PAPUA NEW GUINEA
REGIONAL VALIDATION WORKSHOP

Capacity Building to Strengthen Sustainable Implementation of Renewable Energy Technologies for Rural Energy Access
REPORT

12th -13th November 2020

Lamana Hotel, Port Moresby Papua New Guinea

Acronyms and Abbreviations

CCDA	Climate Change and Development Authority (PNG)
CPA	Central Provincial Administration
EE	Energy Efficiency
EU	European Union
GE	Green Economy
GGGI	Global Green Growth Institute
KOICA	Korean International Cooperation Agency
LLG	Local Level Government
LG	Learners Guide
MP	Member of Parliament
RE	Renewable Energy
TG	Trainers Guide
Tj	Technical Jargon

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1.0 INTRODUCTION

The project "Capacity Building to Strengthen Sustainable Implementation of Renewable Energy Technologies for Rural Energy Access" is a 3-year regional pilot project being implemented in the Melanesian countries: Fiji, Vanuatu, Solomon Islands and Papua New Guinea and funded by the Republic of Korea through the Korea International Corporation Agency (KOICA) and implemented by the Global Green Growth Institute (GGGI) in partnership with the Pacific Islands Development Forum (PIDF). In PNG the Global Green Growth Institute is working in close collaboration with the Climate Change Development Authority (CCDA) and the Central Provincial Administration (CPA) as Partners and important stakeholders to successfully implement this Project.

In PNG the Pilot Project will be implemented in five selected villages of the Central Province of which three of the villages are in the Rigo district while two are in the Kairuku-Hiri District. These sites were selected based on certain set criterion that include existing or planned RE projects in those sites so as accessibility to RE systems mainly solar and grid systems. The proximity of these sites to the nearest government station or city and mode of access to those sites and resources on ground were also considered before these five sites were selected during the National Consultation workshop which was later confirmed during the Pre-implementation survey.

The project's main objective is to strengthen informed and inclusive decision-making by resource owners and local government officials for integration of Green Economy (GE) and Renewable Energy (RE) into Local Level Planning and to Strengthen Implementation of Renewable Energy (RE) infrastructure for Rural Electrification. GGGI is working closely with local partners to develop various training modules within the project context to achieve this goal. In addition, in-country based local trainers will be engaged to deliver these capacity building trainings throughout the identified communities.

In order to carry out the capacity building training to the beneficiaries, the project has drafted training materials on Green Economy (GE) and Renewable Energy (RE), considering gender and inclusive development. This consists of 10 training modules, complete with trainers guide as per below:

1. RENEWABLE ENERGY MODULES

      1.1.   Renewable Energy General Principles

      1.2.   Solar in the Community

      1.3.   Solar Operation & Maintenance Basics

      1.4.   Pico-Hydro In the Community

      1.5.   Pico-Hydro Operation & Maintenance Basics

      1.6.   Renewable Financial Management

2.   GREEN ECONOMY MODULES

      2.1.   Green Economy General Principles

      2.2.   Energy Efficiency

      2.3.   Green Business Basics

      2.4.   Gender Inclusivity & Development

The Project aims to target five groups of people in the selected project communities to train them on the RE and GE. These target groups include; traditional and community leaders, women, youths, vulnerable groups, government officials, small businesses, and local technicians.

The recently completed phase of the Project was pilot community training. The selected village out of the five selected rural villages of which the pilot community training was held from **01st - 14th Oct 2020**, a **duration of two weeks** was **Keapara Village** in the **Rigo District** of **Central Province.**

1.1 Workshop Objectives

The main objectives of this validation workshop is as follows;

    I.   Allow key stakeholders to provide their inputs and point out any missing gaps or inaccuracies in the draft training modules.

    II.   Assess the viability of the community feedback for further necessary improvements to the; Training Guide (TG) and the Learners Workbook (LG) and,

    III.   To validate, comment on, and prioritize the preliminary findings and conclusions from the Pilot community Trainings.

1.2 Participants List

A total of seven (7) people attended the regional validation workshop, consisting of five (5) men and (2) women. The institutions represented in the workshop were; Republic of Korea Embassy to PNG, University of Papua New Guinea (UPNG), the Climate Change Development Authority (CCDA), Central Provincial Administration (CPA), Solar Solutions PNG and the Global Green Growth Institute staffs and Consultants. The workshop was held virtually in which a similar number of participants joined virtually from Vanuatu and Solomon Islands with Fiji hosting the workshop and had the highest number of participants of more than twenty (20) participants all joining virtually.

The list of attendees for PNG is presented in Appendix A.

2.0 Workshop Opening

The Regional validation workshop was held in Fiji on the 12th -13th of November 2020 with Project teams from the other three project Implementation countries (PNG, Vanuatu and Solomon Islands) all joining in virtually with their selected national participants from the relevant important project stakeholders. All welcoming open speeches were made by personals in Fiji while the project progress update for each project countries were presented online by the respective country project coordinators.

3.0 Project overview

3.1. Project objectives & Details

Project Objectives & details: Mr. Mohammed Tazil – Regional Project Manager, GGGI

A general project overview for the KOICA Regional Project was given by Mr. Mohammad Tazil, Regional Project Manager for Global Green Growth Institute (GGGI). In his presentation and Speech, he gave an overview of the Project's aims/objectives including the methodology, the training materials and target audiences and the training matrix's and approach used in the Project .

He further outlined the key Performance indicators, the project timeline, the project progress so far regionally so as the challenges faced and the steps taken to learn and adapt to these challengers as the way forward to the successful implementation of this project in all four project countries.

3.2. Project Progress Update – PNG

Project Overview: Mr. Benjamin Keni -PNG KOICA RE Project Coordinator, GGGI

An overview of the KOICA Project was given by Mr. Benjamin Keni, PNG KOICA RE Project Coordinator. He gave a presentation outlining to participants the objectives of the project and a general update of the project so far to date 12th Nov 2020. His Presentation outlined the key aims and objectives achieved under the different project activities starting from the Pilot ToT workshop in July, to the hiring and training of in-country trainers, to the Pilot community trainings conducted in October 2020 and the now the Regional Validation Workshop in which feedbacks collected from the communities will be analysed as the first step forward to tailoring of the ten training modules on RE & GE for PNG context.

He also in his presentation presented the summarised results of the pre-implementation survey and the pilot community trainings which basically showed that many in the rural Project communities were interested in the Project and wanted to be involved in the main community trainings in 2021.

4.0 Workshop Validations on Community and Trainers Feedbacks Collected

The workshop was arranged virtually in which feedbacks collected from locals by the project team during the Pilot Community training on all the ten training modules were all inputted into a master sheet as shown in appendix F. The master sheet was then projected, and the workshop participants followed through the feedbacks and with the aid of the training materials (TG and LG) for each training modules they gave valuable feedbacks/ comments on the feedbacks collected from locals and the trainers.

Note: Validations made by participants are heighted in '**Green**' Color while general comments for improvement made by participants are highlighted in **'Brown'** color.

4.1. Day 1 Feedbacks from Participants

Day one (1) of the validation workshop concentrated on validating feedbacks collected on three training modules.

4.1.1. Day 1- Feedbacks collected from Workshop Participants on RE General Principles

The following are feedbacks collected from participants on the feedbacks from locals on the RE General Principles training module.

Table 1.0: Validation of Community Feedbacks on RE General Principles

No.	Categories of Assessment	Feedbacks	Validations/Comments
1	Content relevance for Community	Yes	Content of the Training was relevant to the Community -
2	Relevance of Activities (+ /-)	Yes - relevant	Activities were relevant to the contents taught
3	Sync between LG and TG	Yes – good Sync	There was a good Sync between the LG & TG
4	Use of Technical Jargon	1.Terms used to describe the different types of energy maybe too complicated and confusing to some given the low literacy level. Mechanical, Potential & kinetic Energy.	1. **Yes agreed** as such trainers must understand & contextualise the meaning of such terms 2. Use more examples to relate to those terms used and Pictorial/ cartoon illustrations.
5	Illustrations & Pictures (+/ -)	Yes/ Good	1. Pictures and Illustrations were good and relevant 2. Would be nice to use more pacific related pictures/ cartoons especially in the LG/
6	Other Comments	1. Include Steps on constructing a biomass mini plant and extracting the gas.	1. Yes, agreed. This is important as PNG is not so familiar with biomass as such locals require such.

Table 2.0: Validation of Trainers Feedbacks on RE General Principles

No.	Categories of Assessment	Feedback	Validation/ comments
1	Content relevance for Community	Yes Agreed	**Yes Agreed** -Content of training was relevant to the community
2	Relevance of Activities (+ /-)	Yes Agreed	The Activities were relevant to the content taught -
3	Sync between LG and TG	Yes agreed good sync	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Fine/ good	1. Some Technical Jargons in the LG and TG Need to be simplified 2. Use more examples to help define/ stress the meaning of terms used.
5	Illustrations & Pictures (+/ -)	Generally good	The pictures/ illustrations used suited the contents of the Training
6	Other Comments	1. Include text on the impacts of Non-Renewable energy on the environment and more importantly on the human health and those of their children. This will provoke local to take responsibility and think twice before using fossil fuels.	1. - **Yes Agreed** 2. Clear distinction so as advantages and disadvantages of using Renewable and Non-Renewable sources of Energy. Include a section in the TG & LG guide on this.

