



The Vetiver Network International
Proven & green environmental solutions

Promoting the Application and Acceptability of
Vetiver System Technology and its applications
in the Solomon Islands; and identifying
potential projects to help build community
resilience to climate change using the Vetiver
System

FIELD TRIP REPORT



TABLE OF CONTENTS

Introduction	3
Contacts of interested and committed stakeholders who are prepared to promote VS in Solomon Islands.	3
How, When and who originally introduced Vetiver Grass into the Solomon Islands.....	4
Effectiveness of existing vetiver applications.....	5
OTHER SIGNIFICANT IMPACTS IN SOLOMON ISLAND FOLLOWING INTRODUCTION OF vst AT GIZO CORRECTIONAL CENTER IN 2015	11
Confirm the readiness of communities to participate.....	16
AgreeMENT that KGA and Faith would be the lead agencies.....	16
AgreeMENT on the broad scope of primary vetiver activities (applications).....	17
Gizo ISLAND	17
Honiara CAPITAL CITY	21
Potential communities that are likely to participate in the proposed projects both in Gizo and Honiara ...	27
Some key components and “policies” to be followed.....	28
Community Responsibilities	28
Roles of KGA and FAITH.....	29
Training.....	30
Promotion.....	30
Vetiver Plant Supply	31
Expected results of the project.....	31
Key issues that might effect the project being implemented	31
Project Cost	32
POTENTIAL SPONSORS	33
A timetable for finalising the project proposal.....	33
Conclusions.....	33

INTRODUCTION

Representing The Vetiver Network International (TVNI), I visited the Solomon Islands from 27th March 2017 through to the 31st March to identify and establish contacts with interested NGO stakeholders who would agree to identify, prepare and manage a “project” that would meet TVNI objectives as detailed below in the report. TVNI made it possible with a travel grant of USD2300.00 to cover travel and accommodation costs for the trip.

The purpose of the my trip was to assist The Vetiver Network International in identification of a pathway for a rapid expansion in the promotion and adaption of Vetiver System to benefit initially communities in both Honiara and Gizo Island, Solomon Islands. With the objective of increasing rural and urban communities build resilience to climate change and in particular, through Vetiver System applications. It will also provide the means, at low cost, for effective, Soil and Water Conservation, Pollution control that would improve food production and security and health and at the same time reduce sediment flows and pollutants to coastal inshore waters that is having an impact on its marine life in the coastal and island villages.

CONTACTS OF INTERESTED AND COMMITTED STAKEHOLDERS WHO ARE PREPARED TO PROMOTE VS IN SOLOMON ISLANDS.

Following are two key stakeholders in Honiara and Gizo respectively who have willingly showed interest in promoting VS in the Solomon Islands. There were some other community based NGO’s identified, however due to time factor I was not able to see them to discuss further.

1. Faith Garden Programme (FGP) – Gizo

Is a legitimate home grown Community Based Organisation (CBO) who works with rural communities to promote sustainable household and national food security and soil management. The word “Faith” means “Food Always in the Homes”. This rural development initiatives was borne in 2010 by interested and active local farmers who wish to work together to organize, encourage and assist its members to play and take an active part in all activities related to agricultural development in the province.

FGP currently provides practical demonstration training to farmers. It also facilitates practical work experience for Agricultural students from the rural training centres in the Solomon Islands and sharing of planting materials and information to farmers in the province.

2. Kastom Gaden Association (KGA) – Honiara

Kastom Gaden Association (KGA) was established as a charitable trust in 2000. It grew out of a five-year programme of an Australian NGO focussed on providing services to the subsistence and local market agriculture sector which encompassed the vast majority of the rural population. At the time this sector was poorly-serviced and poorly-recognised by government, donors, and private sector.

The KGA mission is to ‘STRENGTHEN VILLAGE-BASED FOOD SECURITY IN THE SOLOMON ISLANDS USING PARTICIPATORY, PRACTICAL, GRASS-ROOTS APPROACHES THAT ENABLE VILLAGE PEOPLE TO

EXAMINE, UNDERSTAND, AND DEVELOP THEIR OWN SOLUTIONS TO IMPROVING HOUSEHOLD FOOD SECURITY AND VILLAGE- BASED AGRICULTURE ECONOMY’.

Stakeholder	Contact Person(s)	Contact Number	Contact Address	Location
Kastom Gaden (NGO)	Clement Hadosia	(677) 7495544	clementh27317fh@gmail.com	Honiara
Faith Garden Incorporated (NGO)	John Holland Mathew Ganuru	(677) 8908339 7740078	matgarunu@gmail.com	Gizo
Honiara City Council (GOVT)	Eddie Gaza	(677) 27545	worksmanager.hcc@gmail.com	Honiara

HOW, WHEN AND WHO ORIGINALLY INTRODUCED VETIVER GRASS INTO THE SOLOMON ISLANDS.

Establishing facts on how, who and when the Vetiver Grass was first introduced into the Solomon Islands remains a mystery untold as no one seems to know. Various interviews I conducted to residents and respective authorities also are unsure. One resident who resides at the Panatina ridge said planting was done by women who were engaged by the City Council, he said they were told the grass was to keep rats out of their residences and keep dust out from the roads. That’s all they knew about Vetiver, until I took out the Vetiver poster and had a session with them explaining, then only they knew the uses of Vetiver Grass. Some residents were very excited and asked how to do planting and said they will with immediate effect plant them on their slopes to control erosion.

