

WORKSHOP REPORT

CLIMATE CHANGE ADAPTATION WORKSHOP FOR DISTRICT ADMINISTRATORS & EMERGENCY BRIGADE TEAM LEADERS - 13 APRIL 2018, THE GUY MOREL INSTITUTE

Compiled by Michele Martin for the GCCA+ Component A and the EBA Project.

BACKGROUND

The GCCA+ component A project provides support for policy, finance and capacity building for climate change adaptation in Seychelles. In early 2018, the Department of Local Government requested support for providing training in basic climate change adaptation for District Administrators and Emergency Brigade Team Leaders. The Adaptation Fund EBA Project had also been planning similar training, and so the two projects collaborated to organise a one-day workshop in April 2018, held at the Guy Morel Institute. The workshop aimed to familiarize participants with the impacts of climate change, and start the process of helping community leaders identify climate risks in their communities and how they can plan ahead to reduce their vulnerabilities.

PARTICIPANTS

The workshop was attended by about 60 people, mainly district administrators and their emergency brigade team leaders, as well as several staff from the MEECC, Local Government and the TGMI. The registration list can be found in Annex A.

WORKSHOP AGENDA

The full workshop agenda is attached in Annex B.

8.30	Welcome by MC & TGMI
8.35	PS Vidot (Local Government) remarks and official opening
8.45	Introductions, Review of Agenda, Ice breaker game & Brief Introduction to Climate Change
9.30	Break
10:00	Climate Change: What do the numbers show? Phoebe Shikuku from the SNMA
10:20	Climate change and risks to communities Regina Sinon from DRDM
10:30	Climate change and human health Dr. Shobha from Ministry of Health
10:50	Group work: Assessing risk in our communities
12:20	PS Agricole - remarks and closing of morning session
12:30	Lunch
13:30	Field Trip to view sites affected by extreme weather and actions taken: North East Point, Glacis, Beau Vallon, Mont Simpson, Anse Marie Laure
16:30	On site – discussions and conclusion of workshop, evaluations

WORKSHOP EXPENSES

All of the workshop expenses were covered by the Adaptation Fund/UNDP EBA project including:

1. Venue at the TGMI and the PA system
2. Refreshments and lunch
3. Bus rental with SPTC for the field trip

Photocopies were made by Local Government as well as coordination of all participants.

GCCA+ covered the costs of workshop planning and facilitation.

WORKSHOP DESCRIPTION

The workshop proceeded as planned with a couple of minor changes – the EBA project was removed as a formal presentation in the morning and moved to the afternoon as an onsite explanation at North East Point project site, and DG Paul Labaleine from DRDM was replaced by Regina Sinon.

The morning session was facilitated by Michele Martin from the GCCA+ and MC'd by Peter Estico from the Department of Local Government. PS Vidot from Local Government opened the workshop and provided a background to why it is so important for district administrators and emergency brigade leaders to be conversant in climate change and proactive in helping communities to prepare.

The morning presentations included a brief overview of the causes and impacts of climate change, a review of climate impacts being observed by the Seychelles National Metereological Authority, an overview of the work of DRDM in terms of response to climate disasters, and a description of the risks that climate change presents to human health. Each was followed by a brief question period and then a short discussion period took place before the groupwork. Participants had the most questions for Dr. Shobha, revealing the relevance of human health impacts of climate change to the work done by Das at community level. Participants were also curious as to the level of preparedness in the country in the eventuality of an extreme weather event. Ms Prosper provided an overview of the protocols in place to ensure a coordinated response and effective communication among decisionmakers to ensure safety of the public.

Before lunch, participants organised themselves into small groups for the groupwork exercise and chose a district to focus on. They were given a list of possible climate change impacts faced by communities and asked to map them on a vulnerability matrix, considering the degree to which that community is sensitive to each impact, and how prepared they are to deal with the problem and recover quickly should it occur today. The exercise proved challenging in terms of understanding the factors that cause vulnerability, but helped participants apply some of what was learned in the earlier presentations to the context of the local community. Each group provided a brief summary of the impact/s their chosen community was most vulnerable to and explained their reasoning. A copy of the groupwork instructions and matrix used for recording vulnerability is provided in Annex C.

After lunch, everyone took part in a field trip by bus to visit sites in north Mahe that have been affected by coastal erosion, heavy rains and which have had remedial works implemented to avoid further impacts. A list of the sites visited and discussion points can be found in Annex D. The field trip provided an ideal opportunity for Betty Victor, EBA Project Manager, to provide some more information about the EBA project and the work that is being done at North East Point to understand the coastal erosion occurring there and how to address it sustainably, using an EBA approach.