4.1.2. Day 1 – Feedbacks Collected from Workshop Participants on GE General Principles

Table 3.0: Validation of Community Feedbacks on GE General Principles

No.	Categories of Assessment	Feedbacks	Validation/ comments
1	Content relevance for Community	Yes Agreed	Content of the Training was relevant to the Community
2	Relevance of Activities (+ /-)	Yes Agreed	Activities were relevant to the contents taught
3	Sync between LG and TG	Yes Agreed	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Yes Agreed	1. Terms used to describe the terms used to describe the different types of economy maybe too complicated and confusing to some given the low literacy level. - 2. Give more local examples/ scenarios
5	Illustrations & Pictures (+/ -)	Yes generally were good.	1. Pictures and illustrations were good and relevant 2. Increase smaller images & use High Resolution Images.
6	Other Comments		1.Provide alternatives that will enable villages to think broad on ways they can help themselves successfully

mitigate or adapt to the drastic effects of climate change they currently face
2. Trainers to Contextualise when Explaining
May want to include this as part of the activities

Table 4.0: Validation of Trainers Feedbacks on GE General Principles

No.	Categories of Assessment		Validation/ comments
1	Content relevance for Community	Yes Agreed	Content of training was relevant to the community
2	Relevance of Activities (+ /-)	Yes Agreed	1. The Activities were relevant to the content taught 2. More time is needed to analysis this further as suggested by participants.
3	Sync between LG and TG	Yes Agreed Generally	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Yes Agreed	1. Some Technical definitions in the LG and TG Need to be simplified 2. Trainer to explain further in local context to locals.
5	Illustrations & Pictures (+/ -)	Good Generally	1. The pictures/ illustrations used suited the contents of the Training- 2. Print all images in colour and use HR images
6	Other Comments		1. Clear distinction is made where locals in a group activity identify the different brown activities they do and also identify the sustainable measures they can take/ do to move away from those brown ways to greener ways. Eg: Replanting mangroves and giving time for them to grow rather than cutting them only. - Include in a table form in both TG & LG

4.1.3. Day 1 – Feedbacks collected from Workshop Participants on RE Financial Management

Table 5.0: Validation of Community Feedbacks on RE Financial Management

No.	Categories of Assessment	Feedbacks	Validation/ comments
1	Content relevance for Community	Yes Agreed	Content of the Training was relevant to the Community
2	Relevance of Activities (+ /-)	Yes Agreed	Activities were relevant to the contents taught
3	Sync between LG and TG	Yes Agreed	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Yes Agreed Generally	Not many technical Jargons were used so this is fine.
5	Illustrations & Pictures (+/ -)	Good Generally	1. The pictures/ illustrations used suited the contents of the Training -

No.	Categories of Assessment	Feedbacks	Validation/ comments
			2. More time is needed to analysis this further by participants
6	Other Comments		1. Use more scenarios to explain terms and concepts for locals to understand in the LG & TG

Table 6.0: Validation of Trainers Feedbacks on RE Financial Management

No.	Categories of Assessment	Feedbacks	Validation/ comments
1	Content relevance for Community	Yes Agreed	Content of training was relevant to the community
2	Relevance of Activities (+ /-)	Yes Agreed generally	The Activities were relevant to the content taught
3	Sync between LG and TG	Yes Agreed	1. There was a good Sync between the LG & TG 2. Was not analysed well due to less time given in the workshop.
4	Use of Technical Jargon	Fine/ good	Some Technical definitions in the LG and TG Need to be simplified by Trainers into local context during trainings.
5	Illustrations & Pictures (+/ -)	Good Generally	The pictures/ illustrations used were suitable generally
6	Other Comments		1. It is important that under the different agencies listed as potential funders under section 3.3 we must include their contacts or their webpage information for locals to have access/ or contact to those agencies or the local government

4.2. Day 2 Feedbacks from Participants

4.2.1 Day 2 – Feedbacks collected from workshop Participants on Energy Efficiency

Table 7.0: Validation of Community Feedbacks on Energy Efficiency

No.	Categories of Assessment	Feedbacks	Validations/ comments
1	Content relevance for Community	Yes Generally.	1. Content of the Training was relevant to the Community 2. Abbreviations and page numbers & glossary to be included in the LG & TG
2	Relevance of Activities (+ /-)	Yes Agreed	Activities were relevant to the contents taught
3	Sync between LG and TG	Yes Agreed Generally	There was a good Sync between the LG & TG -
4	Use of Technical Jargon	Fine/ good	Use more local related examples to explain technical terms
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures and Illustrations were good and relevant

GGGI
KOICA
Korea International
Cooperation Agency
Pacific Islands
Development Forum

			2. Use bigger and HR images
6	Other Comments	1.Need training hand outs/ materials	1. Yes Agreed 2. Include a section on simple energy audit Could also include as a take home activity

Table 8.0: Validation of Trainers Feedbacks on Energy Efficiency

No.	Categories of Assessment	Feedbacks	Validations/ comments
1	Content relevance for Community	Yes, Agreed generally	1. Content of the Training was relevant to the Community- 2. Include brief summaries in TG to conclude its section/ Chapter
2	Relevance of Activities (+ /-)	Yes Agreed generally	1. Activities were relevant to the contents taught 2. (Important to note activities must be contextualized to locally related examples. Eg Biomass is not suitable for the Pacific/PNG
3	Sync between LG and TG	Yes Agreed	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Fine/ good	1. Use more local related examples to explain technical terms
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures and Illustrations were good and relevant 2. Increase size of smaller images & use High resolution Images)
6	Other Comments	1. Use more examples to bring out the meaning of the terms used in the Training Module.	1. Yes Agreed 2. Include a summarised table of common energy equipment's and their energy efficient substitute. 3. Emphasis on SDGs & PNGs own StaRS in line with the country's vision 2050 as part of contextualizing to PNG. 4. Selected Trainers must know the development plans of the Districts & Provinces in which this Project is implemented to tie well the ideas in the training to the plans.

4.2.2. Day 2 – Feedbacks collected from workshop Participants on Inclusive Development

Table 9.0: Validation of Community Feedbacks on Inclusive Development

No.	Categories of Assessment	Feedbacks	Validations/ comments
1	Content relevance for Community	Yes Agreed	Content of the Training was relevant to the Community
2	Relevance of Activities (+ /-)	Yes, Agreed Generally	1. Activities were relevant to the contents taught

			2. More time needed to analysis this as suggested by participants
3	Sync between LG and TG	Yes Agreed	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Fine/ good	1. Simplify gender terms used in the training 2. Simplify in local context with care not to offend participants
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures and Illustrations were good and relevant but there is space for improvement 2. Include Pictures the Pacific (PNG).
6	Other Comments	1.Need color print of training module to be issued	1. Yes agreed 2. Include relevant picture - PNG based and customized, 3. Add cartoons 4. Include pictures relevant to each activity,

Table 10.0: Validation of Trainers Feedbacks on Inclusive Development

No.	Categories of Assessment	Feedbacks	Validation/ comments
1	Content relevance for Community	Yes Agreed	1. Content of the Training was relevant to the Community 2. When training locals it is important that trainers take care when explaining to locals about LGBTQI due to the cultural & Spiritual sensitivity.
2	Relevance of Activities (+ /-)	Yes Agreed	Activities were relevant to the contents taught
3	Sync between LG and TG	Yes Agreed	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Fine/ good	1. Simply gender terms used in the training But be aware of the cultural backgrounds delivering training
5	Illustrations & Pictures (+/ -)	1. Generally Good 2. Use more Pacific related Images depicting gender involvement	1. Pictures and Illustrations were good and relevant but there is space for improvement. 2. Yes Agreed 3. May want to replace the cover image on the LG and TG Include one that clearly shows the involvement of women and vulnerable groups attending a village meeting for example.
6	Other Comments		1. Trainers must make it their agenda to understand the background of the Community before going into the community to conduct this Training. 2. Trainers to communicate well with village elders & do awareness on this module in the community before the actual training due to cultural/ traditional standards especially in PNG.

4.2.3. Day 2 - Feedbacks Collected from workshop Participants on Solar in the Community

Table 11.0: Validation of Community Feedbacks on Solar in the Community

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	Yes Agreed	1. Content of the Training was relevant to the Community 2. Include a section on System sizing. 3. Include a glossary Page and include a table containing the conversion rates eg; 1000w =1kw
2	Relevance of Activities (+ /-)	-Yes Agreed	1.Activities were relevant to the contents taught 2. Also include system sizing as part of the activities so locals can identify the systems they have/ own. 3. Include practical activities that involve locals identifying the angel of the sun and the tilt angle.
3	Sync between LG and TG	Yes generally	1. There was a good Sync between the LG & TG 2. Include glossary in LG & remove Ice Breaker to be included only in TG.
4	Use of Technical Jargon	Fine/ good	Practical Equipment as training aids to supplement training delivery.
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures and Illustrations were good and relevant 2. Include more/ only Pacific pictures in the LG & TG
6	Other Comments	1. In the main training there should be equipment's to aid in the trainings	1. Yes Agreed 2. Stress more on the safety of using solar home systems (difference of using 12v DC and 240 volts AC systems).

Table 12.0: Validation of Trainers Feedbacks on Solar in the Community

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	Yes Agreed	Content of the Training was relevant to the Community
2	Relevance of Activities (+ /-)	Yes Agreed.	1. Activities were relevant to the contents taught. 2. More hands on activities especially for slow learners
3	Sync between LG and TG	Yes Agreed	1. There was a good Sync between the LG & TG 2. Minor inputs as suggested more practical activities
4	Use of Technical Jargon	Fine/ good	1. Practical Equipment as training aids to explain the different terms used. 2. Not much TJ was used but it is a must the trainer must simplify confusing words in local context.
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures and Illustrations were good and relevant. 2. Use High resolution Images
6	Other Comments	1. Include a section on sustainable waste management/ safe disposal of damaged solar panels & batteries	1. Yes Agreed 2. In the main training there should equipment for training 3. Module contains a lot of information and may take time to teach locals on but then it depends on the literacy level of the community and the experience of the trainer to run this training.