The Ministry of Infrastructure Development engineer Evelyn and Honiara City Council personnel were also interviewed and little did they know about the grass as well. They said they will obtain further details and get back to me. This also gave me the opportunity to introduce the VS to them and its importance. Expression of interest to promote the system looks positive, over time I will be keeping in contact with them to have the system rolled out. City Council Manager Eddie Gaza expressed they are very much willing to work together with any NGO that will be engaged to promote the system.

John Holland of Faith Garden in Gizo got their Vetiver Slips from an open Agricultural Day that was hosted by the Agriculture Ministry in Gizo. It was brought in from Simbo Island where it was introduced there for erosion control on slope gardening. John Holland said he saw the vetiver grass left lying on the ground after the field day and out of curiosity and with interest he took it to his house and started multiplying it. Initially he used Vetiver for mulch only until 2015 when Dr Paul Truong and I pointed out to him its other uses during our visit to his farm to source plant supply for the Correctional Centre project.

In Honiara, it was introduced to KGA by Tony Jansen (KGA founder) and Roselyn Kabu. They picked the planting materials from Fore Agriculture College in Malaita province in 1996 and brought it to KGA to be planted and used as part of its training for different farming systems introduced by KGA. Tony who used to work in South America, knows about the importance and uses of the grass, thus when they saw it at Fore, they decide to bring it to KGA. It was after this that the grass was spread across the country through KGAs PMN network members/ farmers.

EFFECTIVENESS OF EXISTING VETIVER APPLICATIONS

The effectiveness of existing vetiver applications and its impacts were visually and anecdotally observed during my visit and included but not limited to on Gizo and Honiara respectively:

GIZO CORRECTIONAL CENTRE SLOPE STABILIZED WITH VETIVER GRASS

A site trip was taken around the proposed project sites by Mr. John Holland Seti (FAITH Garden Program Trust Incorporated) and myself. We started with site inspection of the Gizo Correctional Centre Slope Remediation project. The new center funded by AusAid was not able to be used due to a major Slope Failure in 2014. The following pictures show the slope before and five months after VS implementation



Extensive erosion and land slips on unprotected slope causing severe damage to buildings prompted authority to adopt Vetiver System Technology

However this has since opened and now in use after the whole remand center was stabilized using the VS. The whole perimeter of the remand center is now planted up with more than 50 000 Vetiver tillers by FAITH Garden as shown in pictures 1 – 10.



Pictures 1 – 6: Random shots of the Vetiver planting in the remand center from different locations.



Pictures 7 & 8: Silts were hardly seen in the drains and literally without silt



Picture 9 & 10: John Holland (left) who did the supervision of the planting and Robinson Vanoh (right) who coordinated the Slope Remediation project.

The impact of the VS was very significant as evident in minimal erosion in the areas planted up with Vetiver grass. The drains hardly contained any silt as visually observed during the visit. The hedges also acted as very good wind breakers for the sea breeze.

A few residents were interviewed about sighting of any pests or snakes due to the area being covered up with Vetiver grass. No sightings of such were reported. A few trimming of the hedges here and there by respective house occupants were noted. It would be ideal to have a uniformity in trimming and upkeep by the prisoners as a training.

EROSION REDUCTION (ROADSIDE PLANTING ON PANATINA RIDGES)

Erosion reduction on roadside plantings done on the Panatina Ridges were very encouraging though. The plantings are signatures of someone who knew the Vetiver System well. The plantings were scattered and isolated in most areas, it is highly likely planting was done as a hedgerow to stabilize road batter, however some may have been uprooted and or destroyed unknowing by residents.

The plantings seems to have been planted some 15 – 20 years ago, as some residents who I interviewed knew little or none about the Vetiver Grass planting. On slopes where vetiver were planted, slopes were fully stabilized, unlike where they were not planted, erosion and landslips were evident.

Panatina is an abandoned populated place and is the main feeder to the Lunga Watershed management area. These part of the area are hilly and all the residential houses are built on hills posing immediate danger to landslip. Massive soil erosion were noted which is an immediate danger if no sustainable practices are initiated for these areas.

