

WORKSHOP REPORT

THE CONSTRUCTION INDUSTRY: ADAPTING TO CLIMATE CHANGE

For construction professionals and Seychelles Institute of Technology (SIT) lecturers – 23rd April, 2019, SIT conference Room

Compiled by Michele Martin for the GCCA+ Component A

BACKGROUND

The Government of Seychelles has committed to both reducing our own contributions to greenhouse gas emissions and planning ahead to adequately prepare for the impacts of climate change, and this commitment has been captured in the Intended Nationally Determined Contribution report submitted at the Paris Climate Change Summit in 2015. Meeting these commitments will require the active participation of all government sectors, as well as local businesses and civil society. The planning and construction sector is a critical stakeholder in ensuring that all buildings and infrastructure have low emissions, but are also well designed for current and future climate impacts such as sea level rise, changes in rainfall patterns, flooding and landslides. A capacity needs assessment recently completed by the GCCA+ program identified a need for climate change training for the construction industry, including planners. The Government of Seychelles' GCCA+ capacity building program collaborated with the Seychelles Institute of Technology and the Planning Authority to offer a half-day professional development opportunity for representatives of the construction industry to learn more about how climate change is impacting the sector and discuss appropriate responses, including for on-going training at the SIT. SIT is preparing to further integrate climate change considerations into their 3-year diploma course in construction.

WORKSHOP OBJECTIVES

- 1) To increase participants' knowledge of how the construction industry contributes to climate change and is affected by it.
- 2) To share strategies for effective climate action in the construction sector
- 3) To provide recommendations for further capacity building on climate change for the construction sector

PARTICIPANTS

The workshop was attended by 38 people, representing Ministry of Housing, Infrastructure and Land Transport (MHILT), the Planning Authority, Seychelles Land Transport Agency (SLTA), MEECC, SIT, PUC (Public Utilities Corporation) as well as partners from the construction industry. A list of all participants is provided in Annex A. There were 16 women and 22 men present. The workshop was facilitated by Michele Martin from the GCCA+ team and Rubina Larue from SIT.

WORKSHOP AGENDA

time	Agenda item	Presenter
8:15	Registration	
8.30	Welcome and introductions, review of agenda, icebreaker	Rubina & Michele
8.45	Opening Address by CEO Planning Authority	Joseph Francois
8: 55	Challenges in the sector by PS Infrastructure	Yves Choppy
9:00	Climate Change– a brief overview and implications for the construction industry	Michele Martin
9:45	Testimonial 1: Denis Payette – (Contractor) - innovations in building materials and construction techniques	Denis Payette
10:00	Testimonial 2: Johan Mendez (Hydrogeologist – EBA Project) – Gabion alternative for natural construction	Johan Mendez
10:15	Break (tea, coffee, juice, snacks)	
10:30	Group work: recommendations (SIT program, PD for professionals, policy action)	Michele, Iris, Rubina
11:30	Walking Field Trip and tours of Hyundai and Sharks Ice Cream buildings	Cedric D'Offay / Marc D'Offay
12:30	Workshop conclusion, evaluations	Michele & Michele

WORKSHOP EXPENSES AND CONTRIBUTIONS FROM PARTNERS

- The workshop was organized and facilitated by the GCCA+ Program with support from the SIT, Planning Authority and MHILT.
- The SIT provided the venue and tea and coffee, and the Planning Authority sponsored juice, water and snacks, S4S assisted with backstopping, registration and photography
- PMC Auto and Sharks Ice Cream kindly provided visits to their buildings to allow participants to view best practices in sustainable design/construction of buildings. Sharks Ice Cream sponsored ice creams for all participants – well appreciated on a very hot day!

WORKSHOP DESCRIPTION

The workshop was well attended by a very diverse group of construction professionals representing a range of government agencies as well as the private sector. The program unfolded more or less as planned with a few small shifts in the order of proceedings.

The morning began with a short icebreaker activity, eco-bingo, which encouraged participants to talk to one another about some of their knowledge and experiences related to climate change. Mr Yves Choppy opened the workshop and invited attendees to work together to help the construction industry grapple more pro-actively with the challenges of both reducing the industry's carbon footprint and planning ahead for the impacts of a changing climate. He acknowledged some of the current constraints of implementing climate proof construction, including the difficulty of justifying additional expenses to ensure that building expenses will be climate resilient in decades to come.

Rubina Larue, Deputy Director of the SIT, welcomed all participants and invited them to contribute their ideas and support to the SIT as they seek to deepen the sustainability and climate change content of their diploma program in construction.