Photos of the workshop can be found in Annex E.

WORKSHOP EVALUATION

At the end of the day, participants were invited to fill in an evaluation form. 27 forms were submitted and the findings are summarized in the table below.

In general, the feedback was very positive. Participants reported gaining new knowledge about climate change and particularly noted that they now understood that climate change is real and how it is already affecting Seychelles. A large number enjoyed the field trips particularly but many respondents noted that they enjoyed the wide range of presentations as well as the opportunities for sharing and discussion. The vast majority reported that they would now go and share what they learned with others in the community and some indicated that they would hold public awareness meetings, set up a group, or update their disaster plan to think more about climate change impacts and vulnerabilities. In terms of shortcomings,

several people noted that there was too much talking in the morning presentations, but the majority of participants reported that they enjoyed everything about the day.

Workshop evaluation responses – summary from 27 participants.

1. Please tell us at least one new thing you learned	2. What did you enjoy about the workshop?
<ul style="list-style-type: none"> • intensity / reality / danger of climate change problem in Seychelles - 8 • About GCCA+ project • About climate change – 4 • impacts of climate change -4 • effects of CC on the coast / ecosystem – 4 • how to adapt to cc – 3 • factors causing climate change - 2 • group work cc vulnerability assessment exercise – how to analyse -2 • industrial farming also contributes to cc • practical/ real examples of cc impacts eg on health • how to protect coastal environment • reclaiming land can have side effects on other areas of coast • the music – songs on cc 	<ul style="list-style-type: none"> • Field trip (site visits) - 11 • Presentations – 6 • Everything - 4 • Risk assessment group work -3 • Sharing views and discussions -3 • A lot of new information given – 2 • Different partners who participated • Seeing the map and learning about cc around the world • Variety of techniques used to get participants active • Interactive facilitation style
3. What didn't you like?	4. How can you apply what you learned in your work?
<ul style="list-style-type: none"> • Everything ok / nil - 19 • No reply -3 • The site visits • Too much talking in morning presentations • Some presentations repetitive, got boring • DRDM mandate should be clearer • Needed more time for groupwork • Length of workshop 	<ul style="list-style-type: none"> • Share what I learned with others -8 • Sharing with work colleagues / emergency brigade -6 • Identify and assess risk factors and be proactive, enhance disaster plan – 5 • Organising workshops/ meetings for the public about what they can do to prepare for cc - 4 • We need to be more innovative -2 • Protect what needs protecting -2 • Helping out in the district - 2 • Organise talks and activities with youth worker and schools, youth groups • Form a group in the community to raise awareness • Be more conscious of cc effects • Apply what I've learned every day • Work with the district community based organisation (CBO)

Numbers indicate how many participants wrote a similar response.

CONCLUSION AND RECOMMENDATIONS

The workshop was deemed to be useful and interesting by participants and served as a good introduction to climate change and assessing vulnerability. Many of the participants indicated a willingness to share what they learned with others, and even to organise workshops and training for their colleagues and community members. To do this, they will need ongoing support and access to resources, as well as opportunities for further training. During the workshop, participants were introduced to a methodology for assessing vulnerabilities in the community, but this could be fleshed out through further training so that DA's are able to carry out the exercise in the districts with community members and integrate the findings into their long and short term action plans. The TGMI is committed to integrating climate concerns into their courses offered to DA's and this would help ensure that future DA's are also given the opportunity to learn about how climate change is affecting Seychelles, and actions that can be taken at district level to address the problems.

ANNEX A – WORKSHOP AGENDA



CLIMATE CHANGE ADAPTATION WORKSHOP FOR DISTRICT ADMINISTRATORS & EMERGENCY BRIGADE TEAM LEADERS

13 APRIL 2018, THE GUY MOREL INSTITUTE

Background

As a small island developing state, Seychelles is extremely vulnerable to the impacts of climate change, such as sea level rise, salt water intrusion, heavy rains and flooding, coral bleaching and droughts. It is critical that the population of Seychelles becomes more aware and pro-active in terms of how they can better prepare for present and future impacts of climate change. Communities that identify likely risks and implement strategies to reduce them will be more resilient as climate change impacts become increasingly apparent. The Government of Seychelles' GCCA+ capacity building program has partnered with the Adaptation Fund Eco-System Based Adaptation project and the Guy Morel Institute to hold a one-day workshop for District Administrators and their emergency team leaders. The workshop aims to familiarize participants with the impacts of climate change, and start the process of helping community leaders identify climate risks in their communities and how they can plan ahead to reduce their vulnerabilities.