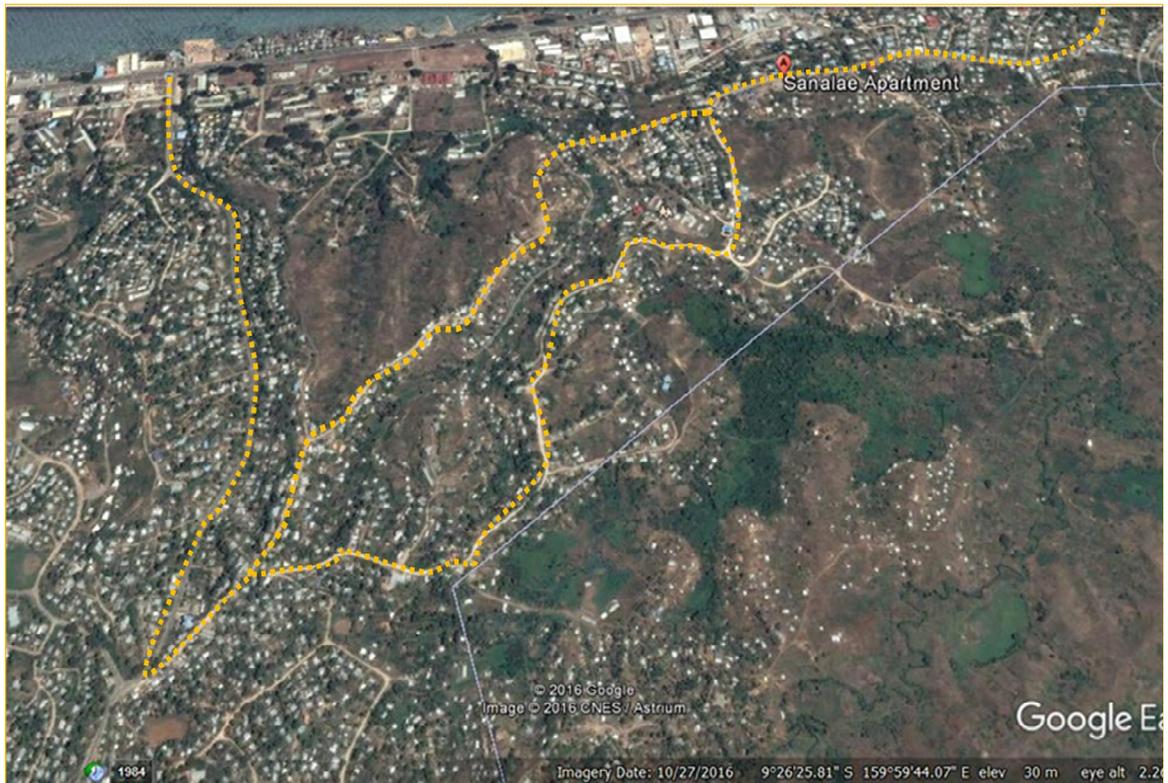


Pictures 11 – 14: Vetiver planting on cut batters to protect slopes on residential properties.



Pictures 15– 20: Random shots from the Panatina ridge planting at different locations for hillside road stabilization.

Image 1: The route taken to visually observe impacts and also establish facts on the establishment of Vetiver Grass on the roadside & hills. Pictures shown above are all from this road. Other plantings were also seen on other adjacent hills as well.



OTHER SIGNIFICANT IMPACTS IN SOLOMON ISLAND FOLLOWING INTRODUCTION OF VST AT GIZO CORRECTIONAL CENTER IN 2015

The impact of the VS was very significant as evident in minimal erosion in the areas planted up with Vetiver grass on the very steep and highly erodible site, with no erosion on the slope and the drains hardly contained any silt as visually observed during the visit.

A few residents were interviewed about sighting of any pests or snakes due to the area being covered up with Vetiver grass. No sightings of such were reported.

GIZO ISLAND

Mountain Home Made Safer and Greener with Vetiver Grass (Jah Hill - Gizo)

Some residential properties were also inspected where vetiver was introduced to after the success of the centre by John Holland also showed very positive results. One such residence was that of Mr. Bob McFarlane, a retired volunteer who had worked in a couple of pacific Island nations and is from New Zealand. He spoke highly of the vetiver grass when I spoke to him. The grass was the answer to his problem as stated. In some areas, the planting was not done correctly, however this was corrected.



Picture 21 & 22: Vetiver planted in front of drains which were dug initially to reduce velocity of water to control soil erosion on hill top.



Picture 23 & 24: Planted across slope contour to stop soil erosion and proven to be a success.



Picture 25 & 26: Bob McFarlane (left) and John Holland, on the right is Mr McFarlane's residence on hill top.



Pictures 27 & 28: View from the top, note the number of drains dug which was only a short term solution which was dug prior to the vetiver introduced to him.

On Farm Applications (Faith Garden organic vegetable demo farm)

Faith Garden Programme (FGP) is a home grown community based organisation (CBO) that works with rural communities to promote sustainable food security and conversation. Following pictures shows demo plots where FGP uses to train its rural farmers on best sustainable farming practices.

John Holland and his family manage a demonstration farm on the outskirts of Gizo for this purpose. He has trained many vocational students, but with limited funding from the Government. Finance has been Faith Garden's main constraint in implementing its programs effectively.



Picture 29 – 33: Faith Garden Organic Vegetable Demonstration farm.

John has been cultivating on this portion of land over the last 6 years with his sustainable practices of soil moisture retention and soil fertility practice using vetiver leaves as mulch. **His neighbours however had to leave their land for furlough whilst he is continuously farming on his model farm.**



Image 2: The route walked on Gizo to visually observe impacts and also establish facts on the establishment of Vetiver Grass on the Correctional Centre Slope failure and other residences. Visual observation of problem areas were also observed on the hills.

