the time, budget, and expertise, ground works as such are not feasible for a community based DRR (Disaster Risk Reduction) project.

Nursery:

The project lead will work on creating a nursery that hosts different plants. These plants will be maintained until they are the size of a shrub or larger, plants were offered to be held by Mr. Mark Yokoyama at the Amuseum Naturale. Due to COVID-19 restrictions, plants are being nursed and grown at home until they can be moved to Amuseum Naturale. They will then be transferred into the environment. By creating a nursery for the project, it is possible to obtain twice the number of trees the budget alone can provide. The trees that are currently growing successfully include pigeon peas, herbs, Jamaican capers, lantanas, and a few fruit trees.

3.6. Partnerships:

Originally, the project lead was to be partnering with schools to educate students on the plant life cycle, bring awareness to the project from a student's perspective, allow the younger students to experience and understand the role trees play in our community, and lastly, allow these students to be a part of environmental resilience building. Unfortunately, due to the COVID-19 crisis these plans have been placed on hold until the new school year begins in August. In agreeance with the Methodist Agogic Centre John A. Gumbs Campus, they have complied with the project for the execution and success of this plan. Students will be given seeds to begin their plant germination process. Each plant that is planted by the students will be transferred into the environment in aid of the project. A field trip opportunity will be provided to the students by the project lead and the school's principle. This will allow these students to transfer their own tree into a specific community chosen by the project lead, students will paint their names on smoothe stones to be placed near their tree. Students will appreciate this more because they can conduct regular maintenance check-ups with their parents on the tree they have planted. The motivation for this is to instil a sense of pride to each student having planted a tree to assist their community and island. The seeds that are chosen for the students to plant are the lantana- yellow sage (St. Maarten's national flower), Jamaican Caper tree (native to St. Maarten), herbs, vegetables, and the Pigeon pea tree. Most of these trees were chosen from information extracted from books borrowed by Ms. Ildiko Gilders (VROMI Nature Department), Mr. Mark Yokoyama (naturalist) and, Mr. Jah-Bash the humanitarian gardener. If there may be a circumstance where these plans may fall through, the project will purchase the plants that will be transferred by each student. This way the students still get to experience and understand the role trees play in our community, allow these students to be a part of environmental resilience building, understand a plant's life cycle, and bring awareness to the project from a student's perspective.

In the future, as the project gets further, "SXM Caps" will be another partnership the project hopes to gain. "SXM Caps" is a company that sells hats with "SXM" written on its front. For every hat that has been sold, they pledge to plant one tree. It would be of great benefit for both the project and SXM Caps to collaborate, especially since SXM Cap's motive have not

seemed to be well recognized in the community thus far. SXM Caps is doing something great for the community, quite similar to the re-greening project. They will be able to carry-out several tree planting alongside the re-greening project. Therefore, a collaboration would be a great move for St. Maarten, they will be approached in May as well.

The Red Cross's "Safe and healthy living project" will be carrying out a portion of their project in the Milton Peters College. Project Manager, Mr. Kevin Davies, and the re-greening project lead believes that it would be great to join forces for the re-greening of this community space and other possible community spaces. Mr. Davies is still working diligently with his team to receive approval. Mr. Davies will be responsible for running the surveys within that area of the community.

4. Schedule

Month	Tasks	Notes
May	Week 1: ➢ Find out what is needed for authorization ➢ Work on request letter for planting Week 2: ➢ Continue working on letter ➢ Contact SXM Caps Week 3: ➢ Work towards gaining authorization. ➢ Create project ideas document for authorization. Week 4: ➢ Continue working on document General: ➢ Monitor nursery	

	➢ Create Fun Facts Posts and updates for awareness	
June	Week 1: ➢ Continue working on project ideas document for authorization ➢ Create materials list for planting Week 2: ➢ Create informational digital document for community. ➢ Find a way to distribute document to people. Week 3: ➢ Plant more plants that require short growth time in the nursery. ➢ Plan first clean-up ➢ Create advertisement for clean-up Week 4: ➢ Advertise clean-up ➢ Pick and purchase more seeds for nursery General: ➢ Monitor nursery and maintain ➢ Create Fun Facts Posts and updates for awareness	
July	Week 1: ➢ Start preparing plants that are ready for transfer ➢ Plan clean-up snacks etc. Week 2: ➢ Check in with schools for student involvement and get dates to begin lessons ➢ Gather last minute clean-up materials ➢ Creation of volunteer flyers	

	➢ Begin advertisement of plant with me volunteer opportunities. Week 3: ➢ First clean-up ➢ Collect compost ➢ Prepare plant maintenance systems Week 4: ➢ Vacation time begins General: ➢ Monitor nursery and maintain ➢ Create Fun Facts Posts and updates for awareness	
August	Week 1: ➢ Will be on vacation Week 2: ➢ Make inquiries by tree companies for the purchasing of trees. ➢ Organize plant transfers occurrence ➢ Clean-up #2 Week 3: ➢ Lessons begin at schools begin ➢ Continue advertising for volunteers to aid in planting trees in the communities. Week 4: ➢ Plant transfers begins, 25 plants ➢ Check in on school nurseries General: ➢ Monitor nursery and maintain ➢ Create Fun Facts Posts and updates for awareness	➢ Based on number of volunteers, this would determine how many trees can be planted and the duration of planting. ➢ Maximum planting duration is set at 2 weeks per community. ➢ Transport will be company trucks or paid services. ➢ It is currently unknown if the companies will hold onto the trees until planting is ready, but it will be investigated before purchases are made. ➢ It will be decided later, which community can be planted in when.
September	Week 1: ➢ Plant transfers continue, 25 plants this week ➢ Check in on school nurseries, if necessary Week 2:	➢ If the amount of plants per transfer can increased the number will go up.