Workshop objectives:

- 1) To increase community leaders' awareness of climate change and its expected impacts on Seychelles' main populated islands
- 2) To share tools to do rapid assessment of community vulnerability to climate change, and plan for resilience.
- 3) To inspire workshop participants to apply what they have learned to their work in districts

Workshop Facilitators: Michele Martin (GCCA+)

Venue: The Guy Morel Institute (Ma Joie, Victoria, Seychelles)

Proposed Agenda

8.30	Welcome by MC & TGMI	MC – LG, TGMI
8.35	Ministers remarks and official opening	LG PS Vidot
8.45	Introductions, Review of Agenda, Ice breaker game Brief Introduction to Climate Change	Michele
9.30	Break	
10:00	Climate Change: What do the numbers show?	Seychelles National Meteorological Authority – Phoebe Shikuku
10:20	Climate change and risks to communities	DRDM – Paul Labaleine
10:30	Climate change and human health	Ministry of Health –Dr. Shobha
10:50	Group work: Assessing risk in our communities	Michele
12:20	PS remarks and closing of morning session	ECC – PS Agricole
12:30	Lunch	
13:30	Field Trip to view sites affected by extreme weather and actions taken: North East Point, Beau Vallon, Mont Simpson, Roche Caiman	Michele, Betty and Rajelle
16:30	On site – discussions and Conclusion of workshop, evaluations	Michele, Rajelle

ANNEX B – WORKSHOP REGISTRATION

GCCA+WORKSHOP REGISTRATION FORM



Date: 13th April, 2018

Event: Climate Change Workshop for District Administrators and Emergency Brigade Leaders

Venue: TGM

NAME	ORGANISATION	PHONE	EMAIL ADDRESS
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GCCA+WORKSHOP REGISTRATION FORM



Date: 13th April, 2018

Event: Climate Change Workshop for District Administrators and Emergency Brigade Leaders

Venue: TGM

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GCCA+WORKSHOP REGISTRATION FORM

Date: 13th April, 2018

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Venue: TGM

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GCCA+WORKSHOP REGISTRATION FORM

Date: 13th April, 2018

Event: Climate Change Workshop for District Administrators and Emergency Brigade Leaders

Venue: TGM

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Pat Nibourette	Emergency Brigad La digue	2569986	
HENRY MAUSSE	PRIMA	272383	

ANNEX C – GROUPWORK INSTRUCTIONS

Vulnerability Assessment Instructions for Groupwork

(Adapted from the Region of Waterloo Community Climate Adaptation Plan Vulnerability Assessment – Workshop in a Box)

Objective:

The goal of this activity is to practice assessing the vulnerability of a community to a series of climate change impacts, as part of a group. You don't have to know the correct scientific situation, just use your existing knowledge of the community to make an educated judgement.

Instructions:

1. In your group, choose one district to focus on.
2. Review the list of climate change impacts and plot them on the matrix according to the risk you think they will pose for that community. You can skip some of the impacts if you think they are not relevant or you don't have enough knowledge of the issue e.g. fishing issues up in La Misere. Use the worksheet to take note of any disagreements or justifications if needed. Plot at least ten of them.
3. Familiarize yourself with the definitions of vulnerability, sensitivity, and adaptive capacity.
 - **Vulnerability:** Vulnerability refers to the susceptibility of the community to harm arising from climate change impacts. It is determined by sensitivity and adaptive capacity. A community is very vulnerable if they are very sensitive to the impact and have very low capacity to adapt to it at present.
 - **Adaptive Capacity:** The resources available to the community that enable it to adjust to the climate impact with minimal cost or disruption
 - **Sensitivity:** Sensitivity measures the degree to which the community will be affected when exposed to a climate related impact. Will life go on as normal or be severely disrupted? Will the economy be affected and people lose jobs? The effect these impacts will have on the functionality of the community is a key determinant of sensitivity.
4. Map each impact on the matrix
 - a) Consider both the sensitivity and adaptive capacity of your community if the impact were to occur today. Try to think of a real scenario. Discuss among yourselves and come to a consensus if possible
 - c) Based on the discussion at your table, use the matrix to locate where each impact should be mapped. Write the impact # in the appropriate box on the matrix. For example, if the community is highly sensitive to the impact (i.e. its ability to deliver services and function as it should would be severely affected) with a low adaptive capacity (i.e. there are no programs or procedures in place to reduce harm from the impact) that would mean the community is highly vulnerable and the impact should be placed in the upper right side of the matrix. Please map ALL impacts on the one matrix. You may have more than one impact in a box.
5. Your group will be asked to report back on the overall vulnerability ranking for ONE of the assigned impacts, and to share your reflections about the exercise.