GUADALCANAL (Honiara Capital City)

Infrastructure Protection in Oil Palm Plantations (GPPOL)

The only oil palm company in the Solomon Islands also has vetiver planted on its plantation to stabilize drain walls, culvert headwalls and its roads. When the Plantation Manager (**Mesach Boge**) was interviewed, he spoke highly of the Vetiver Grass. He said its impacts on the roads, drains and culverts were very significant as seen. He also has an established nursery at this house where he distributes tillers to workers to plant. He was one of the main suppliers of the tillers for the Gizo Slope Remediation project where he supplied more than 30 000 tillers.



Pictures 34 & 35: Plantation road stabilization, also planted to stop debris from being washed onto the roads during flooding.



Pictures 36 & 37: Culvert headwalls stabilization (combination of gabion basket with Vetiver grass)



Pictures 38 & 39: Meshach's nursery which has the capacity to supply more than 50 000 planting slips.

CONFIRM THE READINESS OF COMMUNITIES TO PARTICIPATE.

The communities on Gizo are keen and are ready to participate, actually they have and are starting to use the vetiver grass applications in some of their residences. Some have also requested Faith Garden to install vetiver on their properties where land is slipping. John Holland has been promoting its use to some local residence on Gizo, however due to lack of funding, he was only able to do little.

There are about seven (7) co-partners in and around Gizo who are prepared and ready to promote and even use the system. With the success story of the Correctional Centre slope remediation project, the system is highly likely to be accepted by the community with ease and great interest.

Clement Hadosaia from Kastom Gaden was actually very excited during our discussion in promoting the system. He already was picturing possible sites that the initial pilot projects will be carried out as part of the awareness program.

KGA currently has no donor funding or new project, therefore, its staff were laid off in December 2016. Ideally, they can link up through the umbrella NGO body "Development Service's Exchange". Otherwise, Clement is currently organizing himself to create a new registered group, which is currently under discussion. They may also try and link with KGA, but the fact is that the organization is run by the Board and decisions takes longer to be made. His group consist of all former KGA staff, and therefore they have the necessary experience and knowledge to carry out the work/ activities for the proposed project.

AGREEMENT THAT KGA AND FAITH WOULD BE THE LEAD AGENCIES

Currently KGA have scaled down its operations and only a skeleton staff are maintaining their office, hence their ability to take the lead is very remote, it may take time for them to regroup to take the lead. However, Clement Hadosaia has shown interest and is willing to take the leading role for Honiara. He has already regrouped his team who were laid off by KGA to take the lead in Honiara as am been advised recently after my trip. He has been advised to team up with a legally registered CBO to take on the leading role.

John Holland and his Faith team in Gizo are all set to take the lead as the lead agency in Gizo to take up the project to be initiated. With their recent experience in the planting of the slope failure remediation project, they are all set to go.

All in all, it is recommended, as agreed with Clement and John, that we have 2 lead agencies for the project, one for Honiara and the other for Gizo Island. KGA operations are guided and run by a board, hence delivery of services as and when required can be affected as experienced in their previous funded projects.

AGREEMENT ON THE BROAD SCOPE OF PRIMARY VETIVER ACTIVITIES (APPLICATIONS)

GIZO ISLAND

The broad scope of activities that will be undertaken in Gizo by FAITH Garden as discussed and agreed with John Holland and his project coordinator, but not limited to include:

1. **Water Conservation**

The Island population entirely depended on rain water for consumption. The only water supply in town is a small reservoir which supplies the business community. Whilst the local communities in the settlements depend on small stream catchments, however not safe. Water conservation and retention is of a major concern.

With its rapid growth many of Gizo's hillsides have been settled without approval, as there were few other options for available land. This has caused problems for water catchment that serves the township's water supply.



Picture 40: Standby water reservoir



Picture 41: Rain water catchment for settlers

2. **Soil Conservation/ Erosion Control and Slope Stabilization**

Gizo Island's topography is relatively low. Flat land at 50 cm above sea level only covers a narrow strip averaging at 25 meters from the low water mark to the edge of the foothills. The inland ridges are irregular with intruding valleys and foothills but are gentle and more rounded therefore it is vulnerable to soil erosion as evident.

Runoffs and catchments among the foothills form a number of streams discharging at various sites causing soil erosion on most residential properties as seen.



Picture 42 & 45: Slope failures like this are common sites for the township which poses immediate danger. Two houses were buried by this slip in January.

3. VS for Agriculture

Agriculture in Gizo consists of two subsectors: subsistence smallholder farming and commercial farming. The predominantly Gizo community engage in subsistence agricultural activities which are often combined with cash cropping. The main root crops are: cassava, sweet potato, yams, taro and pana (seasonally). Root crops and vegetables are part of the staple diet and supplement income gained from sale of cash crops such as cocoa and copra.



Picture 46 & 47: Gizo market where all their cash crop are sold to supplement income. Note the abundance of root crop & Vegetables.

4. Solid Waste Management (Landfill)

Solid Waste management of the island is of a major concern as evident. The only landfill they have is located at the mouth of a watershed management area which poses risk of highly toxic waste leaching into the ocean. The ocean is only a couple of meters away from the landfill. Solid Waste from the township is dumped on this site and is not managed as shown in following pictures below.



Pictures 48 & 49: Uncollected rubbish at the main market (left) and at the dump site (right). These rubbish when dumped ends up in the ocean as shown in the following pictures below.