	➢ Plant transfers continue, 25 plants this week ➢ Check in on school nurseries, if necessary Week 3: ➢ Possibly meet with SXM Caps to discuss planting grounds and transfers. ➢ Plant transfers continues, 25 plus plants this week ➢ Clean-up #3 ➢ Check in on school nurseries Week 4: ➢ Plants transfers continue, 25 plus plants this week ➢ Check in on school nurseries General: ➢ Monitor nursery and maintain ➢ Create Fun Facts Posts and updates for awareness	➢ Plant transfers will increase once SXM Caps join.
October	Week 1: ➢ Begin thinking about final report layout ➢ Plant transfers continue, increase to 35 this week ➢ Check in on school nurseries Week 2: ➢ Transfers continue, 35 this week ➢ Gather information needed for final report ➢ Check in on school nurseries Week 3: ➢ Begin report ➢ Clean-up # 4 ➢ Create an awareness article ➢ Check in on school nurseries Week 4:	

	➢ School field trips begins to do transfers, 50 plus plants this week ➢ Check on remaining school nurseries ➢ Work on report General: ➢ Monitor nursery and maintain ➢ Create Fun Facts Posts and updates for awareness	
November	Week 1: ➢ Remaining school field trips continue, 50 plus plants this week ➢ Work on final report Week 2: ➢ Transfers continue, 35 plus plants this week ➢ Follow up on report Week 3: ➢ Clean-up #5 ➢ Plant transfers continue, 35 plus this week ➢ Continue working on final report Week 4: ➢ Plant transfers continue ➢ Finalize events to occur ➢ Work on report General: ➢ Monitor nursery for the last time and maintain ➢ Create Fun Facts Posts and updates for awareness	
December	Week 1: ➢ Plant transfers continue, 35 plus this week ➢ Work on report Week 2: ➢ Plant transfers continue, 35plus this week ➢ Work on report Week 3: ➢ Final Clean-up! ➢ Finalize plant transfers, 35 plus this week	

	➢ Check budget for remaining funds and create a plan to use funds if any is left over. ➢ Finalize final report Week 4: ➢ Transfer last plants to the environment ➢ Complete and turn in report ➢ Turn in work devices, etc. ➢ Present report	

5. The Budget

The budget includes an approximation of what is intended to be spent on each category. Excess money will be used to buy and plant more trees in areas that could use larger tree density.

RE-GREENING PROJECT BUDGET			
Fixed Budget goal: $48,000			
Items	Rate per unit in USD	Quantity	Total approximation in USD rounded
Planting			
Small Trees (6-35 inches)	45.00	445	20025.00
Medium trees (36-100 inches)	80.00	140	11200.00
Seeds	6.00	42	252.00
Landscaping (rph*hrs)	100.00	50	5000.00
Supplies			
Planting pots	2.75	21	57.75
Mini greenhouse	6.95	6	41.70
Shovel	32.25	6	193.50
Hand trowel	2.25	20	45.00
white rope	13.75	7	96.25
White paint	48.30	1	48.30
Soil	14.50	50	725.00
Track tickets	10.00	15	150.00
Watering can	8.50	20	170.00
Food			
Drinks & Snacks	150.00	10	1500.00
Emergency lunch	50.00	10	500.00
Adds & flyers	50.00	10	500.00
Gas	60.00	5	300.00
Patrol & Jackets	10.00	100	1000.00
Supplies (Maintenance)			0.00
Volunteer shirts	8.15	100	815.00
Mulch	5.95	50	297.50
Tree clippers	34.00	5	170.00
Water sprayer	38.95	5	194.75
Water tank	300.00	7	2100.00
Drip systems	50.00	50	2500.00
Rake	16.85	7	117.95
Total			47,999.70

6. Project Outcome:

The intended results of this project are to ensure that each focal community environment can better combat future hazards. Also, that the trees planted are successful, well maintained and doing great. The project will create a sense of awareness throughout

communities and in the schools. Due to the clean-ups the majority of the communities will be free of physical pollutants before planting and awareness about littering will be created. Community involvement, communication and the possibility to volunteer will allow citizens of the communities to feel included and satisfied with the project's end product. As for the school's gardens, they will be completed, and students and staff will be taught how to maintain their garden, increasing their knowledge about the importance of disaster risk reduction, vegetation and our environment. Overall, the project will lower the risk of disasters, create environmental resilience, awareness, and restoration of the natural vegetation in communities leaving them more prepared for future natural hazards and disasters.

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