4.2.4. Day 2 - Feedbacks Collected from workshop Participants on Solar Operation & Maintenance

Table 13.0: Validation of Community Feedbacks on Solar O & M

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	Yes Agreed	1. Content of the Training was relevant to the Community 2. Include a glossary & page number in the lesson Plan & timetable 3. Exclude Ice Breaker in LG should be only in the TG
2	Relevance of Activities (+ /-)	Yes Agreed	1. Activities were relevant to the contents taught 2. Needs more hands on / practical activities. 3. All group Activities should be conducted in groups following the LG

3	Sync between LG and TG	Yes Agreed	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Fine/ good	Practical Equipment as training aids to supplement training delivery.
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures and Illustrations were good and relevant 2. Print all in Color 3. Use clear & big images of Items
6	Other Comments	1.In the main training there should more equipment for training	1. Yes Agreed 2. More awareness must be made for maximum participation of women and vulnerable groups.

Table 14.0: Validation of Trainers Feedbacks on Solar O & M Basics

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	Yes Agreed	Content of the Training was relevant to the Community
2	Relevance of Activities (+ /-)	Yes Agreed	1. Activities were relevant to the contents taught. 2. It is important that trainers have on hand the relevant tools/ equipment's to explain to locals relating to the different activities.
3	Sync between LG and TG	Good Sync	There was a good Sync between the LG & TG -
4	Use of Technical Jargon	Fine/ good generally	1. Practical Equipment as training aids to supplement training delivery.
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures and Illustrations were good and relevant 2. Will be good to include cartoons.
6	Other Comments	1. In the main training there should be equipment for training	1. Yes Agreed (2 separate solar kits, one for males & females) 2. Trainers must stress and define their audiences for this training as this module is very technical -identify the local technicians or a certified trainer should accompany the training team to conduct this training specifically. 2. It is important that the trainers identify local technicians to help them out in this training if they are not trained/ well vest in solar O & M. 3. It is important the trainers identify their participants from the Solar in the Community & Solar O & M to avoid the repeat of information (eg) the defining of the different tools and safety requirements.

4.2.5. Day 2 - Feedbacks Collected from workshop Participants on Green Business Basics

Table 15.0: Validation of Community Feedbacks on Green Business Basics

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	1.Yes, Agreed Generally, as evident by good turnout of Participants by locals & received many questions.	1. Yes Agreed -the content was Relevant. 2. Include a glossary 3. Exclude Ice Breaker in LG
2	Relevance of Activities (+ /-)	Yes, Agreed Generally	1. Activities were relevant to the training as shown by very interactive discussions. 2. Due to limited time Participants did not analysis this well as suggested by one
3	Sync between LG and TG	Good Sync	There was a good Sync
4	Use of Technical Jargon	Fine/ good generally	Not Much used in the LG as such it is okay as such is fine.
5	Illustrations & Pictures (+/ -)	Good Generally	1. Pictures were quite relevant. Locals related well. 2. Smaller size pictures must be increased in size & use High Resolution Images.
6	Other Comments	1. Use more examples and pictures to aid better learning in LG	1. Yes Agreed 2. Use of more relevant picture e.g. Mothers making bilums to sell to show GBB. 3. Change cover photo & include one that displays Green Business activities from the Pacific. 4.For the Green Business Model include a subsection on measuring sustainability/ how green is a business?

Table 16.0: Validation of Trainers Feedbacks on Green Business Basics

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	Yes Agreed	Content of the Training was relevant to the Community
2	Relevance of Activities (+ /-)	Yes Agreed	1. Activities were relevant to the contents taught 2. It is important to group participants, so activities are conducted in groups.
3	Sync between LG and TG	Good Sync	There was a good Sync between the LG & TG
4	Use of Technical Jargon	Fine/ good generally	1. Some terms used maybe new & confusing - stress on the effects of climate change**. –** Yes Agreed 2. It is important the trainers identify and break down the different technical terms they think will be quite difficult for the locals to understand.
5	Illustrations & Pictures (+/ -)	Good Generally	1. **Yes Generally,** Pictures and Illustrations were good and relevant. 2. Use relevant images (pacific Context) & the use of cartoons will help a lot in bringing out the aims of this training.
6	Other Comments	1.Include more examples and pictures to aid better learning 2. Includes more scenarios and more detail examples into Green Business taking into considerations the local geography	1. - **Yes Agreed** 2. - **Yes Agreed** 3. Include brief summaries at the end of each activity sessions in the TG so it helps brings out the main aim behind each training. Emphasis the main top of discussion/ training.

4.2.6. Day 2 – Feedbacks Collected from workshop Participants on Pico-Hydro in the Community

Table 17.0: Validation of Community Feedbacks on Pico-Hydro in the Community

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	Yes Agreed	1. **Yes Agreed** -Content not very relevant to the community given their geography 2. Given that the community is a coastal community this training was not so relevant to them
2	Relevance of Activities (+ /-)	Good Relevance	There was no kit for locals to relate to for Practical activities -**Yes** (Have hardware on hand for Practical exercise)
3	Sync between LG and TG	Good Sync	1.**Yes Agreed** -There was a good Sync between the LG & TG 2.Include a glossary at the beginning of the LG 3.Include Pg. numbers in the Lesson Plan & Times Table in TG & LG. 4. Exclude Ice Breaker in LG include only in TG
4	Use of Technical Jargon	Fine/ good generally	**Yes Agreed,** Not much TJ were used as such this is okay
5	Illustrations & Pictures (+/ -)	Good Generally	1. **Yes Agreed,** Pictures and Illustrations were good and relevant 2. **I**ncrease size of smaller images & use high resolution Images
6	Other Comments	1**.** Probably leave out this module for communities with no rivers 2. Include a section/ way to follow in setting up a small pico-hydro system locally	**1. Yes Agreed** **2. Yes Agreed** 3.Include a section on material data sheet on Pico-hydro Systems e.g. includes the different Pico-hydro components. 4. Include a section on brand quality and estimated costs for the different turbines.

Table 18.0: Validation of Trainers Feedbacks on Pico-Hydro in the Community

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	Yes Agreed	1. **Yes Agreed**, Content not very relevant to the community given their geography 2. on a positive note a lot of PNG local communities have access to rivers/ stream as such this training is very useful to them.
2	Relevance of Activities (+ /-)	Good Relevance 1. There was no kit for locals to relate to for Practical activities	1. Kit must be included in the main trainings 2. More time would help in properly analyzing the activities
3	Sync between LG and TG	Good Sync	1. **Yes Agreed** - There was a good Sync between the LG & TG 2. More time is needed to validate this well
4	Use of Technical Jargon	Fine/ good generally	1. **Yes Agreed-** Not much TJ were used as such this is okay 2. Important that trainers further explain terms in local context especially parts of a hydro systems.
5	Illustrations & Pictures (+/ -)	Good Generally	Yes Agreed -Pictures and Illustrations were good and relevant
6	Other Comments		1. Trainers to analysis and teach this topic only to communities that have a suitable geography to setup pico-hydro.

4.2.7. Day 2 - Feedbacks Collected from workshop Participants on Pico-Hydro Operation & Maintenance

Table 19.0: Validation of Community Feedbacks on Pico-Hydro O & M

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	1.Content not very relevant to the Pilot community given their geography	1. Yes Agreed-but this is very relevant to many other rural communities in PNG that have access to rivers/ streams. 2. Include a glossary at the beginning of the LG & Page Numbers.
2	Relevance of Activities (+ /-)	1. Yes there was good Relevance	1. There was no kit for locals to relate to for Practical activities. - Should provide a kit in the main training 2. Include an activity on Load Sizing
3	Sync between LG and TG	Good Sync	1. **Yes** - There was a good Sync between the LG & TG. 2. Was not really looked at due to limited time
4	Use of Technical Jargon	Fine/ good generally	1. Not much TJ used as such is good.

			2. Was not really looked at due to limited time to analysis.
5	Illustrations & Pictures (+/ -)	Good Generally	1. **Yes Agreed** - Pictures and Illustrations were good and relevant 2. Use more illustrative cartoons in local context/ language.
6	Other Comments	1. Probably leave out this module for communities with no rivers.	1. -**Yes Agreed** 2.Include a section on understanding the demand/load sizing for a community & calculations to calculate power demand. Also include activities on load sizing. 3. Include a section on sustainability plans for Pico-hydro

Table 20.0: Validation of Trainers Feedbacks on Pico-Hydro O & M

No.	Categories of Assessment	Feedbacks	Ratings/ comments
1	Content relevance for Community	1.Content not very relevant to the Pilot community given their geography	1. **Yes Agreed**-but this is very relevant to many other rural communities in PNG that have access to rivers/ streams. 2. Include Page numbers in TG
2	Relevance of Activities (+ /-)	Es Yes generally relevant	Yes Agreed- the use of a hardware will greatly help in the practical activities.
3	Sync between LG and TG	Good Sync	**Yes Agreed** -There was a good Sync between the LG & TG
4	Use of Technical Jargon	Fine/ good generally	1. **Yes Agreed** 2. Trainers should contextualize the terms used further in the local context -eg. The components of a Pico-hydro Systems
5	Illustrations & Pictures (+/ -)	Good Generally	Pictures and Illustrations were good and relevant
6	Other Comments	1. Probably leave out this module for communities with no rivers	1. **Yes Agreed** 2.include a section that identify and in detail explain how electricity is generated using a turbine/hydro especially in the TG. **Yes agreed** 3.Include short videos that will help locals understand the concept of how a Pico-hydro operates. 4.List/ outline the advantages & disadvantages of a Pico-hydro systems in both TG & LG 5. Include a table on Pico-hydro Risks & its mitigations

5.0 Workshop Evaluation Results

The workshop evaluation form was designed in a way that in the first part it collected general information of the participants that includes information of their gender and their current employment status. The overall workshop evaluation questions were divided into three sections in which questions were asked on the workshop objectives, learning and communication and the workshop facilitation. There were also sections on the general application of the workshop to which participants gave general comments and finally participants were asked to give an overall appraisal of the workshop each day. For both days the same evaluation form was issued and filled by the four selected national (PNG) participants.

Refer to Appendix D for a detail sample of the workshop evaluation form.