Pictures 50 & 53: Polluted water at sea fronts near the main market and shopping centre.

5. Sanitation (Vetiver Latrine)

Lack of proper sanitation is among Gizo's number one health issue. Most of the houses seen seem to have no proper sanitation, if there were any, the toilets were not even safe for use as they were only walled with plastics as privacy shields.

One of the biggest issues faced by the local people is on proper sanitation. People residing in the lagoon are using the mangroves and shorelines as toilet ground. The currents circulating within lagoons are holding on to these waste matters, if these people continue using these sites as toilet grounds, their health is at stake because the lagoon offers their fishing ground.

All in all, the concept to be used in promoting the use of Vetiver System will be family based concept and unlike in their previous programs where they used community based projects where it has failed due to lack of leadership and team work. Lack of funding has being another major obstacle in driving projects forward.

With the Solomon Islanders being such a diverse nation, the language and cultural barrier between each tribe poses a serious threat to any community based projects, therefore, family based concept will be adapted on Gizo as discussed and agreed with the Faith team.

HONIARA CAPITAL CITY

The Solomon Islands capital Honiara, as a developing city, has one of the highest urbanisation rates in the region, and the basic service infrastructure is struggling to cater for the influx of people from the provinces to the capital, Honiara. As such some key projects as discussed and agreed upon, and also identified to be undertaken by Kastom Gaden (Clement Hadosaia) in Honiara includes:

Solid Waste Management (Landfill)

The Ranadi landfill site managed by the Honiara City Council is also of a major concern to the community. Dumping of solid waste at this landfill is uncontrolled and open as shown in picture 41 and 42. Solid waste there are uncovered, opening burning of rubbish heavily pollutes the air.

Also observed on the Panatina Ridge settlement areas, residences burn their waste, dispose of it in their backyards, and in the river or streams. These is evident from the volume of waste seen on the beaches along the shoreline. Improper waste management contributes to environmental pollution and the clogging of waterways, creating conditions that can be further exacerbated by climate change impacts. The shorelines of the city is also noted to be heavily polluted with waste dumped into the streams or the rivers as shown in pictures 56 and 57.





Picture 54 & 55: The Ranadi Landfill Site with uncontrolled dumping of rubbish (Photos courtesy of Clement Hadosaia).



Picture 56 & 57: Waste washed down from upstream on the shorelines of the city near Pacific Casino.

Sanitation and Vetiver Latrine

Very few people have access to flush toilets as am been told, some use pit toilets and almost more than half the population use the sea, river or nearby land. The state of sanitation is equally critical. Most people use the nearby beach, even though it is not safe to use at night,” stated by one resident who was interviewed.

One family when interviewed said they only have excess to a pit toilet, however they cannot use the toilet during the day because it’s an open pit toilet. She said they cannot use it because other families sit around during the day and therefore there is no privacy.

Toilet outfalls into open drainage, bathing and kitchen grey water runs directly into open drainage canals. Also noted were waste from pig pens also run directly into the open drainage which is a major concern. Introduction of Vetiver latrine to the communities will be an ideal project and will therefore be accepted by all concerned communities with much interest.



Picture 58 & 59: Drainage canal (left) serving as toilet outfall and connecting into a larger creek which flows to the main rivers and eventually into the sea.

Soil Erosion Control & Conservation

Soil erosion in and around Honiara is of a major concern as evident all over. Uncontrolled logging and deforestation that was done some years back upstream had left the land vulnerable to soil erosion. Due to pressure in population growth, most of the hilly areas are farmed and the soil exposed to sheet erosion. Deforestation is one of the significant environmental problems in Honiara. The related problem of soil erosion is a threat to the country's agricultural productivity if nothing is done to control soil erosion.



Picture 60 & 61: Unsustainable farming practices on the hillsides as seen on the Panatina ridges



Picture 62 & 64: Uncontrolled logging upstream on the top right resulting in rivers being heavily silt with deposits.

Watershed Management

The capital city Honiara is sitting on a time bomb if no immediate environmentally sustainable protection systems such as the vetiver system are implemented. The three main rivers (Lunnga, Mataniko and White river) that run into Honiara have heavy deposits of silt from upstream exposing the city prone to flooding. Therefore the initiative of promoting the use of vetiver system is timely and will by all means will be an impact project for the cities watershed management area.

The Lungga River is on the city boundary of Honiara, has periodic flooding problems, has encroaching urban sprawl, hydroelectric power options and is an important local asset for recreation, and small business such as the local car washing industry with in-stream use. The upper catchments are forested, with lower clearings being pasture land with limited animal grazing and village food production, this terrain is interspersed with some deeply incised rugged gorges. These would be ideal catchment area for the watershed management project.