Michele Martin led the first presentation, which provided an overview of the basics of climate change science and the impacts facing Seychelles, with a special emphasis on how construction both contributes to those impacts and is affected by them. She presented some statistics and maps of climate trends and predictions for Seychelles on sea level rise, coastal erosion, temperature increase and changes in rainfall patterns (much of this work comes from monitoring and modelling being done by the Seychelles Meteorological Authority). She provided an overview of some climate change actions for both mitigation and adaptation that are already underway in Seychelles, as well as some options for financing climate change action projects - that can be accessed by government, the private sector and civil society and noted that the GCCA+ project has compiled a report on climate finance options as well as some materials on how to do a cost-benefit analysis to guide decision-making on how to tackle climate change.

Joseph Francois, CEO of Planning, addressed the attendees confirming the commitment of his organisation to guide and support better planning for climate change.

Following the tea break, participants moved into three groups to further discuss the status of climate change in construction, focusing on the SIT construction program, policy and planning and professionals working in the construction industry. Participants discussed the following:

1. What are the key challenges facing your sector
2. What exists already in terms of response to cc?
3. What more is needed? (recommendations)

The group focused on policy and planning concluded that there is much work to be done to ensure that policy and planning guidelines fully reflect the realities of climate change and how the construction industry should be responding. Existing regulations are outdated and precede the emergence of climate change as a major factor in building design. The proposed setback policy is a move in the right direction, but there is a need for more national dialogue on how to move forward, and to build more ownership among businesses and citizens (not only government). Clear targets need to be set for thermal efficiency of buildings and submitted along with plans for approval.

The group looking at SIT found that the key challenges were student capacity/level, the facilities and teachers. The new construction advanced diploma represents a great opportunity for addressing climate change but needs further development and marketing. It was also suggested that SIT needs a general rebranding to clarify the different

opportunities e.g. differentiate between basic apprenticeship programs and the much more demanding advanced diploma courses.

The group focused on construction professionals found the key challenge they face is changing the mindset of clients, while some progress has been made in the sector in terms of promotion of solar PV, rainwater harvesting and new types of building materials. They emphasized the need for the Planning Authority to be more responsive to innovations in materials and design that are climate friendly.

WORKSHOP EVALUATION

Participants were invited to fill in an evaluation form at the end of the workshop. Out of a total of 38 participants only 17 submitted a form. The findings are summarized in the table below.

Workshop evaluation responses – summary from 17 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"> • New building strategies and efforts, materials and structures already being applied in Seychelles to fight climate change x 9 • About CC / Effects of CC in Seychelles / urgency to adapt x 6 • Gabion construction x4 • how construction contributes to and is impacted by cc x 3 • Strategies to improve our ways of thinking / educate more people on impacts of CC x2 • lack of leadership, knowledge and governance 	<ul style="list-style-type: none"> • Participation / discussions /groupwork /interaction x 7 • Informative / new ideas x 3 • Participants from different organisations / good mix x2 • Useful focus on construction and climate change specifically x2 • Presentations on Gabion and Shera x2 • Snacks • Was eco friendly and should have more of these • Field trip • Well organized
3. What didn't you like?	
<ul style="list-style-type: none"> • No comment, nothing, all good x 8 • Session could be longer to allow more information sharing, interactions, discussion after presentations x4 • Way forward / ideas for future not highlighted clearly x2 • Include more local contractors 	
4.How can you apply what you learned in your work?	
<ul style="list-style-type: none"> • Sensitize others about sustainability/ CC / using more sustainable materials in construction x 8 • Better plan future construction projects / designs incorporating aspects of what was learned and new materials x 6 • I will go into more depth / keep learning x2 • Am working on case study and proposal for green building rating systems so can use what I learned • Networking with different partners • Contribute to the new policy 	

Numbers indicate how many participants wrote a similar response.

CONCLUSION AND RECOMMENDATIONS

Overall the workshop achieved its objectives, and served as a catalyst to start people in the construction industry talking to one another about climate change. At the end of the workshop, many of the participants verbally shared a keen interest in having more opportunities for networking and learning about how to tackle climate change in the construction sector. Although the workshop was planned for a half-day only, to accommodate the busy schedules of participants, many participants would have liked it to be longer, and are open to longer sessions being held in the future.

In terms of recommendations and ideas for moving forward, many ideas were discussed during the day, particularly during the group work session, but the main points that emerged were as follows:

1. There is an urgent need for the Planning Authority to provide guidance and directives to ensure that the construction industry is more responsive to building standards that are better adapted to climate change but also have a lower carbon footprint. If the Planning Authority demands it, and provides the leadership, the