5.1. Participant Profile Results
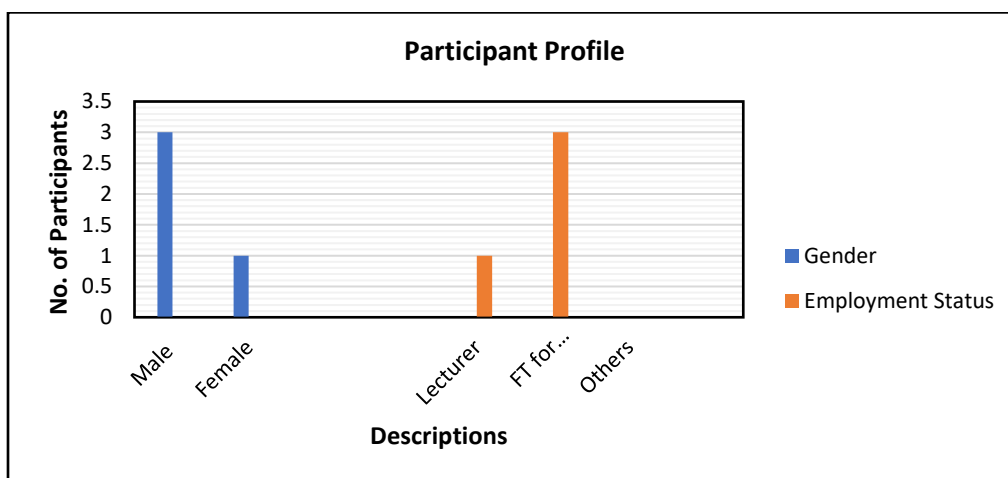
Graph 1.0: Participants Profiles

Results in graph 1.0 shows that a total of four (4) national participants participated in the workshop and were involved in the validation of the feedbacks collected from locals and trainers during the Pilot community trainings together with a staff and a consultant from the project team under GGGI. As shown the participants consisted of one (1) female and three (3) males of which one (female) was a Lecturer at UPNG while the three male participants indicated that they work full time for a company/ Organisation and the government. Two out of the three male participants work for the government while one work full time for a company.

5.2. Overall Evaluation – Workshop Objectives

The following questions were asked under this section.

I. **The workshop objectives were clearly explained to me**
As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, five (5) out of the total eight (8) evaluations gave a rating of strongly Agree

while three (3) out of the total gave a rating of 'Agree'. This concludes that the workshop objectives were clearly stated to the participants.

II. **I generally achieved these workshop objectives**

As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, one (1) out of the total eight evaluations gave a rating of 'Neutral' while three (3) gave a rating of 'Agree' and four (4) gave a 'Strongly Agree' rating for this. This concludes that the workshop generally achieved its objectives but there could be room for improvements and the workshop been conducted virtually may have an impact on the ratings.

III. **These objectives are relevant to my field of work/ academic studies.**

As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, one out of the total eight evaluations gave a rating of 'Agree' while seven(7) out of the total gave a rating of ' Strongly Agree'. This concludes that most of the participants worked in fields related to the workshop topics as such related well and gave valuable validations.

IV. **General Comments**

The following are some feedbacks/ comments received from the participants,

- The training/ workshop is just on validation of course modules
- Workshop was done in a short time to gather feedbacks. Need to give workshop materials prior to workshop for more constructive feedbacks to be collected from participants.
- The workshop objectives were covered and achieved through the 2 days of workshop.

5.3. Overall Evaluation – Learning & Communications

I. **I gained an improved understanding of key concepts and principles on GE and RE via the 10 draft training modules.**

As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, two (2) out of the total eight (8) evaluations gave a rating of 'strongly Agree' while six (6) out of the total gave a rating of 'Agree'. This concludes that the workshop has indeed helped the participants gain an improved understanding on the key concepts and principles on GE and RE.

II. **I learned on the important aspects of designing and delivering of capacity building Projects**

As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, two (2) out of the total eight (8) evaluations gave a rating of 'strongly Agree' while six (6) out of the total gave a rating of 'Agree'. This concludes that the workshop has indeed helped the participants learn the important aspects of designing and delivering a capacity building project as the workshop itself is focused on such as project.

III. **The Presentations has a good combination of lecture and interactive discussions/ exercises.**

As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, three (3) out of the total eight (8) evaluations gave a rating of 'strongly Agree' while four (4) out of the total gave a rating of 'Agree' and one (1) gave a rating of 'Neutral'. This concludes that the workshop has had quite a good combination of lecturer and interactive discussions but there is room for improvement and this is may again be an impact of conducting the workshop virtually.

IV. **General Comments**

The following are some general comments made by participants under this section,

- Overall, the content of the workshop materials are quite clear and simple for a layman's understanding.
- Network problems caused gaps in grasping points in discussions this is one disadvantage of having virtual meeting/ workshops.
- Virtual conferencing/ workshop is good but a better application could have been used (zoom, google meet or Skype) to ensure user friendly. Unreliable networks is a big problem.
- The communication throughout the course of the 2 days workshop was good.

5.4. Overall Evaluation – Facilitation

I. **The facilitators demonstrated good knowledge of training contents**
    As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, three (3) out of the total eight (8) evaluations gave a rating of 'strongly Agree' while five (5) out of the total gave a rating of 'Agree'. This concludes that the workshop facilitators both in PNG and in Fiji demonstrated good knowledge of the training content in the way the presented and conducted the breakout session

II. **The facilitators were easy to talk with and available for consultation.**
III. As shown in graph 2.0 of the eight evaluations filled by the four participants on the two workshop days four evaluations per day respectively, four (4) out of the total eight (8) evaluations gave a rating of 'strongly Agree' while four (4) out of the total gave a rating of 'Agree'. This generally concludes that the workshop facilitators were easy to talk with and available for consultation during the two days of workshop but there is still room for improvement for instance if the workshop was held physically participants would be able to physically consult other facilitators as well.

IV. **General Comments**
     The following are some general comments made by participants under this section,
     - Overall the facilitators have demonstrated sound knowledge and understanding and are confident in their role.
     - Fair presentation from facilitators both in country and from Fiji projected online.

5.5. Overall Evaluation – Application

I. **Please give one example of how you will apply in your work what you have learned from this training/ workshop.**
    The following are some general comments made by participants under this section,
    - I do a lot of community projects and with the type of training materials it will be easy to transfer relevant key ideas/concepts about RE and GE to the local communities.
    - Ideas to share with rural communities
    - I work as a sustainable development officer so this involvement is part of my work in context.
    - The training fits well with the type of work I do, hence it provides more simple working materials for community trainings on Solar PV, etc.
    - More consultation at all levels in developing the training materials for country (PNG) context.
    - Use examples in my workplace as a lecturer

II. **How could this training/ workshop be improved?**
     The following are some feedbacks/ comments received from the participants,

- Consult more local consultants on developing/ tailoring the training modules to suite country (PNG) context.
- Include more females in the rural communities
- Provide materials to review/ validate earlier to participants prior to the workshop.
- Begin to train trainers for each province.
- The master sheet should be completed before the actual validation workshop

III. **What topics relative to this training / workshop do you wish to be offered in future for you to attend a workshop on?**

The following are some feedbacks/ comments received from the participants,

- Include Financial Management
- I have firsthand experience in all modules, so it has a lot of relevance to my field of interest. I would be happy to join any future workshops if given the opportunity.
- Solar in the community, Green Business Basics and Pic-Hydro in the community.
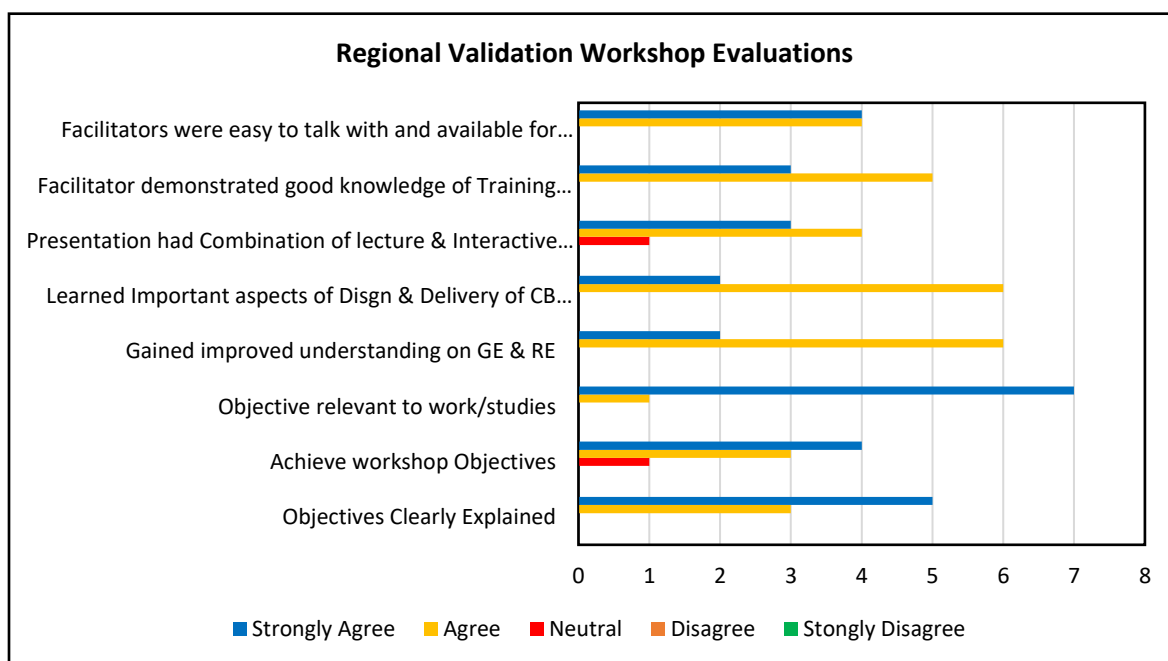
Graph 2.0: Regional Validation Workshop Evaluation Summaries

5.6. Overall Appraisal

Considering everything discussed in the workshop the participants gave their rating of the workshop over the course of two days as shown in graph 3.0.