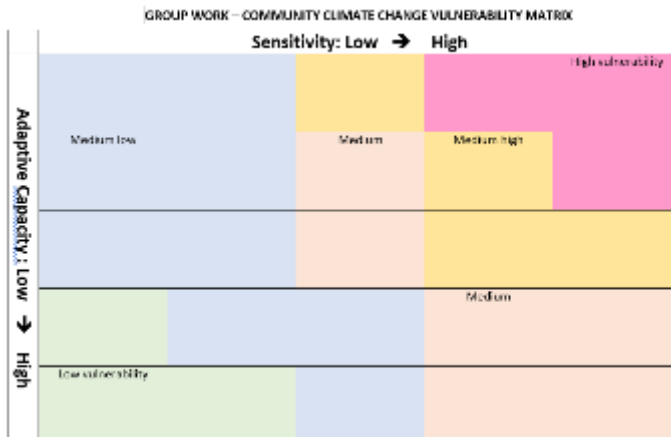
SEYCHELLES CLIMATE CHANGE IMPACTS FOR GROUP WORK

DISTRICT: _____

CLIMATE CHANGE IMPACTS	COMMENTS
1. Sea-level rise and storm surge	
1.1 Damage to community centre/emergency evacuation sites	
1.2 Damage to homes and properties	
1.3 Damage to schools and daycares	
1.4 Salt water intrusion on coastal farmlands affecting crops	
1.5 Damage to local community tourism industry	
1.6 Loss of beaches important for tourism and local recreation	
2. Increased incidence of heavy rainfalls and flooding	
2.1 Damage to homes and properties	
2.2 Damage to crops and agricultural land	
2.3 Flooding of sewage systems	
2.4 Pollution of waterways and lagoon in community	
2.5 Increase in health problems from sewage and vector diseases	
2.6 Damage to local tourism industry in community	
2.7 Landslides blocking roads and damaging property	
3. Increased incidence of drought	
3.1 Water shortage	
3.2 Low yield of agricultural crops	
3.3 Losses to tourism revenue	
3.5 Biodiversity loss	
4. Increase in wind and rain storm intensity	
4.1 Damage to homes and properties	
4.2 Damage to infrastructure	
4.3 Damage to farms and fishing facilities	
4.4 Damage to tourism sites in the community	
5. Increase in sea surface temperature	
5.1 Loss of income for artisanal fisheries in the community	
5.2 Loss of income for diving/snorkeling businesses in the community	

ADD OTHERS IF ANY ARE MISSING

Matrix used:



SITE VISIT OVERVIEW

CLIMATE CHANGE WORKSHOP FOR DA'S APRIL 13TH, 2018

START: TGM CAR PARK

Briefly review the purpose of the site visits:

for participants to see examples of climate change related impacts on coastal communities

Remind participants to take note of the examples we will show them, but also to keep an eye out for other possible ways climate change might affect the communities we drive through.

STOP 1: ANSE MARIE-LAURE PUBLIC ACCESS (NEAR BINS) – COASTAL EROSION

This beach is a good example of sand erosion. The causes may be multiple, including sea level rise and occasional storm surges at high tide. But observe also:

- Parking in the area right by the beach compacts the soil and makes it hard for vegetation to thrive and hold the sand in place during high tides
- Seasonal changes in sand deposit are natural. Normally this beach looks much more eroded during the Northwest monsoon, and roots were covered in sand during the Southeast
- Nearby reclamation works at Bel Ombre port may have changed the currents and thus changed the way that sand is deposited on the beach
- Mary Gears' home next door used sea walls to stop erosion. If built well, with a long slope out to sea, these can help slow erosion, but a perpendicular wall can make erosion worse because the waves crash hard and the energy takes away sand at the bottom of the wall. The government prefers to use more natural methods to slow erosion where possible.
- Compare the area nearby which is still natural and less eroded

STOP 2: MONT SIMPSON RIVER - FLOODING

(GO UP THE ROAD BY CASA DANI, TAKE THE LEFT FORK AND GO UP TO THE TOP, OVER THE LITTLE BRIDGE TO PARK THE BUS)

- This is the site of the river flooding that occurred in 2014 when the river overflowed onto the road causing damage to the road and carrying gravel and rocks into some 10-20 properties below.
- There was a localized incidence of very heavy rain in this area which caused the river to flood. One of the impacts of climate change is changing rainfall patterns and increased occurrence of this sort of heavy rain in a short period of time.
- There are no drains along the road to guide water to the sea or river during heavy rains.
- No work has been done since the incident to install drains although a bank of rocks was put in place to prevent future overflow.
- No heavy rain incidents have occurred since then luckily, but is the problem solved to avoid damages next time?
- Observe at the bottom of the hill when we leave, the flats on the left are at a bend in the road. The water went straight through the gap and into the ground floor flats. A resident reported that this has happened to her 3 times over the past decade or so.