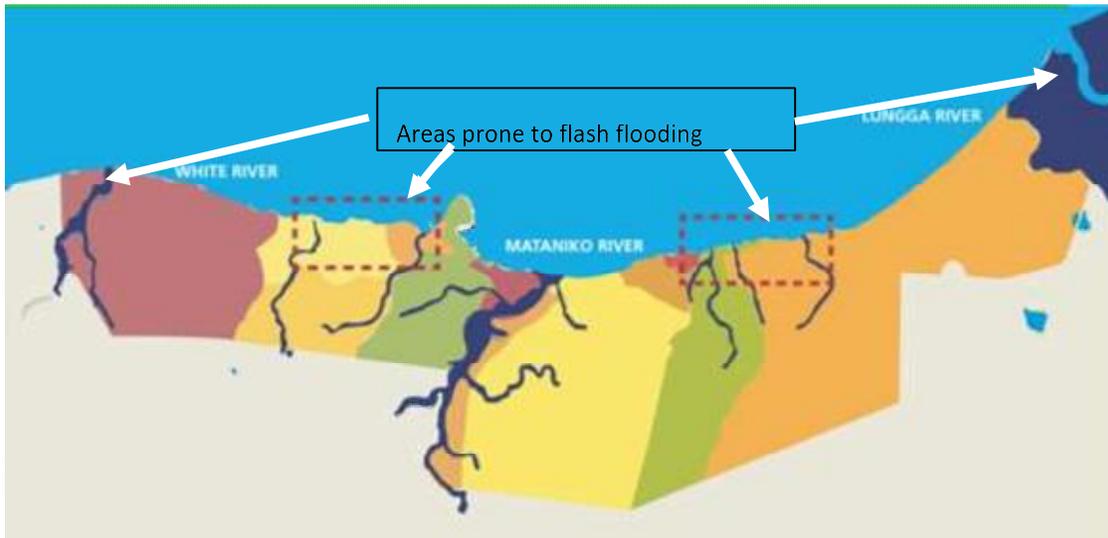


Image 3: Location of three main rivers and areas exposed to Riverine Floods. (Source: UN-Habitat National Geographic Information Centre, SI)



Picture 65 – 68: Catchment areas of main rivers with heavy deposits of silts on river banks

Water Conservation

Most households I spoke to in Honiara experience shortages of clean water for cooking, drinking and washing on a daily basis. Most people as observed do not seem to have any water supply to their homes, it is highly likely they collect water from wells, rivers and streams.

Much of the water supply and sanitation infrastructure in Honiara was seriously damaged during the 'Tensions' and, since then, development funding has prioritised peace and reconciliation, law and justice, governance and economic development therefore this remains a major concern for the city as reported.

Agriculture

Residents who lived along the Lungga River that were affected by the recent flash floods in Honiara in 2015 were moved to higher grounds further up the catchment area as shown in pictures below. Their only means of survival is farming, therefore farming upstream is their main activity, hence is also one of the contributing factors for soil erosion.

As agreed with Clement Hadosaia, piloting a major project (Agriculture package) where they were resettled would have a lot of impacts on people's livelihood and the environment as a whole.



Picture 69 & 70: Re-settlement areas for those that were affected by the flood in 2015. Farming on hillsides as this aerial pictures I captured shows is common there.

Infrastructure Stabilisation

Infrastructures in Honiara are of a concern if no sustainable practices such as the Vetiver System are not introduced as observed. Recent flash floods have in recent years completely washed out bridges and houses affecting the business community. Honiara remains under threat of further destruction.

While driving out of Honiara on the East side highway towards the oil palm plantations, I noted that almost 60% of the bridges is about to be washed off should there be another flash flood. Soil along bridge abutments are heavily washed out and exposed to further damage if no immediate preventative measure is taken to stabilize walls.



Picture 71 & 72: Pictures of destruction to business houses and bridge infrastructure by the recent flash floods (Pictures courtesy of John Holland).



Picture 73 & 74: New Nbalishuma bridge under construction after it was destroyed by flash floods recently (left) and an existing bridge which is also under treat of being washed out if the abutments are not protected.

POTENTIAL COMMUNITIES THAT ARE LIKELY TO PARTICIPATE IN THE PROPOSED PROJECTS BOTH IN GIZO AND HONIARA

Following potential communities from both Gizo and Honiara were identified to participate in the proposed project to be initiated. Other communities are likely to follow suit based on the outcome of the initial communities.

Gizo	Honiara
Gizo Community Farmers Group	Honiara City Council
Nusa Mahiri Farmers Network Group	Lungga Flash Flood victim re-settlers
Rural Training Centres Solomon Islands	Panatina Settlement communities
Bibolo Community	Honiara Community Farmers Group
Gizo SDA Community	Panatina Catchment Community
Correctional Centre Prisoners	

SOME KEY COMPONENTS AND “POLICIES” TO BE FOLLOWED

To implement the project in line with TVNI requirements, KGA and FAITH have drafted the seven following policies:

1. Be financially responsible and acquit all funds to the donor as and when required.
2. KGA and FAITH to submit a completion report on completion of the project.
3. Serve as a lead extension centres to supply vetiver tillers to other interested users and government agencies.
4. Planting of vetiver to protect the areas which are prone to soil erosion within the proposed project areas.
5. Functioning as lead organisations for providing knowledge of vetiver applications among the affected local communities, as well as the public and private agencies.
6. Launching campaigns among the local communities encouraging them to acquire the knowledge on vetiver ecotypes, maintenance and benefits, and to extend the results to other neighbouring communities so that they can adopt the knowledge gained on their own land at home in their respective provinces.
7. Continue to promote and carry out awareness on the use of vetiver system after the completion of the project phase.