Graph 3.0 below shows an overall appraisal by participants on the workshop over the two days. As shown three (3) out of the total eight (8) evaluations stated that they were satisfied with the workshop while five (5) participants sated that they were very satisfied with the overall workshop. This concludes that the workshop was well conducted but there is little room for improvements.
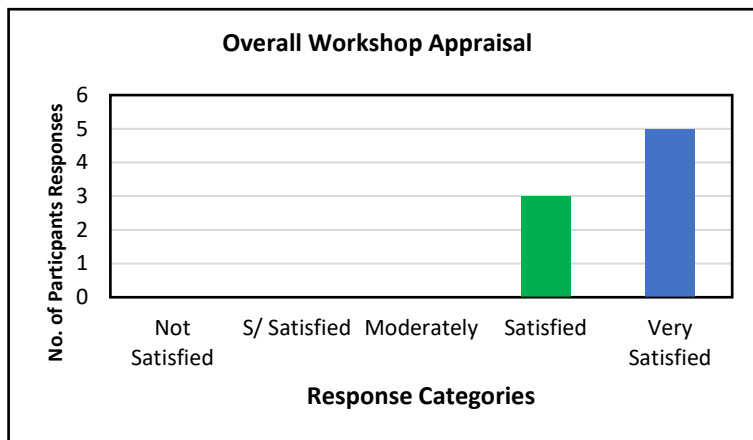
Graph 3.0: Overall Workshop Appraisal by Participants on the Workshop

5.7: Photos of the Workshop

Figure 1.0: Participants doing their validations

Figure 2.0: Participants Participating in breakout sessions

6.0 CONCLUSION

In conclusion the Regional validation workshop was successfully conducted and completed over the course of two days from the 12th -13th November 2020. The workshop was held in Fiji and conducted virtually enabling the other three project implementing countries (PNG, Vanuatu and Solomon Islands) to attend virtually. For PNG four national participants from both government and private sector agencies together with staffs from GGGI and the consultant trainer attended the validation workshop.

The workshop objectives were met in which very valuable validations and feedbacks were received from the workshop participants on the feedbacks collected from community members and trainers during the pilot community trainings conducted from the 01st -15th October 2020 using drafts of the ten training modules.

They went on to provide their inputs on any missing gaps or inaccuracies on the draft training modules and gave their feedbacks or inputs. The participants as important stakeholders to the project also assessed the viability of the community and trainers' feedbacks for further necessary improvements to the LG and TG as the first step into tailoring of the ten training modules to suite the different country specific needs and knowledge gaps in preparations for the main community trainings in 2021.

6.1. Recommendations

Though the Regional validation workshop was completed successfully there is still room for improvements and the following are some recommendations made by the workshop participants;

1. Ensure that enough time is given to participants to discuss well the feedbacks in the breakout sessions for them to give detail validations on feedbacks gathered for each training module.
2. For such short validation workshops in the future it would be ideal to give participants the things (feedbacks & training materials) to validate prior to the workshop so they come prepared which will give them more time to look at the materials and give very constructive validation.
3. When conducting virtual workshops, it is important to check and ensure that the internet conductivity is of good quality. This will ensure all points are taken note of and non are missed.

It is important the above recommendations are taken into consideration for such future workshops but after all the Regional Validation Workshop was indeed a success.

7.0. List of Appendices

Appendix A :   Participants List

Regional Feed Back Workshop

Date: 12th -13th November 2020

Venue: Lamana Hotel, Port Moresby - PNG

Attendance List

No.	Name	Position	Organisation
1	Benjamin Keni	Associate Projects Coordinator – KOICA RE Project	Global Green Growth Institute (GGGI)
2	Nicholas .P. Tokmun	Consultant Trainer – KOICA RE Project	Global Green Growth Institute (GGGI)
3	Daniel Nikitel	Manager Mitigation Division	Climate Change Development Authority (CCDA)
4	Murray Konido	Advisor Disaster & Climate Change	Central Provincial Administration
5	Dr. Olive Baloiloi	Associate Professor at UPNG (Selected Trainer)	University of Papua New Guinea (UPNG)
6	Hobert Asari	Sustainable Energy Officer (Selected Trainer)	Solar Solutions PNG
7	Ms. Ahreong Oh	Administrative Officer	Korean Embassy Representative
8	Jennifer Nila	Associate Admin & Finance (GGGI Support Staff)	Global Green Growth Institute (GGGI)

Project Overview

Benjamin Keni
Papua New Guinea - Project Coordinator

1.0. Project Objective

Objective: To strengthen informed and inclusive decision-making by resource owners and local government officials for integration of Green Economy (GE) and Renewable Energy (RE) into Local Level Planning and to Strengthen Implementation of Renewable energy (RE) Technologies for Rural Energy Access.

2.0. Target locations – PNG

Five Selected Project Sites/ Villages are as follows;

Village Name	1. Edevu Village	2. Brown River	3. Imuagoro Village	4. Kalo
LLG	Koiari LLG	Vanapa Brown	Rigo Central	Rigo Coast
District	Kairuku-Hiri District	Kairuku-Hiri District	Rigo District	Rigo
GPS Location	9.197085^{o}S, 147.301470^{o}E	9.200159^{0}S, 147.236633^{0}E	9.876422^{o}S, 147.679886^{o}E	10.046699^{o}S, 147.790175^{o}E
Population	414	2, 807	1, 024	2, 438
Male	203	1, 556	545	1, 250
Female	211	1, 251	479	1, 188
Households	95	395	113	368
Point of Contact	Alfred Kennedy LLG Manager Ph:7412 9543	Alfred Kennedy LLG Manager Ph:7412 9543	Hon. John Kore, LLG Councilor, Ph:7088 9837	Hon. Guria Rawali, LLG Councilor, Ph: 73327047

5. KEAPARA VIILAGE		ALUKUNI VILLAGE	KARAWA VILLAGE
LLG	Rigo Coast LLG	Rigo Coast LLG	Rigo Coast LLG
District	Rigo District	Rigo District	Rigo District
GPS Location	10.0999^o S, 147.8634^o E	10.0977^o S, 147.8586^o E	10.0961^o S, 147.8608^o E
Population	653	397	660
Male	348	199	330
Female	305	198	330
Households	90	56	94
Point of Contact	Hon. Iruna Ila, LLG Councilor, Ph: 7358 0043		

3.0. Project Progress-Completed Tasks

Global Green Growth Institute

- Pre-implementation Survey – (25th Nov -05th Dec 2019)
- Feedback Workshop –(09th -10th July 2020)
- Hire of In-Country Trainers – (18th August 2020)
- Online Training of In-country Trainers – (24th August -04th Sept 2020)
- Pilot Community Trainings –(01st Oct -15th Oct 2020)
- Regional Validation Workshop –(12th Nov-13th Nov 2020)

3.1.Pre-implementation Survey

Global Green Growth Institute

3.1.1. Aim:
I. Is to visit the five selected Project Sites, assess resources on ground and confirm sites for project implementation.
II. To assess and identify the knowledge gaps of local communities in the area of GE, RE & EE
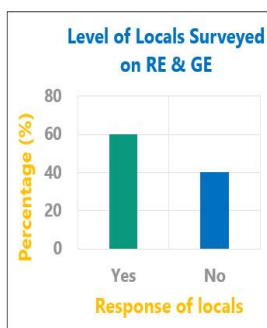III. Collect necessary baseline data for this project

3. 1.2. Findings:
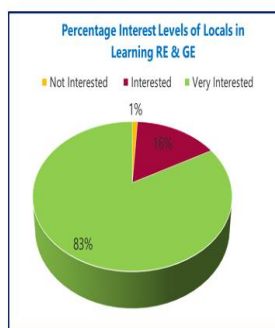**3.1.3.** Challenges Faced & Lessons Learnt

3.1.2.Findings

Global Green Growth Institute

1. Measuring Knowledge Level of locals on RE & GE

2. Interests of Locals in learning about RE & GE

3. RE Systems locals were interested in been trained.

Level of Locals Surveyed on RE & GE

Percentage Interest Levels of Locals in Learning RE & GE

The RE systems locals were Interested on been trained

3.2: Feedback Workshop

Global Green Growth Institute

3.2.1Aim:
I. To introduce the project to selected national trainers and gain their support.
II. To train the trainers on the draft **"Solar in the Community" & Solar O & M Basics** modules and obtain feedback on the trainer's guide, learners' workbook, delivery methods and its suitability to the projects targets groups.
III. Further discuss on other areas of improvement on the 2 modules.

3.2.3. Next Steps
▪ Hire of In-country Trainer on Consultancy basis.

3.2.2. Outcomes:
▪ Recommendations were made for several topics to be added with reasons

Perceptions of Trainers of the 2 draft Training Modules

	Relevance to Work	Comprehension of Training Modules	Sufficiency of Manual coverage	Quality of illustrations	Relevance of illustration	Ease to Present	Understanding of the Thematic Area	Usefulness in your work to use	Practicality of these trainings for your community	Level of Interactive activities in the training modules
Highest (5)	4	2	2	2	3	3	3	4	3	1
High (4)	2	2	4	4	3	1	2	1	2	3
Moderate (3)			1			2	1	1	1	2
Low (2)		1								
Lowest (1)										

3.2. Photos of Feedback Workshop

3.3. Training of In-Country Trainers

3.3.1. Aims:

1. To gather feedbacks from the In-country trainers in all four countries on the ten (10) training modules on (GE) & (RE).
2. Enable the respective In-country trainers to familiarise themselves with the training modules.

3.3.2. Outcomes

- Trainers in all four countries finalised themselves with the training materials & how to conduct trainings.