STOP 3: MARE ANGLAISE BEAU VALLON

(PARK JUST OPPOSITE THE INDIAN SHOP WHERE THERE IS SPACE ON THE RECLAIMED LAND)

- In 2011, the road here at Mare Anglaise fell into the sea when high tides coincided with high winds and storm surge. The cost to make the repairs was about SR2.5 million.
- The strategy used to build the road back up and prevent future erosion was to install ROCK REVETMENTS. Notice the angle of the slope of rocks. The rocks are meant to break up the waves' energy and help sand deposition.

- Observe: is it working? Which season would have more sand?
- Observe: are there any other issues which might also have helped cause the erosion? Sea level rise, the presence of a road right on the dune that would naturally have had trees and vouldoutye and other vegetation.
- Discuss: how do rock revetments affect tourism and local enjoyment of the beach? What are other alternatives?

ALONG THE WAY AT VISTA DO MAR (BY BLISS HOTEL) – LANDSLIDE

No need to stop - just remind people of the landslide back in 2005

- In 2005, 34 families experienced severe damage to their homes when a landslide occurred after heavy rains up on the hillside. At least ten of the homes were condemned and others at risk. The government offered compensation to help the families at risk to relocate and rebuild.
- DRDM is trying to get better information about areas like this that might be at risk, to avoid building or also make contingency plans.
- Deforestation, severe dry periods followed by heavy rains are a great recipe for landslides!
- The landslide back in 1862 has been attributed to deforestation, drying out, and then heavy rains

STOP 4: GLACIS MARKET BEACH – ROCK REVETMENTS TO PROTECT FISHING INFRASTRUCTURE (PARK JUST NEXT TO THE FISHING BOATS WHERE THE REVETMENT WAS DONE)

- This is a much more recent rock revetment project to protect the beach and nearby road, and yet retain access to the sea for local fishers.
- Observe – the angle of the rocks
- Reflect – how has this beach changed over the years? How would this area have looked before people were in Seychelles?
- Observe – what may have caused the erosion in the first place? Look around – a road right on the dune, vegetation gone, intense human activity, sea level rise.....
- What role would the nearby river and wetland play in protecting the beach and/or eroding it?
- How will the new look affect the way the local community uses the beach for leisure or fishing?
- Is the road protected now if the sea level rises 1m by 2100?

STOP 5: NORTH-EAST POINT – COASTAL EROSION

PARK JUST NEAR THE FIRST PART OF THE BEACH YOU COME TO, WHERE THERE IS ROCK REVETMENT

- North east point has been identified as one of the worst cases of severe erosion on Mahe in several studies.
- Observe: What could some of the causes be? Sea level rise, storms, the road on the dune, loss of vegetation, changes to the flow of the river outlet.
- Action to address it: rock revetment, sea wall, and more recently beach nourishment (sand extracted at sea was added to the beach – this is very very costly, and usually results in the sand disappearing again!)
- Other possible factors: reclaimed land in Victoria caused changes to the currents and movement of sand along the coast. Also degradation of coral reefs offshore would reduce natural protective measures of reefs that normally dissipate wave energy
- Reflect: How is this area used by locals and or tourists? What might it look like in 50 years?
- What can we do: EBA project plans...

WORKSHOP CONCLUDING DISCUSSION

- What is the role of DA's and Emergency Brigade leaders in preparing for climate change?
- What will you do differently if anything, as a result of our time spent together today?

FINAL STOP: BACK AT TGM I PARKING LOT

- Workshop conclusion, thanks and ask participants to fill in evaluation form

ANNEX E – WORKSHOP PHOTOS



Top: Betty Victor explaining EBA Project at North East Point, Bottom: Participants in one of the two buses hired for the field trip



Top: Ex Bel Ombre DA Pharisianne Lucas explaining what happened when the river flooded at Mont Simpson in 2014. Bottom: river outlet rock revetment at Glacis.