COMMUNITY RESPONSIBILITIES

Responsibilities are an individual's duties or obligations to the community and include cooperation, respect and participation. The concept goes beyond thinking and acting as individuals to common beliefs about shared interests and life. Communities in both Honiara and Gizo must be able to take the leading

role and ownership of the project as and when implemented for the betterment of their environment. Their responsibilities are listed herewith but not limited to:

- Make land available for the establishment of primary nurseries for tiller distribution.
- Be able to provide labour at cost or on voluntary basis to see the success of these very vital projects sustainability.
- Be socially responsible toward environmental issues. Striving for social responsibility will help the community have a positive impact on the use of VS, with positive contribution to bottom-line results.

ROLES OF KGA AND FAITH

The roles of KGA and FAITH in promoting adaptability and acceptability of Vetiver System will be, but not limited to:

- Provide ongoing progress report for the project during the duration of the project.
- Yearly Acquittal of all funds and report back to the donor agency.
- Set up a committee for the project of promotion on planting Vetiver with Community participation and hold meetings among the committee.
- Set guidelines and regulations including assessment and evaluative procedures.
- Produce young vetiver grass for distribution. Ensure responsible groups produce young vetiver grass within the project site areas.
- Propagate vetiver grass by distributing it to targeted communities.
- Local employment are provided in the targeted areas for producing and caring for young vetiver grass.
- Build signboards to mention the project at each project site stating the project's name, responsible unit, and funding-provider.
- When young vetiver grass becomes strong distribute them to respective communities as most communities cannot afford vehicles and transportation costs for vetiver grass transportation.
- Promote and support information about vetiver grass for communities.
- Distribute educational and promotional material about vetiver grass to use as documents for the trainings and distribute them to local communities. The materials are in the form of books, pamphlets, posters, and videos.
- Train to ensure knowledge of vetiver grass in the course of developing and promoting the utilization of vetiver to conserve soil and water with community participation.
- Provide knowledge about vetiver grass utilization for soil and water conservation.
- Promote by providing knowledge and create understanding to make sure that the locals see benefits of vetiver grass according to the saying, "Plant vetiver grass in people's mind first, then in the areas." This is because the benefits of vetiver grass will not show in a short period of time. At the same time, awareness will also rise, encouraging communities to promote the utilization of vetiver grass in neighbouring communities and encourage participation among local people
- Build awareness and motivation by having local activities related to vetiver grass on important days such as the "Vetiver Field Day".
- Build vetiver grass networks among private organizations, local communities, and youths by having them participate in the program so that they will be the next generation leaders to

promote the benefits of vetiver grass, hence encouraging and persuading neighbour communities to plant vetiver grass in their own fields.

TRAINING

The adoption of new technology is often limited, because it may not always know the communities specific needs and/ or limitations. As a result, the introduced technologies may not be adapted to fit communities' cultural practices. To avoid this, grower's participatory soil conservation demonstration will be carried out on pilot demonstration sites. The grower's participatory pilot demonstration activity will comprise two or more of existing (structural) soil conservation practices and Vetiver hedge rows as a new technology. This intervention will enhance adoption by growers of more suitable conservation practices in the project sites.

Since the promotion of Vetiver System Technology to be undertaken is going to be new in the Solomon Islands, KGA and FAITH extension workers, who will be involved in the program will be trained by TVNI on Vetiver System Technology. In turn, the extension workers will train, advice and guide growers and users to facilitate the adaption of Vetiver System Technology.

Field days will also be organized to discuss with growers and users in pilot sites. This will give access to growers to look and discuss about best demonstrated practices, how best to promote the system cost effectively, in terms of labour. Growers will also be able to compare Vetiver technology with other conservation options. Additionally, this will give opportunity to demonstrate the additional benefits that could be driven from Vetiver. Growers "Vetiver" day will also be organized at convenient period in each project area to ignite and motivate the wide spread use of Vetiver. This will be an opportunity for others to see and learn how best others are using the system.

PROMOTION

To establish a healthy competition atmosphere for growers and users, a participatory monitoring and evaluation of grower's skill and knowledge on VST will be carried out by TVNI technical team randomly during the duration of the project phase.

Based on the result of the evaluation best growers will be selected & awarded in the form of money or in puts, so that other growers will be encouraged. To assess how effective the extension is being used to promote the adaption of VST, regular monitoring & evaluation will be carried out. Awarding of recipients will be done during the Vetiver Field Day.

Since it is essential to evaluate the efficiency of Vetiver planted in the pilot project years. A case study of Vetiver as a tool for application and acceptability of Vetiver Grass Technology and Vetiver System applications in the Solomon Islands will be undertaken.

The current practice of using local family labour on a voluntary basis will be the major input into the Vetiver promotion program.

VETIVER PLANT SUPPLY

A main community nursery where Vetiver promotion program is going to be implemented will be established both on Gizo and in Honiara. The capacity of the main nursery and production capacity will be increased to meet demand. Thus, supply of a health and adequate amount of planting stock, on time, will be guaranteed from the established nurseries.

Interested growers will be encouraged to establish their own Vetiver producing nurseries. Planting stocks will be delivered freely from the main nursery. Technical support will also be given to them.