3.3.3. Challenges

- Covid-19 Global Pandemic prevent the actual/ physical training of In-country trainers
- Held online as there connectively problems at times

3.3.4. Lessons Learnt

-Each Country Trainer learnt how to conduct trainings on the different modules

3.3.5. Next Steps

I. Pilot Community Trainings – Keapara Village

3.4. Pilot Community Training

3.4.1. Aim

➤ Visit selected Pilot Community (Keapara) and conduct Pilot Community Trainings to trail out the ten (10) draft training modules on RE &GE
➤ Identify gaps in the training modules and tailor to suit the locals' needs & literacy level.
➤ Identify best approach to train the locals to implement in the main community trainings.

3.4.2. Outcomes

i. Successfully conducted community trainings from 01st - 15th Oct 2020.
ii. Collected valuable feedbacks from community members & Trainers on the ten training modules.

3.4.3. Challenges Faced

I. Covid-19 Situation in Country
II. Less participants on some training days due to other community/ religious activities.
III. No proper awareness on training by local village elders resulting in less participants attending.
IV. Partiality, asking locals to come on time before the trainings each training day.
V. Bad road condition travelling to and from training village daily.

3.4.4. Lessons Learnt

I. Such capacity building project are needed by locals as most times they are given the infrastructure but do not know how to operate and maintain those infrastructures e.g. Solar systems donated by local MPs/ street solar lightings.
II. More of such projects will help locals move/ adopt successfully ways of sustainable living.
III. Such Projects go inline with helping to achieve the government's district, Province and National goals of Promoting Sustainability/ sustainable development at the local/ community level.
IV. Many locals have went to school as such understood the content of the trainings
V. Less women & vulnerable group participant due to society suppressions/ customs & Traditions.

3.4.5. Next Steps

✓ Regional Validation Workshop
✓ Tailoring & Translating of Training materials for main community trainings in 2021.

4.0. Conclusion

Capacity Building to Strengthen Sustainable Implementation of Renewable Energy Technologies for Rural Energy Access

REGIONAL WORKSHOP

Thursday 12th & Friday 13th November 2020
Venue: Lamana Hotel, Port Moresby-PNG

PROGRAM Day One – Thursday 12th November 2020	
8.30am – 9.00am	**Registration**
9:00am – 9:05am	**Opening Devotion** - Ulaiasi Butukoro, GGGI
9.05am – 9.10am	**Welcome Address** - Mr. Daniel Munoz-Smith, GGGI
9.10am – 9.20am	**Opening Remarks** – H.E Cho Shin-hee, Korean Ambassador to Fiji
9.20am – 9.25am	**Guest Speaker** – Mr. Solo Mara, Secretary General, Pacific Islands Development Forum (PIDF)
9.25am – 9.45am	**Group Photo Session**
9.45am – 10.15am	**Regional Project Overview and Update** – Mr. Mohammed Tazil, Regional Officer, GGGI
10.15am – 10.30am	**Morning Tea**
10.30am – 11.00am	**Fiji Project Overview and Details** – Mr. Ulaiasi Butukoro, Fiji Project Coordinator, GGGI
11.00am – 11.30am	**Vanuatu Project Overview and Details** - Mr. Paul Kaun, Vanuatu Project Coordinator, GGGI
11.30am – 12.00pm	**Solomon Islands Project Overview and Details** - Mr. Hamptan Pitu, SI Project Coordinator, GGGI
12.00pm – 12.30pm	**PNG Project Overview and Details** – Mr. Benjamin Keni, PNG Project Coordinator, GGGI

12.30pm – 1:30pm	**Lunch**
1:30pm – 2:15pm	**Breakout Session 1** – Validation of feedback from "RE General Principles" Module
2:15pm – 3:00pm	**Breakout Session 2** – Validation of feedback from "GE General Principles" Module
3:00pm – 3:15pm	**Afternoon tea**
3:15pm – 4:00pm	**Breakout Session 3** - Validation of feedback from "RE Financial management" Module
4:00pm – 4:45pm	**Breakout Session 4** Validation of feedback from "Energy Efficiency" Module
4:45pm – 5:00pm	**Wrap up of Day 1** - Afsrin Ali, PIDF

PROGRAM **Day Two – Friday 13th November 2020**	
8.30am – 9.00am	**Registration**
9:00am – 9:15am	**Review of Day 1** - Afsrin Ali, PIDF
9.15am – 10.00am	**Breakout Session 5** - Validation of feedback from "Inclusive Development" Module
10.00am – 10.15am	**Morning Tea**
10.15am – 11.00am	**Breakout Session 6** – Validation of feedback from "Solar in the Community" Module
11.00am – 11.45am	**Breakout Session 7** - Validation of feedback from "Solar O&M Basics" Module
11.45am – 12.30pm	**Breakout Session 8** Validation of feedback from "Green Business Basics" Module
12.30pm – 1:30pm	**Lunch**
1:30pm – 2:15pm	**Breakout Session 9** – Validation of feedback from "Pico-Hydro in the Community" Module
2:15pm – 3:00pm	**Breakout Session 10** – Validation of feedback from "Pico-Hydro O&M Basics" Module

3:00pm – 3:45pm	**Afternoon tea**
3:45pm – 4:00pm	**Wrap up of Day 2** - Afsrin Ali, PIDF

Workshop Evaluation – KOICA Regional Capacity Building Project Validation Workshop Lamana Hotel, Port Moresby, PNG - 12th-13th November 2020

Thanks for your participation for this workshop on "KOICA Regional Capacity Building Project Validation Workshop" and we kindly request that you complete this survey openly and honestly. All answers will remain confidential and will have no bearing on your participation in future GGGI/PIDF/KOICA events. **Once completed, please hand it to a GGGI/PIDF staff member.**

Participant profile

Please describe yourself:

1. Gender: ❑ Male   ❑ Female

2. Please indicate your current employment status. Check all that apply.

   ❑ I am a student

   ❑ I am a lecturer

   ❑ I work full time for a company/organization/government

   ❑ Consultant

   ❑ Others: _____

No.	Criteria	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Workshop Objectives						
3.	The workshop objectives were clearly explained to me.					

4.	I generally achieved these workshop objectives.					
5.	These objectives are relevant to my field of work/academic studies					
Comments:						

Overall Evaluation *(Please put a tick mark in appropriate section of the table)*

	Learning & Communication					
6.	I gained an improved understanding of key concepts and principles in Green Economy and Renewable Energy via the 10 draft training modules					
7.	I learned on the important aspects of designing and delivering of capacity building projects.					
8.	The presentations had a good combination of lecture and interactive discussion/exercises					
Comments:						

No	Criteria	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Facilitation					
9.	The facilitators demonstrated good knowledge of training contents.					
10.	The facilitators were easy to talk with and available for consultation.					
Comments:						

Application

11.	Please give one example of how you will apply in your work what you have learned from this training/workshop.
12.	How could this training/workshop be improved?
13.	What topics relative to this training/workshop do you wish to be offered in future for you to attend a workshop on?

Overall Appraisal

Considering everything, what overall rating would you give this workshop?

(Please put a tick mark in appropriate section of the table)

Not satisfied	Slightly Satisfied	Moderately	Satisfied	Very Satisfied

Thank you for your participation and feedback!

KOICA FUNDED PROJECT

CAPACITY BUILDING TO STRENGTH SUSTAINABLE IMPLEMENTATION OF RENEWABLE ENERGY TECHNOLOGIES RURAL ENERGY ACCESS

2020

EXIT REPORT

The project is funded by the Republic of Korea through the Korea International Corporation Agency (KOICA) and implemented by GGG! In partnership with the Pacific Islands Development Forum (PIDF)

REPORT ISSUES RECORD

PROJECT TITLE	Capacity Building to strengthen sustainable implementation of renewable energy technologies for rural energy access.	
PROJECT NO:		
COUNTRY	Papua New Guinea (PNG)	
Name	NICHOLAS PATRICK TOKMUN GGGI PNG Pilot Trainer	NATIONAL PARTNER Benjamin Keni GGGI Country Project Coordinator
Address	Sect 21 Lot 48, Swallow Street WAIGANI, NCD, PNG	
Phone: Email	+675 71853344 / 74222406 +675 75795347 +675 78373810 / 78509765 nptokmun@gmail.com ; nptokmun@outlook.com	
Contact Person – Project Related	NICHOLAS PATRICK TOKMUN	
Contact in terms of Emergency	LEAH AY TOKMUN - Spouse Contact: +675 72993238 +675 78023706 Email: ltokmun3@gmail.com	

Date of Report: November 2020

Reporting Period: Inception Phase – (16 – 25 November 2020)

Project Reporting Period: Project Phase – (August – December 2020)

ACRONYMS AND ABBREVIATION

CCDA	Climate Change Development Authority
CPA	Central Provincial Administration
EE	Energy Efficiency
GE	Green Economy
GGGI	Global Green Growth Institute
KOICA	Korea International Cooperation Agency
PIDF	Pacific Islands Development Forum
MOU	Memorandum of Understanding
O&M	Operation & Maintenance
RE	Renewable Energy

CONTENTS

ATTACHMENTS;

1. Trainer Consultant Contract Documents

2. Trainer Consultant Inception Training Report

3. Pre – Implementation Survey Report

4. Pre – Implementation Workshop Report

5. Community Pilot Training Report

6. Regional Validation PowerPoint Presentation

7. Regional Validation Excel Master Sheet

INTRODUCTION

The project **"Capacity Building to Strengthen Sustainable Implementation of Renewable Energy Technologies for Rural Energy Access"** is a 3-year regional project (2019-2021) implemented in four Melanesian countries: Fiji, Vanuatu, Solomon Islands and Papua New Guinea and funded by the Republic of Korea through the Korea International Corporation Agency (KOICA) and implemented by the Global Green Growth Institute (GGGI) in partnership with the Pacific Islands Development Forum (PIDF).

The project's main objective is to strengthen informed and inclusive decision-making by resource owners and local government officials for integration of Green Economy (GE) and Renewable Energy (RE) into Local Level Planning and to Strengthen Implementation of Renewable energy (RE) infrastructure for Rural Electrification. GGGI will work closely with local partners to develop various training modules within the project context to achieve this goal. In addition, in-country based local trainers will be engaged to deliver these capacity building trainings throughout the identified communities.