- industry will comply.
2. It was suggested that the Planning Authority consider launching an award scheme to give recognition to buildings that exemplify sustainable / climate proof construction, and that this might contribute toward creating a culture of appreciation for the benefits of sustainable building design.
 3. People were very interested in learning about new technologies and materials and there is scope for SIT or another organization such as MHILT to provide professional development seminars or other opportunities for construction professionals to share and keep abreast of new climate proof and climate friendly innovations that are suitable for the Seychelles' context.
 4. The SIT will continue to work on the curriculum for their new advanced diploma program in construction. They welcome input and guidance from the industry, to ensure that what they offer reflects industry needs and the latest developments in sustainable and climate proof construction. The SIT could consider organizing further opportunities for representatives from industry to contribute to curriculum development as well as professional development of their staff.
 5. The SIT has work to do to help potential students and the public to understand the nature and value of their courses. The advanced diploma is quite demanding and they need students of high caliber, interested in pursuing engineering or architecture.
 6. The GCCA+ Capacity Building program has scope to support some further training related to climate change and construction. A special course on climate change for architects, with an emphasis on younger representatives of the industry, was recommended as a critical step forward, given that architects are a critical focal point to guide clients towards more climate proof designs and materials. To be further discussed with the SIT and interested participants from this workshop.
 7. The GCCA+ is planning to support training on climate proof drainage in urban and natural areas in early 2020, in collaboration with the EBA project. This training will be useful for architects, urban planners as well as representatives from SLTA and MEECC. A planning meeting will be held in July and participants from this workshop will be invited to further discuss.

ANNEX A – WORKSHOP REGISTRATION

NAME	GENDER	ORGANISATION	EMAIL
Participants			
Louissette Hoareau	F	MEECC - CAMS	houreaulouissette@gmail.com
Anie Simeon	F	MEECC - CAMS	annie.simeon@env.gov.sc
Jean - Claude Labrosse	M	MEECC - CAMS	j.labrosse@env.gov.sc
Sharifah Arrisol	F	MEECC - CAMS	s.arrisol@env.gov.sc
Doris Freminot	F	MEECC - EAPS	d.morel@env.gov.sc
Xavier Pierre	M	MEECC	x.pierre@env.gov.sc
Christopher Ismael	M	MEECC	c.ismael@gov.sc
Jonathan Rivera Chion	M	JRK Design	studio@jrkdesign.com.au
Erna Victor	F	PUC	evictor@puc.sc
Joseph Francois	M	planning CEO	jfrancois@mluh.gov.sc
Aliette Rosa	F	planning	alliette123@gmail.com
Andy Philoe	M	planning	aphiloe@mluh.gov.sc
Sayeed Abdulhaq Salih	M	planning	sasalih@mluh.gov.sc
Aldo Rose	M	planning	aldo.rose@mluh.gov.sc
Yves Choppy	M	MHILT - Infrastructure	ychoppy@mluh.gov.sc
Gabby Surman - Architect	F	MHILT - Infrastructure	gabbycool14@hotmail.com
Tesarina Gomme - Technician	F	MHILT - Infrastructure	tesagomme@gmail.com
Juan Palmyre - Technician	M	MHILT - Infrastructure	juanpalmyre7@gmail.com
Vaithyanathan	M	SIT	vaithyanathan.thiruvankadam@gmail.com
Rubina Larue	F	SIT	laruerubina@gmail.com
Segametsi Brewster	F	SIT	ssikwane979@gmail.com
Steven Jolicoeur	M	SIT	stevenjolicoeur@yahoo.co.uk
Ron Malvina	M	SIT	ron.malvina@yahoo.com
Bernado Rose	M	SIT	bernadorose2003@yahoo.co.uk
Janice Ladouceur	F	SLTA	jladouceur@slta.sc
Fritznel Cupidon	M	SLTA	fcupidon@slta.sc
Clive Ba	M	Laxmanbhai	clive@laxconsej.com
Walter Labrosse	M	Laxmanbhai	walter@laxconsej.com
Ian Charlette	M	Consultant	iancharlette@gmail.com
Aisha Rachel	F	DRDM	Aisha.Rachel@drdm.gov.sc
Eric Frank	M	S4S	eric7frank@gmail.com
Saratha Naiken	F	SeyCCAT	sarathanaiken@gmail.com
Other Organisers/ Presenters			
Michele Martin	F	GCCA+ consultant	mpmartinsey@gmail.com
Iris Carolus	F	GCCA+ consultant	carolusiris@yahoo.co.uk
Denis Payette	M	Woodworks unlimited	d.payette@wwuseychelles.com
Johan Mendez	M	EBA Project UNDP PCU	j.mendez@pcusey.sc
Amina Furneau	F	S4S	info@s4seychelles.com

ANNEX B – WORKSHOP PHOTOS



Top left: A diverse group of stakeholders participated in the workshop, top right: Joseph Francois CEO Planning Authority addressing the group, Middle left and right: group work discussions. Bottom left: Denis Payette presenting the merits of construction using fibre cement boards and galvanized steel, bottom right: Cedric D'Offay from PMC auto explaining the energy efficiency features of the new showroom.