EXPECTED RESULTS OF THE PROJECT

Expected results of the project both on the Island of Gizo and in Honiara are:

- Plant and distribute more than 100 000 Vetiver slips to all communities involved in the promotion of VST.
- To have clean water for home use.
- Control and reduce landslides in the project areas.
- Stop or minimize soil erosion in all affected areas.
- Solid Waste on both landfills are managed to protect our environment from further pollution.
- Introduce Vetiver Latrine to at least more than 60% of the pit toilet users.
- The community to fully accept the adaptability of Vetiver System for Climate Change resilience by end of project completion.
- A healthy community
- Vetiver System that is fully accepted and its adaptability to combat climate change resilience fully adopted.

KEY ISSUES THAT MIGHT EFFECT THE PROJECT BEING IMPLEMENTED

Some key issues that might effect the project being implemented includes but not limited to:

- One of the main constraint of the association will be the lack of adequate facilities and equipment to assist in delivering the necessary needs and services to members and farmers in the community.
- Cultural barriers
- Lack of understanding of the new Technology being implemented.
- Unavailability of basic services such as transportation to deliver and carry out promotion and awareness.
- Discussion can be dominated or side tracked by a few individuals.
- The information may not represent the whole community, which may require additional focus groups.
- Lack of Stakeholder Engagement – A disinterested team member can destroy a project.
-

PROJECT COST

Since accurate cost breakdown requires a detailed feasibility study of total area selected for the Vetiver promotion program, a lump-sum money of **USD 95,480** is estimated for the project on Gizo Island and Honiara respectively. Total cost can be proportioned as 60% for Honiara and 40% for Gizo. However this amount can be either reduced or increased based on funding eligibility.

Costs Estimate

NO	EXPENDITURE CATEGORIES	TOTAL
1	Vetiver slips for planting in agreed pilot location and Community nurseries	12,000
2	Specialists:	
	Visit by TVNI rep to the Project sites (travel expenses - 3 visits/year @ \$2300/year	13,800
	b. Consultation/allowances fee for the Consulting firm @\$2000/year	6,000
	c. Coordinate Stakeholders in the project sites and review of suitable Pilot project areas	8,000
3	Community surveys to determine project sites, Present livelihoods and aspirations etc: inputting data and analysis	3,000
4	Training, workshops, seminars and awareness programs	
	Field visit to successful Vetiver-based pilot project sites and selected stakeholder trainees to include "Vetiver Field Day".	8,000
	Contribution to the local community groups for awareness with the theme "building community resilience to climate change using the Vetiver System".	15,000
5	Equipment, supplies and documentation: Computer work, Equipment rental, stationeries, etc	7,000
6	Project management monitoring and evaluations by TVNI	6,000
7.	Associated Administration and Transportation costs.	8,000
	Sub-total	86,800
	10% for contingencies	8,680
	TOTAL	95,480

POTENTIAL SPONSORS

Potential International agencies such as JICA, AUSAID, USAID, NZAID, KOREAN AID, TAIWANESE, GERMAN GTZ, DANISH, DUTCH ETC can be sought to sponsor the projects to be initiated in the Solomon Islands.

Other potential sponsors can be from the Palm Oil Company, Logging companies and even from the Fisheries Industry.

A TIMETABLE FOR FINALISING THE PROJECT PROPOSAL

ACTIVITY	IMPLEMENTATION TIME					RESPONSIBILITY
	Apr	May	Jun	Jul	Aug	
Report write-up						Robinson Vanoh
Report Review One						Robinson/Faith/KGA
Report Review Two						R. Grimshaw/P. Truong
Final Review						R. Grimshaw/P. Truong
Project Proposal						R. Grimshaw/P. Truong
Project Funding						R. Grimshaw
Start Project						Robinson/Faith/KGA

CONCLUSIONS

The Solomon Islands possess valuable natural resources that should be protected because they are vanishing at an appalling rate. Beautiful lagoons, rushing rivers and lush rainforests cover the islands, and contribute to the illusion of a tropical paradise.

The pathway for a rapid expansion in the promotion and adaption of Vetiver System to benefit initially communities in both Honiara and Gizo Island, Solomon Islands is one such project that must be accepted by both the government and the community. With the objective of increasing rural and urban communities build resilience to climate change and in particular, through Vetiver System applications is highly recommended.

It will also provide the means, at low cost, for effective, Soil and Water Conservation, Pollution control that would improve food production and security and health and at the same time reduce sediment flows

and pollutants to coastal inshore waters that is having an impact on its marine life in the coastal and island villages.

The majority of the urban population in Honiara and the Island communities on the Island of Gizo remain unaware of the pressing problems happening in their respective communities. Without the creation of a stable health and educational infrastructure, the Solomon Islanders cannot deal with the onslaught of social-economic problems.

The only way to improve the conditions of the communities involves the full cooperation of the government in protecting the environment and providing adequate information to ensure the survival of the people.

Unfortunately, the government still needs to get their heads out of the clouds, and plant their feet firmly on the ground to protect their environment from further destruction. Government must be able to fund and work closely with community based organisations (CBO) as a way forward. The government does not have the capacity and its inability to effectively manage its resources is a major setback for environmental protection initiatives.