The direct beneficiaries of this capacity building project will be a total of 3000 trainees from 4 countries. The target groups for this capacity building training are:

1. Local government officials, Provincial Councils, District Councils, Town Councils, Island Councils, etc.
2. Traditional community/religious leaders and vulnerable groups (women, young leaders), etc.
3. Local electricians, people with technical aptitude, etc.
4. Small businesses

In order to carry out the capacity building training to the beneficiaries, the project is in the final stages of developing training materials in Green Economy (GE) and Renewable Energy (RE), taking into account gender and inclusive development. This will consist of 10 training modules, complete with trainers' guides and learners' workbooks, as per below:

Green Economy Modules:
- GE General Principles
- Energy Efficiency Basics
- Green Business Basics
- Inclusive Development

Renewable Energy Modules:
- RE General Principles
- Solar in the community
- Pico-Hydro in the community
- Solar Operations and Maintenance basics
- Pico-Hydro Operations and Maintenance basics
- RE Financial management

The selected community / village was **Keapara** in Rigo Coast LLG in Central Province and the training was conducted from the 01st – 15th October 2020. Thus, the training is comprehensively covered under the PNG Community Pilot Training Report

CONTRACT AS PNG PILOT TRAINER CONSULTANT, AUGUST – DECEMBER 2020
Under the RE KOICA Project I was the hired PNG Pilot Trainer reports regularly to the in-country project coordinator, Mr. Benjamin KENI. The Trainer must always work as part of a team with GGGI and other consultants.

Below are the main deliverables:

➢ **DELIVERABLE A**:
Brief inception report (approx. 3 pages) with work plan for the assignment, consultant's understanding of the assignment, list of resources the consultant expects to use and initial suggestions/comments for provided training modules and delivery methods within 3days of contract signature.

➢ **DELIVERABLE B:**
Attend the Pilot training of trainer's workshops and be trained on all 10 training modules of this project and its activities etc. and be ready for training of remote communities.

➢ **DELIVERABLE C:**
Assist the in-country project coordinator in developing a schedule for the pilot trainings to ensure the communities and the project team are all aligned and prepared prior to and during the pilot training, as well as assisting in making all arrangements for the community trainings in terms of communications, logistics, etc with relevant stakeholders

➢ **DELIVERABLE D:**
Conduct the training of the target groups of this project with the in-country project coordinator in the selected remote community, ensuring to have successfully and satisfactorily trained 100-150 people in PNG on the 10 training modules. Note that not all modules are meant for all target groups, hence the available "Training Matrix document" must be used to determine this.

➢ **DELIVERABLE E:**
Record and submit a report of all feedback, criticisms, suggestions and recommendations during the training of remote communities by facilitating discussions etc., regarding the 10 training modules and prepare presentations for the Regional Workshop with the in-country project coordinator

➢ **DELIVERABLE F**:
Participate in the Regional Workshop and present the results of the pilot training of communities and all the received feedback from your respective country with the country coordinator. The regional workshop will have a larger set of audience, partners, stakeholders, etc and the country specific feedback presented will be used to discuss and confirm the final changes and customizations that need to be performed on the 10 training modules.

> ➤ **DELIVERABLE G:**
> Provide an exit report after the regional workshop, detailing all the feedback that was presented and all the agreed/recommended changes and customizations for each of the 10 training modules in detail. This will enable the training module development consultants to ensure satisfactory review and customization of the training modules for

VIRTUAL PILOT TRAIN THE TRAINER TRAINING 24 AUGUST – SEPTEMBER 2020

This Virtual TOT was conducted from the 24th August – 4th September 2020 for the 4 project countries which includes Papua New Guinea, Solomon Island, Vanuatu and Fiji.

According the training schedule, I was appointed to deliver RE Module 6 on Renewable Financial Management. My only take was if it be done practically together as group especially for the technical in Solar and Hydro.

Besides there should be a certified technical training by certified trainers on the Solar and Hydro technical modules.

PILOT COMMUNITY TRAININGS 01st – 15th OCTOBER 2020.
The program was conducted from 1st – 15th October 2020. The purpose is to strengthen informed and inclusive decision-making by resource owners and local government officials for integration of Green Economy (GE) and Renewable Energy (RE) into Local Level Planning and to Strengthen Implementation of Renewable energy (RE) Technologies for Rural Energy Access.

Thus in order to carry out the capacity building training to the beneficiaries, the project is in the final stages of developing training materials in Green Economy (GE) and Renewable Energy (RE), taking into account gender and inclusive development. This will consist of 10 training modules, complete with trainers' guides and learners' workbooks, as per below:

Green Economy Modules:
- GE General Principles
- Energy Efficiency Basics
- Green Business Basics
- Inclusive Development

Renewable Energy Modules:
- RE General Principles
- Solar in the community
- Pico-Hydro in the community
- Solar Operations and Maintenance basics
- Pico-Hydro Operations and Maintenance basics

- RE Financial management.

The Communities that participated in the Community Pilot Training were;

KEAPARA VIILAGE		ALUKUNI VILLAGE	KARAWA VILLAGE
LLG	Rigo Coast LLG	Rigo Coast LLG	Rigo Coast LLG
District	Rigo District	Rigo District	Rigo District
GPS Location	10.0999° S, 147.8634° E	10.0977° S, 147.8586° E	10.0961° S, 147.8608° E
Population	653	397	660
Male	348	199	330
Female	305	198	330
Households	90	56	94
Point of Contact	Hon. Iruna Ila, LLG Councilor, Ph: 7358 0043		

AIM
➢ Visit selected Pilot Community (Keapara) and conduct Pilot Community Trainings to trail out the ten (10) draft training   modules on RE &GE
➢ Identify gaps in the training modules and tailor to suit the locals' needs & literacy level.
➢ Identify best approach to   train the locals to implement in the main community trainings.

OUTCOMES
➢ Successfully conducted community   trainings from 1st – 15th Oct 2020.

➢ Collected   valuable feedbacks from community members & Trainers on the ten training modules.

CHALLENGES FACED
➢ Covid-19 Situation in Country
➢ Less participants on some training days due to other community/ religious activities.
➢ No proper awareness on   training by local village elders resulting in less participants attending.
➢ Punctuality,   asking locals to come on time before   the trainings each training day.
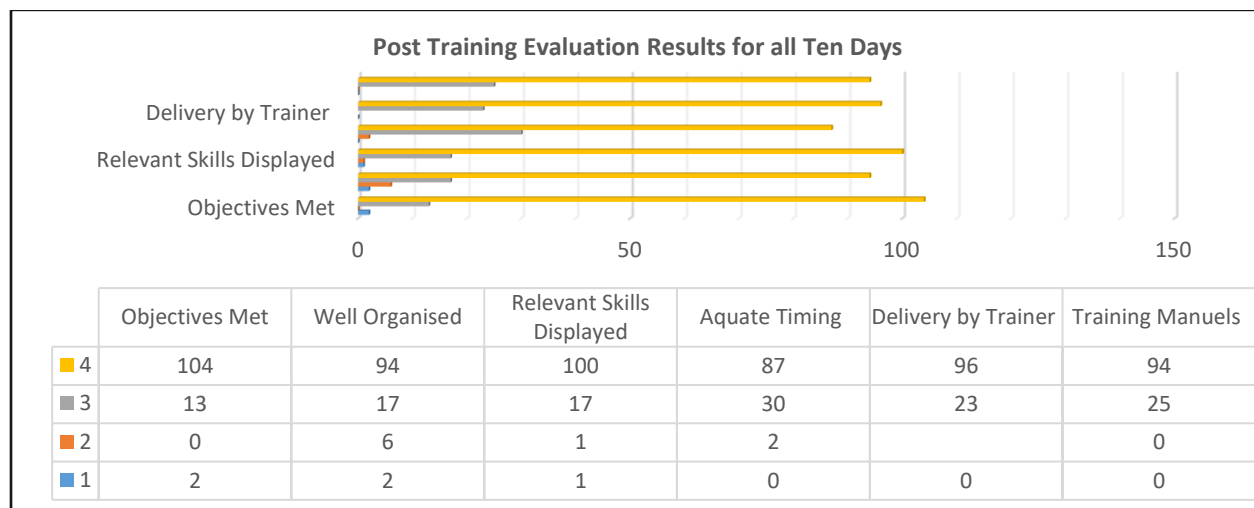➢ Bad road condition travelling to and   from training village daily

LESSONS LEARNT
➢ Such capacity building project are needed by locals as most times they are given the infrastructure but do not know how to operate and maintain those infrastructures e.g. Solar systems donated by local MPs/ street solar lightings.
➢ More of such projects will help locals move/ adopt successfully ways of sustainable living.
➢ Such Projects go online with helping to achieve the government's district, Province and National goals of Promoting Sustainability/ sustainable development at the local/ community level.
➢ Many locals have gone to school as such understood the content of the trainings
➢ Less women & vulnerable group participant due to society suppressions/ customs & Traditions.

NEXT STEPS
➢ Regional Validation Workshop
➢ Tailoring & Translating of Training materials for main community trainings in 2021.

POST TRAINING RESULTS

Graph 1 Post Evaluation Results

Post Training Evaluation Results for all Ten Days

	Objectives Met	Well Organised	Relevant Skills Displayed	Aquate Timing	Delivery by Trainer	Training Manuels
4	104	94	100	87	96	94
3	13	17	17	30	23	25
2	0	6	1	2		0
1	2	2	1	0	0	0

Summary of Post-Evaluation Results gathered from Participants over the ten days for different criteria.
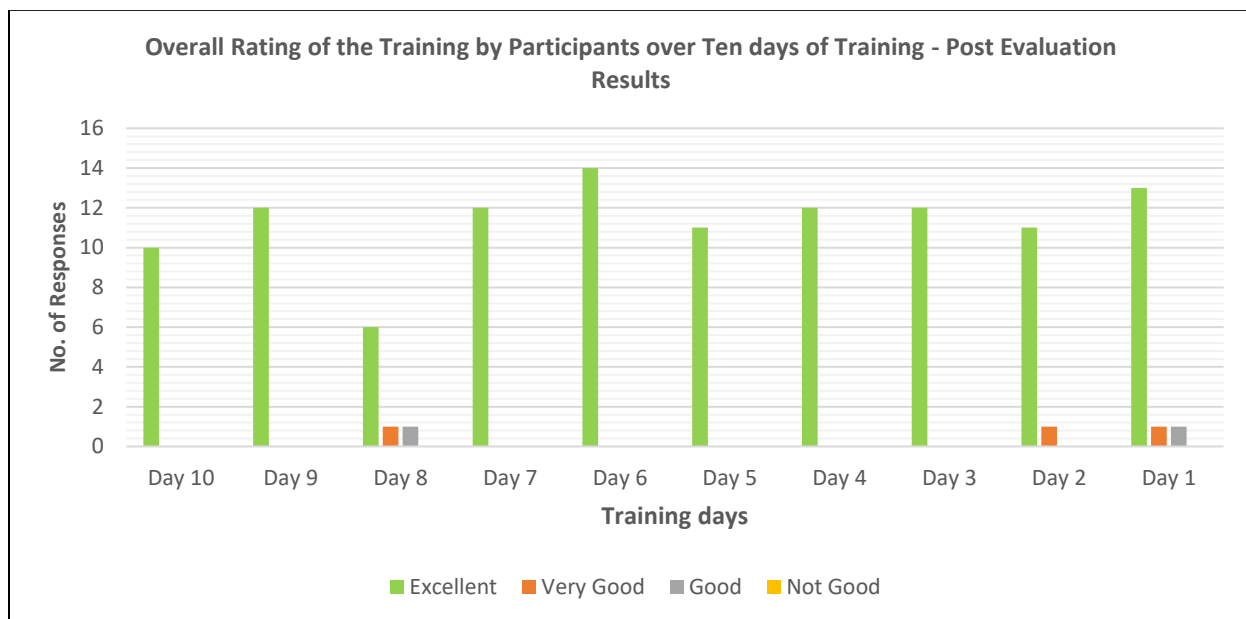**RATIONAL;**
How would you rate this training?

The graph 1 above shows an overall rating given by the participants with regards to the ten training days on the ten different training modules.

As seen in graph above 1 the locals in all ten days of training gave an Excellent rating of the overall workshop indicated by the green bars. While few participants in Day 8, day 2 and Day 1 of the trainings gave Very good ratings indicated by the Brown colored bars while one a female in day 1 gave a rating of Good as indicated by the grey colored bar. This could be because the topic covered in Day 1 of the training never really suited her or maybe because she was expecting to be trained on solar alone instead was trained on another topic on the first day as such gave such a rating on the first day of training but that gradually changed/ improved over the next training days.

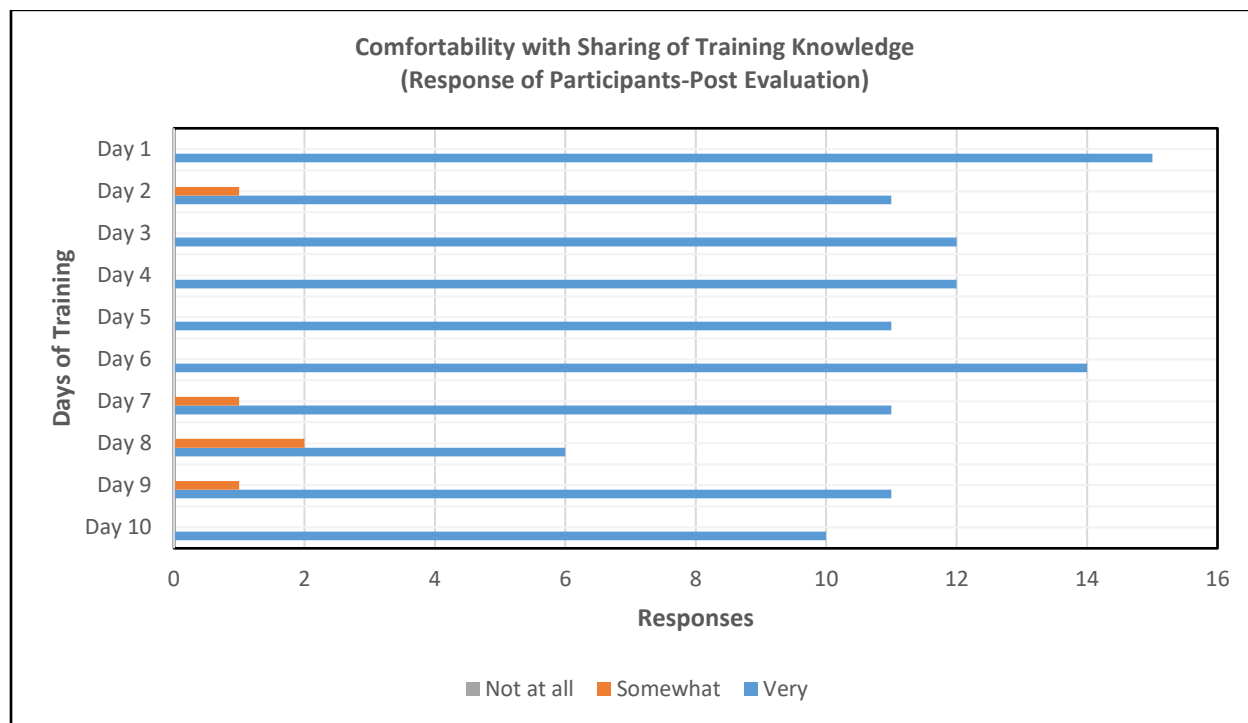**Graph 2 Overall Rating of the Training by participants over 10 days**

Overall Rating of the Training by Participants over Ten days of Training - Post Evaluation Results

RATIONAL;
How comfortable are you with sharing the information learnt at this workshop with others in your community for training?

Graph 3 Comfortability with Sharing Training Knowledge

Comfortability with Sharing of Training Knowledge (Response of Participants-Post Evaluation)

Overall Rating of the Training by Participants over Ten days of Training - Post Evaluation Results

RATIONAL;

As shown in graph 3 of the total 119 participants who attended the training over the ten days 114 gave a rating/ feed that they are **'Very'** confident and comfortable with sharing of training knowledge they gained from the training as indicated by the blue coloured bars while 5 participants showed a bit of doubt and gave a rating/ feedback of **'Somewhat'** as indicated by the orange coloured bar. It was evident that no participant gave a rating of **'Not at all'**.

REGIONAL VALIDATION WORKSHOP 12ᵗʰ – 13ᵗʰ NOVEMBER 2020

This program was conducted from the 12ᵗʰ – 13ᵗʰ November 2020 for the 4 pilot countries with the Virtual Centre in Fiji.

I presented on a presented created by the country project coordinator on the Project progress of the KOICA project in PNG on behalf of Country Project Coordinator, Mr. Benjamin KENI. I thought the PNG Team did well with Report. Four (4) national participants attended as important stakeholders to the project.

The presentation was done to wide cross section of the regional stakeholders' and it learned population in observation and part of the virtually presented regional validation workshop.

The participatory team were very helpful and contributed overwhelming to validating the feedbacks collected from communities and trainers during the Pilot Community trainings and finalized on a Master Sheet as the first step into customization of the ten (10) draft training modules.

Thus, the Project Coordinator has done really well to capture this into the final PNG Excel Master Sheet.

REPORTING

The report requirement of this project and the role of Trainer Consultant is paramount and very crucial to the KOICA RE Project and any other projects of such nature.

Being of the KOICA RE Project and its PNG Pilot Trainer Consultant below are some of the reports of the project that I have been associated directly or indirectly as part of the project.

They are;

➢ Trainer Consultant Inception Training Report

➢ Pre – Implementation Survey Report

➢ Pre – Implementation Workshop Report

➢ Community Pilot Training Report

➢ Regional Validation PowerPoint Presentation

➢ Regional Validation Excel Master Sheet

REQUIREMENTS FOR HIRE OF PROJECT TRAINER

Below are just suggestions for the responsibilities and requirement for a required project trainer.

Responsibilities
➢ Devise technical training programs according to organizational requirements
➢ Produce training schedules and training agenda
➢ Determine course content according to objectives
➢ Prepare training material (presentations, worksheets etc.)
➢ Execute training sessions, workshops, or others, etc. in groups or individually
➢ Arrange for and conduct training when needed
➢ Keep and report data on completed courses, absences, issues etc.
➢ Observe and evaluate results of training programs
➢ Determine overall effectiveness of programs and make improvements

Requirements
➢ Proven experience as technical trainer
➢ Knowledge of modern training techniques and tools in technical subjects
➢ Experience in designing technical course content
➢ Ability to address training needs with complete courses
➢ Working knowledge in MS Office (especially PowerPoint)
➢ Outstanding communication skills and comfortable speaking to crowds
➢ Excellent organizational and time-management abilities

- ➢ Degree in a relevant technical field
- ➢ Certification such as CTT+ (Certified Technical Trainer) is a strong asset

IMPROVEMENTS / SUGGESTIONS

Much of this has already been covered comprehensively in the PNG Community Pilot Training Report and the PNG Excel Master Sheet.

For the main training suggestions for the community;

- ➢ Do a thorough mobilization to understand your community very well. If not done well you are in disaster.
- ➢ Have a colour print of all modules per for each participant
- ➢ Trainer must very experienced
- ➢ Take note of all the feedbacks and improvements such in the PNG Community Pilot Training Report as well the Regional Validations Workshop plus Excel Master Sheet.

CONCLUSION.

I present this report to the Project Coordinator for review and advice.

……………………………………………………………..
NICHOLAS PATRICK TOKMUN (Mr.)
GGGI PNG PILOT TRAINER / 2020